

STANDARD DESIGN

**AIR FORCE
CIVIL ENGINEER SQUADRON
PEST MANAGEMENT**



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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 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 CES Pest Management 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 CES Pest Management 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 personnel and requirements for the maintenance and pesticide areas of the facility. 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 CES Pest Management Facility is to provide a facility that fully supports the mission with a flexible state-of-the-art building. The facility supports pesticide storage and maintenance operations within a standalone facility. The facility is comprised of storage and administrative/support areas. CES Pest Management 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):

Area Modules

- Pesticide Module
 - Insecticide Storage, Mixing Room, Herbicide Storage
- Maintenance Module
 - Wash Down Area, Equipment Area
- Administration Module
 - Superintendent Office
- Administration Support Module
 - Break Room, Laundry/Janitor Room, Storage
- Toilets/Showers/Lockers
 - Men’s Toilet/Locker/Shower, Women’s Toilet/ Locker/Shower
- Building Support Module
 - Electrical Room, Mechanical Room, IT/Telecommunications Room

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.

Hours of operation for this facility type are user driven and typically only require a single shift for approximately 4-6 personnel.

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 3, Facility Class 2, Maintenance Facilities, Category Group 21, Maintenance Facilities, Base Engineer Covered Storage Facility CATCODE 219946 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 3-250-03	Standard Practice Manual for Flexible Pavement
UFC 3-250-04	Standard Practice for Concrete Pavements

UFC 3-260-01	Airfield and Heliport Planning and Design
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 4-020-01	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
USGBC LEED-NC	LEED for New Construction and Major Renovations Rating System (U.S. Green Building Council)

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, Change 1, UFC 4-010-05 Sensitive Compartmented Information Facilities Planning, Design, and Construction and ICD/ICS 705 Technical Specifications for Construction and Management of Sensitive Compartmented Information Facilities. Internal security measures include designated 'non-secure' and 'secure' areas within the building with access to secure areas 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. 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. The location of the facility is determined by the base master plan and is generally located in a specific geographic area or 'zone' of the base.

Location of the Pest Management Building should be selected to avoid potential adverse impacts to threatened, endangered, and at-risk species. Facilities shall be sited at least 100 feet from other structures. Site the Pest Management Building a minimum of 200 feet from surface water, existing wells and cisterns, or 100-year flood plain levels. Site pest management facilities downhill from any sensitive areas (e.g., wells, cisterns, etc.), or provide diking (essential) where space is limited. Do not site facility in locations prone to flooding. Consideration must also be given to prevailing wind conditions and the location of populated areas. Facilities shall not be located uphill from potable water sources or continuously occupied structures. Facilities should not be sited over aquifers (subsurface potable water supplies) unless the aquifer is adequately protected through containment measures.

Provide outdoor areas for medium and large pest management facilities consistent with provisions for the safe filling and mixing of pesticide equipment on vehicles and trailer-mounted equipment. Provide adequate space to park all pesticide dispersal equipment inside the pest management complex and under cover. The part of the compound to be used for cleaning and filling equipment shall be paved as a concrete hardstand.

Provide a covered outdoor hardstand and parking apron for vehicles and equipment consisting of a concrete pad sufficiently large to park a truck and trailer (minimum 15 feet by 25 feet). Slope (3/100) hardstand pad to a sump fitted with a removable grate cover suitable for anticipated vehicular traffic load. Size sump for a minimum of 110 percent of the capacity of the largest bulk liquid pesticide container anticipated to be used at the facility. Provide a curb (minimum 4 inches) at the low edge of the pad to direct liquid (spills and rain) into the sump. Provide an emergency eye wash and deluge shower in accordance with Federal Specification WW-P-541/7C, Plumbing Fixtures (Shower Bath and Emergency Eye and Face Wash Outfits) with manually-operated, delayed-closing valves located adjacent to the mixing site unless devices inside the facility are accessible within 10 seconds from the outdoor mixing site. A canopy roof over the hardstand (extending out far enough to prevent driving rains from entering hardstand area) should be provided to protect parked vehicles and equipment and to minimize accumulation of water.

Other hardstand and site requirements shall be in accordance with the requirements of Technical Guide No. 17

The approximate project area required for the CES Pest Management Facility is 6.0 acres, which includes antiterrorism standoff, future building expansion. Utilization of existing or shared parking is allowable and may reduce the total acreage required for the facility.

2.3.B. Parking

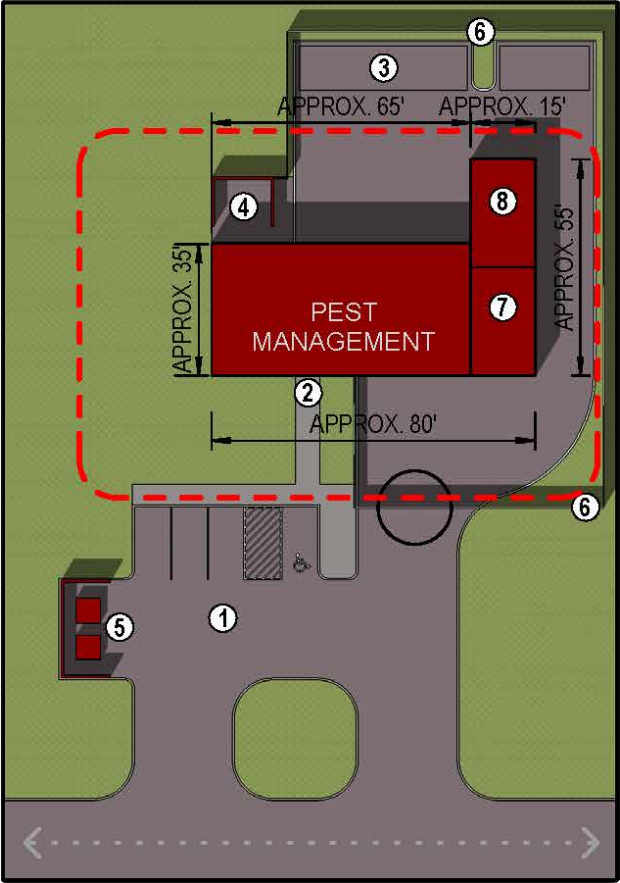
Parking is recommended to be provided to accommodate 60 percent of the assigned personnel to the facility plus additional parking for government vehicles. Government vehicle parking will be located in designated areas behind the secure fenced area at the rear of the facility, and visitor and staff vehicle parking will be located outside the secure fenced area.

