

<b>AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT</b>			1. CONTRACT ID CODE	PAGE OF PAGES 1   7
2. AMENDMENT/MODIFICATION NO. 0002	3. EFFECTIVE DATE 09-Jun-2011	4. REQUISITION/PURCHASE REQ. NO.		5. PROJECT NO.(If applicable) 10-W001A1
6. ISSUED BY AFGHANISTAN DISTRICT SOUTH (AES) US ARMY CORPS OF ENGINEERS APO AE 09355	CODE W5J9LE	7. ADMINISTERED BY (If other than item 6) <b>See Item 6</b>		
8. NAME AND ADDRESS OF CONTRACTOR (No., Street, County, State and Zip Code)		X	9A. AMENDMENT OF SOLICITATION NO. W5J9LE-11-B-0001	
		X	9B. DATED (SEE ITEM 11) 17-May-2011	
			10A. MOD. OF CONTRACT/ORDER NO.	
			10B. DATED (SEE ITEM 13)	
CODE	FACILITY CODE			
<b>11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS</b>				
<input checked="" type="checkbox"/> The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offer <input type="checkbox"/> is extended, <input checked="" type="checkbox"/> is not extended. Offer must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended by one of the following methods: (a) By completing Items 8 and 15, and returning <u>1</u> copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.				
12. ACCOUNTING AND APPROPRIATION DATA (If required)				
<b>13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.</b>				
A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.				
B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(B).				
C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:				
D. OTHER (Specify type of modification and authority)				
E. IMPORTANT: Contractor <input type="checkbox"/> is not, <input type="checkbox"/> is required to sign this document and return _____ copies to the issuing office.				
14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.)  1. Project: 207th Compound Expansion, Camp Zafar, Herat Province, Afghanistan 2. Purpose of this amendment is to revise the bid schedule and to answer a bidder inquiry question. Due to the changes, a revised concept plan drawing and a new Section 01010(Scope of work) is provided. See summary of changes. 3. POC is Mark Jones at mark.t.jones@usace.army.mil.  4. Bids are due 18 June 2011 at 2:00pm (local time).				
Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.				
15A. NAME AND TITLE OF SIGNER (Type or print)		16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print)		
		TEL:	EMAIL:	
15B. CONTRACTOR/OFFEROR  _____ (Signature of person authorized to sign)	15C. DATE SIGNED	16B. UNITED STATES OF AMERICA  BY _____ (Signature of Contracting Officer)		16C. DATE SIGNED  09-Jun-2011

SECTION SF 30 BLOCK 14 CONTINUATION PAGE

**SUMMARY OF CHANGES**

SECTION 00010 - SOLICITATION CONTRACT FORM

The following have been added by full text:

AMENDMENT 0002 Q&A AND CHANGES

**Q1:** Would you please clarify number of buildings given below?

Name of Building	Number of Buildings in;	
	Bidding Schedule	Site Concept Plan
Small Latrine	16	15
Storage Building	9	10

**A1:** There are be 15 Small Latrines and 10 Storage Buildings. Section 01010 and Section 00010 (Bid Schedule) have been corrected.

**SUMMARY OF CHANGES**

New concept plan drawing has been provided.

New bid schedule has been provided.

New Section 01010 (Scope of Work) has been provided.

The CLIN structure has been revised for CLIN 0002. There is no longer a CLIN 0002AI or 0002AJ.

CLIN 0002AH (small latrine) now has a quantity of 15 (previously 16).

Previous CLIN 0002AM (Storage Building), quantity 9 EA, is now CLIN 0002AN with a quantity of 10EA

Five additional optional CLINs have been added to the bid schedule (CLINs 0010 – 0014).

Previous CLIN 0002AR (Vehicle Fuel Point) is no longer a base CLIN. It is now optional CLIN 0011 in the new bid schedule.

The work associated with optional CLINs 0010 (Motor Pool Area), 0012 (Entry Control Point), 0013 (Perimeter Wall) and 0014 (Anti-Vehicle Trench) is not new work and was previously contained in the base bid items with the same description name. Section 01010 provides the breakdown of work/facilities associated with the base CLINs and new optional CLINs.

The following have been modified:

BID SCHEDULE

**BIDDING SCHEDULE  
(AMENDMENT 0002)**

The Contractor shall provide a price for all items, including those labeled, "Optional Items."

<u>ITEM</u>	<u>DESCRIPTION</u>	<u>QTY</u>	<u>UNIT</u>	<u>Unit Price</u>	<u>AMOUNT</u>
<b>0001</b>	<b>GENERAL</b>				
0001AA	Mobilization/Demobilization	1	LS	XXX	\$ _____
0001AB	Security	1	LS	XXX	\$ _____
0001AC	Site Survey/Existing Conditions Map	1	LS	XXX	\$ _____
0001AD	A/E Design	1	LS	XXX	\$ _____
0001AE	Geotechnical Investigation	1	LS	XXX	\$ _____
0001AF	As-Built Drawings	1	LS	XXX	\$ _____
<b>0002</b>	<b>FACILITIES</b>				
0002AA	Officers Barracks	3	EA	\$ _____	\$ _____
0002AB	Small Officers Barracks	1	EA	\$ _____	\$ _____
0002AC	Combination NCO/Enlisted Barracks	4	EA	\$ _____	\$ _____
0002AD	Enlisted Barracks	12	EA	\$ _____	\$ _____
0002AE	NCO Barracks	5	EA	\$ _____	\$ _____
0002AF	Small NCO Barracks	1	EA	\$ _____	\$ _____
0002AG	Large Latrine	5	EA	\$ _____	\$ _____
0002AH	Small Latrine	15	EA	\$ _____	\$ _____
0002AJ	Classroom Building	2	EA	\$ _____	\$ _____
0002AK	Training Building	8	EA	\$ _____	\$ _____
0002AL	MWR Building	1	EA	\$ _____	\$ _____

0002AM	PX Building	2	EA	\$ _____	\$ _____
0002AN	Storage Building	10	EA	\$ _____	\$ _____
0002AP	Battalion Headquarters Building	4	EA	\$ _____	\$ _____
0002AQ	Small Admin Building	2	EA	\$ _____	\$ _____
0002AR	DPW Building	1	EA	\$ _____	\$ _____
0002AS	Motor Pool Area	1	LS	XXX	\$ _____
0002AT	Weapons Storage	7	EA	\$ _____	\$ _____
0002AU	Trash Collection Point	20	EA	\$ _____	\$ _____
0002AV	Helicopter Pad	1	EA	\$ _____	\$ _____
0002AW	Football (Soccer) Field	1	EA	\$ _____	\$ _____
<b>0003</b>	<b>FORCE PROTECTION</b>				
0003AA	Perimeter Wall	1	LS	XXX	\$ _____
0003AB	Anti-Vehicle Trench	1	LS	XXX	\$ _____
0003AC	Guard Towers	8	EA	\$ _____	\$ _____
0003AD	Personnel Bunkers	100	EA	\$ _____	\$ _____
0003AE	Entry Control Point	1	EA	\$ _____	\$ _____
<b>0004</b>	<b>SITE DEVELOPMENT/ IMPROVEMENTS</b>				
0004AA	Site Grading and Stormwater Management	1	LS	XXX	\$ _____
0004AB	Roads and Footpaths/Firelanes	1	LS	XXX	\$ _____
0004AC	Water Distribution System	1	LS	XXX	\$ _____
0004AD	Wastewater Collection System	1	LS	XXX	\$ _____
0004AE	Grey Water Irrigation System	1	LS	XXX	\$ _____
0004AF	Underground Electrical Distribution System	1	LS	XXX	\$ _____

0004AG	Communication System Backbone	1	LS	XXX	\$ _____
<b>0005</b>	<b>DBA INSURANCE</b>	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>					
<b>0006</b>	<b>REIMBURSEMENT FOR ACTUAL PERFORMANCE AND PAYMENT BONDS PREMIUMS</b>	1	LS	XXX	\$ _____ Not to Exceed
	(see schedule note 10 of additional information)				
	<b>TOTAL BASE BID ITEMS</b>				\$ _____
	<b>OPTIONAL BID ITEMS</b>				
0007	Battalion Headquarters Building	1	EA	\$ _____	\$ _____
0008	Small Admin Building	2	EA	\$ _____	\$ _____
0009	Officers Barracks	1	EA	\$ _____	\$ _____
0010	Motor Pool Area	1	LS	XXX	\$ _____
0011	Vehicle Fuel Point	1	LS	XXX	\$ _____
0012	Entry Control Point	1	EA	\$ _____	\$ _____
0013	Perimeter Wall	1	LS	XXX	\$ _____
0014	Anti-Vehicle Trench	1	LS	XXX	\$ _____
	<b>TOTAL OPTIONAL BID ITEMS:</b>				\$ _____
	<b>SCHEDULE TOTAL:</b>				\$ _____

