

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT			1. CONTRACT ID CODE J	PAGE OF PAGES 1 12
2. AMENDMENT/MODIFICATION NO. 0002	3. EFFECTIVE DATE 06-Sep-2007	4. REQUISITION/PURCHASE REQ. NO. W26WKS70847004		5. PROJECT NO.(If applicable)
6. ISSUED BY AFGHANISTAN ENGINEER DISTRICT US ARMY CORPS OF ENGINEERS KABUL APO AE 09356	CODE W917PM	7. ADMINISTERED BY (If other than item 6) See Item 6		
8. NAME AND ADDRESS OF CONTRACTOR (No., Street, County, State and Zip Code)		X	9A. AMENDMENT OF SOLICITATION NO. W917PM-07-R-0109	
		X	9B. DATED (SEE ITEM 11) 09-Aug-2007	
			10A. MOD. OF CONTRACT/ORDER NO.	
			10B. DATED (SEE ITEM 13)	
CODE	FACILITY CODE			
11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS				
<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)				
13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.				
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.) The purpose of this amendment is to incorporate a revised 01010 Section 5 Completion of Work extending the option period. Changes are marked with a vertical bar in the left margin.				
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	15C. DATE SIGNED	16B. UNITED STATES OF AMERICA		16C. DATE SIGNED
_____ (Signature of person authorized to sign)		BY _____ (Signature of Contracting Officer)		06-Sep-2007

SECTION SF 30 BLOCK 14 CONTINUATION PAGE

SUMMARY OF CHANGES

SECTION 00800 - SPECIAL CONTRACT REQUIREMENTS

The following have been added by full text:

REVISED SECTION 01010**SECTION 01010
REVISED 6 September 2007
SCOPE OF WORK****1. GENERAL**

The project consists of the design and construction of new camp facilities, and rehabilitation of existing facilities within the ANA Compound Jalalabad, Afghanistan. Project site is located adjacent to Jalalabad Road about 2 km West of the Jalalabad Airport, and is also known as the Nangarhar Province Garrison. Refer to appendices for approximate site location. The project is to provide design, materials, labor, and equipment to construct and rehabilitate buildings, utilities, and other infrastructure for the station of 750 ANA soldiers. The work within this contract shall meet and be constructed in accordance with current International Building Codes (IBC) and Life Safety Codes (NFPA-101).

1.1 ENGLISH LANGUAGE REQUIREMENT

All information shall be presented in English. The Contractor shall have a minimum of one English-speaking representative on site to communicate with government representatives at all times when work is in progress. Contractor shall also provide one copy of all documents translated into Pashtu/Dari.

1.2 SUBMITTALS

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

1.3 COST ESTIMATE

The contractor shall prepare a parametric construction cost estimate for AED Engineering data collection purposes. The contractor shall prepare a thorough, well-supported, estimate reflecting the final design features, construction schedule and conditions, and any construction phasing requirements. The cost estimate shall be submitted as part of the 35%, 99% and Final design submittals as required for this contract.

1.4 CQM TRAINING REQUIREMENT

Before project design and construction begin, the Contractor's Quality Control Manager is required to have completed the U.S. Army Corps of Engineers CQM course, or equivalent. The Construction Trades Training Center (CTTC) in Jalalabad, Afghanistan provides a course that satisfies the requirement. Courses are offered at regular intervals. For enrollment and course information contact CTTC at the following:

Mhd. Haris

e-mail: mharis@afghanreconstruction.org

Telephone: 0700 08 0602

Pervaiz
e-mail: adpzmuj@yahoo.com
Telephone: 0700 61 3133

2. LOCATION

The site is located in Jalalabad, Afghanistan. Site maps are attached as part of appendix. The site is within following coordinates:

Point 1	70° 20' 54.341" E, 34° 31' 35.767" N
Point 2	70° 21' 33.556" E, 34° 31' 35.292" N
Point 3	70° 21' 32.976" E, 34° 31' 2.838" N
Point 4	70° 20' 53.765" E, 34° 31' 3.313" N

3. UNEXPLODED ORDNANCE (UXO) and De-mining

UXO removal and de-mining work will be carried out by another government contract prior the start of this project.

