

DEPARTMENT OF THE ARMY FACILITIES STANDARDIZATION PROGRAM

COMPANY OPERATIONS FACILITY (COF)

STANDARD DESIGN

15 December 2025

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<REV> GENERAL REQUIREMENTS </REV>

1.0 CENTERS OF STANDARDIZATION

The U.S. Army Corps of Engineers (USACE) Savannah District (SAS) is the designated Center of Standardization (COS) for the Company Operations Facility (COF) Standard Design. This standard consists of two parts. <REV> GENERAL REQUIREMENTS </REV> provides guidance to facility planners and USACE districts. <REV> TECHNICAL CRITERIA </REV> is a Request for Proposal (RFP) Statement of Work (SOW).

The COS maintains lessons learned and CAD files of completed designs. The COS must be consulted when starting a project. The criteria contained in this Standard Design applies to all Modification Table of Organization and Equipment (MTOE) and Table of Distribution and Allowances (TDA) companies other than schools.

All USACE geographic districts must incorporate the mandatory design criteria described herein. In instances where unique unit functional or operational requirements are not accurately captured in this Standard Design, notify USACE Savannah COS before deviating from the mandatory requirements stipulated in this Standard Design. The COS provides guidance on planning and programming justification and waiver validation assistance.

Submit <u>all</u> designs to the USACE Savannah COS for review to ensure conformance with the Army Standard.

This Standard Design must be used in conjunction with other referenced criteria.

2.0 PREAMBLE

This Army Standard Design for the Company Operations Facility (COF) provides an integrated building that houses two related functions in separate areas: Administrative and Readiness. The Administrative Module includes the Commanding Officer and his staff within private offices. The platoon leaders are housed within semi-private offices. Conference space is also provided. The consolidated COF ideally houses all companies of the parent battalion in a single building with access between companies. The restrooms and shower facilities for all companies are consolidated.

The Company Operations Facility (COF) Army Standard defines facilities for:

- Command & Control
- Storage and Maintenance of small arms and equipment assigned to a company
- · Equipment Laydown, Cleaning, Inspection, Shipping, Receiving, and Deployment

The operational need to have the administrative, unit weapons, and TA-50 gear storage in proximity characterizes this category; administrative facilities without weapons storage nearby are not recommended for this purpose. Where possible, consolidate multiple companies of their parent battalion in a single building. The building design includes flexibility for expansion, to include a mezzanine area in the storage module for overflow admin offices.

The COF Army Standard Design is provided for companies, batteries, and troops as space to perform daily administrative and supply activities. It is also known as a company headquarters building. The COF is comprised of three vertical construction components consisting of an Administrative Module, Readiness Module, and exterior covered hardstand area. In conjunction with this, each site-specific project must include necessary site amenities such as vehicle service yards, access drives, and equipment wash stations.

3.0 CATEGORY CODES (CAT CODES)

3.1. CATEGORY CODES INCLUDED IN THIS STANDARD DESIGN

The design information in this Standard Design applies directly to the following Facility Category Codes:

- 14185 Company Headquarters Building
- 14179 Overhead Protection

3.2. RELATED CATEGORY CODES

The following category codes may be associated with the Category Codes addressed in this Standard Design as part of a Brigade or Battalion campus:

- 14182 Brigade Headquarters Facility
- 14183 Battalion Headquarters Facility
- 14185 Company Headquarters Building GSF
- 14190 Echelons Above Brigade (EAB), Command and Control Facility
- 17119 Organizational Classroom GSF
- 85215 Nonorganizational Vehicle Parking SY

4.0 COMPANY HEADQUARTERS BUILDING – CAT CODE 14185

4.1. DEFINITIONS

- A. <u>CAT CODE 14185 DESCRIPTION</u>: A building provided for companies, batteries, and troops as space to perform daily administrative and supply activities. It is also known as a Company Operations Facility. Separate unit headquarters at echelons below company (platoon, detachment, or contact team) are reported as CAT Code 61050, Administrative Building, General Purpose.
- B. <u>FAC 6101 DESCRIPTION</u>: A building that contains the command and staff sections of a Company or Battery headquarters or the headquarters of a military organization of similar size.

5.0 OVERHEAD PROTECTION – CAT CODE 14179

5.1. DEFINITIONS

- A. DOD REAL PROPERTY CATEGORIZATION SYSTEM (RPCS), CAT CODE 14179 DESCRIPTION: A canopy or other self-supported structure that provides cover and protection from the elements for operational facilities. Examples are the canopy over fuel pumps at a transportation motor pool or Army and Air Force Exchange Service (AAFES) fueling facility, covered walkways, and covers over weapons cleaning areas and/or other maintenance and storage activities.
- B. <u>FAC 1459 DESCRIPTION</u>: A canopy or other self-supported structure that provides cover and protection from the elements for operational facilities. Examples are the canopy over fuel pumps at fueling facilities, covered walkways, and covers over weapons cleaning areas and/or other maintenance and storage activities.

C. <u>ARMY STANDARD DESIGN FOR COMPANY OPERATIONS FACILITY</u>: Exterior Covered Hardstand. Outside sheltered space for equipment maintenance, weapons cleaning, and pre-deployment preparation. The preference is to provide a column free interior to the greatest extent possible to allow for the greatest flexibility in use. Minimum canopy height is 14'-0" or as required to allow operational truck access. Minimum clear depth is 30'-0".

6.0 PROPONENT

The Army Facilities Proponent for Company Operations Facilities is the Department of the Army (DA) Deputy Chief of Staff, Operations G-3.

7.0 APPLICABILITY

The criteria contained in this Standard Design applies to all Tables of Organization and Equipment (TOE) company, troop, battery, or detachment level organizations to meet basic command and control, unit supply operations, soldier and unit issued equipment storage, soldier equipment maintenance and inspection, deployment preparation, and high technology/dollar items equipment storage activities in a unitized single structure.

7.1. INCLUSIONS

The criteria contained in this Standard Design apply to:

- All Army Tables of Organization and Equipment (TOE) company, troop, battery, or detachment level organizations wherever they may be stationed.
- Active and Reserve Component COFs (when fielded as standalone, dedicated facilities) on Army or Joint Base installations.
- Active Duty, Reserve, and National Guard Component facilities on Army installations, with the
 exception of facilities intended for Initial Entry Training, Advanced Individual Training,
 Operational Readiness Training, or Warrior Transition Units, which are addressed by separate
 Standard Designs.

7.2. EXCLUSIONS

This Standard Design does not apply to Company Admin and Supply (CO A&S) facilities that do not incorporate a Readiness Module, or for aviation line companies within an aviation line battalion (such as Assault Helicopter, Attack Helicopter, Air Cavalry Squadron, General Support Aviation Battalion, or Aerial Exploitation Battalion), or training base companies. <u>However, use the standardized criteria building blocks from this Standard Design to the maximum extent possible before creating or developing new or different criteria to serve the same basic function, task, or purpose.</u>

This standard does not apply to TDA companies for Reception Stations, Basic Training, One Station Unit Training, and Advanced Individual Training. The criteria for these facilities are incorporated in Army Standards and Standard Designs maintained by the Fort Worth District Center of Standardization.

While TDA facilities are not grouped into the COF standard sizes indicated in this Standard Design, they share the same attributes, adjacencies, and general layout as TOE facilities for planning purposes. The Readiness Module, less TA-50 lockers, may be provided for TDA companies that have unit supply and weapons storage requirements. With prior approval by the COS or Facility Design Team (FDT), and in conjunction with a requirements analysis approved by the Land Holding MACOM, TA-50 lockers may be

provided for TDA companies that are subject to deployments or that regularly engage in support to tactical training in a maneuver setting.

Operations spaces for Battalion (CAT Code 14183) and Brigade (CAT Code 14182) commands and Tactical Equipment Maintenance Facilities (CAT Code 21410) have separate criteria addressed under other Army Standards. These facilities, along with the consolidated COF buildings, are best arranged in a campus near unaccompanied personnel housing and fitness facilities.

8.0 ACCESSIBILITY REQUIREMENTS

COFs are intended for use by able-bodied military personnel only; therefore, COFs are not required to meet accessibility requirements.

9.0 SUSTAINABLE DEVELOPMENT AND DESIGN REQUIREMENTS

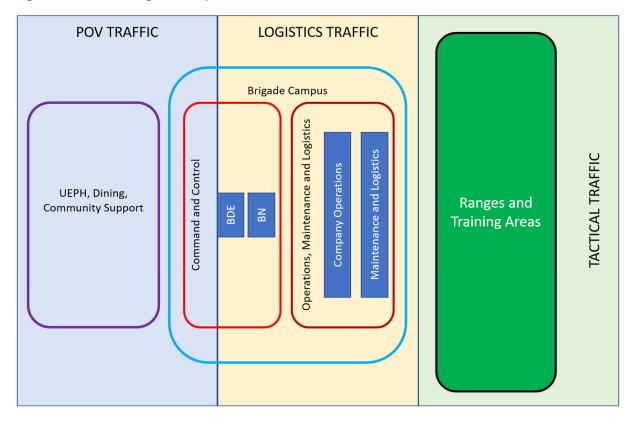
Design COFs to meet the current sustainable development and design criteria as established by the Department of the Army. For the two types of COFs, those in which the Admin Module and the Readiness Module are integrated and those where the two buildings are detached, treat the two buildings as a single facility for LEED purposes.

10.0 INTENT

The Company Operations Facility is a bridge between the headquarters level and the companies that carry out the primary functions of a battalion or higher-level headquarters. These facilities are ideally organized as a campus that includes Brigade Headquarters, Battalion Headquarters, COF, Tactical Equipment Maintenance Facility compound and, when authorized, a Supply Support Activity. Figure 1 shows the relationships within a notional Brigade complex. Ideally the related facilities for a brigade and its subordinate battalions should be within proximity to support operational cohesion and minimize the need for POV movement. When proximity is not possible, priority should favor COF to Tactical Equipment Maintenance Facility (TEMF), then COF to Battalion.

Command and Control Facilities (C2F) for Echelons above Brigade (EAB) are covered in a separate Army Standard and Standard Design.

Figure 1: Notional Brigade Campus



11.0 ASSIGNMENT

Program COFs at the battalion level whenever possible. Consolidate separate companies for facilities that can support three or more companies when consistent with operational and functional requirements. Use the single COF and two company COF only when there are operational, functional, or geographic factors that preclude use of a larger building. Consult the COS when programming a COF for units authorized more than 300 soldiers.

Assign these facilities to the battalion or company level. When a company that is not organic or assigned to a battalion is assigned space in a battalion level COF, assign allocated space to the company.

12.0 FUNCTIONAL AREAS

The COF is comprised of three vertical construction components consisting of an Administrative Module, Readiness Module, and Exterior Covered Hardstand area. In conjunction with this, each site-specific project must include necessary site amenities such as vehicle service yards, access drives, and equipment wash stations.

Table 1 displays the functional areas for each of the required activities in a COF and the Net Usable Area (NUA) allocated to each functional area. The corresponding Standard Design Floor Plan must be used for building layout. A reduced overall net area is permissible if all net program requirements and adjacencies are satisfied per the standard layouts, but in no case may the maximum allowable net area noted in Table 1 for any COF facility be exceeded.

12.1. STANDARD DESIGN PROGRAM AREAS

Table 1 provides the NUA SF program areas for COF Admin Modules per Company to allow for C2 functions. The Readiness Modules are based on the size of Companies, the size of the respective Readiness Module, or the Covered Hardstand. The Army Standard also allows for Consolidated COFs of up to seven individual Companies.

