US Army Corps of Engineers ®
Savannah District

DEPARTMENT OF THE ARMY
FACILITIES STANDARDIZATION PROGRAM

BRIGADE OPERATIONS COMPLEX, BRIGADE AND BATTALION HEADQUARTERS (BDE HQ / BN HQ)

STANDARD DESIGN

22 June 2026

BDE/BN HQ Revision 7.0 Dated 22 June 2026

Contents

Contents

GENERAL REQUIREMENTS

1.1 CENTERS OF STANDARDIZATION

1.1.1 The U.S. Army Corps of Engineers (USACE) Savannah District (SAS) is the designated Center of Standardization (COS) for the Brigade Operations Campus, including the Brigade and Battalion Headquarters (BDE/BN HQ) Standard Design. This standard consists of two parts. <REV> GENERAL REQUIREMENTS provides guidance to facility planners and USACE districts. TECHNICAL CRITERIA is a Request for Proposal (RFP) Statement of Work (SOW), also published in the RFP Wizard: https://mrsi.erdc.dren.mil/model-rfp/.

1.1.2 This Standard Design package complies with the Army Standard (AS) as established by AFSP implemented by the Army Facilities Standardization Committee (AFSC) in accordance with AR 420-1.

1.1.3 The COS maintains lessons learned and follows completed designs. Consult the COS when starting a project and submit all designs to the USACE Savannah COS for review to ensure conformance with the Army Standard. </REV>

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

1.2 PROPONENT

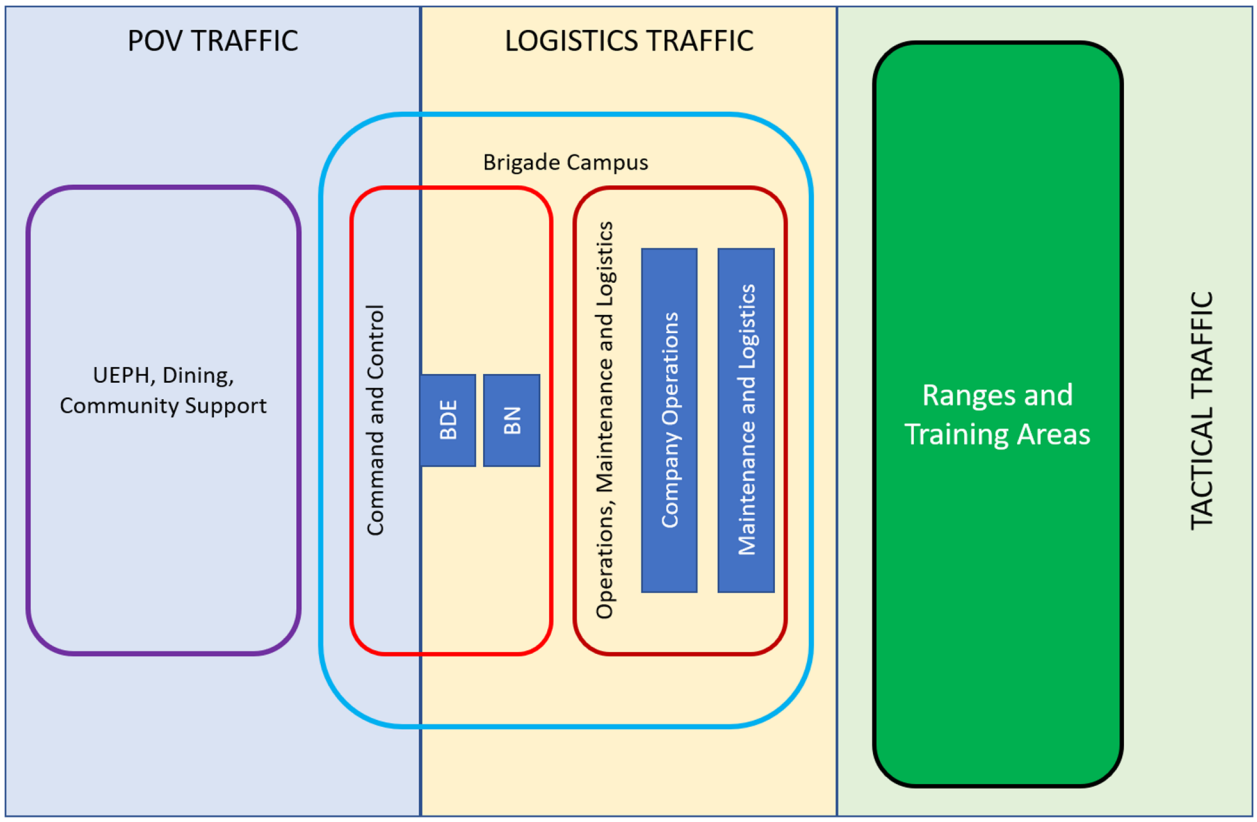
1.2.1 <REV> This standard design has been developed, monitored, and approved by the Army Facilities Proponent for BDE HQ and BN HQ facilities, the Department of the Army (DA) Deputy Chief of Staff, Operations G-3. </REV>

1.3 PURPOSE

1.3.1 INTENT

1.3.1.1 These facilities are normally organized as a campus that includes Brigade Headquarters, one or more Battalion Headquarters, multiple Company Operations Facilities (COF), and one or more Tactical Equipment Maintenance Facility (TEMF) Compounds and, when authorized, a Supply Support Activity (SSA). Related facilities for a brigade and its subordinate battalions and companies should be in close proximity to support operational cohesion and minimize the need for POV movement. Figure 1 shows the notional relationship within a Brigade Campus and between the brigade campus and other facilities and resources on the installations. When proximity is not possible, priority should favor COF to TEMF, then COF to Battalion.

Figure 1: Notional Brigade Campus



1.3.2 PREAMBLE

1.3.2.1 This Army Standard Design for Brigade Headquarters (BDE HQ) and Battalion Headquarters (BN HQ) defines functional and operational requirements for brigade and battalion level headquarters buildings that house the command, personnel, intelligence, operations, supply, communications, and other specialized functions of a regiment/group/brigade or a battalion/squadron headquarters, to include all headquarters administrative and command & control operations.

1.3.2.2 This Army Standard Design supersedes allowance criteria contained in AR 405-70, as noted herein, and serves as the primary authority for Brigade and Battalion Headquarters worldwide.

1.4 APPLICABILITY

1.4.1 This Standard Design applies to all planning or programming decisions and strategies for Brigade Headquarters (BDE HQ) and Battalion Headquarters (BN HQ) facilities. The Army Standard applies to Active Army, Army National Guard, Army Reserve, and to Military Construction on Non-Army facilities on Army Installations.

1.4.2 <REV> All USACE geographic districts must incorporate the mandatory design criteria described herein. In all 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. </REV>

1.4.3 INCLUSIONS

<REV> </REV>

1.4.3.1 The criteria contained in this Standard Design apply to:

a. Development of Brigade Operations Campus site plans

b. Facility designs for Table of Organization and Equipment (TOE) Brigade Headquarters (BDE HQ) and Battalion Headquarters (BN HQ)

c. Consolidation of Brigade and Battalion Headquarters

d. <REV> All Modification Table of Organization and Equipment (MTOE) and Table of Distribution and Allowances (TDA) brigades other than schools </REV>

e. This space planning criteria extends to battalions' subordinate to the functional brigades and battalions that are not subordinate

1.4.4 EXCLUSIONS

1.4.4.1 <REV> The criteria contained in this Standard Design DOES NOT apply to:

a. Standard Designs managed by USACE Fort Worth District Center of Standardization (COS), including Basic Training (BT), One Station Unit Training (OSUT), and Advanced Individual Training (AIT)

b. Operational Readiness Training Complex (ORTC) Standard Designs managed by USACE Louisville District Center of Standardization (COS), including CAT Code 14184 for ORTC Battalion Headquarters, and CAT Code 14187 for ORTC Brigade Headquarters

c. Schools related to MTOE and TDA brigades </REV>

1.5 CATEGORY CODES (CAT CODES)

1.5.1 CATEGORY CODES INCLUDED IN THIS STANDARD DESIGN

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

- 14182 – Brigade Headquarters Facilities
- 14183 – Battalion Headquarters Facilities
- 17119 – Organizational Classroom

1.5.2 RELATED CATEGORY CODES

1.5.2.1 The following category codes may be associated with the Category Codes addressed in this Standard Design:

- 14185 – Company Headquarters Building
- 14179 – Overhead Protection
- 21110 – Aircraft Maintenance Hangar
- 21410 – Vehicle Maintenance Shop
- 21470 – Oil Storage Building
- 44224 – Organizational Storage Building
- 85210 – Organizational Vehicle Parking

1.6 <REV> WAIVER REQUESTS

1.6.1 Waiver requests against the Army Standard must be reviewed by the COS, routed through Army proponents for BDE/BN HQ, the Facility Design Group (FDG), and formally approved by the AFSC. Waiver requests against the standard design must be routed to the COS and approved by the HQUSACE. The Installation is responsible for initiating a waiver request in accordance with AR 420-1.

1.7 MODEL REQUEST FOR PROPOSAL (RFP) WIZARD

1.7.1 The standard design must be implemented in conjunction with the RFP Wizard, which is found on the MRSI site, https://mrsi.erdc.dren.mil/model-rfp/, for use of the web-based RFP Wizard.

1.7.2 PART 1 – GENERAL TECHNICAL REQUIREMENTS

1.7.2.1 The general technical requirements included in PART 1 are controlled by Headquarters USACE and have applicability across all standard designs. Technical requirements are organized by discipline and identify major technical criteria applicable to the facility design.

1.7.3 PART 2 – FACILITY SPECIFIC REQUIREMENTS

1.7.3.1 The facility specific requirements included in PART 2 are controlled by the COS for the facility type. Facility specific requirements are organized by disciplines and include the function and operations requirements that are mandated by the Standard Design.

1.7.4 PART 3 – PROJECT SPECIFIC REQUIREMENTS

1.7.4.1 The project specific requirements included in PART 3 are controlled by the installation and/or RFP preparer. Project specific requirements are organized by discipline and include any project specific requirements that may be unique to the installation or specific mission requirements for the Users assigned to the facility. </REV>

1.8 PROGRAMMING AND PLANNING

1.8.1 The intent of the Army Standard and Standard Design is to provide the required functional areas for the brigade in a single building and to provide the required functional areas of the battalion HQ and the organizational classrooms in a single building. When not possible, adjacent buildings may be acceptable consistent with operational and functional requirements.

1.8.2 ALLOCATION AND ASSIGNMENT OF SPACE

1.8.2.1 Brigade and Battalion HQs must be assigned to the Unit Identification Code (UIC) of the primary organization occupying the Headquarters. For Headquarters designed to accommodate multiple units (e.g., consolidated brigade and battalion HQ), assign the space to the UIC of the primary organization occupying each portion of the building.

1.8.2.2 Select the Brigade HQ size based on the approved manning level of the BDE staff (or staff size) as determined by TOE or TOE/TDA. For new construction, programming a facility is based on the number of authorized staff to include personnel from other elements of the brigade that routinely work in the HQ. This might include fire support elements, Air Force weather or air support elements, military intelligence (MI) analysts and signal enablers. For

MI analysts, provide space based on 60 percent of the authorized strength to account for 24 hours a day, seven days a week operations. The five sizes are displayed in Table 1 below.

1.8.2.3 MTOE Brigade facilities include special purpose space for a Sensitive Compartmented Information Facility (SCIF), Brigade Operations Center (BOC), and Network Operations Center (NOC) areas. Not all Brigades have a requirement for the special purpose space or have the capability to operate these environments. Confirm the requirement during the requirements analysis. The total capacity for each standard size includes the capacity of these areas. For units not requiring these special purpose spaces, the design must preserve the capability to retrofit these capabilities should the need arise.

1.8.3 GROSS AREAS

1.8.3.1 A BDE HQ for a Brigade Combat Team (BCT) or other brigade is sized based on the number of personnel requiring workspace in the headquarters. The BN HQ is sized based on the number of personnel requiring workspace in the headquarters.

1.8.3.2 ARMY STANDARD FOR BDE/BN HQ: The "Army Standard for Brigade and Battalion HQs" addresses both Brigade (CAT Code 14182) and Battalion (CAT Code 14183) HQ facilities, and provide mandatory requirements as either standalone or, where directed, combined headquarters facilities for select types of brigades under the Modular Force.

1.8.3.3 UNIT OF MEASURE: Brigade and Battalion HQ facilities are reported by square feet (SF) as the primary unit of measure (UM). There is no secondary UM identified in the in the DOD Real Property Classification System (RPCS).

1.8.4 FACILITY ALLOWANCE CALCULATION

1.8.4.1 The allowance methodology for brigades and for Army TOE battalions was developed and approved by the Army Facilities Standardization Committee (AFSC) and Army Requirements Group (ARG). This methodology is used by the Army's Real Property Planning and Analysis System (RPLANS) to generate the facility allowance. RPLANS uses a programmed algorithm to calculate facility allowances at the Unit Level. RPLANS can be accessed at the following link: https://rplans.army.mil/rplans-vpd/f?p=2001:30:2691848222003

1.8.4.1.1 BRIGADE HEADQUARTERS SIZES: The following design sizes can be used in the event of new construction or planned renovations. This facility is calculated at the unit level. The requirement will need to be conveyed in an edit justification statement and submitted in RPLANS for review and pending approval.

Table 1: BDE HQ Sizes

Standard Design Size	Number of BDE HQ Staff	Building Area (GSF)
Extra Small	≤ 106	20,400
Small	107 – 173	34,400
Medium	174 – 200	37,700
Large	201 – 224	43,400
Extra Large	225 – 320	59,200

Table 1 Note: Army Standard does not specify minimum number of personnel.

1.8.4.1.2 BATTALION HEADQUARTERS SIZES: The following design sizes can be used in the event of new construction or planned renovations. This facility is calculated at the unit level. The requirement will need to be conveyed in an edit justification statement and submitted in RPLANS for review and pending approval.

Table 2: BN HQ Sizes

Standard Design Size	Number of BN HQ Staff	Building Area (GSF)
	Fewer than 20	Facility Not Authorized
Small	20 – 35	16,000
Medium	36 – 50	18,600
Large	51 – 70	20,400
Extra Large	More than 70	22,600

1.8.5 USER PARTICIPATION IN PROCESS

1.8.5.1 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 including critical meetings and decision points below:

- 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

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

1.8.5.3 In addition, consult the USACE Savannah COS when starting a project. The COS will actively participate in the Project Delivery Team (PDT) to ensure the project is compliant with the functional and operational requirements and technical aspects of the BDE/BN Standard Design.

1.8.6 [BRIGADE HQ FUNCTIONAL AREAS

1.8.6.1 A MTOE Brigade Headquarters consists of Administrative and Support Space for Command and Staff and Special Functions Space. Special functions include Sensitive Compartmented Information Facility (SCIF), Brigade Operations Center (BOC), and Network Operations Center (NOC).

1.8.6.1.1 ADMINISTRATIVE AND SUPPORT SPACE FOR COMMAND AND STAFF: This is the only construction component required in every Brigade Headquarters. It consists of a command suite, open and private office spaces, conference rooms, and storage.

1.8.6.1.2 SENSITIVE COMPARTMENTED INFORMATION FACILITY (SCIF): When required, this space must be accredited under Intelligence Community Directive (ICD) 705 standards. Beyond the enhanced security features, no increased utility infrastructure is required above that of a standard administrative building. Because of the special construction and security measures, report this space in the real property inventory as CAT Code 14162, Administrative Building, Secure. The users of this space are often in a subordinate military intelligence (MI) detachment or company and not included on the Brigade TOE.

1.8.6.1.3 BRIGADE OPERATIONS CENTER (BOC): Brigade combat teams and other selected brigades have missions and capabilities that require specialized spaces for controlling mission operations while in progress. The spaces are not always occupied, but when controlling a mission, they are normally operational 24 hours a day, seven days a week, and staff by personnel who normally work in administrative space within the Brigade HQ.

1.8.6.1.4 NETWORK OPERATIONS CENTER (NOC): The Network Operations Center (NOC) is space intended for management of the information systems within the brigade footprint. It includes workstations for the enablers and space for servers that can replicate a garrison the authorized tactical systems the brigade employs in a field or on deployments.

1.8.6.2 Table 3 below shows the functional areas included in each standard size Brigade HQ by total NSF allowed and, where applicable, the number of PN it can accommodate.

Table 3: Brigade Headquarters – Functional Areas by Standard Size

STANDARD SIZE	**EXTRA LARGE**		**LARGE**		**MEDIUM**		**SMALL**		**EXTRA SMALL**	
TYPE SPACE	**NSF AREA**	**PN**	**NSF AREA**	**PN**	**NSF AREA**	**PN**	**NSF AREA**	**PN**	**NSF AREA**	**PN**
CAT Code 14182 – Brigade Headquarters										
PRIVATE OFFICES	4,680	36	2,470	19	2,080	16	2,080	16	1,690	13
CONFERENCE / TEAM ROOMS	3,042		2,833		2,001		2,341		1,092	
STORAGE & FILES	2,432		1,774		1,341		1,327		721	
COMMON	2,359		1,703		1,569		1,527		1,249	
OPEN OFFICES	27,264	284	19,680	205	17,644	184	15,072	157	8,928	93
OTHER (MECH., COMM., ELEC)	3,385		2,340		2,038		1,990		1,136	
MAX PERSONNEL – TOTAL		**320**		**224**		**200**		**173**		**106**
SPECIAL FUNCTIONS										
SCIF	3,237		3,237		3,237		3,237		2,354	
BOC	1,482		1,482		1,482		1,482		680	
NOC	1,630		1,630		1,630		1,630		451	
TOTAL BUILDING NSF	**49,511**		**37,149**		**33,022**		**30,686**		**18,301**	

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1.8.7 [BATTALION HEADQUARTERS FUNCTIONAL AREAS

1.8.7.1 A MTOE Battalion Headquarters consists of Administrative and Support Space for Command and Staff and an Organizational Classroom (CAT Code 17119).

1.8.7.1.1 ADMINISTRATIVE AND SUPPORT SPACE FOR COMMAND AND STAFF: This construction component is required in every Battalion Headquarters. It consists of a command suite, open and private office spaces, conference rooms, storage, and copier/file area.

1.8.7.1.2 ORGANIZATIONAL CLASSROOM: Battalion classrooms will be accounted for separately under 17119, Organizational Classrooms.

1.8.7.1.3 SPECIAL PURPOSE SPACE: Battalions do not normally have a requirement for the types of special purpose spaces such as a SCIF, NOC, or Operations Center like those associated with some Brigade Headquarters. However, battalions within the US Army Special Operations Command (USASOC), Multi-Domain Task Force Battalions, Military Intelligence Battalions, and Cyber Warfare units may have unique requirements that must be coordinated with their higher headquarters when planning and programming facilities.

1.8.7.1.4 NON-AUTHORIZED FUNCTIONS: Space for fitness equipment is not authorized in the facilities included in this Standard Design without a waiver approved by the AFSC.

1.8.7.1.5 NON-STANDARD BATTALIONS: Non-standard battalions are sized based on the number of personnel requiring workspace in the headquarters. Determine the number of staff personnel authorized space in the Battalion Headquarters using approved force structure documents. For units where the number of personnel exceed the size parameters identified in Table 4 by more than 5 percent, allow an additional 162 gross square feet per person. Coordinate all non-standard Battalion planning and design actions with the Center of Standardization. Special space may be added consistent with AR 405-70, not to exceed 10 percent of the net administrative area of the building. If more than 10 percent is required, contact the COS.

1.8.7.2 Table 4 below shows the functional areas included in a Battalion HQ.

Table 4: Battalion Headquarters – Functional Area by Standard Size

STANDARD SIZE	**EXTRA LARGE**		**LARGE**		**MEDIUM**		**SMALL**	
TYPE SPACE	**NSF**	**PN**	**NSF**	**PN**	**NSF**	**PN**	**NSF**	**PN**
CAT Code 14183 – Battalion Headquarters								
PRIVATE OFFICES	1,900	15	1,900	15	1,900	15	1,900	15
CONFERENCE / TEAM ROOMS / CLASSROOMS	3,675		3,675		3,675		3,675	
STORAGE & FILES	1,099		963		919		724	
COMMON	1,090		1,090		1,207		1,205	
OPEN OFFICE-WORKSTATIONS	6,720	70	5,280	55	3,360	35	1,920	20
OTHER (MECH., COMM., ELEC)	1,448		1,356		950		848	
TOTAL BLDG NSF	**15,932**		**14,264**		**12,011**		**10,272**	
MAX PERSONNEL - TOTAL		**85**		**70**		**50**		**35**

STANDARD SIZE	EXTRA LARGE		LARGE		MEDIUM		SMALL	
CAT Code 17119 – Organizational Classroom								
CLASSROOM	3,000		3,000		3,000		3,000	

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1.8.8 ACCESSIBILITY REQUIREMENTS

1.8.8.1 Brigade and Battalion Headquarters must meet accessibility codes.

1.8.9 SUSTAINABLE DEVELOPMENT AND DESIGN REQUIREMENTS

1.8.9.1 Design Brigade and Battalion HQ facilities to meet the current sustainable development and design criteria as established by the Department of the Army. <REV> </REV>

1.9 ASSESSMENTS AND RENOVATION

1.9.1 <REV> ASSESSMENT AND ADEQUACY ISSUES

1.9.1.1 The Army assesses BDE HQ and BN HQ 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:

a. Apply established Army-wide standards to assess the physical condition of facilities and infrastructure

b. 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

c. Identify facility restoration and construction requirements and estimate the associated costs

d. Coordinate facility restoration efforts across reporting locations

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

a. Assesses conditions against established Army-wide standards

b. Estimates restoration and construction buyout costs

c. Assesses the overall readiness of facilities to support assigned units, organizations, and tenants to accomplish their wartime and primary missions

d. Assists in prioritizing projects

e. Assists in allocation of resources

f. Provides a basis for measuring change in the condition of facilities over time

1.9.1.3 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. </REV>

1.9.2 IDENTIFY AND DOCUMENT ALTERNATIVES

1.9.2.1 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.

1.9.2.2 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.

1.9.2.3 Alternatives may include:

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

1.9.3 SUSTAINMENT

1.9.3.1 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.

1.9.4 RENOVATING LEGACY FACILITIES

1.9.4.1 The "Brigade and Battalion HQs Legacy Facilities Study" completed in 2014 provides information regarding the renovation of legacy facilities. The document is available on the COS website for BDE/BN HQ under "Legacy Renovation": https://mrsi.erdc.dren.mil/cos/sas/bn-bde-hq/

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

a. Bring these Legacy Facilities as close as possible to the current Standard Design

b. Provide a standardized approach to renovating each type of legacy facility

c. Achieve a longer useful life for the legacy BDE and BN HQ facilities

d. Identify the order of preference for accomplishing adjustments in legacy facilities to satisfy current mission requirements as follows:

(1) No construction required

(2) Construction required but within SRM funding limits

(3) Primarily SRM funded but with a MILCON tail

(4) MILCON funded project

e. 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.

f. Several studies within this report show the functions of a BDE or BN HQ divided between 2-3 buildings. It is a goal of this study that these examples be adaptable to similarly sized facilities that are available at other installations.

1.10 VALUE ENGINEERING

1.10.4 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.

1.10.5 The Battalion/Brigade Headquarters 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 BN/BDE HQ facilities under “Programmatic Value Engineering Study”: https://mrsi.erdc.dren.mil/cos/sas/bn-bde-hq/

1.11 WARRANTIES

1.11.4 <REV> 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 </REV>

1.1 PROJECT OBJECTIVES

1.1.1 [BRIGADE][AND][BATTALION] HEADQUARTERS

1.1.1.1 Provide [Brigade][and][Battalion]Headquarters. This project type is to house [Brigade][and][Battalion]administrative and command operations. <REV> </REV> Assume 20 percent of personnel are female unless otherwise indicated.

1.1.1.2 [The project includes[[___] extra-small][,][[___] small][,][[___] medium][,][[___] large][,][[___] extra-large] standalone Brigade Headquarters for [UNIT NAME / PROJECT IDENTIFIERS]. The maximum gross area for the Brigade Headquarters in the project is limited to [___] square feet.]

1.1.1.3 [The project includes[[___] small][,][[___] medium][,][[___] large][,][[___] extra-large] standalone Battalion Headquarters for [UNIT NAME / PROJECT IDENTIFIERS]. The maximum gross area for the Battalion Headquarters in the project is limited to [___] square feet.]

1.1.1.4 [The project includes consolidated Brigade and Battalion Headquarters for a [extra-small][small][medium][large][extra-large] Brigade Headquarters and[[___] small][,][[___] medium][,][[___] large] Battalions for [UNIT NAMES / PROJECT IDENTIFIERS]. The maximum gross area for the Consolidated Brigade and Battalion Headquarters in the project is limited to [___] square feet.]

