

STANDARD DESIGN

AIR FORCE INDOOR SMALL ARMS FIRING RANGE FACILITY



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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 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 Small Arms Range 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 Small Arms Range 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 shooting bays as well as whether a simulator is provided in 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 Indoor Small Arms Range that houses space to fire and train on weapons use is a typically a one-story structure that works best as a standalone facility. All Air Force recruits and active personnel must have weapons training, both initial and ongoing certification. This facility provides a safe to fire live rounds, train on weapon assembly, and clean and maintain weapons. It consists of a large enclosed space for firing live rounds, student classroom and simulator room, weapons cleaning, weapons storage, administration area, and support spaces. This standard facility prototype is considered as a Group II or III hierarchy based on its actual location on the installation. Small Arms Range 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

- Administration Area
 - Queuing
 - Ready Room
 - NCOIC Office
 - Open Office
 - Administrative Storage
- Training
 - Classroom
 - Observation Room
 - Weapons Simulator (where siting available)
 - Storage
- Arms Range
 - Arms Range w/ Control Booth
 - Range Supplies
- Maintenance / Cleaning
 - Weapons Maintenance Shop
 - Student Weapons Cleaning
- Storage
 - Arms Vault
 - Issue Room
- Toilet, Shower, Locker
 - Men’s Toilet, Shower, Locker
 - Women’s Toilet, Shower, Locker

- Janitor
- Laundry

- Building Support
 - Mechanical
 - Electrical
 - Telecommunications
 - 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.

Hours of operation for this facility type are user driven and vary per location with up to approximately 5 full time personnel and several groups of fourteen students plus instructors for a 14-lane facility range.

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 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 Pavements
UFC 3-250-04	Standard Practice for Concrete Pavements
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
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. Additional land may be needed to comply with the storm water 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 any clearances, building setback restrictions, noise restrictions and line of sight restrictions from the adjacent facilities as necessary.

The approximate project area required for the Small Arms Range Facility ranges from 3.3 to 4.5 acres, depending on the number of lanes,, 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.

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.

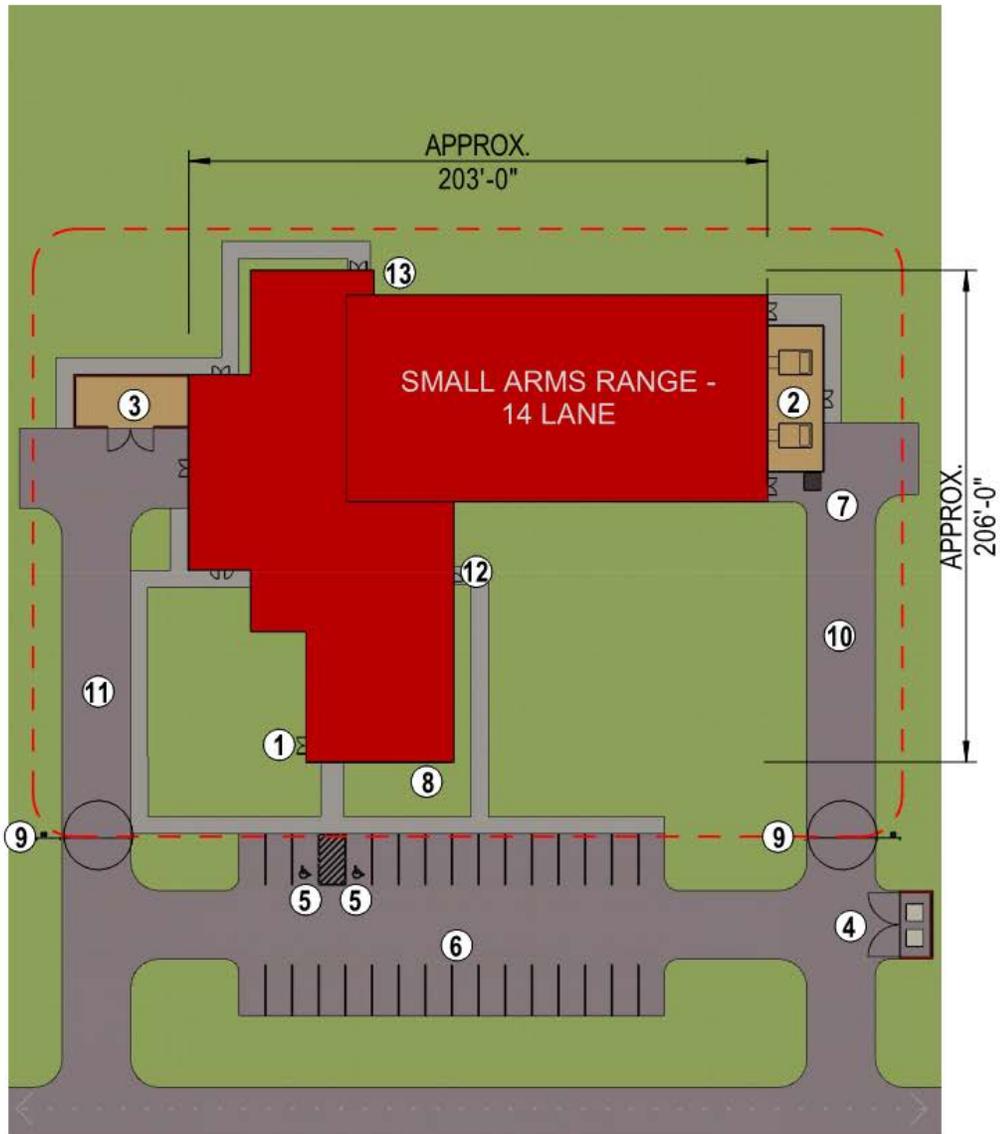
2.3.C. Vehicular and Pedestrian Circulation

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

See Next Page for Image

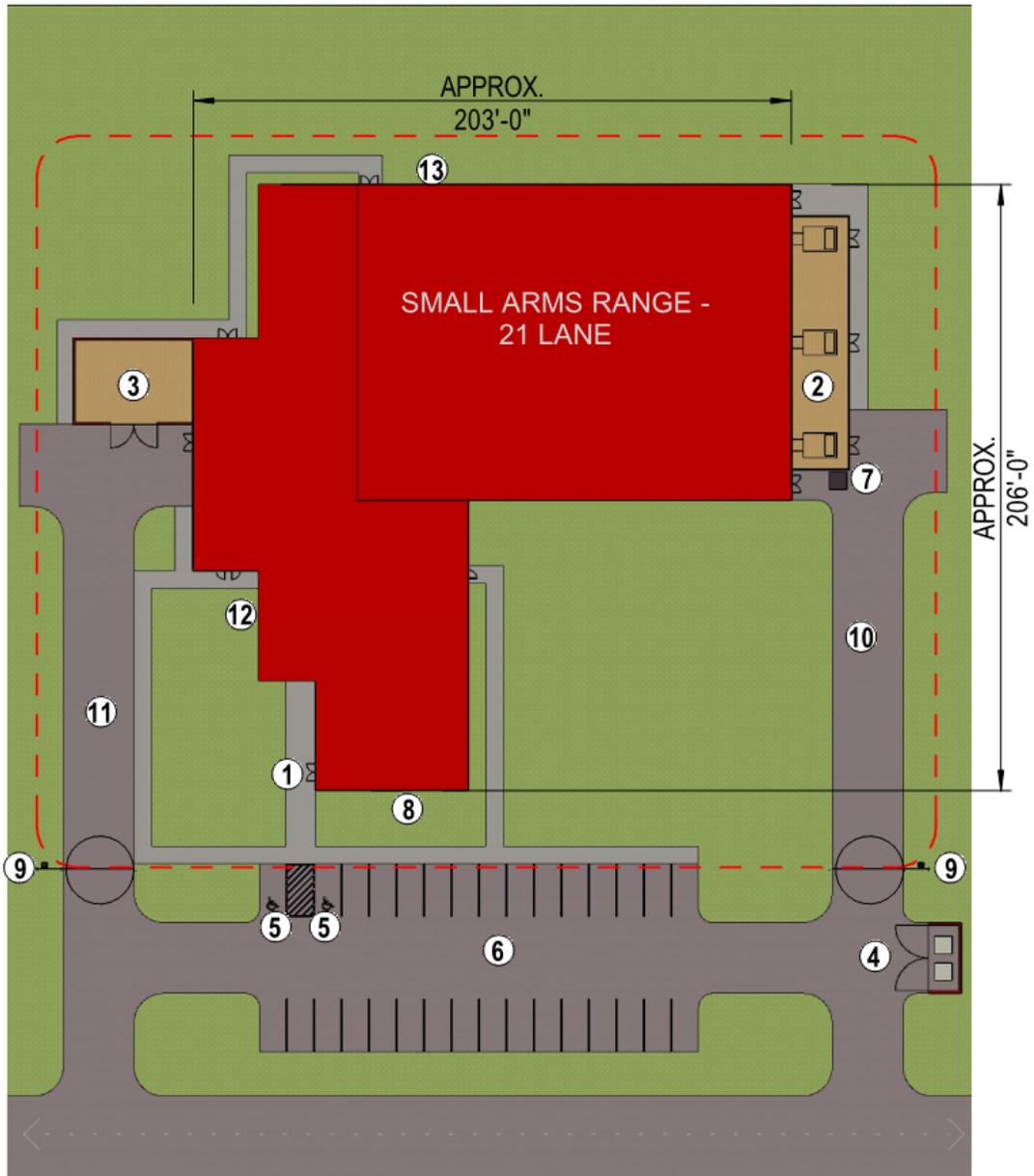


NOTES:

