SECTION 01010

SCOPE OF WORK

# GENERAL

***Note to Editor: Based on the SOR, briefly describe the project scope in a few sentences below. It is ok to provide brief overview of unique or special requirements. Green highlights indicate edits required based on contracts for Site Adapt only and contracts which include design-build facilities; (use “incidental design” for contracts with Site Adapt only and “design” for contracts that include Design-Build facilities):***

***Use the following paragraphs if the contract is for a new procurement and delete those below:***

1. The project consists of [the design and construction] [Site Adapt construction,] of a new [Garrison] for the Afghan National Army (ANA) in Xxxxx District, Xxxxx Province, Afghanistan. Refer to paragraph 1.6.1 SITE BOUNDARIES contained herein and the conceptual Site Plan in Appendix B-1 for approximate site location.

***Note to Editor: Include the following paragraph if Site Adapt only.***

1. [Fully designed construction documents, to include plans and specifications, are provided herein for the facilities identified as Site Adapt. Contractor shall complete construction of site development and features as described in this Contract necessary to Site Adapt the facility designs for this specific site. Construction of site development and features includes but is not limited to a final site layout that incorporates complete force protection, site utilities (e.g. water supply systems, waste treatment facilities, site electrical systems, etc.), grading and drainage in accordance with technical requirements of this Contract.]
2. The project shall include but not be limited to the design verification, material, labor, and equipment to construct [buildings, parking, utilities and other infrastructure] for a population of approximately xxxx personnel [for life support facilities, and xxxx personnel for utilities]. [This includes the estimated populations of future developments within the compound that will tie into and make use of its utility systems.]

***Use the following paragraphs if the contract is for a reprocurement (and delete those above):***

1. The project consists of the completion of [design and construction] [construction] of a [Garrison] for the Afghan National Army (ANA) in Xxxxx District, Xxxxx Province, Afghanistan. Refer to paragraph 1.6.1 SITE BOUNDARIES contained herein and the conceptual Site Plan in Appendix B-1 for approximate site location.

***Note to Editor: Include the following paragraph if Site Adapt only.***

1. [Fully designed construction documents, to include plans and specifications, are provided herein for the facilities identified as Site Adapt. Contractor shall complete construction of site development and features as described in this Contract necessary to Site Adapt the facility designs for this specific site. Construction of site development and features includes but is not limited to a final site layout that incorporates complete force protection, site utilities (e.g. water supply systems, waste treatment facilities, site electrical systems, etc.), grading and drainage in accordance with technical requirements of this Contract.]
2. The project shall include but not be limited to the design verification, material, labor, and equipment to complete the construction of [buildings, parking, utilities and other infrastructure] for a population of approximately xxxx personnel [for life support facilities, and xxxx personnel for utilities]. [This includes the estimated populations of future developments within the compound that will tie into and make use of its utility systems.] A summary of items constructed and approximate degree of completion is included in Section 01010a as an attachment to this section. The previous Contractor’s [35]% drawings and calculations are included in Appendix B-4. The previous Contractor’s [35]% drawings and calculations shall be revised as necessary to incorporate the submittal review comments included in Appendix B-4.

## definitions

For this Contract, the term “Government” is defined as the Contracting Officer for the US Army Corps of Engineers, Afghanistan District North.

## REFERENCES

The work of this Contract shall meet and be constructed in accordance with of the U.S. design standards and technical references as indicated in Appendix A-2.

## SUBMITTALS

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

SD-01 Preconstruction Submittals

Contractor Quality Control Plan; G, RO

***Include the UXO submittals (Work Plan and Certificate) below only when Contractor is responsible for clearance.***

[UXO/Demining Safety Work Plan; G, Safety Office]

[UXO/Demining Clearance Certificate; G, Safety Office]

Certification of UXO clearance; where excavations are to be performed in areas known or suspected to contain explosives, unexploded munitions, or military ordnance, surface and subsurface clearance by qualified explosive ordnance disposal (EOD) personnel shall be accomplished prior to excavation work.

Clearance certificates must be forwarded to the TAN UXO QA Safety specialist, prior to the start of construction. If the site does not have an associated clearance certificate, the site will require an UXO/mine clearance conducted to meet the certification of UXO clearance requirements EM 385-1-1 section 25.A.01.m.

Security Plan; G, Safety Office

[Geotechnical Investigation Plan; G, DO]

***Include the following for reprocurement contracts. Coordinate with paragraph 2.10.1.1.***

[Site Assessment; G, RO] SD-02 Shop Drawings

[Geotechnical Report; G, DO]

Design Analysis, Plans, Specifications; G, DO

[Arch Span Manufacturer’s Construction Documents; G, DO]

## QUALITY ASSURANCE

### LINGUIST requirement

1. All official communication between the Contractor and the Government shall be presented in English.
2. At all times during the performance of this Contract, and until all work is complete and accepted, the Contractor shall have a minimum of one representative (Linguist) on site that is fluent in both English and the local language.
3. The Linguist shall attend all meetings with the Government.
4. The Contracting Officer's Representative (COR) will approve of whom the Contractor provides as its Linguist. At any time upon the request of the COR, the Contractor shall remove the Linguist from its staff and replace with another until found to be satisfactory for contractual communication as determined by the COR.
5. A satisfactory Linguist shall be defined as a person with the ability to:
6. Convey verbal information in English to the Government in a clear and concise manner;
7. Receive and understand verbal information in English from the Government in a clear and concise manner;
8. Read and write the English language in a clear and concise manner; and
9. Convey, communicate, and interpret information in both English and the local language between all multiple language parties at meetings, site visits, in official letters and e-mails, and all other contractual communications as required.

### CONTRACTOR QUALITY CONTROL

#### qc manager training requirement

See Section 01451 CONTRACTOR QUALITY CONTROL for Contractor’s QC Manager training requirements.

#### CONTRACTOR QUALITY CONTROL plan

The Contractor’s quality control plan, as defined in Section 01451 CONTRACTOR QUALITY CONTROL, must include the name qualifications (in resume format), duties, responsibilities, and authorities of each person assigned a Contractor Quality Control function. For the QC Manager, qualifications must include a certificate demonstrating completion of an approved CQM course.

### CONTRACTOR TEAM MEMBERS

#### a/e qualifications

The Contractor may be a single firm or a team of firms that includes Architects and Engineers either employed by or subcontracted to the Contractor. The Contractor shall be the Architect/Engineer-of-Record for all work not associated with the furnished drawings, whether the Contractor utilizes services of architects and engineers employed by its firm or subcontracts with independent architectural and/or engineering firm(s). The Contractor shall be solely liable for design errors and/or omissions.

#### geotechnical engineer QUALIFICATIONS

A geotechnical engineer, qualified by education in geotechnical engineering, or geotechnical firm responsible to the Contractor, shall develop all geotechnical engineering material parameters by appropriate field and laboratory investigation and analysis.

#### ELECTRICAL WORKER QUALIFICATIONS

All electrical work shall be performed by Journeymen Electricians and supervised by one Lead Electrician. The Lead electrician must be on site at all times during electrical installations and be capable of installing as well as directing the installation of all electrical work in compliance with the governing Code. Apprentice Electricians are allowed to assist the Journeymen, but the ratio of Apprentices to Journeymen shall not exceed 3:1. Qualifications for each person to perform electrical work shall be as indicated below.

