STANDARD DESIGN

AIR FORCE

LARGE AIRFRAME

FLIGHT SIMULATOR

1 and 2 BAY FACILITY

TABLE OF CONTENTS

CHAPTER 1 INTRODUCTION

1.1. STANDARD DESIGN

Standard Designs provide functional and spatial requirements for specific Air Force facility types, and are intended for use in conjunction with DoD Unified Facilities Criteria (UFC), Air Force Corporate Facility Standards, Installation Facility Standards, and other applicable standards.

Standard Designs are living documents that are periodically reviewed, updated, and made available to users by posting on the Whole Building Design Guide. This Standard Design, as well as those for many other Air Force facilities, can be accessed at this web site: http://wbdg.org/ffc/af-afcec/prototypes-standard-designs

This Standard Design is effective upon issuance and is distributed only in electronic media.

1.2 AIR FORCE STANDARD DESIGN POLICY

1.2.A. Required use of Standard Designs

The use of Air Force Corporate Facilities Standards (AFCFS), Installation Facility Standards (IFS) and Standard Designs has been codified in the most recent version of AFI 32-1023, *Designing and Constructing Military Construction Projects* (ref (c)). In compliance with the AFI, all facility designs must conform to the standards outlined and specified in the AFCFS, and if there is an applicable Installation Facilities Standards (IFS) document, the project must conform to those standards as well.

This Standard Design was developed in close coordination with the facility's functional users to by determine personnel counts, allowable/authorized space/room sizes, adjacency diagrams between the functional spaces and the overall facility space requirements. It also addresses special requirements unique to this facility type. Use this Standard Design in conjunction with other AF policy and regulations such as AFI's, and UFC's when programming and designing this facility type.

1.2.B. Integration with Air Force Corporate and Installation Facility Standards

The Air Force Corporate Facilities Standards (AFCFS), is an enterprise-wide program of facility standards establishing an acceptable level of quality and performance for facility design, facility operations and ongoing building maintenance. The AFCFS provides an exciting direction forward; intended to create sustainable installations and cohesive, efficient, High Performance and Sustainable Buildings throughout the Air Force.

Installation Facilities Standards (IFS) are part of the Air Force Corporate Facilities Standards (AFCFS) program to assist bases in implementing facilities standards at the local level. Bases develop and maintain an IFS, which replaces the Architectural Compatibility Plan, as a component plan of the Installation Development Plan (IDP).

Programmers and designers for Flight Simulator 1 or 2 Bay Facilities must use this Standard Design to ensure the specific functional, spatial, and special requirements are met, meet the local requirements established by the IFS, and the overall Air Force requirements set forth in the AFCFS.

1.3 APPLICABILITY

This Standard Design provides requirements for evaluating, planning, programming, and designing a Flight Simulator 1 or 2 Bay Facility that supports the mission, is appropriately sized, flexible, durable, and life-cycle cost efficient. The information in this Standard Design applies to the design of all new construction projects, to include additions, alterations, and renovation projects worldwide. It also applies to the procurement of Design Build services for the above-noted projects. Alteration and renovation projects should update existing facilities to meet the guidance and criteria within budgetary constraints.

The facility size is dependent on the number of Training bays and Simulators. Use the Interactive Programming Worksheet to assist in these adjustments.

1.3. A. Additions and Alterations

For additions and alterations to existing facilities, use the adjacencies, sizing/scope and detailed requirements contained in the site diagrams, module drawings, and room data sheets to the maximum extent possible. The functionality and adjacency of the modules are still valid but may require some manipulation to fit into existing spaces. This standard may be modified slightly to accommodate the existing structure. Remove non-structural walls to the greatest extent possible to open up space in the existing facilities to make them more receptive to the placement of the modules. The planner and designer must determine the most efficient means to balance the placement of modules within existing spaces or as a facility addition.

CHAPTER 2 FACILITY DESIGN

2.1 FACILITY DESCRIPTION

2.1.A. Function

The primary function of this Flight Simulator 1 or 2 Bay Facility is to provide a facility that fully supports the mission with a flexible state-of-the-art building. This Standard Design is based on a facility which supports the training missions for the KC-46A Refueling Aircraft, but the Standard Design can be adapted to support Flight Simulator training for other weapon systems. For the KC-46A mission, Pilots and Boom Operators will utilize this facility for mission specific training, flight hours, and general training. The facility is comprised of an articulated weapon system training device (i.e. Simulator), boom operator training device, part task training device and their associated shop/storage and administration spaces. Portions of the facility will be required to be designated as secure. Flight Simulator Facilities will consist of but are not limited to grouped rooms or "Modules". The modules needed for this facility are as follows (included rooms are noted below module title):

- Academic Instruction
  - Learning Center
  - Classroom
  - Mission Planning
  - Large Briefing
  - Small Briefing

- Demonstration Instruction
  - Weapon System Trainer Bay (WST)
  - Boom Operator Training Bay (BOT)
  - Parts Task Trainer

- Equipment Support
  - Simulator MX/Parts
  - Computer Room
  - Maintenance
  - Server

- Staff Personnel
  - Lead Instructor's Office
  - Training Manager
  - Contracting Officer Representative
  - Site Manager
  - Copy / Storage
  - Maintenance Supervisor
  - Test Scheduler
  - Site Administration
  - Conference

  - Break Room
  - Instructors

- Toilet
  - Men's Toilet
  - Women's Toilet
  - Janitor

- Building Support
  - Mechanical
  - Electrical
  - Telecommunications
  - UPS
  - Fire Pump

AFCFS: Consult the Air Force Corporate Facilities Standards (AFCFS) to determine quality standards for this facility group. This standard facility prototype is considered a Group 3 hierarchy.

2.1.B. Typical Users

This facility is operated by active duty, guard, and reserve military personnel as well as civilian contractor representatives of the systems providers as well as USAF Civilian Federal Workforce.

The facility will be occupied by personnel 24 hours a day, 360 days a year. The facility will be occupied with the greatest number of personnel between the hours of 6:00 am and 8:00 pm each day. Approximately 80 facility staff and students could occupy the facility at various shifts.

2.1.C. Related AFMAN 32-1084 Category Code

The related AFMAN 32-1084 Category Codes are as follows: This facility would be governed by Chapter 2, Facility Class 1, Operations and Training, Category Group 17, Training Facilities and Chapter 6, Facility Class 6, Administrative, Category Group 61, Administrative and Administrative Support Spaces.

2.2 CRITERIA

APPLICABLE UNIFIED FACILITY CRITERIA

Comply with UFC 1-200-01, DoD Building Code (General Building Requirements). UFC 1-200-01 provides applicability of model building codes and government unique criteria for typical design disciplines and building systems, as well as for accessibility,

antiterrorism, security, high performance and sustainability requirements, and safety. Use this Standard Design in addition to UFC 1-200-01 and the UFCs and government criteria referenced therein. UFC 1-200-01 references other “Core UFCs” that are applicable to this Standard Design as well as most all DoD facilities.

UFC 1-200-01	DoD Building Code (General Building Requirements)
UFC 1-200-02	High Performance and Sustainability Building Requirements
UFC 1-300-07A	Design Build Technical Requirements
UFC 3-101-01	Architecture
UFC 3-110-03	Roofing
UFC 3-120-01	Design: Sign Standards
UFC 3-120-10	Interior Design
UFC 3-190-06	Protective Coatings and Paints
UFC 3-201-01	Civil Engineering
UFC 3-201-02	Landscape Architecture
UFC 3-210-10	Low Impact Development
UFC 3-220-01	Geotechnical Engineering
UFC 3-230-01	Water Storage, Distribution, and Transmission
UFC 3-240-01	Wastewater Collection
UFC 3-250-01	Pavement Design for Roads and Parking Areas
UFC 3-250-04	Standard Practice for Concrete Pavements
UFC 3-260-01	Airfield and Heliport Planning and Design
UFC 3-260-17	Dust Control for Roads, Airfields, and Adjacent Areas
UFC 3-301-01	Design: Structural Engineering
UFC 3-400-02	Design: Engineering Weather Data
UFC 3-401-01	Mechanical Engineering
UFC 3-410-01	Heating, Ventilation, and Air Conditioning Systems
UFC 3-410-02	Lonworks Direct Digital Control for HVAC and Other Local Building Systems

UFC 3-420-01	Plumbing Systems
UFC 3-450-01	Noise and Vibration Control
UFC 3-501-01	Electrical Engineering
UFC 3-520-01	Interior Electrical Systems,
UFC 3-530-01	Design: Interior and Exterior Lighting and Controls,
UFC 3-550-01	Exterior Electrical Power Distribution
UFC 3-570-01	Cathodic Protection
UFC 3-575-01	Lightning and Static Electricity Protection Systems
UFC 3-580-01	Telecommunications Building Cabling Systems Planning and Design
UFC 3-600-01	Fire Protection Engineering for Facilities
UFC 4-010-01	DoD Minimum Antiterrorism Standards for Buildings
UFC 4-010-05	Sensitive Compartmented Information Facilities Planning, Design, and Construction.
UFC 4-020-01	Security Engineering Facilities Planning Manual
UFC 4-021-01	Design and O&M: Mass Notification Systems
UFC 4-010-06	Cybersecurity of Facility-Related Control Systems
UFC 4-022-03	Security Fences and Gates
UFC 4-023-03	Design of Buildings to Resist Progressive Collapse
UFC 4-211-01	Aircraft Maintenance Hangars
USGBC LEED-NC	LEED for New Construction and Major Renovations Rating System (U.S. Green Building Council)
UFC 1-200-01	DoD Building Code (General Building Requirements)
UFC 1-200-02	High Performance and Sustainability Building Requirements
UFC 1-300-07A	Design Build Technical Requirements
UFC 3-101-01	Architecture

2.2.A. Sustainability

Comply with the Federal sustainability requirements as detailed in UFC 1-200-02, High Performance and Sustainable Building Requirements. Determine third-party

certification requirements based on Table 1-1 of UFC 1-200-02 and current AF guidance at https://www.wbdg.org/ffc/af-afcec.

2.2.B. Security and Antiterrorism

The facility must meet, UFC 4-020-01 Security Engineering Facilities Planning Manual, UFC 04-010-01 DoD Minimum Antiterrorism Standards for Buildings. The building's access to the Weapons System Trainer, Boom Operator Trainer and Part Task Trainer areas are controlled and monitored by special access hardware, Intrusion Detection Systems and Closed-Circuit Television Systems (CCTV). Exterior security measures will include antiterrorism stand-off distances for parking, controlled vehicular circulation, appropriately located trash enclosures, clear space surrounding the facility, and the single point of building entry.

2.3 NOTIONAL SITE

2.3.A. Site Location, Orientation and Adjacencies

The notional site plan diagram demonstrates key site development criteria. It is not a site-specific solution. The information represents the land requirements to construct this facility and includes associated AT standoff and parking. Additional land may be needed to comply with the stormwater management requirements of UFC 3-210-10 Low Impact Development. Utilization of existing or shared parking is allowable and may reduce the total acreage required for the facility. Adapt the requirements to the specific site and location and comply with the applicable Installation Development Plan (IDP) and Area Development Plan (ADP) for facility siting.

Several factors determine the most appropriate and cost-effective location for a facility. The availability and capacity of required utilities and the mass/scale of the facility relative to adjacent structures and noise issues must be analyzed.

Emphasis must be placed on operation, function, and safety when siting the facility. Analyze and comply with airfield clearances, building setback restrictions, and line of sight restrictions from the adjacent flight-line.

The approximate project area required for the Flight Simulator 1 or 2 Bay Facility *is 3.0 acres,* which includes antiterrorism/force protection standoff and parking. Utilization of existing or shared parking is allowable and may reduce the total acreage required for the facility. The project area required for a 1 Bay Flight Simulator Facility (and a 2 Bay extension if required per base location) is depicted in the notional site plan.

2.3.B. Parking

Parking will be as required by the programming documents, but at a minimum must be provided to accommodate 40 percent of the largest shift of assigned personnel.

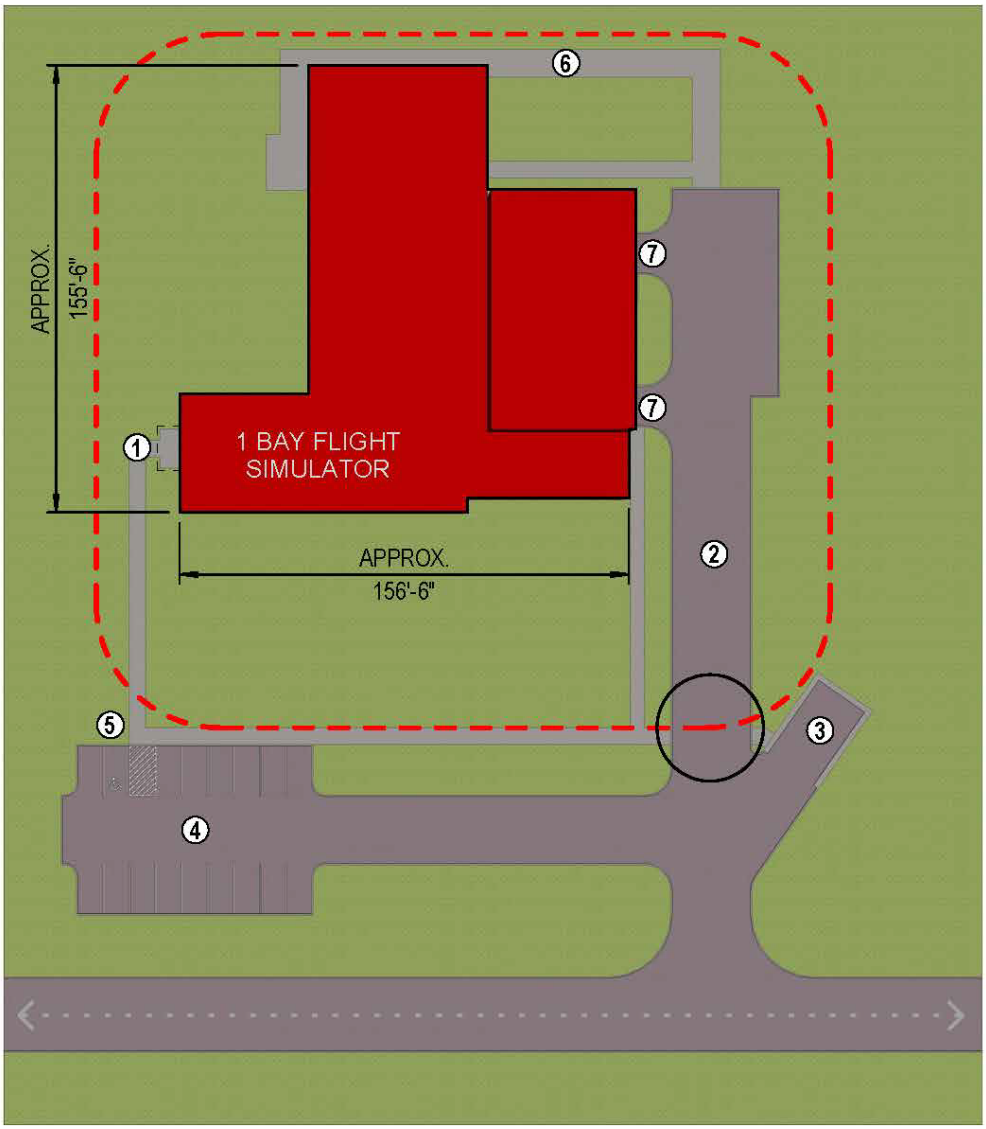
2.3.C. Vehicular and Pedestrian Circulation

Convenient and safe vehicular access and circulation must be provided for personal vehicles and essential services, including operations, maintenance, deliveries, dumpster /recycling collection, and emergency services.