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, garbage and 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



NOTES:

- ① POV PARKING LOT
- ② PRIMARY BUILDING ENTRY
- ③ GOV PARKING - COVERED OPTIONAL
- ④ SCREENED UTILITY YARD
- ⑤ DUMPSTER ENCLOSURE
- ⑥ SECURITY FENCE
- ⑦ HARDSTAND CANOPY
- ⑧ CLEANING/FILLING HARDSTAND

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 Pesticide and Maintenance areas.
- The functional relationships between the modules as well as within the modules
- The general personnel flow requirements within the facility.

Daily shift personnel enter the facility through the primary building entrance.

The Building Support Module needs exterior access.

Other general considerations include:

- The sizing for appropriate ventilation and storage requirements within the Pesticide and Maintenance

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 of personnel and requirements and configurations for the Pesticide, Maintenance, and Storage areas. The general configuration of the building is a linear type configuration.

2.4.C. Interior/Exterior Relationships

This facility is a mix of administrative and storage occupants and a single main point of entry with two entrance/egress points at primary corridor spine. Visitor and clients will enter facility through main entrance vestibule to a small lobby area. All modules are accessed from a linear double loaded corridor with exception of Pesticide Module which is accessed from Maintenance Module.

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 in Chapter 3.

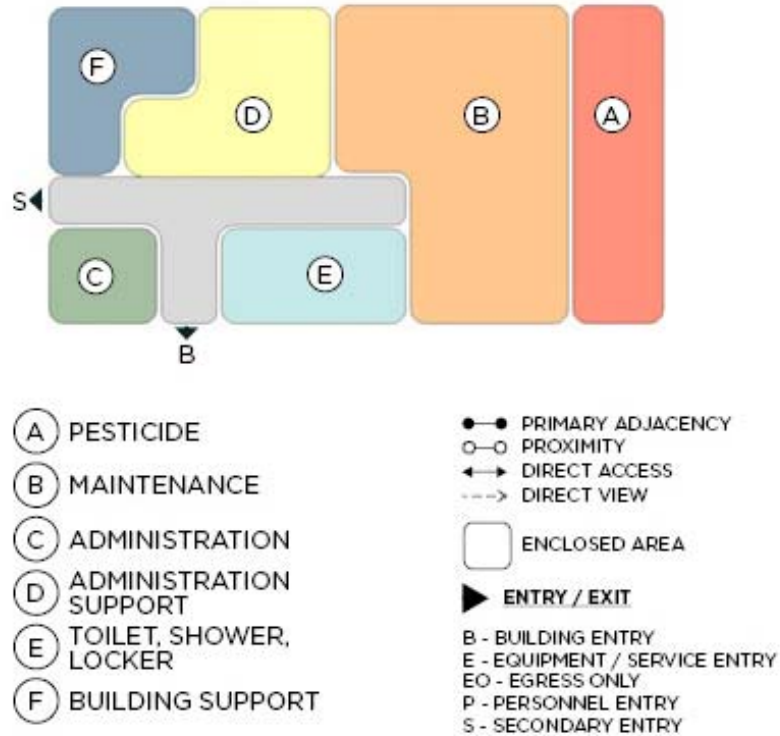
The modules are a grouping of functional spaces and represent “Lego blocks” to be used in a “kit-of-parts” design approach. Use the fixed modules as pre-assembled pieces of the facility “puzzle”. Assemble them to comply with the required adjacencies indicated in the diagrams and module plans.

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 will form the basis of design for the Standard Design plan for a typical CES Pest Management sized for 4 – 6 personnel. This Facility Adjacency Diagram and as well as the modules is the Air Force approved Standard Design plan.



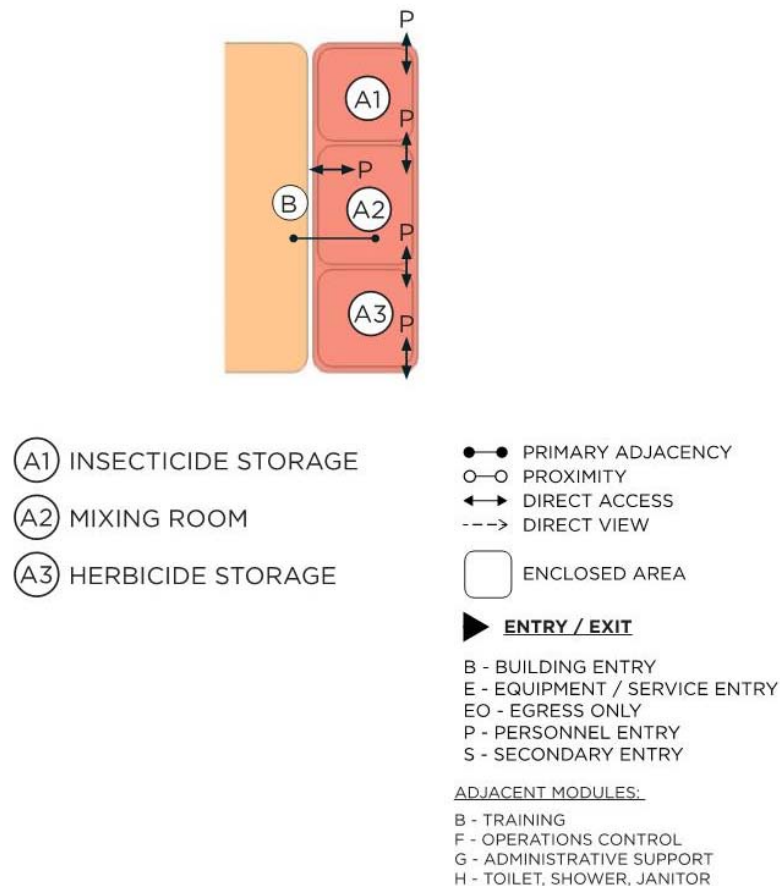
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MODULE A – PESTICIDE