**SCHEDULE NOTES**

1. Offeror shall submit prices on all items. Scope of work on each item is described in Section 01010.
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. A/E Design DEFINITION: Design costs shall consist of design analysis, drawings, and specifications for all facilities where a standard design has not been provided by the Government.
5. 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.
7. EXERCISE OF OPTIONAL BID ITEMS: Optional bid items (if any) may, at the option of the Government, be exercised at any time within 90 calendar days after receipt of the notice to proceed.
8. ORDER of WORK: See Section 00150
9. 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. The Period of performance will not be extended if optional items are exercised. Liquidated Damages are included in this contract. See FAR Clause 52.211-12.
10. 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 0006**.
11. Abbreviations:
  - LM = Linear meters
  - SM = Square meters
  - EA = Each
  - LS = Lump Sum
  - m<sup>2</sup> = square meters
  - kPa = kilopascals
  - m = meters
  - cm = centimeters
  - l = liters
  - kVA = kilo volt amps

**-END OF SECTION-**

(End of Summary of Changes)

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## **SECTION 01010 SCOPE OF WORK**

### **1. GENERAL**

The project consists of the design and construction of the Afghanistan National Army (ANA) 207<sup>th</sup> Compound, Camp Zafar facilities for the Afghanistan National Army (ANA) at Camp Zafar, Herat Province, Afghanistan. The project is defined as the design, materials, labor, and equipment to construct buildings, parking, utilities, and other infrastructure for a design end population of approximately 9,000 ANA personnel. The intent is to provide permanent basing using the most cost-efficient and expeditious construction methods.

The project includes buildings and facilities that shall be constructed using full design arch-span type construction methods and full design standard drawings for facilities CMU type construction located in Appendix.

The Contractor may be required to coordinate the efforts required under this contract with at least one other contractor at the site. Such coordination requirements will be required as part of this contract. The coordination effort may be significant and may include such tasks as the exchange of information with other contractors such as design data, drawings, calculations, and technical information. Additionally, it may be necessary for the contractor to conduct meetings, hold teleconferences, and prepare the submittal of additional information to the Contracting Officer (KO) that demonstrates the coordination and integration of new work with existing and future work of other contractors. All coordination shall be in agreement with the KO and approved prior to the commencement of any work.

All buildings and facilities must be constructed and become operational following the Construction Priority List specified in the Section 01010. All buildings and facilities are categorized in four (4) priorities. Refer to Section 8, Completion of Work, for general requirements and for the priority listing of buildings and facilities as shown in Table 7.1, Construction Priorities Schedule.

#### **1.1 ENGLISH LANGUAGE REQUIREMENT**

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

#### **1.2 CQM TRAINING REQUIREMENT**

The Contractor's Quality Control (QC) Manager is required to complete the U.S. Army Corps of Engineers (USACE) Construction Quality Management (CQM) course, or equivalent as soon as available. The CQM course will be offered periodically by the USACE Afghanistan Engineer District (AES). If the QC Manager has not completed the course, then he shall apply for the first available class after the award of the contract. 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 AES can provide information related to AES offerings of the CQM course, as well as contact information for training centers. Alternative CQM courses, other than those mentioned above, must be approved by the Quality Assurance Branch.

The Contractor's quality control plan, as defined in USACE Guide Specification 01451, entitled "Contractor Quality Control" (CQC), shall 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. In lieu of a certificate, provide date of enrollment for the next CQM course.

#### **1.3 SUBMITTALS**

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

#### **1.4 COST ESTIMATE**

The Contractor shall prepare a parametric construction cost estimate for AES data collection purposes. The Contractor shall prepare a thorough, well-supported, estimate reflecting the final design features, construction

schedule, conditions, and any construction phasing requirements. The cost estimate shall be submitted as part of the 100% design submittal.

## **1.5 LOCATION**

All work under this contract is for the design, site-adaptation, and construction of the 207<sup>th</sup> Compound facilities located at Camp Zafar in Herat Province, Afghanistan. The approximate coordinates of the limits of work for the 207<sup>th</sup> Compound, Camp Zafar can be found on the Concept Plan in the Appendix.

## **1.6 GENERAL REQUIREMENTS FOR FACILITIES**

All requirements set forth in the Scope of Work (01010), but not included in the Technical Requirements (01015), shall be considered as set forth in both and vice versa.

In general, this project consists of designing and constructing facilities as described in this Section, the Concept Plan, standard design Arch-Span type building designs attached in the Appendix, CMU type building standard building designs attached in the Appendix, floor plans and the requirements stated in Section 01015 - Technical Requirements. In case of any discrepancy between Section 01010 and Section 01015, Section 01010 takes precedence. The USACE construction representative shall be notified immediately of any inconsistencies discovered in this IFB.

All standard construction amenities such as underground utilities, site grading, plumbing, heating, and electrical, etc. shall be implied as a design and construction requirement.

All construction of the Standard Building designs identified in the Appendix of this IFB shall be done in strict accordance with the plans and specification furnished, with no changes made to any feature of work shown in these design drawings and specifications, unless otherwise specified.

The Contractor shall match existing on-site architectural materials and colors. All construction shall be done in the same style and paint schemes as existing buildings, respective of sustainable construction and design except as indicated. All toilets shall be eastern style and shall face north or south.

The Contractor shall provide boot scrapers for boot cleaning at all building ingress/egress points.

Barracks shall be spaced as far apart from each other as possible given the final site design configuration, as to minimize sound propagation and to increase privacy.

The Contractor shall provide potable water, toilets, ablution areas, electrical, and communications service backbone in buildings as specified, connecting to and integrating with existing systems and shall be responsible for installing all upgrades. Specification of equipment and materials that match stocked items by the facility or central Department of Public Works is highly desirable. The Contractor shall reference the Appendix for building-specific construction details.

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

All other design work not specifically identified in this IFB shall be the responsibility of the Contractor and it shall be submitted for review in accordance with Section 01335 of this IFB.

### **1.6.1 LIFE SAFETY**

The facilities shall comply with all other safety requirements as required within references. A fire sprinkler system is not required. The Contractor shall equip buildings with wall-mounted A-B-C 6 kg fire extinguishers at a 1:100 SM density (minimum). Exit signs shall be placed above doors opening to the exterior and labeled in English, Dari, and Pashto. The Contractor shall install hardwired smoke detectors to provide local alarm only. Install carbon monoxide (CO) monitors in large occupancy areas (15 SF per person or greater occupant density) and sleeping areas. . These CO monitors/alarms shall be hardwired for reliability and to prevent pilferage. For other requirements, refer to Section 01015.

## 1.6.2 INTERIOR LIGHTING

General lighting shall be provided for each building type and function within each building, in accordance with standard drawings in the Appendices. For any features that the contractor is responsible for, the contractor shall adhere to the requirements in Section 01015.

## 1.6.3 HEATING, VENTILATION, AND AIR CONDITIONING (HVAC)

Environmental control of the facilities shall be achieved by natural ventilation, mechanical ventilation, and heating per the standard drawings in the Appendices. Cooling shall be provided in only specified rooms of specified buildings. In the case of facilities to be designed by the contractor, for inside design conditions and air cooling and heating requirements for various spaces, see Section 01015.

## 1.7 UNEXPLODED ORDNANCE (UXO)/MINES

The Contractor **IS NOT** responsible for the clearance or removal of mines and unexploded ordnance (UXO) from the site prior to the commencement of construction. The site has been cleared to a depth of 1.0 m (40") and the certificate of clearance is available for review. No construction activities are to be conducted without review of the written clearance certification for the site. If sub-surface construction activities will be performed on this site the clearance certification must state that the clearance depth was conducted to a minimum 1.0 m (40") in depth.