1.1.1.5 <REV> [The project includes a [small][medium][large] Tactical SCI Vehicle Area (TSVA) to accommodate up to [5][12][##] vehicles. The maximum gross area for the TSVA in the project is limited to [25,000][30,000][50,000][##,###] square feet.]

1.1.1.6 Approximate site area available for this project is [___ square feet][as shown on the RFP drawings].

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 these types of facilities is below:

Figure 1: Comparison of Military Facilities to Civilian Facilities

Military Facility	Civilian Facility
Brigade Headquarters (BDE HQ)	Office / Administrative Building
Battalion Headquarters (BN HQ)	Office / Administrative Building

1.1.3 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 RFP 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 reference criteria, including any applicable addenda, as of the date of solicitation. In case of conflict between referenced documents or military criteria, the most 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 reference 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

2.1 GENERAL REQUIREMENTS

2.1.1 Provide a [Brigade][and][Battalion] Headquarters (HQ) project as defined herein.

2.1.2 FACILITY DESCRIPTION

2.1.2.1 [Brigade][and][Battalion] Headquarters (HQ) accommodates [Brigade][and][Battalion] administrative and command operations. </REV>

2.1.3 FACILITIY RELATIONSHIPS

2.1.3.1 GENERAL: Locate the [Brigade][and][Battalion] Headquarters within an operations complex along with Company Operations Facilities (COF) and Tactical Equipment Maintenance Facilities (TEMF, motor pools). The facilities within this complex must be oriented to support deployment and daily operations.

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

2.1.4 ACCESSIBILITY REQUIREMENTS

2.1.4.1 <REV> All facilities must be fully accessible for individuals with disabilities and comply with accessibility criteria. </REV>

2.1.5 BUILDING AREAS

2.1.5.1 <REV> GROSS AREA: Calculate gross areas in accordance with UFC 3-101-01, Section 4-2, Building Area Calculations.

2.1.5.2 GROSS AREA LIMITATIONS: Maximum gross area limits in Part 1 must not be exceeded. A smaller overall gross area is permissible if established net area program requirements are met. Clearly indicate proposed overall gross area calculations for each facility, building gross area, and half-scope areas.

2.1.5.3 NET AREA: Net area requirements for functional spaces are included in the standard design drawings. [If net area requirements are not indicated, size the space to accommodate the required function, comply with code requirements, comply with overall gross area limitations, and comply other requirements of the RFP. For example, efficient square footage allotted for corridors, stairs, and mechanical rooms are typically left to the discretion of the DOR.] </REV>

2.1.6 ADAPT-BUILD MODEL

2.1.6.1 An Adapt-Build Model may be available upon request from the COS. Each model contains a developed design which may include a Building Information Model (BIM), 2-D CADD files, and specifications.

2.1.6.2 This design is provided as a guide that exemplifies a technically suitable product and incorporates mandatory functional and operational requirements for a similar (although perhaps 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 dimmish 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 (DOR) 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 GENERAL

2.2.1.1 The standard Army functional layouts are depicted in the drawings included with this RFP, including the extent to which the preferred layouts may be adjusted.

2.2.2 FUNCTIONAL PROGRAM AREAS

2.2.2.1 OFFICE AND ADMINISTRATIVE AREAS: The open office areas for staff sections (for instance S-1 and S-2) in different security zones must be separated from one another by physical separation, such as walls and floors. The intent is to provide visual separation between staff sections within a headquarters, with maximum flexibility for future change within open office areas. A similar preference exists for private offices within the staff section, with the exception that they require doors for privacy. <REV> The command section offices must be constructed to provide privacy and sound control in accordance with Part 2.5.2 of this RFP, while being permanent construction and minimizing load-bearing walls to accommodate future reconfiguration. </REV> This same construction requirement exists for walls between headquarters in a consolidated headquarters facility. Hours of operation are normal business hours except where indicated otherwise.

2.2.2.1.1 <REV> PRINTER / COPIER STATION: Dedicate floor space within each open office or work area for copiers, printer, fax machines, or other printing/reproduction equipment with waste and paper recycling receptacles and supply cabinet for paper storage in each office area. </REV>

2.2.2.2 SECURE DOCUMENTS ROOM: The Secure Documents room in the S-2 area must be designed and constructed in accordance with AR 380-5 and classified for open storage.

2.2.3 FUNCTIONAL SPACES

2.2.3.1 [FUNCTIONAL REQUIREMENTS – BRIGADE HEADQUARTERS (BDE HQ)

2.2.3.1.1 GENERAL: The Brigade Headquarters (BDE HQ) is comprised of administrative, special functions, and secure section components, <REV> </REV> which consist of a Brigade Operations Center (BOC), Secure Compartmented Information Facility (SCIF), and Network Operations Center (NOC). In conjunction with these, each site-specific project must include, but is not limited to, site amenities such as vehicle service yards, access drives, and exterior utilities. Provide space for a command section, S-1, S-2, S-3, S-4, S-6, S-7, utilities, and support services. Provide private offices for the commanding officer, commander's deputy, executive officer, command sergeant major, S-1 officer, S-2 officer, S-3 officers, S-4 officer, S-6 officer, S-7 officers, Human Resources NCO, re-

enlistment, surgeon, Legal Staff office(s), Family Resource Services Administrator (RFSA), chaplain, and assistant chaplain. Also provide space for clerical and central files, conference room(s), staff duty station, reception, secure documents room, showers, supplies, recycling, [Mother's room,] and vending. <REV> A staff duty station must be provided at primary entrances to any building with BDE HQ functions. </REV>

a. A stand-alone BDE HQ is a two-story facility with Secure Zone 1 (SZ1) spaces on the ground floor and Secure Zone 2 (SZ2) spaces on the second floor. Provide Secure Zone 3 (SZ3) spaces (SCIF, BOC, and NOC) on the first floor separated from the rest of the facility with card reader access control doors and provided with raised access flooring. <REV> Proximity between SZ2 and SZ3 spaces is achieved via vertical stacking with stairwell access. </REV>

b. Secure Section Components (SZ3):

(1) [The NOC must be designed and constructed as a secure room in accordance with AR 380-5 and classified for open storage.]

(2) [The BOC must accommodate Government-Furnished TV screens (wall of knowledge) and flat panel monitors. The BOC must be designed and constructed as a secure room in accordance with AR 380-5 and classified for open storage. The main floor must be non-sloping on one level, with raised access flooring to accommodate changing the equipment and the room layout. It must be configured in a lecture-style arrangement with clear sightlines to the wall of knowledge. Also provide a VTC-capable conference room adjacent to the BOC. Refer to the standard design layout and furnishings table for the required number and size of workstations.]

(3) [The SCIF must be designed and constructed for accreditation in accordance with Office of the Director of National Intelligence – Intelligence Community Standard (ICS) 705 and comply with UFC 4-010-05. The SCIF must be classified for open storage.]

2.2.3.1.2 <REV> ADJACENCY: Figure 2 below represents the functional adjacencies and typical connections in a BDE HQ. </REV>

Figure 2: Brigade Headquarters Adjacency Matrix

	ACTIVITY OR ELEMENT	COMMAND GROUP	S1 PERSONNEL (NOTE 1)	S1 / PAC (NOTE 2)	S4 LOGISTICS	S8 RESOURCE MANAGEMENT	CHAPLAIN	SURGEON / MEDICAL	INSPECTOR GENERAL (IG)	PUBLICH AFFAIS	LEGAL	SAFETY	S2 INTELLIGENCE	S3 OPERATIONS	S5 PLANS (NOTE 3)	S6 COMMUNICATIONS	S7 INFORMATION OPS	S9 CIVIL AFFAIRS	SUPPORT OPERATIONS (NOTE 4)	FIRE AND EFFECTS	AVIATION	AIR DEFENSE	CBRNE (NOTE 5)	ENGINEER	PROTECTION (NOTE 7)	SCIF (NOTES 6 AND 8)	BOC (NOTE 8)	NOC (NOTE 8)
		ZONE 1											**ZONE 2**													**ZONE 3**		
ZONE 1	CMD GROUP		P	A			X		X	P	P																	
	S1 PERSONNEL	P		P																								
	S1 / PAC	A	P																									
	S4 LOGISTICS																											
	S8 RES MGMT																											
	CHAPLAIN	X																										
	SURGEON / MEDICAL																											
	INSPECTOR GENERAL	X																										
	PUBLIC AFFAIRS	P																										
	LEGAL	P																										
	SAFETY																											
ZONE 2	S2 INTEL																									P		
	S3 OPS														P				P	P	P	P	P	P	P		P	
	S5 PLANS													P														
	S6 COMM																											P
	S7 INFO OPS																	P										
	S9 CIVIL AFFAIRS																P							P				
	SUPPORT OPS													P														
	FIRE AND EFFECTS													P							A	A						
	AVIATION													P						A		A						
	AIR DEFENSE													P						A	A							
	CBRNE													P										P	P			
	ENGINEER													P				P					P		P			
	PROTECTION													P									P	P				
ZONE 3	SCIF												P															
	BOC													P														
	NOC															P												

Figure 2 Key:
A = Adjacency Required
P = Proximity Desirable
X = Separation Needed
"blank" = no functional relationship or adjacency requirements
Security Zone 1 = Limited access for physical and personal security purposes
Security Zone 2 = Controlled access for operational and information security purposes
Security Zone 3 = Restricted access

Figure 2 Notes:

1. *S-1 Personnel: Combined with S-4 as a sustainment section.*
2. *S-1/PAC: Personnel Action Center. Provides customer service. Location should avoid cross traffic with the command group.*
3. *S-5 Plans: Combined with S-3.*
4. *Support Operations (Ops) or SPO is a major separate staff element in Sustainment brigades.*
5. *Chemical, Biological, Radiological, Nuclear, and Explosives (CBRNE): Co-located with S-3.*
6. *<REV> Sensitive Compartmented Information Facility (SCIF): Associated with S-2. SCIF must be adjacent to an exterior parking area, when included, for tactical SCI vehicles (TSVA). </REV>*
7. *'Protection' is the MP Section in the Combat Support Brigade (Maneuver Enhancement): Co-located with S-2 or S-3.*
8. *A variance is permitted for the desired proximity between the SCIF, BOC, and NOC and the Brigade staff section. The intent is to allow for the consolidation of the SCIF, BOC, and NOC on the ground floor for ease of deployment and to accommodate the adjacency requirement between the SCIF, TSVA, and the NOC secure parking area.*
9. *In the consolidated Battalion/Brigade HQ concept, the staff sections for each battalion headquarters must be consolidated on a single floor, and the brigade staff sections must be physically separated from battalion staff sections.*
10. *Security Zone area must be segregated from one another by space separation, physical barriers, or placement of spaces on separate floors of the building.*
11. *Network Operations Center (NOC): The NOC must be adjacent to an exterior parking area for tactical NOC vehicles. The exterior Tactical NOC Vehicle Area (TNVA) must be in a secured, screened, fenced yard with controlled access. Allow space for two vehicles to park side-by-side within the enclosure.*

]

2.2.3.2 [BATTALION HEADQUARTERS (BN HQ) FUNCTIONAL REQUIREMENTS:

2.2.3.2.1 GENERAL: The Battalion Headquarters is comprised of administration, special functions, and classroom components. <REV> </REV> In conjunction with these, each site-specific project must include, but is not limited to, site amenities such as vehicle service yards, access drives, and exterior utilities. Provide space for a command section, S-1, S-2, S-3, S-4, S-6, utilities, and support services. Provide private offices for the commanding officer, executive officer, command sergeant major, S-1 officer, S-2 officer, S-3 officer, S-4 officer, S-6 officer, Human Resources NCO, chaplain, and assistant chaplain. Also provide space for clerical and central files, conference room (s), staff duty station, Family Resource Services Administrator (FRSA), reception, secure documents room, [Mother's room,]showers, supplies, toilet facilities, vending, recycling, mechanical room, electrical rooms, telecommunication rooms, and classrooms. <REV> A staff duty station must be provided at primary entrance to any building with BN HQ functions. </REV>

a. A stand-alone BN HQ is a two-story facility with Secure Zone 1 (SZ1) spaces on the ground floor and Secure Zone 2 (SZ2) spaces on the second floor. A separate cluster of classrooms is provided on the ground floor and is segregated from other building components to minimize disruption to normal headquarters activities.

b. The programmatic requirements for the BN HQ are as indicated on the standard design drawings. Note that the BN HQ structure is similar for all army battalions and the main difference is size. See Table 7 for other room information.

2.2.3.2.2 <REV> ADJACENCY: Figure 3 below represents the functional adjacencies and typical connections in a BN HQ. </REV>

Figure 3: Battalion Headquarters Adjacency Matrix

	ACTIVITY OR ELEMENT	COMMAND GROUP	S1 PERSONNEL (NOTE 1)	S1 / PAC (NOTE 2)	S4 LOGISTICS	CHAPLAIN	SURGEON / MEDICAL	PUBLIC AFFAIRS	LEGAL	SAFETY	CLASSROOMS (NOTE 13)	S2 INTELLIGENCE	S3 OPERATIONS	S5 PLANS (NOTE 3)	S6 COMMUNICATIONS	FIRE AND EFFECTS	AIR DEFENSE	CBRNE (NOTE 4)	ENGINEER
		ZONE 1										**ZONE 2**							
ZONE 1	CMD GROUP		P	A		X		P	P		X								
	S1 PERSONNEL	P		P							X								
	S1 / PAC	A	P								X								
	S4 LOGISTICS										X								
	CHAPLAIN	X									X								
	SURGEON / MEDICAL										X								
	PUBLIC AFFAIRS	P									X								
	LEGAL	P									X								
	SAFETY										X								
	CLASSROOMS	X	X	X	X	X	X	X	X	X									
ZONE 2	S2 INTELLIGENCE																		
	S3 OPERATIONS													P		P	P	P	P
	S5 PLANS												P						
	S6 COMMUNICATIONS																		
	FIRE AND EFFECTS												P				A		
	AIR DEFENCE												P			A			
	CBRNE												P						P
	ENGINEER												P					P	

Figure 3 Key:
A = Adjacency Required
P = Proximity Desirable
X = Separation Needed
"blank" = no functional relationship or adjacency requirements
Security Zone 1 = Limited access for physical and personal security purposes
Security Zone 2 = Controlled access for operational and information security purposes
Security Zone 3 = Restricted access

Figure 3 Notes:

1. *S-1 Personnel: Combined with S-4 as a sustainment section.*
2. *S-1/PAC: Personnel Action Center. Provides customer service. Location should avoid cross traffic with the command group.*
3. *S-5 Plans: Combined with S-3.*
4. *Chemical, Biological, Radiological, Nuclear, and Explosive (CBRNE): Co-located with S-3.*
5. *In the consolidated Battalion / Brigade HQ concept, the staff sections for each battalion headquarters must be consolidated on a single floor, and the brigade staff sections must be physically separated from battalion staff sections.*
6. *Security Zone areas must be segregated from one another by space separation, physical barriers, or placement of spaces on separate floors of the building.*

]

2.2.3.3 [CONSOLIDATED BRIGADE AND BATTALION HEADQUARTERS BUILDING

2.2.3.3.1 INDIVIDUAL HEADQUARTERS STAFF SECTIONS: The individual headquarters staff sections must be consolidated within the building as if each headquarters was leased space in the large building. The brigade staff sections must be physically separated (by floors or walls) from battalion staff sections.

2.2.3.3.2 BRIGADE OPERATIONS CENTER (BOC), NETWORK OPERATIONS CENTER (NOC), AND SENSITIVE COMPARTMENTED INFORMATION FACILITY (SCIF): The BOC, NOC, and SCIF for the Brigade HQ must be located on the first floor to make them accessible to tactical vehicles during exercises. Locate the classrooms on the ground floor near the BOC and SCIF to allow them to be used in support of exercises or pre-deployment activities.

2.2.3.3.3 BATTALION CLASSROOMS: Battalion classrooms must be consolidated and reduced in number by 50 percent since the consolidated headquarters option enables alternating use of classrooms by multiple battalions.]

2.2.3.4 FUNCTIONAL AREA DESCRIPTIONS AND PERFORMANCE REQUIREMENTS: <REV> Functional areas required are dependent on Brigade and/or Battalion program and staff. The general functional requirements are provided below. </REV>

Command Section	Zone 1	The command section corresponds to the office of the CEO of a corporation. It must be located away from heavy traffic activities, provide a means for support personnel to control the flow of visitors, and located with a proximity to the main entrance that allows visitors to have access to the reception area without moving through operational areas of the building such as the SCIF, BOC, S-2, and S-3. The legal staff, public affairs staff, and the chaplain are outside the area controlled by the commander's support personnel. These groups and individuals need ready access to the commander on a recurring basis but also have visitors who normally must not access the command suite.

S-1	Zone 1	The S-1 office is the human resources section. While the S-1 has representatives who support operational activities in the building, the S-1 also serves a clientele that often does not have a requirement for access to operational areas. While functioning as human resources, it generally does not provide customer service to individual soldiers but rather serves human resource specialists from subordinate organizations and agencies. The S-1 section frequently provides the personnel who control access to the commander and so proximity to the command suite is recommended as long as traffic to the S-1 does not invade the privacy of the command suite.
S-2	Zone 2	The S-2 office (Intelligence, Surveillance, and Reconnaissance) supports the commander in the areas of opposition research, terrain analysis, and weather. This involves a variety of secure communications capabilities. Much of the S-2 section workspace is inside of the SCIF (Brigade Headquarters only) portion of the building, requiring strict access control. The S-2 section also requires direct access to a secure exterior vehicle compound adjacent to the SCIF. Locate away from areas that have customer service activities related to other sections.
S-3	Zone 2	The S-3 (Coordinating Staff Office – Operations, Plans, and Training) officer's functions are similar to those of the chief operations officer of a corporation. The S-3 section is responsible for planning, coordinating, and supervising the mission functions of the brigade. Because the S-3 integrates the operational functions of the other staff sections as they relate to the mission, it should be as centrally located as possible consistent with other requirements and constraints. The S-3 is responsible for managing the brigade operations center (BOC) (Brigade Headquarters only), which is a restricted area. Much of the work of the S-3 involves dealing with classified information and communications and, as such, should be isolated from activities that generate traffic that is not related to the operational function of that section. S-3 may require exterior pass-throughs for roof-mounted radio antennae.
S-3	Zone 2	The S-3 Special Staff Office houses a variety of staff elements that are generally autonomous from one another, but which work under the direction of the S-3 office. Each section is aligned with a special function that directly supports the operations of the brigade or battalion and which much be integrated into the overall operations of the command. When the BOC is active, each of these sections provides support staff inside the BOC. Within the section the aviation, fires and effects, and air defense elements are more independent of the other sections. Like the S-3 coordinating staff, locate in a manner that isolates them from activities that generate traffic that is not related to the operational function of that section such as the S-1 and S-4.
S-4	Zone 1	The logistics operations office (S-4) is responsible for the administration of the logistics, transportation, and maintenance functions and programs within the brigade. It does not perform any industrial type functions, does not provide direct customer service, and generates traffic that is excluded from operational areas. Most of the traffic it generates includes logistics, transportation, and maintenance managers from subordinate organizations.

S-6	Zone 2	The S-6 Information Management office operates the NOC (Brigade Headquarters only) with personnel assigned to the Brigade Signal Company. The S-6 is similar to the IT section of a corporation. At the brigade level, it performs policy and management functions but is not necessarily involved in the day-to-day operation of the networks or communications systems. Similarly, it does not provide help desk or hardware and software management. Rather, it provides plans and policies for the organization as a whole, and exercises staff supervision of the IT specialists who provide direct support to users.

S-7	Zone 2	The S-7 Information Operations office plans and conducts sensitive operations involving the relationship between the military and the civilian populations when the brigade is deployed. The S-7 has a high correlation to the S-3 Operations and Plans officers, the BOC, and the SCIF. Locate away from the high traffic areas. The S-7 section needs to have ready access to the SCIF and the BOC. The personnel spaces in this section are from other organizations.

Battalion Headquarters Organizational Classrooms	Zone 1	Classrooms (Battalion Headquarters only) must be provided for training and other ceremonial and gathering functions for all battalions. Organizational classrooms are authorized for individual battalions when battalion HQs are built as stand-alone or consolidated with a Brigade. A maximum of three classrooms per battalion is permitted. Arrange the classrooms as a continuous area with movable partitions to allow the facility to provide maximum flexibility. When multiple battalion classrooms are consolidated in a single building, such as in consolidated brigade/battalion headquarters, the battalion classrooms must be reduced in number by 50 percent since the consolidation enables alternating use of classrooms by battalions.

BOC	Zone 3	The brigade operations center (BOC) (Brigade Headquarters only) is similar to an emergency operations center in a local city of county. It provides a venue for interdisciplinary collaboration by specialists from the various staff elements and is a secure area with restricted access. Only personnel on approved rosters or those who have a verified clearance and need to know are admitted to the BOC. Complementary technologies such as card access and procedural methods are used to control access. The BOC does not normally operate at full capacity except during an exercise or during preparation for deployments. While the duration of its intense use may be limited, it is also possible to be the site of extended operations at full capacity as military preparations continue in anticipation of a political decision to employ military forces. It has workstations connected to all critical networks that are manned by representatives of the various staff agencies. Each of the representatives is “on loan” to the BOC and therefore has another permanently assigned work area. In addition to the main floor, the BOC may provide areas adjacent to the floor for smaller collaborative meetings. Locate the BOC with proximity to the S-3 and isolated from non-operational traffic to the extent possible.

SCIF	Zone 3	The Sensitive Compartmented Information Facility (SCIF) (Brigade Headquarters only) is the portion of the facility that is supervised by and primarily supports the S-2 staff section. It is a restricted space that must have ground level access to an enclosure, i.e. the Tactical SCIF Vehicle Area (TSVA),

		capable of containing up to five HMMWVs (High-Mobility Multipurpose Wheeled Vehicles) and four larger tactical vehicles with trailers in a controlled area. Complementary technological and procedural methods are used to control access.

NOC	Zone 3	The Network Operations Center (NOC) (Brigade Headquarters only) is the area where S-6 personnel and personnel from supporting activities perform network control operations. It includes workstations for each individual working in the area. It is a restricted access area that directly supports the SCIF and the BOC as well as provides general support to the internal communications to the rest of the headquarters building. It must have ground level access to an adjoining exterior enclosure capable of containing up to two HMMWVs (High-Mobility Multipurpose Wheeled Vehicles) with trailers in a controlled area. Complementary technological and procedural methods are used to control access.
<REV> TSVA (BDE HQ - Intelligence and Electronic Warfare (IEW) and Military Intelligence (MI) units only)	Zone 3	The Tactical SCI Vehicle Area (TSVA) is a restricted parking area containing assigned organizational vehicles or systems requiring sensitive continuous communication and direct network interconnectivity to enable and maintain secure operations between the hardstand and internal building SCIF work area. </REV>

2.3 SITE FUNCTIONAL REQUIREMENTS

2.3.1 <REV> GENERAL

2.3.1.1 Provide all site design and construction within the project limits of construction to support the new building facilities. Supporting facilities include, but are not limited to, utilities, electric service, exterior and security lighting, connection to telecommunications infrastructure, fire protection and alarm systems, security fencing and gates, loading and service areas, water, gas, sewer, storm drainage, access drives and emergency vehicle access, and site improvements. </REV>

2.3.1.2 Maintain the construction site and haul routes. 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 routes resulting from construction activities at no additional cost to the Government. Prior to construction activities, perform an existing condition survey. At the completion of the Task Order, perform a final condition survey to determine repair and replacement requirements.

2.3.1.3 PARKING

2.3.1.3.1 PRIVATELY OWNED VEHICLES (POV) PARKING: [POV parking to be provided by others.][POV parking to be provided at a ratio of one space for 90 percent of the intended HQ staff capacity.]

2.3.1.3.2 <REV> [TACTICAL SCI VEHICLE AREAS (TSVA): A secure parking area to accommodate HMMWV, Stryker, FMTV, JLTV, MRAPs, TITAN, or other large tactical vehicles with trailers, antennas, internal slingable units (ISUs), and/or shelters and must be located

adjacent to the SCIF. The area must allow for an unobstructed south-facing exposure to the sky for direct satellite communication.

2.3.1.3.3 Design and construct the TSVA for accreditation in accordance with DIA/DAC-2A2 MSG, Security Guidelines for Mobile Ground Tactical Platforms, DTG - 211128Z MAY 07 and be provided with the following features:

a. HARDSTAND: Rigid concrete pavement designed to support the heaviest tactical vehicle, trailer, or other deployable equipment utilized by the unit. The quantity of pavement must be sufficient to accommodate the number of vehicles being fielded, the required vehicles turning radius, and efficient vehicle circulation. The site layout must support simultaneous circulation, mobilization/demobilization, and use of multiple vehicles and their supporting equipment at any time. The pavement quantity will vary based on unit size and mission, reference Part 1.1 Project Objectives for vehicle quantities and TSVA Table below for potential vehicle square footages for planning purposes. Confirm all vehicles, equipment, and sizing requirements with the user.