Function and Adjacency

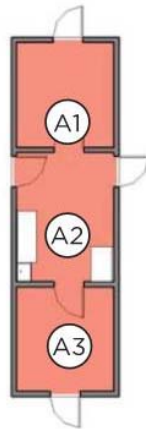
The Pesticide Module is comprised of an Insecticide Storage Room, an Herbicide Storage Room and a Mixing Room. These spaces to be separated by CMU or metal stud/gypsum board wall construction. This module is adjacent to the Maintenance Module.

Figure 2-A.1 Module A Adjacency Diagram

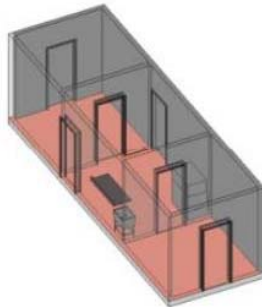


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Pesticide
Figure 2-A.2 Module A Floor Plan & Axonometric



- (A1) INSECTICIDE STORAGE
 - (A2) MIXING ROOM
 - (A3) HERBICIDE STORAGE
- MODULE NET AREA: 300 SF



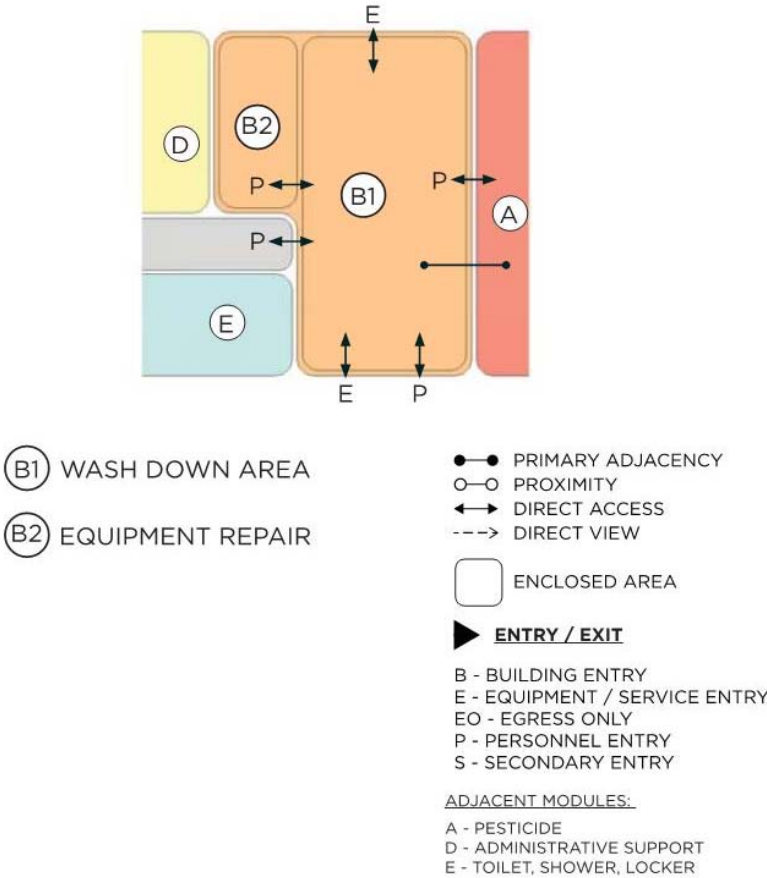
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MODULE B – MAINTENANCE

Function and Adjacency

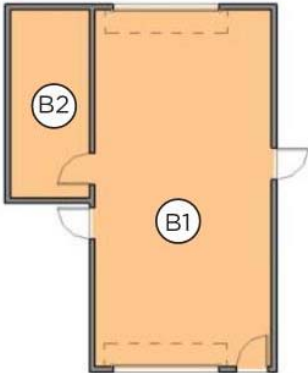
The Maintenance Module is comprised of an Equipment Repair Room and a Wash Down Area. These spaces can be separated by CMU wall construction. This module is accessible via the main circulation corridor and is adjacent to the Pesticide Module.

Figure 2-B.1 Module B Adjacency Diagram



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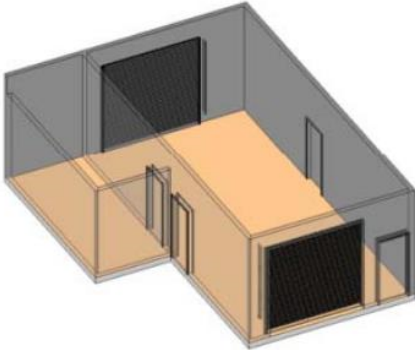
Maintenance
Figure 2-B.2 Module B Floor Plan & Axonometric