NOTE 1: For previous UXO/mine information, and a copy of the clearance certification the following points of contact from the UN Mine Action Center of Afghanistan are provided:

Mohammad Sediq, Chief of Operations,  
Email: [sediq@unmaca.org](mailto:sediq@unmaca.org)  
Cell: +93 070 295207

Hansie Heymans, Chief Information Officer,  
Email: [hansie@unmaca.org](mailto:hansie@unmaca.org)  
Cell: +93 070 294286

Ron Cates  
UXO Safety/ Demining COR, USACE  
[tas.uxo.safety@usace.army.mil](mailto:tas.uxo.safety@usace.army.mil) Comm: 540-667-6359  
Roshan: 079-467-3891

NOTE 2: For construction in excess of 1.0 m (40") in depth on areas previously cleared. If the contract parameters for sub-surface construction exceed the minimum 1.0 m (40") clearance depth the Contractor WILL be responsible for clearance to these depths.

The Contractor may only provide clearance/removal services via UN Mine Action Center for Afghanistan (UNMACA) accredited entities and 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.

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 3: The Contractor should be aware that many areas demined by NGOs and other groups may have only been cleared to a depth of 130 mm (5") for humanitarian purposes. If construction will take place, a minimum of 1.0 m (40") in depth is mandatory.

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

If a UXO/mine is encountered during project construction, the Contractor shall immediately stop work in the affected area, mark the area of the UXO/Mine and immediately notify the Contracting Officer, COR or the Government Construction Representative. UXO/Mine disposal will not be the responsibility of the Contractor unless the area exceeds the 1.0 m (40") clearance depth of the original clearance certificate.

## **2. SUMMARY OF WORK**

### **2.1 MOBILIZATION/DEMobilIZATION**

Mobilization and Demobilization shall consist of all labor, equipment, supplies and facilities required to stage all equipment and facilities needed for construction of this project. All mobilization and staging areas shall be located within the limit of work or shall be coordinated with the Contracting Officer. The location of all mobilization and staging areas is the responsibility of the Contractor. See Contract Clauses for further information.

The Contractor shall install temporary access points and roads, temporary parking, construction lay-down areas, and foot paths with compacted base, appropriately graded for drainage, and cover with a well graded, crushed stone aggregate surface capable of withstanding the anticipated construction traffic. At a minimum, the Contractor shall place 50 mm of crushed, well-graded, and compacted aggregate over areas to be used for drainage, pedestrian circulation (not including foot paths), and/or dust control.

Portable latrines: During construction, the Contractor shall furnish and install portable latrine units in locations as required. Portable latrines shall be a mix of western and eastern style units. Mix shall be determined by Contracting Officer.

Portable lavatories: During construction, the Contractor shall furnish and install handwash units in locations as required. Handwash units shall each include four (4) wash units. Each wash unit shall consist of a basin, foot controlled wash water dispenser, hand soap dispenser, and towel dispenser.

Mobilization/Demobilization shall have a unit measurement of lump sum and paid for under bid items 0001AA, Mobilization/Demobilization, of the Proposal Schedule (Section 00010).

### **2.2 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 01040 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.

Security shall have a unit of measure lump sum and paid for under bid items 0001AB, Security, of the Proposal Schedule (Section 00010).

### **2.3 SITE SURVEY / EXISTING CONDITIONS MAP**

The site survey and existing conditions map shall consist of all labor, equipment and supplies necessary to produce the topographical data in accordance with the requirements specified in Sections 01015 and 01335.

Site Survey and Existing Conditions Map shall have a unit of measure lump sum and be paid for under bid items 0001AC, Site Survey/Existing Conditions Map, of the Proposal Schedule (Section 00010).

## **2.4 A/E DESIGN**

The Contractor shall design all features of the project that are not included in the standard design drawings in the Appendix. All drawings shall be submitted in accordance with the requirements specified in Section 01335 and 01780A.

A/E Design shall have a unit measure of lump sum and paid for under bid items 0001AD, A/E Design, of the Proposal Schedule (Section 00010). This shall also include payment for all required items as stated in paragraph 3.2.1, Master Planning, and paragraph 3.2.2, Foundation Design.

### **2.4.1 MASTER PLAN**

The Concept Plan attached in the Appendix is for conceptual purposes only and does not constitute a design. The Contractor shall prepare a site Master Plan based on information contained in this IFB. The Contractor shall submit the site Master Plan for review within 21 days from the Notice to Proceed (NTP). The Contractor shall participate in a Master Plan design charrette that shall be conducted at the Corps of Engineers Kandahar Area Office at Kandahar Airfield, if deemed necessary by the Government. If necessary, the Contractor shall modify and implement changes to the Master Plan based on the information gathered during the design charrette process.

Current site conditions are only partially indicated in the Concept Plan. The Contractor is responsible to identify all buildings, facilities and site features by construction priority following the Construction Priorities Schedule, Table 7-1.

The Contractor must verify all space requirements and code compliance in accordance of Section and Section 01015 of this contract. The final Master Plan shall be site-specific and it shall include the location of all temporary structures such as the construction office/storage containers and lay-down and construction debris removal areas. The Contractor shall indicate all other site features on the Master Plan regardless of whether they are indicated on the Government supplied Concept Plan or not. The Contractor shall include all information pertinent to this project into the Master Plan to achieve a complete design in accordance with the requirements of this contract.

### **2.4.2 FOUNDATION DESIGN**

Foundations, including sub-grade, are based on an assumed soil bearing value for standard building designs. The Contractor shall design and construct foundations for standard designs based on recommendations from geotechnical investigation, as described in paragraph 3.3, Geotechnical Investigation, are required herein.

## **2.5 GEOTECHNICAL INVESTIGATION**

Existing geotechnical information is not available at the project site. Any site-specific geotechnical data required to develop foundations, fill at elevated slabs, materials, earthwork, roads, and other geotechnical related design and construction activities for this project shall be the Contractor's responsibility.

The geotechnical report shall contain the results of a geotechnical investigation conducted in accordance with the requirements specified in Section 01015. All labor, equipment and supplies necessary to conduct a geotechnical investigation shall be considered a part of the geotechnical report.

The Geotechnical Investigation shall have a unit of measure lump sum and be paid for under bid items 0001AE, Geotechnical Investigation, of the proposed schedule.

## **2.6 AS-BUILT DRAWINGS**

The Contractor shall provide the Government with complete as-built drawings at the conclusion of the project. The bid item "As-Built Drawings" shall consist of all labor, equipment, and all supplies needed to produce design records, documents and drawings in accordance with the requirements specified in Section 01335 and 01780A.

The As-built Drawings shall have a unit of measure lump sum and paid for under bid items 0001AF, As-Built drawings, of the Proposal Schedule (Section 00010).

### **3. FACILITIES**

#### **3.1 OFFICERS BARRACKS**

Contractor shall construct three (3) officers barracks per the Standard Building Design titled “Officers Barracks-Large- Arch Span” in the Appendix.

The Contractor shall construct the Officers Barracks in the locations per the Concept Plan in the Appendix.

The Contractor shall coordinate the construction of this facility based on the Construction Priority List, Table 7-1 in this Section.

The Officers Barracks shall have a unit of measure per each and shall be paid for under bid item 0002AA, Officers Barracks, of the Proposal Schedule (Section 00010).

#### **3.2 SMALL OFFICERS BARRACKS**

The Contractor shall construct one (1) small officers barracks per the standard design titled “Officer Barracks – Small – Arch Span” in the Appendix.

The Contractor shall construct the Small Officers Barracks in the locations per the Concept Plan in the Appendix.

The Contractor shall coordinate the construction of this facility based on the Construction Priority List, Table 7-1 in this Section.

The Officers Barracks shall have a unit of measure per each and shall be paid for under bid item 0002AB, Officers Barracks, of the Proposal Schedule (Section 00010).

#### **3.3 COMBINATION NCO/ENLISTED BARRACKS**

Contractor shall construct four (4) Combination NCO/Enlisted barracks per the standard design drawings titled “Combination NCO/Enlisted Barracks-Arch Span” in the Appendix.

The Contractor shall construct the Combination NCO/Enlisted Barracks in the locations per the Concept Plan in the Appendix.

The Contractor shall coordinate the construction of this facility based on the Construction Priority List, Table 7-1 in this Section.

The Combination NCO/Enlisted Barracks shall have a unit of measure per each and shall be paid for under items 0002AC, Combo NCO/Enlisted Barracks, of the Proposal Schedule (Section 00010).

#### **3.4 ENLISTED BARRACKS**

The Contractor shall construct twelve (12) Enlisted Barracks per the standard design drawing titled “Enlisted Barracks-Arch Span” in the Appendix.

The Contractor shall construct the Enlisted Barracks in the locations per the Concept Plan in the Appendix.