- ① PRIMARY BUILDING ENTRY
- ② SCREENED MECH YARD - RANGE EXHAUST
- ③ SCREENED MECH YARD - BUILDING SUPPLY
- ④ DUMPSTER ENCLOSURE
- ⑤ HANDICAPPED PARKING SPACE
- ⑥ STAFF/VISITOR PARKING SPACES (31)
- ⑦ SPENT AMMUNITION CONTAINMENT
- ⑧ STANDOFF DISTANCE - CONCEPTUAL
- ⑨ ACCESS CONTROL GATE
- ⑩ SERVICE DRIVE-BULLET CONTAINMENT ACCESS
- ⑪ SERVICE DRIVE - HVAC AND DELIVERY ACCESS
- ⑫ SECONDARY/SERVICE ENTRANCE
- ⑬ SECONDARY MEANS OF EGRESS

LEGEND:

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

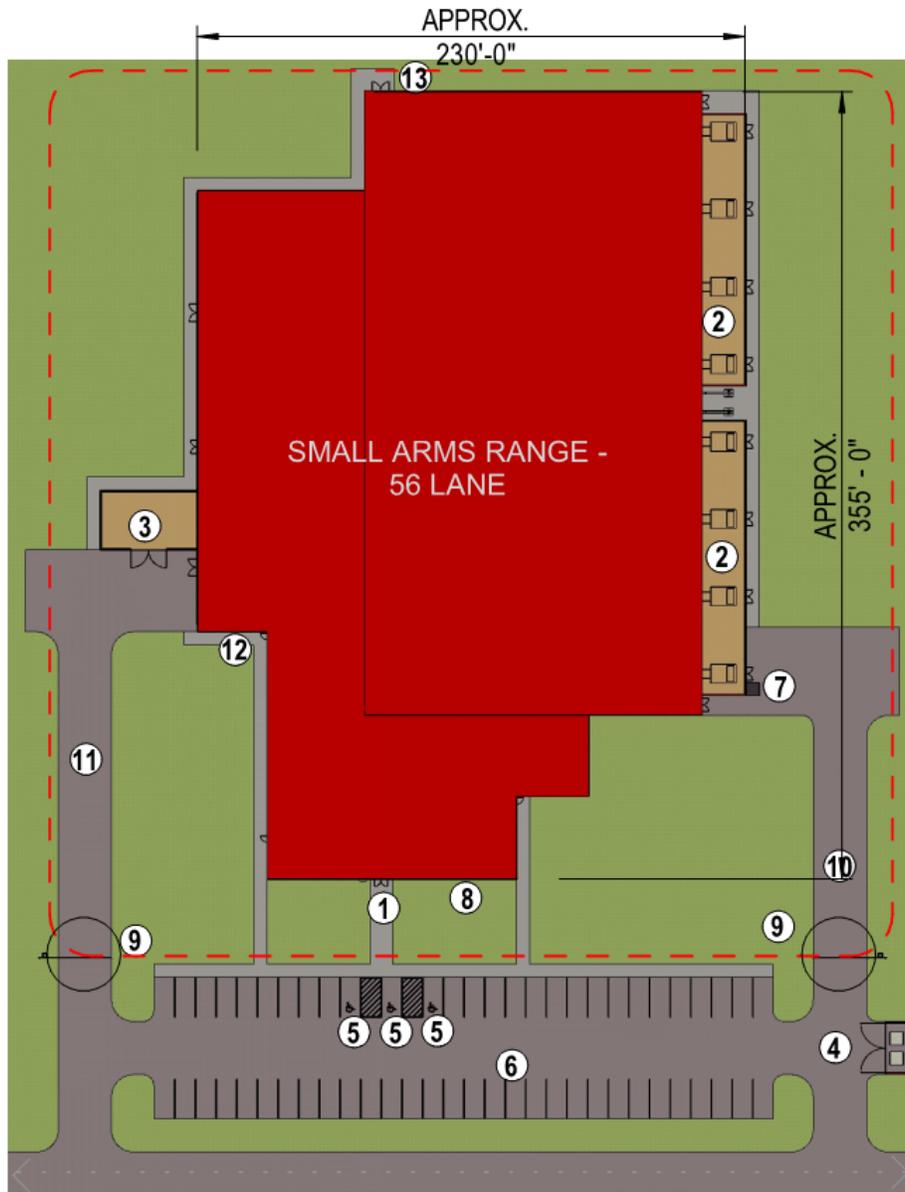


NOTES:

- ① PRIMARY BUILDING ENTRY
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- - - CONCEPTUAL AT SETBACK (REFERENCE UFC 4-010-01)
- < - - - > ACCESS STREET
- CONTROLLED VEHICLE ACCESS



NOTES:

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- ② SCREENED MECH YARD - RANGE EXHAUST
- ③ SCREENED MECH YARD - BUILDING SUPPLY
- ④ DUMPSTER ENCLOSURE
- ⑤ HANDICAPPED PARKING SPACE
- ⑥ STAFF/VISITOR PARKING SPACES (52)
- ⑦ SPENT AMMUNITION CONTAINMENT
- ⑧ STANDOFF DISTANCE - CONCEPTUAL
- ⑨ ACCESS CONTROL GATE
- ⑩ SERVICE DRIVE-BULLET CONTAINMENT ACCESS
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- ⑬ SECONDARY MEANS OF EGRESS

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 Arms Range lane count and the associated Administration areas based on the number of students per base.
- The Weapons Simulator Module (when site has capacity)
- 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 from the administrative side of the building and continue to the Support or Arms Range areas of the building as needed.

The Building Support Module needs exterior access. An additional mechanical yard is required as support for the Arms Range module.

Other general considerations include:

- Mitigating Noise of Arms Range and Simulator Areas.
- Site Limitations

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 a linear type configuration with the Administrative/Support located at the entrance of the facility with support areas located at the back end of the facility. The size of the following module is affected by the type, number and size of the number of lanes and students supported:

- Arms Range
- Weapons Simulator

2.4.C. Interior/Exterior Relationships

The Small Arms Range Facility will have access to POV and Visitor parking. There will be a single primary point of entry to facility with support spaces on opposite sides of a central facility corridor.

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.

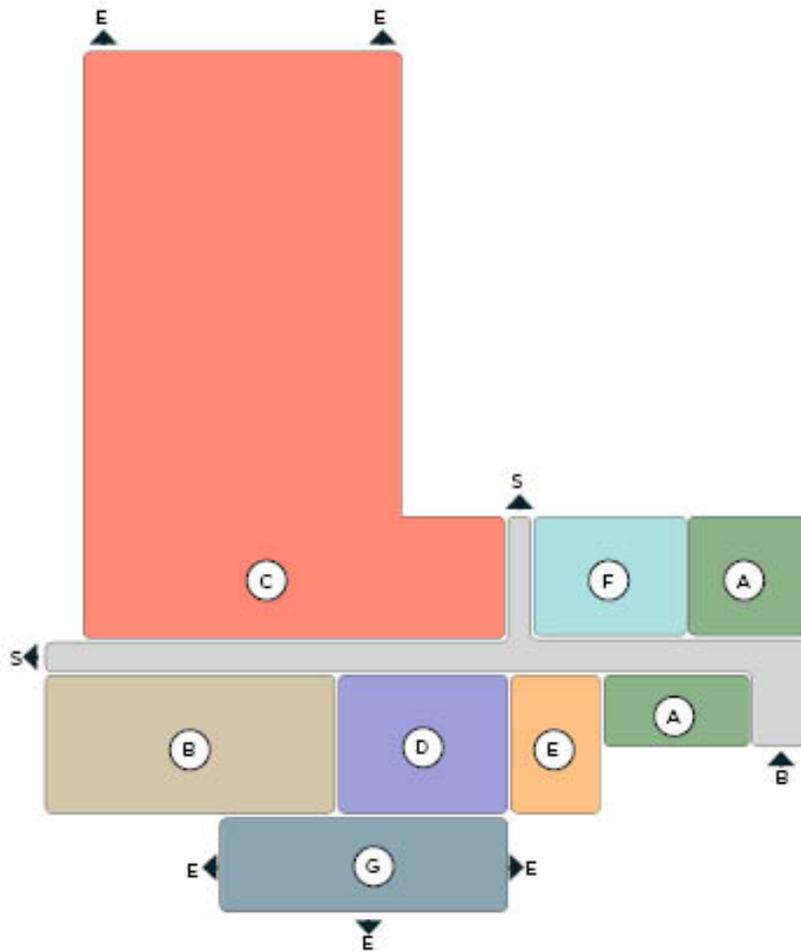
The modules are a grouping of functional spaces and represent “Lego blocks” to be used in a “kit-of-parts” design approach. Use the fixed modules as pre-assembled pieces of the facility “puzzle”. Assemble them to comply with the required adjacencies indicated in the diagrams and module plans.