ⓑ1 WASH DOWN AREA

ⓑ2 EQUIPMENT REPAIR

MODULE NET AREA: 675 SF



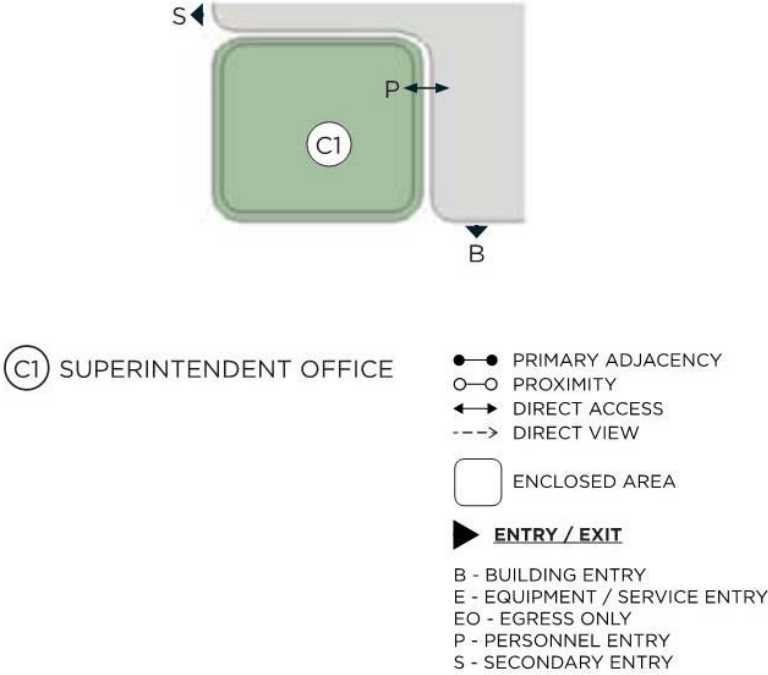
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MODULE C – ADMINISTRATION

Function and Adjacency

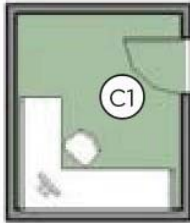
The Administration Module is a single Superintendent Office. The enclosed office space can be separated by demountable partitions, systems furniture or metal stud/gypsum board wall construction. This module is accessible via the main circulation corridor.

Figure 2-C.1 Module C Adjacency Diagram

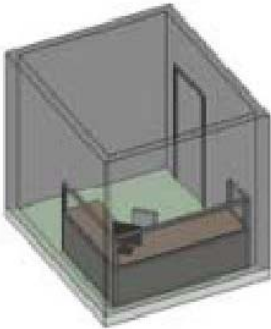


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Administration
Figure 2-C.2 Module C Floor Plan & Axonometric



Ⓢ SUPERINTENDENT OFFICE
MODULE NET AREA: 120 SF



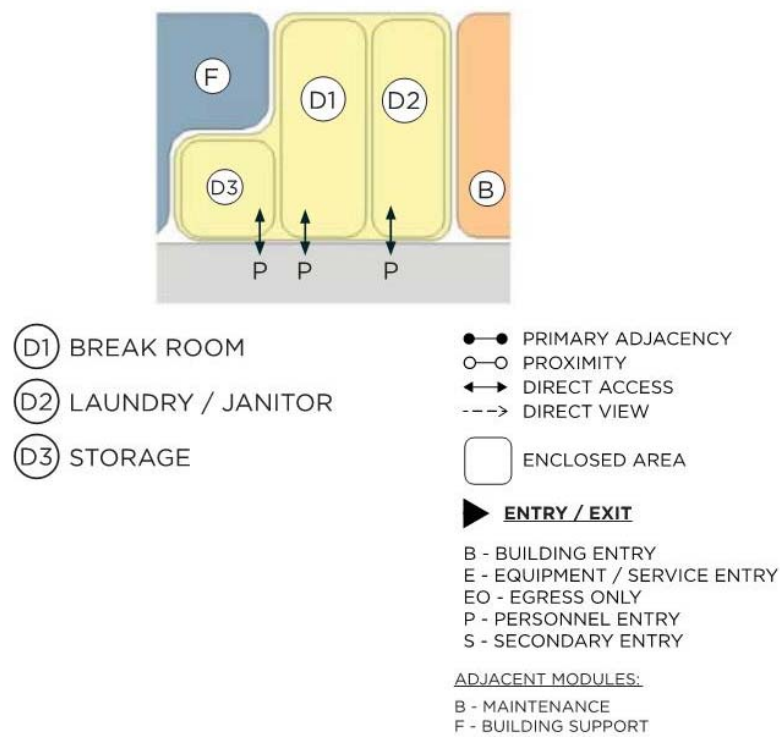
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MODULE D – ADMINISTRATION SUPPORT

Function and Adjacency

This Module consists of a Break Room, a Laundry/ Janitor Room and a Storage Room. Rooms should be centrally located for all staff to access and have close proximity to the Toilet/Shower/Locker Module and Administration Module. The break room is required to have a designated recycling area. ABA compliant water cooler shall be provided in corridor.

Figure 2-D.1 Module D Adjacency Diagram

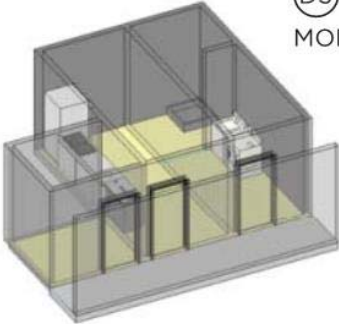


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Administration Support
Figure 2-D.2 Module D Floor Plan & Axonometric