(1) Where parking is proposed directly adjacent to an exterior wall(s), provide 6-inch-high concrete wheel stops for each parking stall 6 feet from the exterior wall to prevent damage to the facility by vehicle impact.

b. LOADING DOCK: Locate one permanent elevated loading dock with access stair within the TSVA to facilitate loading / offloading / setup of equipment, preparation for deployment, and service of installed equipment when necessary to accommodate vehicles with tall tail platforms.

c. FENCING: A perimeter fence consisting of 7’-0” high chain link fabric topped by an additional 1’-0” high single outrigger with three-strand barbed wire designed in accordance with STD 872-90-03, FE-6, chain link security fence details.

d. ACCESS: Provide access-controlled personnel and organizational vehicle gates at entrance. Vehicular gate must be no less than 25’-0” wide overall; pedestrian access gate(s) must be no less than 40” wide. The vehicle entrance must be designed and configured to allow accommodation for a tactical vehicle and trailer inspection area prior to entry into the controlled security line without impeding authorized traffic ingress/egress. When required, include a fenced man-lock at primary pedestrian access gate for credentialing, check-in, and access control. Personnel emergency egress is required for this area. Provide security provisions in accordance with Part 2.9.8 Electronic Security Systems.

e. OVERHEAD COVER: Canopies or other overhead cover may be required based on extreme climate conditions or protection from surveillance. Coordinate with Installation / User / Security Officer. Overhead cover should not exceed 40% of the fielded vehicle required parking spaces and must not impede required vehicular circulation or other criteria within this RFP.

f. VISUAL SCREENING: Consider the facility location and amount of non-user pedestrian traffic around the secured area as fence screens or deliberate parking locations of deployable vehicles may be required to maintain acceptable levels of visual security.

g. CLEAR ZONE: A 30’-0” wide zone clear of trees and shrubs is required on all exterior sides of the fence with a 10’-0” wide clear zone on each interior side unless determined otherwise by Installation Security Officer based on asset being protected. The clear zone

is gravel underlain by a synthetic fabric. Treat the clear zone to discourage vegetative growth. As an option, the installation may choose to use grass in the exterior clear zone.

h. UTILITIES

(1) No above-ground permanently installed transformers, generators, or mechanical equipment are permitted to be located in this area.

(2) Storm drain inlets or other underground utilities that run from the TSVA to outside the area's fenced perimeter must be secured to prevent intruder access to the area.

(3) Utility infrastructure may be required to be buried up to 6 feet below finished grade. This could create utility and/or constructability conflicts. Coordinate closely with Electrical and Plumbing DOR and the Installation to minimize conflicts between utilities.

(4) Provide exterior lighting as specified in Part 2.9.2.2.

i. ANTENNAS

(1) Provide space for all antennas associated with each system within the scope of Part 1.1 Project Objectives. When project site is constrained, antennas may be located outside of the TSVA secure perimeter [or a permanent, free-standing canopy may include antenna attachment where authorized].

(2) Antenna angles from horizon and line-of-sight (LOS) vary based on systems being fielded. Coordinate with user during site planning and design to ensure antenna locations will accommodate required satellite site-lines.

j. See Table below for approximate sizing factors, verify and coordinate actual requirements for vehicles / systems being fielded with User.

TSVA Table: Vehicle / System Specifications

Vehicle	Length (in)	Width (in)	Height (in)	Weight (lbs)	Power Required	Antennas	SQ FT Req'd	Turning Radius (ft)
TITAN Basic	246"	98.4"	122.7"	22,500	60 Amp 208V 3-ph	10	7,000	27'
TITAN Advanced	274"	96"	168" / 156"	22,723	200 Amp 208V 3-ph	15	7,000	40
Stryker	274"	107"	104"	38,000	-	-	450	26.5'
M1165 HMMWV	194"	91"	76"	12,100	-	-	392	25'
MRAP	246"	98"	104"	27,500	-	-	560	27'
M1083 FMTV	272"	96"'	112"	22,723	-	-	640	55'
JLTV	246"	98"	104"	22,500	-	-	512	27'
Systems								
Prophet	180"	91"	81"	8,600	100 Amp 208V 3-ph	1 up to 23' high	2,025	*

Trojan SPIRIT	-	-	-	42,000	100 Amp 208V 3-ph	2 up to 15' high	1,350	*
TLS-SIGINT	-	-	-	-	200 Amp 208V 3-ph	9-11 up to 30' high	1350	*
TIGS	-	-	-	-	-	-	-	*
TSIGS	-	-	-	-	-	-	-	*

TSVA Table Key:
FMTV = Family of Medium Tactical Vehicles
HMMWV = High Mobility Multipurpose Wheeled Vehicle
JLTV = Joint Light Tactical Vehicle
MRAP = Mine-Resistant Ambush Protected
TIGS = Tactical Integrated Ground System
TLS SIGINT = Terrestrial Layer System – Signals Intelligence
TSIGS = Theater SIGINT System

TSVA Table Notes (*):

1. *(+) Systems are vehicle mounted, footprint varies based on type of transport platform selected.*
2. *(-) Requirement to be determined, coordinate with User.*
3. *Vehicle trailers and ISUs may be parked or stored outside of the TSVA once SCI equipment is removed.*

] </REV>

2.3.1.4 <REV> [TACTICAL NOC VEHICLE AREAS (TNVA) AT BRIGADE HEADQUARTERS:

a. A perimeter fence consisting of 7'-0" high chain link fabric topped by an additional 1'-0" high single outrigger with three-strand barbed wire designed in accordance with STD 872-90-03, FE-6, chain link security fence details.

b. Provide approximately 3,050 square feet of rigid concrete pavement designed to support HMMWV vehicles or other large tactical vehicles, as utilized by the unit, with trailers.

c. A 10'-0" wide zone clear of trees and shrubs is required on each side of the fence. The clear zone should require minimal maintenance. The area 5 feet on each side of the fence must be gravel and treated to discourage vegetation growth. As an option, the installation may choose to use grass in the exterior clear zone.

d. Where parking is proposed directly adjacent to an exterior wall(s), provide 6-inch-high concrete wheel stops for each parking stall 6 feet from the exterior wall to prevent damage to the facility by vehicle impact.

e. No above-ground permanently installed transformers, generators, or mechanical equipment are permitted to be located in this area.] </REV>

2.3.1.5 EXTERIOR LIGHTING: Sidewalks, service yards, and parking areas must have exterior lighting in accordance with Part 2.9.2.2 of this RFP. <REV> </REV>

2.4 SITE AND LANDSCAPE REQUIREMENTS – NOT USED

2.5 ARCHITECTURAL REQUIREMENTS

2.5.1 GENERAL

2.5.1.1 Building construction must comply with requirements of UFC 1-200-01, UFC 3-600-01, the IBC, and NFPA.

2.5.1.2 EXTERIOR ARCHITECTURE

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

2.5.1.2.2 BUILDING ACCESS: Provide attractive entry features such as canopies and large glass wall surfaces, as well as vestibules, while ensuring compliance with Sustainability and Antiterrorism/Force Protection requirements.

2.5.1.2.3 NATURAL LIGHTING: Provide windows, transoms, sidelites, and skylights (where practical or required) for natural lighting in all Security Zone 1 and 2 office areas. Areas where classified material (physical or electronic format) is handled, stored, processed, or discussed must be limited to non-operable windows. This prohibition extends to locations with components for SIPRNet and to other devices processing classified data, which includes all private offices and conference rooms. When fixed windows are provided in rooms authorized for SIPRNet, the following features must be addressed:

a. Ensure TEMPEST is mitigated by using TEMPEST approved equipment and shielded or fiber optic cabling.

b. Provide window curtains, shades, or blinds, or application of a one-way film to the window glazing.

c. Provide sound control windows where audio from classified VTC sessions has the potential of being transmitted through window glazing.

d. [Windows are not authorized in the Brigade Headquarters Security Zone 3 areas.]

2.5.2 <REV> ACOUSTICAL REQUIREMENTS </REV>

2.5.2.1 Due to the possibility of amplified audio, provide sound insulation for all classrooms and conference rooms[, to include the Operations Center (OC) in BDE HQ,] to meet a minimum rating of <REV> STC 50 </REV> at doors, walls, floors, and ceiling assemblies.[In addition to performing at STC 50 or better, SCIF Conference Rooms must also meet Sound Group 4 performance criteria in accordance with <REV> IC Tech Spec for ICD/ICS 705.] </REV> Provide sound insulation to meet a minimum rating at doors, walls, and floor/ceiling assemblies of STC 45 at [all other Security Zone 3 areas,]private offices, team rooms, A/V control rooms, and walls separating security zones. <REV> [Refer to IC Tech Spec for minimum required SCIF perimeter door STC ratings.] </REV> The sound insulation system must be as defined by ASTM E413-04, Classification for Rating Sound Insulation. Compliance with STC requirements includes industry standard sound deterrence measures and sound flanking paths at HVAC ductwork and pipe penetrations, electrical boxes, and similar systems. In addition to sound insulation requirements, all conference rooms and classrooms supporting video teleconferencing capabilities must meet Noise Criteria (NC) 30 rating in accordance with ASHRAE Fundamentals Handbook.

2.5.2.1.1 In open office areas, providing acoustic wall panels, hanging vertical panels, and other non-permanent means of noise reduction are permitted to manage sound transmission and acoustically separate staff functions.

<REV> </REV>

2.6 INTERIOR DESIGN

2.6.1 GENERAL

2.6.1.1 <REV> INTERIOR SPECIALTIES

2.6.1.1.1 FIRE EXTINGUISHERS / CABINETS: Provide fire extinguisher cabinets and brackets when fire extinguishers are required by UFC 3-600-01. Locate cabinets and brackets in accordance with NFPA 10. Provide recessed or semi-recessed cabinets in finished areas, and brackets in non-finished areas (such as utility rooms and storage rooms). Extinguishers are not provided in the Contract.

2.6.2 GOVERNMENT-FURNISHED GOVERNMENT-INSTALLED (GFGI) ITEMS

2.6.2.1 Coordinate with the Government on GFGI item requirements and provide structural support and brackets for projectors / DVD and other media players / TVs / monitors, all utility connections, fire extinguishers, and spaces with required clearances for all GFGI items. All computers and related hardware, copiers, faxes, printers, video projectors, DVD and other media players, cameras, fire extinguishers, and TVs are GFGI. </REV>

2.7 STRUCTURAL REQUIREMENTS

2.7.1 GENERAL

2.7.1.1 The information provided in this section is based on general requirements in producing a structure that meets the needs of the users.

2.7.1.2 The project facilities must be designed for a lateral force resisting system based on wind and seismic forces which produce a worst-case scenario.

2.7.1.3 <REV> The project facilities must be evaluated for disproportionate collapse in accordance with UFC 3-301-01.

2.7.2 RISK CATEGORY

2.7.2.1 Design each facility to be Risk Category [II for BN HQ][and][III for BDE HQ] unless project requirements dictate a more stringent Risk Category and comply with UFC 3-301-01.

2.7.3 SEISMIC IMPORTANCE FACTOR (I_E)

2.7.3.1 The Seismic Importance Factor must be in accordance with UFC 3-301-01, Table 2-2 and ASCE 7-22, Table 1.5-2 for Seismic Importance Factors by Risk Category of Buildings.

2.7.4 DESIGN LOADS

2.7.4.1 LIVE LOADS: Design live loads must be in accordance with the most recent and approved IBC, ASCE 7, and UFC 3-301-01 mandated live loads. </REV>

2.7.4.2 SECURE DOCUMENTS ROOM: The floor system for the Secure Documents Room must be designed to store up to 12 safes/file cabinets. <REV> The empty shipping dead load of each cabinet is approximately 1,500 pounds. </REV> The live load of the safe/file cabinet must be based on the latest approved edition of IBC for a "Heavy Storage" of 250 psf.

2.7.5 <REV> DISPROPORTIONATE COLLAPSE

2.7.5.1 When required by UFC 3-301-01, design buildings to resist disproportionate collapse.

2.7.6 MODIFICATIONS TO EXISTING STRUCTURES

2.7.6.1 Structural modifications must be considered in the renovation of existing facilities and executed in accordance with UFC 3-301-01.

2.7.7 AT/FP REQUIREMENTS

2.7.7.1 Antiterrorism / Force Protection measure must comply with UFC 4-010-01. All planned security design and installation must be coordinated in advance with the Base Antiterrorism Office (ATO) and Security Office to determine the area or building designation (controlled or restricted), threat environment, design basis threat (DBT), level of protection (LOP), and access control or other ESS requirements. Design structures for the DBT and LOP provided by the installation.

2.7.8 DESIGN ANALYSIS

2.7.8.1 Computer-generated calculations must identify the program name, source, and version. Provide input data, including loads, loading diagrams, node diagrams, and complete documentation to illustrate the design. The schematic models used for input must show as a minimum: nodes, joints, elements, members, materials, properties, all loadings, induced settlements and deflections, and a list of load combinations. Results must include an output listing for maximum and minimum stresses and forces, deflections for each element, and the reactions for each loading case and combination. All calculations must be performed by a registered engineer and checked by a registered engineer other than the design engineer. </REV>

2.8 PLUMBING REQUIREMENTS – NOT USED

2.9 TELECOMMUNICATIONS REQUIREMENTS

<REV> </REV>

2.9.1 TELECOMMUNICATIONS SYSTEMS

2.9.1.1 <REV> Telecommunications system must be designed and provided in compliance with UFC 3-580-01, ANSI/TIA/EIA requirements, and comply with Telecommunications and SIPRNet Minimum Room Sizes – Telecommunication Pathways, Outlets, and Cabling. </REV>

2.9.2 EXTERIOR TELECOMMUNICATIONS

2.9.2.1 OUTSIDE PLANT TELECOMMUNICATIONS SYSTEMS: The project's facilities must connect to the Installation telecommunications (voice and data) system through the outside plant (OSP) underground infrastructure in accordance with UFC 3-580-01 and local NEC requirements. Connections to the OSP cabling system must be from each facility main cross connect

located in the main telecommunications room to the closest OSP access point. Components include the physical cable plant and the supporting structures. Items included under OSP infrastructure encompass, but are not limited to, maintenance hold and duct infrastructure, copper cable, fiber optic cable, entrance protectors, cross connects, terminations, splices, cable vaults, and copper and FO entrance facilities.

2.9.2.2 <REV> [DATA CONNECTIONS FOR TSVA: Provide DIA/DAC-2A2 approved Protective Distribution System (PDS) from the permanent SCIF to each TSVA vehicle. Provide weatherproof tactical interface boxes (TIB) for each vehicle that are designed to prevent damage from the vehicles. Provide a TIB for secure vehicle system connections, non-secure NIPRnet, telephone, and Intrusion Detection Systems (IDS). Provide all infrastructure, components, and pathways to connect the TIBs with termination in the SCIF server room. TIBs connectors must match the current Tactical Vehicle connections and will be connected into the underground pathway system by the user. Connection to all data networks (including NIPRNet, SIPRNet, NSANet/TDN-2, and any other network required) must be established through single mode fiber optic cabling unless otherwise authorized. Coordinate connection requirements with the User.] </REV>

2.9.2.3 [DATA CONNECTIONS FOR TACTICAL NOC VEHICLE AREA (TNVA): Provide underground Protective Distribution System (PDS) pathway for telecommunications connectivity from the main building NOC to each vehicle. Weatherproof tactical interface boxes (TIB) are required for each vehicle. A TIB must be provided for secure vehicle system connections, non-secure NIPRNet, telephone, and Intrusion Detection System (IDS). Connectors for all systems must be included. Connect the TIBs to the building NOC via an underground pathway system. Cabling for all data networks (including NIPRNet, SIPRNet, NSANet/TDN-2, and any other network required) must be provided. Include three 6-strand single mode fiber optic cables run to each TIB for secure networks unless otherwise specified. Design connection points to service and prevent damage from vehicles. Pathways terminating in the NOC must terminate in the server room. Coordinate connection requirements with the user.]

2.9.3 INTERIOR TELECOMMUNICATIONS <REV> </REV>

2.9.3.1 TELECOMMUNICATIONS ROOMS (TR): Telecommunications rooms and telecommunications entrance facilities must be provided for the network and voice equipment, and cabling infrastructure. Provide a minimum of one TR on each floor, located near the center of the building, and preferably stacked between floors. Provide additional TRs to ensure that the horizontal copper cable length does not exceed the 295-foot limitation. The TRs must be designed and provisioned in accordance with UFC 3-580-01. Provide a main TR with telecommunications entrance capability for each facility and locate this space on the first floor. The main TR serves as the hub for the interior backbone single mode fiber cable and copper riser cable to each of the other TRs. Provide backbone cabling in accordance with UFC 3-580-01. Each TR must also have the following requirements.

a. Access must be from a centralized corridor within the building. No exterior access is allowed.

b. Door must be 3’-0” wide opening outward.

c. Room must <REV> </REV> accommodate working clearances around data equipment and racks. Avoid odd-shaped TRs, such as “L” shaped, that decrease the useable area for backboards and racks.

d. Provide a fire-rated A-C plywood backboard (3/4-inch-thick) around interior perimeter to a height of 8’-0”.

e. <REV> Provide illumination in accordance with UFC 3-530-01. </REV>

f. Dedicated power panel within the room.

g. Minimum TR sizes as shown in tables below.

<REV> [Table 1: Brigade HQ Telecommunications Room Sizes

Building Size	Main TR (1st Floor)		TR (2nd Floor)	
	Min Width (Feet)	Min Square Feet	Min Width (Feet)	Min Square Feet
Extra Small	12	168	9	95
Small	12	168	9	120
Medium	12	168	9	130
Large	12	168	9	150
Extra Large	12	168	9	235
Additional TRs (If required)	9	95	See Note 4	See Note 4
SCIF TRs	14	196	n/a	n/a

][Table 2: Battalion HQ Telecommunications Room Sizes

Building Size	Main TR (1st Floor)		TR (2nd Floor)	
	Min Width (Feet)	Min Square Feet	Min Width (Feet)	Min Square Feet
Small	12	168	9	95
Medium	12	168	9	95
Large	12	168	9	95
Extra Large	12	168	9	95
[SCIF TRs	14	196	n/a	n/a]

][Table 3: Combined BDE/BN HQ Telecommunications Room Sizes

Building Size	TR	
	Min Width (Feet)	Min Square Feet
1st Floor BN	12	See Note 4
1st Floor BDE	12	See Note 4
1st Floor Classroom	9	95
2nd Floor BN	9	See Note 4
2nd Floor BDE	9	See Note 4

Additional TRs (If required)	9	95
[SCIF TRs	14	196]

]Table Notes:

1. *Width is a minimum inside edge of wall to inside edge of wall dimension inside the room. Length must be greater than or equal to width.*
2. *Standard Drawings may be adjusted as needed, but the TRs must not be less than the minimum width and square feet indicated in tables.*
3. *TRs are preferred to be rectangular in shape.*
4. *For TRs serving more than 10,000 sf of offices, classrooms, conference rooms, and other spaces requiring telecommunication connectivity, the minimum TR size should be 1.1% of the area served (see UFC 3-580-01 for additional guidance). </REV>*

2.9.3.2 TELECOMMUNICATIONS DISTRIBUTION

2.9.3.2.1 Tele-poles are prohibited. <REV> The use of existing architectural columns or perimeter walls are the preferred method of power and telecommunications distribution to workstations. </REV> Utilize underfloor conduits if no other alternative exists, and design and provide this system in accordance with TIA/EIA-569-B. Underfloor outlet boxes must also contain a spare conduit for future expansion. [Avoid second floor penetrations above the SCIF area.]

2.9.3.2.2 TELECOMMUNICATIONS OUTLETS: Provide telecommunications outlets in accordance with UFC 3-580-01 for functional purposes of the various spaces with the facility as modified by user special operational requirements and herein. Each headquarters workstation must have voice and data connection capability. Each conference room[and classroom] must have voice capability via minimum one outlet per room and data connection capability via minimum one outlet per person. Provide a voice/data outlet at each printer and copier location. Provide a wall-mounted telephone outlet with a single jack in each mechanical, electrical, and telecommunications room, and secure storage room. For controlled access areas, provide outlets for wall-mounted GFGI phones at access points. Provide additional locations based on coordination with the facility user and where required for HVAC, other equipment, and as required by UFC 3-580-01.

2.9.3.2.3 CABLE TRAYS: Provide cable tray pathways throughout the facility to support the systems required for the construction of the facility as well as user's computer networks, video integration system, telecommunications systems, and other specialized electronic systems.

2.9.3.2.4 RAISED ACCESS FLOORING (RAF): Provide raised access flooring in areas with high concentrations of cabling to accommodate flexibility and growth. Signal ground must be provided in a grid pattern under all RAF areas in accordance with MIL-HDBK 419A. <REV> Minimum clearance between subfloor and underside of RAF system is 12 inches. </REV>

2.9.3.3 CABLE TELEVISION (CATV): Provide CATV in all private offices[, classrooms,] and conference rooms.[Additionally, provide CATV in the BDE HQ BOC, NOC, and SCIF.] The cable television system must consist of cabling, pathways, and outlets. CATV systems must conform to criteria including UFC 3-580-01.

2.9.4 AUDIO / VISUAL SYSTEMS <REV> AND INFRASTRUCTURE </REV>

2.9.4.1 GFGI PROJECTORS AND FLAT PANEL MONITORS: Provide power receptacles and conduits for signal wiring for GFGI projectors and flat panel monitors in each conference room[and classroom].

2.9.4.2 PAGING SYSTEMS: Provide a zoned paging system throughout each facility that is integrated with the telephone system.

2.9.4.3 VIDEO TELECONFERENCING (VTC): Provide non-secure VTC capability in all conference rooms[and classrooms], which generally consists of a power connection and two FJ45 data outlets in a double gang outlet faceplate.

2.9.5 <REV> MASS NOTIFICATION SYSTEM (MNS)

2.9.5.1 Provide a mass notification system in accordance with UFC 3-600-01. The system must be fully compatible with and integrated with the local installation-wide MNS. </REV>

2.9.6 SECURE TELECOMMUNICATIONS APPLICABILITY

2.9.6.1 SECURE TRs: Design and build SIPRNet room(s) in accordance with the open storage area requirements at secret level outlined in the Secret Internet Protocol Router Network (SIPRNet) Technical Implementation Criteria. These rooms must be separate dedicated rooms with minimum dimensions of 8'-0" x 8'-0", and must include a communication signal ground busbar, connected to the main TR signal busbar via properly sized ground wire (see MIL-HDBK-419-A), and one dedicated 20-amp circuit for the SIPRNet rack/safe, in addition to convenience outlets. The connection to the main TR must be via a single 2-inch trade-size steel conduit in accordance with UFC 3-580-01. Also provide a NIPRNet data outlet. As an alternative, the space allocated for the SIPRNet room may be incorporated into the TR if an approved SIPRNet Information Processing System Security Container (IPS) is provided within the combined SIPRNet/TR and it is approved by the local NEC.

2.9.6.2 SECRET INTERNET PROTOCOL ROUTER NETWORK (SIPRNET): Design and build the distribution infrastructure in accordance with the Secret Internet Protocol Router Network (SIPRNet) Technical Implementation Criteria <REV> and UFC 3-580-01. </REV> The word "shall" shall be substituted for the words "should" or "will" in the referenced publication <REV> Committee on National Security Systems Instruction (CNSSI) No. 7003. </REV> Provide a secure outlet drop box in each private office, conference room, and other areas as directed. [SIPRNet distribution includes the SCIF, BOC, and NOC in the Brigade HQ.]Provide a Protective Distribution System (PDS) in all limited and uncontrolled access areas. Specification Section 27 05 28 Protective Distribution System (PDS) for SIPRNet Communications Systems must be incorporated into this project. Approved surface-mounted raceway PDS must be used instead of the surface-mounted conduit unless otherwise directed by the local NEC/DOIM. Category 6 UTP copper cables with red cable jacket must be included and terminated at both ends in accordance with UFC 3-580-01.

2.9.6.3 SECURE VIDEO TELECONFERENCING (VTC): Provide secure VTC capability in each conference room but not team rooms[and in the Brigade HQ BOC and SCIF]. Provisions generally consist of a power connection and two RJ45 SIPRNet outlets.

2.9.7 <REV> ELECTRONIC SECURITY SYSTEMS (ESS)

2.9.7.1 Design Electronic Security Systems (ESS) in accordance with UFC 4-021-02. Provide and install security infrastructure to support Government-Furnished equipment including but

not limited to Integrated Commercial Intrusion Detection Systems (ICIDS), Video Surveillance Systems (VSS), and Access Control Systems. Provisions must include rooms/cabinets, dedicated power circuits, communications connections, raceways, and signal wiring for user-installed devices. Coordinate system requirements with the Installation Security Office.