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

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

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

4. SUMMARY OF WORK

4.1 CONTRACTOR REQUIREMENTS

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

4.1.1 GENERAL REQUIREMENTS FOR FACILITIES

All requirements set forth in the Scope of Work, but not included in the Technical Requirements, shall be considered as set forth in both, and vice versa. Provide heating for all facilities unless otherwise stated in Section 1010 or 1015. Do not provide cooling for facilities unless otherwise stated in Section 1010 or 1015. All toilets shall be eastern style. All eastern toilets shall face north or south.

All standard construction amenities and details such as heating, lighting, site drainage, utility connections, etc. shall be implied as a design and construction requirement. Drawings referenced are contained in Section 01015 or Appendix.

4.1.2 Base Bid Items for this project

1. Architecture and engineering design required to construct the base items.
2. Site Development (Construction)
 - 2-1 Grading and storm drainage system for the construction site.
 - 2-2 Water Storage and Distribution System to all constructed facilities with the capability specified herein.
 - 2-3 Sewage and treatment system with discharge channel with the capability specified herein
 - 2-4 Electric generators, fuel tanks and the distribution system for with the capability to support all base and option item specified in this contract plus 25% additional reserve.
3. Buildings (Construction)
 - 3-1 DFAC facility
 - 3-2 Barracks for 750 soldiers of 10 Type-A Barracks and 2 Type-B barracks
 - 3-3 Shower and Latrines Facility

4.1.3 Option Items

- 4-0 Architecture and engineering design required to construct the base items.
- 4-1 Gravel parking, roads, and walks
- 4-2 Backup water well and pump house
- 4-3 Refurbish an Office Building
- 4-4 Refurbish four(4) Barrack Building
- 4-5 Repair Perimeter Wall
- 4-6 Motor Pool facilities
- 4-7 Pave Gravel Road
- 4-8 Construct Five(5) Guard Towers
- 4-9 Refurbish ECP

4.2 MASTER PLANNING

The Contractor shall prepare a site Master Plan based on information contained in the Request For Proposal (RFP). The development of the master plan will include participation in a design charrette that will be conducted at the Corps of Engineers Headquarters Office in Kabul. The contractor must verify the requirements, site condition, and code compliance in accordance of section 1010 and section 1015 of this contract.

4.3 WATER SYSTEM

Design a water system, to include the connection to city water source, water pump, hydro-pneumatic water storage tank, and underground pipe distribution system. The water storage tank shall have storage capacity of one day demand based on 155 liters per person of total 750 soldiers. The storage tank and distribution system shall be designed to provide a minimum 276 kPa (40 psi) at ground level at all points in the systems and minimum pressures of 207 kPa (30 psi), under peak domestic flow conditions in small sections. Maximum water pressures in distribution mains and service lines shall not exceed 517 kPa (75 psi) at ground elevation. Weather exposed water storage tanks and pipes shall be insulated to prevent freezing during winter

4.3.1 BACK UP WATER WELL AND PUMP HOUSE (option item)

Design and construct a backup water system to include development of a ground well water source; water well pumps and service booster pumps, chlorination and water storage tank(s) sized for the entire concept plan of 2,000 occupants with one day of storage; and water distribution system to serve the

entire installation in case of the failure of the city water supply with a minimum of 40 psi pressures throughout.

4.4 SANITARY SEWER SYSTEM

Sanitary sewer collection and treatment system shall be designed and constructed by contractor. Sewer collection system shall consist of gravity sewer pipe and appurtenances such as manholes, cleanouts, a grease trap for the DFAC, and building service connections. The gravity sewer collection system shall connect to the sewage treatment and effluent disposal system. The wastewater treatment system shall be underground. The treatment system capacity shall be sized to 150,000 Liter/per day. The sewage treatment system shall be pre-engineered and pre-manufactured type (except the tanks) by a well known manufacturer in the industry. The treated water effluent disposal system shall be designed and constructed with sound environmental consideration. No sewer holding tanks allowed.

4.5 GRADING AND GRAVEL WORK

The user will demolish and remove any existing structures and debris at the sites designated for new building construction above surface grade. The Contractor shall be responsible for grading and earth work for the foundations. The Contractor shall perform complete final site grading and installation of all required drainage structures per the Drainage Plan.

Native 25mm crushed stone shall be placed around all buildings to a depth of 100 mm. Gravel shall extend from the building wall or building landscaping out 2m. All sub-base for graveled areas must be compacted to at least 95% proctor density.