- Ⓛ D1 BREAK ROOM
 - Ⓛ D2 LAUNDRY / JANITOR
 - Ⓛ D3 STORAGE
- MODULE NET AREA: 265 SF



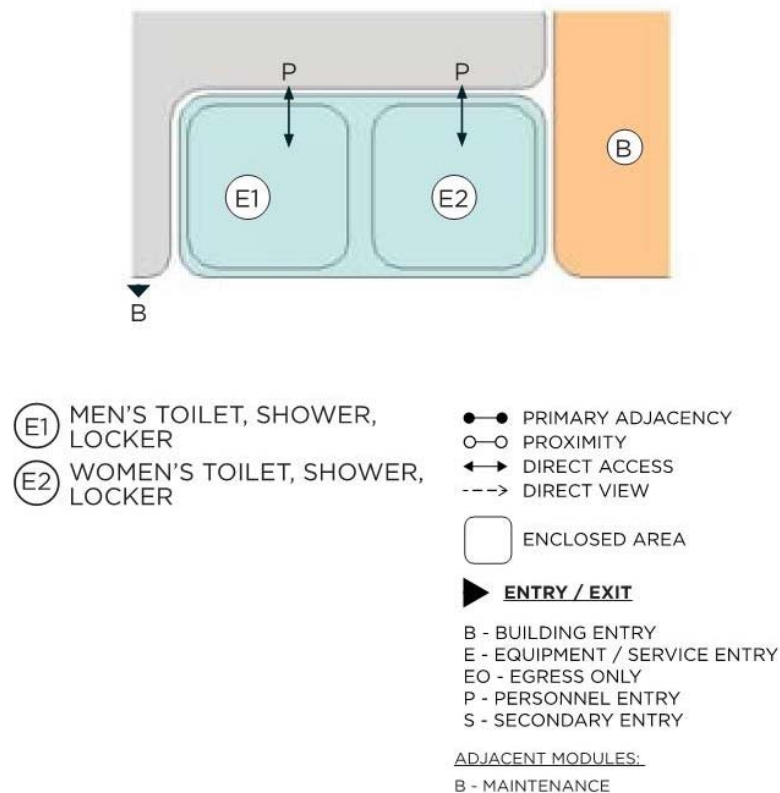
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MODULE E – TOILET, SHOWER, LOCKER

Function and Adjacency

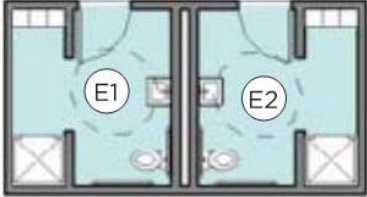
The Toilets Module consists of a Men’s Toilet, Shower, Locker Room and Women’s Toilet, Shower, and Locker Room. The toilet room facilities are provided are a ratio of 50/50. This module is centrally located and has close proximity to the Administration Support Module and Administration Module. The plumbing 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.

Figure 2-E.1 Module E Adjacency Diagram

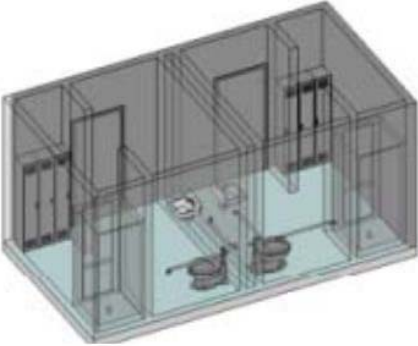


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Toilet, Shower, Locker
Figure 2-E.2 Module E Floor Plan & Axonometric



- ⓔ1 MEN'S TOILET, SHOWER,
LOCKER
 - ⓔ2 WOMEN'S TOILET, SHOWER,
LOCKER
- MODULE NET AREA: 180 SF



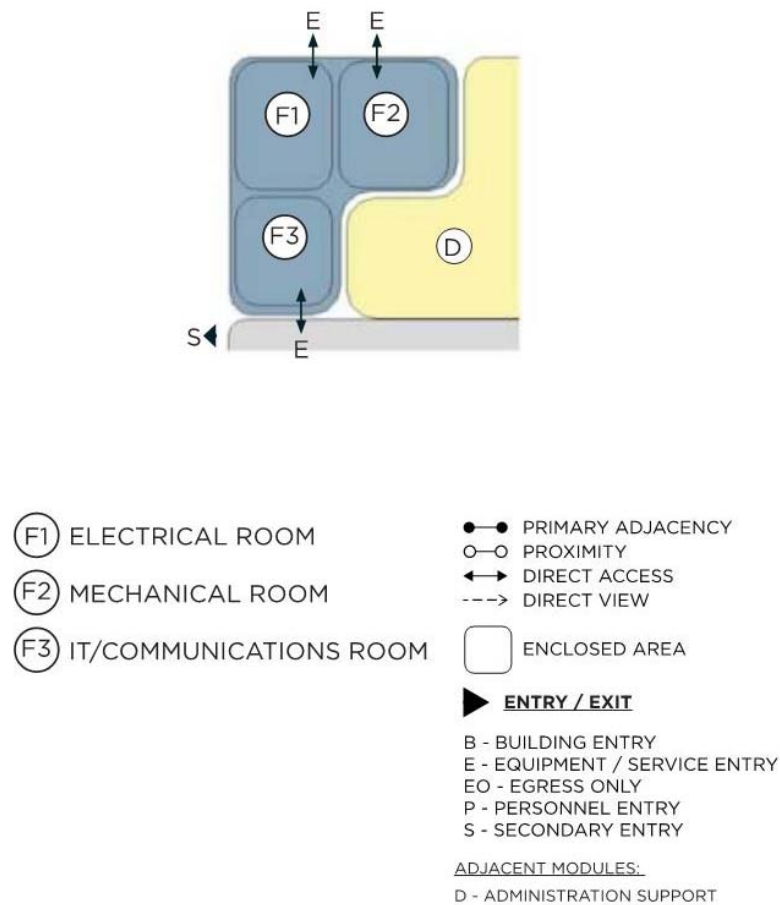
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MODULE F – BUILDING SUPPORT

Function and Adjacency

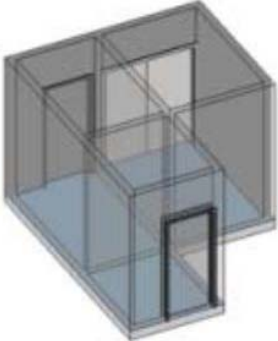
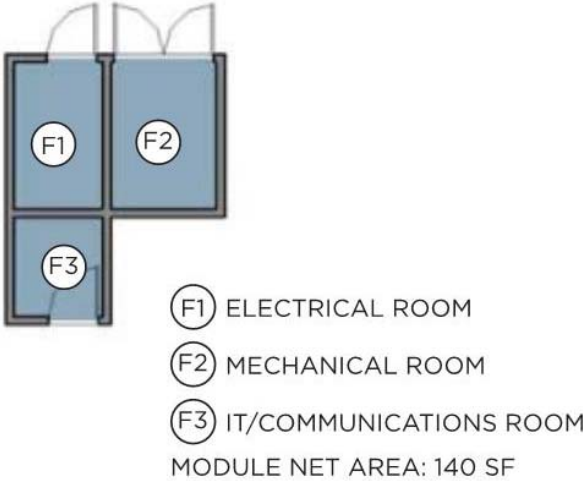
The Building Support Module consists of Mechanical Room, Electrical Room and Telecommunications Room (Fire Protection Room if not in Mechanical Room). All rooms to have exterior access (with exception of Communication Room which may have interior access). These modules are to be located on exterior wall adjacent to a Utility Courtyard and accessible for maintenance.