***Use below for ANSF Projects only.***

1. [Lead Electrician
2. Proof of Completion of an Electrical Safety Course AND
3. Proof of Completion of an Electrical Code Class (NEC or BS7671) AND
4. Graduate of an Approved Trade School AND
5. 4000 hours of verifiable commercial/industrial electrical experience
6. Journey Electrician
7. Proof of Completion of an Electrical Safety Course AND
8. Proof of Completion of an Electrical Code Class (NEC or BS7671) AND
9. Graduate of an Approved Trade School AND
10. 2000 hours of verifiable commercial/industrial electrical experience
11. Apprentice Electrician
12. Proof of Completion of an Electrical Safety Course AND
13. Proof of Completion of an Electrical Code Class (NEC or BS7671)]

***Use below for GWOT, MILCON and select ANSF Projects***

1. [Lead Electrician
2. U.S. Master Electrician Certification or License OR
3. “Technician Grade” as defined by U.K.’s Joint Industry Board
4. Journey Electrician
5. U.S. Journeyman Electrician Certification or License OR
6. “Approved Electrician” as defined by U.K.’s Joint Industry Board
7. Apprentice Electrician
8. Proof of Completion of an Electrical Safety Course AND
9. Proof of completion of an Electrical Code Class (NEC or BS7671) AND
10. Graduate of an Approved Trade School]

## SCHEDULE

The following is an internal schedule outlining the [incidental design] [design] submittals for Completion of Work and is subject to modification by the Offeror to suit their particular method of operation. The submittal milestones are described in Section 01335 SUBMITTAL PROCEDURES. Overall time constraints are required and cannot be changed except by contract modification. The successful Contractor shall be required to submit a complete schedule for this [incidental design] [design] and construction that meets or exceeds the overall time goals of the Government for this project.

***Use below note below if project consists of ONLY Site Adapt work.***

[Offeror should note that the incidental design requirements only include site work (master plan, force protection layout, grading and drainage, and site utilities, i.e., water, wastewater, electrical and communications); all other Site Adapt features of work are inclusive as part of the Contract and provided to the Contractor.]

|  |  |
| --- | --- |
| **ACTION / SUBMITTAL ITEM** | **TIME FROM LAST ACTION**  **(IN CALENDAR DAYS)** |
| Notice to Proceed (NTP) | Following Written Notification of Contract Award |
| Design Phase  Basic Services  Pre-construction Conference | Within 7 days following NTP |
| Project Schedule | Within 14 days following NTP |
| 10% Site Design Submittal | Within 45 days following NTP |
| 10% Site Design Approval | 14 days following 10% Site Design Submittal |
| 35% WWTP Design Submittal | 14 days following 10% Site Design Submittal |
| 35% WWTP Design Approval | 14 days following 35% WWTP Design Submittal |
| 65% Design Submittal | 45 days following approval of xx% Design |
| 65% Design Approval | 14 days following 65% Design Submittal |
| 95% Design Submittal | 20 days following approval of 65% Design |
| 95% Design Approval | 14 days following 95% Design Submittal |
| 100% Design Submittal | 14 days following approval of 95% Design |
| 100% Design Approval | 14 days following 100% Design Submittal |
| Total Design and Construction Period | xxx days  Period of Performance includes design and construction activities |

## PROJECT AND SITE CONDITIONS

### SITE BOUNDARIES

1. The Licensed for Construction (LFC) site boundaries are defined by the following coordinate points:

***Modify for this project site. Coordinate with the SOR and GIS. Add these coordinate points to the Conceptual Site Plan including which Corner is which.***

Corner 1 30.xxxxxx N 61.xxxxxx E

Corner 2 30.xxxxxx N 61.xxxxxx E

Corner 3 30.xxxxxx N 61.xxxxxx E

Corner 4 30.xxxxxx N 61.xxxxxx E

Corner 5 30.xxxxxx N 61.xxxxxx E

Corner 6 30.xxxxxx N 61.xxxxxx E

1. The Contractor shall verify the accuracy of the coordinates provided herein, and submit to the COR for approval. The development of the site and construction of all permanent structures is required to be fully within this defined LFC area. The Contractor shall notify the COR immediately should the development of the proposed site require an encroachment beyond the LFC boundary. The Contractor shall obtain the necessary approval for the access road connecting the proposed site to an existing road. Submittals shall include a site plan illustrating the limits, boundaries, access roads, and coordinates representing the LFC area.

### SITE VISIT

It is the responsibility of the Contractor to have visited the site prior to submitting its proposal for the project and to have gained a good understanding of the project and its requirements, including grading and drainage details necessary to appropriately submit its proposal and construct the project.

### PROJECT COORDINATION

***Note to Editor: Use this statement if more than one Contractor will be working on the site under a different contract.***

The Contractor may be required to coordinate the efforts required under this contract with another 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.

### COORDINATION WITH OCCUPANTS OF EXISTING BUILDINGS

***Note to Editor: Use the following statement if there are occupants living in existing buildings on the project site.***

[The Contractor shall identify all occupants of existing buildings within the Licensed for Construction (LFC) boundary and hold a meeting with them to discuss, at a minimum, the scope of the project, access to the existing buildings during construction, impacts to utilities, site security and construction safety precautions. During this meeting, the Contractor shall solicit comments and concerns about the project. The Contractor shall provide meeting minutes to the Contracting Officer’s Representative (COR) within seven (7) days after the meeting. Meeting minutes shall include, at a minimum, name, position title and phone number of those in attendance; and a record of issues that were discussed and proposed solutions to the issues.]

## sECURITY

1. Security is critical to construction in Afghanistan, especially on roads and remote areas away from Coalition Force bases.
2. The Contractor shall provide an appropriate level of security and protection to match the threat that exists in the project area and along the supply routes. A detailed security plan in accordance with Section 01040 SECURITY shall be provided by the Contractor, and must be approved by the Government, prior to issuing a construction Notice to Proceed.

***Note to Editor: You must choose only one of these two options. Delete the other option.***

## unexploded ordnance (uxo) [option one]

***Use the following when the Contractor IS responsible for initial clearance/removal.***

### site clearing

The Contractor is responsible to search for, identify and clear all mines and unexploded ordnance (UXO) from the entire site. The Contractor may only provide clearance/removal services via UN Mine Action Center for Afghanistan (UNMACA) accredited entities. Clearance shall be accomplished to the anticipated foundation depths as indicated in the Contract.

### CONTRACTOR CLEARANCE REQUIREMENTS

1. If sub-surface construction activities are to be performed on this site, the minimum required clearance depth shall be 1 m. Sub-surface clearance for construction activities in excess of 1 m, as defined by the Contract parameters, is also the responsibility of the Contractor.
2. Clearance, by definition, includes an investigation and clearance of all sub-surface metallic anomalies within the site. Clearance and 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.
3. When mines and/or UXO’s are discovered, the Contractor shall place them in a location in accordance with IMAS/AMAS/USACE until destruction of the items can take place. Construction work shall not occur inside the safety exclusion zone based on the Most Probable Munition (MPM) expected on the site. Construction shall not commence in any area that has not been cleared to the specified depth.

### safety work plan

The Contractor shall provide a standard UXO/Demining safety work plan to the US Army Corps of Engineers UXO / Demining COR for review and approval 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: USACE does not need written clearance certificate approval from the UNMACA to approve the start of construction activities. However, the Contractor is responsible for providing a copy of the clearance certificate to the UNMACA for entry into the country-wide database. A final signed copy of the UNMACE certificate must then be provided to the USACE UXO/Demining COR.***

### PERSONAL RISK

1. It is the responsibility of the Contractor to be aware of the risk of encountering UXO/mines and to take all actions necessary to assure a safe work area to perform the requirements of this Contract. The Contractor assumes the risk of any and all personal injury, property damage or other liability arising out of or resulting from any Contractor action taken hereunder. The Contractor and its subcontractors may not handle, work with, move, transport, render safe, or disarm any UXO/mine, unless they have appropriate accreditations under the IMAS/AMAS from the UNMACA.
2. If a UXO/mine is encountered after a UNMACA-approved clearance certificate is provided to the Government, UXO/mine disposal shall be handled in accordance with Section 01015 TECHNICAL REQUIREMENTS.