The Contractor shall coordinate the construction of this facility based on the Construction Priority List, Table 7-1 in this Section.

The Enlisted Barracks shall have a unit of measure per each and shall be paid for under items 0002AD, Enlisted Barracks, of the Proposal Schedule (Section 00010).

#### **3.5 NCO BARRACKS**

The Contractor shall construct five (5) NCO Barracks per the standard design drawing titled “NCO Barracks-Large-Arch Span” in the Appendix.

The Contractor shall construct the NCO Barracks in the locations per the Concept Plan in the Appendix.

The Contractor shall coordinate the construction of this facility based on the Construction Priority List, Table 7-1 in this Section.

The NCO Barracks shall have a unit of measure per each and shall be paid for under items 0002AE, NCO Barracks, of the Proposal Schedule (Section 00010).

### **3.6 SMALL NCO BARRACKS**

The Contractor shall construct one (1) Small NCO Barracks per the standard design drawing titled “NCO Barracks-Small-Arch Span” in the Appendix.

The Contractor shall construct the Small NCO Barracks in the locations per the Concept Plan in the Appendix.

The Contractor shall coordinate the construction of this facility based on the Construction Priority List, Table 7-1 in this Section.

The Small NCO Barracks shall have a unit of measure per each and shall be paid for under items 0002AF, Small NCO Barracks, of the Proposal Schedule (Section 00010).

### **3.7 LARGE LATRINE**

The Contractor shall construct five (5) Large Latrine facilities per the standard design drawing titled “Latrine-Large-Arch Span” in the Appendix.

The Contractor shall construct the Large Latrines in the locations per the Concept Plan in the Appendix.

The Contractor shall construct two (2) clotheslines per large latrine building for a total of ten (10) clotheslines. The Contractor shall construct the clotheslines per the standard design drawings in the Appendix. The clotheslines shall be located adjacent to the large latrines.

The Contractor shall coordinate the construction of this facility based on the Construction Priority List, Table 7-1 in this Section.

The large latrine shall have a unit of measure per each and shall be paid for under bid item 0002AG, Large Latrines, of the Proposal Schedule (Section 00010).

### **3.8 SMALL LATRINE**

The Contractor shall construct **fifteen (15)** Small Latrine facilities per the standard design drawing titled “Latrine-Small-Arch Span” in the Appendix.

The Contractor shall construct the Small Latrines in the locations per the Concept Plan in the Appendix.

The Contractor shall construct one (1) clothesline per small latrine building for a total of **fifteen (15)** clotheslines. The Contractor shall construct the clotheslines per the standard design drawings in the Appendix. The clotheslines shall be located adjacent to the small latrines.

The Contractor shall coordinate the construction of this facility based on the Construction Priority List, Table 7-1 in this Section.

The small latrines shall have a unit of measure per each and shall be paid for under bid item 0002AH, Small Latrines, of the Proposal Schedule (Section 00010).

### **3.9 CLASSROOM BUILDING**

The Contractor shall design and construct two (2) Classroom Buildings per the standard design drawing for “Classroom Building-Arch Span” in the Appendix.

The Contractor shall construct the Classroom Building in the location per the Concept Plan in the Appendix.

**The Contractor shall modify the “Classroom Building-Arch Span” Standard Building Design drawings to include HVAC with split-pack units per Section 01015.**

The Contractor shall coordinate the construction of this facility based on the Construction Priority List, Table 7-1 in this Section.

The Classroom Buildings shall have a unit of measure per each and shall be paid for under bid item 0002AJ, Classroom Building, of the Proposal Schedule (Section 00010).

### **3.10 TRAINING BUILDING**

The Contractor shall construct eight (8) Training Buildings using the standard design drawing titled “Training Building – Arch Span” in the Appendix.

The Contractor shall refer to the Concept Plan for the location of this facility type in relationship to other buildings and facilities on site.

The Contractor shall coordinate the construction of this facility based on the Construction Priority List, Table 7-1 in this Section.

The Training Buildings shall have a unit of measure per each and shall be paid for under bid item 0002AK, Training Building, of the Proposal Schedule (Section 00010).

### **3.11 MWR BUILDING**

The Contractor shall construct one (1) MWR building per the standard design drawing titled “MWR Building- Arch Span” in the Appendix.

The Contractor shall refer to the Concept Plan for the location of this facility type in relationship to other buildings and facilities on site.

The Contractor shall coordinate the construction of this facility based on the Facility Quantities and Prioritization table in this Section.

The MWR shall have a unit of measure lump sum and paid for under bid items 0002AL, MWR Building, of the Proposal Schedule (Section 00010).

### **3.12 PX BUILDING**

The Contractor shall construct two (2) PX building per the standard design drawig titled “Post Exchange Building – Arch Span” in the Appendix.

Provide ten (10) aggregate surfaced POV parking spaces in front of the PX Building.

The Contractor shall refer to the Concept Plan for the location of this facility type in relationship to other buildings and facilities on site.

The Contractor shall coordinate the construction of this facility based on the Facility Quantities and Prioritization table in this Section.

The PX Building shall have a unit of measure per each and paid for under the bid item 0002AM, PX Building, of the Proposal Schedule (Section 00010).

### **3.13 STORAGE BUILDING**

The Contractor shall construct ten (10) Storage Buildings per the Standard Design drawings titled “Storage Building – Arch Span” in the Appendix.

Provide outside storage and vehicle maneuver areas in support each Storage Building. The areas shall be surrounded with a 3 m high chain link fence with Y-channel and triple strand concertina wire. Provide a minimum of two (2) lockable double swing arm vehicle gates and one (1) lockable personnel gate per Storage Building compound. Construct the fence and gates per the standard design drawings in the Appendix. Install area lighting over the loading dock area. The fenced area shall be paved with 100 mm thick aggregate.

The Contractor shall coordinate the construction of this facility based on the Construction Priority List, Table 7-1 in this Section.

The storage buildings shall have a unit of measure per each and shall be paid for under the bid item 0002AN, Storage Building, of the Proposal Schedule (Section 00010).

### 3.14 BATTALION HEADQUARTERS BUILDING

The Contractor shall construct four (4) Battalion Headquarters Buildings per the standard design titled “Headquarters Building – Arch Span” in the Appendix with three (3) flagpoles per battalion headquarters building.

The Contractor shall construct the Flag Poles per the standard design drawings in the Appendix.

Provide ten (10) aggregate surfaced POV parking spaces in front of each Battalion Headquarters Building.

The Contractor shall construct the Battalion Headquarters Buildings in the locations per the Concept Plan in the Appendix.

The Contractor shall coordinate the construction of this facility based on the Construction Priority List, Table 7-1 in this Section.

The headquarter buildings shall have a unit of measure per each and shall be paid for under the bid item 0002AP, Battalion HQ Building, of the Proposal Schedule (Section 00010).

### 3.15 SMALL ADMIN BUILDING

The Contractor shall construct two (2) Small Admin Buildings per the Standard Building Design drawings titled “Admin Building – Arch Span” in the Appendix.

The Contractor shall construct the small admin buildings in the locations per the Concept Plan in the Appendix.

The Contractor shall coordinate the construction of this facility based on the Construction Priority List, Table 7-1 in this Section.

The Small Admin Buildings shall have a unit of measure per each and shall be paid for under the bid item 0002AQ, Small Admin Building, of the Proposal Schedule (Section 00010).

### 3.16 DPW BUILDING

The Contractor shall construct one (1) DPW building per the Standard Building Design drawings titled “DPW Building – Arch Span” in the Appendix.

The Contractor shall construct the DPW Building in the location per the Concept Plan in the Appendix.

The Contractor shall coordinate the construction of this facility based on the Facility Quantities and Prioritization table in this Section.

The DPW Building shall have a unit of measure lump sum and paid for under bid items 0002AR, DPW Building, of the Proposal Schedule (Section 00010).

### 3.17 MOTOR POOL AREAS

The Contractor shall design and construct five (5) Motor Pool Areas using the plans titled “Motor Pool Area” as a reference. Adequate vehicle maneuver areas shall be provided for all parking and facilities.

The Contractor shall construct the Motor Pool Areas in the locations per the Concept Plan in the Appendix.