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 Small Arms Range Facility. The Facility is programed around the Arms Range area which is located at the ‘back’ end of the facility with support spaces that include the Maintenance Shop, Simulator, and Classroom. The Administration, Secure Storage and Toilet/Shower/Locker Modules, are located at the front end of the facility. This Facility Adjacency Diagram as well as the modules is the Air Force approved Standard Design plan.



- (A) ADMINISTRATION
- (B) TRAINING
- (C) ARMS RANGE
- (D) MAINTENANCE/CLEANING
- (E) STORAGE
- (F) TOILET, SHOWER, LOCKER
- (G) BUILDING SUPPORT

- PRIMARY ADJACENCY
- PROXIMITY
- ←→ DIRECT ACCESS
- > DIRECT VIEW

□ ENCLOSED AREA

▶ **ENTRY / EXIT**

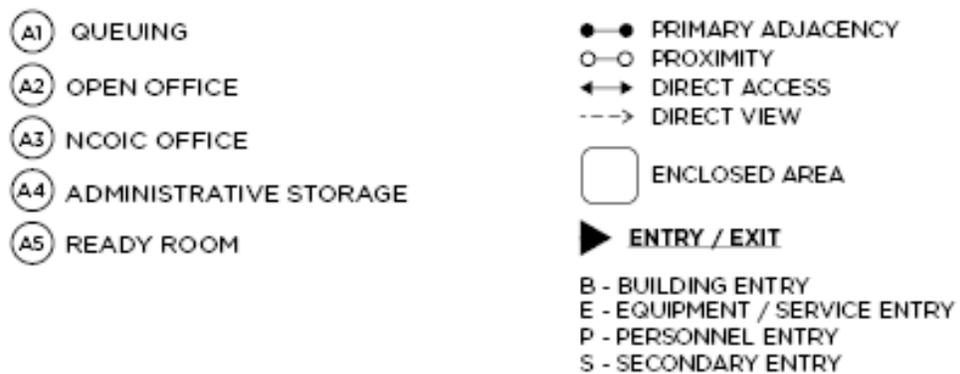
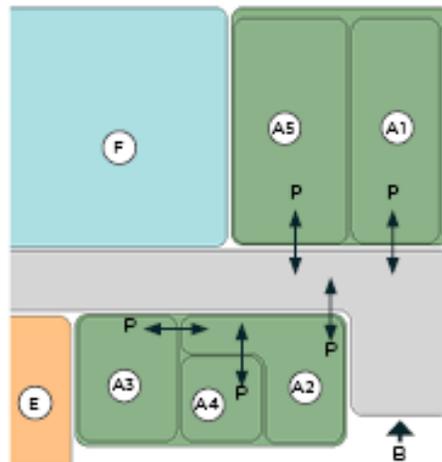
- B - BUILDING ENTRY
- E - EQUIPMENT / SERVICE ENTRY
- P - PERSONNEL ENTRY
- S - SECONDARY ENTRY

MODULE A – ADMINISTRATION MODULE

Function and Adjacency

The Administration Module consists of a Queuing area, Ready Room, Open Office, NCOIC Office and Administrative Storage. A designated recycling area is required within the Ready Room.