Figure 2-F.1 Module F Adjacency Diagram



DRAWINGS NOT TO SCALE

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



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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 Insecticide Storage Room Data Sheet		
Index		A1
Description/Usage		This is a storage room for Insecticides, minimum 100 sf in size. Room is adjacent to Mixing Room.
Ceiling Height		9'-0" minimum
Windows		N/A
Doors	Type	Hollow metal, 3'x7'
	Security/ Hardware	Keyed lockset
	View Panels/ Kick Plates	No view panels Kick Plates both sides of doors
Finishes	Walls	Gypsum Board – Painted or CMU -Painted
	Floor	Sealed concrete
	Base	Resilient
	Ceiling	Exposed structure – Painted
Plumbing		
HVAC		Heated; ventilation
Fire Protection		Wet pipe sprinkler system
Power		Per UFC 3-520-01
Lighting		Per UFC 3-530-01
Communication	Tele.	One per room
	Data	N/A
	CCTV	N/A
	CATV	N/A
	Security	N/A
Acoustical Requirements		Per UFC 3-450-01 for Noise Control
Furnishings, Equipment and Casework		Shelving for Insecticides.
Special Requirements		N/A

Figure 2-A.3.2 A2 Mixing Room Data Sheet		
Index		A2
Description/Usage		This is a room for mixing Insecticides and herbicides, minimum 125 sf in size
Ceiling Height		9'-0" minimum
Windows		N/A
Doors	Type	Hollow metal, 3'x7'
	Security/ Hardware	Keyed lockset
	View Panels/ Kick Plates	No view panels Kick Plates both sides of doors
Finishes	Walls	Gypsum Board – Painted or CMU -Painted
	Floor	Sealed concrete
	Base	Resilient
	Ceiling	Exposed structure – Painted
Plumbing		Industrial double sink with strainer, no drain in this room
HVAC		Heated; ventilation
Fire Protection		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 Requirements		Per UFC 3-450-01 for Noise Control
Furnishings, Equipment and Casework		Base and upper cabinets, counter top.
Special Requirements		Fume Hood Containment curb for spills around room

Figure 2-A.3.3 Herbicide Storage Room Data Sheet		
Index		A3
Description/Usage		This is a storage room for Herbicides, minimum 100 sf in size. Room is adjacent to Mixing Room.
Ceiling Height		9'-0" minimum
Windows		N/A
Doors	Type	Hollow metal, 3'x7'
	Security/ Hardware	Keyed lockset
	View Panels/ Kick Plates	No view panels Kick Plates both sides of doors
Finishes	Walls	Gypsum Board – Painted or CMU -Painted
	Floor	Sealed concrete
	Base	Resilient
	Ceiling	Exposed structure – Painted
Plumbing		
HVAC		Heated; ventilation
Fire Protection		Wet pipe sprinkler system
Power		Per UFC 3-520-01
Lighting		Per UFC 3-530-01
Communication	Tele.	One per room
	Data	N/A
	CCTV	N/A
	CATV	N/A
	Security	N/A
Acoustical Requirements		Per UFC 3-450-01 for Noise Control
Furnishings, Equipment and Casework		Shelving for herbicides.
Special Requirements		N/A

Figure 2-B.3.1 Wash Down Area Room Data Sheet		
Index		B1
Description/Usage		High Bay area for wash down of vehicles and insecticide and herbicide equipment, 530 sf minimum size.
Ceiling Height		12'-0" minimum clearance
Windows		N/A, Translucent panels for daylighting
Doors	Type	Hollow metal, 3'x7', two 10'x10' Overhead Doors (one each side for vehicle/equipment drive through).
	Security/ Hardware	Keyed lockset
	View Panels/ Kick Plates	No view panels Kick Plates both sides of doors
Finishes	Walls	CMU - Painted
	Floor	Sealed concrete
	Base	No base
	Ceiling	Exposed structure – Painted
Plumbing		Hot and Cold water hose connections, trench drains
HVAC		Heated; ventilation
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		Per UFC 3-450-01 for Noise Control
Furnishings, Equipment and Casework		N/A
Special Requirements		Slope floor towards center od bay with collection system.

Figure 2-B.3.2 Equipment Repair Room Data Sheet		
Index	B2	
Description/Usage	Room for equipment repair, 145 sf minimum size.	
Ceiling Height	9'-0" minimum	
Windows	Exterior – Aluminum framed, insulated fixed, blast resistant; Meeting daylighting requirements of UFC 1-200-02	
Doors	Type	Hollow metal, 3'x7'
	Security/ Hardware	Keyed lockset
	View Panels/ Kick Plates	No view panels Kick Plates both sides of doors
Finishes	Walls	CMU - Painted
	Floor	Sealed concrete
	Base	No base
	Ceiling	Exposed structure – Painted
Plumbing	N/A	
HVAC	Air Conditioned; heated; ventilation; humidity control	
Fire Protection	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 Requirements	Per UFC 3-450-01 for Noise Control	
Furnishings, Equipment and Casework	Storage racks/shelving	
Special Requirements	N/A	