2.9.7.2 INTRUSION DETECTION SYSTEMS: Provide and install the necessary conduit, dedicated electrical power, telecommunications connections, raceways, and wiring to support user-installed ICIDS in each secure and restricted area including the Secure Documents[, BOC, NOC, SCIF, SCIF corridor, rear exit, TSVA,] and SIPRNet rooms. If a SIPRNet safe or container is used, IDS may not be required for that space.

2.9.7.3 ACCESS CONTROL SYSTEMS: The access control system (ACS) consists of, but is not limited to, card readers, keypads, electronic locking devices, and high security switches throughout the facility with varying levels of security. [SCIF Automated ACS must be in accordance with ICD/ICS 705, UFC 4-010-05, and will be separate from building ACS as only SCI indoctrinated personnel can manage the system. [Provide intercom with remote release between TSVA personnel gate and on-site SCIF Special Security Office (SSO)]. System requirements must be coordinated with the Installation Security Office.

2.9.7.4 VIDEO SURVEILLANCE SYSTEM (VSS): Design the VSS to provide complete coverage of the TSVA, entrances to secure / restricted areas as identified in the IDS paragraph above, and other areas as directed with monitoring location as determined by the Installation Security Officer.

2.9.7.5 TEMPEST REQUIREMENTS: TEMPEST requirements must be met on a per site basis dependent on the facility zone type and the equipment NSTISSAM level. All unclassified telecommunications systems and associated infrastructure must be electrically and physically isolated from all classified telecommunications systems in accordance with NSTISSAM requirements. </REV>

2.9.8 RADIO COMMUNICATIONS AND ANTENNAS

2.9.8.1 Provide watertight antenna mounting brackets attached to the exterior wall of the building at a location that has been coordinated with the user for FM reception from the ranges. Roof-mounted equipment is not permitted. Wall-mounted structures must not violate any warranty conditions. Design all brackets to structurally support the equipment that is required by the user and capable of resisting the local wind loads. Optional antenna mounting locations must be freestanding poles or platforms located with proper site orientation to connect to the Duty Station of each unit. Provide two 3-inch conduits with weatherheads at the antenna mounting location and terminate the conduit inside the headquarters building at the Duty Station. If a multi-unit HQ is being designed, then this same requirement must be provided to each unit within the building. The actual equipment will be provided and installed by the government.

2.10 ELECTRICAL REQUIREMENTS

2.10.1 EXTERIOR ELECTRICAL SYSTEM

2.10.1.1 [EXTERIOR POWER

2.10.1.1.1 EXTERIOR GENERATOR (BRIGADE HEADQUARTERS ONLY): One automatic start-stand-by power generator to serve mission-essential areas and life safety systems as defined by paragraph Stand-by Power System (Brigade Headquarters Only) must be provided. Locate in a secure area outside of the building in a weatherproof enclosure. Provide a fuel tank to serve the generator for 48 hours of operation at full load.

2.10.1.1.2 <REV> POWER CONNECTIONS FOR TACTICAL SCI VEHICLE AREA (TSVA): Provide underground systems for power connectivity to the TSVA. Power must be capable of accommodating user power requirements to each tactical SCI vehicle for manned and unmanned platform support without using the platform's onboard power. Assume that 50% of the vehicles will have a load of 200 Amps and 50% of the vehicles will have a load of 100 Amps. Unless otherwise directed, alternate 200A and 100A connection points at adjacent parking spaces. Coordinate with the User to provide the appropriate MIL - STD connectors. Also provide a general purpose 120-volt receptacle at each vehicle.]

2.10.1.2 EXTERIOR LIGHTING

2.10.1.2.1 Provide exterior area lighting systems for courtyards, sidewalks, service yards, uncovered storage areas, and parking areas in accordance with UFC 3-530-01.

2.10.1.2.2 [Tactical SCI Vehicle Area (TSVA): Provide security lighting to support video surveillance cameras in accordance with UFC 4-021-01.] </REV>

2.10.2 INTERIOR ELECTRICAL SYSTEM

2.10.2.1 INTERIOR POWER

2.10.2.1.1 Provide a minimum of <REV> 15 percent </REV> spare circuit and load capacity at all levels of the power distribution system.

2.10.2.1.2 CHARACTERISTICS: 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.

2.10.2.1.3 <REV> </REV>

2.10.2.1.4 RECEPTACLES: Provide power receptacles per NFPA 70 and in conjunction with the proposed equipment and furniture layouts. Provide power connectivity to each workstation. Provide a duplex receptacle adjacent to each voice, data, and CATV outlet. Power poles are prohibited. The use of furred structural columns or perimeter walls are the preferred methods of power and telecommunication distribution to system furniture workstations. Utilize underfloor conduits if no other alternative exists. [Second floor penetrations above the SCIF area are prohibited.]

2.10.2.1.5 SURGE PROTECTION: Provide surge protection designed in accordance with NFPA 780 and other reference criteria.

2.10.2.1.6 [REDUNDANCY (BDE HQ ONLY)

a. STAND-BY POWER SYSTEM: Provide stand-by generator(s) and automatic transfer switch with internal isolation and bypass capabilities for maintenance to serve all mission essential areas including the BOC, NOC, SCIF, TSVA vehicles, telecommunications rooms, SIPRNet rooms, and server rooms. (Also provide HVAC in these areas.) In addition, system must serve life safety and emergency loads that include, but are not limited to, elevator, emergency egress and exit lighting, fire alarm system, mass notification system, security systems, and other emergency circuits.

b. UNINTERRUPTIBLE POWER SUPPLY (UPS) SYSTEM: Provide Uninterrupted Power Supply (UPS) systems to serve the BOC, NOC, SCIF, server rooms, SIPRNet rooms, and telecommunications rooms. Each unit must have a minimum of 5 minutes of capacity at full load to allow for generator override, or orderly shut-down of critical loads if the generator power fails to go online. Each unit must have isolation and bypass capabilities for maintenance and utilize leak-proof maintenance-free sealed lead-acid batteries with suspended electrolyte.]

2.10.2.2 INTERIOR LIGHTING: Design the interior lighting and lighting controls systems in accordance with the <REV> Illumination Engineering Society (IES) Lighting Library, UFC 3-530-01 criteria, </REV> and the requirements of ASHRAE 90.1. Lighting must be compatible with security cameras, safety, and security requirements. <REV> </REV>

2.10.3 GROUNDING

2.10.3.1 Provide a ground counterpoise around the building perimeter 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 a grounding point under each raised access floor. Provide additional grounding if needed based on project requirements. Systems must conform to NFPA 70, NFPA 780, local codes, and UFC 3-580-01.

2.10.4 LIGHTNING PROTECTION SYSTEM

2.10.4.1 Provide in accordance with UFC 3-575-01, NFPA 780, and other referenced criteria.

2.11 HEATING, VENTILATION, AND AIR CONDITIONING (HVAC) SYSTEM

2.11.1 GENERAL

2.11.1.1 DESIGN DATA: Actual internal equipment loads (i.e. heat dissipation) for finalized HVAC system sizing proposed must be acquired from the user or appropriate point-of-contact (POC) and is the responsibility of the DOR. For baseline purposes, estimated internal equipment loads are as follows:

a. Communication-type rooms and areas such as TR and SIPRNet, use 585 watts

b. <REV> Administrative, conference, and office-type areas [with the exception of the][Classroom area][and][the SCIF area], assume that each person or workstation area, cubicle, and office space is assigned one personal desktop computer. </REV>

(1) The quantity of personnel within each Conference room and area must be based on one person per 15 square feet of floor area.

(2) [For Classroom areas, assume that each person is assigned one laptop computer for HVAC load calculation purposes. The overall quantity of personnel within each Classroom area must be based on one person per 20 square feet of floor area.]

c. [NOC, BOC, and SCIF areas, use Table 4 below

d. Indoor design conditions for specific spaces are as shown in Table 5. <REV> </REV>

Table 4: Equipment Loads (Brigade Only)

NOC / BOC / SCIF	
ROOM DESCRIPTION	**WATTS / FT2**
SCIF (Open Office)	5.98
SigInt	2.36
Server Room (SCIF)	51.85
GeoInt	2.93
BOC (Open Office)	15.58
NOC (Open Office)	1.31
ISM Office (NOC)	1.17
A/V Server Room (BOC)	39.87
Server Room (NOC)	40.58

Table 5: Indoor Design Data

NOC / BOC / SCIF	
ROOM DESCRIPTION	**WATTS / FT2**
SCIF (Open Office)	5.98
SigInt	2.36
Server Room (SCIF)	51.85
GeoInt	2.93
BOC (Open Office)	15.58
NOC (Open Office)	1.31
ISM Office (NOC)	1.17
A/V Server Room (BOC)	39.87
Server Room (NOC)	40.58

[Areas in which humidity control (including humidification and reheat) is required.]*

]

2.11.2 HVAC SYSTEM REQUIREMENTS <REV> </REV>

2.11.2.1 <REV> ADMINISTRATIVE AREAS: </REV> The capability of extending the regularly scheduled operating hours of the HVAC systems (Administrative and Classroom areas) must be provided. A password-protected control device (i.e. control panel) located within the staff duty station is the preferred design approach and arrangement. Provide a separate, dedicated HVAC unit independent of the main building HVAC system for the staff duty station and schedule the system for after normal hours operation only. The admin areas' HVAC system design must include flexibility in zoning to where it can address future changes in occupant densities. Administrative areas must be temperature-controlled by the DDC System. Temperature set-point adjustment must be accomplished via DDC System by authorized personnel.

2.11.2.2 <REV> CRITICAL SPACES </REV>

2.11.2.2.1 TELECOMMUNICATIONS AND SIPRNET ROOMS: Provide an independent and dedicated air handling system for each TR and SIPRNet room. Air handling unit system(s) must not be floor-space mounted within the actual space served. These rooms must meet the HVAC requirements for TRs in accordance with UFC 3-410-01. [Provide equipment redundancy in accordance with Table 6.]

2.11.2.2.2 [BRIGADE OPERATIONS CENTER: Provide an independent and dedicated air handling system for the BOC, NOC, and SCIF. These areas are allowed to be combined on a common system depending on the load profile and zoning requirements for each space. Provide equipment redundancy in accordance with Table 6: Redundancy / Reliability Matrix. The use of an Under-Floor Air Distribution (UFAD) system for these areas is not mandatory, nor a requirement.]

2.11.2.2.3 [SERVER ROOMS: Provide an independent and dedicated air handling system for each server room. Air handling unit systems may be floor-space mounted within the actual space served. Provide equipment redundancy in accordance with Table 6. Provide computer room type air conditioning units to condition server rooms.]

2.11.2.3 [CLASSROOMS: Each classroom area must be individually temperature-controlled by the Direct Digital Control (DDC) System. Temperature setpoint adjustment must be accomplished via the DDC System by authorized personnel.]

2.11.2.4 [UPS SYSTEM: Provide a UPS system to serve the BOC, NOC, SCIF, server rooms, and TRs (see electrical requirements). Provide and design HVAC systems to maintain appropriate interior environmental conditions (for instance temperature, humidity, and pressure), and to limit hydrogen gas accumulation to less than an explosive mixture. Design of HVAC systems must meet the system manufacturer's requirements and other code requirements such as OSHA, NFPA 1, NFPA 111, and NFPA 70. Provide ventilation and exhaust systems as required and as independent and dedicated systems which are separate from all other building systems. Air recirculation within the battery area is not allowed, and where required, mechanical components of the ventilation system must be explosion-proof. Provide alarms and automatic controls to automatically detect and sound audible alarms upon malfunction of the ventilation system. A malfunction of the ventilation system must prevent the battery charging system from operating. Design features of the battery area or room must address all requirements such as ventilation, fire protection, hazardous material reporting, disposal, and spill control, as well as include emergency eyewash/shower as required by code.]

[Table 6: Redundancy / Reliability Matrix (Brigade Only)

CATEGORY	AREA SERVED	EMERGENCY POWER	REQUIREMENT
[Heating/]Cooling Equipment and Associated Controls	BOC, NOC, SCIF, Server Rooms, and Telecommunications Rooms	Yes	100% dedicated redundancy required for [heating and]cooling equipment
Air handling Equipment and Associated Controls	BOC, NOC, SCIF, Server Rooms, and Telecommunications Rooms	Yes	100% dedicated redundancy is required
Piping	BOC, NOC, SCIF, Server Rooms, and Telecommunications Rooms	N/A	Provide 100% redundant cooling[and heating] piping feeds from the cooling[and heating] source equipment to the air handling equipment serving these areas.

Table 6 Notes:

1. *Provide all required equipment, components, controls, and other appurtenances on emergency power such that 100% cooling[and heating] capacity is available and provided to the BOC, NOC, SCIF, Server Rooms, and Telecommunications Rooms.*
2. *Where redundancy requirements dictate the use of packaged equipment for an area or combination of areas, provide two separate sets of packaged equipment, each at 100% capacity.*
3. *The above categorized equipment requiring emergency power is not required to be on UPS.*
4. *For equipment requiring emergency power, controls must have battery back-up or non-volatile memory to facilitate automatic re-start upon restoration of emergency or normal power.*
5. *Where centralized underground piping distribution system is utilized as a cooling[and heating] fuel source, it must be available year-round, 24 hours/day, 7 days/week, and an additional and separate cooling[and heating] system must be provided to serve as the required 100% capacity backup.*
6. *System redundancy requirements for the BOC, NOC, SCIF, Server Rooms, and Telecommunications Rooms must include the capability of automatic monitoring and automatic system switch-over in the event of a system operational failure or malfunction, and also to equalize systems' run time. System operational failure or malfunction must produce an audible and visual alarm for the occupant.*
7. *[Redundant heating piping feeds are not required to be extended to the individual air terminal units (i.e. VAV boxes) in VAV air handling systems.]*

]

<REV> </REV>

2.11.3 HVAC CONTROLS

2.11.3.1 <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). Points schedule drawings convey a great deal of information critical to design, installation, and subsequent performance of the control system. It includes hardware input and output information, device ranges and settings, ANSI 709.1 communications protocol data, and information about data for use at the operator workstation by Monitoring and Control software. These schedules are available as an excel spreadsheet and as AutoCAD drawings 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 information, as the documents provide necessary and critical information for the use of website drawings and other information.

2.11.4 SCHEDULES

2.11.4.1 The following load schedules must be used in all facility energy simulations for purposes of documenting compliance with energy performance requirements.

Schedule 1: Battalion and Brigade Headquarters Internal Load Schedules

Hr	Occupancy			Lighting			Plug Loads			Service Hot Water		
	Wk	Sat	Sun	Wk	Sat	Sun	Wk	Sat	Sun	Wk	Sat	Sun
1	0.00	0.00	0.00	0.05	0.05	0.05	0.30	0.30	0.30	0.00	0.00	0.00
2	0.00	0.00	0.00	0.05	0.05	0.05	0.30	0.30	0.30	0.00	0.00	0.00
3	0.00	0.00	0.00	0.05	0.05	0.05	0.30	0.30	0.30	0.00	0.00	0.00
4	0.00	0.00	0.00	0.05	0.05	0.05	0.30	0.30	0.30	0.00	0.00	0.00
5	0.00	0.00	0.00	0.05	0.05	0.05	0.30	0.30	0.30	0.00	0.00	0.00
6	0.00	0.00	0.00	0.05	0.05	0.05	0.30	0.30	0.30	0.00	0.00	0.00
7	0.00	0.00	0.00	0.10	0.05	0.05	0.30	0.30	0.30	0.00	0.00	0.00
8	0.20	0.00	0.00	0.30	0.05	0.05	0.30	0.30	0.30	0.00	0.00	0.00
9	0.95	0.00	0.00	0.90	0.05	0.05	0.90	0.30	0.30	0.00	0.00	0.00
10	0.95	0.00	0.00	0.90	0.05	0.05	0.90	0.30	0.30	0.00	0.00	0.00
11	0.95	0.00	0.00	0.90	0.05	0.05	0.90	0.30	0.30	0.00	0.00	0.00
12	0.95	0.00	0.00	0.90	0.05	0.05	0.90	0.30	0.30	0.00	0.00	0.00
13	0.50	0.00	0.00	0.90	0.05	0.05	0.80	0.30	0.30	0.00	0.00	0.00
14	0.95	0.00	0.00	0.90	0.05	0.05	0.90	0.30	0.30	0.00	0.00	0.00
15	0.95	0.00	0.00	0.90	0.05	0.05	0.90	0.30	0.30	0.00	0.00	0.00
16	0.95	0.00	0.00	0.90	0.05	0.05	0.90	0.30	0.30	0.00	0.00	0.00
17	0.95	0.00	0.00	0.90	0.05	0.05	0.90	0.30	0.30	0.00	0.00	0.00
18	0.30	0.00	0.00	0.50	0.05	0.05	0.50	0.30	0.30	0.00	0.00	0.00
19	0.00	0.00	0.00	0.30	0.05	0.05	0.30	0.30	0.30	0.00	0.00	0.00
20	0.00	0.00	0.00	0.30	0.05	0.05	0.30	0.30	0.30	0.00	0.00	0.00
21	0.00	0.00	0.00	0.20	0.05	0.05	0.30	0.30	0.30	0.00	0.00	0.00
22	0.00	0.00	0.00	0.20	0.05	0.05	0.30	0.30	0.30	0.00	0.00	0.00
23	0.00	0.00	0.00	0.10	0.05	0.05	0.30	0.30	0.30	0.00	0.00	0.00
24	0.00	0.00	0.00	0.05	0.05	0.05	0.30	0.30	0.30	0.00	0.00	0.00
Peak	See Note 1 below for occupancy info			1.0 W/ft^2 (10.8 W/m^2)			0.75 W/ft^2 (8.1 W/m^2)			0 gal/hr (0 L/hr)		

Schedule 1 Notes:

1. *See "Standard Design Program Areas & Unit costs" table at the COS website for staff (i.e., occupancy quantities) based on applicable facility sizes.*

Schedule 2: Battalion Headquarters Internal Load Schedules (Duty Office and Main Entry Area – 2 occupants continuously)

Hr	Occupancy			Lighting			Plug Loads			Service Hot Water		
	Wk	Sat	Sun	Wk	Sat	Sun	Wk	Sat	Sun	Wk	Sat	Sun
1	0.417	0.417	0.417	0.50	0.50	0.50	0.30	0.30	0.30	0.00	0.00	0.00
2	0.417	0.417	0.417	0.50	0.50	0.50	0.30	0.30	0.30	0.00	0.00	0.00
3	0.417	0.417	0.417	0.50	0.50	0.50	0.30	0.30	0.30	0.00	0.00	0.00
4	0.417	0.417	0.417	0.50	0.50	0.50	0.30	0.30	0.30	0.00	0.00	0.00
5	0.417	0.417	0.417	0.50	0.50	0.50	0.30	0.30	0.30	0.00	0.00	0.00
6	0.417	0.417	0.417	0.50	0.50	0.50	0.30	0.30	0.30	0.10	0.10	0.10
7	0.417	0.417	0.417	0.50	0.50	0.50	0.30	0.30	0.30	0.40	0.40	0.40
8	0.417	0.417	0.417	0.50	0.50	0.50	0.30	0.30	0.30	0.20	0.20	0.20
9	0.95	0.417	0.417	0.90	0.50	0.50	0.90	0.30	0.30	0.00	0.00	0.00
10	0.95	0.417	0.417	0.90	0.50	0.50	0.90	0.30	0.30	0.00	0.00	0.00
11	0.95	0.417	0.417	0.90	0.50	0.50	0.90	0.30	0.30	0.00	0.00	0.00
12	0.95	0.417	0.417	0.90	0.50	0.50	0.90	0.30	0.30	0.00	0.00	0.00
13	0.50	0.417	0.417	0.90	0.50	0.50	0.80	0.30	0.30	0.00	0.00	0.00
14	0.95	0.417	0.417	0.90	0.50	0.50	0.90	0.30	0.30	0.00	0.00	0.00
15	0.95	0.417	0.417	0.90	0.50	0.50	0.90	0.30	0.30	0.00	0.00	0.00
16	0.95	0.417	0.417	0.90	0.50	0.50	0.90	0.30	0.30	0.00	0.00	0.00
17	0.95	0.417	0.417	0.90	0.50	0.50	0.90	0.30	0.30	0.00	0.00	0.00
18	0.417	0.417	0.417	0.50	0.50	0.50	0.50	0.30	0.30	0.10	0.10	0.10
19	0.417	0.417	0.417	0.50	0.50	0.50	0.30	0.30	0.30	0.10	0.10	0.10
20	0.417	0.417	0.417	0.50	0.50	0.50	0.30	0.30	0.30	0.10	0.10	0.10
21	0.417	0.417	0.417	0.50	0.50	0.50	0.30	0.30	0.30	0.00	0.00	0.00
22	0.417	0.417	0.417	0.50	0.50	0.50	0.30	0.30	0.30	0.00	0.00	0.00
23	0.417	0.417	0.417	0.50	0.50	0.50	0.30	0.30	0.30	0.00	0.00	0.00
24	0.417	0.417	0.417	0.50	0.50	0.50	0.30	0.30	0.30	0.00	0.00	0.00
Peak	5 occupants			1.0 W/ft^2 (10.8 W/m^2)			0.75 W/ft^2 (8.1 W/m^2)			6.4 gal/hr (24 L/hr)		

2.12 FIRE PROTECTION REQUIREMENTS

2.12.1 GENERAL

2.12.1.1 All fire protection and life safety features must be in accordance with UFC 3-600-01 and the criteria it references.

2.12.1.2 [Battalion][and][Brigade] Headquarters Facilities <REV> </REV> must have complete sprinkler protection <REV> in accordance with NFPA 101 and UFC 3-600-01. </REV>

2.12.2 FIRE PROTECTION AND LIFE SAFETY ANALYSIS

2.12.2.1 <REV> Provide a fire protection and life safety design analysis for each building and site in the project in accordance with UFC 3-600-01 and ER 1110-345-700. Submit the analyses with the interim design submittal.

2.12.2.2 SUGGESTED OCCUPANCY CLASSIFICATION(S): Occupancy classification per International Building Code (IBC) and National Fire Protection Associate (NFPA) 101 must be identified. DOR is solely responsible for categorizing, analyzing, and designing the occupancy classifications for this project. </REV>

2.12.2.3 BUILDING CONSTRUCTION

2.12.2.3.1 Construction, including interior finishes, must comply with UFC 1-200-01, UFC 3-600-01, the IBC, NFPA 101, and NFPA 75.

2.12.2.3.2 SERVER ROOMS: Server Rooms house MISSION CRITICAL electronic equipment areas and must be separated from surrounding occupancies by fire-resistance rated construction in accordance with NFPA 75.

2.12.2.3.3 Modify the requirements of NFPA 75 to incorporate provisions for drainage and a leak detection system under raised-floor installations as follows: <REV> Provisions for drainage and leak detection systems are required under raised access flooring (RAF) in Server Rooms and any other areas that house MISSION CRITICAL electronic equipment installations. </REV>

2.12.2.4 ELEVATORS: The fire protection features of elevators, hoistways, machine rooms, <REV> control closets </REV> and lobbies must be in accordance with UFC 3-490-06, UFC 3-600-01, ASME A17.1, NFPA 13, and NFPA 72.

2.12.3 SPRINKLER SYSTEM

2.12.3.1 <REV> All floors and areas of each facility must be fully protected with automatic sprinkler systems when required by NFPA 101 and UFC 3-600-01. Provide the sprinkler system design, sprinkler hazard classifications, design densities, design areas, and exterior hose streams in accordance with UFC 3-600-01, NFPA 13, and other applicable criteria. Use computer-generated hydraulic calculations for the sprinkler systems design, exterior hose stream demand, and selection of piping sizes. 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” by 2’-0” splash block at exterior grade. </REV>

2.12.3.2 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 [tamper switch reporting to the fire alarm control panel (FACP)][lock]. The ground floor entry penetration must be sleeved in accordance with NFPA 13 requirements for seismic protection. <REV> The sprinkler entry riser must include a backflow preventer, a fire department connection, and a backflow preventer test header. </REV> 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 valve or a butterfly valve 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.

<REV> </REV>

2.12.3.3 BACKFLOW PREVENTER: Provide a backflow preventer on the fire water service lateral serving each building. <REV> </REV> 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-inch hose valves to allow forward-flow testing of the backflow preventer at full system demand, in accordance with NFPA 13. <REV> </REV> 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.

2.12.3.4 FIRE DEPARTMENT CONNECTION (FDC): Provide a fire department connection for each building with sprinkler protection, located directly accessible to the fire department. <REV> </REV>

2.12.4 SYSTEM COMPONENTS AND HARDWARE

2.12.4.1 Provide materials for the sprinkler system, fire pump system, and hose standpipe system in accordance with NFPA 13, <REV> NFPA 14, UFC 3-600-01 </REV> and NFPA 20.