Specific information for the Motor Pool Areas and support facilities are indicated in the table below:

Facility	Motor Pool Areas (Numbers below correspond to Concept Plan)					Total No. of Facilities
	#306	#613	#713	#909	#1008	
Motor Pool (Area in SM)	10,000 SM	10,000 SM	9,000 SM	3,000 SM	6,200 SM	5

Vehicle Maintenance Building	1	1	1	0	1	4
POL Storage Building	1	1	1	1	1	5

Each Motor Pool Area shall be completely enclosed by a 3 m high chain link fence with Y-channel and triple strand concertina wire and one (1) lockable double swing arm vehicle gates and one (1) lockable personnel gates. The ground grade shall slope away from the fence for at least 5 m and shall be kept a minimum of 3 m below the top of the fence for a distance of 10 m minimum. The Contractor shall construct the fence and gates per the standard design drawings in the Appendix. The entire enclosed fenced area shall have a 100 mm of aggregate surface. Exterior pole-mounted lighting along the fence line shall be provided to provide illumination for night-time operations and safe movement of vehicles within the motor pool compound.

The motor pool areas shall have a unit of measure lump sum and be paid for under the bid item 0002AS, Motor Pool, of the Proposal Schedule (Section 00010).

### 3.17.1 VEHICLE MAINTENANCE BUILDING

As part of the “Motor Pool Area” bid item, the Contractor shall construct four (4) Vehicle Maintenance Buildings inside the Motor Pool Areas. The Contractor shall construct the vehicle maintenance buildings per the standard design drawings titled “Vehicle Maintenance Building – Arch Span” in the Appendix.

The Contractor shall construct the Vehicle Maintenance Buildings in the locations per the Concept Plan in the Appendix. The design drawings shall include the following:

- a. There shall be a concrete hardstand apron outside all garage doors at a minimum 10 m width. Concrete hardstand apron shall support a minimum loading of a 3-axle, 30,000 kg vehicle without failing.
- b. There shall be at least 18 m clear distance around the vehicle maintenance building before any parking or between any other facilities.
- c. Emergency eye-wash stations shall be provided for each building or for every two (2) maintenance bays, as applicable.
- d. Battery rooms shall have emergency eyewash stations and one (1) acid resistant sink.
- e. An overhead vehicle tailpipe exhaust removal system shall be provided. The location of the system shall be coordinated so that it does not interfere with vehicle access.
- f. An air compressor shall be located outside and to the rear of the building under a canopy and enclosed in a security with gate.

The Contractor shall coordinate the construction of this facility based on the Construction Priority List, Table 7-1 in this Section.

### 3.17.2 POL STORAGE BUILDING

As part of the “Motor Pool Area” bid item, the Contractor shall construct five (5) POL Storage Buildings per the Standard Design drawings titled “POL Storage” in the Appendix.

The POL Storage Buildings shall be located adjacent to the Vehicle Maintenance Buildings. The Contractor shall construct the POL Buildings in the locations per the Concept Plan in the Appendix.

### 3.18 WEAPONS STORAGE

The Contractor shall construct seven (7) weapons storage buildings per the Standard Building Design drawings titled “Weapons Storage (ASP)” in the Appendix. The Contractor shall locate the weapons storage buildings per the Concept Plan in the Appendix.

The Contractor shall provide wooden racks for storing long-arm weapons vertically within structure. Racks shall not be furnished with locking bars.

The Weapons Storage Buildings shall be surrounded with a 3 m high chain link fence with Y-channel and triple strand concertina wire and one (1) lockable personnel gate. The Contractor shall fence in an area 30 m by 30 m around the weapons storage building. The Contractor shall construct the fence and gate per the standard design drawings in the Appendix.

The Contractor shall pave all areas inside the fenced area with 100 mm thick compacted crushed aggregate.

The Contractor shall provide exterior lighting on the corners of all buildings sufficient to light an area 30 m from the building.

The Weapons Storage Buildings shall have a unit of measure per each and be paid under bid item 0002AT, Weapons Storage, of the Proposal Schedule (Section 00010).

### **3.19 TRASH COLLECTION POINT**

The Contractor shall construct twenty (20) trash collection points per the standard drawings titled "Trash Collection Point". The Contractor shall place Trash Collection Points in locations convenient for personnel access. All trash collection points shall have paved vehicular access.

The Trash Collection Points shall have a unit of measure per each and paid under bid items 0002AU, Trash Collection Point, of the Proposal Schedule (Section 00010).

### **3.20 HELICOPTER PAD**

The Contractor shall design and construct one (1) helicopter pad. The helicopter pad shall consist of a 30 m by 30 m unreinforced concrete pad with 7.5 m wide thick aggregate paved shoulders. The helicopter pad shall not be lighted for night time operations. The Helipad pavement shall be designed based on the maximum point load of the helicopters that will be using the Helipad and results from calculations from California Bearing Ratio tests on the soil. All calculations shall be shown in the design analysis. The helicopter pad shall be designed in accordance with UFC 3-260-01 located in the Appendix. An asphalt paved access road shall be design and constructed to provide access to the helicopter pad.

The helicopter pads shall have a unit of measure lump sum and paid under bid items 0002AV, HLZ Expansion, of the Proposal Schedule (Section 00010).

### **3.21 FOOTBALL (SOCCER) FIELD**

The Contractor shall design and construct one (1) football field (soccer field) to international specifications. The football field shall be located per the Concept Plan in the Appendix. The Contractor shall connect to the existing grey water irrigation distribution system and shall design and construct an irrigation system for the football field. The irrigation system shall consist of above ground hose bibs. See paragraph 4.5.6 for additional information.

The soccer field shall have a unit of measure lump sum and paid under bid item 0002AW, Soccer Field, of the Proposal Schedule (Section 00010).

## **4. FORCE PROTECTION**

Construct force protection measures to include stone perimeter walls, guard towers, and personnel bunkers. Force protection requirements shall be in accordance with UFC 4-010-01, *Minimum DoD Anti-terrorism Standards for Buildings*; and UFC 4-010-02, *DoD Minimum Anti-terrorism Standoff Distances for Buildings*. A standoff distance of 45 m is required for billeting and high-occupancy facilities.

### **4.1 PERIMETER WALLS**

The Contractor shall construct the perimeter wall per the Concept Plan for the general location. The Contractor shall construct the wall per the standard drawing, Perimeter Wall, in the Appendix. The Perimeter Walls shall be between locations "Begin Southwest Wall Construction" and "End Southwest Wall Construction" and "Begin

Northeast Wall Construction” and “End Northeast Wall Construction” as shown on the Concept Plan in the Appendix labeled as #123.

The height of the walls shall measure the standard of 3.0 m from the inside and outside grades to the top of the concrete wall cap. The wall shall be topped with Y shaped outriggers and single-coil concertina style razor wire. The ground grade shall slope away from the wall for at least 5.0 m and shall be kept a minimum of 3.0 m below the top of wall for a minimum distance of 10 m.

The wall shall be designed to keep all pedestrian and truck traffic outside the compound from having a visual line of site into the compound. The perimeter road shall be at a standoff distance of no less than 3.0 m from the inside face of the perimeter wall.

The Perimeter Wall shall have a unit of measure lump sum and be paid under bid item 0003AA, Perimeter Wall, of the Proposal Schedule (Section 00010).

#### **4.2 ANTI-VEHICLE TRENCH**

The Contractor shall design and construct an anti-vehicular ditch per the standard design drawing titled “Anti-Vehicular Trench” in the Appendix. The ditches shall be between locations 1 and 2 as shown on the Concept Plan in the Appendix labeled as #124. See paragraph 4.5.2 for additional information concerning the anti-vehicle trench.

The Anti-Vehicular Trench shall have a unit of measure lump sum and be paid under bid items 0003AB, Anti-Vehicular Trench, of the Proposal Schedule (Section 00010).

#### **4.3 GUARD TOWERS**

The Contractor shall construct eight (8) Guard Towers per the standard drawings titled “Guard Tower” in the Appendix. The Contractor shall construct the guard towers at appropriate locations near the perimeter wall according to angle points, site lines, and elevations. The Contractor shall space the guard towers no more than 300 m apart.

The Contractor shall install manually operated 360-degree, omni-directional searchlight and communications at each guard tower. The guard towers shall be located such that the outside of the perimeter wall can be observed from two sides of the tower windows. The floor height shall be elevated as to allow the window sill to be 0.5 m above the top of the wall.

The lights shall be positioned to provide overlapping coverage and to avoid illuminating guard positions. White lights shall not be used inside the Guard Towers. Red, blue, or black lenses for interior Guard Tower lighting shall be used.

The area in the immediate exterior vicinity of the Guard Towers shall be provided with an all weather non-slip surface and shall be graded to sufficiently drain away from structure.