Locate sidewalk networks to provide convenient and safe pedestrian circulation from existing circulation elements of the project site to the new parking areas and doors of the facility. Sidewalk width must accommodate maintenance and emergency services requirements.

2.3.D. Notional Site Plan

1 Bay Notional Site Plan



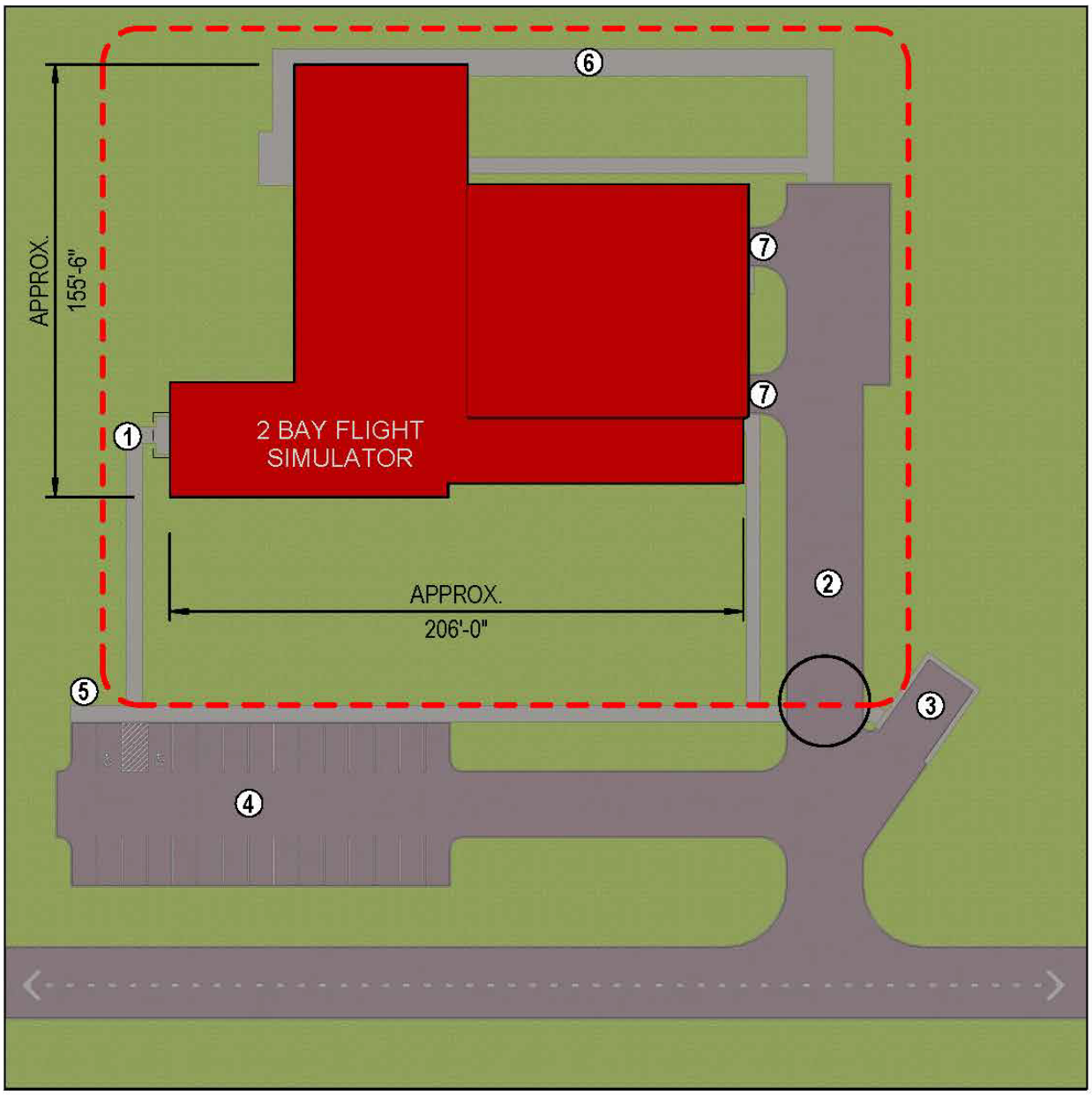
NOTES:

1. PRIMARY BUILDING ENTRY
2. SERVICE DRIVE
3. DUMPSTER / RECYCLING SCREENED ENCLOSURE
4. POV PARKING LOT - 16 SPACES
5. 6' WIDE CONCRETE SIDEWALK (MIN)
6. CONCRETE FIRE ACCESS LANE (10' MIN)
7. SIMULATOR BAY ACCESS

LEGEND:

- CONCEPTUAL AT SETBACK (REFERENCE UFC 4-010-01)
- ACCESS STREET
- CONTROLLED VEHICLE ACCESS

2 Bay Notional Site Plan



NOTES:

① PRIMARY BUILDING ENTRY
② SERVICE DRIVE
③ DUMPSTER / RECYCLING SCREENED ENCLOSURE
④ POV PARKING LOT (28 SPACES)
⑤ 6' WIDE CONCRETE SIDEWALK (MIN)
⑥ CONCRETE FIRE ACCESS LANE (10' MIN)
⑦ SIMULATOR BAY ACCESS

LEGEND:

CONCEPTUAL AT SETBACK (REFERENCE UFC 4-010-01)

ACCESS STREET

CONTROLLED VEHICLE ACCESS

2.4 BUILDING DESIGN

2.4.A. General Considerations

General considerations of the facility design are centered on:

- The Academic Instruction and Demonstration Instruction modules.
- The functional relationships between the modules as well as within the modules
- Equipment Support modules association with the Academic Instruction and Demonstration Instruction modules.
- The general personnel flow requirements within the facility.

Daily shift personnel enter the facility from the main Building entrance.

The Building Support Module needs exterior access with exception of the Communication Room which requires interior access.

Other general considerations include:

- The Staff Personnel module association with the Academic Instruction, Demonstration Instruction and Equipment Support modules.

2.4.B. Building Configuration

The building should be configured for future expansion or reconfiguration. The general size of the building is based on the number, type and/or size of the primary module(s) required for this type of facility. The general configuration of the building is an L-shaped type configuration with the Demonstration Module, Equipment Support and Academic Module (with exception of the Classroom and Instructor's Office) being located in a sequestered or secure portion of the facility and the Staff Personnel Module along with the Classroom and Instructor's Office concentrated on the other portion of the building. The size of the following module(s) is affected by the type and size of the mission:

- 1 or 2 WST Bays,1 or 2 BOT Bays, and 1 or 2 Parts Task Trainer Rooms.
- Briefing Rooms

This facility may have either 1 or 2 WST Bays,1 or 2 BOT Bays, and 1 or 2 Parts Task Trainer Rooms. A conceptual configuration of a 1 and a 2 bay building configuration is provided at the end of this chapter.

2.4.C. Interior/Exterior Relationships

The Facility will have access to POV and Visitor parking. There will be one primary entry point for the facility for all staff and visitors. Additional secured entry points will be provided for personnel use and for general facility egress.

2.4.D. Functional Area Requirements

Facility Modules Adjacency Diagrams & Conceptual Axonometric Layout(s)

The composite diagram(s) represent ways to conceptually assemble the functional areas (modules) into a cohesive whole. Individual modules are represented by different colors.

Spaces and rooms that are integrally related with a specific functional connection or operational flow are grouped into a module. Modules and the associated room data sheets identify specific criteria and additional detail for each functional area of the facility as outlined in the Interactive Programming Sheet located at the end of the document.

The modules are a grouping of functional spaces and represent “Lego blocks” to be used in a “kit-of-parts” design approach. Use the fixed modules as pre-assembled pieces of the facility “puzzle”. Assemble them to comply with the required adjacencies indicated in the diagrams and module plans.

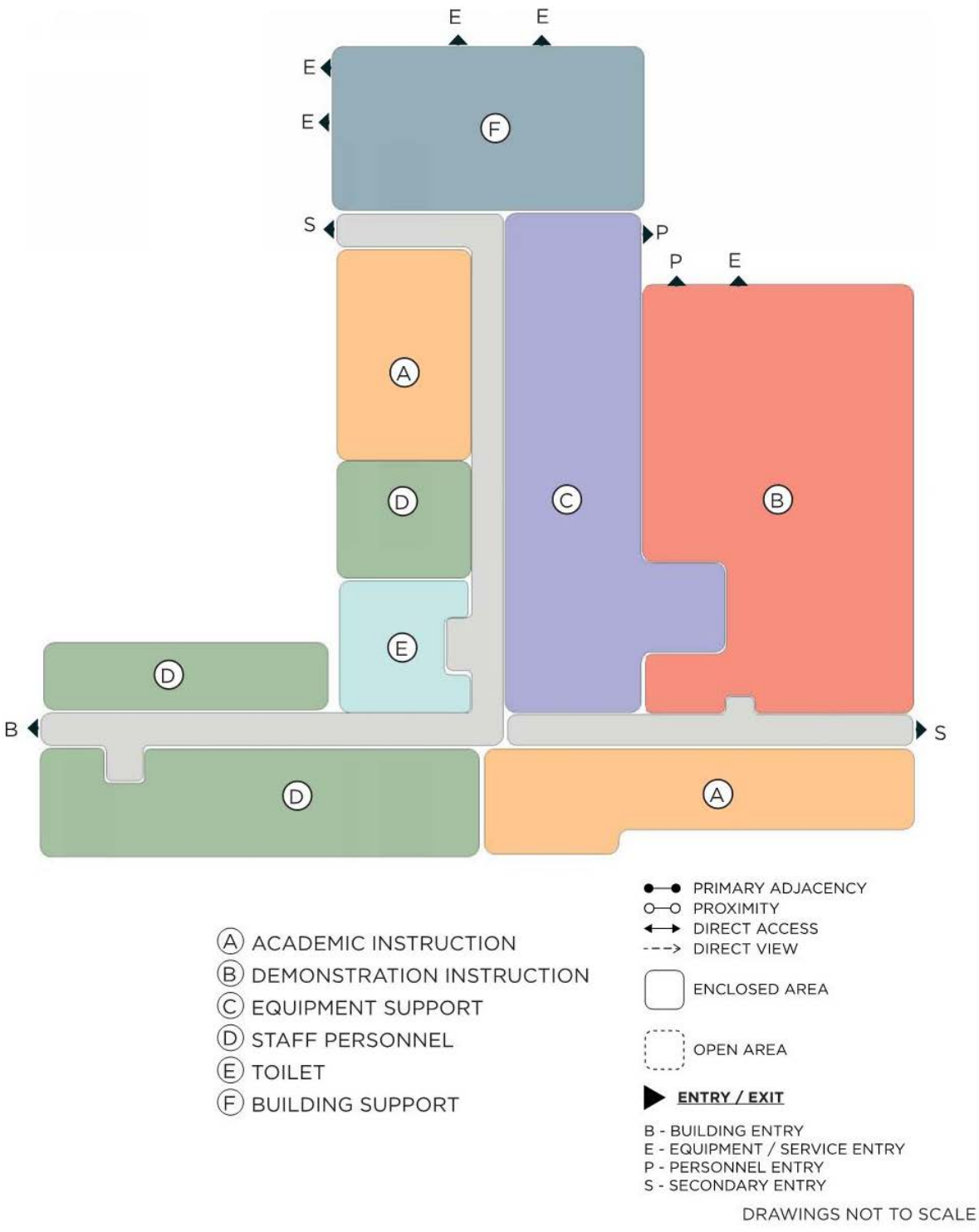
Modules must be used as shown in this Standard Design to the greatest extent possible and must not be deconstructed or altered except as indicated herein. The intent of the Standard Design criteria is to avoid manipulation of the composition, functional relationships, adjacencies, and module sizes. Modules contain fixed attributes and must not be changed arbitrarily. Modules may be rotated, flipped, and/or mirrored to accommodate an overall composition or site issue, but this must not be done arbitrarily and should occur only when necessary.

Some modules are linked to space requirements that increase or decrease in size based on the personnel count and equipment for a particular mission. In these cases, increase or decrease the size of the module to match the revised scope calculation. This may sometimes require minor adjustments in other adjacent modules so that they properly fit together to create a constructible facility floor plan. Spaces must comply with any critical dimensions indicated on module plans. Manipulate as few modules as possible to create a constructible facility. The resulting composite plan must respect the established modules adjacencies and must not exceed the authorized project scope.

Functional Adjacency Diagram

The following Functional Adjacency Diagram form the basis of design for the Standard Design Flight Simulator 1 and 2 Bay Facility. The Facility is programed around the Demonstration Instruction Module - 1 or 2 WST Bays, 1 or 2 BOT Bays, and 1 or 2 Parts Task Trainer Rooms with the Academic Instruction, Equipment Support modules in close proximity.

This Facility Adjacency Diagram as well as the modules is the Air Force approved Standard Design plan.


E
E
E
E
F
S
P
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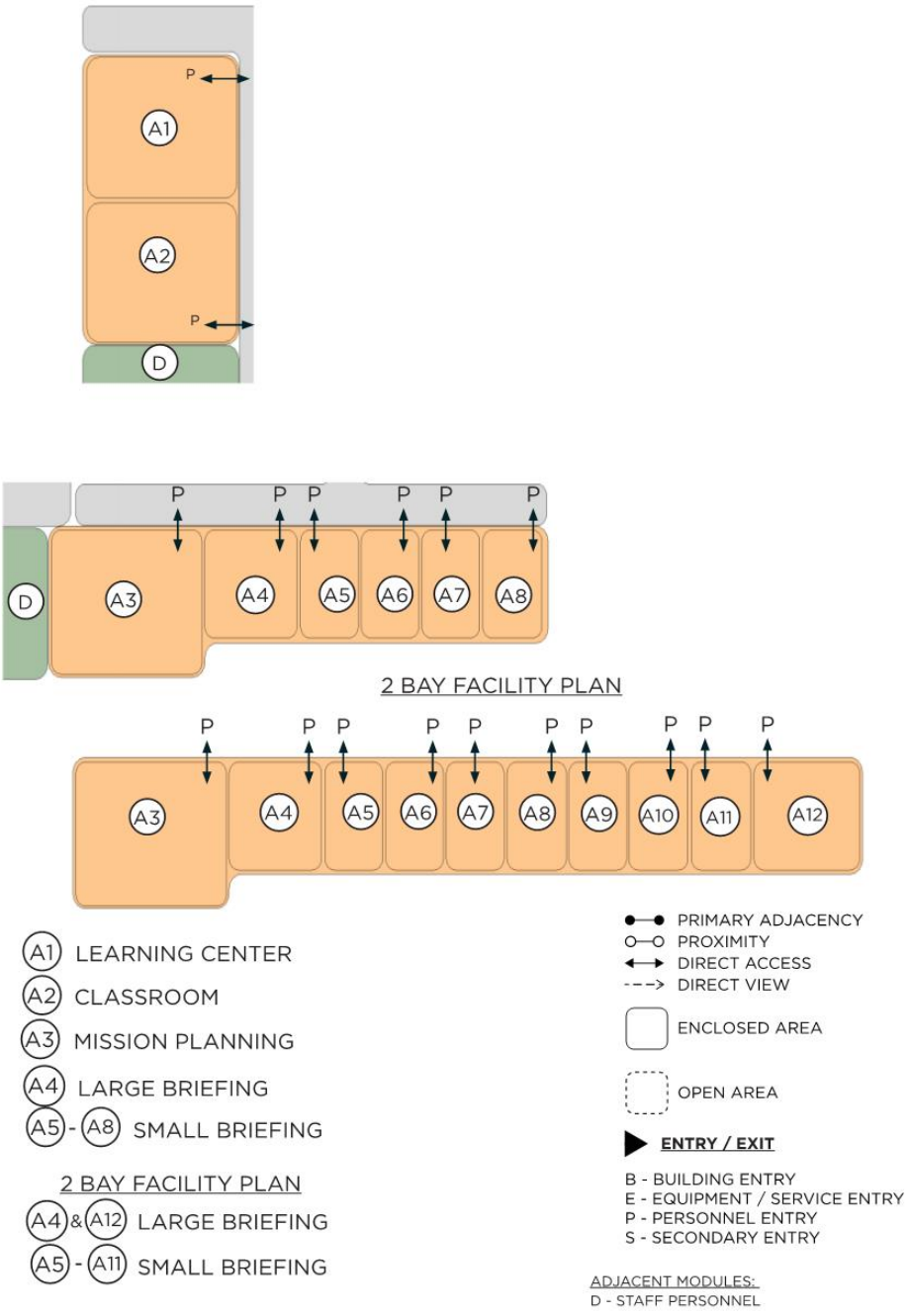
A
D
C
B
E
D
B
S
D
A
A ACADEMIC INSTRUCTION
B DEMONSTRATION INSTRUCTION
C EQUIPMENT SUPPORT
D STAFF PERSONNEL
E TOILET
F BUILDING SUPPORT
PRIMARY ADJACENCY
PROXIMITY
DIRECT ACCESS
DIRECT VIEW
ENCLOSED AREA
OPEN AREA
ENTRY / EXIT
B - BUILDING ENTRY
E - EQUIPMENT / SERVICE ENTRY
P - PERSONNEL ENTRY
S - SECONDARY ENTRY
DRAWINGS NOT TO SCALE

MODULE A – ACADEMIC INSTRUCTION MODULE

Function and Adjacency

The Academic Instruction Module includes those spaces in the facility designated to teach students using academic materials, CBT terminals, and/or models in a classroom environment. This module consists of a Classroom, Learning Center, Mission Planning Room, Large Briefing Room (one in the 1-Bay and two in the 2-Bay) and Small Briefing Rooms (four in the 1-Bay and seven in the 2-Bay). This module is to have proximity to both the Demonstration Instruction and Equipment Support modules.