### CONTACT information

The Point of Contact for UXO/Demining Safety Work Plan review and approval shall be the US Army Corps of Engineers Demining Safety/COR. Direct all materials and correspondence to the following:

Mine Action Coordination Center of Afghanistan

Website: <http://www.macca.org.af/>

Email: [flora.sutherland@macca.org.af](mailto:flora.sutherland@macca.org.af)

Phone: +93 (0) 700 295 207

Fax: +92 51 211 450

Mr. Mohammed Sediq Rashid, Head of Operations

Email: [sediq.rashid@macca.org.af](mailto:sediq.rashid@macca.org.af)

Phone: +93 (0) 700 295 207

Mr. Rafiullah Alkozai, Communications Office

Email: [rafiullah.alkozai@macca.org.af](mailto:rafiullah.alkozai@macca.org.af)

Phone: +93 (0) 707 306 803

UXO Safety/Demining COR, USACE

Email: [Tan.uxo.demining.safety@usace.army.mil](mailto:Tan.uxo.demining.safety@usace.army.mil)

Roshan: 079 778 6848

Comm: (1) 540 667 2127]

## unexploded ordnance (uxo) [option two]

***Use the following when the Contractor IS NOT responsible for initial clearance/removal.***

### previous site clearing

1. 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 minimum depth of 1 m and the certificate of clearance is available for review.
2. 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 m in depth.

### contractor clearance requirements

***Note: If the contract parameters for sub-surface construction exceed the minimum 1 m 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.

### previous uxo information / clearance certificate

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:

Mine Action Coordination Center of Afghanistan

Website: <http://www.macca.org.af/>

Email: [flora.sutherland@macca.org.af](mailto:flora.sutherland@macca.org.af)

Phone: +93 (0) 700 295 207

Fax: +92 51 211 450

Mr. Mohammed Sediq Rashid, Head of Operations

Email: [sediq.rashid@macca.org.af](mailto:sediq.rashid@macca.org.af)

Phone: +93 (0) 700 295 207

Mr. Rafiullah Alkozai, Communications Office

Email: [rafiullah.alkozai@macca.org.af](mailto:rafiullah.alkozai@macca.org.af)

Phone: +93 (0) 707 306 803

UXO Safety/Demining COR, USACE

Email: [Tan.uxo.demining.safety@usace.army.mil](mailto:Tan.uxo.demining.safety@usace.army.mil)

Roshan: 079 778 6848

Comm: (1) 540 667 2127

### construction in excess of 1 m in depth

For construction in excess of 1 m in depth on areas previously cleared. 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.

### previous clearance by other organizations

The Contractor should be aware that many areas demined by NGOs and other groups may have only been cleared to a depth of 13 cm for humanitarian purposes. If construction will take place, a minimum of 1 m in depth is mandatory.

### uxo risk assessment & resolution

1. 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.
2. 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 m clearance depth of the original clearance certificate.

## sequencing

[Provide information for construction sequencing / phasing as necessary.]

***Note to Editor: Use and edit the following as necessary for reprocurement contracts:***

1. The Contractor shall complete the construction documents from the previous Contractor. This shall include the completion of a new survey, [completion of the well report], and completion of the plans (floor plans, elevations, details, etc.), specifications, and design analyses. The Contractor shall incorporate all comments from the previous Contractor’s most recent [35]% submittal. The Contractor’s submittals shall be in accordance with Section 01335 SUBMITTAL PROCEDURES.
2. Upon approval of the submittals by the Government, the Contractor shall complete construction of the [barracks, DFAC, latrines, diesel generator power plant and electrical distribution system, water distribution system, sanitary sewer collection system, and force protection measures].

## furnished material and equipment

***Note to Editor: Use the following statement if there are facilities that will have equipment provided by either the Contractor or Government.***

### government furnished material and equipment

The Government shall furnish the materials and equipment identified in Section 01701 GFM-E FROM CASA, in compliance with the technical specifications, required to construct the AED Standard buildings included in Appendix B-2, and any design-build facilities included in Appendix B-3 [and/or Appendix B-4]. The Contractor shall install Government furnished material and equipment (GFM-E) and adhere to the material request and inventory management process outlined in Section 01701 GFM-E FROM CASA, Section 01701a ATTACHMENT TO SECTION 01701, and Section 01701b ATTACHMENT TO SECTION 01701.

### CONTRACTOR furnished material and equipment – option

If option is exercised by the Government, the Contractor shall be fully responsible for furnishing and installing the material and equipment required by this Contract as described in Section 01701 GFM-E FROM CASA. Material shall be submitted for review of adherence to technical requirements within this Contract in accordance with Section 01335 SUBMITTAL PROCEDURES. Refer to Section 01010.3.3 for exercise of options listed below.

1. Reinforcement Steel
2. Steel Coils
3. Water Heater[s]
4. Medium Voltage Cable
5. Transformer[s]
6. Generator[s]

## Construction Project Sign

The contactor shall fabricate and display at least one sign to identify the project site as an Islamic Republic of Afghanistan sponsored project. The sign shall meet or exceed the requirements provided in Section 01060 SPECIAL REQUIREMENTS. Exact placement of the sign at the project site shall be coordinated with the COR.

***Note to Editor: Sign requirements in Section 01060 shall be edited to provide definitive direction as to which Government of the Islamic Republic of Afghanistan (GIRoA) shall be featured. Signs are intended to highlight the support and cooperation between the miscellaneous Afghanistan governmental agencies. Signs as specified in this section shall not be provided for MILCON and GWOT projects and this paragraph of the SOW shall be deleted. This paragraph shall also be deleted if contract is for reprocurement and a sign is already in place.***

# SUMMARY OF WORK

***Note to Editor: Describe ONLY the scope of the project. Do not describe technical requirements. Those go into Section 01015. Compare the two when doing your edits. Do not be redundant. Do not leave out any scope of work. Clearly indicate what is Site-Adapt, and what is Design-Build.***

## master planning

### site survey plan

***Note to Editor: Use the higlighted sentences below only for reprocurement contracts.***

[The Contractor shall complete a new survey of the site to include all existing items and general conditions of the site as left by the previous Contractor. Survey data shall be referenced to the same horizontal and vertical datum as used in the original Contract.] The Contractor shall prepare a plan of the Licensed for Construction (LFC) property as part of the submittal packages. The plan shall be based on a survey of the project site, as located and defined by the coordinates provided herein. The survey shall show the closure of the property boundaries, identification of all property boundaries and corners, and establishment of horizontal and vertical controls. These controls shall list all bearings and distances of property lines from the centerline of all adjacent roads. The surveyor shall place property corner markers and a monument on the property showing site elevations, coordinate grid systems and WGS 84 latitude longitude.

### master site plan

The Contractor shall prepare a final Master Site Plan that reflects all customer requirements for this project based on information described in this Section and identified in Appendix B-1. The Contractor shall use the conceptual layout on drawing C-101 for the basis of the final site layout. This plan is provided as a conceptual guide only to assist the Contractor with his development of the Master Site Plan, including the layout and organization of the project’s program. However, the Contractor is fully responsible for verifying and conforming to all site constraints and characteristics; and all program, code and guideline requirements referenced and contained within this Contract.

## GEOTECHNICAL

### gEOTECHNICAL INVESTIGATION

#### gEOTECHNICAL INVESTIGATION PLAN

1. Existing geotechnical information is not available at the project site. All site specific geotechnical data required to develop foundations, materials, earthwork, and other geotechnical related design and construction activities for this project shall be the Contractor’s responsibility. The Contractor shall submit a Geotechnical Investigation Plan in accordance with Section 01335 SUBMITTAL REQUIREMENTS.
2. Geotechnical investigation shall specifically address the possibility that the site is underlain with collapsible soils supported with the appropriate tests and analysis for this condition as identified in Section 01015 TECHNICAL REQUIREMENTS, paragraph “Collapsible Soils.” Should the geotechnical investigation identify collapsible soils at the project site, then the procedures for collapsible soils shall be followed according to the provisions provided for such in that section.