Table 1: Net Usable Area (NUA) Allowances for Company Operations Facilities

TYPE SPACE	NUA per COMPANY
ADMIN MODULE	
Storage	40
CMDR Office	150
XO Office	150
1SG Office	150
Training Room	150
Conference Room	310
Platoon Office x 4 at 150 NSF	600

STANDARD COMPANY SIZES	≤ 100 PN	101-150 PN	151-200 PN	201-250 PN	ADDITIONAL 50 PN
READINESS MODULE					
SUPPLY BAY					
Nonsensitive Secure Storage (NSSS)	165	330	500	670	170
Arms Vault	400	500	600	700	100
NBC Storage	95	150	200	250	50
Communications Storage	95	150	200	250	50
Unit Storage	365	600	770	970	200
READINESS BAY					
TA-50 Lockers / Equipment Layout	3,360	5,260	6,900	8,510	1,620
OVERFLOW / MEZZANINE	1,220	1,750	2,300	2,840	480
EXTERIOR COVERED HARDSTAND	1,680	2,330	2,990	3,650	650

Use the Space Criteria for COFs (Table 1) in conjunction with the "enterprise Pro-active Real Property Interactive Space Management System (ePRISMS)" when available, to evaluate whether the required functional areas are present in an existing facility and, if present, whether they are appropriately sized.

13.0 CONSTRUCTION COMPONENT AREAS

13.1. ADMINISTRATIVE MODULE

The components of the Administrative Module include offices for Commander (CO), Executive Officer (XO), First Sergeant (1SG), and semi-private shared offices for platoon leaders and training. Break, training, and conference rooms, storage rooms, and restrooms with showers are also provided.

The Army Standard for COFs mandates a single set of shower/latrine facilities for each COF to be situated in the Admin Module. Additionally, for the detached Admin Module, limited restroom facilities have been provided on the second floor for administrative personnel.

Mezzanine areas are built to accommodate admin overflow and reduce the footprint of the COF. Administrative areas are distinct but there are no physical barriers between companies. When the number of companies increase, the Administrative Module stays the same size by relocating platoon leaders and possibly training functions to the mezzanine in the Readiness Module.

13.2. READINESS MODULE

The storage module, or Readiness Module, of the COF includes the TA-50 gear lockers, staging areas near the lockers, a vault for small arms storage, and secure areas for NBC protective gear, communications and electronic equipment, and company supplies. Space for a supply sergeant, supply clerks, and armorer is also provided. Floor space near the TA-50 lockers accommodates laydown areas for inspection of individual equipment. These spaces are physically separated between companies with limited access to ensure inventory control. While the administrative modules are relatively the same size, the storage module is sized based upon each company population even when most of the company works from other buildings. Spaces in the storage module are sized for all the unit's assigned population, as shown Table 1. Equipment is maintained and inspected within the COF, but repairs are performed in a TEMF facility. When a single facility is not feasible due to site constraints, the Administrative Module may be separated with the Readiness Module building adjacent.

The Readiness Module consists of two bays: the supply bay and the readiness bay.

13.2.1. **SUPPLY BAY**

The supply bay includes a small arms vault, Communications Equipment Storage Area, Chemical Biological, Radiological, Nuclear, Energy (CBRNE) Storage Area, Non-Sensitive Secure Storage (NSSS), and spaces for inventory control personnel.

13.2.2. READINESS BAY

The readiness bay provides TA-50 lockers for all personnel assigned to the company, with adjacent indoor laydown areas for inspection. Each company's readiness bay has controlled access and the spaces are not shared between companies.

13.3. EXTERIOR COVERED HARDSTAND

The covered outdoor area provides space for weapons and personal equipment cleaning, maintenance, laydown and inspection, and loading and unloading equipment into vehicles. The outdoor areas are shared between all companies. All companies in the battalion are intended to be housed in a consolidated facility or a campus of adjacent buildings for these purposes.

14.0 FUNCTIONAL AREAS ADDITIONAL GUIDANCE

14.1. LATRINE, SHOWER, AND LOCKER ROOMS

Latrine, Shower, and Locker Room facilities are sized in accordance with Table 2 below. When programming, determine the ratio of showers and lockers for male and female soldiers during the requirements analysis. Showers and lockers are included for both on-site administrative personnel and for off-post personnel as a place for commuters to shower and change after physical training (PT).

Table 2: Locker Room NSF

NUMBER OF FACILITY OCCUPANTS	NSF PER OCCUPANT
0 – 25	60
26 – 50	20
51 – 75	15
76 – 175	14
176 or more	11

14.2. CONSOLIDATED UTILITY SPACES

These spaces serve the entire facility. Supplemental rooms or areas may be provided in larger Readiness Bays or where utility runs exceed recommended limits. These functions include mechanical room, electrical room, telecommunication rooms, Secure Internet Protocol Routing Network (SIPRNet), janitor's closet, vending area, and area or room for recyclables.

14.3. READINESS MODULE

The interior equipment maintenance area is nominally sized so that up to 50 percent of the unit personnel can lay out TA-50 gear simultaneously, based on providing 40 square feet (5'-0" by 8'-0" plus a circulation factor) for each layout space. Each company area must accommodate forklift access from the readiness bay to the exterior loading areas. Interior mud wash utility sinks are provided in the Readiness Areas. Sinks must be allocated based on one utility sink for every 50 soldiers in the company.

14.4. SUPPLY BAYS

Supply Bays provide storage space for company supplies and equipment - Tables of Equipment (TOE) and Common Tables of Allowance (CTA), weapons, and consumable supplies (including items awaiting issue, turn-in, or repair). Also, it provides accommodation for the supply sergeant, supply clerk(s), and the armorer in performing shipping and receiving functions. Distinct storage areas accommodated in the supply bay include:

- Arms vault for storage of arms, ammunition, and explosives (AA&E)
- Secure storage room for non-sensitive items (high value items other than AA&E, where accountability is a concern)
- Nuclear, biological, and chemical (NBC) equipment storage
- Communications equipment storage
- Consumable unit storage

14.5. MEZZANINE AREA

The Mezzanine Area provides accommodation for overflow and expansion of either admin or storage spaces. This mezzanine over the open area of the Readiness Module must meet the area requirements of IBC and NFPA 101. The drawings indicate preferred overflow and expansion arrangements that meet user operability requirements. Provide the mezzanine and mezzanine-level platoon offices expansion space indicated on the drawings at the time of initial project construction.

14.6. COVERED HARDSTAND

The covered hardstand can be attached to the Readiness Module, or it can be detached. The default configuration shown in the Standard Design is detached. The choice is solely that of the User, DPW, and Installation. If, however, the choice is made to attach the structure to the Readiness Module, the area under the canopy must be protected with a sprinkler system.

For maximum functionality, the area under the covered hardstand needs to be kept as dry as possible. Accordingly, roof drainage from the COF must not drain freely across the hardstand surface under the canopy. Instead, tie all vertical downspouts into the storm drainage system. The minimum clear canopy height must be 14'-0" to allow operational truck access. Minimum clear depth must be 30'-0".

Use CAT Code 14179 – Exterior covered outdoor area for spaces used for cleaning of weapons and equipment with staging for pre-deployment equipment inspections.

14.7. TROOP AID STATIONS

In cases where the battalion includes a medical company and where previously authorized by Installation Management Command (IMCOM) or the Land Holding Major Army Command (MACOM), the COF may have a Troop Aid Station (TAS). New TAS for company-level organizations are not authorized by Medical Command (MEDCOM) and the sick-call function is handled at the battalion or higher level. The TAS provides sick-call screening and issuing limited non-prescription and limited prescription medications as authorized. Medical care and treatment are only performed within authorized clinics, facilities category 500 series. When authorized, locate the TAS in the Admin Module. This results in two platoon suites being displaced from the Admin Module to the expansion space in the Readiness Module.

14.8. NON-AUTHORIZED FUNCTIONS

Fitness areas are not authorized within the COF buildings.

15.0 NON-ASSIGNABLE SPACES <REV> </REV>

Non-assignable area includes stairwells, common circulation corridors, janitorial spaces, exterior wall thickness, and areas for mechanical, electrical, and telecommunication rooms <REV> </REV>

16.0 ALLOCATION AND ASSIGNMENT OF SPACE

Assign COFs at battalion level whenever possible. This Standard Design is intended to create a facility that consolidates between three and seven companies of a Battalion in a single building. This building can be reconfigured internally without changing the footprint if organizational structure changes.

When assigning space in an existing building, assign square footage (Net Usable Area – NUA) corresponding to the required NSF for each functional area based on authorized personnel in the unit.

17.0 SITE PLANNING

Next to the Readiness Module, provide an 80-foot-deep paved service yard that runs the length of the covered hardstand. A 28-foot-wide entrance from an adjacent road is required at each end of the service yard. When a COF and a TEMF are sited back-to-back, parallel with each other, the minimum distance between the edge of the covered hardstand of the COF and the edge of the main TEMF building must be 125 feet.

18.0 EXTERIOR SITE AMENITIES

Exterior amenities include an optional PT area with exercise equipment including accommodations for push-ups, sit-ups, and chin-up bars for each company adjacent to its COF. Provide one boot/gear wash station per company. Each wash station must include four freeze-proof hose bibs and handrail-type drying racks.

19.0 PRIVATELY OWNED VEHICLE (POV) PARKING

Provide POV at the ratio of one space for every two persons for the maximum design capacity of all Company Operations Facilities. Place parking on the Administrative Module side of the building; no POV parking is authorized in the service yard.

20.0 FACILITY CRITERIA

The maximum allowable gross areas for COF, including space for mechanical equipment, varies depending on the mix of companies and the resulting variance in the Readiness Modules. The optional Troop Aid Station, when authorized, further complicates setting a fixed GSF per company or for a specific number of companies. Use the net allowances listed in Table 1.

20.1. ARMY STANDARD FOR COF

The Army Standard for Company Operation Facility (COF) defines standard sizes for battalions with 1-7 companies. The appropriate size and maximum gross area for a proposed COF facility including space for mechanical equipment are determined by the size of the company and the number of companies per battalion.

20.2. UNIT OF MEASURE

The COF facilities are reported by square feet (SF) as the primary unit of measure (UM). There is no secondary UM. However, DPWs should consider including a Unit of Measure "Each" in General Fund Enterprise Business System (GFEBS) to identify how many COF facilities are available within a building.

21.0 FACILITY ALLOWANCE CALCULATION

The Army's Real Property Planning and Analysis System (RPLANS) calculates allowances for COF facilities at the unit level based on the attributes of the TOE or TDA.

21.1. BASIS FOR AUTHORIZATION AND CALCULATION

The criteria allow this space for battalions or battalion equivalent organizations with at least one company and a need for a Readiness Module. This does not apply to Company Admin and Supply facilities without the Readiness Module, nor for aviation line battalions or training base companies. Standardized building blocks found in these criteria may form the basis of planning and may be used before creating or developing new criteria to serve the same basic functions.

21.2. RPLANS ALLOWANCE CALCULATION

This Standard Design is the primary criteria source for the RPLANS. RPLANS uses an algorithm to generate facility allowances for a COF. The RPLANS allowance is the sum of the Admin Module <REV> </REV> and the Readiness Module consistent with the number of soldiers authorized per company. RPLANS calculates the allowance at Company Unit Identification Code (UIC) level and assigns the allowance to each UIC that meets the authorization step.

22.0 USER PARTICIPATION IN PROCESS

To ensure a successful development of a programming action including repair, maintenance, modernization, or new construction, it is critical that the facility "end-users" are part of the solution being developed. End-users must support the endeavor throughout the entire process.

End-users must be aware of the Army Standard and the basis for development of the authorization for the COF. End-users must have knowledge of the facility reporting, facility assessment, and the Army planning and programming processes.