The guard towers shall have a unit of measure per each and paid under bid item 0003AC, Guard Tower, of the Proposal Schedule (Section 00010).

#### **4.4 PERSONNEL BUNKERS**

The Contractor shall construct approximately one hundred (100) Personnel Bunkers per the Standard Drawings titled “Personnel Bunker” in the Appendix. The Contractor shall choose locations for personnel bunkers based upon personnel density and locations.

The Personnel Bunkers shall have a unit of measure per each and paid under bid item 0003AD, Personnel Bunkers, of the Proposal Schedule (Section 00010).

#### **4.5 ENTRY CONTROL POINTS (ECP)**

The Contractor shall design and construct one (1) ECPs. . This ECP is identified as #121 as shown on the Concept Plan in the Appendix. the ECP shall consist of two (2) manually operated drop arm barriers, one (1) manually operated steel sliding gate, one (1) personnel gate, one (1) covered canopy, one (1) guard shack, Jersey

barriers, and an inspection/rejection area and turn out lane as indicated in the drawing titled "ECP Schematic" (C-9 Civil Details) in the Appendix.

The Contractor shall install floodlights at the guard shack to illuminate the entrance and inspection/rejection area for force protection personnel at the gate.

Construct the drop arm barriers, sliding gate, covered canopy, and guard shack per the standard design drawings in the Appendix.

The ECP shall have a unit of measure lump sum and be paid under bid items 0003AE, Entry Control Point (ECP), of the Proposal Schedule (Section 00010).

## 5. SITE DEVELOPMENT/IMPROVEMENTS

### 5.1 DEMOLITION

The Contractor shall remove and dispose of all debris, concrete, buildings and foundations. The Contractor shall be responsible for locating and paying all fees associated with removal and relocation of all debris and shall verify the location of debris disposal with the Contracting Officer. Scrap metal on site shall be moved to an area away from the site perimeter as directed by the COR and left for the host government to salvage. Demolished fencing and concertina wire shall be neatly rolled up and used fence posts and outriggers shall be neatly stockpiled for reuse by the host government. There will be no separate measurement or payment for demolition and the costs associated with any demolition work shall be accounted for by the Contractor in the bid item for which the demolition is associated.

**Note: The Contractor shall demolish the existing helicopter pad only after the new helicopter pad (see paragraph 4.3.2.21) is constructed and operational. The existing helicopter pad is located in the location of the 600 and 700 series of buildings on the Concept Plan in the Appendix.**

### 5.2 SITE GRADING AND STORMWATER MANAGEMENT

Site grading and drainage features shall conform to the requirements and references specified herein for development of the facility. The Contractor shall design and submit a Site Grading and Drainage Plan showing the location of all required drainage structures. Site grading shall be compatible with existing terrain/grading, provide adequate drainage to minimize flooding, and promote drainage to the nearest wadi or adequate drainage ditch for the entire development.

The Grading and Drainage Plan shall be properly contoured showing existing and proposed contour lines, location of drainage structures, details of all drainage structures, and show direction of flow in drainage swales and ditches. There shall be spot elevations shown at the beginning and end of all drainage structures, at inflection points, and spaced every 25 meters along the alignment. Proposed contour lines shall meet with existing contour lines on the Grading and Drainage Plan. The Grading and Drainage Plan shall be at a scale that all lines and structures can be easily seen and ascertained.

**There are several shallow drainage ditches in the site. A large drainage ditch shall be constructed around the perimeter to manage and redirect offsite storm-water runoff from the site.** The anti-vehicle trench to be constructed by the Contractor in the locations shown on the Concept Plan in the Appendix shall be utilized as the perimeter drainage ditch. The standard detail for the anti-vehicle trench in the Appendix shall be modified to accommodate the storm flows from off site. The anti-vehicle trench standard detail in the Appendix shall be the smallest cross section constructed, the Contractor shall widen or deepen the anti-vehicle trench as necessary for drainage purposes. The anti-vehicle/drainage trench shall be sloped to provide positive drainage to the offsite wadi/drainage ditch located as shown on the Concept Plan in the Appendix. **The anti-vehicle trench shall be protected from erosion using rip rap or concrete lining on the interior slopes (the slopes nearest to the compound) of the trench.** The anti-vehicle ditch/perimeter drainage trench shall be paid for under the bid item for "Anti-Vehicle Trench".

At locations of the existing fence and perimeter wall where drainage ditches cross, new concrete culverts shall be installed to manage the wastewater and stormwater flows. The culverts shall include personnel access denial system(s).

The installation of culverts, sized for maximum stormwater flows, shall be required at all road and walkway locations which cross drainage ditches. All culverts outside of the perimeter fence or wall shall include personnel access denial system(s).

The sides of all new earthen storm drainage (including canals, trenches, ditches, swales, etc) except the anti-vehicle trench shall not have a slope greater than 1 Vertical:3 Horizontal. The sides of storm drainage with greater slope is allowed, but the drainage must be lined with a stone and mortar finish or concrete lined to prevent erosion.

All drainage shall be conveyed off site; stormwater retention shall not be allowed as a drainage solution.

The site grading and stormwater management shall have a unit of measure lump sum and paid for under bid items 0004AA, Site Grading and Stormwater Management, of the Proposal Schedule (Section 00010).

### **5.3 ROADS AND FOOTPATHS/FIRE LANES**

The road layout shall provide ease of access to entrance points, buildings, loading ramps and docks, vehicle maintenance facilities, fuel points, trash collection points, grease traps, oil/water separators, etc. Roads shall be able to withstand 30,000 kg vehicles. A storm drainage system shall also be included.

The Contractor shall design and construct the entire road and parking network based on an analysis of geotechnical data.

The roads, footpaths, and fire lanes shall have a unit of measure lump sum and be paid for under bid items 0004AB, Roads and Footpaths/Fire Lanes, of the Proposal Schedule (Section 00010).

#### **5.3.1 ROADS**

As part of the "Roads and Footpaths/Firelanes" bid item, the Contractor shall design and construct two-lane asphalt paved roads within the proposed developments. The Contractor shall design and construct a two-lane asphalt paved road from ECP2 to the existing ECP as shown on the Concept Plan in the Appendix. The Contractor shall provide design drawings showing detailed cross sections and road structure and plan and profile drawings showing proper stationing. Roads shall be 8 m wide (4 m wide per lane for two lanes) unless otherwise noted and should be elevated from the graded site. Roads shall be sloped for proper surface runoff. Drainage ditches are required on both sides of the road; ditches shall be connected to a drainage network that shall convey drainage offsite. The hydrology of the area shall be evaluated to determine drainage ditch and structure sizes.

#### **5.3.2 FOOTPATHS/FIRELANES**

As part of the "Roads and Footpaths/Firelanes" bid item, the Contractor shall design and construct 1.5 m wide concrete foot paths. The concrete footpaths shall be required to connect all buildings, facilities, and features such as offices, classrooms, billeting, etc. Footpaths shall be appropriately graded for drainage. Footpaths shall be shown on the Site Plan and a detail of the foot paths shall be provided in the design drawings.

The Contractor shall design and construct firelanes on a minimum of three (3) sides of all buildings. Fire lanes shall be a minimum of three (3) meters wide and paved with a minimum of 100 mm of aggregate paving. Footpaths may be used as firelanes if the footpath is a minimum of 3 m wide. All footpaths that are used as firelanes shall be concrete paved.

### **5.4 WATER DISTRIBUTION SYSTEM**

The Contractor shall design and construct a potable water system to include underground pipe distribution system, service connections, and necessary appurtenances to all buildings and features requiring water supply. The Contractor shall install water meters on service lines prior to entering a facility. See Section 01015 for technical requirements.

Water demand required for fire fighting and for irrigation and landscaping needs shall not be included in design demand calculations.

**The water systems for all facilities within this scope of work shall connect to the existing Camp Zafar water main system. See sheet titled “Existing Utility System” in the Appendix for the existing and proposed water distribution system by others.**

The Water Distribution System shall have a unit of measure lump sum and paid for under bid items 0004AC, Water Distribution System, of the Proposal Schedule (Section 00010).

## **5.5 WASTEWATER COLLECTION SYSTEM**

The Contractor shall design and construct a sanitary sewer collection system for all facilities.

Sewer collection system shall consist of gravity sewer pipe and appurtenances such as manholes, cleanouts, building service connections and lift station(s). See Section 01015 for technical requirements.