***Note to Editor: Use the following paragraph for reprocurement contracts and if geotechnical information is available:***

1. [Existing geotechnical information is available for this site. The geotechnical investigation was prepared by [xxx Company]. See “[Title of Geotechnical Report]” in Appendix B-4. ]

#### gEOTECHNICAL report

Results of the geotechnical investigation and testing shall be submitted in accordance with Section 01335 SUBMITTAL REQUIREMENTS and contained within a detailed Geotechnical Report containing: test bore location plan; test boring logs; test boring profiles; laboratory testing results of soil and rock; laboratory testing results; and geotechnical recommendations.

### collapsible soils – bid option

***Note to engineer: The collapsible soils bid option is to be included only when the project location is north of latitude 35.5° N and west of longitude 69.5°E. For all other projects delete this option. Edit paragraph as necessary for reprocurement contracts with existing geotechnical data.*** The Contractor shall provide a price proposal for remediation of collapsible soils should they be found at the site. Procedures for dealing with collapsible soils are provided in Section 01015 TECHNICAL REQUIREMENTS under the paragraph entitled “COLLAPSIBLE SOILS.”

### GEOTECHNICAL laboratory

The Geotechnical Lab shall be from USACE listing at <http://www.aed.usace.army.mil/documents/Labs_AEN.pdf> and able to perform soil and aggregate testing. All testing and field work shall be based on relevant standards set forth in the American Standard Testing Material (ASTM) Specifications. Obtain undisturbed soil samples to provide data for estimation of foundation, embankment settlements and perform settlement analyses.

### foundation design

1. To confirm Standard Building foundations, allowable soil bearing pressures shall be based on the International Building Code (IBC) 2009 Table 1806.2. The Contractor shall conduct soils classification per ASTM D 2487-06. There shall be no variation from the values listed in the table indicated above, unless the soils investigation indicates lower allowable values shall be used. Soil investigations shall conform to AED Design Requirements.
2. For Site Adapt buildings and structures in Appendix B-2, the foundations shall be as per the standard drawings. Standard buildings and structures with foundations based on 96 kPa (2000 psf) soil bearing will not be required to be revised if lower allowable soil bearing values have been determined unless unique circumstances have been determined by USACE-AEN.

## CIVIL

### DEMOLITION

***Note to Editor: Choose one option depending on level of demo required for project***

[The Contractor shall demolish all existing structures and buildings within the LFC site boundaries prior to commencement of new work. The demolition work includes the removal and disposal of all debris, concrete, foundations and vegetation. The location of where materials are to be disposed shall be provided to the Contracting Officer.]

[Minor site demolition is required prior to construction of new Work. Site grading is required and shall conform to the requirements of Section 01015 TECHNICAL REQUIREMENTS.]

[Demolition of previously constructed work is required as a part of this Contract. Refer to the Assessment of existing work provided in Appendix [X] for additional information. The location of where materials are to be disposed shall be provided to the Contracting Officer.]

### GRADING

The Contractor shall perform complete final site grading only after complete and final installation of all drainage structures, as required by the Site Drainage Plan. This plan shall be prepared by the Contractor after installation of any other buried utilities or other project components.

### hardscape

***Note to Civil Engineer: Edit this section to include full and clear scope descriptions… not technical requirements. If guideline details are provided, then delete redundant descriptions.***

1. The Contractor shall layout and construct the entire road, parking and sidewalk networks as indicated in the conceptual Site Plan included in Appendix B-1 and per Section 01015 TECHNICAL REQUIREMENTS.
2. The Contractor’s site layout shall include an integrated storm drainage system [and landscaping] for the entire compound.

#### roads

The Contractor shall layout and construct the road network to provide access to all entry control points, parking lots, vehicle maintenance facilities, fuel points, generator yards, [other items?] sewage septic tank, and trash collection points. All roads shall be of [aggregate] [concrete] [asphalt] construction.

#### convoy assembly area

The Contractor shall layout and construct the road network to include a [15 m x 100 m] Convoy Assembly Area as indicated in the Site Plan included in Appendix B-1. It shall accommodate two parallel sets of vehicles parked in formation [ready to exit the [South] Entrance Control Point.]

#### parking

The Contractor shall layout and construct parking areas for xxx vehicles inside the compound as indicated on the Site Plan included in Appendix B-1.

#### motor pools

[The Contractor shall [layout and construct] [finish construction of] a motor pool and unit vehicle parking area located within fenced area as indicated on the Site Plan; provide [three] vehicle and [three] personnel gates.]

#### sidewalks

The Contractor shall layout and construct [aggregate] [concrete] [asphalt] sidewalks to connect all buildings, facilities, and features such as parking lots, power plants, etc. The clear area along sidewalks shall be wide enough to be used as fire-lane/service roads.

#### erosion control

Native crushed stone (150 mm thick) shall be placed around all buildings, from the face of building wall [or building landscaping] out 3 m (min.), and at all areas of anticipated foot or vehicle traffic, to reduce erosion and to provide dust control.

## force protection & security

***Note to Civil Engineer: Edit this section to include full and clear scope descriptions of required force protection for this project.***

1. The Contractor shall layout and construct force protection measures to include [perimeter walls, Entry Control Points (ECPs), guard towers, gate house, guard shacks, illumination system, and communication systems at each location].
2. Force protection shall incorporate setbacks for new facilities to maximum extent possible as permitted by size of the site and the requirements of the user. Building setbacks shall be as follows: ***(Confirm with Customer)***
3. [40] [25] m from perimeter walls;
4. 10 m from roadways;
5. 10 m between facilities.

***Note to Architect/Lead: Be mindful of which Appendix drawings are put in. Facilities such as ECPs, fuel points, and some generator canopies are typically design-build, thus the AED Standard drawings should be located in Appendix B-4 Reference Drawings.***

### perimeter wall

The Contractor shall construct reinforced concrete walls, [3.0 m] tall with native stone veneer, around the perimeter of the site as indicated in the Site Plan in Appendix B-1. The wall shall be constructed to keep all pedestrian and truck traffic outside the compound from having a visual line of site into the compound. The layout and construction shall be based on the perimeter wall details provided in Appendix B-4.

### main installation entry control point (ecp)

The Contractor shall layout and construct a Main Installation ECP, which shall include a paved entrance; a manually-operated sliding steel gate; a guard house; a gate house; a canopy; two guard shacks, one located [define] and one located [define]; a vehicle drop arm barrier; and [jersey barriers] placed in serpentine pattern to prevent high speed vehicle entry into compound. Provide a 5 m wide rejection lane entered between the vehicle inspection stop and the compound entry gates. Refer to Appendix B-4 for related drawings and details.

### primary entry control point (ecp)

The Contractor shall layout and construct a Primary ECP, which shall include a paved entrance; a manually-operated sliding steel gate; a guard house; a canopy; two guard shacks, one located [define] and one located [define]; a vehicle drop arm barrier; and [jersey barriers] placed in serpentine pattern to prevent high speed vehicle entry into compound. Provide a 5 m wide rejection lane entered between the vehicle inspection stop and the compound entry gates. Refer to Appendix B-4 for related drawings and details.

### secondary entry control point (ecp)

The Contractor shall layout and construct a Secondary ECP, which shall include a paved entrance; a manually-operated sliding steel gate; a guard house; a guard shack; a vehicle drop arm barrier; and [jersey barriers] placed in serpentine pattern to prevent high speed vehicle entry into compound. Refer to Appendix B-4 for related drawings and details.

### CONTRACTOR TEMPORARY ECP

1. The Contractor shall construct temporary Entry Control Points into their areas of work on site as indicated on the Site Plan provided in Appendix B-1. Each ECP shall include aggregate roadway, 3 m tall chain link fence with outriggers, barbed and concertina wire, a sliding vehicle gate, drop arm barrier and serpentine vehicle barriers.
2. [The Contractor is responsible for all associated demolition required to create the temporary ECP. Upon project completion, the Contractor shall remove all temporary ECP features and repair and / or replace any previously existing work that was demolished as part of this Contract.]

### Force Protection COMPONENTS

***Note to Editor: For the following components, change the words “site adapt and construct” to “complete the construction of” for reprocurment contracts if the work is partially complete.***

#### CANOPY

The Contractor shall site adapt and construct a canopy in accordance with AED Standard FP01. Refer to Appendix B-2 for related drawings and details.