4.6 SITE ELECTRICAL DISTRIBUTION SYSTEM

POWER SYSTEM: The contractor shall design a power source with capacity to support all base items only in this contract. The system includes generator(s), fuel storage, and underground electrical distribution to include manholes, connection point for option items. All electrical design and installation shall meet NEC (NFPA 70) requirements. Electrical receptacles shall be provided as indicated in section 01015, Technical Requirements. Conductors and circuits shall be sized for the specific loads. All wiring shall be run and pulled through properly sized conduits. The power plant shall include prime power generator and a backup generator, switchgear, and all appurtenances necessary to meet the electrical demand. Provide a properly ventilated generator shack over generators.

Contractor shall provide generators based on the N+1 concept. Where 'N' would be the required number of generator(s) and '1' being a 'stand-by' unit. Generation shall supply 125% of the maximum calculated demand load plus the stand-by generator in reserve. Contractor shall design and all interior electrical systems as described in section 01015 Technical Requirements and shall design and install any required exterior lighting, as described in section 01015.

4.7 FORCE PROTECTION MEASURES

4.7.1 Refurbish the ECP and construct five (5) Guard towers (option items)

Entry Control Points (ECP) force protection design shall be in accordance with Joint Security Directorate Antiterrorism/Force Protection Guide, March 2002. Entry control point shall be provided with a passive ram barrier or drop arm gate capable of stopping a large truck traveling at 60kph. Provide jersey barriers in a serpentine pattern to slow the traffic. Allow an area where trucks/vehicles can be blocked from movement while they are being inspected. Allow a turn out point where a vehicle being rejected from entering the compound can turn around and drive out without blocking the other vehicles behind. Install sufficient lighting to allow for close inspection of all sides of vehicles to include the inside. Install high intensity lighting directed outward as to illuminate all external approaches to the ECP while not backlighting the ECP or having light shine into the ECP

Guard tower design and construction shall be done according to the drawing provided in the appendix-D.

Guard tower shall be a minimum of 3m x 3m in size. The floor height shall be elevated as to allow the window sill to be 0.5m above the top of the wall. The guard tower shall be constructed of reinforced CMU walls with a metal door and horizontal sliding windows with metal window frame, 800mm high x 1000mm wide. Glazing for the windows shall use laminated shattering resistant glass. Windows shall be located on all 4 sides to provide a 360 degree viewing area. Windows shall not be screened (but should be tinted). Window sills shall be adequately reinforced with metal to allow for mounting of crew served weapon pintel's. Open window shall be wide enough to allow for crew served weapons to be swung in an arc of no less than 120 degrees. The stairs and platforms shall be constructed per OSHA Standards, with entry to the tower through a lockable security door. Guard Tower shall have heating and cooling with split pack HVAC unit. Guard towers shall be provided with general lighting and shall be fitted with one 360-degree omni-directional searchlight. One weather-resistant duplex receptacle shall be provided as required for general use. The area in the immediate exterior vicinity of the guard tower shall be provided with an all weather non-slip surface and shall be graded to sufficiently drain away from structure.

4.7.1 Repair perimeter wall (option item)

Repair the damaged and deteriorating sections of the Perimeter Wall to match existing good section wall profile or better. The amount of repair work to be provided shall be equal to 2100 meters new wall construction (excluding wall foundation work but including related demolition work).

4.8 ROAD NETWORK, SIDEWALK, AND PARKING (option item)

The Contractor shall design and construct the entire road and parking network. Gravel walkways shall be installed between buildings and cover all areas of anticipated foot or vehicle traffic to reduce erosion and to provide dust control. The roads shall be designed to carry traffic of a 52 ton tractor trailer vehicle (belonging to the garrison) with the road having a minimum 7 meter width and 400 meters in total length for the base bid. Provide temporary gravel parking areas of for total 20 vehicles. Vehicles must be accessible to all buildings. Sub-base for graveled areas must be compacted to 95% proctor density. A storm drainage system shall also be included. Base bid includes gravel paving, option bid include the asphalt paving over all roads and parking, and concrete sidewalks. Road shall be designed per Section 01015, Technical Requirements.

4.9 Not used

4.10 BARRACKS

The Contractor shall design and construct ten (10) Type A barracks and two (2) Type B barracks shown in Appendix A.