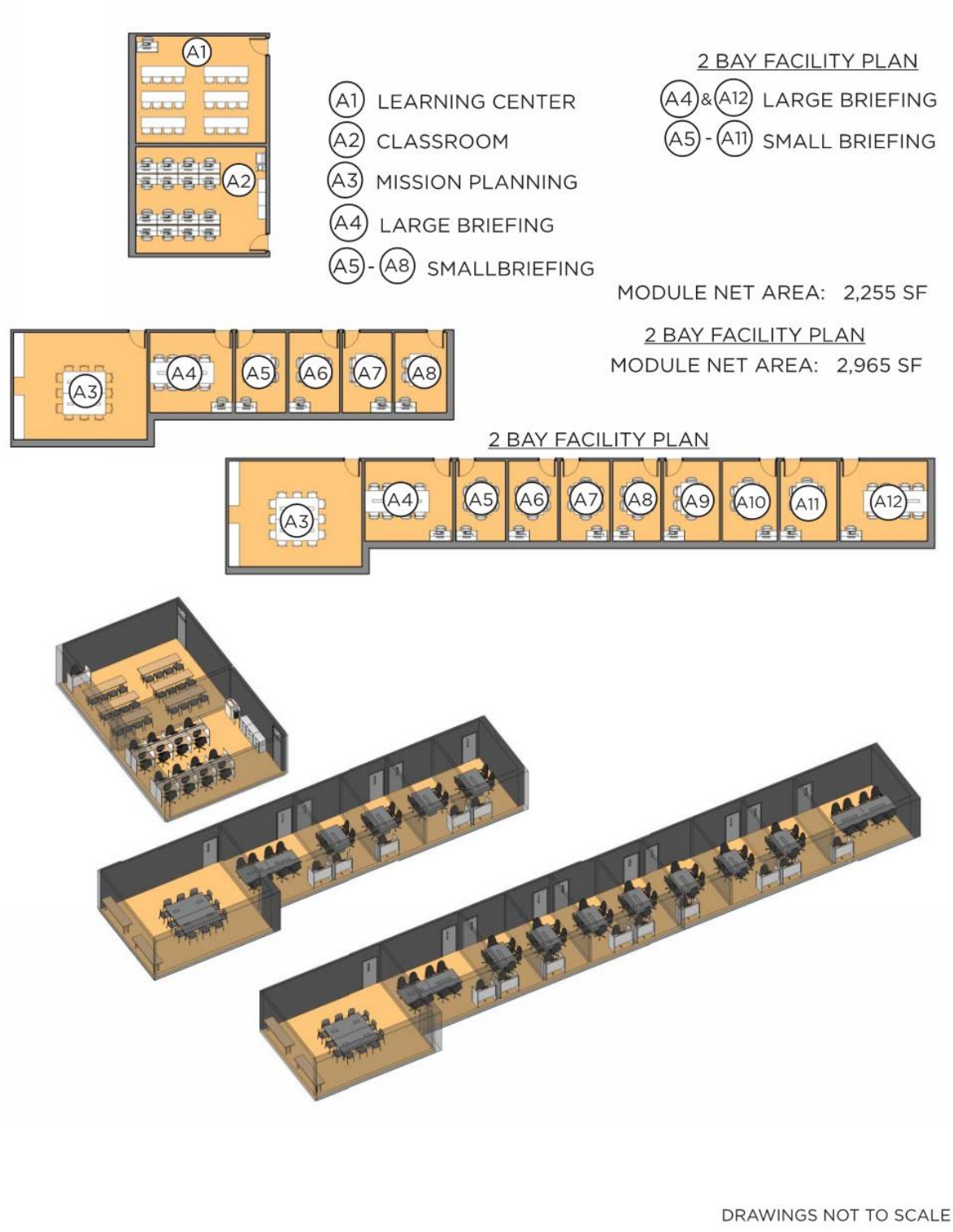
Figure 2-A.1 Module A Adjacency Diagram



DRAWINGS NOT TO SCALE

Academic Instruction

Figure 2-A.2 Module A Floor Plan & Axonometric

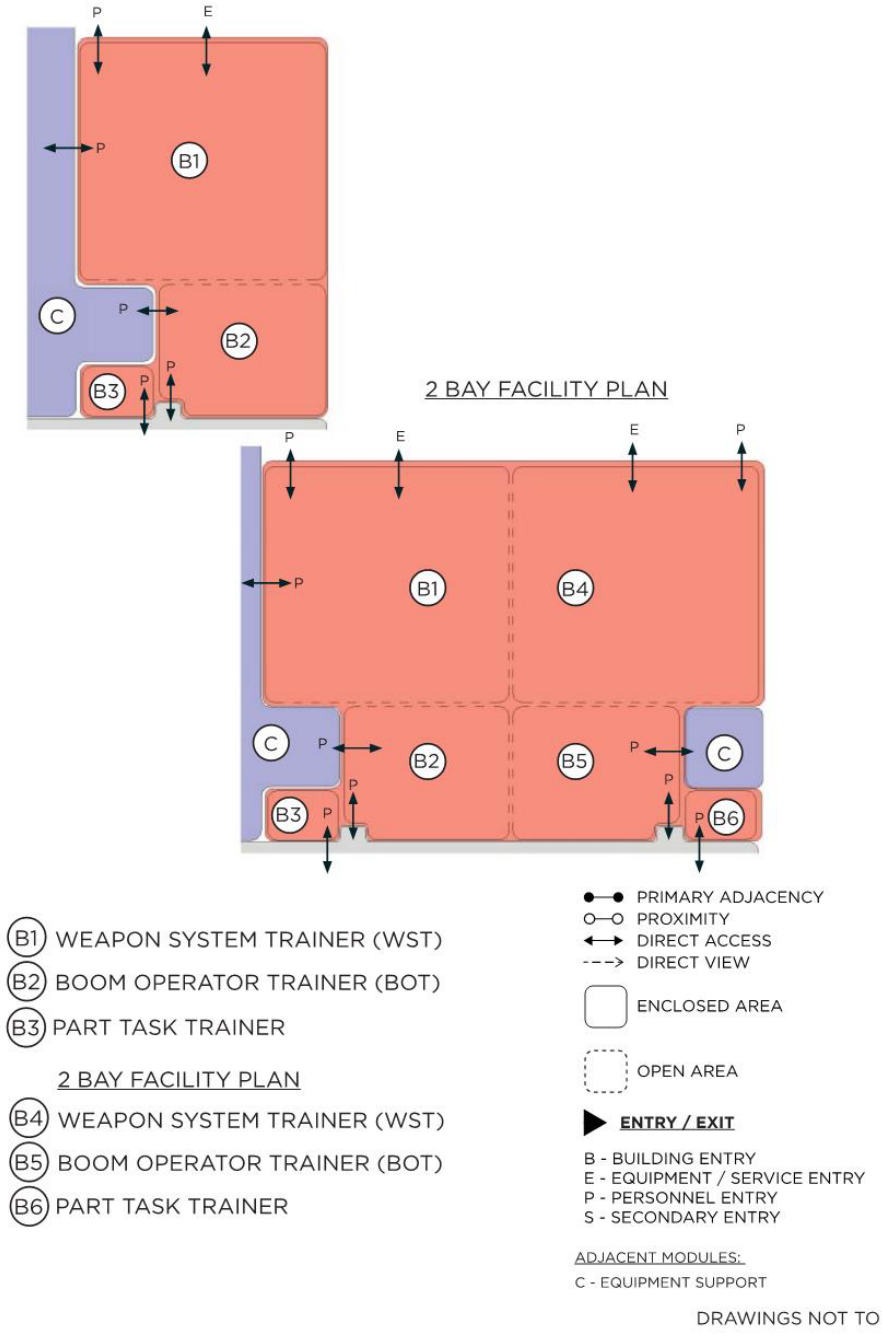


MODULE B – DEMONSTRATION INSTRUCTION MODULE

Function and Adjacency

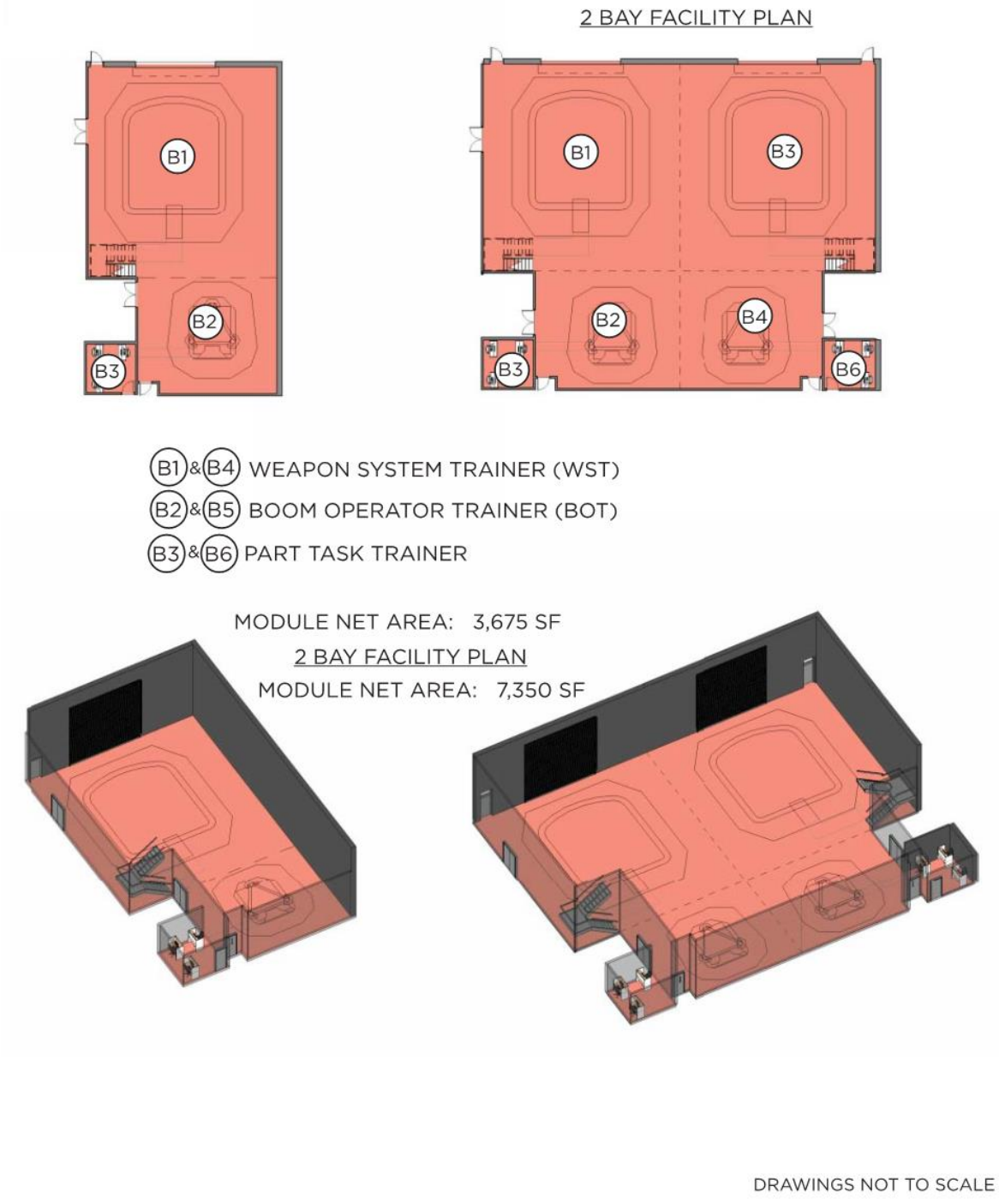
The Demonstration Instruction Module consists of those spaces in the facility designated to provide students with hands-on training. Equipment which simulates aircraft operational characteristics is contained in these areas. This module consists of the Weapons System Trainer (one for the 1-Bay and two for the 2-Bay), Boom Operator Trainer (one for the 1-Bay and two for the 2-Bay) and Parts Tasks Trainer (one for the 1-Bay and two for the 2-Bay). The WST and BOT devices are in high bay areas which accommodate the devices as well as enough clearance for any associated equipment, bridge crane and other requirements. This module is to have proximity to both the Equipment Support and Academic Instruction modules.