There are critical meetings and decision points throughout a successful project:

- Development of need
- Preparation of requisite documentation
- Prioritization at an Installation Planning Board
- Planning Charrettes
- Design Charrettes
- Value Engineering Charrettes
- Beneficial Occupancy walk-throughs
- Understanding warranties

In addition, consult the Center of Standardization (COS) USACE, Savannah (SAS) when starting a project. The COS will actively participate on the Project Delivery Team (PDT) to ensure the project is compliant with the functional and operational requirements and technical aspects of the COF Standard Design.

23.0 RENOVATING LEGACY FACILITIES

The "Company Operations Facilities Legacy Facilities Renovation Study" completed in 2013 provides information regarding the renovation of legacy facilities. The document is available on the Savannah COS website for COF facilities under "Legacy Renovation": https://mrsi.erdc.dren.mil/cos/sas/cof/

The intent of this study is to provide information regarding the renovation of Legacy COF Facilities. The information and notional floor plans included are intended to:

- Bring these Legacy Facilities as close as possible to the current Standard Design
- Provide a standardized approach to renovating each type of legacy facility
- Achieve a longer useful life for the legacy COF facilities
- Accomplish this within facilities sustainment, restoration, and modernization (SRM) funding limitations
- Evaluate renovation of legacy facilities, considering the cost of renovation in comparison to new construction cost. If the renovation cost exceeds 75 percent of new construction cost, pursue new construction.

24.0 UTILIZATION

Facility Utilization is an important metric. The measurement of the Utilization of COFs is basically whether the campus is the correct size for the user that is currently utilizing the space as a COF. Since the standard designs are intended to support units with a range of capabilities, the building should be able to support the leadership of the company in the admin core with the platoon leaders nearby, either in adjacent admin spaces or in the mezzanine above the Storage Module. While a single building housing all companies is preferred, if existing adequate spaces exist but cannot house all companies of a battalion, these should be utilized, and the remaining deficiencies should be housed in a nearby facility.

Use the Space Criteria for COFs (Table 1) in this document in conjunction with the enterprise Pro-active Real Property Interactive Space Management System (ePRISMS), when available, to evaluate whether the required functional areas are present in an existing facility and, if present, whether they are appropriately sized.

25.0 ASSESSMENT AND ADEQUACY ISSUES

The Army assesses COF facilities using the Installation Status Report – Infrastructure (ISR-I) based on guidance provided in AR 210-14, Installation Status Report Program. The objectives are to:

- Apply established, Army-wide standards to assess the physical condition of facilities and infrastructure
- Identify substandard facilities or facility shortfalls that might adversely affect either day-to-day operations or readiness at reporting locations, i.e. support to sustainment, deployment, reception, and training
- Identify facility restoration and construction requirements and estimate the associated costs
- Coordinate facility restoration efforts across reporting locations

Reporting location objectives for ISR-I are to provide Commanders with a decision support system that:

- Assesses conditions against established, Army-wide standards
- Estimates restoration and construction buyout costs
- Assesses the overall readiness of facilities to support assigned units, organizations, and tenants to accomplish their wartime and primary missions
- Assists in prioritizing projects
- Assists in allocation of resources
- Provides a basis for measuring change in the condition of facilities over time

This process is an important step in the eventual justification of facility investments. The end-users must participate in the process to ensure that ISR-I facility issues are accurately addressed.

26.0 IDENTIFY AND DOCUMENT ALTERNATIVES

If facility investments are deemed necessary, alternatives to new construction must be considered. An "Analysis of Alternatives" study plays a crucial role. This analysis becomes a foundation of any funding request (for example, DD1391 or DA 4283) for facility investment funding.

Document all alternatives, and if any of those alternatives are not carried forward in the analysis phase, provide a statement as to why they were dismissed.

Alternatives may include:

- Repurpose
- Renovate
- Modernize
- Consolidate
- Re-Station
- Leased Facilities
- New Construction

27.0 SUSTAINMENT

The Army Sustainment, Restoration, and Modernization (SRM) funds support the Sustainment of Army Real property. Each facility CAT Code has an SRM amount assigned per UM of that facility. This value is rolled to the Army level for distribution to the Garrisons. In austere times, this amount is generally decremented by a certain percentage, resulting in further competition for scarcer funds for projects.

28.0 VALUE ENGINEERING

The basic intent of the value engineering process is to increase project value by proactively searching for and resolving issues through transparent, short-term workshops (charrettes) and to stretch finite taxpayer resources by providing the required function(s), most amenities, and the highest quality project(s) at the lowest life cycle costs.

The Company Operations Facility Value Engineering Study completed in 2020 identifies solutions to achieve the required functions at a minimum expenditure of resources without sacrificing the required performance. The document is available on the Savannah COS website for COF facilities under "Programmatic Value Engineering Study": https://mrsi.erdc.dren.mil/cos/sas/cof/

29.0 WARRANTIES

Warranties on equipment installed in new and modernized or renovated facilities may begin from the date of installation and not necessarily on the date of the acceptance of the facility by the Army.

<REV> TECHNICAL CRITERIA </REV>

PART 1 - GENERAL

1.1 PROJECT OBJE	CTIVIEC

1.1.1	COMPANY	OPERATIONS	FACILITY (COF
		0		

- 1.1.1.1 <REV> Provide Company Operations Facilities (COF). This project type is to house Company administrative operations and store and move supplies.
- 1.1.1.2 The project will include Company Operations Facilities for [_____] Companies. The preferred design approach for this complex is a [UNICOF with detached two-story admin][UNICOF with integrated admin] layout. The information for the [Unit Identifier] and number of personnel per company for this project is as follows:
 - A. Company [CO_LETTER]:
 - [COF_CO_PERSONNEL] total personnel for a [___] pn Readiness Module
 - Male to female ratio of [__:__]
 - The maximum allowable gross area for this Company's Readiness Module is [___] gross square feet.
 - The maximum allowable gross area for this Company's exterior covered hardstand is [___] gross square feet.
 - B. The maximum allowable total gross area for the UNICOF Admin Module is [_____] gross square feet.
 - C. A Troop Aid Station to support the Brigade [is][is not] required. </REV>

1.1.1.3 SITE

- 1.1.1.3.1 Provide all site design and construction within the limits of construction necessary to support the new building facilities. Supporting facilities include, but are not limited to, utilities, electric service, exterior and security lighting, connection to the telecommunications infrastructure, fire protection and alarm systems, security fencing and gates, water, gas, sewer, oil-water separators, storm drainage, and site improvements. Include Antiterrorism / Force Protection measures in the facility design in accordance with applicable criteria.
- 1.1.1.3.2 Maintain the construction site and haul route(s). Repair or replace damage to existing sidewalks, pavements, curb and gutter, utilities, and landscaping within the construction limits, adjacent to the construction site, and along the haul route(s) resulting from construction activities at no additional cost to the Government. Prior to construction activities, perform an existing condition survey. At completion of the work, perform a final condition survey to determine repair and replacement requirements.
- 1.1.1.3.3 Approximate area available for this project is [_____ square feet][as shown on the drawings].
- 1.1.1.4 GOVERNMENT-FURNISHED GOVERNMENT-INSTALLED EQUIPMENT (GFGI)

1.1.1.4.1 Coordinate with the Government on GFGI item requirements and provide structural support and brackets for projectors/DVD and other media players/TVs/monitors, arms/weapons racks, utility connections, and space with required clearances for GFGI items. All computers and related hardware, copiers, faxes, printers, video projectors, DVD and other media players, cameras, and TVs are GFGI.

1.1.1.5 FURNITURE REQUIREMENTS

- 1.1.1.5.1 Provide furniture design for all spaces including existing furniture and equipment to be re-used. Coordinate with the user to define requirements for items such as furniture systems, movable furniture, equipment, existing items to be re-used, and storage systems. Early coordination of the furniture schedule is required for a complete and usable facility. Furniture procurement is not included in this Contract or Task Order.
- 1.1.1.5.2 The Government reserves the right to change the method for procurement and installation of furniture to Contractor-Furnished Contractor-Installed (CFCI). CFCI furniture requires competitive open market procurement by the Contractor using the Furniture, Fixtures, and Equipment (FF&E) package.

1.1.2 FUNCTIONAL OBJECTIVES

1.1.2.1 Provide facilities for the military that perform similar functions to civilian sector facilities. The comparison for this type of facility is below. For example, a Company Operations Facility has the similar function as an office/warehouse in the civilian sector; therefore, the design and construction practices should be consistent with the design and construction of an office/warehouse.

Figure 1: Comparison of Military Facilities to Civilian Facilities

Military Facility	Civilian Facility
Company Operations Facility (COF)	Office / Warehouse

1.1.3 <REV> DESIGN PERFORMANCE OBJECTIVES

- 1.1.3.1 Design the facility to accommodate potential changes in use over its lifespan. To the extent practical, designs must be flexible and adaptable to future functions while meeting all specified operational and functional requirements. Site development must promote efficiency and provide visual and functional continuity with adjacent facilities and the overall Installation.
- 1.1.3.2 Requirements stated in this contract are minimum standards. The Contractor is encouraged to propose innovative, creative, and life cycle cost effective solutions which meet or exceed these minimums. The Government's intent is to prioritize funding toward functional and operational performance. Accordingly, materials and construction methods must be the most economical as allowed by code for the intended occupancy, allowing greater investment in the quality of interior and exterior finishes and systems.

1.1.4 ORDER OF PRECEDENCE

1.1.4.1 In the event of a conflict or inconsistency between specification requirements, the following order of precedence governs: (i) PART 2 Facility Specific Requirements; (ii) PART 1 General Technical Requirements; (iii) PART 3 Project Specific Requirements.

1.2 NON-MILITARY CRITERIA

- 1.2.1 MILCON D-B RFP Wizard Table 2 provides design and construction criteria references. This list is not intended to include all criteria that may apply or to restrict design and construction to only those references listed. RFP Table 2 is provided by Headquarters, U.S. Army Corps of Engineers for all Military Construction projects and may include references not applicable for all projects.
- 1.2.2 References cited herein are not necessarily incorporated in their entirety. Refer to specific design requirements established throughout this document.
- 1.2.3 Unless otherwise stated in the contract, use the most current version of all referenced criteria, including any applicable addenda, as of the date of solicitation. In case of conflict between referenced documents or military criteria, the more stringent requirement applies unless explicitly stated otherwise in the contract.

1.3 MILITARY CRITERIA

- 1.3.1 MILCON D-B RFP Wizard Table 3 provides design and construction criteria references. This list is not intended to include all criteria that may apply or to restrict design and construction to only those references listed. RFP Table 3 is provided by Headquarters, U.S. Army Corps of Engineers for all military construction projects and may include references not applicable for all projects.
- 1.3.2 Unless otherwise stated in the contract, use the most current version of all referenced criteria, including any applicable addenda, as of the date of solicitation. In case of conflict between referenced documents or non-military criteria, the more stringent requirement applies unless explicitly stated otherwise in the contract.
- 1.4 GENERAL TECHNICAL REQUIREMENTS
- 1.4.1 MILCON D-B RFP Wizard includes the technical requirements with general applicability to all Army facilities. All projects must comply with UFC 1-200-01 and other referenced UFCs. </REV>

<REV> PART 2 – FACILITY SPECIFIC REQUIREMENTS </REV>

2.1 GENERAL REQUIREMENTS

Provide an Army Standard Design Company Operations Facility (COF) as defined herein.

2.1.1 FACILITY DESCRIPTION

COFs provide administrative and supply facilities for unit personnel functions and storage of their equipment. These facilities serve as the primary staging, training, and deployment center for personnel and their individualized gear.

2.1.2 FACILITY RELATIONSHIPS

2.1.2.1 <u>GENERAL</u>: COFs are typically located within an operations complex along with Tactical Equipment Maintenance Facilities (TEMF motor pools) and Battalion or Brigade HQ. The facilities within this complex must be oriented to support deployment and daily operations.