Figure 2-C.3.1 Superintendent Office Room Data Sheet		
Index		C1
Description/Usage		Office with one desk/workstation
Ceiling Height		9'-0" minimum
Windows		Exterior – Aluminum framed, insulated fixed, blast resistant; Meeting daylighting requirements of UFC 1-200-02
Doors	Type	Hollow metal, 3'x7'
	Security/ Hardware	Keyed lock set
	View Panels/ Kick Plates	View Panels, 5"x20" Kick Plates both sides of door
Finishes	Walls	Systems furniture, Demountable Partitions or Gyp. Board -Painted
	Floor	Sealed concrete, Stained concrete, or tile
	Base	Resilient Base or Ceramic/Porcelain Tile
	Ceiling	Acoustical Ceiling Tile
Plumbing		N/A
HVAC		Air Conditioned; heated; ventilation
Fire Protection		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 Requirements		Per UFC 3-450-01 for Noise Control
Furnishings, Equipment and Casework		One desk/workstation.
Special Requirements		N/A

Figure 2-D.3.1 Break Room Data Sheet		
Index		D1
Description/Usage		Small break area centrally located for staff. Space also used for small staff meetings. Room to be minimum 100 sf in size.
Ceiling Height		9'-0" minimum
Windows		Exterior – Aluminum framed, insulated fixed, blast resistant; Meeting daylighting requirements of UFC 1-200-02
Doors	Type	Hollow metal, 3'x7'
	Security/ Hardware	Keyed lock set
	View Panels/ Kick Plates	View Panels, 5"x20" for door to corridor Kick Plates both sides of doors
Finishes	Walls	Gypsum Board – Painted or CMU -Painted
	Floor	Sealed concrete, Stained concrete, or tile
	Base	Resilient or tile
	Ceiling	Acoustical Ceiling Tile
Plumbing		Sink with disposal, hot water
HVAC		Air Conditioned; heated; ventilation
Fire Protection		Wet pipe sprinkler system
Power		120v dedicated circuits for coffee maker, microwave, & refrigerator; 120v convenience outlets per UFC 3-520-01
Lighting		Per UFC 3-530-01
Communication	Tele.	N/A
	Data	N/A
	CCTV	N/A
	CATV	YES
	Security	N/A
Acoustical Requirements		Per UFC 3-450-01 for Noise Control
Furnishings, Equipment and Casework		Refrigerator, microwave, sink with disposal; vending machine; Wall mounted bulletin board.
Special Requirements		Recycling Area

Figure 2-D.3.2 Laundry / Janitor Room Data Sheet		
Index		D2
Description/Usage		Small room for PPE washing with stacked commercial type washer and dryer and a Janitor sink
Ceiling Height		9'-0" minimum
Windows		No window required
Doors	Type	Hollow metal, 3'x7'
	Security/ Hardware	Keyed lock set
	View Panels/ Kick Plates	View Panels, 5"x20" Kick Plates both sides of doors
Finishes	Walls	Gypsum Board - Painted, Ceramic Tile wainscot at mop sink
	Floor	Sealed concrete
	Base	Resilient Base
	Ceiling	Acoustical Ceiling Tile (moisture resistant)
Plumbing		Mop sink with hot water, floor drain
HVAC		Air conditioning; heated; ventilation. Dryer exhaust directly outdoors
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		Per UFC 3-450-01 for Noise Control
Furnishings, Equipment and Casework		Stacked commercial type washer and dryer.
Special Requirements		Water resistant gypsum board where required.

Figure 2-D.3.3 Storage Room Data Sheet		
Index		D3
Description/Usage		Room for general material storage. Minimum size of room to be 50 sf.
Ceiling Height		No ceiling, 9' minimum clearance
Windows		N/A
Doors	Type	Hollow metal, pair 3'x7', exterior access required
	Security/ Hardware	Keyed lock set
	View Panels/ Kick Plates	No view panels Kick Plates each side of door
Finishes	Walls	CMU – Painted
	Floor	Sealer Hardener
	Base	No Base
	Ceiling	Acoustical Ceiling Tile or Gypsum board - painted
Plumbing		Floor drains as required
HVAC		Heated & Ventilated
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		Per UFC 3-450-01 for Noise Control
Furnishings, Equipment and Casework		N/A
Special Requirements		N/A

Figure 2-E.3.1 Men's Toilet, Shower, Locker Room Data Sheet		
Index		E1
Description/Usage		Men's toilet, shower, locker room
Ceiling Height		8'-0" minimum
Windows		N/A
Doors	Type	Hollow metal, 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 – Painte , Ceramic Wall Tile in Showers
	Floor	Porcelain Tile or Quartz Epoxy
	Base	Porcelain Tile or Quartz Epoxy
	Ceiling	Gypsum Board - Painted
Plumbing		Water closet, lavatory, shower, 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		Three 12x12 double tier lockers. Fixture count shall be determined by the number of building occupants at maximum load per International Plumbing Code latest edition, Chapter 29; wall hung water closets and urinals, lavatories in counter tops.
Special Requirements		Water resistant gypsum board throughout.

Figure 2-E.3.2 Women's Toilet, Shower, Locker Room Data Sheet		
Index	E2	
Description/Usage	Women's toilet, shower, locker room	
Ceiling Height	8'-0" minimum	
Windows	N/A	
Doors	Type	Hollow metal, 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, Ceramic Wall Tile in Showers
	Floor	Porcelain Tile or Quartz Epoxy
	Base	Porcelain Tile or Quartz Epoxy
	Ceiling	Gypsum Board - Painted
Plumbing	Water closet, lavatory, shower, 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	Three 12x12 double tier lockers. Fixture count shall be determined by the number of building occupants at maximum load per International Plumbing Code latest edition, Chapter 29; wall hung water closets and urinals, lavatories in counter tops.	
Special Requirements	Water resistant gypsum board throughout.	