2.12.5 FIRE WATER SUPPLY

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

2.12.6 FIRE PUMP

2.12.6.1 The QFPE must 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. <REV> The QFPE must submit fire pump preliminary sizing and drawings in the design analysis. </REV>

2.12.7 FIRE DETECTION AND ALARM SYSTEMS

2.12.7.1 Provide a fire alarm and detection system that complies with 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's Representative during design.

2.12.7.2 SERVER ROOMS: Server rooms contain MISSION CRITICAL electronic equipment. They are considered electronic equipment areas as identified in Section 4-13 of UFC 3-600-01, and are the only areas considered to be "information technology areas" as defined by NFPA 75. Server rooms must be protected as information technology areas in accordance with NFPA 75, except as modified by UFC 3-600-01 and herein. In server rooms with raised access floors, underfloor detectors must be provided and connected to the fire alarm system. The smoke detectors must be wired to immediately shut down power to the electronic equipment in the protected room upon activation. Shutdown devices must be supervised by

the fire alarm control panel in accordance with NFPA 75. <REV> Clean agent suppression systems are only permitted when approved by the DFPE. </REV>

2.12.7.3 INITIATING DEVICES: All 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.

2.12.7.4 FIRE ALARM STATIONS: <REV> Provide manual fire alarm stations in accordance with UFC 3-600-01. </REV> Break-glass manual fire alarm stations are prohibited.

2.12.7.5 Provide over-voltage and surge protection at the input power of all fire alarm panels.

2.13 SUSTAINABLE DESIGN

2.13.1 GENERAL

2.13.1.1 Comply with UFC 1-200-02 and ASHRAE 90.1.

2.13.2 <REV> HIGH PERFORMANCE AND SUSTAINABLE BUILDING (HPSB) COMPLIANCE AND TRACKING

2.13.2.1 Full compliance with UFC 1-200-02 High Performance and Sustainable Building (HPSB) criteria is required unless otherwise specified.

2.13.2.2 [The following facilities meet the threshold in Table 1-1 of UFC 1-200-02 requiring HPSB compliance tracking and reporting: [BDE HQ][,][BN HQ]. Refer to the HPSB checklist provided in Appendix [_] for use during design.][HPSB compliance tracking and reporting is not required for this project.]

2.13.3 ENERGY CONSERVATION

2.13.3.1 GENERAL: Energy conservation must be in accordance with Part 1 and UFC 1-200-02.

2.13.4 ALTERNATIVE ENERGY SOURCES

2.13.4.1 Locations of solar collectors or panels must be positioned to prevent heat gain and sun reflection issues for the site and adjacent sites.

2.13.4.2 Availability of local or installation personnel to provide maintenance on energy systems should be considered prior to design of these features.

2.14 CYBERSECURITY REQUIREMENTS

2.14.1 The following facility related control systems (FRCS) must be included in the design: [list of FRCS anticipated for facility type including utility monitoring and control systems (UMCS / EMCS / HVAC), fire alarm mass notification systems (FA / MNS), electronic security systems (ESS / ACS), fuel management systems, and lighting control systems]. Validate all required FRCS during the design phase. </REV>

2.15 EQUIPMENT AND FURNITURE REQUIREMENTS

2.15.1 GENERAL

2.15.1.1 Furniture procurement is not included in this Contractor or Task Order. The Government reserves the right to change the method for procurement and installation of furniture to Contractor-Furnished Contractor-Installed (CFCI). <REV> CFCI furniture requires procurement by the Contractor using a Furniture, Fixtures, and Equipment (FF&E) package in accordance with UFC 3-120-10. </REV>

2.15.1.2 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.

2.15.1.3 <REV> Furniture will be provided and installed under a separate furniture vendor / installer contract(s). The general Contractor must accommodate time to permit completion of the furniture installation for a complete and usable facility to coincide with the Beneficial Occupancy Date (BOD) of this project. The furniture vendor and installer contract(s) must include electrical pre-wiring and the whips for final connection to the building electrical systems; however, the general Contractor must make the final connections to the building electrical systems under this Contract. Furthermore, the general Contractor must provide Information/Technology (IT) wiring, such as LAN and phone, up to and including the faceplate of all freestanding and systems furniture desktops, the services to install the cable and faceplates in the furniture, the coordination with the furniture vendors and installers to accomplish the installation at the appropriate time, and the final IT connections to the building systems under this Contract. </REV>

2.15.2 FURNITURE, FIXTURES, AND EQUIPMENT (FF&E)

2.15.2.1 <REV> An FF&E package [is][is not] required for this project. </REV>

2.15.2.2 FURNITURE SYSTEMS: <REV> The following criteria describe the furnishing requirements for typical room types. Some room types listed may not apply to this project. </REV> Furnishings, other than installed building equipment, are GFGI unless otherwise specified. The following furnishings table is provided for coordination of room and office layouts to ensure suitability for their intended function. Large interior spaces such as open office areas may be subdivided into smaller areas by using workstation partitions, storage units and file cabinets, hanging acoustic panels, or similar devices. In general, the interior design must provide a comfortable, efficient, and flexible work environment. All open office workstations are predicated on 6’-0” by 8’-0” cubicles (i.e., systems furniture or modular workstation) unless noted otherwise. Smaller workstations are allowed if requested by occupants or if additional open team meeting areas are needed. <REV> Unless noted otherwise, conference tables may be standalone or modular per user preference. </REV>

2.15.2.3 <REV> Furniture listed may be considered minimums, typical, or recommendations for functionality. Additional or different furniture may be requested by user as needed. Confirm variations in FF&E with COS. </REV>

Table 7: Room Size and Furnishings

ROOM TYPE	MIN. SF	COMMENTS	FURNITURE REQUIRED
Senior Executive Office	200	Private Office	U-shaped executive desk unit with single pedestal desk with center drawer, box/box/file pedestal, full modesty panel; executive bridge 42" min.; credenza unit with 2-drawer lateral file and optional hutch unit with door storage, two 4-drawer lateral files, one conference table, two conference chairs minimum, two guest chairs, one ergonomic executive chair
Execute Office	150	Private Office	L-shaped executive desk unit with single pedestal desk with center drawer and storage pedestal with box/box/file configuration, full modesty panel; executive return with storage pedestal box/box/file configuration, two 4-drawer lateral files, two guest chairs, one ergonomic executive chair
Office	110	Private Office	L-shaped executive desk unit with single pedestal desk with center drawer and storage pedestal with box/box/file configuration, full modesty panel; executive return with storage pedestal box/box/file configuration, one 4-drawer lateral file, one guest chair, one ergonomic task chair
Open Workstation	48	Open Workstation	<REV> Workstation as indicated in standard floor plans, approximately 48 SF, with work surfaces, task lighting, file drawers, and optional overhead storage; confirm workstation panel heights with occupants </REV>
Brigade Command Conference Room	600	-	Conference table with 18 chairs and 18 side chairs
Battalion Command Conference Room	330	-	Conference table with 14 chairs and 8 side chairs
Medium Conference Room	200-300	-	Conference table with 12 chairs and 4 side chairs
Team Room	110-150	-	Conference table with 6 chairs and 2 side chairs
Reception Area	Varies	Executive Reception Area	<REV> Reception desk with transaction countertop workstation for one staff member and 5 guest chairs for visitors </REV>
Classroom	Varies	BN HQ only	One work surface and chair for each 85 SF; movable partitions to divide large classroom space into three equally sized spaces
<REV> File Storage Room	Varies	Storing files and records </REV>	Minimum of 1 linear foot (LF) of 4-drawer lateral file cabinet for every 4 SF of space (250 SF room = min. 62.5 LF 4-drawer horizontal base files; one 36" wide 4-drawer file cabinet = 12 LF)
<REV> General Storage	Varies	-	Heavy duty shelving units </REV>

Showers	Varies	-	Provide lockers (with benches if space allows) on a 3:1 ratio of lockers per shower. Minimum locker size is 12” wide x 18” deep x 36” high.
Lobby	Varies	Building Reception Area	Lounge seating when space allows; one recessed building directory near each main entrance; one recessed building directory near elevator doors above the first floor in multi-story building; one 4’-0” x 6’-0” wall-mounted bulletin board for each headquarters unit; one glass-front 4’-0” wide (min.) built-in display cabinet for unit memorabilia, awards, and trophies in BDE HQ
Break Room	Varies	-	Minimum <REV> 20 LF cabinets, </REV> under-counter dishwasher, and space for a full-size refrigerator with ice maker. Note that in BDE HQ, first floor Break Room also supports Command group. Provide recessed space for two vending machines per building (machines are GFGI) not in view of the lobby.
Secured Documents Room	Varies	Secure Documents Room conforming to requirements in AR 380-5	Two 4-drawer safes per authorized company within each battalion secure documents room; two 4-drawer safes per coordinating staff section within each battalion and brigade secure documents room, not to exceed 12 total safes in the battalion room
BOC	Varies	Brigade Operations Center	<REV> Provision for GFGI monitors (wall of knowledge); workstations, 30” deep x 60” wide, with 42”-48” high powered panels, one stationary box/box/file pedestal, and one ergonomic task chair per workstation as indicated on standard floor plans; conference tables and chairs for 12 persons with side chairs as space allows at conference room; CFCI raised flooring </REV>
NOC	Varies	Network Operations Center	<REV> Workstations as indicated on standard floor plans, approximately 48 SF, with work surfaces, task lighting, files drawers, and optional overhead storage; space for GFGI telecommunications racks, equipment, and three work benches in Server Room; CFCI raised flooring </REV>
SCIF	Varies	Sensitive Compartmented Information Facility conforming to Office of the Director of National Intelligence – Intelligence Community Standard (ICS) 705	50 – 52 total <REV> workstations </REV>, 30” deep x 60” wide, with 42”-48” high powered panels, one stationary box/box/file pedestal, and one ergonomic task chair per workstation as indicated on standard floor plans; <REV> </REV> conference tables and chairs for 12 persons with side chairs as space allows at conference room; CFCI raised flooring to accommodate weight of seven 4-drawer safes. Primary entry vestibule (interior) must accommodate one 24” deep x 36” wide standing-height table. One cell phone storage locker to contain minimum 50 individual phones adjacent to primary SCIF entry at corridor side.

Janitor Closet	Varies	Cleaning Supplies and Storage	One lockable metal cabinet with shelves, and one industrial open shelving unit
<REV> Mother's Room	Varies	Privacy for Nursing Mothers	One bariatric lounge chair with optional ottoman, one 24"x24" minimum table; counter space for 1 microwave and 1 dish-drying rack; under-counter or larger size refrigerator </REV>

2.16 FACILITY SPECIFIC REFERENCES

2.16.1 SPECIFIC INDUSTRY CRITERIA

2.16.1.1 American National Standards Institute (ANSI) / Telecommunications Industry Association (TIA) / Electronic Industry Association (EIA)

a. ANSI/EIA/TIA 568.0 – D Commercial Telecommunications Cabling for Customer Premises (including all applicable Addendums)

b. EIA/TIA 568.1 – D Commercial Building Telecommunications Cabling Infrastructure Standard (including all applicable Addendums)

c. EIA/TIA 568C – 2 Balanced Twisted Pair Telecommunications Cabling and Components Standards (including all applicable Addendums)

d. EIA/TIA 568.3 – D Optical Fiber Cabling Components Standard (including all applicable Addendums)

e. EIA/TIA 568.4 – D Broadband Coaxial Cabling and Components Standard (including all applicable Addendums)

f. EIA/TIA 569 – D Telecommunications Pathways and Spaces (including all applicable Addendums)

g. ANSI/EIA/TIA 606C Administration Standard for Commercial Telecommunications Infrastructure (including all applicable Addendums)

2.16.1.2 <REV> American Society of Heating, Refrigerating, and Air Conditioning Engineers (ASHRAE) </REV>

a. ASHRAE 55 Thermal Environmental Conditions for Human Occupancy

b. ASHRAE Hdbk-IP Handbook, Refrigeration I-P Edition

c. ASHRAE Hdbk-IP Handbook, HVAC Applications I-P Edition

d. ASHRAE Hdbk-IP Handbook, HVAC Systems and Equipment I-P Edition

2.16.1.3 <REV> American Society of Mechanical Engineers (ASME) </REV>

a. ASME B31.1 Power Piping

b. ASTM E413-04, Classification for Rating Sound Insulation

2.16.1.4 Clean Air Act Amendment of 1990

2.16.1.5 Discount Factors for Life-Cycle Cost Analysis, Annual Supplement to NIST Handbook 135

2.16.1.6 Memorandum of Agreement (MOA) on Criteria/Standards for Economic Analyses/Life Cycle

2.16.1.7 Costing for MILCON Design (March 1996)

2.16.1.8 NIST Handbook 135 (with the annual supplement of discount factors)

2.16.1.9 [National Electrical Manufacturers Association (NEMA) PE 1 Uninterruptible Power Systems]

2.16.1.10 [National Fire Protection Association (NFPA) 110 Emergency and Standby Power Systems]

2.16.1.11 SMACNA Seismic Restraint Manual: Guidelines for Mechanical Systems

2.16.1.12 Testing and Balancing Bureau (TABB)

2.16.1.13 Underwriters Laboratories (UL)

a. [UL 1008 Transfer Switch Equipment]

b. UL 1449 Transient Voltage Surge Suppressors

c. [UL 1778 Uninterruptible Power Systems]

2.16.2 SPECIFIC MILITARY CRITERIA

2.16.2.1 Army Regulation (AR)

a. AR 190-51, Security of Unclassified Army Property (Sensitive and Non-sensitive)

b. AR 380-381 Special Access Programs (SAPS) and Sensitive Activities

c. AR 380-5, Department of the Army Information Security Program

2.16.2.2 Committee on National Security Systems (CNSS)

a. CNSSAM TEMPEST/1-13 (CNSS Advisory Memorandum, the RED/BLACK Installation Guidance

b. <REV> CNSSI No. 7003 Protected Distribution Systems (PDS) </REV>

2.16.2.3 <REV> Defense Intelligence Agency (DIA)

a. DIA/DAC-2A2 Message, Security Guidelines for Mobile Ground Tactical Platforms, DTG - 211128Z MAY 07 </REV>

2.16.2.4 Department of Defense (DOD)

a. DOD MIL-HDBK-419A Grounding, Bonding, and Shielding for Electronic Equipment and Facilities

b. [DOD 5105.21-M-1 Sensitive Compartment Information Administrative Security Manual]

c. DOD Regulation 5200.1-R, Information Security Program, dated January 1997, Appendix 7 – Physical Security for Vault and Secure Room Construction Standards

2.16.2.5 <REV> </REV>

2.16.2.6 Office of the Director of National Intelligence

a. Intelligence Community Directive Number 705 Sensitive Compartmented Information Facilities

b. [Intelligence Community Standard (ICS) 705-1 Physical and Technical Standards for Sensitive Compartmented Information Facilities

c. Intelligence Community Standard (ICS) 705-2 Standards for Accreditation and Reciprocal Use of Sensitive Compartmented Information

d. IC Tech Spec for ICD/ICS 705 Technical Specifications for Construction and Management of Sensitive Compartmented Information Facilities]

2.16.2.7 <REV> Unified Facilities Criteria (UFC)

a. UFC 1-200-01 DoD Building Code

b. UFC 1-200-02 High Performance and Sustainable Building Requirements

c. UFC 3-101-01 Architecture

d. UFC 3-120-01 Design: Sign Standards

e. UFC 3-301-01 Structural Engineering

f. UFC 3-490-06 Elevators

g. UFC 3-530-01 Interior and Exterior Lighting Systems

h. UFC 3-575-01 Lightning and Static Electricity Protection Systems

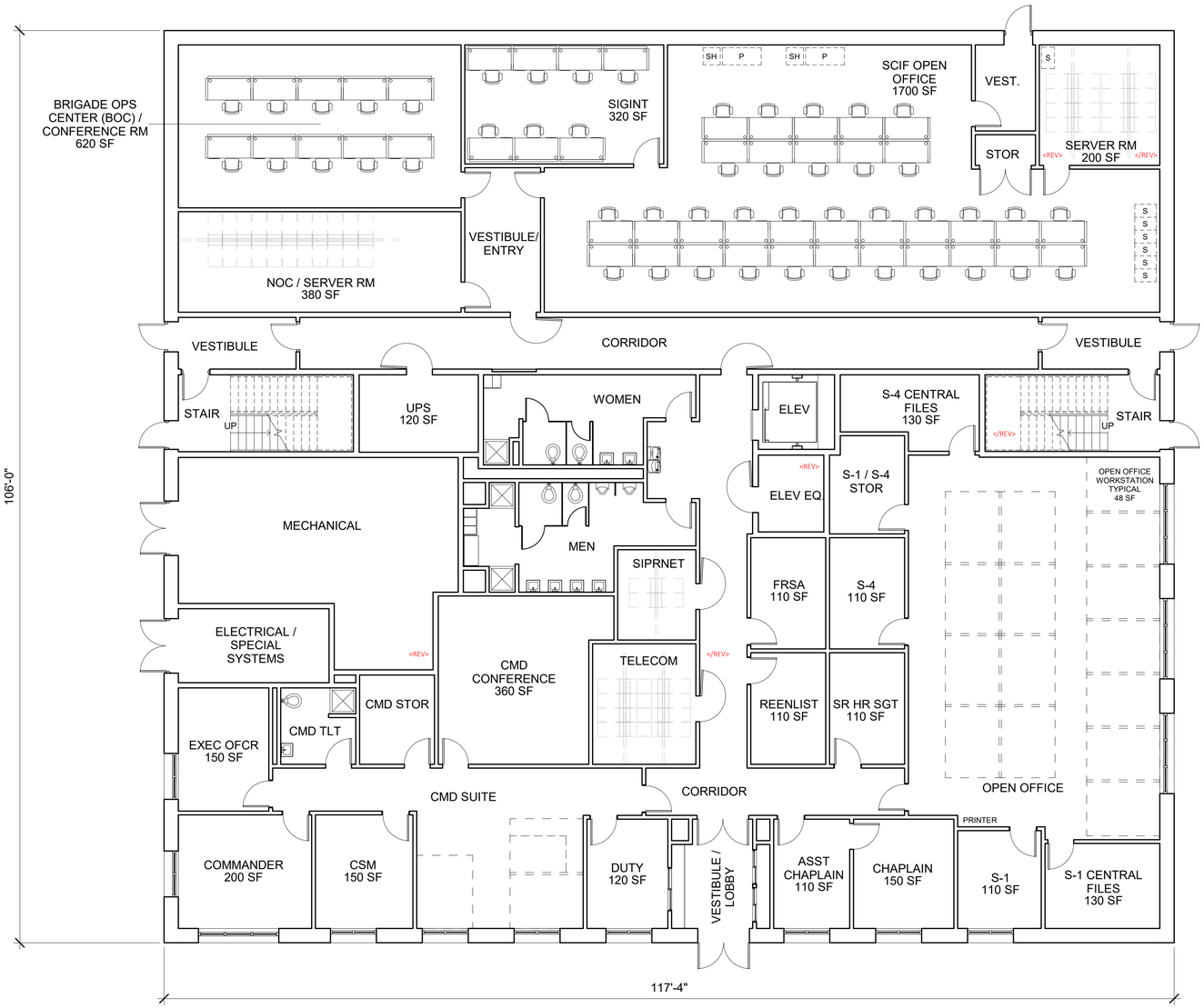
i. UFC 3-580-1 Telecommunications Bldg Cabling Systems Planning/Design Manual 22 June 2007

j. UFC 3-600-01 Fire Protection Engineering for Facilities

k. UFC 4-010-05 SCIF/SAPF Planning, Design, and Construction

l. UFC 4-021-02 Electronic Security Systems

m. UFC 4-610-01, Administrative Facilities </REV>



01 EXTRA SMALL BRIGADE FIRST FLOOR PLAN

1/8" = 1'-0"

8 6 4 2 0 8 16

GENERAL NOTES

1. OVERALL BUILDING DIMENSIONS AND VALUES FOR THE GROSS BUILDING AREAS INDICATED ARE FOR THE STANDARD LAYOUTS SHOWN AND ARE PREDICATED ON AN ASSUMED EXTERIOR WALL THICKNESS OF 20-INCHES. IT IS UNDERSTOOD THAT THE ACTUAL GROSS BUILDING AREA WILL VARY DEPENDING ON THE WALL SYSTEM / MATERIALS SELECTED FOR A SPECIFIC PROJECT. A REDUCED OVERALL GROSS AREA IS PERMISSIBLE IF ALL NET PROGRAM REQUIREMENTS AND ADJACENCIES ARE SATISFIED, BUT IN NO CASE MAY THE MAXIMUM GROSS AREA FOR THE FACILITY BE EXCEEDED. REFER TO STANDARD DESIGN PART 1 FOR MAXIMUM GROSS AREAS PERMISSIBLE.

2. FLOOR PLAN INDICATES THE ARMY STANDARD IN SCHEMATIC FORM. THE DESIGNER-OF-RECORD (DOR) IS ALLOWED TO MAKE ADJUSTMENTS FOR EXTERIOR FACADE / ARCHITECTURAL THEME, AND/OR TO ACCOMMODATE SPECIFIC BUILDING ENGINEERING SYSTEMS (STRUCTURAL, MECHANICAL, ELECTRICAL, SUSTAINABILITY, FIRE PROTECTION, ETC.). THESE ADJUSTMENTS WILL BE EVALUATED BY THE CENTER OF STANDARDIZATION (COS) DURING ITS COMPLIANCE REVIEW(S).