2.1.2.2 TRAVEL DISTANCES: Locate COFs to the greatest extent possible within walking distance of associated community facilities such as barracks and dining facilities.

2.1.3 ACCESSIBILITY REQUIREMENTS

COFs are intended for use by able-bodied military personnel only, and therefore, are not required to meet accessibility requirements.

2.1.4 BUILDING AREAS

- 2.1.4.1 <u>GENERAL</u>: Calculate gross area in accordance with UFC 3-101-01, Section 4-2, Building Area Calculations. However, the COF exterior covered hardstand area is computed as full scope even though it is a covered but not enclosed space.
- 2.1.4.2 <u>GROSS AREA LIMITATIONS</u>: Maximum gross area limits indicated in Part 1 must not be exceeded for the structures. A smaller overall gross area is permissible if established net program requirements are met.
- 2.1.4.3 <u>NET AREA</u>: Net area requirements for functional spaces are included in the space criteria table (Table 1). If net area requirements are not specified, size the space to accommodate the required function, comply with code requirements, comply with overall gross area limitations, and comply with other requirements of the RFP (for example, area requirements for corridors, stairs, and mechanical rooms are typically left to the discretion of the designer-of-record (DOR)).

2.1.5 ADAPT-BUILD MODEL

An Adapt-Build Model for a COF is available upon request from the Center of Standardization. Each model contains a developed design which may include a Building Information Model (BIM), 2-D CAD files, and specifications.

This design is provided as a guide that exemplifies a technically suitable product and incorporates mandatory functional and operational requirements for a similar (although not an exact) facility to be constructed under this solicitation. It is left to the offerors' discretion if, and how, the offeror uses the sample files provided to satisfy the requirements of this Request for Proposal. This model is not intended to modify or override specific requirements of this RFP and, under each circumstance, it is incumbent upon the successful offeror to adhere to the site-specific scope and functional and operational requirements specified within the RFP. Neither this statement of work nor the adapt-build model is intended to diminish the offeror's responsibilities under the clauses titled "Responsibility of the Contractor for Design," "Warranty of Design," and "Construction Role During Design." The successful offeror is to be the designer-of-record and is responsible for the final design and construction product, including but not limited to adherence to the installation architectural theme, building code compliance, and correctness of the engineering systems provided. The government assumes no liability for the model design provided and, to the extent it is used by an offeror, the offeror is responsible for all aspects of the design as designer-of-record (DOR).

2.2 FUNCTIONAL AND OPERATIONAL REQUIREMENTS

2.2.1 FUNCTIONAL SPACES

2.2.1.1 <u>GENERAL</u>: COF functional layout and adjacency requirements are as indicated on the enclosed drawings, including the extent to which the preferred layouts may be adjusted.

- COFs must be easily adaptable to accommodate variations in size and number of companies in the Army's future force. The design objective of the basic battalion level COF complex is to provide a flexible facility acceptable to a mix of battalions of varying composition while utilizing a modular approach.
- 2.2.1.2 PRIMARY SPACES: The COF is comprised of three vertical construction components consisting of an Administrative Module, Readiness Module, and exterior covered hardstand. In conjunction with this, each site-specific project must include necessary site amenities, such as vehicle service yards, access drives, equipment wash stations, and exterior utilities. These components are more fully described below.
 - 2.2.1.2.1 <u>Administrative Module</u>: Space must be provided for the following administration and support functions:
 - a. Private offices for the Commander, First Sergeant, Executive Officer
 - b. Space for printer and fax machines, waste and paper recycling receptacles, and supply furniture for storage
 - c. Shared office space for platoon leaders, platoon sergeants, and training
 - d. Conference space for meetings and training
 - e. Showers, locker rooms, and latrines to serve both the administrative personnel assigned to the company and for off-post personnel a place for commuters to shower and change after physical training (PT)
 - f. Consolidated utility spaces to serve the entire facility including a mechanical room, electrical room, telecommunications rooms (including SIPRNet), janitor's closet, vending area, and area or room for recyclables. Accommodation for Secure Internet Protocol Routing Network (SIPRNet) must be constructed in accordance with AR 380-5, Chapter 7.
 - 2.2.1.2.2 <u>Readiness Module</u>: Provide space for the following operational and supply functions:
 - a. Readiness Bays to provide accommodation for individual combat equipment (TA-50) lockers (CFCI) for total unit personnel, plus co-located area for equipment maintenance, training, and pre-deployment preparations. Interior equipment maintenance area is nominally sized so that 50 percent of the unit personnel can lay out TA-50 gear simultaneously, based on providing 40 square feet (5'-0" by 8'-0") plus minimal circulation for each layout space. Each company area must accommodate forklift access from the Readiness Bay to the exterior loading areas, via oversized personnel doors, motorized overhead door, or both as space and egress allow. Interior mud wash utility sinks must be provided in the Readiness Areas. Allocate sinks based on one utility sink for every 50 soldiers in the company.
 - b. Supply Bays to provide storage space for company supplies and equipment Tables of Equipment (TOE) and Common Tables of Allowance (CTA), arms, consumable supplies (including items awaiting issue, turn-in, or repair), and future company equipment fielding (for example, ground robotics). Also, it provides accommodation for the supply sergeant, supply clerk(s), and the armorer in performing shipping and receiving functions. Specific storage areas included in the supply bay include:

- (1) Arms vault for storage of arms, ammunition, and explosives (AA&E)
- (2) Secure storage room for non-sensitive items (high value items, other than AA&E, where accountability is a concern)
- (3) Nuclear, biological, and chemical (NBC) equipment storage
- (4) Communications equipment storage
- (5) Consumable unit storage
- c. Accommodation for overflow or expansion from either admin or storage spaces. This provision is accomplished by the utilization of a mezzanine over the open area of the Readiness Module, within the area limitations of the International Building Code (IBC) and NFPA 101. The drawings indicate preferred overflow or expansion arrangements that meet user operability requirements. For the expansion space indicated, the mezzanine, storage closet/furniture, mezzanine-level platoon offices, and telecommunication room (where applicable) must be provided at the time of initial project construction.
- 2.2.1.2.3 Exterior Covered Hardstand: Outside sheltered space for equipment maintenance, weapons cleaning, and pre-deployment preparation. This area must be sized in accordance with Part 1. The preference is to provide a column-free interior to the greatest extent possible to allow for the greatest flexibility in use. The minimum clear canopy height must be 14'-0" to allow for operational truck access. The minimum clear depth must be 30'-0".
- 2.2.1.3 <u>COF ARMY STANDARD REQUIREMENTS</u>: The following items are the Army mandatory features for the COF.
 - a. <u>Battalion Centric Design</u>: Design that consolidates COFs for an entire battalion in a single building. The design standard is intended to create a facility that consolidates between three and seven companies of a Battalion in a single building. This single building can be reconfigured internally without changing the footprint of the building if organizational structure changes.
 - b. Open, Flexible Design: Provide open, flexible design for both Admin and Readiness Modules, easy to reconfigure in response to changes in force structure, equipment, and doctrine for ready adaptability. Consistent with the battalion-centric focus, both the Admin and the Readiness (supply) Modules must employ design features that are durable but reconfigurable without altering the structural design of the building. The addition of internal loadbearing structures that limit design flexibility is not permitted.
 - c. TA-50 Lockers: Individual combat equipment (TA-50) lockers in quantity to meet the upper limit of the design capacity of the facility (100 percent of maximum personnel in each company). Provide permanently installed, individual steel lockable lockers sized 42 inches wide x 24 inches deep x 78 inches high to allow each soldier to securely store current TA-50 as well as future Soldier Systems equipment.
 - d. <u>Interior Operations and Maintenance Area</u>: The interior space of the Readiness Module is intended to provide space for equipment maintenance and pre- and postdeployment checks, as well as other unit preparatory and training requirements. The space includes the provision for individual TA-50 and other equipment storage,

and future fielding of Soldier Systems equipment. Size the space to provide 40-square-foot layout areas for 50 percent of the upper limit of the design capacity of the facility (50 percent of the maximum personnel). Variations to the locker arrangement shown in the drawings are permitted but could result in a different number of layout spaces. Revised configurations that reduce the available layout area to less than 25 percent of the design capacity of the Readiness Module are not permitted. Design the Readiness Module to accommodate the use of forklifts. In addition to the above, wire mesh cage storage must be provided for unit supply, NBC, and communications equipment located at the supply bay area.

- e. Exterior Covered Hardstand: Exterior covered hardstand adjacent to the Readiness Module must be provided for each company to accommodate activities such as outside equipment maintenance, weapons cleaning, pre- or post-deployment preparation, vehicle loading, and close formation. Size this space to provide 40-square-foot layout areas for 25 percent of the upper limit of the design capacity of the facility (25 percent of the maximum personnel). Water, lighting, and electrical connections must be provided.
- f. Arms Vaults: Arms vaults to accommodate storage of arms, ammunition, and explosives (AA&E) must be provided for each company. These vaults must comply with AR 190-11 Appendix G and UFC 4-215-01. An option exists for use of prefabricated, modular vaults in accordance with Fed. Spec. AA-V-2737 requirements. Provide a GSA-approved Class 5A Armory vault door with lock in accordance with Fed. Spec. AA-D-600D and a Dutch-style day gate with issue port. Provide internal wire mesh partitioned spaces or provide for GFGI lockable cabinets in accordance with installation requirements to accommodate armorer's tool kits, etc. Coordinate arms rack embedded or removable eyebolt anchor rings, common storage racks, and similar storage items and locations with user.
- g. Non-Sensitive Secure Storage (NSSS) (other than AA&E): Intent is to provide secure storage of items with a high dollar value and items for which command accountability is required. The room must be constructed of material to prevent forcible entry. The minimum acceptable construction is expanded steel fabric behind impact-resistant gypsum board at both walls and ceiling. The door must provide an equivalent degree of security, and as a minimum, be constructed of sheet metal material not less than 16-gauge in thickness and be equipped with a hasp to accommodate a high security padlock.
- h. Consolidated Showers and Latrines: Provide a single set of shower and latrine facilities for each combined COF (UNICOF). The design layout must allow adjustment for the ratio of males and females in the units by repositioning the dividing wall between the spaces at the time of initial construction. The facilities must have [both linterior[and][exterior] access to these facilities. Provide lockers with benches on a 3:1 ratio of lockers to shower. Minimum locker size is 1'-0" wide x 1'-6" deep x 3'-0" high.
- <u>Economy of Construction to Suit Function</u>: Design must consider economy of construction to suit the function, for example warehouse or light industrial type facilities.

- j. <u>Operational Site Orientation</u>: Operational facility relationships require locating COFs within a complex with direct access to the unit motor pool or other corresponding work areas. The intent is to provide a single battalion-centric complex containing facilities to support company operations and vehicle maintenance in a single fenced compound. When site conditions do not permit this configuration, locate COFs adjacent to the vehicle maintenance complex to facilitate the movement of personnel and equipment between the two facilities.
- 2.2.1.4 <u>SPACE CRITERIA</u>: Table 1 establishes the minimum net areas for the various rooms. The gross square footage of the building may be less than the programmed square footage of the building if all minimum net areas are met.