Figure 2-F.3.1 Electrical Room Data Sheet		
Index		F1
Description/Usage		Electrical equipment and service.
Ceiling Height		No ceiling, 9'-0" minimum clearance
Windows		N/A
Doors	Type	Hollow metal, 3'x7', exterior access required
	Security/ Hardware	Keyed lock set
	View Panels/ Kick Plates	No view panels Kick Plates each side of door
Finishes	Walls	CMU - Painted
	Floor	Sealer Hardener
	Base	No Base
	Ceiling	Open to Structure - Painted
Plumbing		N/A
HVAC		Heated & Ventilated
Fire Protection		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 Requirements		N/A
Furnishings, Equipment and Casework		N/A
Special Requirements		N/A

Figure 2-F.3.2 Mechanical Room Data Sheet		
Index		F2
Description/Usage		Mechanical equipment and service.
Ceiling Height		No ceiling, 9' minimum clearance
Windows		N/A
Doors	Type	Hollow metal, pair 3'x7', exterior access required
	Security/ Hardware	Keyed lock set
	View Panels/ Kick Plates	No view panels Kick Plates each side of door
Finishes	Walls	CMU – Painted
	Floor	Sealer Hardener
	Base	No Base
	Ceiling	Open to Structure - Painted
Plumbing		Floor drains as required
HVAC		Heated & Ventilated
Fire Protection		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 Requirements		Per UFC 3-450-01 for Noise Control
Furnishings, Equipment and Casework		N/A
Special Requirements		N/A

Figure 2-F.3.3 IT/Communications Room Data Sheet		
Index		F3
Description/Usage		Communication and UPS service.
Ceiling Height		No ceiling, 9'-0" minimum clearance
Windows		N/A
Doors	Type	Hollow metal, 3'x7', interior or exterior access is acceptable
	Security/ Hardware	Keyed lock set
	View Panels/ Kick Plates	No view panels Kick Plates each side of door
Finishes	Walls	CMU - Painted
	Floor	Sealer Hardener
	Base	No Base
	Ceiling	Open to Structure - Painted
Plumbing		N/A
HVAC		Heated & Ventilated; Dedicated cooling for Comm.
Fire Protection		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 Requirements		N/A
Furnishings, Equipment and Casework		N/A
Special Requirements		N/A

Figure 2-X-3.1 Entrance & Circulation Room Data Sheet		
Index		
Description/Usage		All areas of general facility circulation. This includes facility entrances, vestibules or corridor spaces. An air lock type entrance vestibule may be required.
Ceiling Height		9'-0" minimum
Windows		No windows required
Doors	Type	Hollow metal, 3' x 7' (egress), 3' x7' aluminum framed with full glass (medium stile) at entrance vestibule.
	Security/ Hardware	Keyed lock set
	View Panels/ Kick Plates	Side lites and transom at entrance vestibule doors Kick plates both sides of door
Finishes	Walls	Gypsum board - painted
	Floor	Sealed concrete, stained concrete or tile
	Base	Resilient or tile
	Ceiling	Acoustical Ceiling Tile
Plumbing		N/A
HVAC		Air conditioned; heated; ventilation
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		Walk-off mat at entry vestibule.

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

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.

CES PEST MANAGEMENT FACILITY INTERACTIVE PROGRAMMING WORKSHEET								
MODULE NO.	AREA	NO. OCCUP	SF PER USER	NO. OF ROOMS REQUIRED	INDIVIDUAL ROOM RQRMNTS	NET USER REQUIREMENTS		COMMENTS
						SF	SM	
A	PESTICIDE							
A1	INSECTICIDE STORAGE			1	100	100	9.29	4
A2	MIXING ROOM			1	100	100	9.29	4
A3	HERBICIDE STORAGE			1	100	100	9.29	4
	SUBTOTAL PESTICIDE AREA					300	27.87	
B	MAINTENANCE							
B1	WASH DOWN AREA			1	530	530	49.24	4
B2	EQUIPMENT REPAIR			1	145	145	13.47	4
	SUBTOTAL MAINTENANCE AREA					675	62.71	
C	SUPERINTENDENT OFFICE							
C1	SUPERINTENDENT OFFICE			1	120	120	11.15	5
	SUBTOTAL SUPERINTENDENT AREA					120	11.15	
D	ADMINISTRATION SUPPORT							
D1	BREAK ROOM			1	110	110	10.22	
D2	LAUNDRY / JANITOR ROOM			1	105	105	9.75	
D3	STORAGE			1	50	50	4.65	
	SUBTOTAL ADMINISTRATION SUPPORT AREA					265	24.62	
E	TOILET, SHOWER, LOCKER							
E1	MEN'S TOILET, SHOWER, LOCKER			1	90	90	8.36	6
E2	WOMEN'S TOILET, SHOWER, LOCKER			1	90	90	8.36	6
	SUBTOTAL TOILET, SHOWER, LOCKER AREA					180	16.72	
F	BUILDING SUPPORT							
F1	ELECTRICAL ROOM			1	40	40	3.72	7
F2	MECHANICAL ROOM			1	55	55	5.11	7
F3	IT/COMMUNICATIONS ROOM			1	45	45	4.18	7
	SUBTOTAL BUILDING SUPPORT AREA					140	13.01	
TOTAL FACILITY NET FLOOR AREA						1,680	156.07	
CIRCULATION MULTIPLIER 10%						1,850		
NET TO GROSS MULTIPLIER 25%						2,315		
TOTAL FACILITY GROSS ARE (ROUNDED)						2,400	215	8,9.10
COMMENTS:								
1 Facility Personnel Count : 4 - 6								
2 Includes all areas listed in Air Force Manual 32-1084, Chapter 1 and Chapter 6								
3 Reference Tables in Chapter 6 of Air Force Manual 32-1084 for additional information.								
4 These areas are User Defined/Justified. SF to be adjusted and or verified for each base installation.								
5 Administration Areas include circulation factor of 10% per Chapter 1 Air Force Manual 32-1084								
6 Male/Female ratio of 50/50. Actual fixture count shall be based on International Plumbing Code, latest edition, Chapter 29 and the UFC 3-420-01, latest edition, Plumbing Systems. This 50/50 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 25% per Standard Design Plan which would include any additional Building Support Areas that may be required. Also included in multipliers are column run-outs and mechanical/plumbing chases.								
9 All area SF's are rounded to the nearest whole 5 number.								
10 This worksheet represents a facility rounded up to 2,400 Square Feet.								