#### GUARD SHACK

The Contractor shall site adapt and construct guard shacks in accordance with AED Standard FP05. Refer to Appendix B-2 for related drawings and details.

#### GUARD TOWER

The Contractor shall site adapt and construct guard towers in accordance with AED Standard FP04. Refer to Appendix B-2 for related drawings and details.

#### guard house

The Contractor shall site adapt and construct a guard house in accordance with AED Standard FP07. Refer to Appendix B-2 for related drawings and details.

#### GATE HOUSE

The Contractor shall site adapt and construct a gate house in accordance with AED Standard FP02 [FP03]. Refer to Appendix B-2 for related drawings and details.

#### special entry feature

The Contractor shall design and construct the special entry feature to be incorporated into each ECP. The Contractor shall base the design on concept drawings included in Appendix B-3.

### fencing & barricades

* 1. Fencing shall consist of the types shown or described herein. Refer to drawings for required types and locations.
  2. Barricades shall consist of either Hesco Bastion Container barriers or concrete type barriers. Refer to drawings for required types and locations. Barricades are not intended to resist a certain horizontal load and are not required to be permanently anchored to ground.

1. [The Contractor shall provide temporary chain link fencing and gates with outriggers, barbed wire and concertina wire around each project site in a manner sufficient to reduce unnecessary disturbance to operations on the compound.]

## SITE FEATURES

***Note to Civil Engineer: Edit this section to include full and clear scope descriptions of site features (i.e. athletic fields, volleyball fields, parade fields, trash collection points, etc.). For the following features, change the words “site adapt and construct” to “complete the construction of” for reprocurment contracts if the work is partially complete.***

### SCOPE

[Concise information about the scope, if needed, goes here.]

### personnel bunkers

The Contractor shall site adapt and construct personnel bunkers in accordance with AED Standard FP06 as shown on the Site Plan. Refer to Appendix B-2 for related drawings and details.

### Trash Collection Points

The Contractor shall site adapt and construct trash collection points in accordance with AED Standard G01 as shown on the Site Plan. Refer to Appendix B-2 for related drawings and details.

### parade ground review stand

The Contractor shall layout and construct a parade field in the location shown in the concept Site Plan in Appendix B-1; and shall site adapt and construct a Review Stand in accordance with AED Standard G02 in Appendix B-2.

### SPORTS FIELD & TRACK

1. The Contractor shall layout and construct a sports field and track in the location and configuration shown on the conceptual Site Plan in Appendix B-1[, and based on the concept drawings in Appendix B-3]; and shall site adapt and construct Bleachers in accordance with AED Standard G03 in Appendix B-2.
2. The sports field shall consist of a regulation sized soccer field (70 M x 100 M min.) including regulation-sized fixed metal goal posts and nets. Provide 1.8 M high x 70 M long chain link fences set 8.0 M beyond both ends of the field. Provide a grass playing surface that covers the entire area contained within the track loop. This area shall include a loam soil sub-base and drainage capable of sustaining a grass playing surface. Grade the field to slope and drain to the sides so that water does not pond on the field.
3. The track shall consist of a regulation layout of approximately 430 M in length along the interior circumference of the track, and 8.0 M in width. Provide a minimum 8 M distance from the inside edge of the track to the soccer field sideline or touchline extents (in play area). The track shall have a stone dust or compacted fine aggregate surface, with bermed curbs or edges. Slope to direct surface water to drain and run off the edges. Do not allow ponding.

### VEHICLE FUEL STORAGE AND REFUELING POINT

The Contractor shall site adapt and construct fuel storage in accordance with AED Standard [VM03] [VM03a] with a capacity of [20,000] [\_\_\_\_\_\_] liters of diesel fuel, and [5,000] [\_\_\_\_] liters of MoGas, and a refueling point for each fuel type. Provide single 1200 liter/minute centrifugal fuel transfer pump in the delivery truck unloading system. Refer to Appendix B-2 for related drawings and details.

### VOLLEYBALL COURTS

1. The Contractor shall layout and construct regulation-sized exterior sand volleyball courts in the locations and configuration shown on the conceptual Site Plan in Appendix B-1, and based on the concept drawings in Appendix B-3.
2. Provide an overall sand surface of 15.0M x 26.0M. These dimensions allow for placement of a regulation sized court of 9.0M x 18.0M with surrounding safety zones. Provide a fine gravel base 75mm deep (min.), and covered with new, clean sand 200mm deep (min.) that is free of organic materials.
3. Provide and install a regulation-sized volleyball net supported by 3.5M long metal posts secured a minimum of 1.0M below grade set into concrete footings.
4. Provide a 3.0 M high chain link fence enclosure around each volleyball court. Each enclosure shall be a minimum of 20 M wide by 32 M long, and include two access gates located at opposite ends.

### Clotheslines

Two (2) clotheslines shall be installed behind each barracks. Clotheslines shall be approximately 5m in length with 4 lines spaced 410mm apart and be of sufficient strength to prevent sagging when all of the lines are loaded. Provide walkway accessible from barracks to clothesline.

## WATER SYSTEM

***Approach one***

### SYSTEM assessment

1. Contractor shall perform an assessment of the existing water supply and distribution system within the ANA Compound. Assessment shall include, but is not limited to, well yield, aquifer drawdown, distribution system capacity (pipe sizes), water pressure, distribution pump capacity, storage tank capacity, distribution system fittings and valves, etc.
2. The Contractor shall layout and construct a new water distribution system to connect to the existing water distribution system. The water distribution system shall meet all criteria of Section 01015 TECHNICAL REQUIREMENTS, Paragraph “Water Distribution System” and in accordance with the AED Design Requirements.

### WATER SYSTEM option

1. Should the existing water supply and distribution system assessment determine that the potable water system is inadequate to provide a satisfactory water distribution, the Contractor shall layout and construct a Potable Water System (PWS), to include a well, protected in an enclosed water well house, water well pump(s), steel or concrete ground storage tank (GST), booster pumps, and expansion tank. These structures shall be constructed in strict conformance with the furnished drawings in Appendix B and specifications in Appendix A. The storage tanks shall provide capacity for a minimum of 100 percent of the required daily demand based on 155 L/capita/day unless specified otherwise in these documents. The water system shall be laid out and constructed in accordance with the AED Design Requirements, latest version, and UFC 3-230-03A Water Supply which include the use of a capacity factor. Water demand required for fire fighting and for irrigation and landscaping needs shall not be included in design demand calculations.
2. A manually operated, lever, hand pump shall be installed at the well head. The pump shall be used to supply water when there is no electricity.

***Approach two***

### potable water system

The Contractor shall layout and construct a Potable Water System (PWS), to include a water well protected in an enclosed well house, water well pump(s), steel or concrete ground storage tank(s) (GST), booster pump(s), expansion tank(s), hydropneumatic tank(s), elevated water storage tank(s), and an underground pipe distribution network system. The elevated water storage tank and supporting structure shall be constructed in strict conformance with the furnished drawings and specifications. The storage tanks shall provide capacity for a minimum of 100 percent of the required daily demand based on 155 L/capita/day, unless specified otherwise in these documents. The water system shall be laid out and constructed in accordance with the latest version of the AED Design Requirements, and UFC 3-230-03A Water Supply, including the use of a capacity factor. Water required for fire fighting, site irrigation and landscaping needs shall not be included in the water demand calculations. A manually-operated, lever-type hand pump shall be installed at the well head, to be used to supply water when there is no electrical power available to operate motorized pumps.

### Well Completion Report

Upon completion of the well, including a pumping test, Contractor shall submit a Well Completion Report per Section 01335 Submittal Procedures. The document “AED Design Requirements: Well Pumps and Well Design” provides information regarding filling out and submitting the form. See Appendix A-2 Technical References.