Table 1: Space Criteria for Company Operations Facilities

ADMIN MODULE – MINIMUM REQUIRED NET AREAS (PER SPACE)	ADMIN (TYPICAL)			
ADMIN MODULE				
Command or Platoon Storage	40			
хо	150			
1SG	150			
со	150			
Training Room	150			
Conference Room	310			
Platoon Offices (each)	150			
READINESS MODULE VARIANTS – MINIMUM REQUIRED NET AREAS (BASED ON PERSONNEL PER COMPANY)	100 PN	150 PN	200 PN	ADDITIONAL 50 PN
READINESS MODULE				
Supply Bay:				
Non-Sensitive Secure Storage (NSSS)	165	330	500	170
Vault	400	500	600	100
NBC Storage	95	150	200	50
Communications Storage	95	150	200	50
Unit Storage	365	600	770	200
Readiness Bay:				
TA-50 Lockers and Equipment Layout Area	3,665	5,280	6,900	1,620
Mezzanine Overflow and Expansion Space	1,230	1,710	2,200	480
EXTERIOR COVERED HARDSTAND				
Equipment Maintenance, Layout Space, and Weapons Cleaning	1,680	2,330	2,990	650

2.3 SITE FUNCTIONAL REQUIREMENTS

2.3.1 EXTERIOR COVERED HARDSTAND

Provide an exterior covered hardstand adjacent to the Readiness Module. Provide weatherproof lighting and weatherproof general-purpose receptacles with ground fault protection. Lighting control must be provided with local switches with photocell override. Provide one duplex receptacle for every two columns. The concrete pavement under the Covered Hardstand must have a slope of no more than 2 percent.

2.3.2 SERVICE YARD

Provide a rigid concrete pavement for the service yard from the Readiness Module and Exterior Covered Hardstand (depending on site layout) to the project demarcation line. The service yard must be a minimum of 80'-0" deep to accommodate up to a 35-foot-long vehicle with a 45'-0" turning radius along the entire length of the Readiness Module and Exterior Covered Hardstand. Slope the service yard to drain away from the Readiness Module and Exterior Covered Hardstand area with a slope of no more than 2 percent.

2.3.3 ENTRANCE DRIVE INTO SERVICE YARD

Provide two 28-foot-wide rigid concrete pavement entrance drives from the service yard to an adjacent roadway. Locate service drives on opposite sides of the service yard.

2.3.4 PRIVATELY OWNED VEHICLE (POV) PARKING

[POV parking to be provided by others.][Provide POV parking at the ratio of one space for every two people for the maximum design capacity of all Company Operations Facilities.]

2.4 SITE AND LANDSCAPE REQUIREMENTS

2.4.1 GENERAL

Site features include utilities, optional physical training area, gear cleaning stations, and general site improvements.

2.4.2 GEAR CLEANING STATIONS

Provide accommodation for boot washing, TA-50 gear washing, drainage, and grit removal in the service yard. Provide minimum of one wash station per company. Each wash station must include four freeze-proof hose bibbs and a <REV> 20-ft minimum total length of </REV> handrail-type drying rack.

2.4.3 PHYSICAL FITNESS AREAS (OPTIONAL)

Provide accommodation for push-ups, sit-ups, and chin-ups for each company adjacent to their COF and service yard.

2.4.4 BOLLARDS

Provide 6-inch-diameter by 5-foot-high concrete-filled, schedule 80 galvanized steel pipe bollards, spaced 5'-0" on center, painted safety yellow for each column of the exterior covered hardstand located adjacent to the service yard where frequent vehicle movement increases the risk of damage by vehicle impact. Also, provide bollards 5 feet from the edge of electrical and mechanical equipment and at the corners of Admin and Readiness buildings where exposed to vehicle traffic. Design bollard footings to withstand vehicular impact.

2.5 ARCHITECTURAL REQUIREMENTS

2.5.1 ARCHITECTURAL THEME

Interior and exterior architectural features of the building must be designed in accordance with the established Installation architectural theme.

2.5.2 OFFICE ADMINISTRATIVE AREAS

The preference is to provide maximum flexibility for future change within office and administration areas. The command section offices must be constructed to provide privacy and sound control in accordance with ACOUSTICAL REQUIREMENTS below. The intent for these areas is to minimize load-bearing walls to the greatest extent possible to accommodate future reconfiguration of spaces. This same construction requirement applies to walls between companies in the readiness areas.

2.5.3 READINESS MODULE

Design and construct the Readiness Module to meet the requirements of a Risk Level II analysis in accordance with AR 190-51 and AR 190-13. In conjunction with this, it has been determined that a minimum exterior wall construction consisting of 26-gauge metal wall panels with insulation and an interior metal liner panel extended to a height 8'-0" above the finished floor satisfies the minimum Risk Level II requirements of AR 190-51, Appendix B-2, paragraph c. The minimum interior wall construction for dividing walls between company readiness areas must consist of no less than a stud wall with impact-resistant gypsum wallboard each side. Design the Readiness Module to minimize the interior volume to the greatest extent possible to reduce energy consumption, while at the same time ensuring that the mezzanine and mezzanine-level platoon offices and spaces can be accommodated.

2.5.4 NATURAL LIGHTING

Provide windows for natural lighting and ventilation in all office areas. Glazing in interior doors and lites may be frosted or transparent except where visibility is needed. Windows in mezzanine offices are preferred but not required. Provide locks and insect screens on all operable windows. Preference is for natural lighting to be provided at Readiness Areas to the greatest extent possible.

2.5.5 ACOUSTICAL REQUIREMENTS

Provide sound insulation in all administration areas to meet a minimum rating of STC 45 at walls, floors, and ceiling assemblies, and a rating of STC 33 for doors, which are to be solid core wood in a metal frame. In addition to the sound insulation required, conference areas must meet a Noise Criteria (NC) 30 rating in accordance with ASHRAE Fundamentals Handbook.

2.5.6 FINISHES AND INTERIOR SPECIALTIES

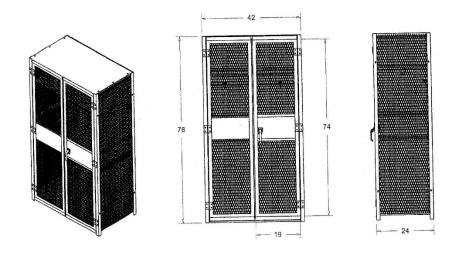
2.5.6.1 <u>FINISHES</u>: Select interior and exterior materials that are commensurate with office and warehouse type construction, and that are attractive, economical, durable, and low maintenance.

2.5.6.2 INTERIOR SPECIALTIES:

2.5.6.2.1 <u>TA-50 Storage Lockers</u>: Provide lockers as indicated in Part 2.2.1.3.c, with size and appearance similar to that shown below. TA-50 lockers must be single tier, heavy duty, all welded ventilated type and meet the following minimum requirements:

- a. Tops, bottoms, and shelves must be constructed of minimum 16 gauge cold-rolled sheet steel. Sides, intermediate partitions, and backs must be constructed of minimum 14 gauge flattened expanded metal or perforated metal with a minimum free area of 50 percent, welded to angle iron frames. Frames must be constructed of minimum 1-inch x 1-inch x 1/8-inch angle iron steel. Thickness of metal and details of assembly and supports must provide strength and stiffness.
- b. Double doors must have a three-point three-sided cremone latch and be able to be secured with a padlock. Doors must be hinged with minimum five knuckle heavy duty steel pin butt hinges welded to both door and locker frame. Provide three hinges per single tier door.
- c. Each locker must include: one aluminum number plate (numbered in sequential order), one full width shelf located 12" from the top with clothes hangar rod, and three locker hooks mounted below.
- d. Lockers must be galvanized and coated with a high-quality durable finish with color to be manufacturer's standard tan or gray.
- e. Anchor lockers to concrete floor in accordance with manufacturer's recommendations.

Figure 2: TA-50 Lockers



2.5.6.2.2 <u>Fire Extinguisher Cabinets and Brackets</u>: Provide Fire Extinguisher cabinets and brackets when fire extinguishers are required by UFC 3-600-01 or the installation. Locate cabinets and brackets in accordance with NFPA 10. Provide semi-recessed cabinets in finished areas and brackets in non-finished areas (such as utility rooms and storage rooms). Fire extinguishers are not included as part of the Contract.

2.6 STRUCTURAL REQUIREMENTS

2.6.1 **DESIGN LOADS**

- 2.6.1.1 **LIVE LOADS**: Design live loads must be in accordance with the most recent and approved IBC and ASCE 7 mandated live loads.
- 2.6.1.2 <u>OTHER LOADS</u>: The readiness bay floor must be capable of supporting forklift movement throughout the area. Design the slab for forklift truck maximum axle load of 5 kips and maximum load capacity of 2 kips.

2.6.1.3 **BOLLARD LOADS**:

- 2.6.1.3.1 Design bollards and footings for an organizational vehicle (minimum 7,000 pounds) impacting the bollard at bumper height.
- 2.6.1.3.2 To the greatest extent possible, bollards must not be fastened directly to the building column foundations and must be spaced from the building accordingly.

2.6.2 STRUCTURAL DESIGN CRITERIA

2.6.2.1 <u>AT/FP REQUIREMENTS</u>: Antiterrorism / Force Protection measures must comply with UFC 4-010-01.

2.7 THERMAL PERFORMANCE

Admin and Readiness Modules must comply with requirements of UFC 1-200-02 and ASHRAE 90.1.

2.8 PLUMBING REQUIREMENTS

2.8.1 EXTERIOR WALL HYDRANTS

In addition to wall hydrants provided around perimeter of building(s), one additional freezeproof exterior wall hydrant or wall faucet per company must be provided at the hardstand.

2.8.2 DOMESTIC HOT WATER SYSTEM

The main water heating equipment must be located within a mechanical room on the ground floor level. Instantaneous water heaters are not allowed to be used for hot water serving all COF areas, with the exception of Readiness Areas. Size system storage and recovery to deliver capacity for all showers for a continuous duration of 90 minutes. Usage diversity factor for the showers must be one. Minimum system total storage of water heater(s) must be 400 gallons for 1- and 2-company COFs, and 600 gallons for 3-company and larger COFs.

2.8.3 PROTECTION OF EXPOSED PIPING

Plumbing piping installed in the Readiness Module but not concealed within walls must be protected from physical damage by recessing the piping in the wall, concealing the piping with wall furring, or by metallic jacketing.

2.9 TELECOMMUNICATIONS AND SECURITY SYSTEMS

2.9.1 TELECOMMUNICATION SYSTEMS

Telecommunications Rooms must be provided for voice and data. Design the telecommunications rooms in accordance UFC 3-580-01.

- 2.9.1.1 TELECOMMUNICATIONS OUTLETS: Provide telecommunications outlets in accordance with UFC 3-580-01 based on functional purpose of the various spaces within the facility as modified by user special operational requirements. All COF workstations and desks must have voice and data connection capability. All conference rooms must have voice and data connection capability (minimum six outlets). A wall telephone outlet with a single jack must be provided in each mechanical room, electrical room, Arms Vault, and telecommunications room, and entrances/exits in the Readiness Modules. Provide a duplex (voice/data) outlet at the desk of each of the Storage Rooms and Arms Vault in the Readiness Module. Provide a duplex (voice/data) outlet for a network printer/copier in the vending area and in the printer / storage areas adjacent to each suite including the mezzanine. Telecommunications infrastructure must meet UFC 3-580-01 and ANSI/TIA/EIA requirements.
- 2.9.1.2 <u>CABLE TRAYS</u>: Provide cable tray pathways throughout the facility (Admin and Readiness Modules) to support the systems required for the construction of the facility as well as user's computer networks, video integration system, telecommunication systems, and other specialized electronic systems.
- 2.9.1.3 TELECOMMUNICATIONS ROOM FOR DETACHED READINESS BUILDING: Provide a separate telecommunications room on every or every other mezzanine. The telecommunications room(s) must be designed in accordance with UFC 3-580-01 criteria and ANSI/EIA/TIA-569-B. Where copper cable runs exceed 295 feet, provide additional telecommunication rooms on the mezzanine. The incoming telephone service (voice and data) must be from the nearest manhole or from the main telephone communication room in the Admin Module. Size the cables and conduits in accordance with UFC 3-580-01.
- 2.9.1.4 COPPER CABLING LEAVING ONE BUILDING TO GO TO ANOTHER: <REV> Use dual-rated indoor / outdoor cable. Provide protector blocks and other grounding requirements to avoid lightning issues resulting in damage to IT equipment. </REV>
- 2.9.1.5 <u>FIBER CABLE</u>: <REV> Use dual-rated indoor / outdoor cable </REV> from the main telecommunications room to be terminated inside the next building on a fiber distribution panel, rack, or cabinet, with a minimum of 6-strands.
- 2.9.1.6 <u>CABLE TELEVISION (CATV)</u>: CATV must be provided in all offices, conference rooms (minimum two outlets), and one in each of the readiness areas. The cable television system must consist of cabling, pathways, and outlets. Building CATV systems must conform to applicable criteria including UFC 3-580-01.
- 2.9.2 AUDIO / VISUAL SYSTEMS
 - Provide provisions (consisting of power receptacle and conduit for signal wiring) for a Government-Furnished Government-Installed (GFGI) projector in each conference room.
- 2.9.3 SIPRNET FOR EXPLOSIVE ORDNANCE DISPOSAL (EOD) AND MILITARY INTELLIGENCE (MI) COFS

 The Secret Internet Protocol Router Network (SIPRNet) room and infrastructure must be designed and constructed in accordance with the Technical Guide for the Integration of SIPRNet

and UFC 3-580-01. Coordinate the SIPRNet building infrastructure design and installation with the local Network Enterprise Center (NEC). As an option, the Telecommunications Room and the SIPRNet Room can be combined into a single room if a SIPRNet safe is used. Coordinate this option with the local NEC.