Figure 2-B.1 Module B Adjacency Diagram



Demonstration Instruction

Figure 2-B.2 Module B Floor Plan & Axonometric

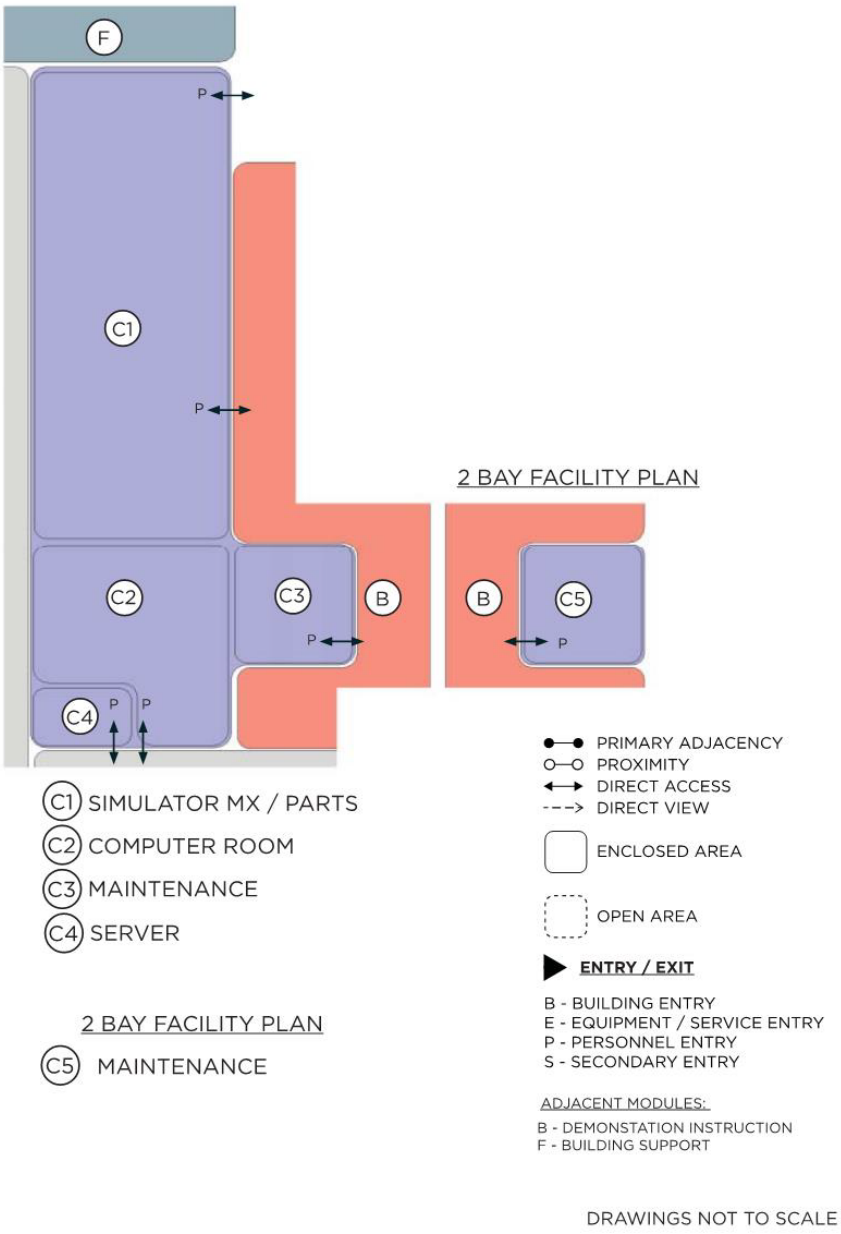


MODULE C – EQUIPMENT SUPPORT

Function and Adjacency

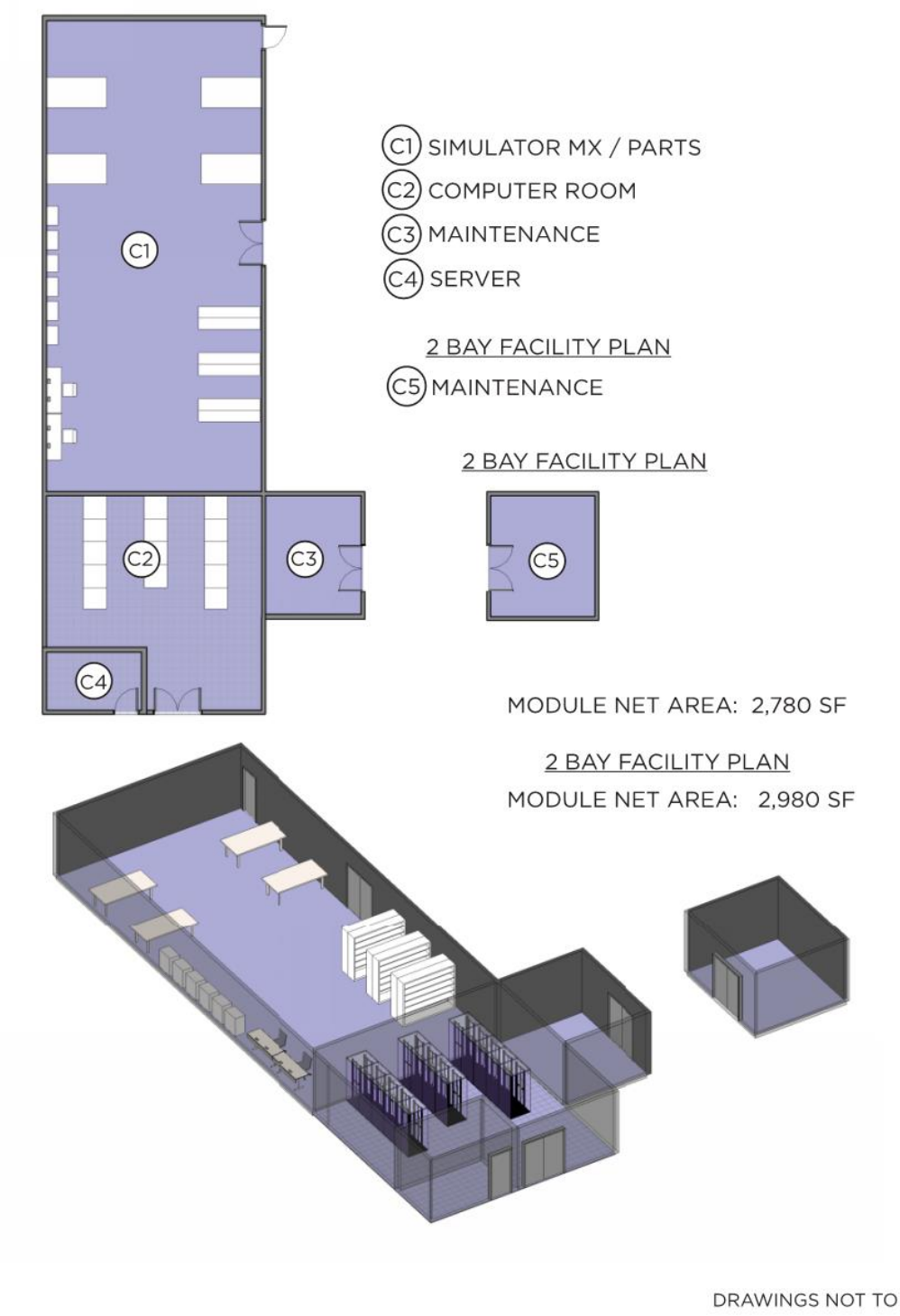
The Equipment Support Module contains facility areas which either house the equipment that supports the Demonstration Instruction Module devices or contains equipment/supplies required to sustain the facility operation. This module includes rooms for Simulator / MX Parts (one for the 1-Bay and two for the 2-Bay), Computer, Server and Maintenance. Open storage and exterior access is required for the Simulator / MX parts room. The Computer Room and Server room require access flooring. This module to have proximity to the Demonstration Instruction Module.

Figure 2-C.1 Module C Adjacency Diagram



Equipment Support

Figure 2-C.2 Module C Floor Plan & Axonometric

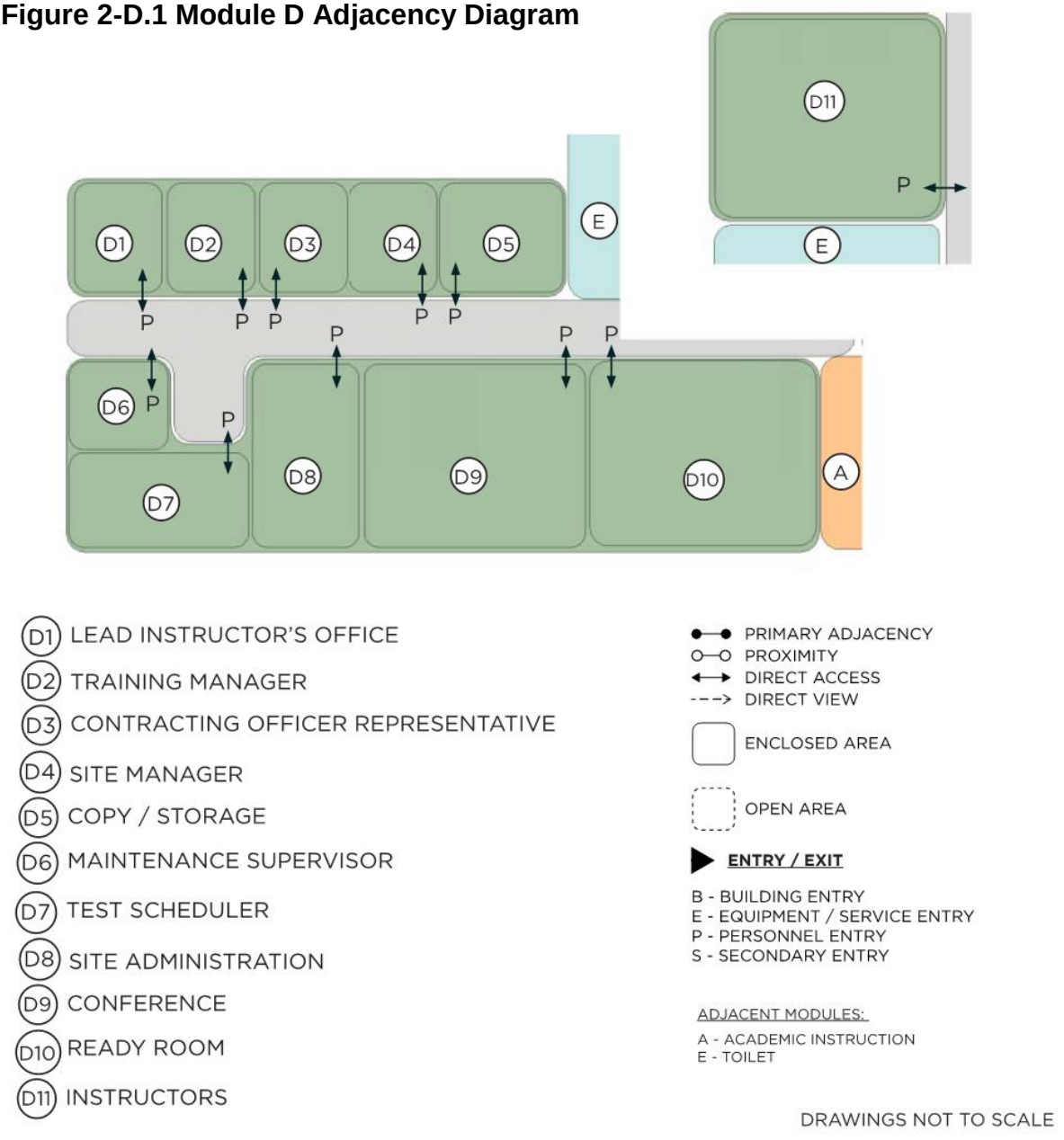


MODULE D – STAFF PERSONNEL

Function and Adjacency

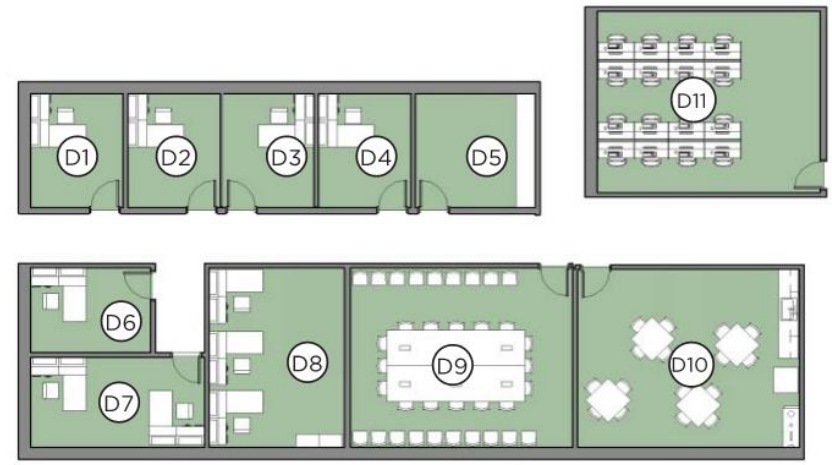
The Staff Personnel Module contains facility areas which provide an office-type environment for permanently assigned personnel to perform daily administrative/maintenance tasks. This module consists of a Lead Instructor's Office, Training Manager Office, Contracting Officer Rep. Office, Site Manager Office, a Copy Storage Room, Maintenance Supervisor Office, Test Scheduler Office, Site Administration Office a Conference Room, a Break Room and an Instructors Office. This module should have proximity to the Demonstration Instruction Module and the Academic Instruction Module.

Figure 2-D.1 Module D Adjacency Diagram

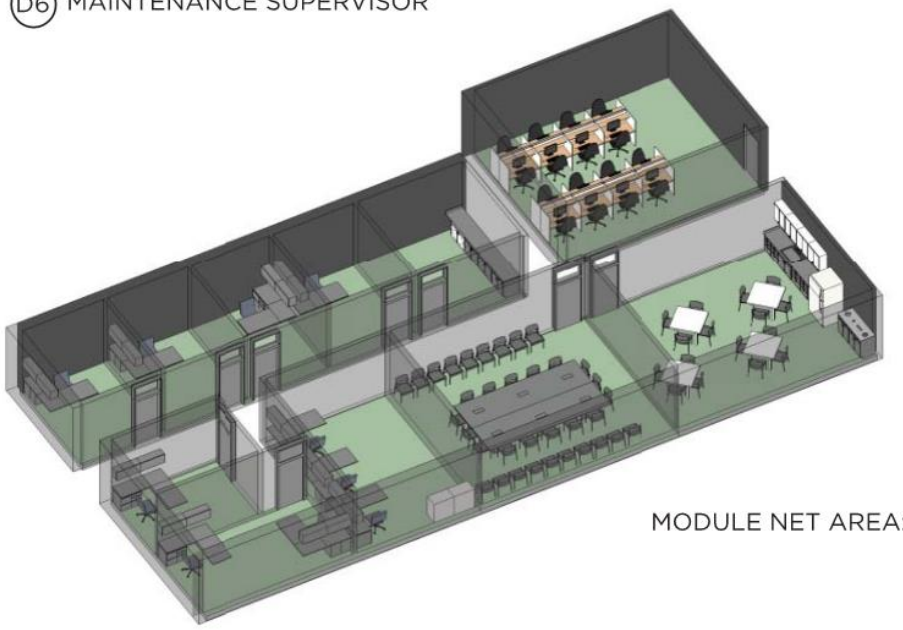


Staff Personnel

Figure 2-D.2 Module D Floor Plan & Axonometric



D1 LEAD INSTRUCTOR'S OFFICE
D2 TRAINING MANAGER
D3 CONTRACTING OFFICER REPRESENTATIVE
D4 SITE MANAGER
D5 COPY / STORAGE
D6 MAINTENANCE SUPERVISOR
D7 TEST SCHEDULER
D8 SITE ADMINISTRATION
D9 CONFERENCE
D10 READY ROOM
D11 INSTRUCTORS