**The wastewater collection system from all facilities within this scope of work shall connect to the existing Camp Zafar sewer collection system or the sewer collection system being constructed by others. The Contractor shall coordinate all tie in locations with the contractors constructing the main wastewater collection system. See sheet titled “Existing Utility System” in the Appendix for the existing and proposed sewer collection system.**

The wastewater collection system shall have a unit of measure lump sum and paid for under bid items 0004AD, Wastewater Collection System, of the Proposal Schedule (Section 00010).

## **5.6 GREY WATER IRRIGATION SYSTEM**

The Contractor shall design and construct a grey water irrigation system for distribution of grey water for irrigation purposes throughout the proposed development.

Grey water irrigation system shall consist of underground pipe distribution system, service connections, and necessary appurtenances along all vehicle circulation routes, major open areas, football fields and any other features requiring irrigation. The Contractor shall install hose bibs every 100 meters for access to grey water irrigation. All hose bibs shall be clearly marked in Dari, Pashtun and English “Irrigation Only-Do Not Drink”.

**The grey water irrigation system for all facilities within this scope of work shall connect to the existing Camp Zafar grey water irrigation system or the grey water irrigation system being constructed by others. The Contractor shall coordinate all tie in locations with the contractors constructing the main grey water irrigation system. See sheet titled “Existing Grey Water System” in the Appendix for the existing and proposed system.**

The irrigation system shall have a unit of measure lump sum and paid for under bid items 0004AE, Grey Water Irrigation System, of the Proposal Schedule (Section 00010).

## **5.7 UNDERGROUND ELECTRICAL DISTRIBUTION SYSTEM**

The Contractor shall design and construct an underground electrical distribution system to provide electricity to all facilities within this scope of work. The Contractor shall provide and install all appropriate transformers, cable and any other equipment necessary for a fully functioning electrical distribution system. All electrical design and installation shall meet British Standard BS 7671 requirements. All wiring shall be run and pulled through conduits. Electrical receptacles shall be provided as indicated. Conductors and circuits shall be sized for the specific design loads. Contractor shall connect to existing electrical system. Utilization voltage shall be shall be 220/380V, 50Hz.

Contractor shall design all interior electrical systems and any required exterior lighting as described in Section 01015, Technical Requirements. There shall be no lightning protection systems except as indicated on the standard building designs.

The electrical distribution system shall have a unit of measure lump sum and be paid for under bid items 0004AF, Underground Electrical Distribution System, of the proposed schedule.

## **5.8 COMMUNICATION SYSTEM BACKBONE**

Provide communication conduits (backbone only), space requirements, and feeds in designated facilities as well as a communication system for perimeter security functions. Feeds shall run to all guard towers and guard shacks/houses and back to a central communications room in the designated facility communications room. The communications wiring shall be installed by others. Communication infrastructure shall be designed in accordance with Section 01015, Technical Requirements.

Backbone Pathway: Telecommunication pathways from the telecommunications entrance facility to telecommunications room(s), and, telecommunications equipment rooms (backbone conduits) shall be installed.

The communication system shall have a unit of measure lump sum and be paid for under bid items 0004AG, Communication System Backbone, of the Proposal Schedule (Section 00010).

## **6. OPTION ITEMS**

### **6.1 BATTALION HEADQUARTERS BUILDING**

As an option for the Government, the Contractor shall construct one (1) Battalion Headquarters Buildings per the standard design drawing titled "Headquarters Building – Arch Span" in the Appendix with three (3) flagpoles constructed near the entrance.

The Contractor shall construct the Battalion Headquarters Buildings in the locations for "Battalion Headquarters (Option)" per the Concept Plan in the Appendix.

The Contractor shall construct the Flag Poles per the standard design drawings in the Appendix. Provide ten (10) aggregate surfaced POV parking spaces in front of each Battalion Headquarters Building.

The Battalion Headquarters Building shall have a unit of measure lump sum and be paid for under option bid item 0007, Battalion Headquarters Building, of the Proposal Schedule (Section 00010).

### **6.2 SMALL ADMIN BUILDING**

As an option for the Government, the Contractor shall construct two (2) Small Admin Buildings per the standard design drawings titled "Admin Building – Arch Span" in the Appendix.

The Contractor shall construct the Small Admin Buildings in the locations for "Admin Building (Option)" per the Concept Plan in the Appendix.

Provide ten (10) aggregate surfaced POV parking spaces in front of each Admin Building.

The Small Admin Building shall have a unit of measure lump sum and be paid for under option bid item 0008, Small Admin Building, of the Proposal Schedule (Section 00010).

### **6.3 OFFICERS BARRACKS**

As an option for the Government, the Contractor shall construct one (1) officers barracks per the standard design drawing titled "Officers Barracks – Large – Arch Span" in the Appendix.

The Contractor shall construct the Small Admin Buildings in the locations for "Officers Barracks (Option)" per the Concept Plan in the Appendix.

The Officers Barracks - Large shall have a unit of measure lump sum and be paid for under option bid item 0009, Officers Barracks, of the Proposal Schedule (Section 00010).

## 6.4 MOTOR POOL AREAS

As an Option to the Government, the Contractor shall design and construct four (4) Motor Pool Areas using the plans titled “Motor Pool Area” as a reference. Adequate vehicle maneuver areas shall be provided for all parking and facilities.

The Contractor shall construct the Motor Pool Areas in the locations per the Concept Plan in the Appendix.

Specific information for the Motor Pool Areas and support facilities are indicated in the table below:

Facility	Motor Pool Areas (Numbers below correspond to Concept Plan)				Total No. of Facilities
	#118	#217	#410	#517	
Motor Pool (Area in SM)	3,000 SM	20,000 SM	10,000 SM	30,000 SM	4
Vehicle Maintenance Building	1	1	1	2	5
POL Storage Building	1	1	1	1	4

Each Motor Pool Area shall be completely enclosed by a 3 m high chain link fence with Y-channel and triple strand concertina wire and one (1) lockable double swing arm vehicle gates and one (1) lockable personnel gates. The ground grade shall slope away from the fence for at least 5 m and shall be kept a minimum of 3 m below the top of the fence for a distance of 10 m minimum. The Contractor shall construct the fence and gates per the standard design drawings in the Appendix. The entire enclosed fenced area shall have a 100 mm of aggregate surface. Exterior pole-mounted lighting along the fence line shall be provided to provide illumination for night-time operations and safe movement of vehicles within the motor pool compound.

The motor pool areas shall have a unit of measure lump sum and be paid for under the option bid item 0010, Motor Pool, of the Proposal Schedule (Section 00010).

### 6.4.1 VEHICLE MAINTENANCE BUILDING

As part of the “Motor Pool Area” option bid item, the Contractor shall construct five (5) Vehicle Maintenance Buildings inside the Motor Pool Areas. The Contractor shall construct the vehicle maintenance buildings per the standard design drawings titled “Vehicle Maintenance Building – Arch Span” in the Appendix.

The Contractor shall construct the Vehicle Maintenance Buildings in the locations per the Concept Plan in the Appendix. The design drawings shall include the following:

- g. There shall be a concrete hardstand apron outside all garage doors at a minimum 10 m width. Concrete hardstand apron shall support a minimum loading of a 3-axle, 30,000 kg vehicle without failing.
- h. There shall be at least 18 m clear distance around the vehicle maintenance building before any parking or between any other facilities.
- i. Emergency eye-wash stations shall be provided for each building or for every two (2) maintenance bays, as applicable.
- j. Battery rooms shall have emergency eyewash stations and one (1) acid resistant sink.
- k. An overhead vehicle tailpipe exhaust removal system shall be provided. The location of the system shall be coordinated so that it does not interfere with vehicle access.

1. An air compressor shall be located outside and to the rear of the building under a canopy and enclosed in a security with gate.

The Contractor shall coordinate the construction of this facility based on the Construction Priority List, Table 7-1 in this Section.

## **6.4.2 POL STORAGE BUILDING**

As part of the “Motor Pool Area” option bid item, the Contractor shall construct four (4) POL Storage Buildings per the Standard Design drawings titled “POL Storage” in the Appendix.

The POL Storage Buildings shall be located adjacent to the Vehicle Maintenance Buildings. The Contractor shall construct the POL Buildings in the locations per the Concept Plan in the Appendix.

## **6.5 VEHICLE FUEL POINT**

As an Option to the Government, the Contractor shall design and construct one (1) Vehicle Fuel Point with fuel dispensers, fuel tanks, one (1) Operators Building and one (1) wash rack.