Figure 2-A.1 Module A Adjacency Diagram

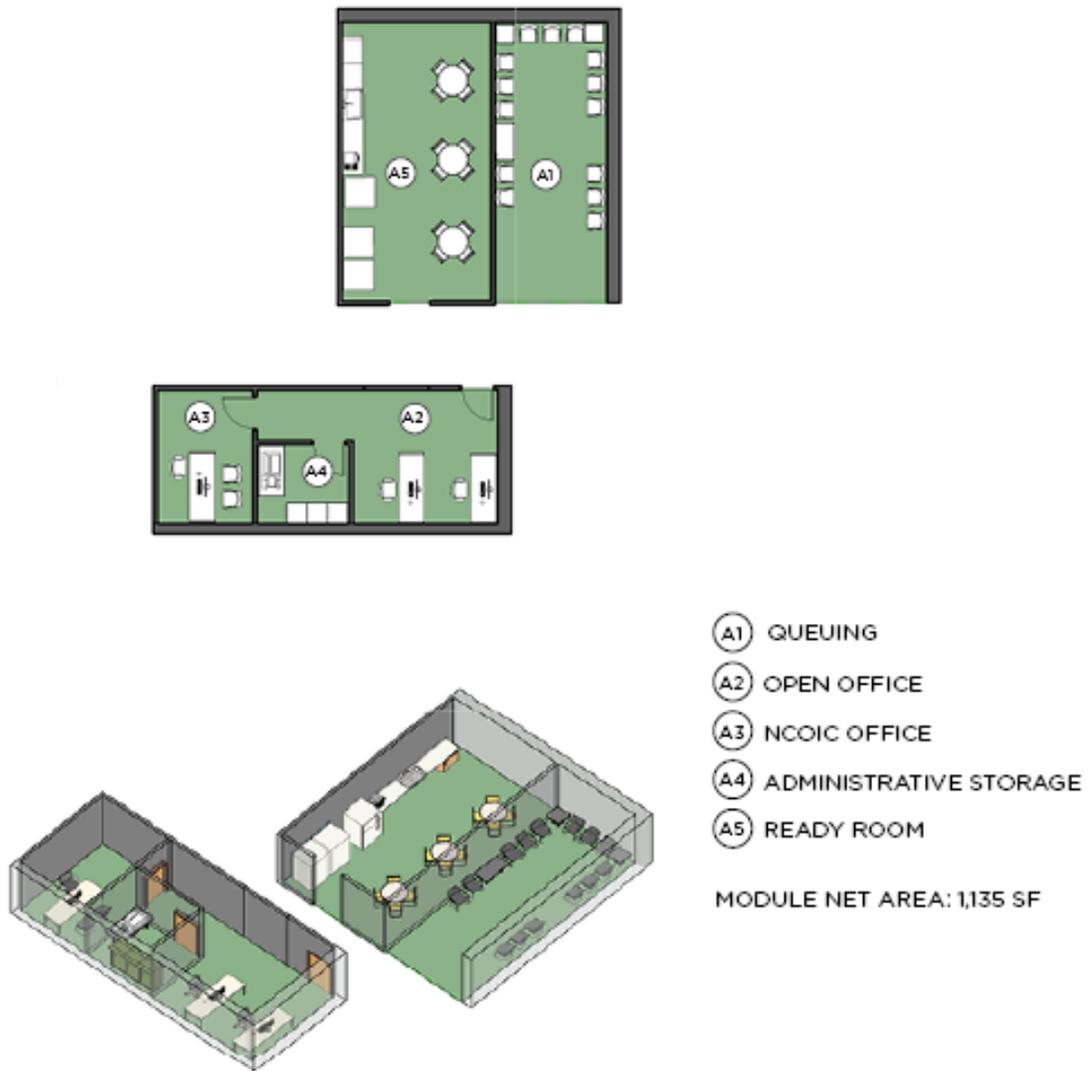


ADJACENT MODULES:
 E - STORAGE
 F - TOILET, SHOWER, LOCKER

DRAWINGS NOT TO SCALE

Administration

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



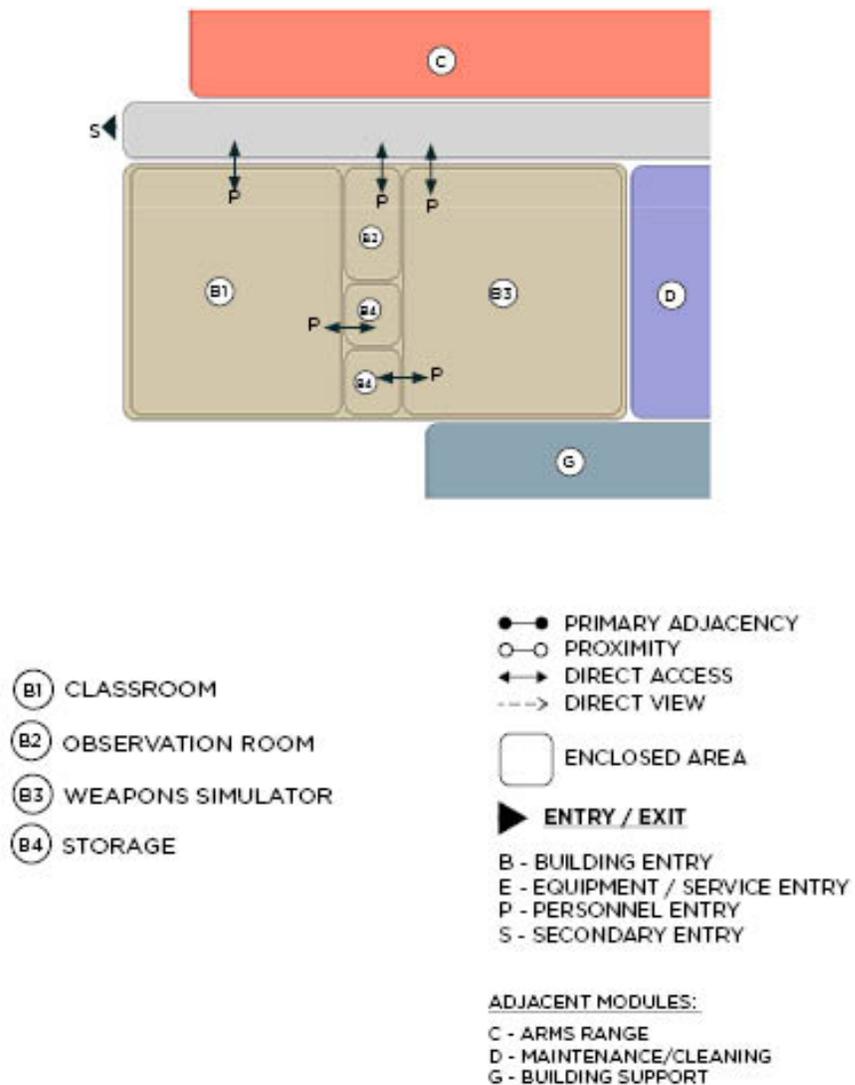
DRAWINGS NOT TO SCALE

MODULE B – TRAINING

Function and Adjacency

The Training Module includes a Weapons Simulator Room, a Classroom, Storage Rooms (x2) and an Observation Room with views into both the Classroom and the Simulator Room.