MODULE NET AREA: 2,945 SF

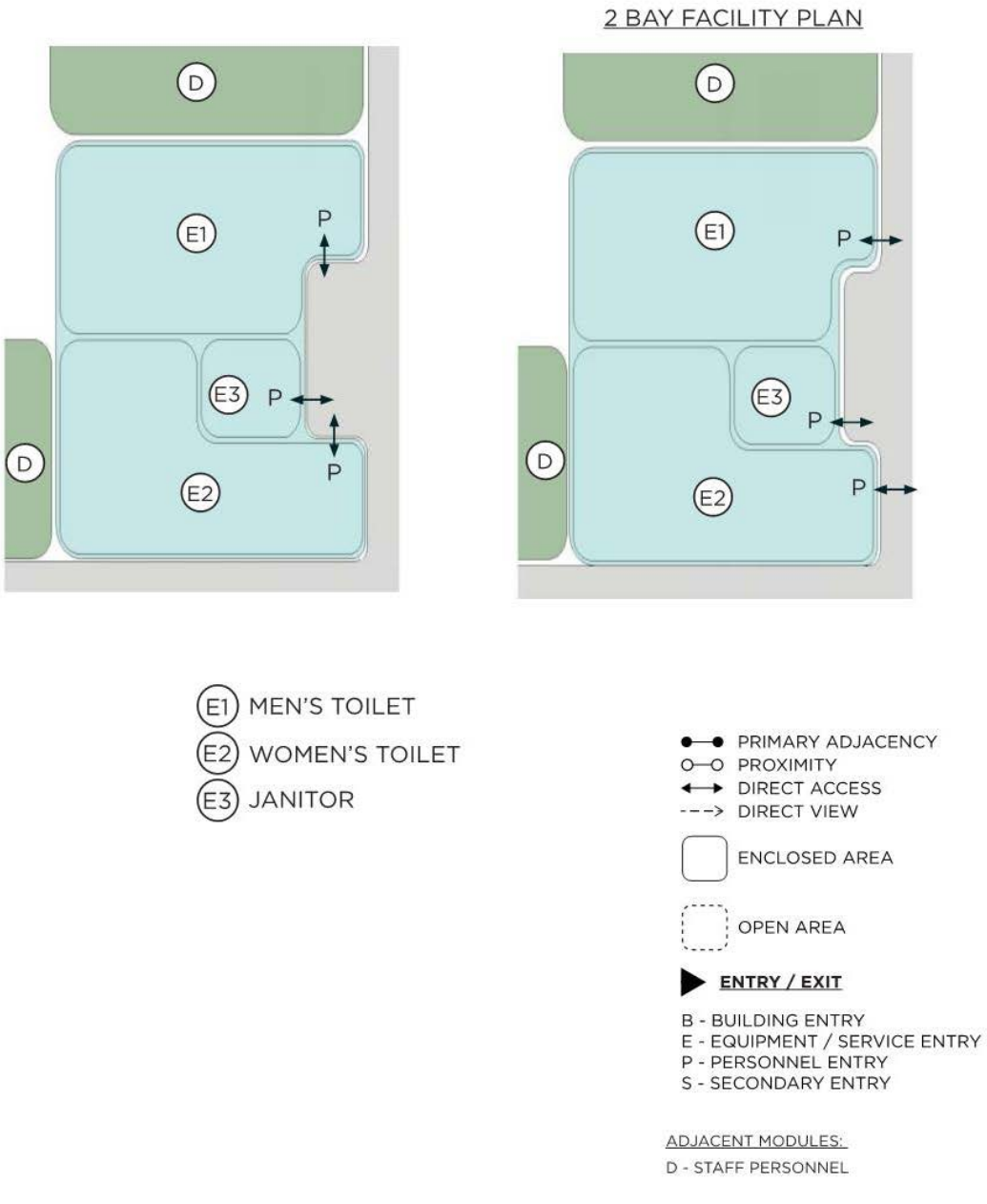
DRAWINGS NOT TO SCALE

MODULE E – TOILET

Function and Adjacency

The Toilet Module consists of a Men's Toilet, Women's Toilet and a Janitor's Closet. The plumbing fixture count in the Standard design plan is approximate and actual plumbing fixture count shall be as required per actual occupancy count and as required in International Plumbing Codes, latest edition, Chapter 29. Two layouts are provided below, one for the 1-Bay scenario and one for the 2-Bay scenario.

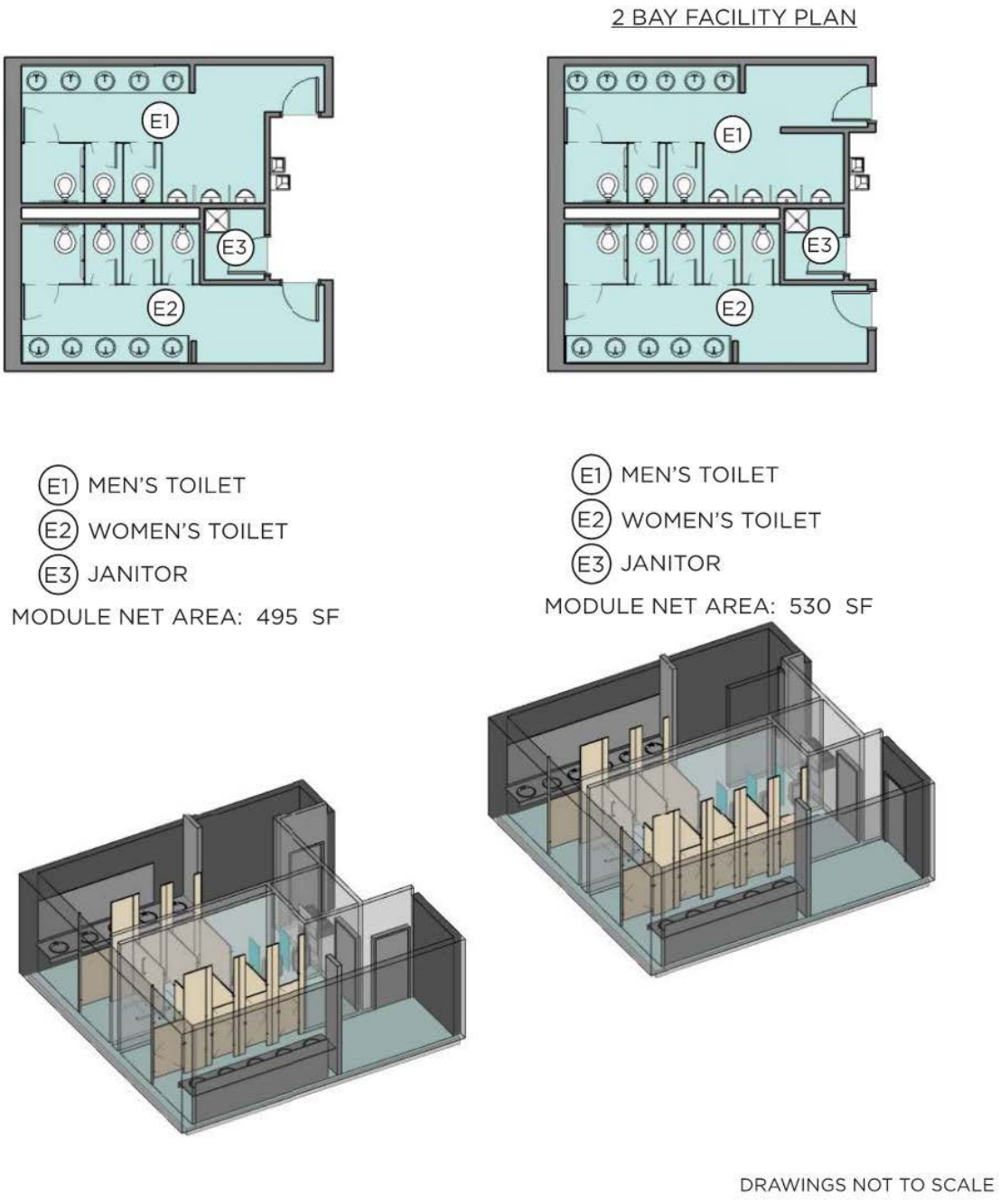
Figure 2-E.1 Module E Adjacency Diagram



DRAWINGS NOT TO SCALE

Toilet

Figure 2-E.2 Module E Floor Plan & Axonometric

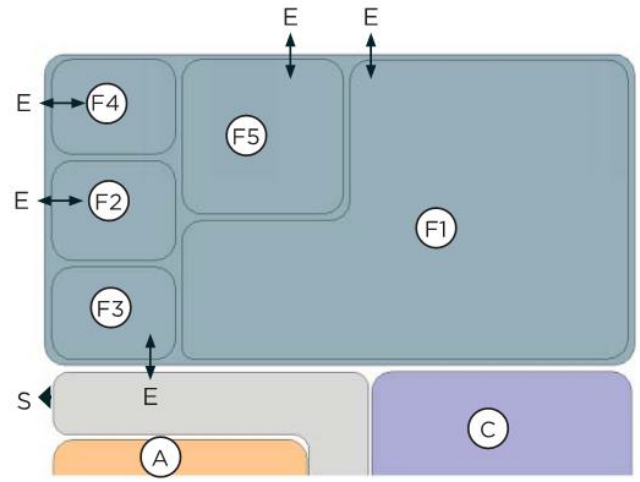


MODULE F – BUILDING SUPPORT

Function and Adjacency

The Building Support Module consists of a mechanical room, fire pump room (if required), electrical room, communications room and UPS room. All rooms will have exterior access (except for the communications room, which will have interior access). These modules will be located on the exterior wall adjacent to the utility courtyard and accessible for maintenance.

Figure 2-F.1 Module F Adjacency Diagram



F1 MECHANICAL
F2 ELECTRICAL
F3 TELECOMMUNICATIONS
F4 UPS
F5 FIRE PUMP

PRIMARY ADJACENCY
PROXIMITY
DIRECT ACCESS
DIRECT VIEW

ENCLOSED AREA

OPEN AREA

ENTRY / EXIT

B - BUILDING ENTRY
E - EQUIPMENT / SERVICE ENTRY
P - PERSONNEL ENTRY
S - SECONDARY ENTRY

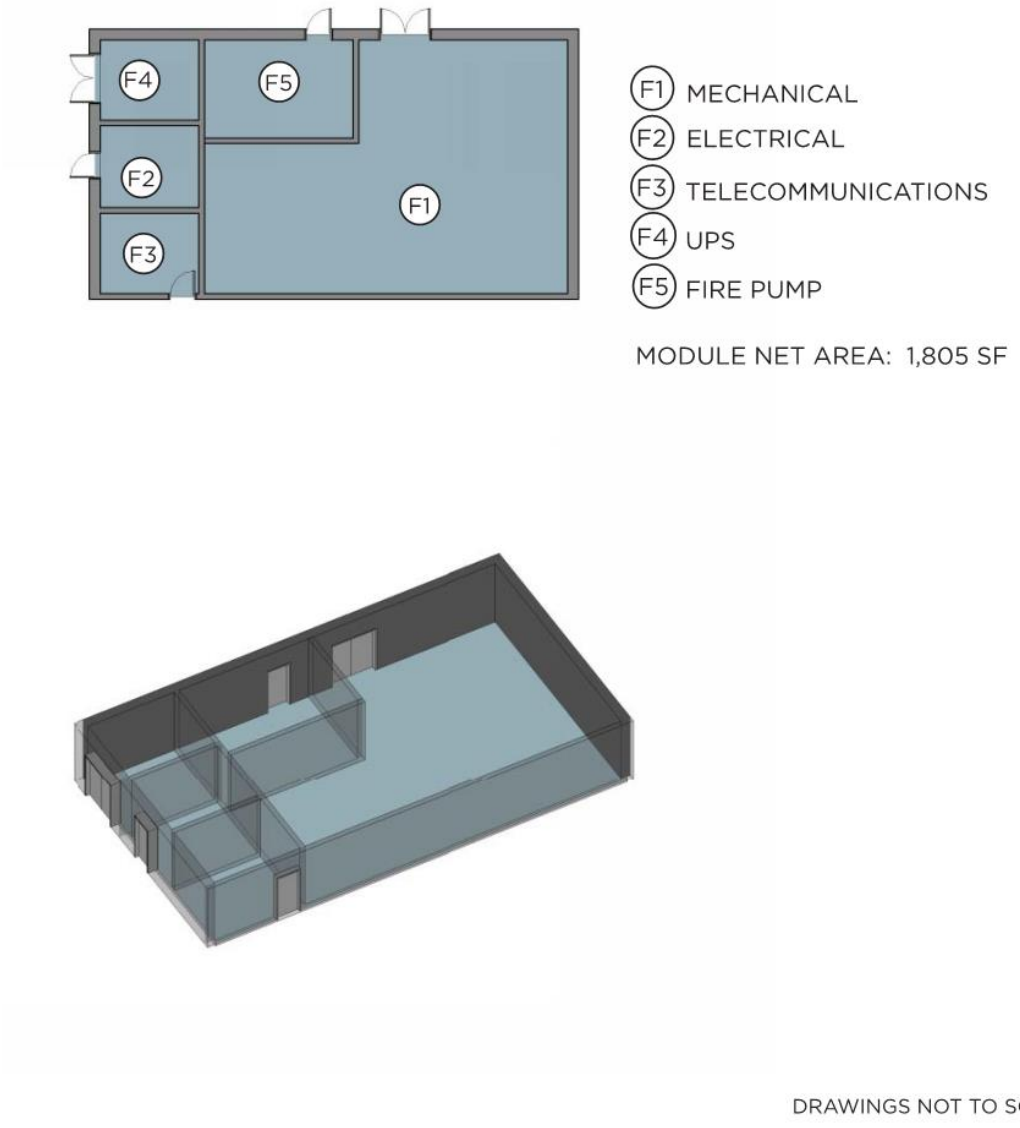
ADJACENT MODULES:

A - ACADEMIC INSTRUCTION
C - EQUIPMENT SUPPORT

DRAWINGS NOT TO SCALE

Building Support

Figure 2-F.2 Module F Floor Plan & Axonometric



2.4.E. Room Data Sheets

Specific requirements for each room, space, or area are provided on room data sheets that correspond to their respective color-coded Modules, basis of design Functional Adjacency Diagram as well as the Interactive Programming Worksheet. Information contained on the data sheets defines the functional and physical requirements for each of the spaces within the facility type and are generally minimum requirements and must be modified as required for specific unique situations/scenarios as deemed appropriate by the USAF.