The Contractor shall design and construct maneuver areas for vehicle ingress/egress to the dispensers fuel filling point. Grade and level the parking area with appropriate slope and drainage shall tie into the storm drainage system.

The standard design drawings in the Appendix for the “Fuel Storage and Vehicle Re-Fueling Point” shall be used as a reference for design. The fuel point shall be designed to accommodate three (3) 7-ton vehicles side by side in accordance with the Concept Plan. Each refueling point shall have a metal roof canopy per the standard design in the Appendix. The Contractor shall provide fire extinguishers at each fuel dispenser.

The fuel point shall have a unit of measure lump sum and paid for under the option bid item 0011, Vehicle Fuel Point, of the Proposal Schedule (Section 00010).

### **6.5.1 DISPENSERS AND FUEL TANKS**

As part of the “Vehicle Fuel Point” option bid item, the Contractor shall design, install, and construct Dispensers and Fuel Tanks for a complete operational vehicle refueling facility. There shall be three (3) diesel and three (3) MOGAS fuel dispensers.

The Contractor shall provide 200 mm diameter by 1,000 mm high concrete-filled steel bollards around the pumps to prevent damage from vehicles. Around the fuel pumps and dispensers there shall be a concrete pad 3 meters wide on both sides of the fuel dispensers. The concrete hard surface pad shall extend for the full length of the dispensing area as shown in the standard drawings.

The Contractor shall provide emergency shut-off capability to pumps, high/low level alarm and high level shut-off system for tanks, breakaway nozzles, gauging system, explosion proof lighting, and fire extinguishers. The Contractor shall provide electrical service to the fuel pumps in accordance with the manufacturer’s recommendations. The Contractor shall design and construct area lighting for general illumination of vehicle fuel dispensing areas. All lighting and electrical devices shall be explosion-proof.

The Contractor shall design and construct a metal roof canopy for each fuel dispenser per the standard design in the Appendix.

The Contractor shall design and construct above-ground fuel tanks. Fuel Storage capacity shall be 50,000 liters of diesel fuel and 5,000 liters of MOGAS. The fuel lines shall be gravity feed and the fuel tanks shall have a sight glass or dipstick measuring system. Rubber hoses shall not be used. The storage tanks shall be single walled surrounded by a concrete containment structure for spill containment. The storage tanks shall have adequately protected distribution lines to the vehicle refueling points. The tanks shall be surrounded by concrete T-walls (Alaska barriers) and have a metal roof to keep precipitation out of the tank pit. The tank pit floor shall be sloped to a sump pit for extracting water and/or spilled fuel from the spill containment area. Fuel containment shall be 110% of the fuel tank capacity. The dispensing meter shall be mechanical type. Hot-dipped galvanized tanks or pipe in the fuel system shall not be used.

**The Contractor shall provide a full supply of fuel to the tanks at the time of turnover to the Government.**

The standard design titled “Fuel Storage and Vehicle Re-Fueling Point” in the Appendix for the Fuel Storage and Vehicle Fuel Point shall be used as a reference for the design of the area.

### **6.5.2 FUEL OPERATORS BUILDING**

As part of the “Vehicle Fuel Point” option bid item, the Contractor shall construct one (1) Fuel Operators Building per the standard design drawing titled “Fuel Operators Building” in the Appendix. The fuel operators building shall be located within the vehicle fuel point area.

### **6.5.3 VEHICLE WASH RACK**

As part of the “Vehicle Fuel Point” option bid item, the Contractor shall design and construct one (1) Vehicle Wash Rack with water service by a pressure pump to the nearest water source, spigot, water hose, and nozzle. Provide a broom finished concrete pad elevated with appropriate slope for drainage run-off to a trench drain. Extend drainpipes from trench drain away from the wash bays, with grit chambers, an oil/water separator, and clean outs, and tie into the storm drainage system.

The vehicle wash station shall include elevated concrete pads to accommodate 3 vehicles side by side, as indicated on the Concept Plan. The Vehicle Wash Racks shall be built according to the Appendix drawing, Wash Rack and per the requirements of Section 01015. All surface inside the compound up to the elevated concrete racks, shall be designed and constructed with 150 mm of aggregate surface. The Contractor shall allow for adequate vehicle maneuver space.

## **6.6 ENTRY CONTROL POINTS (ECP)**

As an Option to the Government, the Contractor shall design and construct one (1) ECP. This option ECP is identified as #120 as shown on the Concept Plan in the Appendix. The ECP shall consist of two (2) manually operated drop arm barriers, one (1) manually operated steel sliding gate, one (1) personnel gate, one (1) covered canopy, one (1) guard shack, Jersey barriers, and an inspection/rejection area and turn out lane as indicated in the drawing titled “ECP Schematic” (C-9 Civil Details) in the Appendix.

The Contractor shall install floodlights at the guard shack to illuminate the entrance and inspection/rejection area for force protection personnel at the gate.

Construct the drop arm barriers, sliding gate, covered canopy, and guard shack per the standard design drawings in the Appendix.

The ECP shall have a unit of measure lump sum and be paid under option bid item 0012, Entry Control Point (ECP), of the Proposal Schedule (Section 00010).

## **6.7 PERIMETER WALL**

As an Option to the Government, the Contractor shall construct the perimeter wall per the Concept Plan for the general location. The perimeter walls for this option item shall be between locations “Begin Option Wall Construction” and “End Option Wall Construction” as shown on the Concept Plan in the Appendix labeled as #122. The Contractor shall follow the standard construction drawing, Perimeter Wall, in the Appendix.

The height of the walls shall measure the standard of 3.0 m from the inside and outside grades to the top of the concrete wall cap. The wall shall be topped with Y shaped outriggers and single-coil concertina style razor wire. The ground grade shall slope away from the wall for at least 5.0 m and shall be kept a minimum of 3.0 m below the top of wall for a minimum distance of 10 m.

The wall shall be designed to keep all pedestrian and truck traffic outside the compound from having a visual line of site into the compound. The perimeter road shall be at a standoff distance of no less than 3.0 m from the inside face of the perimeter wall.

The Perimeter Wall shall have a unit of measure lump sum and be paid under option bid item 0013, Perimeter Wall, of the Proposal Schedule (Section 00010).

**6.8 ANTI-VEHICLE TRENCH**

As an Option to the Government, the Contractor shall design and construct an anti-vehicular ditch per the standard design drawing titled “Anti-Vehicular Trench” in the Appendix. The ditches for this option item shall be between locations 2,3,4,and 5 as shown on the Concept Plan in the Appendix labeled as #125. See paragraph 4.5.2 for additional information concerning the anti-vehicle trench.

The Anti-Vehicular Trench shall have a unit of measure lump sum and be paid under option bid items 0014, Anti-Vehicular Trench, of the Proposal Schedule (Section 00010).

**7. COMPLETION OF WORK**

All work required under this contract shall be completed within 540 calendar days including government review time from Notice to Proceed for site work.

The order of construction for all buildings and facilities shall be prioritized. The contractor shall construct in accordance with the Construction Priority Schedule and the requirements specified in Section 00150, Design/Build Process.

All work under this contract shall be completed and buildings ready for beneficial occupancy in accordance with the Construction Priority Schedule. The Required Period of Performance is stated in Days following the NTP, as described in the Table below:

**Table 7-1: Construction Prioritization Schedule**

<b>PRIORITY 1: 270 Days Completion from NTP</b>
<b>SITE WORK AND FACILITIES</b>
Helicopter Pad
Water Distribution System
Wastewater Collection System
Electrical Distribution System
Perimeter Stone Wall
Guard Towers
Entry Control Points
<b>PRIORITY 2: 360 Days Completion from NTP</b>
<b>FACILITIES TO BE CONSTRUCTED</b>
Officers Barracks
Small Officers Barracks
Combination NCO/Enlisted Barracks
Enlisted Barracks

NCO Barracks Building
Small NCO Barracks
Large Latrine
Small Latrine
<b>PRIORITY 3: 450 Days Completion from NTP</b>
<b>FACILITIES TO BE CONSTRUCTED</b>
Battalion Headquarters Building
Admin Building
Motor Pool Areas
Vehicle Maintenance Buildings
Vehicle Refueling Points
Weapons Storage Buildings
Roads
<b>PRIORITY 4: 540 Days Completion from NTP</b>
<b>FACILITIES TO BE CONSTRUCTED</b>
All Remaining Work Items

-- END OF SECTION --