AREA NOTES

	AREA AS SHOWN	ALLOWABLE
FIRST FLOOR:	12,440 SQ FT*	
SECOND FLOOR:	7,940 SQ FT	
TOTAL:	20,380 SQ FT*	**20,400 SQ FT**

** PREDICATED ON AN ASSUMED EXTERIOR WALL THICKNESS OF 20-INCHES.*

ABBREVIATIONS

P	PLOTTER
S	SAFE
SH	SHREDDER

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE

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CHECKED BY: J.S.	CONTRACT NO.:
SUBMITTED BY: J.S.	CATEGORY CODE:
SIZE: ANSI D	FILE NAME:

U.S. ARMY CORPS OF ENGINEERS

BRIGADE HEADQUARTERS (BDE HQ)

EXTRA SMALL BDQ HQ - FIRST FLOOR PLAN

SHEET ID

01

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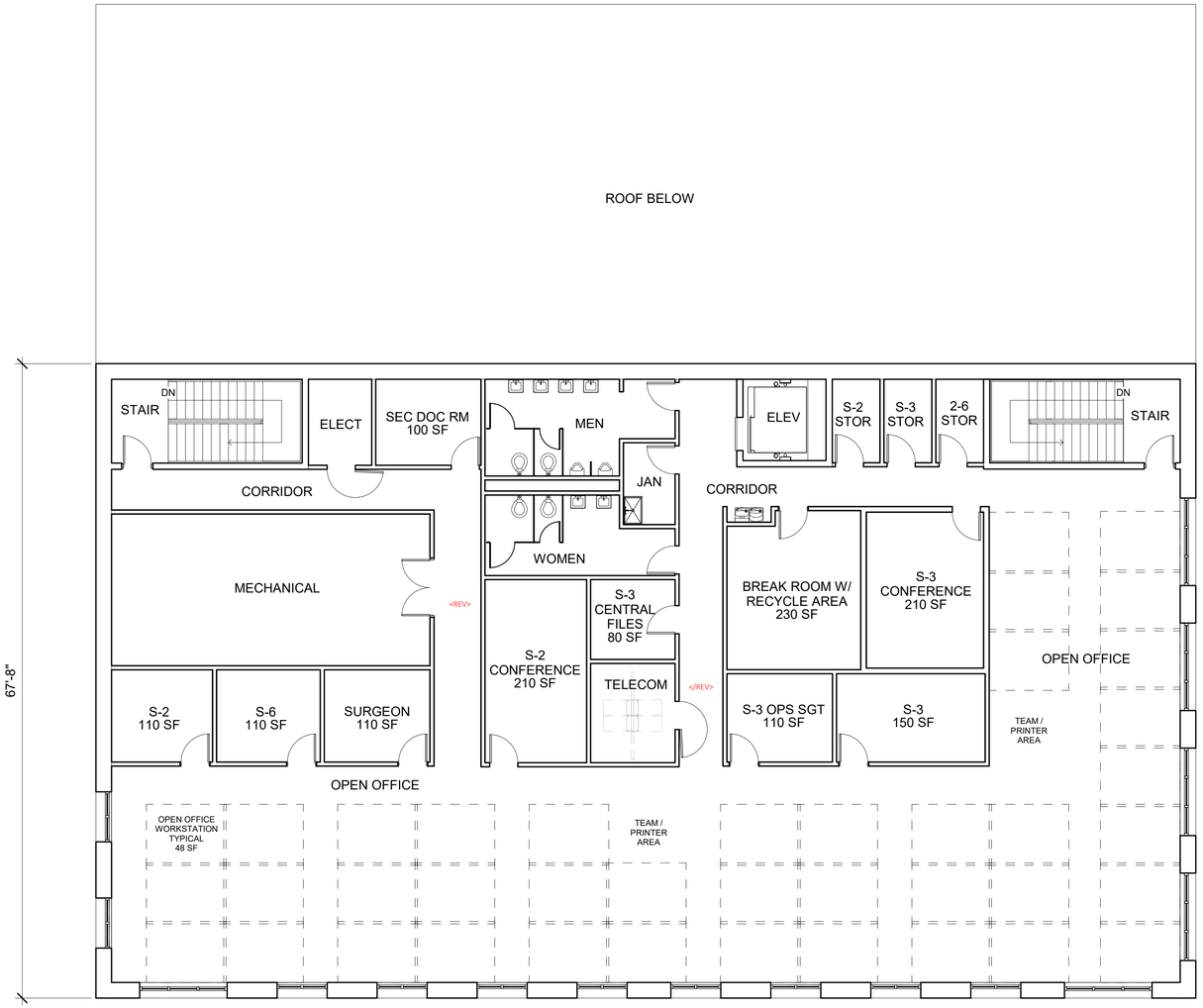

01 EXTRA SMALL BRIGADE SECOND FLOOR PLAN

1/8" = 1'-0"

8 6 4 2 0 8 16

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE

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U.S. ARMY CORPS OF ENGINEERS

BRIGADE HEADQUARTERS (BDE HQ)

EXTRA SMALL BDE HQ - SECOND FLOOR PLAN

SHEET ID

02

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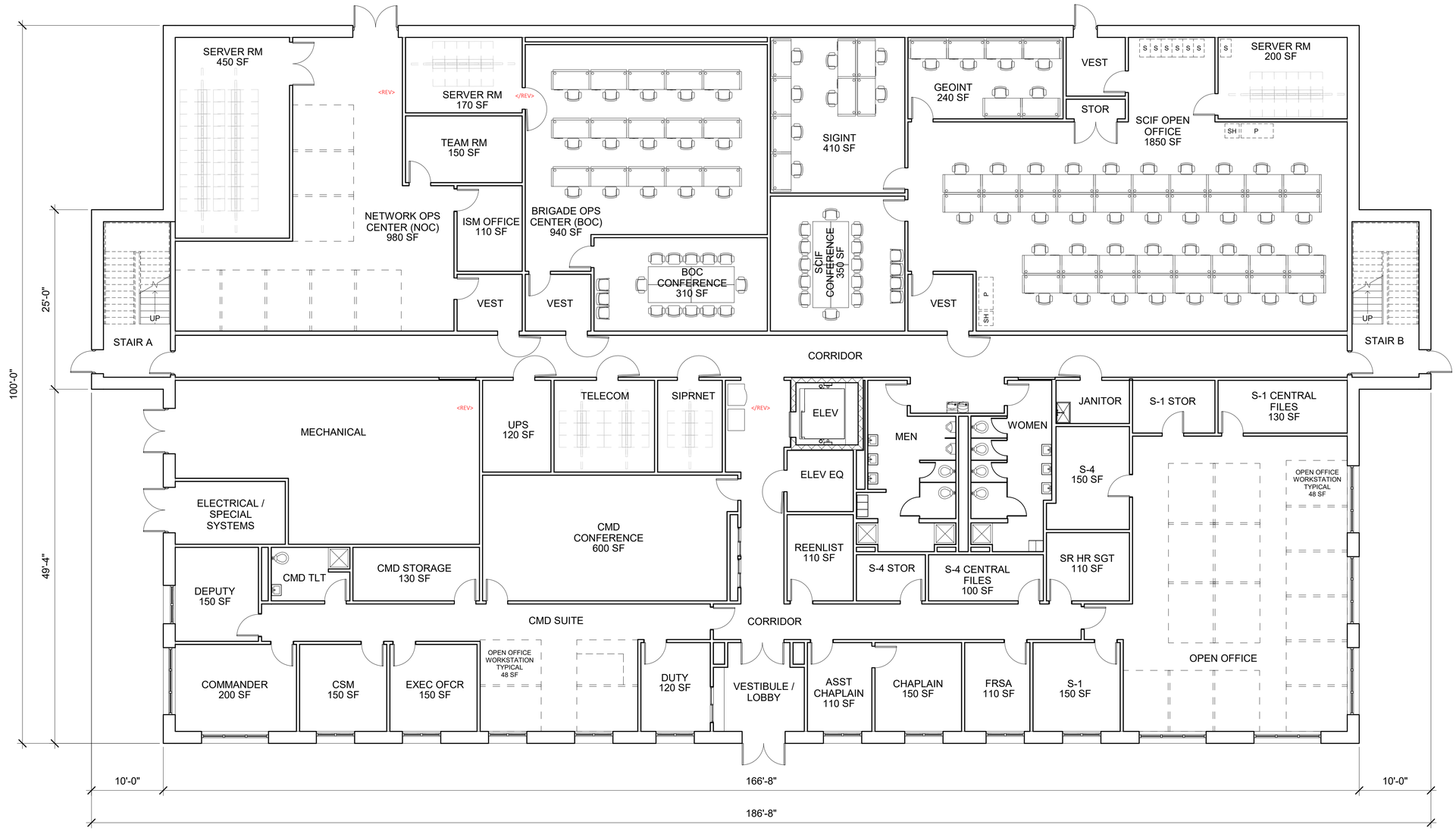

01 SMALL BRIGADE FIRST FLOOR PLAN

1/8" = 1'-0"

GENERAL NOTES

1. OVERALL BUILDING DIMENSIONS AND VALUES FOR THE GROSS BUILDING AREAS INDICATED ARE FOR THE STANDARD LAYOUTS SHOWN AND ARE PREDICATED ON AN ASSUMED EXTERIOR WALL THICKNESS OF 20-INCHES. IT IS UNDERSTOOD THAT THE ACTUAL GROSS BUILDING AREA WILL VARY DEPENDING ON THE WALL SYSTEM / MATERIALS SELECTED FOR A SPECIFIC PROJECT. A REDUCED OVERALL GROSS AREA IS PERMISSIBLE IF ALL NET PROGRAM REQUIREMENTS AND ADJACENCIES ARE SATISFIED, BUT IN NO CASE MAY THE MAXIMUM GROSS AREA FOR THE FACILITY BE EXCEEDED. REFER TO STANDARD DESIGN PART 1 FOR MAXIMUM GROSS AREAS PERMISSIBLE.

2. FLOOR PLAN INDICATES THE ARMY STANDARD IN SCHEMATIC FORM. THE DESIGNER-OF-RECORD (DOR) IS ALLOWED TO MAKE ADJUSTMENTS FOR EXTERIOR FACADE / ARCHITECTURAL THEME, AND/OR TO ACCOMMODATE SPECIFIC BUILDING ENGINEERING SYSTEMS (STRUCTURAL, MECHANICAL, ELECTRICAL, SUSTAINABILITY, FIRE PROTECTION, ETC.). THESE ADJUSTMENTS WILL BE EVALUATED BY THE CENTER OF STANDARDIZATION (COS) DURING ITS COMPLIANCE REVIEW(S).

AREA NOTES

	AREA AS SHOWN	ALLOWABLE
FIRST FLOOR:	17,167 SQ FT*	
SECOND FLOOR:	17,167 SQ FT	
TOTAL:	34,334 SQ FT*	**34,400 SQ FT**

** PREDICATED ON AN ASSUMED EXTERIOR WALL THICKNESS OF 20-INCHES.*

ABBREVIATIONS

P	PLOTTER
S	SAFE
SH	SHREDDER

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE

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U.S. ARMY CORPS OF ENGINEERS

BRIGADE HEADQUARTERS (BDE HQ)

SMALL BDE HQ - FIRST FLOOR PLAN

SHEET ID
03

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01 SMALL BRIGADE SECOND FLOOR PLAN

1/8" = 1'-0"

8 6 4 2 0 8 16

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE

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U.S. ARMY CORPS OF ENGINEERS

BRIGADE HEADQUARTERS (BDE HQ)

SMALL BDE HQ - SECOND FLOOR PLAN

SHEET ID

04

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01 MEDIUM BRIGADE FIRST FLOOR PLAN

1/8" = 1'-0"

8 6 4 2 0 8 16

GENERAL NOTES

1. OVERALL BUILDING DIMENSIONS AND VALUES FOR THE GROSS BUILDING AREAS INDICATED ARE FOR THE STANDARD LAYOUTS SHOWN AND ARE PREDICATED ON AN ASSUMED EXTERIOR WALL THICKNESS OF 20-INCHES. IT IS UNDERSTOOD THAT THE ACTUAL GROSS BUILDING AREA WILL VARY DEPENDING ON THE WALL SYSTEM / MATERIALS SELECTED FOR A SPECIFIC PROJECT. A REDUCED OVERALL GROSS AREA IS PERMISSIBLE IF ALL NET PROGRAM REQUIREMENTS AND ADJACENCIES ARE SATISFIED, BUT IN NO CASE MAY THE MAXIMUM GROSS AREA FOR THE FACILITY BE EXCEEDED. REFER TO STANDARD DESIGN PART 1 FOR MAXIMUM GROSS AREAS PERMISSIBLE.

2. FLOOR PLAN INDICATES THE ARMY STANDARD IN SCHEMATIC FORM. THE DESIGNER-OF-RECORD (DOR) IS ALLOWED TO MAKE ADJUSTMENTS FOR EXTERIOR FACADE / ARCHITECTURAL THEME, AND/OR TO ACCOMMODATE SPECIFIC BUILDING ENGINEERING SYSTEMS (STRUCTURAL, MECHANICAL, ELECTRICAL, SUSTAINABILITY, FIRE PROTECTION, ETC.). THESE ADJUSTMENTS WILL BE EVALUATED BY THE CENTER OF STANDARDIZATION (COS) DURING ITS COMPLIANCE REVIEW(S).

AREA NOTES

	AREA AS SHOWN	ALLOWABLE
FIRST FLOOR:	18,748 SQ FT*	
SECOND FLOOR:	18,748 SQ FT	
TOTAL:	37,496 SQ FT*	**37,700 SQ FT**

** PREDICATED ON AN ASSUMED EXTERIOR WALL THICKNESS OF 20-INCHES.*

ABBREVIATIONS

P	PLOTTER
S	SAFE
SH	SHREDDER

US Army Corps of Engineers ®

DESCRIPTION / DATE / MARK

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U.S. ARMY CORPS OF ENGINEERS

MEDIUM BRIGADE HEADQUARTERS (BDE HQ)

MEDIUM BDE HQ - FIRST FLOOR PLAN

SHEET ID 05

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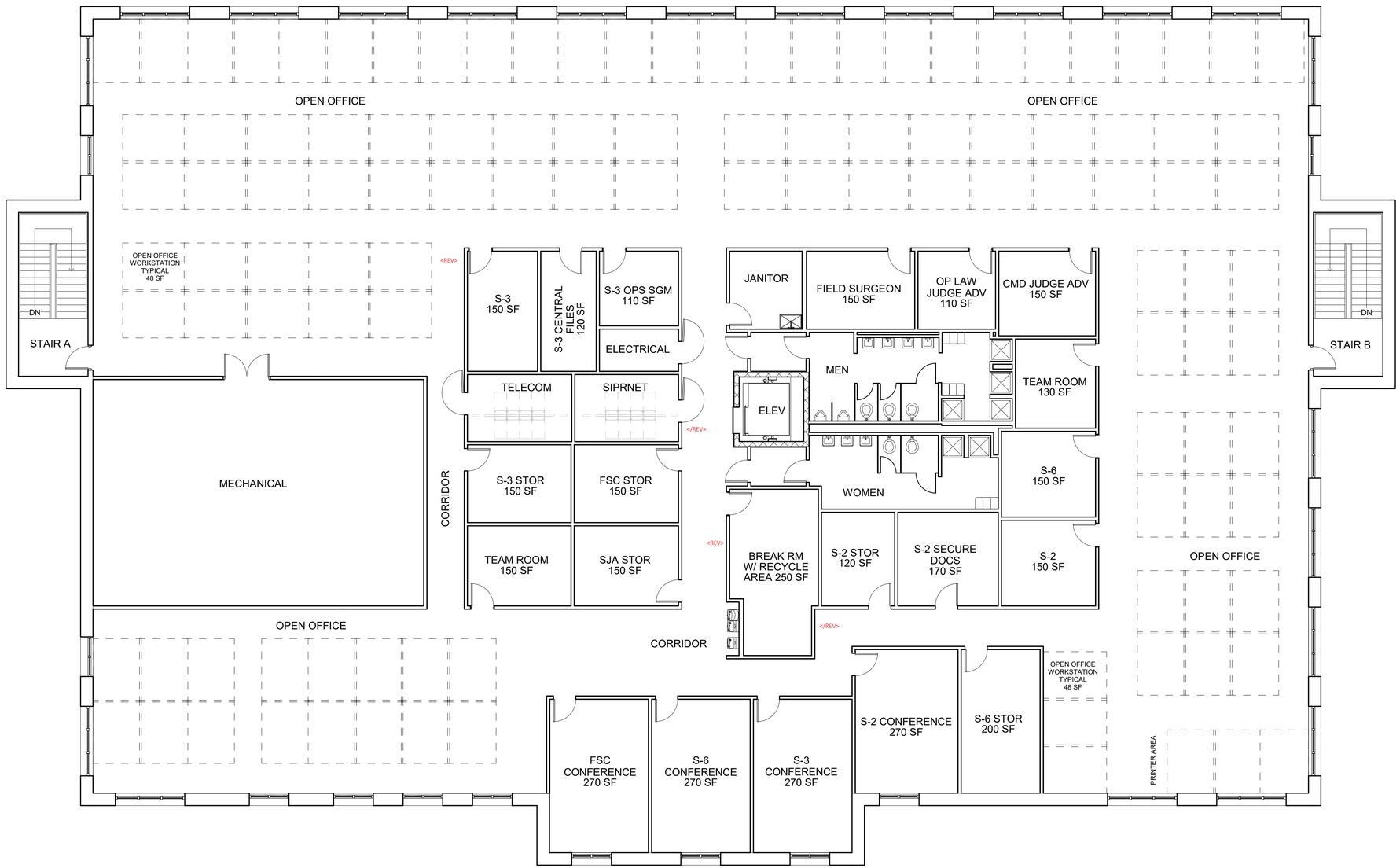

01 MEDIUM BRIGADE SECOND FLOOR PLAN

1/8" = 1'-0"

8 6 4 2 0 8 16

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE

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U.S. ARMY CORPS OF ENGINEERS

MEDIUM BRIGADE HEADQUARTERS (BDE HQ)

MEDIUM BDE HQ - SECOND FLOOR PLAN

SHEET ID

06

Plot Date: 6/8/2026 9:02:34 AM

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01 LARGE BRIGADE FIRST FLOOR PLAN

1/8" = 1'-0"

GENERAL NOTES

1. OVERALL BUILDING DIMENSIONS AND VALUES FOR THE GROSS BUILDING AREAS INDICATED ARE FOR THE STANDARD LAYOUTS SHOWN AND ARE PREDICATED ON AN ASSUMED EXTERIOR WALL THICKNESS OF 20-INCHES. IT IS UNDERSTOOD THAT THE ACTUAL GROSS BUILDING AREA WILL VARY DEPENDING ON THE WALL SYSTEM / MATERIALS SELECTED FOR A SPECIFIC PROJECT. A REDUCED OVERALL GROSS AREA IS PERMISSIBLE IF ALL NET PROGRAM REQUIREMENTS AND ADJACENCIES ARE SATISFIED, BUT IN NO CASE MAY THE MAXIMUM GROSS AREA FOR THE FACILITY BE EXCEEDED. REFER TO STANDARD DESIGN PART 1 FOR MAXIMUM GROSS AREAS PERMISSIBLE.

2. FLOOR PLAN INDICATES THE ARMY STANDARD IN SCHEMATIC FORM. THE DESIGNER-OF-RECORD (DOR) IS ALLOWED TO MAKE ADJUSTMENTS FOR EXTERIOR FACADE / ARCHITECTURAL THEME, AND/OR TO ACCOMMODATE SPECIFIC BUILDING ENGINEERING SYSTEMS (STRUCTURAL, MECHANICAL, ELECTRICAL, SUSTAINABILITY, FIRE PROTECTION, ETC.). THESE ADJUSTMENTS WILL BE EVALUATED BY THE CENTER OF STANDARDIZATION (COS) DURING ITS COMPLIANCE REVIEW(S).

AREA NOTES

	AREA AS SHOWN	ALLOWABLE
FIRST FLOOR:	21,396 SQ FT*	
SECOND FLOOR:	21,396 SQ FT	
TOTAL:	42,792 SQ FT*	**43,400 SQ FT**

** PREDICATED ON AN ASSUMED EXTERIOR WALL THICKNESS OF 20-INCHES.*

ABBREVIATIONS

P	PLOTTER
S	SAFE
SH	SHREDDER

US Army Corps of Engineers ®

DESCRIPTION / DATE / MARK

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U.S. ARMY CORPS OF ENGINEERS

LARGE BRIGADE HEADQUARTERS (BDE HQ)

LARGE BDE HQ - FIRST FLOOR PLAN

SHEET ID 07

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01 LARGE BRIGADE SECOND FLOOR PLAN

1/8" = 1'-0"

8 6 4 2 0 8 16

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE

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CHECKED BY: J.S.	CONTRACT NO.: -
SUBMITTED BY: J.S.	CATEGORY CODE: -
SIZE: ANSI D	FILE NAME: -

U.S. ARMY CORPS OF ENGINEERS

LARGE BRIGADE HEADQUARTERS (BDE HQ)

LARGE BDE HQ - SECOND FLOOR PLAN

SHEET ID

08

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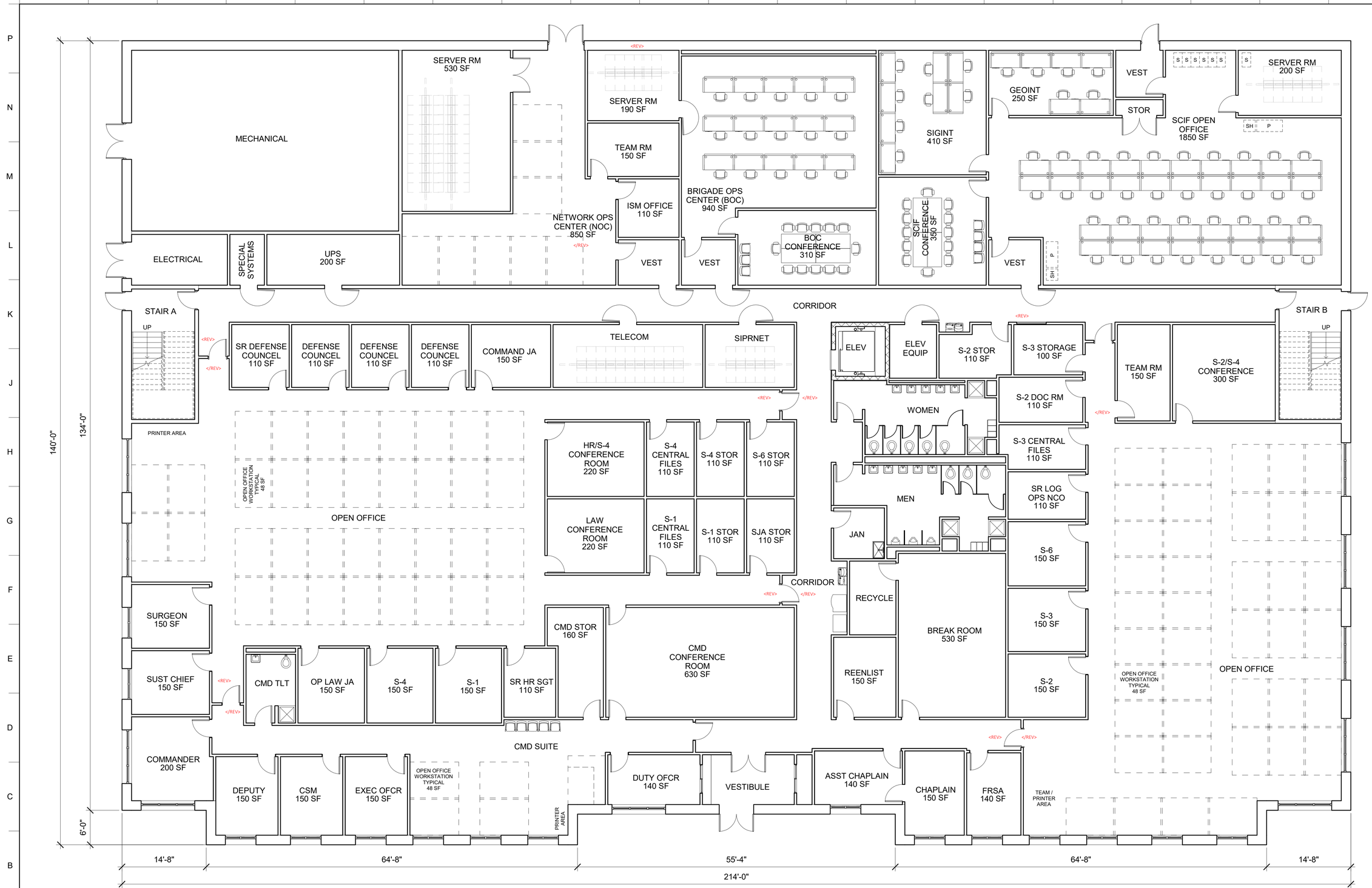

01 EXTRA LARGE BRIGADE FIRST FLOOR PLAN

1/8" = 1'-0"

(SEE SHEET 10 FOR GENERAL NOTES, AREA NOTES, AND ABBREVIATIONS)

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE

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U.S. ARMY CORPS OF ENGINEERS

EXTRA LARGE BRIGADE HEADQUARTERS (BDE HQ)

EXTRA LARGE BDE HQ - FIRST FLOOR PLAN

SHEET ID 09

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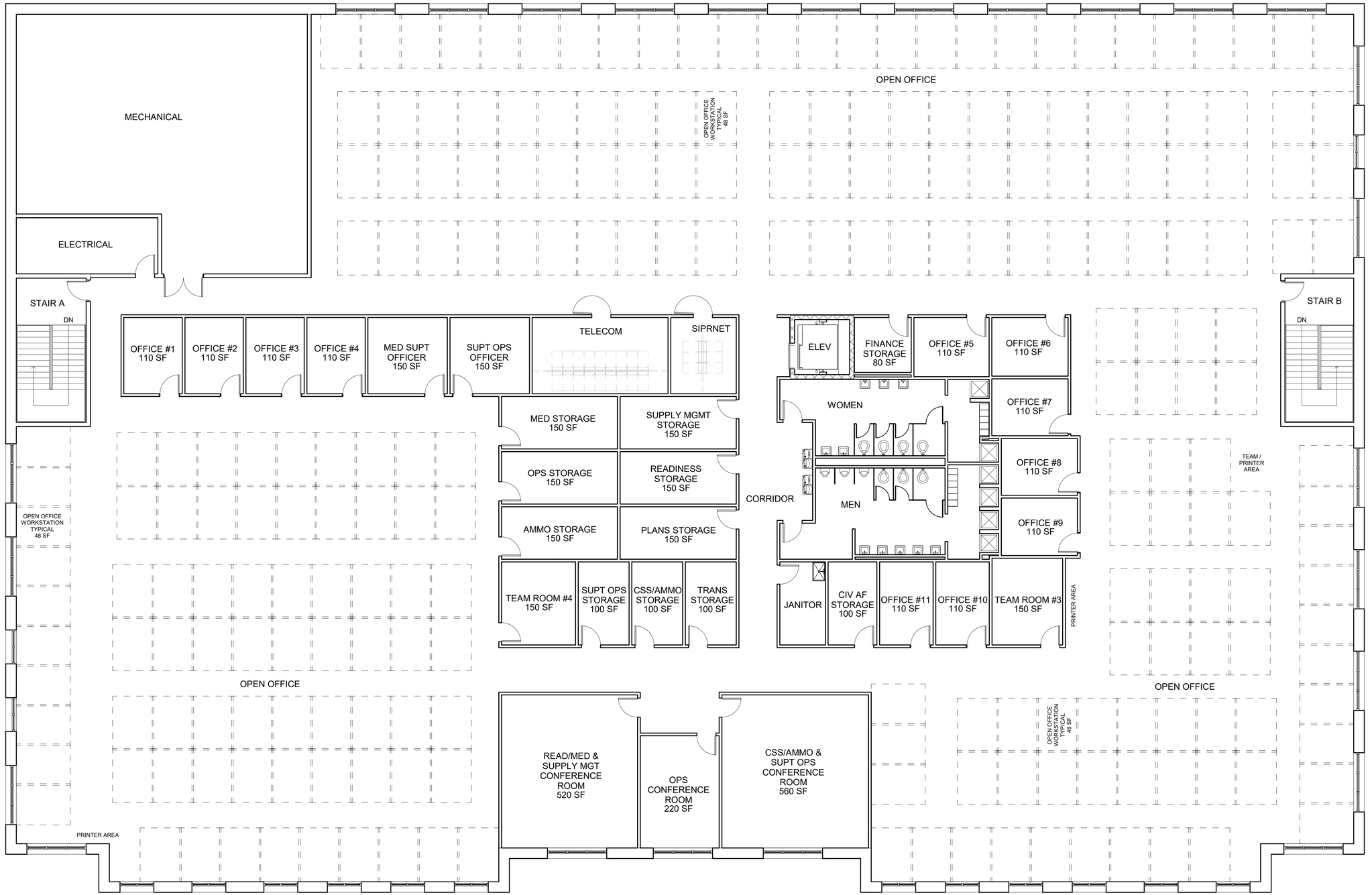

01 EXTRA LARGE BRIGADE SECOND FLOOR PLAN

1/8" = 1'-0"

8 6 4 2 0 8 16

GENERAL NOTES

1. OVERALL BUILDING DIMENSIONS AND VALUES FOR THE GROSS BUILDING AREAS INDICATED ARE FOR THE STANDARD LAYOUTS SHOWN AND ARE PREDICATED ON AN ASSUMED EXTERIOR WALL THICKNESS OF 20-INCHES. IT IS UNDERSTOOD THAT THE ACTUAL GROSS BUILDING AREA WILL VARY DEPENDING ON THE WALL SYSTEM / MATERIALS SELECTED FOR A SPECIFIC PROJECT. A REDUCED OVERALL GROSS AREA IS PERMISSIBLE IF ALL NET PROGRAM REQUIREMENTS AND ADJACENCIES ARE SATISFIED, BUT IN NO CASE MAY THE MAXIMUM GROSS AREA FOR THE FACILITY BE EXCEEDED. REFER TO STANDARD DESIGN PART 1 FOR MAXIMUM GROSS AREAS PERMISSIBLE.