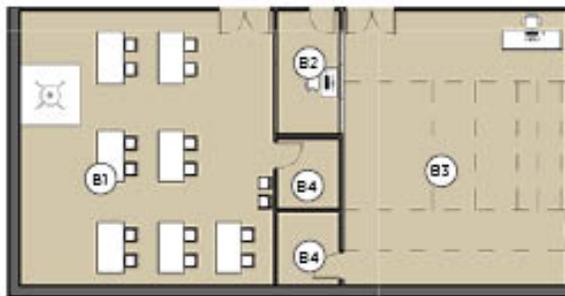
Figure 2-B.1 Module B Adjacency Diagram



DRAWINGS NOT TO SCALE

Training

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



- ⓑ CLASSROOM
- ⓑ OBSERVATION ROOM
- ⓑ WEAPONS SIMULATOR
- ⓑ STORAGE

MODULE NET AREA: 2,025 SF



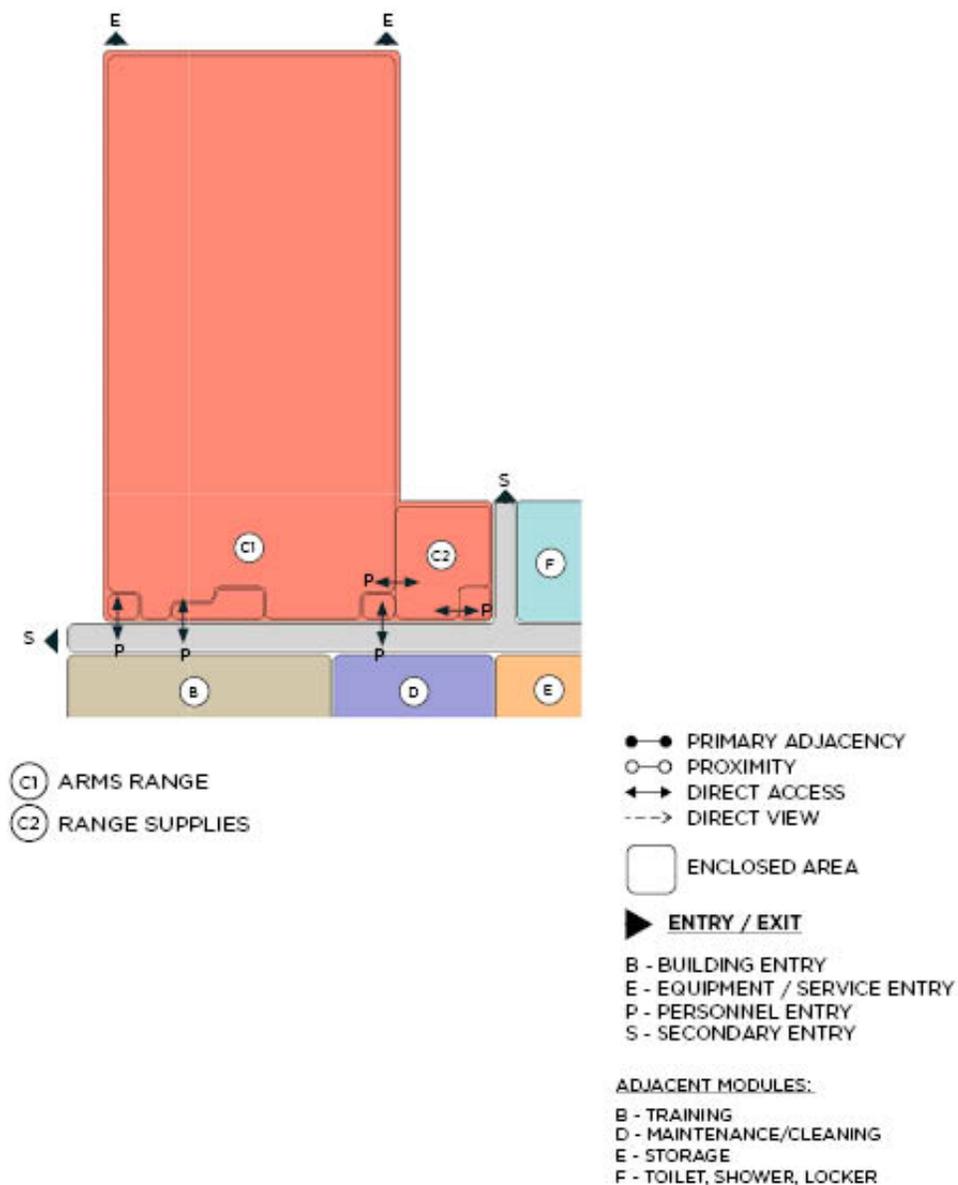
DRAWINGS NOT TO SCALE

MODULE C – ARMS RANGE

Function and Adjacency

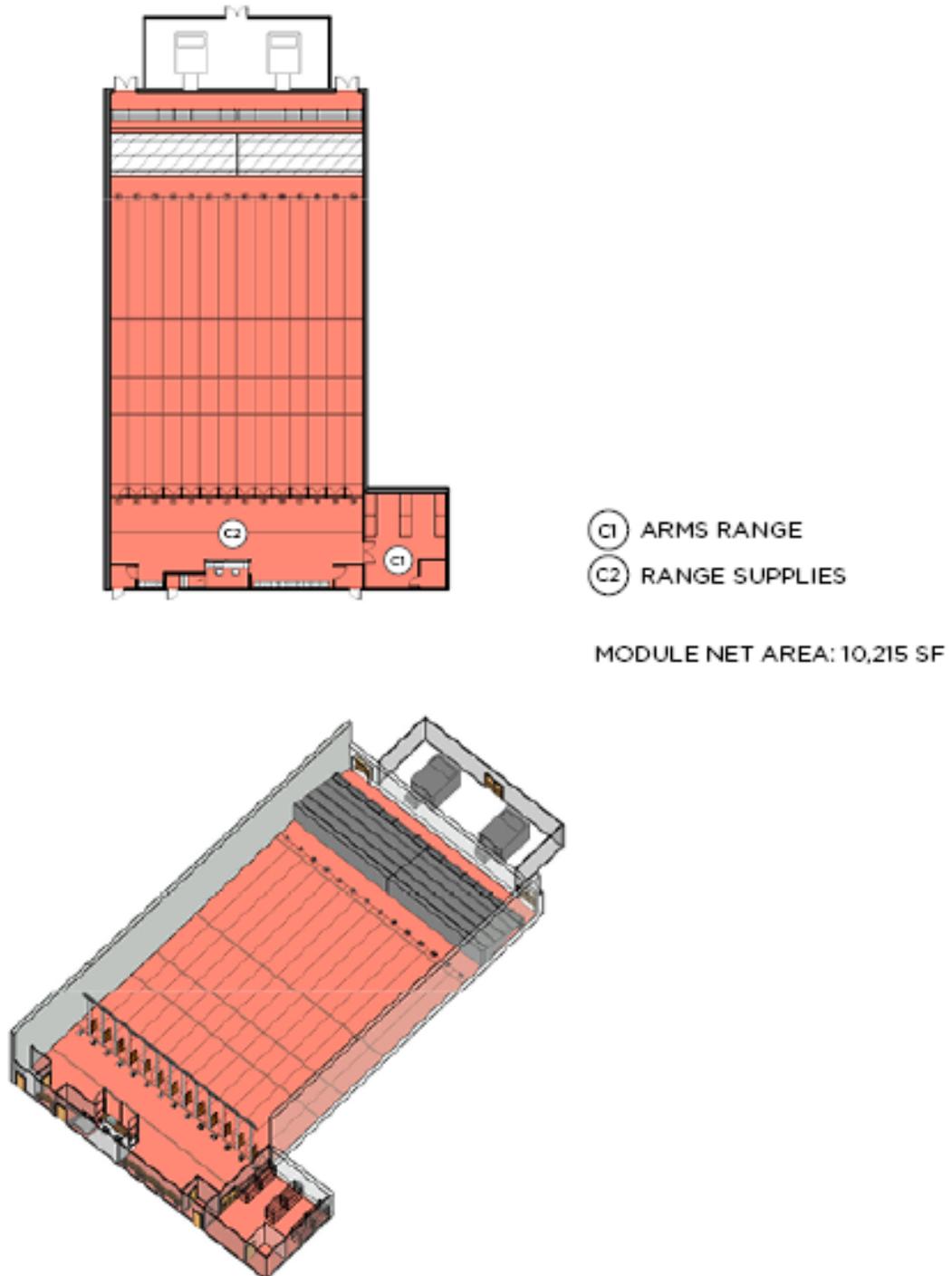
The Arms Range Module includes the Arms Range (organized in 7 lane increments, the small version containing 14 lanes), and a Range Supplies room. The Arms Range has Observation Booth inside this room and requires a Mechanical yard directly outside of the rear wall of the lanes for exhaust air equipment. There are two vestibules (for sound control) to enter and exit the Arms Range area to the Circulation Corridor.

Figure 2-C.1 Module C Adjacency Diagram



Arms Range

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

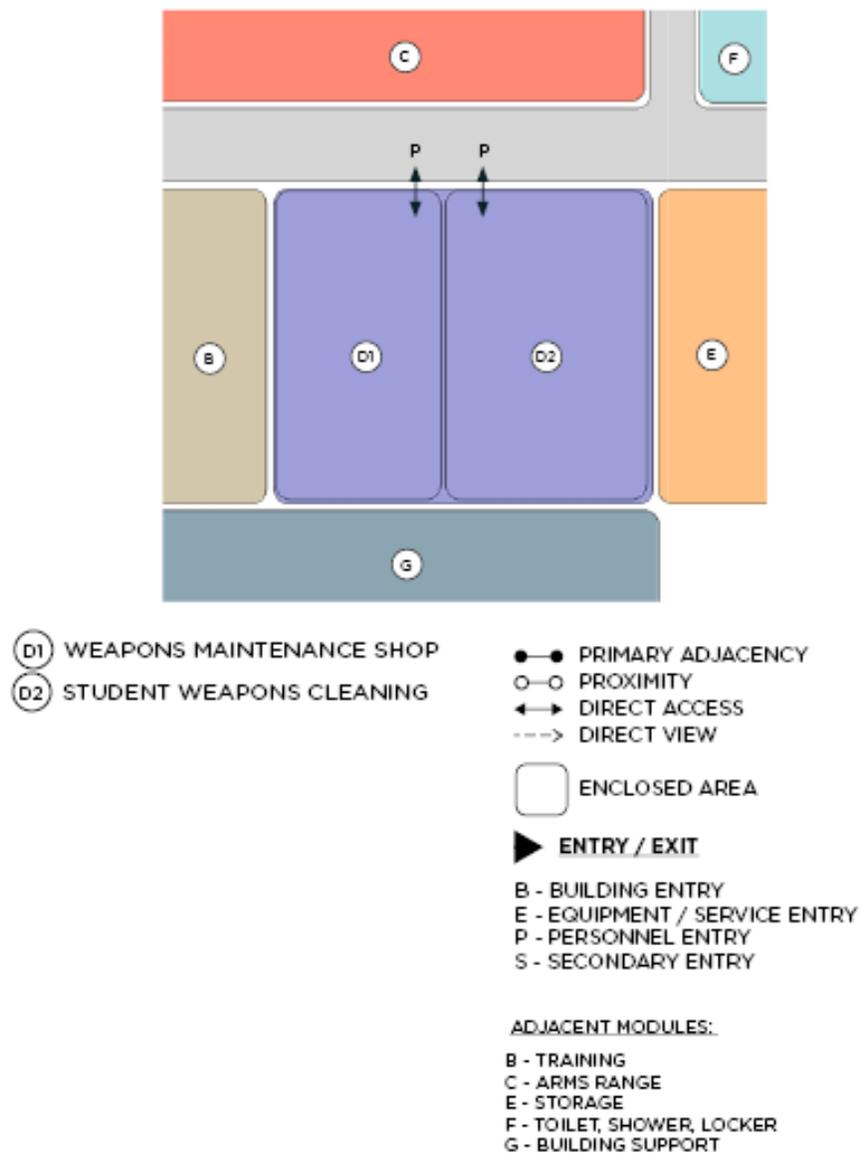


MODULE D – MAINTENANCE / CLEANING

Function and Adjacency

The Maintenance / Cleaning Module includes a Weapons Maintenance Shop and a Student Weapons Cleaning Room.

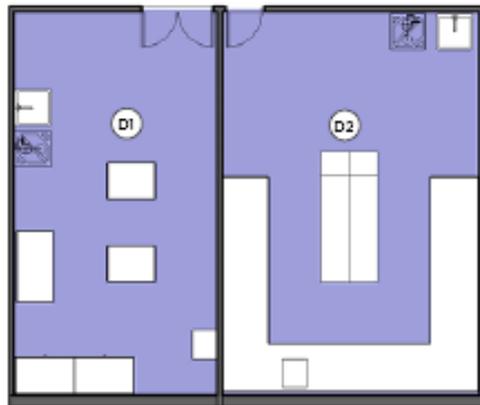
Figure 2-D.1 Module D Adjacency Diagram



DRAWINGS NOT TO SCALE

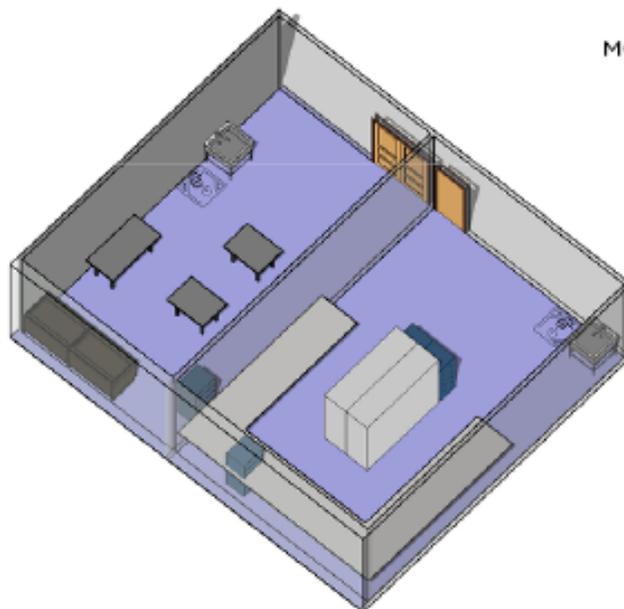
Maintenance/ Cleaning

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



- Ⓛ D1 WEAPONS MAINTENANCE SHOP
- Ⓛ D2 STUDENT WEAPONS CLEANING

MODULE NET AREA: 1,245 SF

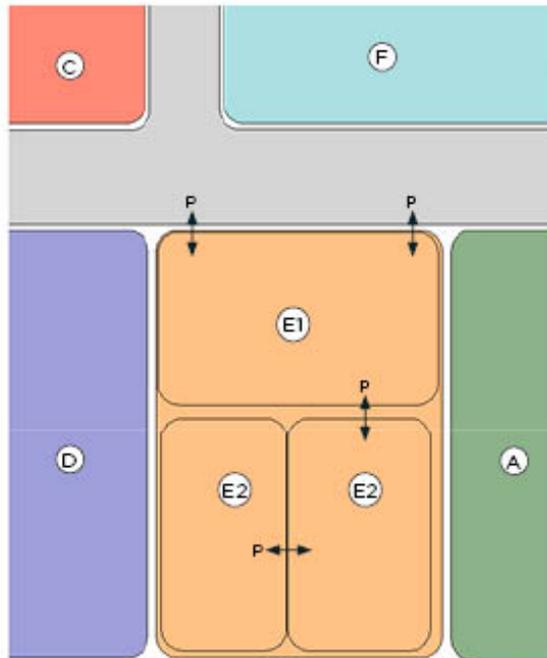


MODULE E – STORAGE

Function and Adjacency

The Storage Module includes an Issue Room and Arms Vault which provides secure storage for weapons and ammunition used in the Arms Range.