The Contractor shall incorporate the following special features into the Type A barracks:

- 1) Provide 6 ceiling fans and 48 power outlets evenly located in each barrack building.
- 2) Concrete stoops shall be provided at all exterior doors.
- 3) Wall mounted electric forced air and radiating heaters shall be used to maintain a minimum temperature of 18 degree Celsius during winter.
- 4) Maintain a building envelop of R-22 wall insulation, R-30 roof insulation, double insulated windows, and insulated metal doors.
- 5) Select the optimal construction method proved to be economic, durable, and fast-erecting.

- 6) The floor is smooth concrete finished with gray colored sealer.
- 7) Provide 10% exterior area for window with double insulated glass glazing.
- 8) Flat ceilings shall be located 3m above finish floor. Slopped ceilings shall be located at an average height of 3m above finished floor, with the lowest point no less than 2.6m above finished floor.
- 9) Provide at least two pair of RJ45 outlets (for telephone and data) in the building with wires connected to central location in the DFAC.

The Contractor shall incorporate the following special features into the Type B barracks:

- 10) Provide split HVAC unit for VIP rooms in each barrack.
- 11) Bath, toilets and shower rooms are finished with ceramic wall and floor. Provide proper ventilation systems in those rooms.
- 12) Provide power outlets in each bedroom so the distance between two outlets will not exceed 3 m.
- 13) Provide a ceiling fan in each bedroom.
- 14) Concrete stoops shall be provided at all exterior doors.
- 15) Wall mounted electric forced air and radiating heaters shall be used to maintain a minimum temperature of 18 degree Celsius during winter for bedrooms and toilet/shower room.
- 16) Maintain a building envelop of R-22 wall insulation, R-30 roof insulation, double insulated windows, and insulated metal doors.
- 17) Select the optimal construction method proved to be economic, durable, and fast-erecting.
- 18) The floor is smooth concrete finished with gray colored floor sealer. The VIP rooms are provided with mid-grade carpet.
- 19) Provide 10% exterior area for window with double insulated glass glazing.
- 20) Flat ceilings shall be located 3m above finish floor. Sloped ceilings shall be located at an average height of 3m above finished floor, with the lowest point no less than 2.6m above finished floor.
- 21) Provide at least one pair of RJ45 outlets (for telephone and data) at each VIP room and Bedroom in the building with wires connected to central location in the DFAC.

One of the construction method recommended here is the 3-D Wall Panel System, which consists of a polystyrene panel core, welded wire mesh and shotcrete thick skin on both side of the insulation core. The Type A Barracks can be built entirely by the 3-D Panel System. The government can provide partial construction drawings that will allow the construction work to start immediately. Type B Barracks can be built with 3-D Panel System for envelops (roof and exterior walls). Interior partitions can be built with metal studs with drywall system, masonry, or the 3-D system whichever is more economic.

4.11 DFAC, DINING FACILITY AND STORAGE YARD

The contractor shall design and construct a Dining Facility (DFAC) providing cafeteria-style feeding and local style meals. Spaces include dining areas and kitchen facilities outfitted with propane-burning built-in stoves in accordance with local practice. The schematic layout is shown in Appendix-B. The contractor shall incorporate the following special features into the DFAC:

- 1) Provide a dining area of 8m x 28m area with entry and exit vestibules. Provide 6 hand wash stations in the entry vestibule. Trough type sinks shall be used.
- 2) Provide 5 gas fired cooking stoves and 2 tea brewing stoves. Cooking Stove information is attached in Appendix J. Provide a ventilation system (hood) over stoves that are capable of preventing smoke and steam generated during cooking from entering other areas.
- 3) All floors in buildings shall be terrazzo finished with clear stone sealer. Floor drains shall be incorporated in the dining areas with the floor sloped to drain.
- 4) Provide at least 4 floor drains in Kitchen common area. A grease trap shall be installed to prevent undesirable discharge into the sewer system.
- 5) Provide one walk-in cooler and one walk-in freezer per Section 01015. Provide other electrical outlets for other mobile refrigerators/freezers and cooking equipments.
- 6) Provide 10% exterior area for window with double insulated glass glazing.
- 7) Provide a depressed door mat for mud removal at the entrance.
- 8) Provide evaporative cooling and heat pump AC system for the dining facility.
- 9) Provide one large pot washing sink with a low rim/curb height, one two compartment sink, one three-compartment sink, and one mop sink at the cooking and preparation area. Provide one two-compartment sink at Rough Preparation Room. Provide hot water to kitchen sinks, hand wash stations, and the shower unit through electric water boiler(s).
- 10) Provide Propane Storage shack with capacity for four (4) weeks operation. Install a canopy and partition to protected propane tanks used for stoves at connection point exterior to the building.
- 11) Provide an office, a bathroom with one shower, one toilet, and a hand sink, and storage rooms shown in the Appendix. Provide at least one pair of RJ45 outlets (for telephone and data) in the office, with wires connected to the corner room to a central connection point for all communication service connection.