2. FLOOR PLAN INDICATES THE ARMY STANDARD IN SCHEMATIC FORM. THE DESIGNER-OF-RECORD (DOR) IS ALLOWED TO MAKE ADJUSTMENTS FOR EXTERIOR FACADE / ARCHITECTURAL THEME, AND/OR TO ACCOMMODATE SPECIFIC BUILDING ENGINEERING SYSTEMS (STRUCTURAL, MECHANICAL, ELECTRICAL, SUSTAINABILITY, FIRE PROTECTION, ETC.). THESE ADJUSTMENTS WILL BE EVALUATED BY THE CENTER OF STANDARDIZATION (COS) DURING ITS COMPLIANCE REVIEW(S).

AREA NOTES

	AREA AS SHOWN	ALLOWABLE
FIRST FLOOR:	29,489 SQ FT*	
SECOND FLOOR:	29,489 SQ FT	
TOTAL:	58,978 SQ FT*	**59,200 SQ FT**

** PREDICATED ON AN ASSUMED EXTERIOR WALL THICKNESS OF 20-INCHES.*

ABBREVIATIONS

P	PLOTTER
S	SAFE
SH	SHREDDER

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE

DESIGN BY: -	ISSUE DATE: JUNE 2026
DRAWN BY: S.M.	SOLICITATION NO.: -
CHECKED BY: J.S.	CONTRACT NO.: -
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SIZE: ANSI D	FILE NAME: -

U.S. ARMY CORPS OF ENGINEERS

EXTRA LARGE BRIGADE HEADQUARTERS (BDE HQ)

EXTRA LARGE BDE HQ - SECOND FLOOR PLAN

SHEET ID

10

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01 CONSOLIDATED HEADQUARTERS FIRST FLOOR PLAN

1/16" = 1'-0"

16 12 8 4 0 16 32

GENERAL NOTES

1. OVERALL BUILDING DIMENSIONS AND VALUES FOR THE GROSS BUILDING AREAS INDICATED ARE FOR THE STANDARD LAYOUTS SHOWN AND ARE PREDICATED ON AN ASSUMED EXTERIOR WALL THICKNESS OF 20-INCHES. IT IS UNDERSTOOD THAT THE ACTUAL GROSS BUILDING AREA WILL VARY DEPENDING ON THE WALL SYSTEM / MATERIALS SELECTED FOR A SPECIFIC PROJECT. A REDUCED OVERALL GROSS AREA IS PERMISSIBLE IF ALL NET PROGRAM REQUIREMENTS AND ADJACENCIES ARE SATISFIED, BUT IN NO CASE MAY THE MAXIMUM GROSS AREA FOR THE FACILITY BE EXCEEDED. REFER TO STANDARD DESIGN PART 1 FOR MAXIMUM GROSS AREAS PERMISSIBLE.

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AREA NOTES

	AREA AS SHOWN	ALLOWABLE
FIRST FLOOR:	62,371 SQ FT	
SECOND FLOOR:	48,361 SQ FT	
THIRD FLOOR:	28,139 SQ FT	
TOTAL:	138,871 SQ FT*	**138,900 SQ FT**

** PREDICATED ON AN ASSUMED EXTERIOR WALL THICKNESS OF 20-INCHES.*

ABBREVIATIONS

P	PLOTTER
S	SAFE
SH	SHREDDER

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE

ISSUE DATE:	JUNE 2026
SOLICITATION NO.:	
CONTRACT NO.:	
CATEGORY CODE:	
DESIGN BY:	-
DRAWN BY:	S.M.
CHECKED BY:	J.S.
SUBMITTED BY:	J.S.
SIZE:	ANSI D
FILE NAME:	

U.S. ARMY CORPS OF ENGINEERS

COMBINED BATTALION / BRIGADE HEADQUARTERS (BN/BDE HQ)

COMBINED BN / BDE HQ - FIRST FLOOR PLAN

SHEET ID

11

File Path: P:\Revit Projects\Standards\BRIGADE HQ\WORKING REVISION\SDREV6.X-Combined BN BDE HQ-R22.rvt

Plot Date: 6/8/2026 11:11:52 AM

01 CONSOLIDATED HEADQUARTERS SECOND FLOOR PLAN

1/16" = 1'-0"

16 12 8 4 0 16 32

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE

DESIGN BY: -
DRAWN BY: -
S.M.
CHECKED BY: -
J.S.
SUBMITTED BY: -
J.S.
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ISSUE DATE: JUNE 2026
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CATEGORY CODE: -
FILE NAME: -

U.S. ARMY CORPS OF ENGINEERS

COMBINED BATTALION / BRIGADE HEADQUARTERS (BN/BDE HQ)

COMBINED BN / BDE HQ - SECOND FLOOR PLAN

SHEET ID

12

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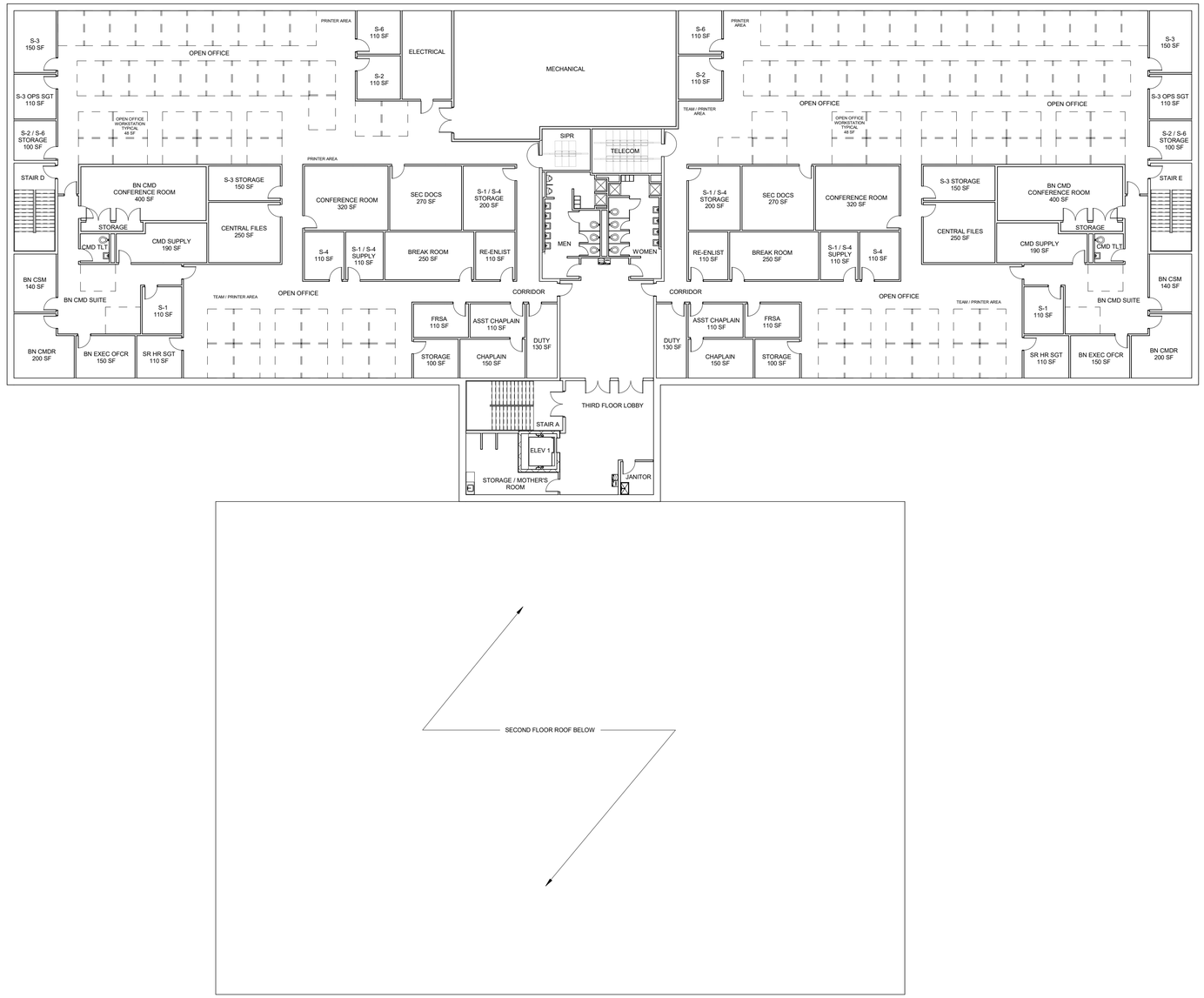

01 CONSOLIDATED HEADQUARTERS THIRD FLOOR PLAN

1/16" = 1'-0"

16 12 8 4 0 16 32

US Army Corps of Engineers ®

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SUBMITTED BY: J.S.	CATEGORY CODE:
SIZE: ANSI D	FILE NAME:

U.S. ARMY CORPS OF ENGINEERS

COMBINED BATTALION / BRIGADE HEADQUARTERS (BN/BDE HQ)

COMBINED BN / BDE HQ - THIRD FLOOR PLAN

SHEET ID

13

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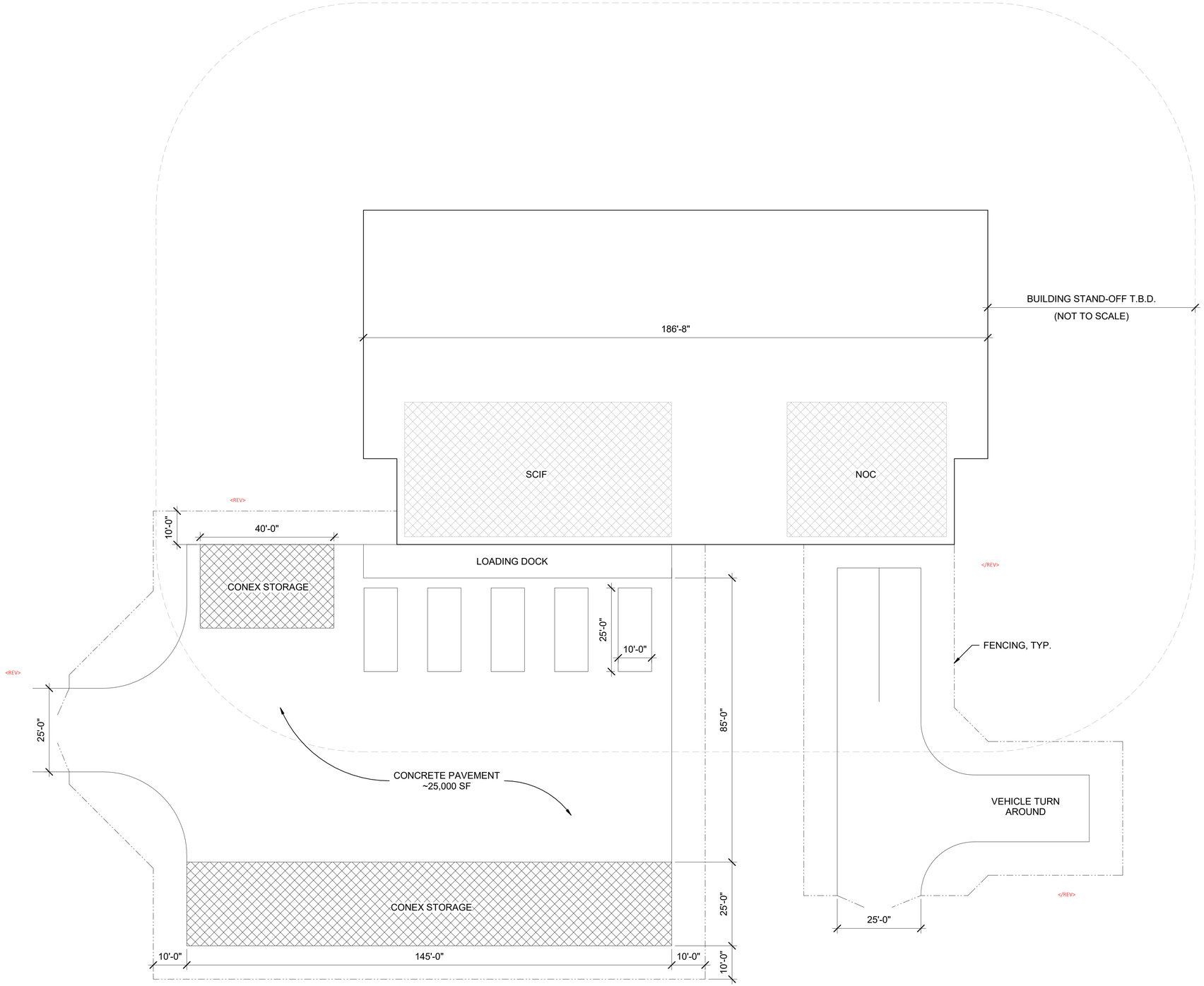

01 EXAMPLE LAYOUT FOR TACTICAL SCIF AND NOC VEHICLE AREAS

1/16" = 1'-0"

GENERAL NOTES

1. SITE PLAN INDICATES THE ARMY STANDARD FOR GENERIC TSVA VEHICLES / SYSTEMS IN SCHEMATIC FORM. THE DESIGNER-OF-RECORD (DOR) IS ALLOWED TO MAKE ADJUSTMENTS FOR EXTERIOR FACADE / ARCHITECTURAL THEME, ANTITERRORISM / FORCE PROTECTION REQUIREMENTS, AND/OR TO ACCOMMODATE SPECIFIC BUILDING ENGINEERING SYSTEMS (STRUCTURAL, MECHANICAL, ELECTRICAL, SUSTAINABILITY, FIRE PROTECTION, ETC.). DOR MUST COORDINATE ACTUAL VEHICLES AND SYSTEMS FIELDED WITH THE USER AND MAY ADJUST LAYOUTS WITHIN ARMY STANDARD AND STANDARD DESIGN LIMITS. THESE ADJUSTMENTS WILL BE EVALUATED BY THE CENTER OF STANDARDIZATION (COS) DURING ITS COMPLIANCE REVIEW(S).

2. DIMENSIONS SHOWN ON THE SITE PLAN ARE FOR REFERENCE ONLY. DO NOT SCALE DRAWINGS. COMPLY WITH REQUIREMENTS OF SHEET NOTES AND STANDARD DESIGN LANGUAGE.

SHEET NOTES

1. LAYOUT CAN BE ADJUSTED TO PROVIDE SOUTH / SOUTHWEST VIEW FOR REQUIRED ANTENNAS AND CONEX STORAGE. HOWEVER, THE LAYOUT MAY NOT ENCLOSE THE EMERGENCY EGRESS FROM BUILDING.

2. ASSUME VEHICLES WILL BE PARKED FOR PERIODS OF TIME VERSES DRIVEN OUT OF FENCED AREA DAILY.

3. PROVIDE A MINIMUM OF 30'-0" CLEAR GRADE (GRAVEL, GRASS, ETC.) OUTSIDE OF THE ENTIRE FENCE PERIMETER.

4. CIRCULATION PATHWAY AND CLEARANCES MUST BE DESIGNED BASED ON LARGEST PROJECT VEHICLE, BUT NO SMALLER THAN AN SU-30 "BOX TRUCK" 30'-0" X 8'-0".

6. COORDINATE LOADING DOCK RAMPS AND/OR STAIR ACCESS WITH BUILDING LAYOUT AND USER.

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U.S. ARMY CORPS OF ENGINEERS

BRIGADE HEADQUARTERS (BDE HQ)

EXAMPLE LAYOUT - TACTICAL SCIF & NOC VEHICLE AREAS

SHEET ID

14

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Plot Date: 6/24/2026 7:54:34 AM

01 SMALL BATTALION FIRST FLOOR PLAN

1/8" = 1'-0"

8 6 4 2 0 8 16

GENERAL NOTES

1. OVERALL BUILDING DIMENSIONS AND VALUES FOR THE GROSS BUILDING AREAS INDICATED ARE FOR THE STANDARD LAYOUTS SHOWN AND ARE PREDICATED ON AN ASSUMED EXTERIOR WALL THICKNESS OF 20-INCHES. IT IS UNDERSTOOD THAT THE ACTUAL GROSS BUILDING AREA WILL VARY DEPENDING ON THE WALL SYSTEM / MATERIALS SELECTED FOR A SPECIFIC PROJECT. A REDUCED OVERALL GROSS AREA IS PERMISSIBLE IF ALL NET PROGRAM REQUIREMENTS AND ADJACENCIES ARE SATISFIED, BUT IN NO CASE MAY THE MAXIMUM GROSS AREA FOR THE FACILITY BE EXCEEDED. REFER TO STANDARD DESIGN PART 1 FOR MAXIMUM GROSS AREAS PERMISSIBLE.

2. FLOOR PLAN INDICATES THE ARMY STANDARD IN SCHEMATIC FORM. THE DESIGNER-OF-RECORD (DOR) IS ALLOWED TO MAKE ADJUSTMENTS FOR EXTERIOR FACADE / ARCHITECTURAL THEME, AND/OR TO ACCOMMODATE SPECIFIC BUILDING ENGINEERING SYSTEMS (STRUCTURAL, MECHANICAL, ELECTRICAL, SUSTAINABILITY, FIRE PROTECTION, ETC.). THESE ADJUSTMENTS WILL BE EVALUATED BY THE CENTER OF STANDARDIZATION (COS) DURING ITS COMPLIANCE REVIEW(S).

AREA NOTES

	AREA AS SHOWN	ALLOWABLE
FIRST FLOOR:	9,845 SQ FT*	
SECOND FLOOR:	6,090 SQ FT	
TOTAL:	15,935 SQ FT*	**16,000 SQ FT**

** PREDICATED ON AN ASSUMED EXTERIOR WALL THICKNESS OF 20-INCHES.*

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE

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U.S. ARMY CORPS OF ENGINEERS SAVANNAH DISTRICT

BATTALION HEADQUARTERS (BN HQ)

SMALL BN HQ - FIRST FLOOR PLAN

SHEET ID

01

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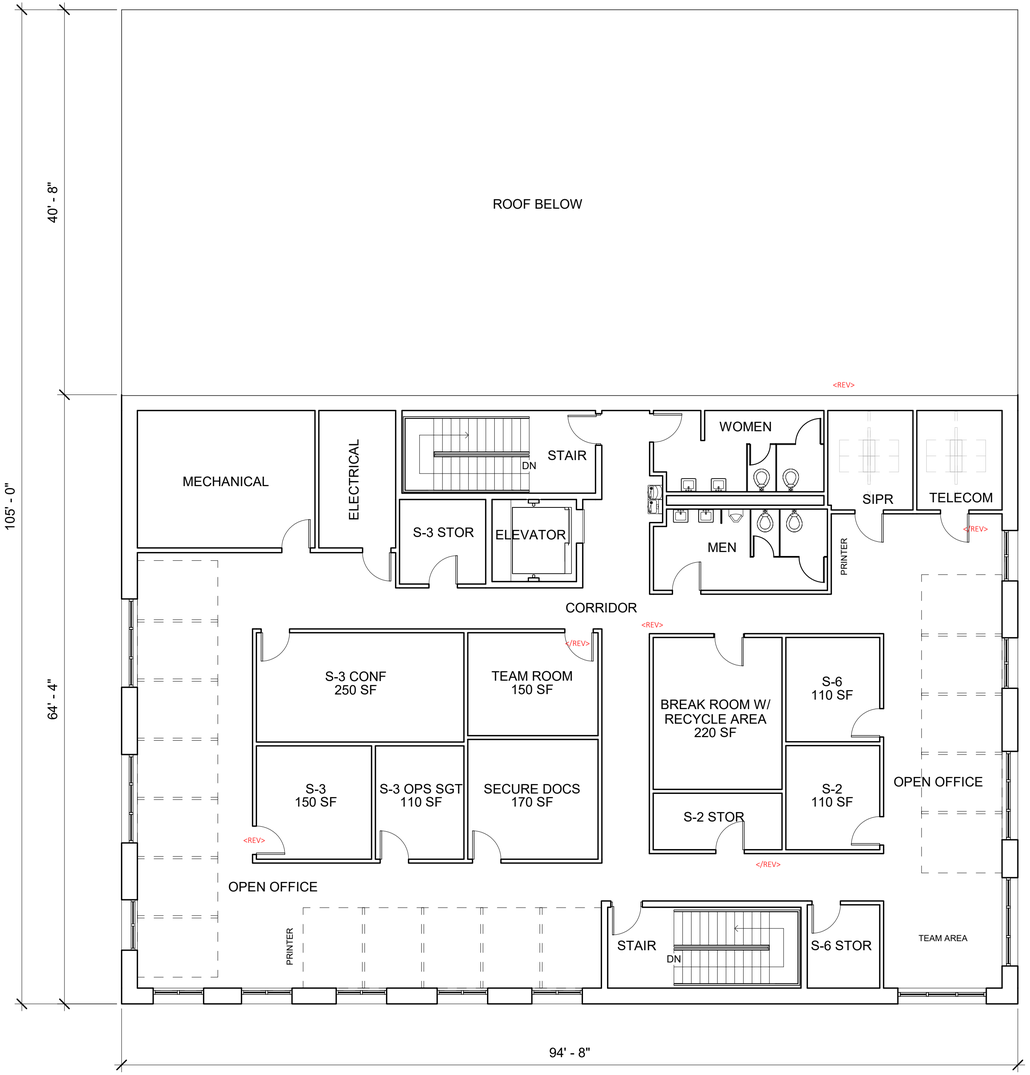

01 SMALL BATTALION SECOND FLOOR PLAN

1/8" = 1'-0"

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE

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SUBMITTED BY: J.S.	CATEGORY CODE:
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U.S. ARMY CORPS OF ENGINEERS
SAVANNAH DISTRICT

BATTALION HEADQUARTERS (BN HQ)