Figure 2-E.1 Module E Adjacency Diagram



- (E1) ISSUE ROOM
- (E2) ARMS VAULT

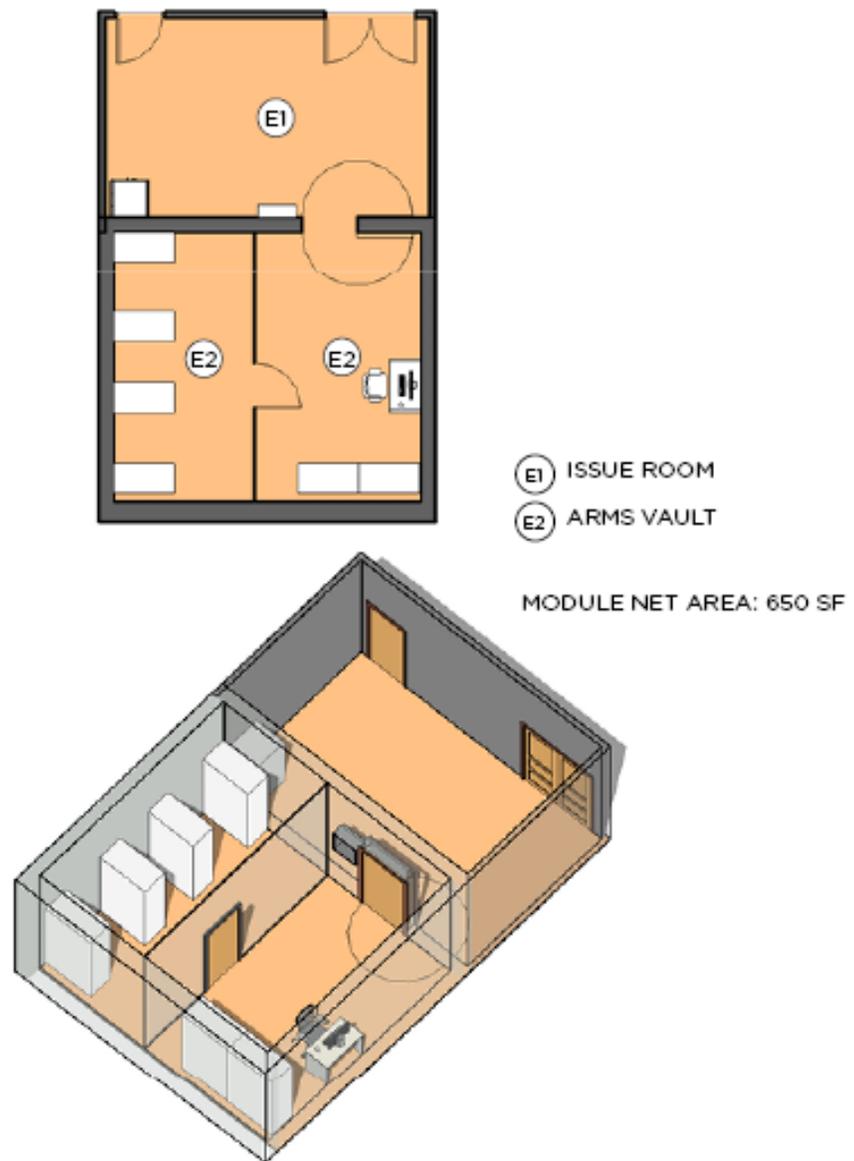
- PRIMARY ADJACENCY
- PROXIMITY
- ↔ DIRECT ACCESS
- > DIRECT VIEW
- ENCLOSED AREA
- ▶ ENTRY / EXIT
- B - BUILDING ENTRY
- E - EQUIPMENT / SERVICE ENTRY
- P - PERSONNEL ENTRY
- S - SECONDARY ENTRY

ADJACENT MODULES:

- A - ADMINISTRATION
- C - ARMS RANGE
- D - MAINTENANCE/CLEANING
- F - TOILET, SHOWER, LOCKER

Storage

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

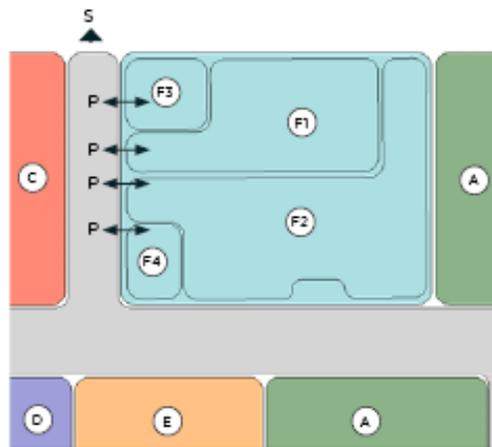


MODULE F – TOILET, SHOWER, LOCKER

Function and Adjacency

The Toilet/Shower/Locker Module consists of a Male Restroom, a Female Restroom, a Laundry Room, and Janitor Closet. This module should be located near the administrative module and near the front of the facility. Each Restroom will include a toilet, shower, and locker area. 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-F.1 Module F Adjacency Diagram



- (F1) WOMEN'S RESTROOM
- (F2) MEN'S RESTROOM
- (F3) LAUNDRY
- (F4) JANITOR'S CLOSET

- PRIMARY ADJACENCY
- PROXIMITY
- ↔ DIRECT ACCESS
- > DIRECT VIEW

□ ENCLOSED AREA

▶ ENTRY / EXIT

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

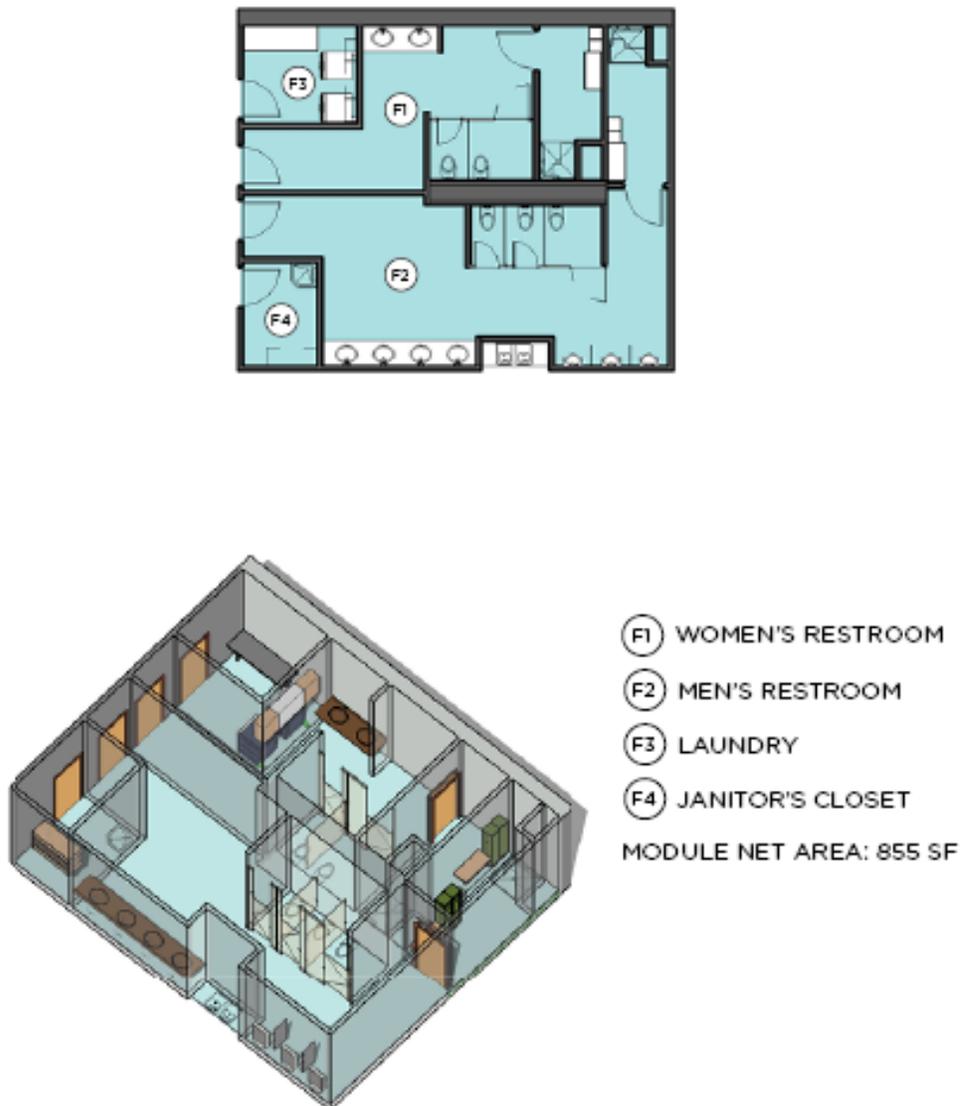
ADJACENT MODULES:

- A - ADMINISTRATION
- C - ARMS RANGE
- D - MAINTENANCE/CLEANING
- E - STORAGE

DRAWINGS NOT TO SCALE

Toilet, Shower, Locker

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

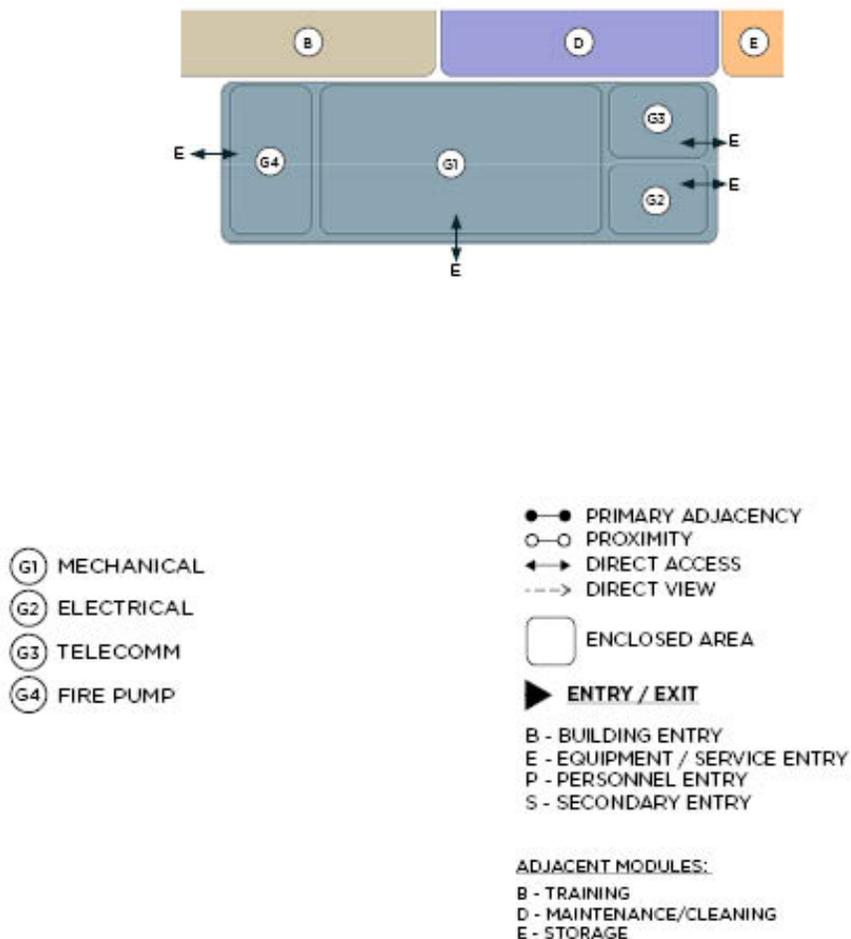


MODULE G – BUILDING SUPPORT

Function and Adjacency

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

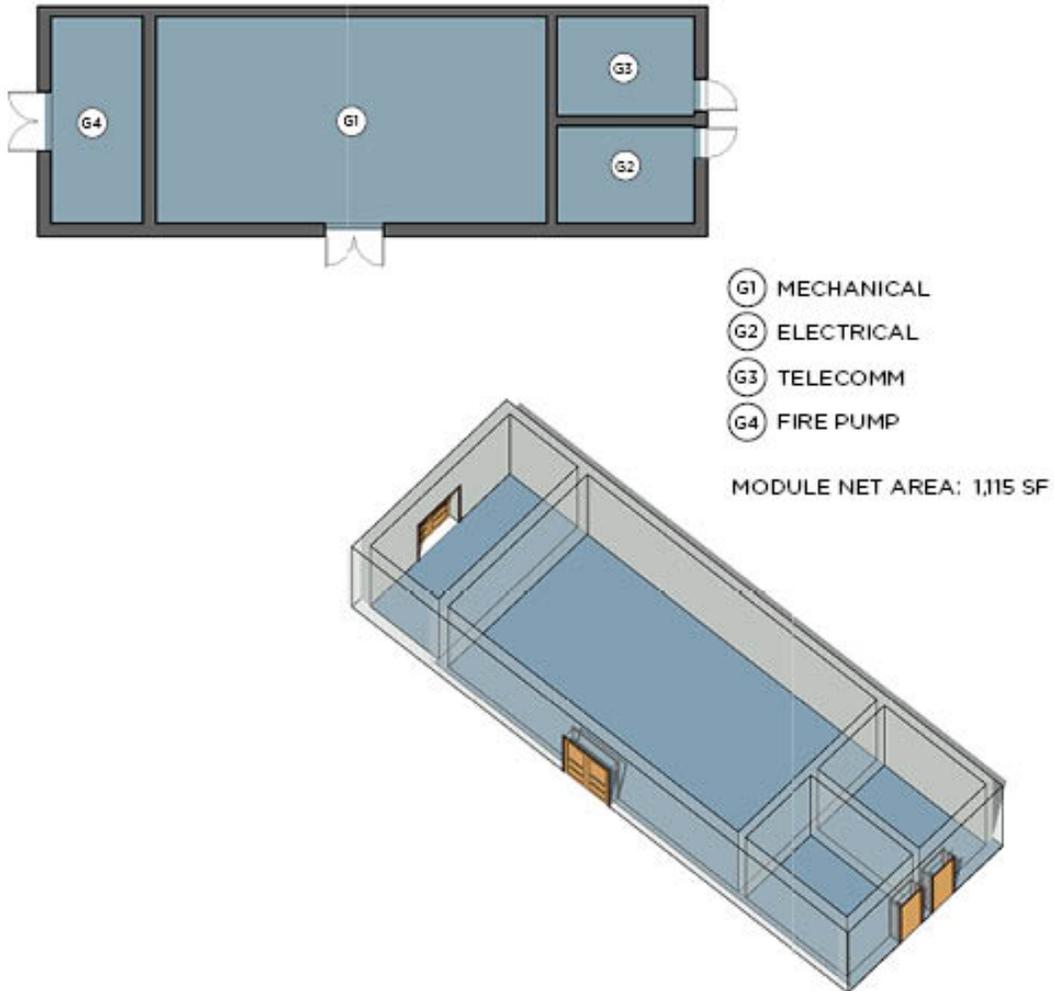
Figure 2-G.1 Module G Adjacency Diagram



DRAWINGS NOT TO SCALE

Building Support

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



DRAWINGS NOT TO SCALE

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 Queuing Room Data Sheet		
INDEX		A1
Description/Usage		The queuing area for range students awaiting instruction; includes seating (size is based upon range capacity) and display area. Room should be located near the main building entrance.
Ceiling Height		9'-0" minimum
Windows		Exterior – Aluminum framed, insulated fixed, blast resistant; Meeting daylighting requirements of UFC 1-200-02
Doors	Type	No doors
	Security/ Hardware	
	View Panels/ Kick Plates	
Finishes	Walls	Gypsum board - painted
	Floor	Sealed concrete, stained concrete, Porcelain tile
	Base	Resilient or tile
	Ceiling	Acoustical Ceiling Tile or Exposed structure - painted
Plumbing		
HVAC		
Fire Protection / Life Safety		
Power		Per UFC 3-520-01
Lighting		Per UFC 3-530-01
Communication	Tele.	One per Room
	Data	NIPR
	CCTV	
	CATV	
	Security	
Acoustical		
Furnishings / Equipment / Casework		Display case; chairs (number based upon range capacity, minimum one chair per lane); wall-mounted TV; end tables
Special Requirements		

Figure 2-A.3.2 Open Office Room Data Sheet		
INDEX		A2
Description/Usage		Open office for Range Instructor's to perform daily administrative duties; with 4 workstations for 14 lane range.
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, single 3'-0" x 7'-0"
	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	Carpet tile
	Base	Resilient or Porcelain tile
	Ceiling	Acoustical Ceiling Tile
Plumbing		
HVAC		
Fire Protection / Life Safety		
Power		Per UFC 3-520-01
Lighting		Per UFC 3-530-01
Communication	Tele.	One per Desk
	Data	NIPR
	CCTV	
	CATV	
	Security	
Acoustical		
Furnishings / Equipment / Casework		Four (4) workstations; Desk, chair, computer; files, radio charging station with table.
Special Requirements		