4.12 RENOVATE ONE OFFICE BUILDING (Option Item)

Renovate one of the existing buildings as administrative offices. The existing building measures approximately 9.5m x 27m and is two-story high.

- 1) Replace all windows with insulated double pane windows.
- 2) Provide interior fluorescent lighting with uniform level of minimum lighting in accordance with Section 01015 throughout the buildings. Provide electrical outlets on each wall of every room and ensure they are spaced no more than 4m apart. Provide at least one pair of RJ45 outlets (for telephone and data) at each power outlet location in offices, with wires connected to one central location in the building convenient for service connection.

- 3) Refinish existing concrete floors with slip-resistant ceramic tiles.
- 4) Repair, patch, smooth, and paint walls and ceilings. Provide tile wall base to match the floor material.
- 5) Provide new doors for all rooms
- 6) Provide HVAC split unit for all spaces
- 7) Clean, repair, patch, and paint all exterior surfaces of the building to include soffits and roof.
- 8) At the side of the building provide small independent latrine unit with 3 toilets, two urinals, and one sink for man; and two toilets, one sink for women, and a deep sink/tub with faucet for cleaning buckets.
- 9) Replace or install new hand railings for the stairway.
- 10) Install walls or partitions as needed to support installation of doors and segregation of existing rooms.
- 11) Install one lockable storage room for supplies on each floor.

4.13 RENOVATE 4 BARRACK BUILDINGS (Option Item)

Renovate four existing buildings as officer quarters. Existing buildings measure approximately 9.5m x 27m and are two-stories high.

- 1) Replace all windows with insulated double pane windows.
- 2) Provide interior fluorescent lighting in accordance with Section 01015 throughout the buildings. Provide at least three electrical outlets in each room.
- 3) Repair, Patch, smooth, and refinish existing concrete floors with gray-colored floor sealer.
- 4) Repair, patch, smooth, and repaint walls and ceilings. Provide tile wall base.
- 5) Provide new doors for all rooms.
- 6) Provide HVAC split unit for all spaces.
- 7) Clear, repair, patch, and paint all exterior surfaces of the building to include soffits and roof.
- 8) At one side of the building provide total two independent latrine/shower units with 4 toilets, 4 showers, two ablutions, one sink in each unit, and one deep sink or tub for cleaning buckets.
- 9) Repair or replace deteriorated stairways and hand rails.
- 10) Provide one pair of RJ45 outlets (for telephone and data) at each room in the building with wires connected to central location in the building convenient for service connection.

4.14 LATRINE AND SHOWER FACILITIES

The Contractor shall design and construct one central latrine and shower facility, containing 30 toilets, 30 showers, 16 ablution, and 20 sinks. The schematic layout is shown in Appendix-C. The latrine and shower facility will be closely located to 10 Type A barracks. The schematic shows toilets, and showers intermixed. J7 recommends placing toilets together and showers together instead.

- 1) Shower stalls shall close and shall have a door. Showers shall contain a single valve for hot and cold water mixing and a wall mounted shower head.
- 2) Electric hot water heaters and storage shall be installed to service all showers and sinks.
- 3) Electric cabinet heaters or electric unit heaters suitable for wet areas shall be utilized to provide heat in the facility.
- 4) The building shall be constructed with exhaust fans with sufficient ventilation.
- 5) Accessories shall include: soap dishes, curtains with curtain rods, robe hooks, and mirrors.
- 6) All toilets shall be eastern style units and be facing north and south.
- 7) All floors will be finished using ceramic tiles and all walls will have ceramic tile wainscots extending 1.8m above the finish floor.
- 8) Design and construct the floors to be sloped to floor drains.
- 9) Ablution areas shall be provided with low flow water devices. There shall be a built-in seating design with ceramic tile measuring 300mm x 300mm x 300mm. The drain areas shall be recessed below the floor level 200mm and lined with ceramic tile.
- 10) Wall surfaces above wainscot and all ceiling areas shall be finished with gloss water-resistant paint.
- 11) The lowest ceiling height shall be no less than 3.3m above finished floor.
- 12) The partition for the toilets and showers can be any durable and tamper-resistant opaque material with less thickness considered better.