Figure 2-A.3.1 Classroom Data Sheet		
INDEX		A1
Description/Usage		Room for group student learning
Ceiling Height		9'-0" minimum
Windows		Exterior – Aluminum framed, insulated fixed, blast resistant; Meeting daylighting requirements of UFC 1-200-02
Doors	Type	(1) Hollow metal personnel door - 3'x7'
	Security/ Hardware	Keyed lock set
	View Panels/ Kick Plates	No view panels Kick plates on both sides of door
Finishes	Walls	Gypsum board - painted
	Floor	Carpet tile
	Base	Resilient
	Ceiling	Acoustical Ceiling Tile
Plumbing		N/A
HVAC		Heating, ventilation, air conditioning
Fire Protection / Life Safety		Wet pipe sprinkler system
Power		Per UFC 3-520-01
Lighting		Per UFC 3-530-01
Communication	Tele.	One per desk
	Data	NIPR and SIPR
	CCTV	Per program security requirements observing the exterior of the door into the room
	CATV	N/A
	Security	Intrusion Detection System and Access Controls
Acoustical		Per UFC 3-450-01 for noise control
Furnishings / Equipment / Casework		6 Desks/Tables with chairs for 24 students
Special Requirements		N/A

Figure 2-A.3.2 Learning Center Room Data Sheet		
INDEX		A2
Description/Usage		Room for 16 small hot desks/stations, printers and file storage
Ceiling Height		9'-0" minimum
Windows		Exterior – Aluminum framed, insulated fixed, blast resistant; Meeting daylighting requirements of UFC 1-200-02
Doors	Type	(1) Hollow metal personnel door - 3'x7'
	Security/ Hardware	Keyed lock set
	View Panels/ Kick Plates	View panels, 5" x 20" Kick plates on both sides of door
Finishes	Walls	Gypsum board - painted
	Floor	Carpet tile
	Base	Resilient
	Ceiling	Acoustical Ceiling Tile
Plumbing		N/A
HVAC		Heating, ventilation, air conditioning
Fire Protection / Life Safety		Wet pipe sprinkler system
Power		Per UFC 3-520-01
Lighting		Per UFC 3-530-01
Communication	Tele.	One per desk
	Data	NIPR
	CCTV	N/A
	CATV	N/A
	Security	N/A
Acoustical		Per UFC 3-450-01 for noise control
Furnishings / Equipment / Casework		16 Hot Desks, printers, and file storage
Special Requirements		N/A

Figure 2-A.3.3 Mission Planning Room Data Sheet		
INDEX		A3
Description/Usage		Office with large table and chairs for 10-20 people
Ceiling Height		9'-0" minimum
Windows		Exterior – Aluminum framed, insulated fixed, blast resistant; Meeting daylighting requirements of UFC 1-200-02
Doors	Type	(1) Hollow metal personnel door - 3'x7'
	Security/ Hardware	Electronic strike, card reader, X-09 lock
	View Panels/ Kick Plates	View panels, 5" x 20" Kick plates on both sides of door
Finishes	Walls	Gypsum board - painted
	Floor	Carpet tile
	Base	Resilient
	Ceiling	Acoustical Ceiling Tile
Plumbing		N/A
HVAC		Heating, ventilation, air conditioning
Fire Protection / Life Safety		Wet pipe sprinkler system
Power		Per UFC 3-520-01
Lighting		Per UFC 3-530-01
Communication	Tele.	One per room
	Data	NIPR
	CCTV	N/A
	CATV	N/A
	Security	N/A
Acoustical		Per UFC 3-450-01 for noise control
Furnishings / Equipment / Casework		One (1) powered conference table for 12
Special Requirements		N/A

Figure 2-A.3.4 Large Briefing Room Data Sheet		
INDEX		A4 (& A12 in 2 Bay Plan)
Description/Usage		Open office with 2 powered tables for 4 people each and 1 support desk
Ceiling Height		9'-0" minimum
Windows		Exterior – Aluminum framed, insulated fixed, blast resistant; Meeting daylighting requirements of UFC 1-200-02
Doors	Type	(1) Hollow metal personnel door - 3'x7'
	Security/ Hardware	Keyed lock set
	View Panels/ Kick Plates	View panels, 5" x 20" Kick plates on both sides of door
Finishes	Walls	Gypsum board - painted
	Floor	Carpet tile
	Base	Resilient
	Ceiling	Acoustical Ceiling Tile
Plumbing		N/A
HVAC		Heating, ventilation, air conditioning
Fire Protection / Life Safety		Wet pipe sprinkler system
Power		Per UFC 3-520-01
Lighting		Per UFC 3-530-01
Communication	Tele.	One per room
	Data	NIPR
	CCTV	N/A
	CATV	N/A
	Security	N/A
Acoustical		Per UFC 3-450-01 for noise control
Furnishings / Equipment / Casework		Two (2) powered tables
Special Requirements		N/A

Figure 2-A.3.5 Small Briefing Room Data Sheet		
INDEX		A5-8 (A5-11 in 2 Bay Plan)
Description/Usage		Small Conference Room for briefing staff with 1 powered conference table and 1 support desk
Ceiling Height		9'-0" minimum
Windows		Exterior – Aluminum framed, insulated fixed, blast resistant; Meeting daylighting requirements of UFC 1-200-02
Doors	Type	(1) Hollow metal personnel door - 3'x7'
	Security/ Hardware	Keyed lock set
	View Panels/ Kick Plates	View panels, 5" x 20" and side lite, 12" wide Kick plates on both sides of door
Finishes	Walls	Gypsum board - painted
	Floor	Carpet tile
	Base	Resilient
	Ceiling	Acoustical Ceiling Tile
Plumbing		N/A
HVAC		Heating, ventilation, air conditioning
Fire Protection / Life Safety		Wet pipe sprinkler system
Power		Per UFC 3-520-01
Lighting		Per UFC 3-530-01
Communication	Tele.	One per room
	Data	NIPR and potentially SIPR based on program requirements.
	CCTV	N/A
	CATV	N/A
	Security	N/A
Acoustical		Per UFC 3-450-01 for noise control
Furnishings / Equipment / Casework		One (1) powered tables with 4 chairs each, One (1) support desk with chair
Special Requirements		

Figure 2-B.3.1 Weapon System Trainer (WST) Bay Room Data Sheet		
INDEX		B1 (& B4 in 2 Bay Plan)
Description/Usage		Training bay for Weapons System Simulator device
Ceiling Height		Minimum 40'-0" unobstructed clearances and as required to meet KC-46 Aircrew Training System, Trainer Facilities Report, 26 January 2018, Revision C, Document Number KC46-ENG-15-053, Table 2.2-1a.
Windows		Translucent wall panels for daylighting
Doors	Type	(1) Hollow metal personnel door - 3'x7', (1) 20' x 18' Overhead Coiling Door
	Security/ Hardware	Access control, LKM10K lock
	View Panels/ Kick Plates	View panels, 5" x 20" at all exterior doors Kick plates on both sides of doors
Finishes	Walls	CMU – painted wainscot 8' above floor, pre-finished metal wall or liner panels above to roof deck
	Floor	Concrete floor with Epoxy-non-slip & Dust Control Sealant
	Base	No base
	Ceiling	Exposed structure –painted
Plumbing		N/A
HVAC		Heating, ventilation, air conditioning
Fire Protection / Life Safety		
Power		Per UFC 3-520-01 in addition to weapons training system power requirements
Lighting		Per UFC 3-530-01. Lights shall not be placed directly over simulator and require lowering devices for maintenance
Communication	Tele.	One per room
	Data	NIPR
	CCTV	N/A
	CATV	N/A
	Security	Intrusion Detection System and Access Controls
Acoustical		Per UFC 3-450-01 for noise control
Furnishings / Equipment / Casework		
Special Requirements		Bridge Crane, full coverage, 2.5 ton capacity.

Figure 2-B.3.2 Boom Operator Trainer (BOT) Room Data Sheet		
INDEX		B2 (& B5 in 2 Bay Plan)
Description/Usage		Training bay for Boom Operator Training
Ceiling Height		Minimum 25'-0" unobstructed clearances and as required to meet KC-46 Aircrew Training System, Trainer Facilities Report, 26 January 2018, Revision C, Document Number KC46-ENG-15-053, Table 2.2-1a.
Windows		Translucent wall panels for daylighting
Doors	Type	(1) Hollow metal personnel door - 3'x7'
	Security/ Hardware	Access control, LKM10K lock
	View Panels/ Kick Plates	View panels, 5" x 20" at all exterior doors Kick plates on both sides of doors
Finishes	Walls	CMU – painted wainscot 8' above floor, pre-finished metal wall or liner panels above to roof deck
	Floor	Concrete floor with Epoxy-non-slip & Dust Control Sealant
	Base	No base
	Ceiling	Exposed structure –painted
Plumbing		N/A
HVAC		Heating, ventilation, air conditioning
Fire Protection / Life Safety		
Power		Per UFC 3-520-01 in addition to weapons training system power requirements
Lighting		Per UFC 3-530-01. Lights shall not be placed directly over simulator and require lowering devices for maintenance
Communication	Tele.	One per room
	Data	NIPR
	CCTV	N/A
	CATV	N/A
	Security	Intrusion Detection System and Access Controls
Acoustical		Per UFC 3-450-01 for noise control
Furnishings / Equipment / Casework		
Special Requirements		

Figure 2-B.3.3 Part Task Trainer Room Data Sheet		
INDEX		B3 (& B6 in 2 Bay Plan)
Description/Usage		Open office with 3 workstations
Ceiling Height		Minimum 8'-0" unobstructed clearances and as required to meet KC-46 Aircrew Training System, Trainer Facilities Report, 26 January 2018, Revision C, Document Number KC46-ENG-15-053, Table 2.2-1a.
Windows		N/A
Doors	Type	(1) Hollow metal personnel door - 3'x7'
	Security/ Hardware	Access control, LKM10K lock
	View Panels/ Kick Plates	View panels, 5" x 20" Kick plates on both sides of door
Finishes	Walls	Gypsum board - painted
	Floor	Carpet tile
	Base	Resilient
	Ceiling	Acoustical ceiling tile or exposed structure - painted
Plumbing		N/A
HVAC		Heating, ventilation, air conditioning
Fire Protection / Life Safety		Wet pipe sprinkler system
Power		Per UFC 3-520-01
Lighting		Per UFC 3-530-01
Communication	Tele.	One per desk
	Data	NIPR
	CCTV	N/A
	CATV	N/A
	Security	N/A
Acoustical		Per UFC 3-450-01 for noise control
Furnishings / Equipment / Casework		Three (3) workstations
Special Requirements		N/A

Figure 2-C.3.1 Simulator/MX Parts Room Data Sheet		
INDEX		C1
Description/Usage		Tools/parts assembly area with access to Simulator Bay.
Ceiling Height		9’ minimum clearance
Windows		N/A
Doors	Type	(1) Hollow metal personnel door - 3'x7', pair, to Simulator bay, (1) Hollow metal personnel door to exterior
	Security/ Hardware	Keyed lock set
	View Panels/ Kick Plates	View panels, 5” x 20” Kick plates on both sides of doors
Finishes	Walls	CMU - painted
	Floor	Sealed concrete
	Base	No base
	Ceiling	Exposed structure - painted
Plumbing		N/A
HVAC		Heating, ventilation, air conditioning
Fire Protection / Life Safety		Wet pipe sprinkler system
Power		Per UFC 3-520-01
Lighting		Per UFC 3-530-01
Communication	Tele.	One per desk
	Data	NIPR
	CCTV	N/A
	CATV	N/A
	Security	N/A
Acoustical		Per UFC 3-450-01 for noise control
Furnishings / Equipment / Casework		N/A
Special Requirements		N/A

Figure 2-C.3.2 **Computer** Room Data Sheet		
INDEX		C2
Description/Usage		Open office with workstations and computers
Ceiling Height		9'-0" minimum
Windows		N/A
Doors	Type	(1) Hollow metal personnel door - 3'x7', pair
	Security/ Hardware	Keyed lock set
	View Panels/ Kick Plates	View panels, 5" x 20" Kick plates on both sides of doors
Finishes	Walls	Gypsum board - painted
	Floor	24" Access Floor, minimum 12" deep
	Base	Resilient
	Ceiling	Acoustical ceiling tile or exposed structure - painted
Plumbing		N/A
HVAC		Heating, ventilation, air conditioning
Fire Protection / Life Safety		Wet pipe sprinkler system
Power		Per UFC 3-520-01 in addition to computer system requirements
Lighting		Per UFC 3-530-01
Communication	Tele.	One per desk
	Data	NIPR and potentially SIPR based on program requirements.
	CCTV	N/A
	CATV	N/A
	Security	Access Controls
Acoustical		Per UFC 3-450-01 for noise control
Furnishings / Equipment / Casework		
Special Requirements		Moisture Detectors under floor

Figure 2-C.3.3 Maintenance Room Data Sheet		
INDEX		C3 (& C5 in 2 Bay Plan)
Description/Usage		Open Room
Ceiling Height		9'-0" minimum clearance
Windows		No Windows Permitted
Doors	Type	(1) Hollow metal personnel door - 3'x7' - pair
	Security/ Hardware	Keyed lock set
	View Panels/ Kick Plates	No view panels Kick plates on both sides of doors
Finishes	Walls	CMU - painted
	Floor	Sealed concrete
	Base	No base
	Ceiling	Exposed structure - painted
Plumbing		Floor drains as required
HVAC		Heating and ventilation
Fire Protection / Life Safety		Wet pipe sprinkler system
Power		Per UFC 3-520-01
Lighting		Per UFC 3-530-01
Communication	Tele.	One per room
	Data	NIPR
	CCTV	N/A
	CATV	N/A
	Security	N/A
Acoustical		Per UFC 3-450-01 for noise control
Furnishings / Equipment / Casework		N/A
Special Requirements		N/A

Figure 2-C.3.4 Server Room Data Sheet		
INDEX		C4
Description/Usage		Open Room
Ceiling Height		9'-0" minimum clearance
Windows		No Windows Permitted
Doors	Type	(1) Hollow metal personnel door - 3'x7'
	Security/ Hardware	Keyed lock set
	View Panels/ Kick Plates	No view panels Kick plates on both sides of doors
Finishes	Walls	CMU - painted
	Floor	Access Floor, minimum 12” deep
	Base	Resilient
	Ceiling	Exposed structure - painted
Plumbing		Floor drains as required
HVAC		Heating and ventilation
Fire Protection / Life Safety		Wet pipe sprinkler system
Power		Per UFC 3-520-01
Lighting		Per UFC 3-530-01
Communication	Tele.	One per room
	Data	NIPR
	CCTV	N/A
	CATV	N/A
	Security	N/A
Acoustical		Per UFC 3-450-01 for noise control
Furnishings / Equipment / Casework		N/A
Special Requirements		N/A

Figure 2-D.3.1 Lead Instructor's Office Room Data Sheet		
INDEX		D1
Description/Usage		Office with one workstation
Ceiling Height		9'-0" minimum
Windows		Exterior – Aluminum framed, insulated fixed, blast resistant; Meeting daylighting requirements of UFC 1-200-02
Doors	Type	(1) Hollow metal personnel door - 3'x7'
	Security/ Hardware	Keyed lock set
	View Panels/ Kick Plates	View panels, 5" x 20" Kick plates on both sides of door
Finishes	Walls	Gypsum board - painted
	Floor	Carpet tile
	Base	Resilient
	Ceiling	Acoustical Ceiling Tile
Plumbing		N/A
HVAC		Heating, ventilation, air conditioning
Fire Protection / Life Safety		Wet pipe sprinkler system
Power		Per UFC 3-520-01
Lighting		Per UFC 3-530-01
Communication	Tele.	One per desk
	Data	NIPR
	CCTV	N/A
	CATV	N/A
	Security	N/A
Acoustical		Per UFC 3-450-01 for noise control
Furnishings / Equipment / Casework		One (1) workstation
Special Requirements		N/A

Figure 2-D.3.2 Training Manager Office Room Data Sheet		
INDEX		D2
Description/Usage		Office with one workstation
Ceiling Height		9'-0" minimum
Windows		Exterior – Aluminum framed, insulated fixed, blast resistant; Meeting daylighting requirements of UFC 1-200-02
Doors	Type	(1) Hollow metal personnel door - 3'x7'
	Security/ Hardware	Keyed lock set
	View Panels/ Kick Plates	View panels, 5" x 20" Kick plates on both sides of door
Finishes	Walls	Gypsum board - painted
	Floor	Carpet tile
	Base	Resilient
	Ceiling	Acoustical Ceiling Tile
Plumbing		N/A
HVAC		Heating, ventilation, air conditioning
Fire Protection / Life Safety		Wet pipe sprinkler system
Power		Per UFC 3-520-01
Lighting		Per UFC 3-530-01
Communication	Tele.	One per desk
	Data	NIPR
	CCTV	N/A
	CATV	N/A
	Security	N/A
Acoustical		Per UFC 3-450-01 for noise control
Furnishings / Equipment / Casework		One (1) workstation
Special Requirements		N/A

Figure 2-D.3.3 Contracting Officer Representative Room Data Sheet		
INDEX		D3
Description/Usage		Office with one workstation
Ceiling Height		9'-0" minimum
Windows		Exterior – Aluminum framed, insulated fixed, blast resistant; Meeting daylighting requirements of UFC 1-200-02
Doors	Type	(1) Hollow metal personnel door - 3'x7'
	Security/ Hardware	Keyed lock set
	View Panels/ Kick Plates	View panels, 5" x 20" Kick plates on both sides of door
Finishes	Walls	Gypsum board - painted
	Floor	Carpet tile
	Base	Resilient
	Ceiling	Acoustical Ceiling Tile
Plumbing		N/A
HVAC		Heating, ventilation, air conditioning
Fire Protection / Life Safety		Wet pipe sprinkler system
Power		Per UFC 3-520-01
Lighting		Per UFC 3-530-01
Communication	Tele.	One per desk
	Data	NIPR
	CCTV	N/A
	CATV	N/A
	Security	N/A
Acoustical		Per UFC 3-450-01 for noise control
Furnishings / Equipment / Casework		One (1) workstation
Special Requirements		N/A