## SANITARY SEWER SYSTEM

***Approach one***

### system assessment

1. Contractor shall perform an assessment of the existing sanitary sewer collection and treatment system within the ANA compound. The assessment shall include, but is not limited to collection system and treatment capacity.
2. Sanitary sewer collection system shall be laid out and constructed by the Contractor.  Sewer collection system shall consist of gravity sewer pipe and appurtenances such as manholes, cleanouts and building service connections.  The gravity sewer collection system shall connect to the existing sewage treatment and effluent disposal system. System capacity shall be calculated based on a hydraulic waste load that is equivalent to 80 percent of the Required Daily Demand for the water system as specified in these technical requirements, or as 124 liters per capita per day, whichever is greater.

### SANITARY SEWER SYSTEM option

Should the existing sanitary sewer collections and treatment system assessment determine that the sanitary sewer system is inadequate to provide a satisfactory collection and treatment capacity, the Contractor shall layout and construct a gravity sewer collection system to include the waste water treatment system as follows and according to Section 01015 TECHNICAL REQUIREMENTS. Septic tank shall be underground. Sanitary sewer system shall accommodate future expansion. System capacity shall be calculated based on a hydraulic waste load that is equivalent to 80 percent of the Required Daily Demand for the water system as specified in these technical requirements, or as 124 liters per capita per day, whichever is greater.  A geotechnical investigation of the proposed sewage treatment site is required; the sewage treatment system shall be compatible with site and soil conditions.  Sewage treatment system shall be a traditional septic tank and absorption field, or other low maintenance, cost effective system. The sewage collection system and wastewater treatment system and effluent disposal shall accommodate the total facility compound population as specified in the Scope of Work to include capacity factors as used in the AED Design Guides and the UFCs and verified by the contractor.

***Approach two***

### SANITARY SEWER SYSTEM option

1. The Contractor shall layout and construct a gravity flow sanitary sewer collection and wastewater treatment system.  The collection system shall consist of sewer piping and appurtenances such as manholes, cleanouts and building service connections. The collection system shall connect to the wastewater treatment plant and effluent disposal system. Septic tank shall be underground and shall be located at proposed locations as shown.
2. The collection and treatment systems shall accommodate future expansion. System capacity shall be calculated based on a hydraulic waste load that is equivalent to 80 percent of the Required Daily Demand for the water system as specified in these technical requirements; or as 124 L/capita/day, whichever is greater.
3. A geotechnical investigation of the proposed wastewater treatment site area is required to be performed prior to laying out and constructing the wastewater treatment facilities. The treatment system shall be compatible with site and soil conditions defined in the geotechnical investigation and report. The wastewater treatment system shall consist of [a traditional septic tank, absorption field, effluent disposal system, facultative pond system or some other low-maintenance and cost effective system]. The collection, treatment and effluent disposal systems shall accommodate the total facility compound population as specified in the Scope of Work, including the capacity factors used in the AED Design Guides and the UFCs. The design population and capacity shall be verified by the Contractor.

***Note to Editor: Consider adding the following for expeditionary projects:***

1. Portable Latrines: The Contractor shall furnish and install portable latrine units in locations shown on the attached drawings, and as described within Section 01015 TECHNICAL REQUIREMENTS. Portable latrines shall be a mix of western and eastern style units; ratio shall be determined by Contracting Officer.
2. Portable Lavatories: The Contractor shall furnish and install portable lavatory units in locations as shown on the attached drawings, and as described within Section 01015 TECHNICAL REQUIREMENTS. Each lavatory units shall include four (4) handwashing stations. Handwashing stations shall consist of a basin, a foot controlled wash water dispenser, a hand soap dispenser, and a towel dispenser.

## ELECTRICAL SYSTEM

1. The Contractor shall construct all electrical systems for the facilities to be provided. This includes all necessary labor, equipment, and material for a fully functional system. Electrical system reuirements shall be as described below.
2. Utilization voltage / frequency for this project shall be [400Y/230V, 50Hz., 3 phase, 5 wire (4 wire plus circuit protective conductor using 5 wire TN-S), designed and constructed in compliance with BS 7671 Requirements for Electrical Installations, Institution of Electrical Engineers (IEE), Wiring Regulations, Seventeenth Edition.] [208Y/120V, 3 phase, 5 wire (4 wire plus equipment grounding conductor), in compliance with the latest edition of the National Fire Protection Agency (NFPA) 70 National Electrical Code (NEC).] Electrical systems shall comply with AED-N Electrical Design Requirements.

### power source

1. The source of power for this Contract is [utility power with generator backup.] [a new prime rated diesel-generator power plant.] [connection to existing distribution system.] [expanded existing power plant.]

***Note to Electrical Engineer: Use the following paragraph for projects with Utility Power w/ Generator Backup. (Generally included if project is in Kabul and a known source is available)***

1. The Contractor shall connect to the local power grid and provide X-XXXkVA standby-rated generator sets as a backup system. The power plant shall include switchgear and all appurtenances necessary to meet the electrical demand. Provide a covered (roof-only) shelter with chain link security fence enclosure for both the generator(s) and fuel storage tank(s).

***Note to Electrical Engineer: Use only one of the following two paragraphs for projects with a New Prime-Rated Diesel Generator Power Plant. (Used for most new projects. Use N+1 for all ANA projects and large ANP projects. Use N for small, remote ANP projects. Switching mechanism: MTS for 2 gensets, synchronizer for 3 or more gensets, ATS for critical GWOT or MILCON projects.)***

***(Use the following paragraph for Small Powerplants)***

1. The Contractor shall provide X-XXX kVA prime-rated generator sets to satisfy an [N+1] [N+2] configuration. The power plant shall include prime power generators, [Manual Transfer Switch,] [Synchronizer,] [Automatic Transfer Switch,] XXXkVA automatic load bank, switchgear, and all appurtenances necessary to meet the electrical demand.  [Provide an enclosed generator house] [Provide a covered (roof-only) shelter with chain link security fence for both the generator(s) and fuel storage tank(s).]

***(For Large Powerplant. Use Custom Language. Consider site-adapting Perini Powerplant)***

***\* Connection to Existing Distribution System \* (Generally used for small projects on existing compounds. This section needs to be tailored to the specific project by an Electrical Engineer)***

1. The Contractor shall connect the existing [aerial] [underground] distribution system….***(…Continue with additional language for type of connection, distance to connection, etc…)***

***\*Expand Existing Power Plant\*  
(Generally used for large projects on existing compounds. This section needs to be tailored to the specific project by an Electrical Engineer)***

1. The Contractor shall provide X-XXX kVA prime-rated generator sets in the existing power plant to satisfy an [N+1] [N+2] configuration. The Contractor shall connect to the existing [aerial] [underground] distribution system. ***(…Continue with additional language for type of connection, distance to connection, etc…)***
2. Provide fuel storage and supply piping system. [Provide [30 day] [\_\_\_\_\_] storage capacity for prime duty plants. Storage tank volume shall be based on the rate of fuel consumption of all engines including spares, at 100 percent, multiplied by a 0.75 operating factor.] [Provide [20,000 liters] [\_\_\_\_] liters storage capacity for [prime duty plant] [standby generator].] Provide duplex transfer pumps to transfer fuel from the bulk storage tanks to the generator tank. Provide single 1200 liter/minute centrifugal fuel transfer pump in the delivery truck unloading system

### distribution SYSTEM

***DO NOT CHOOSE 15kV FOR NEW MEDIUM SYSTEM VOLTAGE. ONLY USE 15kV ON EXISTING COMPOUNDS WHERE VOLTAGE IS KNOWN TO BE 15kV.***

The Contractor shall design and construct an [underground] [aerial] electrical distribution system to supply power to all buildings, facilities and other loads in this contract. The [primary] distribution voltage shall be [120/208 VAC, 60Hz] [400/230V, 50Hz] [277/480v, 60Hz] [15kV,50Hz] [20kV,50Hz]. [The secondary distribution voltage shall be [120/208 VAC, 60Hz] [400/230V, 50Hz] [277/480v, 60Hz] .]