4.15 Not Used

4.16 MOTOR POOL (option item)

The Contractor shall design and construct a motor pool gravel holding area of 60m x 60m, and a maintenance garage shall be included.

- a. After leveling, grading, and compacting the holding yard, the contractor shall overlay the entire graded area with 15cm of compacted 25mm gravel/crush stone.
- b. Construct 2.4 meter high chain link fence with barbed wire and vehicle gates surrounding the vehicle holding yard. The contractor shall install barbed wire on supporting arms above the fence posts.
- c. Construct entry control points each consisting of a vehicle gate and a pedestrian gate. Extend each end member of the gate frames sufficiently above the top member to carry three strands of barbed wire in horizontal alignment.

- d. The contractor shall construct one three bay vehicle maintenance facility, each bay shall have dimensions 5 m (width) x 12 m (depth) x 6 m (height). Ground slab for garage shall be 300 mm thick to support seven ton vehicles. All concrete shall be reinforced with deformed steel rebar. Provide garage doors measuring at least 4.5 meter in height and 3 meter in width.
- e. A proper drainage plan shall be incorporated into the maintenance building and exterior concrete finish which shall both slope away from the facility. There shall be a sub-base course installed and compacted to 95% compaction prior to pouring any concrete.
- f. Provide within this facility office space large enough to accommodate 5 people comfortably (4 m x 5 m) as well as a tool room (3 m x 4 m). Provide at least one pair of RJ45 outlets (for telephone and data) at each power outlet location in offices, with wires connected to one central location in the building convenient for service connection. Provide a toilet, a sink and a shower unit inside the building.
- g. Provide HVAC split unit to the office and toilet room.
- h. Provide a 6sm roofed structure with chain link fence walls and topped with concertina wire for POL storage, which is located at least 10m away from the building and is securely lockable.
- i. Provide two bollards located at each side of the entrances to the rollup door.
- j. Preferred building type is pre-engineered metal assembly.
- k. A maintenance pit shall be provided with steps into the pit. The Pit shall not be more than 100mm in width and to have concrete safety curbs.
- l. Provide an exhaust fan system for maintenance bay to provide adequate ventilation for vehicle exhaustive fume.

4.17 HVAC, HEATING VENTILATION AIR-CONDITIONING

Environmental control of the facilities shall be achieved by HVAC equipment proposed by the contractor and approved by the U.S. Government. See section 01015 for scope of work required.

4.18 LIFE SAFETY

Design and Construct circulation pathways and exit stairs in accordance with building code references herein. Fire sprinkler system is not required. The facility shall comply with all other safety requirements as required within references. Smoke detectors shall be installed in accordance with requirements herein.

4.19 LIGHTING

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

4.20 ELECTRICAL

Design and construct a power system for supply and distribution to all to include generation with fuel storage, and underground electrical distribution. All electrical design and installation shall meet NEC

(NFPA 70) requirements. Electrical receptacles shall be provided as indicated. Conductors and circuits shall be sized for the specific loads.

4.21 FOUNDATION DESIGN

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

4.22 SITE DESIGN

The contractor will propose alternatives for general site layout and coordinate with the government to achieve optimal solution. General areas of usage are indicated in the Appendix-E. Relationship of Barracks, Shower/Latrine facility, and DFAC is shown in Appendix –F.

5. COMPLETION OF WORK

All base items required under this contract shall be completed within 240 calendar days from Notice to Proceed for site work.

All renovation option works shall be completed within **120** days after exercise/award of the option items. All other option works except motor pool shall be finished within 180 days, and Motor Pool Facility shall be completed no later than 240 calendar days after exercise/award of the option items.

6. SPARE PARTS

Refer to other sections herein for requirements.

7. REFERENCES

Refer to Section 01015 for required references.

-- End of Section --

(End of Summary of Changes)