Figure 2-D.3.4 Site Manager Room Data Sheet		
INDEX		D4
Description/Usage		Office with one workstation
Ceiling Height		9'-0" minimum
Windows		Exterior – Aluminum framed, insulated fixed, blast resistant; Meeting daylighting requirements of UFC 1-200-02
Doors	Type	(1) Hollow metal personnel door - 3'x7'
	Security/ Hardware	Keyed lock set
	View Panels/ Kick Plates	View panels, 5" x 20" Kick plates on both sides of door
Finishes	Walls	Gypsum board - painted
	Floor	Carpet tile
	Base	Resilient
	Ceiling	Acoustical Ceiling Tile
Plumbing		N/A
HVAC		Heating, ventilation, air conditioning
Fire Protection / Life Safety		Wet pipe sprinkler system
Power		Per UFC 3-520-01
Lighting		Per UFC 3-530-01
Communication	Tele.	One per desk
	Data	NIPR
	CCTV	N/A
	CATV	N/A
	Security	N/A
Acoustical		Per UFC 3-450-01 for noise control
Furnishings / Equipment / Casework		One (1) workstation
Special Requirements		N/A

Figure 2-D.3.5 Copy / Storage Room Data Sheet		
INDEX		D5
Description/Usage		Open space with casework for storage and equipment for administrative usage.
Ceiling Height		9'-0" minimum
Windows		Exterior – Aluminum framed, insulated fixed, blast resistant; Meeting daylighting requirements of UFC 1-200-02
Doors	Type	(1) Hollow metal personnel door - 3'x7'
	Security/ Hardware	Keyed lock set
	View Panels/ Kick Plates	View panels, 5" x 20" Kick plates on both sides of door
Finishes	Walls	Gypsum board - painted
	Floor	Carpet tile
	Base	Resilient
	Ceiling	Acoustical Ceiling Tile
Plumbing		N/A
HVAC		Heating, ventilation, air conditioning
Fire Protection / Life Safety		Wet pipe sprinkler system
Power		Per UFC 3-520-01
Lighting		Per UFC 3-530-01
Communication	Tele.	One per desk
	Data	NIPR
	CCTV	N/A
	CATV	N/A
	Security	N/A
Acoustical		Per UFC 3-450-01 for noise control
Furnishings / Equipment / Casework		Casework (upper and lower) Printing and administrative equipment
Special Requirements		N/A

Figure 2-D.3.6 Maintenance Supervisor Room Data Sheet		
INDEX		D6
Description/Usage		Office with one workstations
Ceiling Height		9'-0" minimum
Windows		Exterior – Aluminum framed, insulated fixed, blast resistant; Meeting daylighting requirements of UFC 1-200-02
Doors	Type	(1) Hollow metal personnel door - 3'x7'
	Security/ Hardware	Keyed lock set
	View Panels/ Kick Plates	View panels, 5" x 20" Kick plates on both sides of door
Finishes	Walls	Gypsum board - painted
	Floor	Carpet tile
	Base	Resilient
	Ceiling	Acoustical Ceiling Tile
Plumbing		N/A
HVAC		Heating, ventilation, air conditioning
Fire Protection / Life Safety		Wet pipe sprinkler system
Power		Per UFC 3-520-01
Lighting		Per UFC 3-530-01
Communication	Tele.	One per desk
	Data	NIPR
	CCTV	N/A
	CATV	N/A
	Security	N/A
Acoustical		Per UFC 3-450-01 for noise control
Furnishings / Equipment / Casework		One (1) workstations
Special Requirements		N/A

Figure 2-D.3.7 Test Scheduler Room Data Sheet		
INDEX		D7
Description/Usage		Office with two workstations
Ceiling Height		9'-0" minimum
Windows		Exterior – Aluminum framed, insulated fixed, blast resistant; Meeting daylighting requirements of UFC 1-200-02
Doors	Type	(1) Hollow metal personnel door - 3'x7'
	Security/ Hardware	Keyed lock set
	View Panels/ Kick Plates	View panels, 5" x 20" Kick plates on both sides of door
Finishes	Walls	Gypsum board - painted
	Floor	Carpet tile
	Base	Resilient
	Ceiling	Acoustical Ceiling Tile
Plumbing		N/A
HVAC		Heating, ventilation, air conditioning
Fire Protection / Life Safety		Wet pipe sprinkler system
Power		Per UFC 3-520-01
Lighting		Per UFC 3-530-01
Communication	Tele.	One per desk
	Data	NIPR
	CCTV	N/A
	CATV	N/A
	Security	N/A
Acoustical		Per UFC 3-450-01 for noise control
Furnishings / Equipment / Casework		Two (2) workstations
Special Requirements		N/A

Figure 2-D.3.8 Site Administration Room Data Sheet		
INDEX		D8
Description/Usage		Office with three workstations
Ceiling Height		9'-0" minimum
Windows		Exterior – Aluminum framed, insulated fixed, blast resistant; Meeting daylighting requirements of UFC 1-200-02
Doors	Type	(1) Hollow metal personnel door - 3'x7'
	Security/ Hardware	Keyed lock set
	View Panels/ Kick Plates	View panels, 5" x 20" Kick plates on both sides of door
Finishes	Walls	Gypsum board - painted
	Floor	Carpet tile
	Base	Resilient
	Ceiling	Acoustical Ceiling Tile
Plumbing		N/A
HVAC		Heating, ventilation, air conditioning
Fire Protection / Life Safety		Wet pipe sprinkler system
Power		Per UFC 3-520-01
Lighting		Per UFC 3-530-01
Communication	Tele.	One per desk
	Data	NIPR
	CCTV	N/A
	CATV	N/A
	Security	N/A
Acoustical		Per UFC 3-450-01 for noise control
Furnishings / Equipment / Casework		Three (3) workstations
Special Requirements		N/A

Figure 2-D.3.9 Conference Room Data Sheet		
INDEX		D9
Description/Usage		Office with large table and chairs for 16-20 people
Ceiling Height		9'-0" minimum
Windows		Exterior – Aluminum framed, insulated fixed, blast resistant; Meeting daylighting requirements of UFC 1-200-02
Doors	Type	(1) Hollow metal personnel door - 3'x7'
	Security/ Hardware	Keyed lock set
	View Panels/ Kick Plates	View panels, 5" x 20" Kick plates on both sides of door
Finishes	Walls	Gypsum board - painted
	Floor	Carpet tile
	Base	Resilient
	Ceiling	Acoustical Ceiling Tile
Plumbing		N/A
HVAC		Heating, ventilation, air conditioning
Fire Protection / Life Safety		Wet pipe sprinkler system
Power		Per UFC 3-520-01
Lighting		Per UFC 3-530-01
Communication	Tele.	One per room
	Data	NIPR
	CCTV	N/A
	CATV	N/A
	Security	N/A
Acoustical		Per UFC 3-450-01 for noise control
Furnishings / Equipment / Casework		One (1) powered conference table for 16; 18 extra chairs at wall
Special Requirements		N/A

Figure 2-D.3.10 Break Room Data Sheet		
INDEX		D10
Description/Usage		Small area for staff food preparation and storage with a counter, cabinets, sink, microwaves, refrigerators, ice maker, with 4-5 four-person tables and a recycling area
Ceiling Height		9'-0" minimum
Windows		Exterior – Aluminum framed, insulated fixed, blast resistant; Meeting daylighting requirements of UFC 1-200-02
Doors	Type	(1) Hollow metal personnel door - 3'x7'
	Security/ Hardware	N/A
	View Panels/ Kick Plates	N/A
Finishes	Walls	Gypsum board - painted
	Floor	Vinyl Composition Tile (VCT)
	Base	Resilient
	Ceiling	Acoustical Ceiling Tile
Plumbing		Sink with disposal, electric water cooler. Water for ice machine.
HVAC		Heating, ventilation, air conditioning
Fire Protection / Life Safety		Wet pipe sprinkler system
Power		Per UFC 3-520-01
Lighting		Per UFC 3-530-01
Communication	Tele.	N/A
	Data	N/A
	CCTV	N/A
	CATV	N/A
	Security	N/A
Acoustical		Per UFC 3-450-01 for noise control
Furnishings / Equipment / Casework		Counter, cabinets, tables with chairs
Special Requirements		Recycling Area

Figure 2-D.3.11 Instructors Room Data Sheet		
INDEX		D11
Description/Usage		Room for 16 small hot desks/stations
Ceiling Height		9'-0" minimum
Windows		Exterior – Aluminum framed, insulated fixed, blast resistant; Meeting daylighting requirements of UFC 1-200-02
Doors	Type	(1) Hollow metal personnel door - 3'x7'
	Security/ Hardware	Keyed lock set
	View Panels/ Kick Plates	View panels, 5" x 20" Kick plates on both sides of door
Finishes	Walls	Gypsum board - painted
	Floor	Carpet tile
	Base	Resilient
	Ceiling	Acoustical Ceiling Tile
Plumbing		N/A
HVAC		Heating, ventilation, air conditioning
Fire Protection / Life Safety		Wet pipe sprinkler system
Power		Per UFC 3-520-01
Lighting		Per UFC 3-530-01
Communication	Tele.	One per desk
	Data	NIPR
	CCTV	N/A
	CATV	N/A
	Security	N/A
Acoustical		Per UFC 3-450-01 for noise control
Furnishings / Equipment / Casework		16 Hot Desks, printers, and file storage
Special Requirements		N/A

Figure 2-E.3.1 Men's Toilet Room Data Sheet		
INDEX		E1
Description/Usage		Men's Toilet
Ceiling Height		8'-0" minimum
Windows		No Windows Permitted
Doors	Type	(1) Hollow metal personnel door - 3'x7'
	Security/ Hardware	Privacy lock set
	View Panels/ Kick Plates	No view panels Kick plates on both sides of door
Finishes	Walls	Gypsum board - painted
	Floor	Porcelain tile or quartz epoxy
	Base	Porcelain tile or quartz epoxy
	Ceiling	Gypsum board - painted
Plumbing		Water closets, urinals, lavatories. Floor drain in restroom area.
HVAC		Heating, ventilation, air conditioning. Exhaust directly outdoors.
Fire Protection / Life Safety		Wet pipe sprinkler system
Power		Per UFC 3-520-01
Lighting		Per UFC 3-530-01
Communication	Tele.	N/A
	Data	N/A
	CCTV	N/A
	CATV	N/A
	Security	N/A
Acoustical		Per UFC 3-450-01 for noise control
Furnishings / Equipment / Casework		N/A
Special Requirements		Water-resistant gypsum board throughout

Figure 2-E.3.2 Women's Toilet Room Data Sheet		
INDEX		E2
Description/Usage		Women's toilet
Ceiling Height		8'-0" minimum
Windows		No Windows Permitted
Doors	Type	(1) Hollow metal personnel door - 3'x7'
	Security/ Hardware	Privacy lock set
	View Panels/ Kick Plates	No view panels Kick plates on both sides of door
Finishes	Walls	Gypsum board - painted
	Floor	Porcelain tile or quartz epoxy
	Base	Porcelain tile or quartz epoxy
	Ceiling	Gypsum board - painted
Plumbing		Water closets, lavatories. Floor drain in restroom area.
HVAC		Heating, ventilation, air conditioning. Exhaust directly outdoors.
Fire Protection / Life Safety		Wet pipe sprinkler system
Power		Per UFC 3-520-01
Lighting		Per UFC 3-530-01
Communication	Tele.	N/A
	Data	N/A
	CCTV	N/A
	CATV	N/A
	Security	N/A
Acoustical		Per UFC 3-450-01 for noise control
Furnishings / Equipment / Casework		N/A
Special Requirements		Water-resistant gypsum board throughout

Figure 2-E.3-3 Janitor Room Data Sheet		
INDEX		E3
Description/Usage		Custodial room for general maintenance of facility
Ceiling Height		9'-0" minimum
Windows		No Windows Permitted
Doors	Type	(1) Hollow metal personnel door - 3'x7'
	Security/ Hardware	Keyed lock set
	View Panels/ Kick Plates	No view panels Kick Plates both sides of door
Finishes	Walls	Gypsum board - painted, ceramic tile at mop sink
	Floor	Porcelain tile or quartz epoxy
	Base	Porcelain tile or quartz epoxy
	Ceiling	Gypsum board - painted
Plumbing		Mop sink, floor drain
HVAC		Heating, ventilation, air conditioning. Exhaust directly outdoors.
Fire Protection / Life Safety		Wet pipe sprinkler system
Power		Per UFC 3-520-01
Lighting		Per UFC 3-530-01
Communication	Tele.	N/A
	Data	N/A
	CCTV	N/A
	CATV	N/A
	Security	N/A
Acoustical		Per UFC 3-450-01 for noise control
Furnishings / Equipment / Casework		N/A
Special Requirements		Water resistant gypsum board throughout.

Figure 2-F.3.1 Mechanical Room Data Sheet		
INDEX		F1
Description/Usage		Mechanical equipment
Ceiling Height		No ceiling, 9'-0" minimum clearance
Windows		No Windows Permitted
Doors	Type	(1) Hollow metal personnel door - 3'x7', single or pair, to exterior
	Security/ Hardware	Keyed lock set
	View Panels/ Kick Plates	No view panels Kick plates on both sides of doors
Finishes	Walls	CMU - painted
	Floor	Sealed Concrete
	Base	No base
	Ceiling	Exposed structure - painted
Plumbing		Floor drains as required
HVAC		Heating and ventilation
Fire Protection / Life Safety		Wet pipe sprinkler system
Power		Per UFC 3-520-01
Lighting		Per UFC 3-530-01
Communication	Tele.	One per room
	Data	NIPR
	CCTV	N/A
	CATV	N/A
	Security	N/A
Acoustical		Per UFC 3-450-01 for noise control
Furnishings / Equipment / Casework		N/A
Special Requirements		N/A

Figure 2-F.3.2 Electrical Room Data Sheet		
INDEX		F2
Description/Usage		Electrical equipment
Ceiling Height		No ceiling, 9'-0 minimum clearance
Windows		No Windows Permitted
Doors	Type	(1) Hollow metal personnel door - 3'x7', single or pair, to exterior
	Security/ Hardware	Keyed lock set
	View Panels/ Kick Plates	No view panels Kick plates on both sides of doors
Finishes	Walls	CMU - painted
	Floor	Concrete floor with Epoxy-non-slip & Dust Control Sealant
	Base	No base
	Ceiling	Exposed structure - painted
Plumbing		N/A
HVAC		Heating and ventilation
Fire Protection / Life Safety		Wet pipe sprinkler system
Power		Per UFC 3-520-01
Lighting		Per UFC 3-530-01
Communication	Tele.	N/A
	Data	NIPR
	CCTV	N/A
	CATV	N/A
	Security	N/A
Acoustical		N/A
Furnishings / Equipment / Casework		N/A
Special Requirements		N/A

Figure 2-F.3.3 Communications Room Data Sheet		
INDEX		F3
Description/Usage		Communications equipment
Ceiling Height		No ceiling, 9'-0 minimum clearance
Windows		No Windows Permitted
Doors	Type	(1) Hollow metal personnel door - 3'x7', single
	Security/ Hardware	Keyed lock set
	View Panels/ Kick Plates	No view panels Kick plates on both sides of door
Finishes	Walls	CMU - painted
	Floor	Sealed concrete
	Base	No base
	Ceiling	Exposed structure - painted
Plumbing		N/A
HVAC		Heating, ventilation and air conditioning. Dedicated unit required.
Fire Protection / Life Safety		Wet pipe sprinkler system
Power		Per UFC 3-520-01
Lighting		Per UFC 3-530-01
Communication	Tele.	N/A
	Data	Per UFC 3-580-01
	CCTV	N/A
	CATV	N/A
	Security	N/A
Acoustical		N/A
Furnishings / Equipment / Casework		N/A
Special Requirements		N/A