SMALL BN HQ - SECOND FLOOR PLAN

SHEET ID

02

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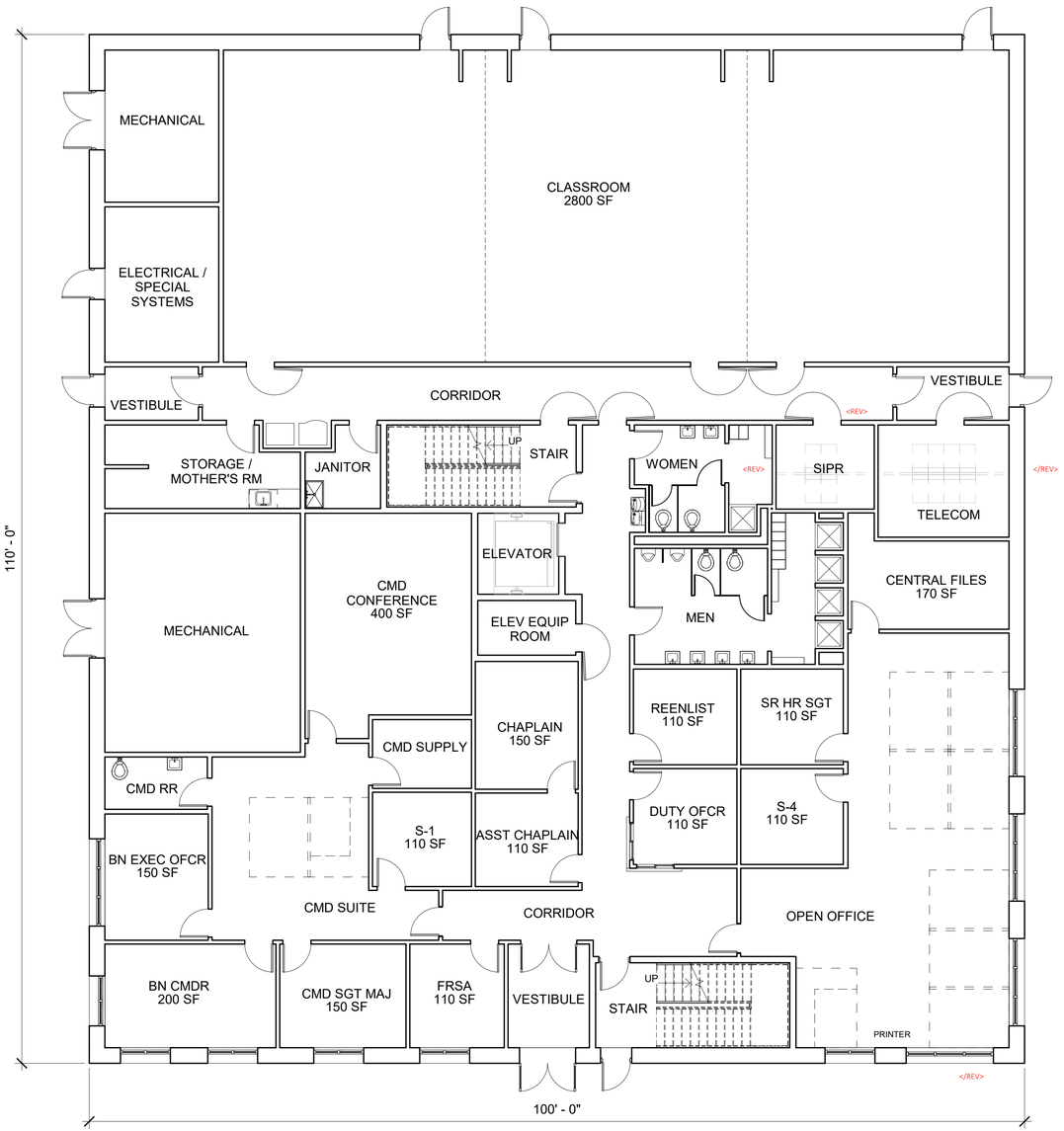

01 MEDIUM BATTALION FIRST FLOOR PLAN

1/8" = 1'-0"

8 6 4 2 0 8 16

GENERAL NOTES

1. OVERALL BUILDING DIMENSIONS AND VALUES FOR THE GROSS BUILDING AREAS INDICATED ARE FOR THE STANDARD LAYOUTS SHOWN AND ARE PREDICATED ON AN ASSUMED EXTERIOR WALL THICKNESS OF 20-INCHES. IT IS UNDERSTOOD THAT THE ACTUAL GROSS BUILDING AREA WILL VARY DEPENDING ON THE WALL SYSTEM / MATERIALS SELECTED FOR A SPECIFIC PROJECT. A REDUCED OVERALL GROSS AREA IS PERMISSIBLE IF ALL NET PROGRAM REQUIREMENTS AND ADJACENCIES ARE SATISFIED, BUT IN NO CASE MAY THE MAXIMUM GROSS AREA FOR THE FACILITY BE EXCEEDED. REFER TO STANDARD DESIGN PART 1 FOR MAXIMUM GROSS AREAS PERMISSIBLE.

2. FLOOR PLAN INDICATES THE ARMY STANDARD IN SCHEMATIC FORM. THE DESIGNER-OF-RECORD (DOR) IS ALLOWED TO MAKE ADJUSTMENTS FOR EXTERIOR FACADE / ARCHITECTURAL THEME, AND/OR TO ACCOMMODATE SPECIFIC BUILDING ENGINEERING SYSTEMS (STRUCTURAL, MECHANICAL, ELECTRICAL, SUSTAINABILITY, FIRE PROTECTION, ETC.). THESE ADJUSTMENTS WILL BE EVALUATED BY THE CENTER OF STANDARDIZATION (COS) DURING ITS COMPLIANCE REVIEW(S).

AREA NOTES

	AREA AS SHOWN	ALLOWABLE
FIRST FLOOR:	11,000 SQ FT*	
SECOND FLOOR:	6,992 SQ FT	
TOTAL:	18,025 SQ FT*	**18,600 SQ FT**

** PREDICATED ON AN ASSUMED EXTERIOR WALL THICKNESS OF 20-INCHES.*

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE

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U.S. ARMY CORPS OF ENGINEERS
SAVANNAH DISTRICT

BATTALION HEADQUARTERS (BN HQ)

MEDIUM BN HQ - FIRST FLOOR PLAN

SHEET ID

03

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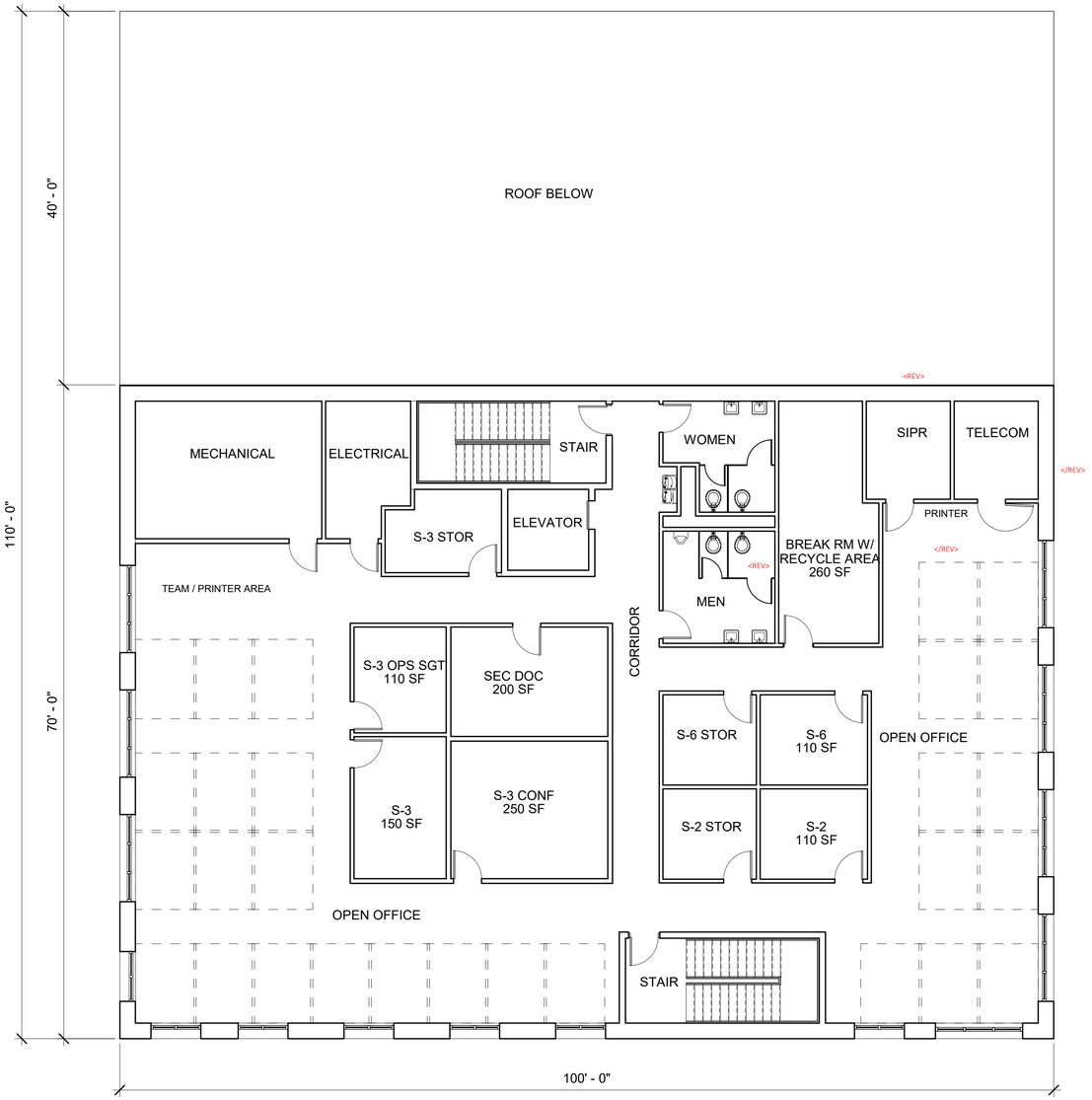

01 MEDIUM BATTALION SECOND FLOOR PLAN

1/8" = 1'-0"

8 6 4 2 0 8 16

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE

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U.S. ARMY CORPS OF ENGINEERS
SAVANNAH DISTRICT

BATTALION HEADQUARTERS (BN HQ)

MEDIUM BN HQ - SECOND FLOOR PLAN

SHEET ID

04

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Plot Date: 6/12/2026 1:37:53 PM

01 LARGE BATTALION FIRST FLOOR PLAN

1/8" = 1'-0"

8 6 4 2 0 8 16

GENERAL NOTES

1. OVERALL BUILDING DIMENSIONS AND VALUES FOR THE GROSS BUILDING AREAS INDICATED ARE FOR THE STANDARD LAYOUTS SHOWN AND ARE PREDICATED ON AN ASSUMED EXTERIOR WALL THICKNESS OF 20-INCHES. IT IS UNDERSTOOD THAT THE ACTUAL GROSS BUILDING AREA WILL VARY DEPENDING ON THE WALL SYSTEM / MATERIALS SELECTED FOR A SPECIFIC PROJECT. A REDUCED OVERALL GROSS AREA IS PERMISSIBLE IF ALL NET PROGRAM REQUIREMENTS AND ADJACENCIES ARE SATISFIED, BUT IN NO CASE MAY THE MAXIMUM GROSS AREA FOR THE FACILITY BE EXCEEDED. REFER TO STANDARD DESIGN PART 1 FOR MAXIMUM GROSS AREAS PERMISSIBLE.

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AREA NOTES

	AREA AS SHOWN	ALLOWABLE
FIRST FLOOR:	12,610 SQ FT*	
SECOND FLOOR:	7,766 SQ FT	
TOTAL:	20,376 SQ FT*	**20,400 SQ FT**

** PREDICATED ON AN ASSUMED EXTERIOR WALL THICKNESS OF 20-INCHES.*

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MARK	DESCRIPTION	DATE

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SIZE: ANSI D	FILE NAME:

U.S. ARMY CORPS OF ENGINEERS SAVANNAH DISTRICT

BATTALION HEADQUARTERS (BN HQ)

LARGE BN HQ - FIRST FLOOR PLAN

SHEET ID

05

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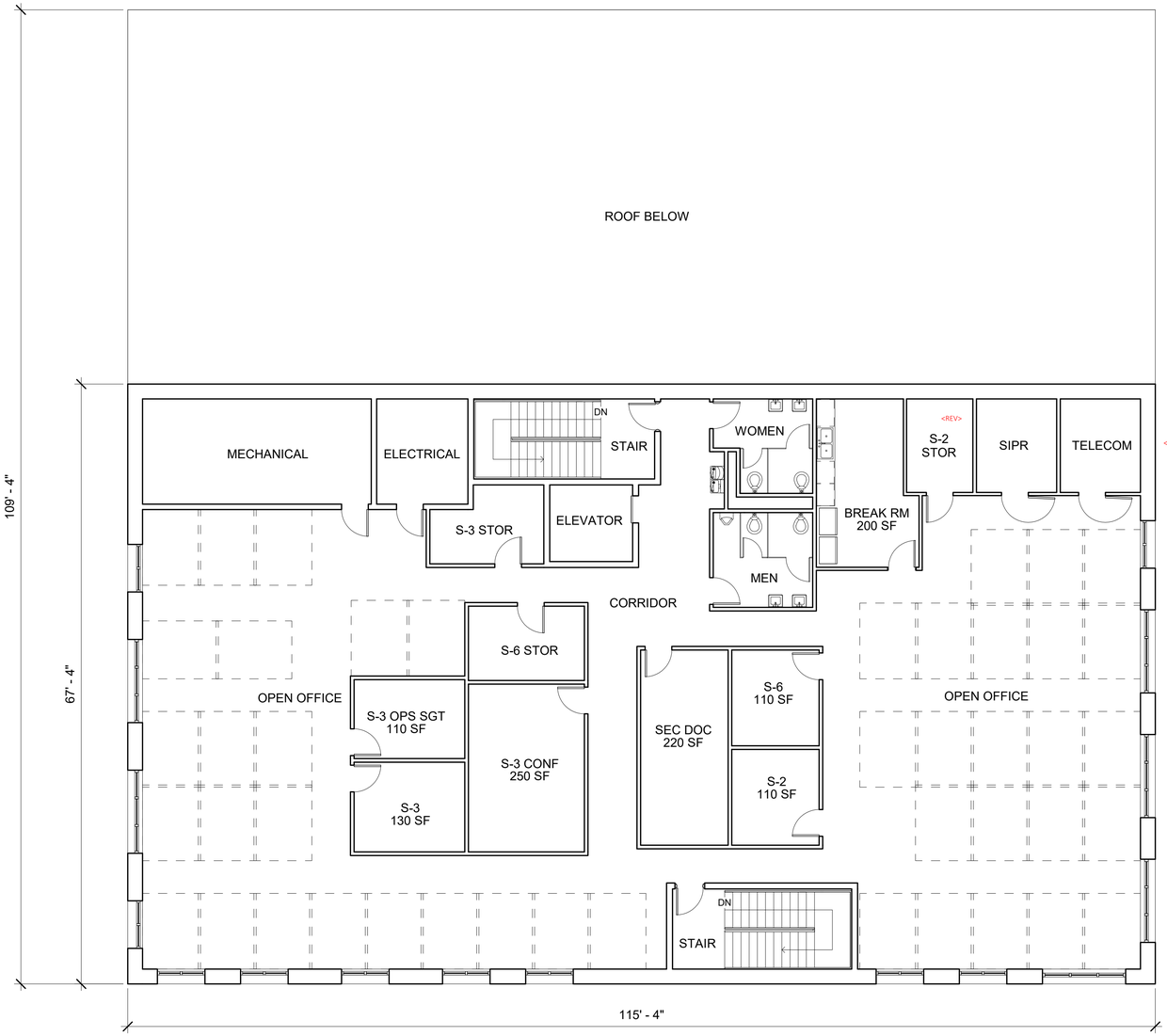

01 LARGE BATTALION SECOND FLOOR PLAN

1/8" = 1'-0"

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE

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U.S. ARMY CORPS OF ENGINEERS
SAVANNAH DISTRICT

BATTALION HEADQUARTERS (BN HQ)

LARGE BN HQ - SECOND FLOOR PLAN

SHEET ID

06

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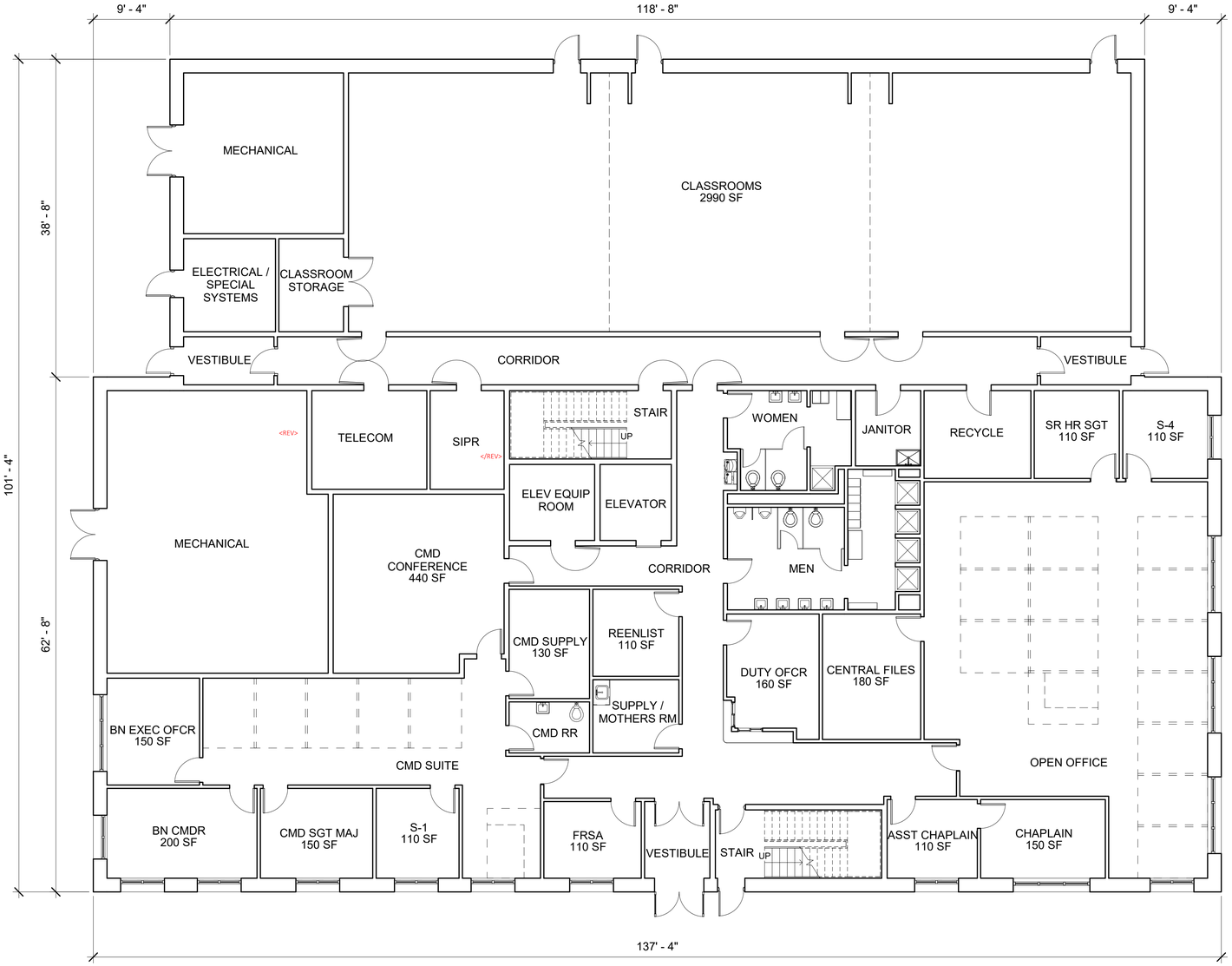

01 EXTRA LARGE BATTALION FIRST FLOOR PLAN

1/8" = 1'-0"

8 6 4 2 0 8 16

GENERAL NOTES

1. OVERALL BUILDING DIMENSIONS AND VALUES FOR THE GROSS BUILDING AREAS INDICATED ARE FOR THE STANDARD LAYOUTS SHOWN AND ARE PREDICATED ON AN ASSUMED EXTERIOR WALL THICKNESS OF 20-INCHES. IT IS UNDERSTOOD THAT THE ACTUAL GROSS BUILDING AREA WILL VARY DEPENDING ON THE WALL SYSTEM / MATERIALS SELECTED FOR A SPECIFIC PROJECT. A REDUCED OVERALL GROSS AREA IS PERMISSIBLE IF ALL NET PROGRAM REQUIREMENTS AND ADJACENCIES ARE SATISFIED, BUT IN NO CASE MAY THE MAXIMUM GROSS AREA FOR THE FACILITY BE EXCEEDED. REFER TO STANDARD DESIGN PART 1 FOR MAXIMUM GROSS AREAS PERMISSIBLE.

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AREA NOTES

	AREA AS SHOWN	ALLOWABLE
FIRST FLOOR:	13,182 SQ FT*	
SECOND FLOOR:	8,606 SQ FT	
TOTAL:	21,788 SQ FT*	**22,600 SQ FT**

** PREDICATED ON AN ASSUMED EXTERIOR WALL THICKNESS OF 20-INCHES.*

US Army Corps of Engineers ®

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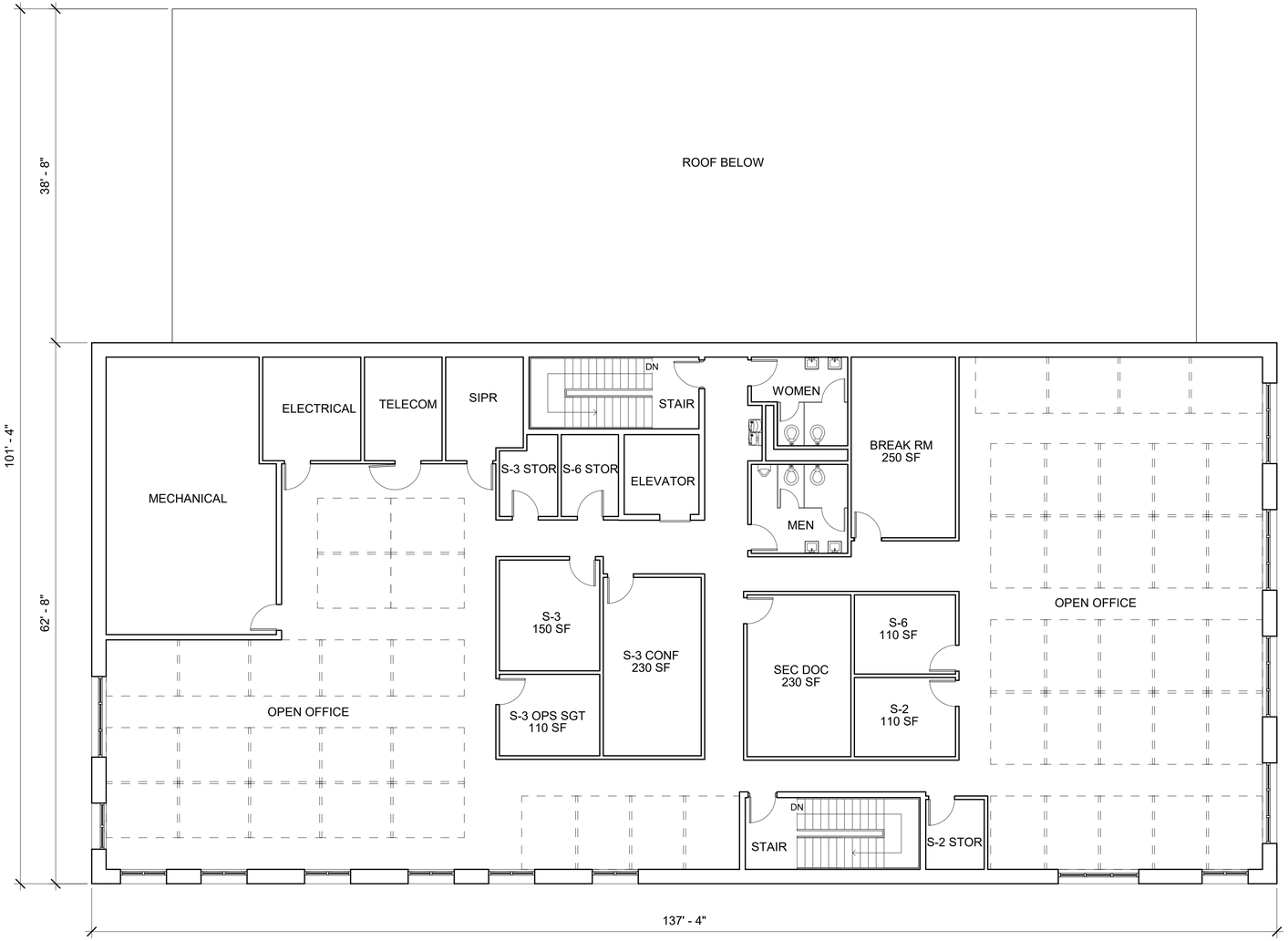
U.S. ARMY CORPS OF ENGINEERS
SAVANNAH DISTRICT

BATTALION HEADQUARTERS (BN HQ)

EXTRA-LARGE BN HQ - FIRST FLOOR PLAN

SHEET ID

07



01 EXTRA LARGE BATTALION SECOND FLOOR PLAN

1/8" = 1'-0"

8 6 4 2 0 8 16

US Army Corps of Engineers ®

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U.S. ARMY CORPS OF ENGINEERS
SAVANNAH DISTRICT

BATTALION HEADQUARTERS (BN HQ)

EXTRA-LARGE BN HQ - SECOND FLOOR PLAN

SHEET ID

08