### standby generators for critical buildings

1. Provide a standby-rated generator set as back-up electrical power for the [Dining Facility, Medical Clinic, Kandak Headquarters, and the Tactical Operations Center.] The secondary distribution system shall include [an auto transfer switch, a load bank, main power and back-up power switchgear and all appurtenances necessary to meet the electrical demand.]
2. Provide a covered (roof-only) shelter on concrete pad with chain link security fence for the generator, the load bank, the LV switchgear, and fuel storage tanks (see mechanical for requirements). The generator, the load bank, and the LV switchgear shall be in NEMA Type 3 or IP 54 Enclosures. Provide a lightning protection system for the canopy.

### other electrical systems

The following electrical systems shall be designed and constructed by the Contractor:

1. [Exterior Lighting]
2. [Loud Speaker and Alarm System]
3. [Lightning Protection System; constructed as shown on site-adapt buildings; designed and constructed for other buildings and structures]

### SITE communications

The Contractor shall design and construct communications system infrastructure for the entire compound. The communications system shall consist of an outside plant distribution system that originates at the [ insert source of comms here, usually a HQ or Admin Bldg] and terminates at each facility containing communications, interior communications infrastructure, and looped communications infrastructure for all Guard Towers, Guard Houses, ECP’s, etc. The Contractor shall provide and install all communications equipment including but not limited to outside plant conduit, pull-strings, manholes, handholes, interior conduit, and junction boxes for future installation of voice/data jacks. Communications cabling and voice/data jacks will be provided in future by others.

## structural

***Identify any structural specific scope that needs to be included in Contract; structural information pertinent to facilities is listed below. Use the first paragraph if contract includes only Site Adapt facilities; use the second paragraph if the contract includes only design-build facilities; use both if the contract is a hybrid.***

1. The Contractor shall construct complete structural systems per the construction documents provided in Appendix B-2 for facilities identified as Site-Adapt.
2. The Contractor shall design and construct structural systems for facilities identified as Design Build. Facilities or items not identified as site-adapt shall be considered design-build. Structural designs, calculations and drawings shall conform to criteria as described in Section 01015 TECHNICAL REQUIREMENTS.

## Facilities

### general requirements

#### contract requirements

All standard construction amenities and details such as heating, lighting, site drainage, utility connections, etc. shall be implied as a construction requirement.

***Note to Editor: For reprocurement contracts, delete the above paragraph and use the following two. For procurement contracts, use the paragraph above and delete the following two:***

1. The Contractor shall modify the previous Contractor’s drawings, specifications, and calculations as necessary to incorporate the DrChecks comments in Appendix B-4 and the requirements herein to produce 100% Cleared for Construction documents.
2. The Contractor shall provide complete facilities according to the drawings, specifications, and all applicable contract requirements.
3. The Contractor shall perform a site assessment of all utilities, infrastructure, buildings, elements of force protection, and all other amenities partially or fully constructed. Site assessment shall include Contractor’s recommendations for completing construction of all facilities and shall be submitted for approval in accordance with 01335 SUBMITTAL PROCEDURES.

#### heating ventilation air-conditioning (hvac)

1. Provide Heating, Ventilation and Air conditioning as shown on the Site Adapt drawings, unless modified or noted otherwise.
2. Where wall penetrations for wood heating are shown on the drawings the Contractor shall provide wood heating stoves.

#### plumbing

1. Provide plumbing systems as shown on the Site Adapt drawings, unless modified or noted otherwise.
2. All toilets shall be eastern style unless modified otherwise in this specification section.
3. All eastern and western style toilets shall face north or south. Contractor shall rotate fixtures as necessary to face eastern style toilets north or south. Contractor shall modify the Site Adapt plan as necessary to face western style toilets north or south.
4. All interior hot and cold domestic water shall be surface mounted schedule 40 galvanized steel pipe.
5. Lavatories shall be trough type, supported by reinforced concrete or concrete masonry units.

#### INTERIOR electrical systems

Interior electrical systems shall be [constructed as shown on the site-adapt drawings for site-adapt facilities, and designed and constructed for design/build facilities]. Interior electrical systems include, but are not limited to: interior secondary power distribution system, lighting and power branch circuits, smoke alarms, and communications system. [All systems shall be designed for the ultimate demand loads, plus 25% spare capacity.]

#### FIRE PROTECTION

1. The Contractor shall construct all exitways and egress paths in compliance with the requirements of the building codes referenced herein.
2. Portable fire extinguishers shall be provided inside all facilities and at exterior locations as required in accordance with NFPA 10. Generally, extinguishers will be of the multi-purpose dry chemical type except for occupancies requiring a special type extinguisher (e.g., carbon dioxide portable fire extinguishers for electrical rooms).
3. Fire sprinkler systems are not required in any structures [unless specifically indicated in the construction documents].

#### ACCESSIBILITY REQUIREMENTS

Handicapped accessibility shall not be incorporated in this project. Due to the war contingency requirement, it is assumed that only able-bodied military and civilian personnel will use the facilities listed herein.

### arch span building requirements

#### steel panel BUILDINGS

1. The Arch-Span facilities shall be fabricated and constructed with semi-circular single radius roof panels without vertical side walls, and with vertical end wall panels.
2. All mechanical, electrical and plumbing supports, as well as penetrations through the arch-span walls and roofs, including light-framed dormers at taller openings, shall be compatible with the arch-span construction.
3. For Site-Adapt Arch-Span buildings the Contractor shall submit as a shop drawing a complete set of manuals of the Arch-Span buildings to the Government.

#### insulation

1. Arch-span panels shall be insulated with a minimum of R-18 insulation. The roof insulation system shall be spray applied and harden to a durable rigid surface, per the Arch-Span manufacturer’s standards. The insulation system shall have a smoke-developed index less than 450 and a flame spread rating less than 75. The insulation system shall be protected by a spray-applied 15-minute rated thermal barrier.
2. Install R-19 unfaced batt insulation above all gypsum board and suspended metal panel ceilings.

### site adapt facilities

***Note to editor: Use only if contract includes Site Adapt facilities. For the following facilities, change the words “site adapt and construct” to “complete the construction of” for reprocurment contracts if the work is partially complete.***

The Contractor shall construct the facilities listed below in accordance with the referenced AED Standard drawings and technical specifications. All facility locations are indicated on the Site Plan in Appendix B-1. Site Adapt drawings are provided in Appendix B-2.

#### facility name

Construct a [building] in accordance with AED Standard [xx##] [for function.]

### modified site adapt facilities

***Note to editor: Use only if contract includes modified Site Adapt facilities. For the following facilities, change the words “site adapt and construct” to “complete the construction of” for reprocurment contracts if the work is partially complete.***

The Contractor shall construct the facilities listed below in accordance with the concept floor plans and referenced AED Standard drawings and technical specifications. All facility locations are indicated on the Site Plan in Appendix B-1. Modified Site Adapt drawings are provided in Appendix B-3. Referenced drawings are provided in Appendix B-4.

#### facility name

***[Note to editor: Identify the modifications to the standard floor plan. Include the modified floor plan as a concept drawing in Appendix B-3. Include the entire AED Standard Drawing as a reference in Appendix B-4.]***

Construct a [building] based on AED Standard [xx##] [for function.] Contractor shall modify the floor plan as follows:

### design build facilities

***Note to editor: Use only if contract includes Design Build facilities. For the following facilities, change the words “design and construct” to “complete the [design and] construction of” for reprocurment contracts if the work is partially complete.***

The Contractor shall design and construct the facilities listed below in accordance with the requirements in this Section, Section 01015 TECHNICAL REQUIREMENTS, the technical specifications, concept drawings, and reference drawings. All facility locations are indicated on the Site Plan in Appendix B-1. Concept drawings are provided in Appendix B-3. Reference drawings, if applicable, are provided in Appendix B-4.

#### facility name

Design and construct a [building] based on [the concept drawing.] [AED Standard xx##.]