Figure 2.F.3.4 UPS Room Data Sheet		
INDEX		F4
Description/Usage		UPS equipment
Ceiling Height		No ceiling, 9'-0" minimum clearance
Windows		No Windows Permitted
Doors	Type	(1) Hollow metal personnel door - 3'x7', single or pair, to exterior
	Security/ Hardware	Keyed lock set
	View Panels/ Kick Plates	No view panels Kick plates on both sides of doors
Finishes	Walls	CMU - painted
	Floor	Sealed concrete
	Base	No base
	Ceiling	Exposed structure - painted
Plumbing		Floor drains as required
HVAC		Heating and ventilation
Fire Protection / Life Safety		Wet pipe sprinkler system
Power		Per UFC 3-520-01
Lighting		Per UFC 3-530-01
Communication	Tele.	N/A
	Data	NIPR
	CCTV	N/A
	CATV	N/A
	Security	N/A
Acoustical		Per UFC 3-450-01 for noise control
Furnishings / Equipment / Casework		N/A
Special Requirements		N/A

Figure 2-F.3.5 Fire Pump Room Data Sheet		
INDEX		F5
Description/Usage		Fire pump equipment
Ceiling Height		No ceiling, 9'-0" minimum clearance
Windows		No Windows Permitted
Doors	Type	(1) Hollow metal personnel door - 3'x7', single or pair, to exterior
	Security/ Hardware	Keyed lock set
	View Panels/ Kick Plates	No view panels Kick plates on both sides of doors
Finishes	Walls	CMU - painted
	Floor	Sealed concrete
	Base	No base
	Ceiling	Exposed structure - painted
Plumbing		Floor drains as required
HVAC		Heating and ventilation. Air conditioning required in foam equipment room with releasing panel per UFC 3-600-01.
Fire Protection / Life Safety		Wet pipe sprinkler system
Power		Per UFC 3-520-01
Lighting		Per UFC 3-530-01
Communication	Tele.	N/A
	Data	NIPR
	CCTV	N/A
	CATV	N/A
	Security	N/A
Acoustical		N/A
Furnishings / Equipment / Casework		N/A
Special Requirements		N/A

Entrance & Circulation Room Data Sheet		
Description/Usage		This data sheet is for the building entrance and general circulation or corridor spaces not associated with individual modules. Main entry point to have covered entrance canopy.
Ceiling Height		9'-0" minimum
Windows		N/A
Doors	Type	Hollow metal, 3'x7' (egress)
	Security/ Hardware	Keyed lock set
	View Panels/ Kick Plates	N/A Kick plates both sides of door
Finishes	Walls	CMU – painted or gypsum board - painted
	Floor	Sealed concrete, stained concrete or tile
	Base	Resilient or tile
	Ceiling	Acoustical ceiling tile or exposed structure - painted
Plumbing		N/A
HVAC		Heated and air conditioned
Fire Protection		Wet pipe sprinkler system
Power		Per UFC 3-520-01
Lighting		Per UFC 3-530-01
Communication	Tele.	N/A
	Data	N/A
	CCTV	N/A
	CATV	N/A
	Security	N/A
Acoustical Requirements		N/A
Furnishings, Equipment and Casework		N/A
Special Requirements		N/A

2.4.F. Floor Plan

The floor plan below is a composite of the Modules within the approved Functional Adjacency Diagram which is based on the criteria listed within this Standard Design document. The scaled drawing showing conceptual fixture and furniture information is located within the Standard Design drawings.

DRAWINGS NOT TO SCALE

The floor plan below is a composite of the 1 Bay Simulator Facility Modules with additional spaces and rooms provided as required to meet the 2 Bay facility specifications. This layout meets the approved Functional Adjacency Diagram which is based on the criteria listed within this Standard Design document. The scaled drawing showing conceptual fixture and furniture information is located within the Standard Design drawings.

DRAWINGS NOT TO SCALE

2.4.G. Interactive Programming Worksheet

This tool is provided in two formats. A snapshot of the programming sheet is provided in this section primarily as a reference and reflects the baseline standard facility program based on the criteria as discussed in this document. The additional interactive programming sheet provides a tool for planners and programmers. It allows the input of authorized personnel positions and special purpose spaces. Updated inputs are automatically calculated and provide new required square footage for each space and the estimated overall facility size.

1 Bay Programming Worksheet

INTERACTIVE PROGRAMMING WORKSHEET

MODULE NO.	AREA	NO. OCCUP	SF PER USER	NO. OF ROOMS REQUIRED	INDIVIDUAL ROOM RQRMNTS	NET USER REQUIREMENTS		COMMENTS
					SF	SF	SM	
A	ACADEMIC INSTRUCTION							
A1	LEARNING CENTER			1	480	480	44.59	1
A2	CLASSROOM			1	500	500	46.45	1
A3	MISSION PLANNING			1	480	480	44.59	1
A4	LARGE BRIEFING			1	235	235	21.83	1
A5-A8	SMALL BRIEFING			4	140	560	52.02	1
	SUBTOTAL ACADEMIC INSTRUCTION AREA					**2,255**	**209.49**	
B	DEMONSTRATION INSTRUCTION							
B1	WEAPON SYSTEM TRAINER (WST)			1	2,510	2,510	233.18	1
B2	BOOM OPERATOR TRAINER (BOT)			1	1,015	1,015	94.29	1
B3	PARTS/ TASK TRAINER			1	150	150	13.94	1
	SUBTOTAL DEMONSTRATION INSTRUCTION AREA					**3,675**	**341.41**	
C	EQUIPMENT SUPPORT							
C1	SIMULATOR MX / PARTS			1	1,800	1,800	167.22	1
C2	COMPUTER ROOM			1	685	685	63.64	1
C3	MAINTENANCE			1	200	200	18.58	1
C4	SERVER			1	95	95	8.83	1
	SUBTOTAL EQUIPMENT SUPPORT AREA					**2,780**	**258.26**	
D	STAFF PERSONNEL							
D1	LEAD INSTRUCTORS OFFICE			1	115	115	10.68	1,4
D1	TRAINING MANAGER			1	115	115	10.68	1,4
D2	CONTRACTING OFFICER REPRESENTATIVE			1	115	115	10.68	1,4
D3	SITE MANAGER			1	115	115	10.68	1,4
D4	COPY / STORAGE			1	150	150	13.94	1,4
D5	MAINTENANCE SUPERVISOR			1	120	120	11.15	1,4
D6	TEST SCHEDULER			1	295	295	27.41	1,4
D7	SITE ADMINISTRATION			1	480	480	44.59	1,4
D8	CONFERENCE			1	480	480	44.59	1,4
D9	BREAK ROOM			1	480	480	44.59	1,4
D10	INSTRUCTORS			1	480	480	44.59	1,4
	SUBTOTAL STAFF PERSONNEL AREA					**2,945**	**273.59**	
E	TOILET							
E1	MEN'S TOILET			1	240	240	22.30	6
E2	WOMEN'S TOILET			1	225	225	20.90	6
E3	JANITOR			1	30	30	2.79	
	SUBTOTAL TOILET AREA					**495**	**45.99**	
F	BUILDING SUPPORT							
F1	MECHANICAL ROOM			1	1,245	1,245	115.66	7
F2	ELECTRICAL ROOM			1	120	120	11.15	7
F3	TELECOMMUNICATIONS			1	120	120	11.15	7
F4	UPS			1	120	120	11.15	7
F5	FIRE PUMP			1	200	200	18.58	7
	SUBTOTAL BUILDING SUPPORT AREA					**1,805**	**167.68**	
	CIRCULATION							
	CORRIDOR			1	1,355	1,355	125.88	
	SECURE CORRIDOR			1	485	485	45.06	
	SUBTOTAL CIRCULATION AREA					**1,840**	**170.94**	
	TOTAL FACILITY NET FLOOR AREA					**13,990**	**1,299.67**	
	CIRCULATION MULTIPLIER	5.0%				14,690		
	NET TO GROSS MULTIPLIER	16.0%				17,040		
	TOTAL FACILITY GROSS ARE (ROUNDED)					**17,100**	**1,583**	8,9,10

COMMENTS:

1. Rooms as per Traing Facilities Report (KC-46 Aircrew Training System FA8621-13-C-6247, January 26, 2018 Revision C, Document Number KC46-ENG-15-053; Part 2.0 Specific Requirements, 2.2 Architectural, Table 2.2-1a: Typical Room Dimensions - Flight Training Center (FTC) Building.
2. These spaces per Traing Facilities Report (KC-46 Aircrew Training System FA8621-13-C-6247, January 26, 2018 Revision C, Document Number KC46-ENG-15-053; Part 2.0 Specific Requirements, 2.2 Architectural, Table 2.2-5: Personnel Occupancy.
3. Reference Tables in Chapter 6 of Air Force Manual 32-1084 for additional information.
4. Administration Area include circulation factor of 10% per Chapter 1 Air Force Manual 32-1084.
5. Special Purpose Space, per Air Force Manual 32-1084, Table 6.3.
6. Male/Female ratio of 60/40. Actual fixture count shall be based on International Plumbing Code, latest editon, Chapter 29 and the UFC 3-420-01, latest edition, Plumbing Systems. This ratio shall be verified at each installation
7. Building Support areas are estimates only and actual size is dependent on requirements for climate zone, location, system, etc.
(Sq. Ft. not included in Total Facility Net Floor Area as this area is included in Net to Gross Multiplier)
8. Per AFM 32-1084 Chapter 1, net-to-gross multiplier of up to 25%, used 16% per Standard Design Plan which would include any additional Building Support Areas that may be required. Also included in multipliers are column furr-outs and mechanical/plumbing chases.
9. All area SF's are rounded to the nearest whole 5 number.
10. This worksheet represents a one-bay facility rounded up to 17,100 Square Feet.

2 Bay Programming Worksheet

INTERACTIVE PROGRAMMING WORKSHEET

MODULE NO.	AREA	NO. OCCUP	SF PER USER	NO. OF ROOMS REQUIRED	INDIVIDUAL ROOM RQRMNTS	NET USER REQUIREMENTS		COMMENTS
					SF	SF	SM	
A	ACADEMIC INSTRUCTION							
A1	LEARNING CENTER			1	480	480	44.59	1
A2	CLASSROOM			1	500	500	46.45	1
A3	MISSION PLANNING			1	480	480	44.59	1
A4 & A12	LARGE BRIEFING			2	245	490	45.52	1
A5-A11	SMALL BRIEFING			7	145	1,015	94.29	1
	SUBTOTAL ACADEMIC INSTRUCTION AREA					**2,965**	**275.45**	
B	DEMONSTRATION INSTRUCTION							
B1 & B4	WEAPON SYSTEM TRAINER (WST)			2	2,510	5,020	466.36	1
B2 & B5	BOOM OPERATOR TRAINER (BOT)			2	1,015	2,030	188.59	1
B3 & B6	PARTS/ TASK TRAINER			2	150	300	27.87	1
	SUBTOTAL DEMONSTRATION INSTRUCTION AREA					**7,350**	**682.82**	
C	EQUIPMENT SUPPORT							
C1	SIMULATOR MX / PARTS			1	1,800	1,800	167.22	1
C2	COMPUTER ROOM			1	685	685	63.64	1
C3 & C6	MAINTENANCE			2	200	400	37.16	1
C4	SERVER			1	95	95	8.83	1
	SUBTOTAL EQUIPMENT SUPPORT AREA					**2,980**	**276.84**	
D	STAFF PERSONNEL							
D1	LEAD INSTRUCTOR'S OFFICE			1	115	115	10.68	1,4
D2	TRAINING MANAGER			1	115	115	10.68	1,4
D3	CONTRACTING OFFICER REPRESENTATIVE			1	115	115	10.68	1,4
D4	SITE MANAGER			1	115	115	10.68	1,4
D5	COPY / STORAGE			1	150	150	13.94	1,4
D6	MAINTENANCE SUPERVISOR			1	120	120	11.15	1,4
D7	TEST SCHEDULER			1	295	295	27.41	1,4
D8	SITE ADMINISTRATION			1	480	480	44.59	1,4
D9	CONFERENCE			1	480	480	44.59	1,4
D10	BREAK ROOM			1	480	480	44.59	1,4
D11	INSTRUCTORS			1	480	480	44.59	1,4
	SUBTOTAL STAFF PERSONNEL AREA					**2,945**	**273.59**	
E	TOILET							
E1	MEN'S TOILET			1	260	260	24.15	6
E2	WOMEN'S TOILET			1	240	240	22.30	6
E3	JANITOR			1	30	30	2.79	
	SUBTOTAL TOILET AREA					**530**	**49.24**	
F	BUILDING SUPPORT							
F1	MECHANICAL ROOM			1	1,245	1,245	115.66	7
F2	ELECTRICAL ROOM			1	120	120	11.15	7
F3	TELECOMMUNICATIONS			1	120	120	11.15	7
F4	UPS			1	120	120	11.15	7
F5	FIRE PUMP			1	200	200	18.58	7
	SUBTOTAL BUILDING SUPPORT AREA					**1,805**	**167.68**	
	CIRCULATION							
	CORRIDOR			1	1,310	1,310	121.70	
	SECURE CORRIDOR			1	795	795	73.86	
	SUBTOTAL CIRCULATION AREA					**2,105**	**195.55**	
	TOTAL FACILITY NET FLOOR AREA					**18,875**	**1,753.49**	
	CIRCULATION MULTIPLIER	9.5%				20,670		
	NET TO GROSS MULTIPLIER	8.5%				22,425		
	TOTAL FACILITY GROSS ARE (ROUNDED)					**22,500**	**2,083**	8,9,10

COMMENTS:

1	Rooms as per Traing Facilities Report (KC-46 Aircrew Training System FA8621-13-C-6247, January 26, 2018 Revision C, Document Number KC46-ENG-15-053; Part 2.0 Specific Requirements, 2.2 Architectural, Table 2.2-1a: Typical Room Dimensions - Flight Training Center (FTC) Building.
2	These spaces per Traing Facilities Report (KC-46 Aircrew Training System FA8621-13-C-6247, January 26, 2018 Revision C, Document Number KC46-ENG-15-053; Part 2.0 Specific Requirements, 2.2 Architectural, Table 2.2-5: Personnel Occupancy.
3	Reference Tables in Chapter 6 of Air Force Manual 32-1084 for additional information.
4	Administration Area include circulation factor of 10% per Chapter 1 Air Force Manual 32-1084.
5	Special Purpose Space, per Air Force Manual 32-1084, Table 6.3.
6	Male/Female ratio of 60/40. Actual fixture count shall be based on International Plumbing Code, latest editon, Chapter 29 and the UFC 3-420-01, latest edition, Plumbing Systems. This ratio shall be verified at each installation.
7	Building Support areas are estimates only and actual size is dependent on requirements for climate zone, location, system, etc. (Sq. Ft. not included in Total Facility Net Floor Area as this area is included in Net to Gross Multiplier)
8	Per AFM 32-1084 Chapter 1, net-to-gross multiplier of up to 25%, used 12% per Standard Design Plan which would include any additional Building Support Areas that may be required. Also included in multipliers are column furr-outs and mechanical/plumbing chases.
9	All area SF's are rounded to the nearest whole 5 number.
10	This worksheet represents a two-bay facility rounded up to 22,500 Square Feet.