- 2.9.3.1 In the NSTISSI 7003 and the Technical Guide for Integration of SIPRNet, paragraph "Protective Distribution System", substitute the word "shall" for the word "should" or "will".
- 2.9.3.2 Install one SIPRNet outlet with one drop in the office of each Company Commander (CO CDR), Executive Officer (XO), and 1st Sergeant (1SG). Install one SIPRNet outlet with two drops in each Platoon Office and one outlet and two drops in each conference room. The SIPRNet building infrastructure must use Category 6 UTP copper cables with red cable jacket and red outlet modules unless otherwise directed by the local NEC. Terminate cables in the SIPRNet room and at the outlet in accordance with UFC 3-580-01.
- 2.9.3.3 SIPRNet draft specifications may be found in the SIPRNet Technical Implementation criteria.

 Use the surface-mounted raceway instead of the surface-mounted conduit unless otherwise indicated by the local NEC.

2.9.4 SIPRNET FOR ALL OTHER COFS

A SIPRNet room must be provided for future SIPRNet connectivity. Design and build the SIPRNet room in accordance with the Technical Guide for the Integration of SIPRNet and UFC 3-580-01. Connection to the main telecommunications room from the SIPRNet room must be via a 2-inch trade size steel conduit. Provide a communications signal ground bus bar connected to the main telecommunications room signal bus bar via a correctly sized ground wire (see MIL-HDBK-419-A). Provide one dedicated standard 20-amp duplex receptacle for a future SIPRNet rack in addition to convenience receptacles in the SIPRNet room.

2.9.5 INTRUSION DETECTION SYSTEM

Install the necessary conduit, electrical power, and wiring to support installation of an integrated commercial intrusion detection system (ICIDS) in each of the Arms Vault and SIPRNet room. Contact the Physical Security office for guidance on installation of the signal devices and equipment to activate the system. If a SIPRNet safe or container is used, ICIDS may not be required for this room. Contact the Physical Security Office for guidance.

2.9.6 FIRE DETECTION AND ALARM

Provide a fire alarm and detection system for this facility that complies with the requirements of UFC 3-600-01 and NFPA 72. The system must be addressable and fully compatible with and integrated with the local installation-wide central monitoring system. Coordinate fire alarm system requirements with the Installation Fire Department during design.

- 2.9.6.1 <u>INITIATING DEVICES</u>: Initiating devices must be connected, Class B, to signal line circuits (SLC). All alarm appliances must be connected to notification appliance circuits (NAC), Class B.
- 2.9.6.2 <u>FIRE ALARM STATIONS</u>: Break-glass manual fire alarm stations must not be used.
- 2.9.6.3 Provide fire alarm and mass notification strobes in employee work areas and common use areas with spacing and locations in accordance with NFPA 72. This requirement applies to all DoD facilities with fire alarm evacuation systems, including those facilities only intended for able-bodied military personnel.

2.9.7 MASS NOTIFICATION SYSTEM (MNS)

Provide a mass notification system for each facility and throughout the complex in accordance with UFC 4-010-01. The system must be fully compatible with and integrated with the local installation-wide Mass Notification System.

2.10 ELECTRICAL REQUIREMENTS

2.10.1 GENERAL

See Part 3 of the project RFP for installation-specific clarifications and additional requirements for the electrical and telecommunication systems.

2.10.2 INTERIOR ELECTRICAL

- 2.10.1.1 <u>CHARACTERISTICS</u>: Select electrical characteristics of the power system to provide a safe, efficient, and economical distribution of power, based upon the size and types of loads to be served. Use distribution and utilization voltages of the highest level practical for the load to be served.
- 2.10.1.2 NONLINEAR LOADS: The effect of nonlinear loads such as computers and other electronic devices must be considered and accommodated. These loads generate harmonics, which can overload conventionally sized conductors or equipment and thereby cause safety hazards and premature failures. Equip circuits serving such devices with a separate neutral conductor not shared with other circuits. Panelboards and any dry type transformers must be rated accordingly.
- 2.10.1.3 <u>LIGHTNING PROTECTION SYSTEM AND TRANSIENT VOLTAGE SURGE PROTECTION</u>: Design in accordance with NFPA 780 and other referenced criteria. Provide transient voltage surge protection.
- 2.10.1.4 <u>RECEPTACLES</u>: Provide power receptacles in accordance with NFPA 70 and in conjunction with the proposed equipment and furniture layouts. Provide power connectivity to each workstation. Power poles are prohibited. Provide a duplex receptacle adjacent to each voice, data, and CATV outlet.
- 2.10.1.5 <u>FUTURE SOLDIER LAND WARRIOR SYSTEM</u>: Provide a disconnect switch (208/120V, 3-phase, 4 wire) in each of the Non-Sensitive Secure Storage Rooms (NSSS) in the Readiness Modules. Size the disconnect switch(es) and the circuit breaker(s), conductors, and conduit(s) from a 208-volt, 3-phase, 4-wire distribution panel to the disconnect switch(es) based on a 200 VA continuous demand load for 100 percent of the maximum personnel in each Company Readiness Area (for example, 150-person Readiness Module x 200 VA = 30,000 VA).
- 2.10.1.6 <u>SURGE PROTECTION</u>: Provide surge protection on the service entrance equipment, major distribution equipment, and branch panels serving communications equipment and exterior equipment.

2.10.2 LIGHTING

Lighting and lighting controls must comply with the recommendations of the Illumination Engineering Society of North America (IESNA), UFC 3-530-01 criteria, and the requirements of ASHRAE 90.1. Interior ambient illumination must provide a generally glare-free, high quality lighting environment, and conform to IESNA RP-1-04.

2.10.2.1 <u>LIGHTING CONTROLS</u>: PLC-based programmable lighting controls are prohibited. Systems that require the use of a laptop to configure or modify lighting controls are prohibited. Recommended lighting control systems are controls that are integral to the light fixture (such as daylight sensors or occupancy/vacancy sensors that are integrated into the light fixture housing) or low voltage room control systems ("plug-and-play"). A combination of these types of systems may be used in individual spaces to have different lighting control requirements and each system has features that apply to specific area control needs.

2.10.3 GROUNDING

The ground counterpoise must be provided around the building perimeter and must be utilized for grounding incoming service, building steel, telephone service, piping, lightning protection, and internal grounding requirements. Provide ground straps where required by function and connect to the building grounding system. Provide additional grounding if needed based on project requirements. Systems must conform to NFPA 70 National Electrical Code, NFPA 780 Lightning Protection Code, local codes, and UFC 3-580-01.

2.11 HEATING, VENTILATING, AND AIR CONDITIONING (HVAC)

2.11.1 ADMINISTRATIVE AREAS

The administrative areas' HVAC system design must include flexibility in zoning to where it can address future changes in occupant densities (for example, a platoon office suite converted to a conference room). Administrative areas must be temperature-controlled by the direct digital control (DDC) system. Temperature setpoint adjustment must be accomplished via DDC system by authorized personnel.

2.11.2 TELECOMMUNICATIONS AND SIPRNET ROOMS

Provide an independent and dedicated air handling system. Air handling unit system(s) must not be floor-space mounted within the actual space served. These rooms must meet the HVAC requirements for telecommunications rooms in accordance with UFC 3-410-01. Assume 1,775 BTU per hour for the equipment heat dissipation. Verify this load during the design stage.

2.11.3 READINESS AREAS

- 2.11.3.1 The Readiness Module must be heated and [mechanically ventilated][air conditioned]. Provide separate air side equipment (heating, ventilation, air conditioning units as applicable) for each Readiness Module. Indoor design temperature for heating is 55 degrees F, and for [cooling][mechanically ventilating], the indoor design conditions are 80 degrees F dry bulb with a maximum 60 percent relative humidity. Whenever the indoor dry bulb temperature or the maximum relative humidity is exceeded, the system must run and continue to run until the design dry bulb temperature and the relative humidity requirements are satisfied. The [air conditioning unit][ventilation unit] serving the readiness area must be capable of providing outside air quantities, in accordance with ASHRAE 62.1, for the design people load of the readiness area.
- 2.11.3.2 Provide independent and dedicated packaged A/C units for the Arms Vaults[and Non-Sensitive Secure Storage Areas]. Arms Vaults must have humidity control to limit the relative humidity to no greater than 40 percent at 80 degrees F. If rooms are considered occupied, design to 68 degrees F dry bulb and 40 percent relative humidity for indoor design heating conditions, and 75 degrees F dry bulb and 40 percent relative humidity for indoor design

cooling conditions. Exhaust supply air to the Arms Vaults at the rate of 100 percent. Provide ventilation for Arms Vaults in accordance with ASHRAE 62.1 requirements for storage rooms.

2.11.3.3 <REV> Telecommunications rooms located in Readiness Modules must be served by an independent and dedicated air handling system and be conditioned in accordance with ADMINISTRATIVE AREAS Part 2.11.1 above. Administrative-type areas located within the Readiness Module must be conditioned in accordance with Part 1 requirements and Part 2.11.1 above. </REV>

2.11.4 HVAC CONTROLS

<REV> </REV> See Appendix for HVAC Controls for typical control system points schedules. These schedules identify minimum points to be monitored and controlled by the building automation system (BAS). See Part 3 for additional installation-specific points. The points schedule drawings convey a great deal of information critical to the design, installation, and subsequent performance of the control system. It includes hardware input and output information, device ranges and settings, ANSI 709.1 communication protocol data, and information about data to be used at the operator workstation by the Monitoring and Control software. These schedules are available as an excel spread sheet and as AutoCAD files on the Whole Building Design Guide (WBDG) website <REV> https://www.wbdg.org/dod/ufgs/forms-graphics-tables REV> under UFGS 23 09 00 Instrumentation and Control for HVAC. Develop and provide a point schedule of system types not addressed in the appendix that are detailed to a level consistent to a similar listed system in the appendix. It is recommended that the guidance and instruction documents be reviewed prior to using the info, as the documents provide necessary and critical information to the use of the website drawings and other information.

2.12 ENERGY CONSERVATION REQUIREMENTS

2.12.1 GENERAL

Energy conservation must be in accordance with Part 1 and UFC 1-200-02. <REV> </REV>

2.12.2 SCHEDULES

Utilize the following facility load schedules in all facility energy simulations for purposes of documenting compliance with energy performance requirements.