# execution

## CONTRACT REQUIREMENTS

***Note to Editor: Remove unnecessary process information.***

### site adapt process

***Note to editor: Use only if contract includes Site Adapt facilities.***

1. Site Adapt plans for the facility types requested in this proposal are provided in Appendix B-2. These plans shall be used without deviation to the documents, unless noted otherwise, to create a complete and usable facility meeting the minimum requirements stated in these documents.
2. Contractor shall complete incidental design and all site planning and development as described in this Contract necessary to site adapt the facility plans for this specific site. Site planning and development includes but is not limited to the incidental design of the master site plan, layout of force protection elements, design of all site utilities (including features such as water supply systems, waste treatment facilities and site electrical system), grading and drainage.

#### CONTRACT PLANS AND SPECIFICATIONS

Contractor shall construct all features of Contract work (architectural, structural, civil, mechanical, plumbing, electrical, etc.) in complete accordance with contract plans and specifications furnished by AED unless noted otherwise and stated herein. Refer to the appendices for provided plans.

***Note to editor: Use the paragraph above and delete the paragraph below if the contract is for a new procurement. Use the paragraph below and delete the paragraph above if the contract is for a reprocurement.***

Contractor shall complete construction of all features of Contract work, including any work begun by previous Contractor (architectural, structural, civil, mechanical, plumbing, electrical, etc.), in complete accordance with contract plans and specifications furnished by AED unless noted otherwise and stated herein. Refer to the appendices for provided plans, current site assessment, and Government’s responses to previous Contractor’s latest [design] [construction] submittal.

#### design analysis

Contractor shall perform incidental design analyses as necessary in the preparation of all drawings and specifications required to complete all other remaining scopes of work in this Contract.

#### NECESSARY ALTERATIONS

1. Foundation changes of Site Adapt “Standard Design” building foundations shall only occur for special case deficiencies and only when directed to do so by USACE-AEN Engineering.
2. The COR shall be immediately informed of this change to coordinate a modification. Even if changes to the foundation drawings are required, all other features of the site-adapt work shall be accomplished in strict compliance with the furnished drawings, details and specifications, unless specifically directed otherwise by COR or as indicated below.

### modified site adapt process

***Note to editor: Use only if contract includes modified Site Adapt facilities.***

1. The Contractor shall modify the Site Adapt construction documents, to include plans and specifications, to the extent necessary to provide a complete construction set, and construct the facilities identified in this Section as a Modified Site Adapt effort.

***Note to editor: Use paragraph a above and delete paragraph a below if the contract is for a new procurement. Use paragraph a below and delete paragraph a above if the contract is for a reprocurement. If necessary, edit the paragraph below to include “completion of modifications” to the Site Adapt construction documents.***

1. Contractor shall complete construction of all features of Contract work identified in this Section as a Modified Site Adapt effort.
2. Modified Site Adapt facilities shall be in accordance with the requirements stated in Section 01015 TECHNICAL REQUIREMENTS. Refer to the appendices for concept plans and reference drawings to which the Contractor should adhere for programmatic requirements. The modified plan and construction work shall include and be limited to that described herein. All building systems shall be modified as required by the changes shown in the concept drawings in Appendix B-3, and only to the extent necessary to support the required modifications.

#### concept drawings

Concept drawings provided for Modified Site-Adapt work are only concepts with minimum requirements; the Contactor must verify the space requirements and code compliance in accordance with this Contract.

### design build process

***Note to editor: Use only if contract includes Design Build facilities.***

The Contractor shall design and construct the facilities identified in this Section as Design-Build and shall be in accordance with the requirements stated in Section 01015 TECHNICAL REQUIREMENTS. Refer to the appendices for concept designs to which the Contractor should adhere for programmatic and minimum requirements. The design and construction work shall include but not be limited to that described herein.

***Note to editor: Use the paragraph above and delete the paragraph below if the contract is for a new procurement. Use the paragraph below and delete the paragraph above if the contract is for a reprocurement.***

The Contractor shall complete the construction of the facilities identified in this Section as Design-Build and shall be in accordance with the requirements stated in Section 01015 TECHNICAL REQUIREMENTS. Refer to the appendices for concept designs to which the Contractor should adhere for programmatic and minimum requirements. The design and construction work shall include but not be limited to that described herein.

#### concept drawings

Concept drawings provided for Design Build work are only concepts with minimum requirements; the Contactor must verify the space requirements and code compliance in accordance with this Contract.

#### submittals

The incidental design analysis and contractor-developed drawings and construction specifications shall be submitted for review in accordance with Section 01335 SUBMITTAL PROCEDURES.

## CONTRACT documents

### technical specifications

1. The Technical Specifications, included in Appendix A-1, are provided for work to be performed and materials to be installed by the Contractor as directed by the plans provided by the Government. All technical, testing and submittal requirements shall be adhered to as described in each respective specification.
2. The Contractor shall prepare and submit for approval in accordance with Section 01335 SUBMITTAL PROCEDURES any technical specification required for construction of the plans provided by the Government.

### technical requirements

Section 01015 TECHNICAL REQUIREMENTS provides performance criteria to which the Contractor shall design any scope of work not identified as Site Adapt facilities. These requirements are not intended to supersede nor conflict with the Technical Specifications included in Appendix A-1; they are design requirements to which the Contractor, or his Design Agent, shall adhere.

### ORDER OF PRECEDENCE

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

1. Contract Award Document and referenced publications therein;
2. Written requirements and specifications;
3. Drawings.

## EXERCISE OF OPTIONS

***Note to Editor: Table below should be coordinated with all options associated with this project (re: Section 00010, 01335, 01701 & SOW paragraphs above). List options in same order as they appear in the 01010.***

1. The Government may exercise the Options described in this Scope of Work within the time frames indicated below.
2. Where applicable, Options contingent on submittals from the Contractor may be exercised within a time relative to approval of the submittal. Submittals and subsequent evaluations are described in Section 01335 SUBMITTAL REQUIREMENTS.
3. Exercise of Options shall not warrant an extension to the overall Period of Performance.

|  |  |
| --- | --- |
| **OPTION**  **(PARAGRAPH NUMBER)** | **TIME TO EXERCISE OPTION**  **(IN CALENDAR DAYS)** |
| 1.11.3.a. Reinforcement Steel | May be exercised within 30 days of Government receipt of Initial Material Calculations. |
| 1.11.3.b. Steel Coils | May be exercised within 30 days of Government receipt of Initial Material Calculations. |
| 1.11.3.c. Water Heater[s] | May be exercised within 30 days of Government receipt of Initial Material Calculations. |
| 1.11.3.d. Medium Voltage Cable | May be exercised within 30 days of Government receipt of Initial Material Calculations. |
| 1.11.3.e. Transformer[s] | May be exercised within 30 days of Government receipt of Initial Material Calculations. |
| 1.11.3.f. Generator[s] | May be exercised within 30 days of Government receipt of Initial Material Calculations. |
| 2.2.2 Collapsible Soil – Bid Option | May be exercised within 14 days of Government approval of Geotechnical Report. |
| 2.6.2 Water System Option | May be exercised within 14 days after Contractor reaches depth indicated in Section 01015 TECHNICAL REQUIREMENTS. |
| [Para. Number Option Name] | May be exercised within [xxx] days of [NTP, Government approval of xxx]. |

## life safety analysis

***Note to Editor: Require only if Design-Build effort with no life safety analysis provided.***

A life safety and fire protection analysis shall be completed for each design-build building prior to commencement of construction. This analysis shall be included, as well as a Life Safety Plan, in the design submittals and construction documents. A Life Safety Analysis template is provided in Appendix C-3. All spaces shall be classified following NFPA 101 for egress requirements and IBC for structure limitations and fire protection. The design analysis and life safety plan shall identify which code is used and when. The facility shall comply with all other safety requirements of the NFPA 101. To the extent possible, all facilities shall be designed in accordance with recognized industry standards for life safety and building egress.

-- End of Section --