Schedule 1: COF Facility Load Schedule

Hour	Adr		Readiness		Ligh	ghting Service Water		Plug Loads		HVAC			
	Occup	oancy	Occu	pancy			Hea	iting	ing			Operation	
	WD	Wkd	WD	Wkd	WD	Wkd	WD	Wkd	WD	Wkd	WD	Wkd	
1	0	0	0	0	0.05	0.05	0	0	0.3	0.3	1	1	
2	0	0	0	0	0.05	0.05	0	0	0.3	0.3	1	1	
3	0	0	0	0	0.05	0.05	0	0	0.3	0.3	1	1	
4	0	0	0	0	0.05	0.05	0	0	0.3	0.3	1	1	
5	0	0	0	0	0.05	0.05	0	0	0.3	0.3	1	1	

6	0	0	0	0	0.1	0.05	0	0	0.3	0.3	1	1
7	0	0	0	0	0.1	0.05	0	0	0.3	0.3	1	1
8	0.2	0	0	0	0.3	0.05	0.5	0	0.3	0.3	1	1
9	0.9	0	0.1	0	0.9	0.05	0.1	0	0.9	0.3	1	1
10	0.9	0	0.8	0	0.9	0.05	0.1	0	0.9	0.3	1	1
11	0.9	0	0.1	0	0.9	0.05	0.1	0	0.9	0.3	1	1
12	0.9	0	0	0	0.9	0.05	0.1	0	0.9	0.3	1	1
13	0.5	0	0	0	0.9	0.05	0.1	0	0.8	0.3	1	1
14	0.9	0	0	0	0.9	0.05	0.1	0	0.9	0.3	1	1
15	0.9	0	0	0	0.9	0.05	0.1	0	0.9	0.3	1	1
16	0.9	0	0	0	0.9	0.05	0.1	0	0.9	0.3	1	1
17	0.9	0	0	0	0.9	0.05	0.1	0	0.9	0.3	1	1
18	0.3	0	0	0	0.5	0.05	0.5	0	0.5	0.3	1	1
19	0	0	0	0	0.3	0.05	0	0	0.3	0.3	1	1
20	0	0	0	0	0.3	0.05	0	0	0.3	0.3	1	1
21	0	0	0	0	0.2	0.05	0	0	0.3	0.3	1	1
22	0	0	0	0	0.2	0.05	0	0	0.3	0.3	1	1
23	0	0	0	0	0.1	0.05	0	0	0.3	0.3	1	1
24	0	0	0	0	0.05	0.05	0	0	0.3	0.3	1	1

Schedule 1 Notes:

1. "WD" = Week Day; "Wkd" = Weekend

2.13 FIRE PROTECTION REQUIREMENTS

2.13.1 STANDARDS AND CODES

All fire protection and life safety features must be in accordance with UFC 3-600-01 and the criteria it references. COFs are classified as mission essential and must have complete sprinkler protection.

2.13.2 FIRE PROTECTION AND LIFE SAFETY ANALYSIS

Provide a fire protection and life safety design analysis for all buildings in the project. Submit the analysis with the interim design submittal. <REV> </REV>

2.13.3 SPRINKLER SYSTEM

Provide complete sprinkler protection for Company Operations Facilities, including Administrative Modules and Readiness Modules, designed in accordance with UFC 3-600-01 and NFPA 13. Provide wet pipe sprinkler systems in areas that are heated and dry pipe sprinkler

systems in areas subject to freezing. All floors and areas of the facilities must be protected. The Covered Hardstand, if separated by the distance in accordance with the IBC, is considered a separate structure and does not require sprinkler protection. The Covered Hardstand, if not separated by the distance in accordance with the IBC, must be considered part of the COF building and requires sprinkler protection. The sprinkler hazard classifications must be in accordance with UFC 3-600-01, NFPA 13, and other applicable criteria. Design densities, design areas, and exterior hose streams must be in accordance with UFC 3-600-01. The sprinkler systems must be designed, and all piping sized with computer-generated hydraulic calculations. Include the exterior hose stream demand in the hydraulic calculations. Show a complete sprinkler system design, including sprinklers, branch lines, floor mains, and risers on the design drawings. The sprinkler system plans must include node and pipe identification used in the hydraulic calculations. All sprinkler system drains, including main drains, test drains, and auxiliary drains, must be routed to a 2'-0" x 2'-0" splash block at exterior grade.

- 2.13.3.1 SPRINKLER SERVICE MAIN AND RISER: The sprinkler service main must be a dedicated line from the distribution main. Do not combine the sprinkler service and domestic service. Provide the sprinkler service main with an exterior post indicator valve with lock or tamper switch reporting to the fire alarm control panel (FACP). The ground floor entry penetration must be sleeved in accordance with NFPA 13 requirements for seismic protection. The sprinkler entry riser must include a backflow preventer, a fire department connection, and a wall hydrant for testing of backflow preventer. The sprinkler system must include an indicating control valve for each sprinkler system riser, a flow switch reporting to the FACP, and an exterior alarm bell. All control valves must be OS&Y gate type and have tamper switches connected to the FACP. Facilities with multiple floors must have floor control valves for each floor. The floor control valve assembly must be in accordance with UFC 3-600-01.
- 2.13.3.2 <u>EXTERIOR HOSE STREAM</u>: Exterior hose stream demand must be in accordance with UFC 3-600-01. Include exterior hose stream demand in the sprinkler system hydraulic calculations.
- 2.13.3.3 <u>BACKFLOW PREVENTER</u>: Provide a backflow preventer on the fire water service lateral serving each building. Unless otherwise required by the installation or private water utility management company, the backflow preventer must be located within the building. Provide an exterior wall-mounted test header equipped with 2.5" hose valves to allow for forward-flow testing of the backflow preventer at full system demand, in accordance with NFPA 13. The test header must have one 2.5" hose valve for each 250 gpm, and fraction thereof, of system design flow (for example, a volumetric water flow rate of 600 gpm would require three valves). Provide a closed loop test header sized for full system flow around the backflow preventer equipped with a check valve and a listed digital flow meter to be used. Provide a listed OS&Y with a tamper switch monitored by the FACP in each test header.
- 2.13.3.4 <u>FIRE DEPARTMENT CONNECTION (FDC)</u>: Provide a fire department connection for each building with sprinkler protection, located directly accessible to the fire department.
- 2.13.4 SYSTEM COMPONENTS AND HARDWARE

Provide materials for the sprinkler system, fire pump system, and hose standpipe system in accordance with NFPA 13 and NFPA 20.

2.13.5 FIRE WATER SUPPLY

A fire flow test, as described in UFC 3-600-01, shall be performed by or under the direction of the Qualified Fire Protection Engineer. The fire flow test shall be dated within 6 months of the initial design submission.

2.13.6 FIRE PUMP

Determine if a fire pump is required based on fire flow test data from the project site and fire protection system design requirements for the project. If required, provide a complete fire pump installation for the facility that complies with UFC 3-600-01, NFPA 13, and NFPA 20. The Contractor must submit fire pump design analysis and drawings in the design requirements.

2.13.7 FIRE DETECTION AND ALARM

<REV> See requirements in Part 2.9.6. </REV>

2.13.8 BUILDING CONSTRUCTION

Construction must comply with UFC 3-600-01, the International Building Code (IBC), and NFPA 101.

2.13.8.1 <u>INTERIOR WALL AND CEILING FINISHES</u>: Interior wall and ceiling finishes and movable partitions must conform to the requirements of UFC 3-600-01 and NFPA 101.

2.14 SUSTAINABLE DESIGN

2.14.1 Admin and Readiness Modules must comply with UFC 1-200-02 and ASHRAE 90.1.

2.15 ENVIRONMENTAL – NOT USED

- 2.16 PERMITS NOT USED
- 2.17 DEMOLITION NOT USED
- 2.18 ADDITIONAL FACILITIES NOT USED

2.19 EQUIPMENT AND FURNITURE REQUIREMENTS

2.19.1 FURNISHINGS

2.19.1.1 <u>FURNITURE SYSTEMS</u>: The following criterion describes the furnishing requirements for room types. Furnishings, other than installed building equipment, are Government-Furnished Government-Installed (GFGI) unless otherwise specified. The following furnishings tables are provided for coordination of room and office layouts to ensure suitability for their intended function. Furniture listed is a minimum for functionality; user may request whiteboards and additional storage furniture / equipment as needed based on mission requirements.

Table 2: Room Sizes and Furnishings for COF

ROOM	DESCRIPTION	NSF	COMMENTS	FURNITURE REQUIRED
со	Commander Office	150	Private Office	U-shaped executive 36" deep wood desk unit with single pedestal desk with one box/box/file pedestal, bridge unit, optional hutch with doors and task light, credenza unit with 2-drawer lateral file; two wood side chairs and one ergonomic executive task chair. Note: one cable grommet per work surface.
хо	Executive Officer	150	Private Office	L-shaped 30" deep wood desk unit with single pedestal desk with one box/box/file pedestal, return with file/file pedestal, optional hutch with doors and task light; one 4-drawer lateral file cabinet, two wood guest chairs, and one ergonomic executive task chair. Note: one cable grommet per work surface.
1SG	1 st Sergeant	150	Private Office	L-shaped 30" deep wood desk unit with single pedestal desk with one box/box/file pedestal, return with file/file pedestal, optional hutch with doors and task light; one 4-drawer lateral file cabinet, two wood guest chairs, and one ergonomic executive task chair. Note: one cable grommet per work surface.
Training	Training Room	150	Semi-private, 2- person Offices	Two single table desks with one mobile box/box/file pedestal each; two 5-drawer lateral file cabinets, two guest chairs, and two ergonomic task chairs. Note: one grommet per work surface.
Platoon	Platoon Offices	150 x 4	Semi-private, 2- person Offices	For each 150 SF office, two single pedestal metal desks with optional overhead storage unit with doors; two ergonomic task chairs, two optional guest chairs, two bookcases for manuals, and two 5-drawer file cabinets. Note: one grommet per work surface.
Conference Room	Conference Room	Varies	Meeting Room	Conference table to accommodate 10 people, 10 conference chairs with casters, six side chairs with arms, and one server rack storage credenza.

Storage / Printer Area	Storage	40	Area or room for office supplies and materials	One full height storage cabinet and optional table for printer (printer GFGI)
Arms Vault	Class 5A Vault	Varies	Construct in accordance with AR 190-11, App G	One double pedestal metal desk with one box/box/file and one file/file configuration; one ergonomic task chair, one 3-shelf bookcase for manuals, one 5-drawer file cabinet; one adjustable height work bench and optional ergonomic task stool.
Unit Storage	Unit Storage	Varies	Storage Room	One double pedestal metal desk with one box/box/file and one file/file configuration; one ergonomic task chair, one 3-shelf bookcase for manuals, four lockable metal cabinets with shelves, one 5-drawer lateral file cabinet, and two industrial shelving units with 5 shelves minimum
Comm. Storage	Communications Storage	Varies (Note 1)	Storage Room	One double pedestal metal desk with one box/box/file and one file/file configuration; one ergonomic task chair, one 3-shelf bookcase for manuals, four lockable metal cabinets with shelves, and two 5-drawer lateral file cabinets.
NBC Storage	NBC Storage	Varies (Note 1)	Storage Room	One double pedestal metal desk with one box/box/file and one file/file configuration; one ergonomic task chair, one 5-drawer lateral file cabinet, and four lockable metal cabinets with shelves.
Non-Sensitive Secure Storage (NSSS)	Secure Storage	Varies	Storage Room	Four lockable metal cabinets with shelves and industrial shelving approximately 5'-0" wide x 4'-0" deep x 6'-0" high each – two for 1st 100PN and one additional for every 50PN thereafter.

Table 2 Notes:

1. In 100-person Readiness Module, 30-inch-wide versions of storage items are acceptable in lieu of 36 inch wide. At a minimum, provide desk with pedestals, chair, bookcase, one lateral file, and two storage cabinets in Comm Storage; and desk with pedestals, chair, one lateral file, and three storage cabinets in NBC Storage.

Table 3: Room Sizes and Furnishings for Troop Aid Station (TAS)

ROOM	DESCRIPTION	NSF	COMMENTS	FURNITURE REQUIRED
Waiting Room	Waiting Room	480	Public area	Seating to accommodate 15 people, magazine rack, brochure rack, and end tables
Screening Room	Screening rooms	90 x 2	Private room adjacent to waiting room	48" long work surface with wall- mounted overhead cabinet, one mobile general storage cart (42" high x 32" wide x 22" deep), one task chair, and one guest chair
Admin. / Med Records	Reception, administrative and records storage	150	Reception and check-in, private and secure room for safe keeping of medical records. Visual control of waiting room.	Two countertops, two ergonomic task chairs, two sitting height base cabinets (pullboard above two drawers and file drawer), and three 2-drawer lateral files
Exam Room	Exam rooms	115 x 4	Private room	One cubicle curtain with surface-mounted track, one 48" long work surface with wall-mounted overhead cabinet, one mobile general storage cart (42" high x 32" wide x 22" deep), one task chair, one guest chair, one self-adjusting stool, and one examination and treatment table with cabinet
Phar. / Stor. / Opt. Exam Room	Medicine and equipment storage – Optional exam for surge situations	115	Private and secure room, preferably on the interior with no windows.	One cubicle curtain with surface-mounted track, one 48" long work surface with wall-mounted overhead cabinet, one mobile general storage cart (42" high x 32" wide x 22" deep), one task chair, one guest chair, one self-adjusting stool, and one examination and treatment table with cabinet

Table 3 Notes:

- 1. All furniture items identified in Table 3 are provided for initial coordination of TAS room layouts to ensure suitability for their intended functions. These items are described in detail and located at Appendix entitled TROOP AID STATION FURNISHINGS.
- 2. Examination and treatment table with cabinet is a hospital equipment item that is specified, purchased, and installed by others (Government-Furnished, Government-Installed (GFGI)).
- 3. Countertops, base cabinets, and cubicle curtain and track are Contractor-Furnished, Contractor-Installed (CFCI) items.
- 4. Troop Aid Station Furnishings Tables 4, 5, and 6 further clarify what is: (1) Contractor-Furnished Contractor-Installed (CFCI); (2) Hospital Equipment (Hosp Equip) specified, purchased, and installed by others (GFGI); and (3) Furniture, Fixtures, and Equipment (FF&E) designed by AE but purchased and installed by others (GFGI).

2.19.2 EQUIPMENT - NOT USED

2.20 FACILITY SPECIFIC REFERENCES

- 2.20.1 SPECIFIC INDUSTRY CRITERIA NOT USED
- 2.20.2 SPECIFIC MILITARY CRITERIA
- 2.20.2.1 Army Regulation (AR)
 - a. AR 190-11, Physical Security of Arms, Ammunition, and Explosives (FOUO)
 - b. AR 190-13, The Army Physical Security Program
 - c. AR 190-51, Security of Unclassified Army Property (Sensitive and Non-sensitive)
 - d. AR 380-5, Department of the Army Information Security Program
 - e. AR 380-19, Information Systems Security
 - f. AR 380-40, Policy for Safeguarding and Controlling Communications Security Material (CUI)
- 2.20.2.2 Federal Specification AA-V-2737, Modular Vault Systems
- 2.20.2.3 USACE STD 872-90-03, FE6 Chain-Link Security Fence Details

APPENDIX A - TROOP AID STATION, FURNISHINGS

Table 4 – Exam Room Army, Room Code EXRG1, Quantity 4, 115 SF

JSN	NOMENCLATURE	Qty	UNIT ISSUE	LOG CAT	RESPONSIBLE PARTY	Utl 1	Utl 2	Utl 3	Utl 4
Equipment per Room:									
A1066	Mirror, Float Glass, with SS Frame, 36" x 18"	1	EA	Α	CFCI	-	-	-	-
A1132	Rail, Accessory Mounting, Length as required	2	LF	С	CFCI	-	-	-	-
A5075	Dispenser, Soap, Disposable	1	EA	С	HOSP EQUIP	-	-	-	-
A5080	Dispenser, Paper Towel, SS, Surface Mounted	1	EA	Α	CFCI	-	-	-	-
A5106	Waste Disposal Unit, Sharps with Glove Dispenser	1	EA	С	HOSP EQUIP	-	-	ı	-
A5145	Hook, Garment, Double, SS, Surface Mounted	2	EA	Α	CFCI	-	-	-	-
A5180	Track, Cubicle, Surface Mounted, with Curtain	1	FT	А	CFCI	-	-	-	-
E0210	Worksurface, w/ Overhead Cab, Wall Mounted, 48" W	1	EA	С	FF&E	-	Α	-	-
E0948	Cart, General Storage, Mobile, 42"H x 32"W x 22"	1	EA	С	FF&E	-	-	-	-
F0205	Chair, Side with Arms	1	EA	С	FF&E	-	-	-	-
F0280	Chair, Swivel, Low Back	1	EA	С	FF&E	-	-	-	-
F0340	Stool, Self-Adjusting	1	EA	С	FF&E	-	-	-	-
F2000	Basket, Wastepaper, Round, Metal 18"H x 16" Dia.	2	EA	С	FF&E	-	-	-	-
F3200	Clock, Battery, 12" Dia.	1	EA	С	HOSP EQUIP	-	-	-	-
M1620	Holder, Chart, Patient, Wall or Door Mounted	1	EA	Α	FF&E	-	-	-	-
M1800	Computer, Microprocessing, with CRT Monitor	1	EA	С	HOSP EQUIP	-	Α	ı	-
M3072	Frame, Infectious Waste Bag with Lid	1	EA	С	HOSP EQUIP	-	-	-	-
M4100	Sphygmomanometer, Aneroid, Wall Mounted	1	EA	С	HOSP EQUIP	-	-	ı	-
M4200	Otoscope / Ophthalmoscope, Wall Mounted	1	EA	С	HOSP EQUIP	-	Α	ı	-
M7401	Light, Exam, Mobile, Spotlight, Mobile Stand	1	EA	-	HOSP EQUIP	-	Α	-	-
M9025	Table, Examination / Treatment, with Cabinet	1	EA	С	HOSP EQUIP	-	Α	-	-
P3100	Lavatory, Vitreous China, Slab Type	1	EA	Α	CFCI	D	-	-	-
X3930	Illuminator, Film, Double, Wall Mounted, 20 x 29 x 6	1	EA	С	HOSP EQUIP	-	А	-	-
	GRAND TOTAL	26							

Table 4 Note: Reference Paragraph 3.19.1.A Furniture Systems Table 3 for additional information.

Table 5: Exam Screening, Room Code EXRG4, Quantity 2, 90 SF

JSN	NOMENCLATURE	Qty	UNIT ISSUE	LOG CAT	RESPONSIBLE PARTY	Utl 1	Utl 2	Utl 3	Utl 4
Equipment per Room:									
A1066	Mirror, Float Glass, with SS Frame, 36" x 18"	1	EA	А	CFCI	-	-	1	-
A1132	Rail, Accessory Mounting, Length as required	2	LF	С	CFCI	-	-	-	-
A5075	Dispenser, Soap, Disposable	1	EA	С	HOSP EQUIP	-	-	ı	-
A5080	Dispenser, Paper Towel, SS, Surface Mounted	1	EA	Α	CFCI	-	-	1	-
A5106	Waste Disposal Unit, Sharps with Glove Dispenser	1	EA	С	HOSP EQUIP	-	-	-	-
A5145	Hook, Garment, Double, SS, Surface Mounted	1	EA	Α	CFCI	-	-	-	-
E0210	Worksurface, with Overhead Cab, Wall Mounted, 48"W	1	EA	С	FF&E	-	Α	-	-
E0948	Cart, General Storage, Mobile, 42"H x 32"W x 22"	1	EA	С	FF&E	-	-	-	-
F0205	Chair, Side with Arms	1	EA	С	FF&E	-	-	-	-
F0300	Chair, Typist, Swivel	1	EA	С	FF&E	-	-	-	-
F2000	Basket, Wastepaper, Round, Metal 18"H x 16" Dia.	2	EA	С	FF&E	-	-	-	-
F3200	Clock, Battery, 12" Dia.	1	EA	С	HOSP EQUIP	-	-	-	-
M1620	Holder, Chart, Patient, Wall or Door Mounted	1	EA	Α	FF&E	-	-	1	-
M1800	Computer, Microprocessing, with CRT Monitor	1	EA	C	HOSP EQUIP	-	А	ı	-
M4040	Scale, Weighing, 300-pound Capacity	1	EA	С	HOSP EQUIP	-	-	-	-
M4100	Sphygmomanometer, Aneroid, Wall Mounted	1	EA	С	HOSP EQUIP	-	-	ı	-
M4116	Monitor, Vital Signs	1	EA	С	HOSP EQUIP		Α	ı	-
M4200	Otoscope / Ophthalmoscope, Wall Mounted	1	EA	С	HOSP EQUIP	-	А	-	-
P3100	Lavatory, Vitreous China, Slab Type	1	EA	Α	CFCI	D	-	-	-
	GRAND TOTAL	19							

Table 5 Note: Reference Paragraph 3.19.1.A Furniture Systems Table 3 for additional information.

Table 6: Reception, Room Code RECP1, Quantity 1, 150 SF

JSN	NOMENCLATURE	Qty	UNIT ISSUE	LOG CAT	RESPONSIBLE PARTY	Utl 1	Utl 2	Utl 3	Utl 4
Equipment per Room:									
C0037	Rail, Apron, 4" x 36" x 1"	1	EA	Α	CFCI	-	-	-	-
C0039	Rail, Apron, 4" x 48" x 1"	2	EA	Α	CFCI	-	-	-	-
C0045	Frame, Apron, 1-Drawer, 4" x 36" x 22"	1	EA	Α	CFCI	-	-	-	-
C0046	Frame, Apron, 2-Drawer, 4" x 38" x 22"	2	EA	Α	CFCI	-	-	-	-
C05M0	Cabinet, U/C/B, one PBD, two DR, one File DR, 30" x 18" x 22"	2	EA	Α	CFCI	-	-	-	-
CT030	Countertop, High Pressure Laminate	2	LF	Α	CFCI	-	-	-	-
F0280	Chair, Swivel, Low Back	2	EA	С	FF&E	-	-	-	-
F0420	Cabinet, Filing, Lateral, Half Height	3	EA	С	FF&E	-	-	-	-
F2000	Basket, Wastepaper, Round, Metal 18"H x 16" Dia.	2	EA	С	FF&E	-	-	-	-
F3200	Clock, Battery, 12" Dia.	1	EA	С	HOSP EQUIP	-	-	-	-
M1605	Holder, Chart, 20 Each	1	EA	С	FF&E	-	-	-	-
M1800	Computer, Microprocessing, with CRT Monitor	2	EA	С	HOSP EQUIP	-	А	-	-
M1820	Imprinter, Data Record, Electric	1	EA	С	HOSP EQUIP	-	Α	-	-
M1825	Printer, Computer	1	EA	С	HOSP EQUIP	-	Α	-	-
M1850	Typewriter, Electric	1	EA	С	HOSP EQUIP	-	Α	-	-
M1855	Facsimile Machine	1	EA	С	HOSP EQUIP	-	Α	-	-
	GRAND TOTAL	25							

Table 6 Note: Reference Paragraph 3.19.1.A Furniture Systems Table 3 for additional information.