Figure 2-A.3.3 NCOIC Office Room Data Sheet		
INDEX		A3
Description/Usage		Private Office for NCOIC with 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, single 3'-0" x 7'-0"
	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	Carpet tile
	Base	Resilient
	Ceiling	Acoustical Ceiling Tile
Plumbing		
HVAC		
Fire Protection / Life Safety		
Power		Per UFC 3-520-01
Lighting		Per UFC 3-530-01
Communication	Tele.	One per Desk
	Data	NIPR
	CCTV	
	CATV	
	Security	
Acoustical		
Furnishings / Equipment / Casework		One (1) workstation, chair (3), computer.
Special Requirements		

Figure 2-A.3.4 Administrative Storage Room Data Sheet		
INDEX		A4
Description/Usage		This room serves as a place for administrative storage and printing.
Ceiling Height		9'-0" minimum
Windows		No Windows
Doors	Type	Hollow metal, single 3'-0" x 7'-0"
	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	Resilient or Porcelain tile
	Base	Resilient or tile
	Ceiling	Acoustical Ceiling Tile
Plumbing		
Fire Protection / Life Safety		
Power		Per UFC 3-520-01
Lighting		Per UFC 3-530-01
Communication	Tele.	N/A
	Data	NIPR
	CCTV	
	CATV	
	Security	
Acoustical		
Furnishings / Equipment / Casework		File storage, shelving, single tier locket (one per Instructor and NCOIC) as well as space for a copier, table.
Special Requirements		

Figure 2-A.3.5 Ready Room Data Sheet		
INDEX		A5
Description/Usage		This room serves as a combination conference room and break room for students and instructors.
Ceiling Height		9'-0" minimum
Windows		Exterior – Aluminum framed, insulated fixed, blast resistant; Meeting daylighting requirements of UFC 1-200-02
Doors	Type	No doors
	Security/ Hardware	
	View Panels/ Kick Plates	
Finishes	Walls	Gypsum board - painted
	Floor	Sealed concrete, Stained concrete, Porcelain tile
	Base	Resilient or tile
	Ceiling	Acoustical Ceiling Tile
Plumbing		
Fire Protection / Life Safety		
Power		Per UFC 3-520-01
Lighting		Per UFC 3-530-01
Communication	Tele.	One per room
	Data	NIPR
	CCTV	
	CATV	
	Security	
Acoustical		
Furnishings / Equipment / Casework		Furnishings include three four-person tables, chairs, bulletin board, and one 4 x 8-foot dry erase board. Equipment includes wall mounted tv/monitors, sink, microwave oven, vending machines, and refrigerator. A designate recycling area is required in this area.
Special Requirements		

Figure 2-B.3.1 Classroom Data Sheet		
INDEX		B1
Description/Usage		Instructor-based arms training in classroom setting, including vehicle weapons mount training.
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, pair 3'-0" x 7'-0"
	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	Sealed concrete, stained concrete or Porcelain tile
	Base	Resilient or tile
	Ceiling	Acoustical Ceiling Tile or Exposed structure - painted
Plumbing		
Fire Protection / Life Safety		
Power		Per UFC 3-520-01
Lighting		Per UFC 3-530-01
Communication	Tele.	One per Room
	Data	NIPR
	CCTV	
	CATV	
	Security	
Acoustical		
Furnishings / Equipment / Casework		7'-0" x 7'-0" vehicle mount mockup; projector set up or wall-mounted TV; 36" x 48" tables with 2 stackable chairs per table; 36" x 48" instructor table; instructor podium; stackable chairs for additional instructors (1 instructor per seven students); motorized blackout screens for fenestration
Special Requirements		14 person classroom is standard for 14-lane range with additional seating for instructors

Figure 2-B.3.2 Observation Room Data Sheet		
INDEX		B2
Description/Usage		The observation room provides visual observation to the classroom and weapons simulator.
Ceiling Height		9'-0" minimum
Windows		Interior Windows with view into the classroom & Simulator Room (when provided)
Doors	Type	Hollow metal, single 3'-0" x 7'-0"
	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	Resilient, sealed, concrete, stained concrete
	Base	Resilient
	Ceiling	Acoustical Ceiling Tile
Plumbing		
HVAC		
Fire Protection / Life Safety		
Power		Per UFC 3-520-01
Lighting		Per UFC 3-530-01
Communication	Tele.	One per Room
	Data	NIPR
	CCTV	
	CATV	
	Security	
Acoustical		
Furnishings / Equipment / Casework		Desk, chair, computer.
Special Requirements		Used in conjunction with classroom and simulator; Observation room base upon 64 square feet per occupant.

Figure 2-B.3.3 Weapons Simulator Room Data Sheet		
INDEX		B3
Description/Usage		Computer-based marksmanship training. Can be used as alternate classroom. Simulator size and controls configuration determined by manufacturer's requirements.
Ceiling Height		9'-0" minimum
Windows		No Windows
Doors	Type	Hollow metal, Pair 3'-0" x 7'-0"
	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, stained concrete
	Base	Resilient
	Ceiling	Acoustical Ceiling Tile
Plumbing		
HVAC		
Fire Protection / Life Safety		
Power		Per UFC 3-520-01
Lighting		Per UFC 3-530-01
Communication	Tele.	One per Room
	Data	NIPR
	CCTV	
	CATV	
	Security	
Acoustical		
Furnishings / Equipment / Casework		Commercially purchased projection-based simulator system; desk with chair; computer; simulator instructor workstation
Special Requirements		Simulator Module is preferred; module can be deleted based upon specific base installation requirements and budget facilities.

Figure 2-B.3.4 Storage Room Data Sheet		
INDEX		B4
Description/Usage		Storage for training aids, tools, and miscellaneous items for classroom and simulator room.
Ceiling Height		9'-0" minimum
Windows		No Windows
Doors	Type	Hollow metal, pair 3'-0" x 7'-0"
	Security/ Hardware	Keyed lock set
	View Panels/ Kick Plates	View panels, 5" x 20" Kick plates on both sides of door
Finishes	Walls	CMU – painted or Impact-resistant gypsum board - painted
	Floor	Resilient, sealed concrete, stained concrete
	Base	Resilient
	Ceiling	Acoustical Ceiling Tile
Plumbing		
HVAC		
Fire Protection / Life Safety		
Power		Per UFC 3-520-01
Lighting		Per UFC 3-530-01
Communication	Tele.	One per Room
	Data	NIPR
	CCTV	
	CATV	
	Security	
Acoustical		
Furnishings / Equipment / Casework		
Special Requirements		

Figure 2-C.3.1 Arms Range Room Data Sheet		
INDEX		C1
Description/Usage		Indoor arms range for weapons training with Control Booth and Entry Vestibules. Allows firing from standing, kneeling, prone, and barricade positions. Fourteen (14) lane, expandable to 56 lanes maximum; automatic target retrieving system adjustable; bullet trap and deceleration chamber and dust/solids collection.
Ceiling Height		9'-0" minimum (10'-0" minimum clearance to steel baffles over firing lanes)
Windows		No exterior windows; window with full range visibility from Control Booth
Doors	Type	(4) Hollow metal, single 3'-0" x 7'-0", one for Control Booth
	Security/ Hardware	Keyed lock set or cypher system
	View Panels/ Kick Plates	View panels, 5" x 20" Kick plates on both sides of door
Finishes	Walls	CMU or cast-in-place concrete (unpainted) with acoustical panels
	Floor	Sealed concrete
	Base	Resilient
	Ceiling	Exposed structure – painted, overhead steel baffles with acoustical panels
Plumbing		
Fire Protection / Life Safety		
Power		Per UFC 3-520-01
Lighting		Per UFC 3-530-01 and as noted in "Special Requirements"
Communication	Tele.	One per Room
	Data	N/A
	CCTV	
	CATV	
	Security	
Acoustical		NCR (Noise reduction coefficient) of 0.85 or higher for Control Booth
Furnishings / Equipment / Casework		Preparation area with wall-mounted benches and tables; Control Room with range control system; barricades; bullet trap system; acoustical panels; automatic target. Control Booth to have countertop and two workstations, two chairs.
Special Requirements		Lighting requires multiple primary lighting zones for "Ambient", "Down-Range", and "Firing Line". Further lighting should be at 3m, 7m, 10m, 15m, and 25m distances from the firing line. All zones and areas should be dimmable and separately controlled. Refer to ETL 11-18 for Small Arms Range requirements.

Figure 2-C.3.2 Range Supplies Room Data Sheet		
INDEX		C2
Description/Usage		Area for storage of targets and other range-related supplies; secure tool storage.
Ceiling Height		9'-0" minimum
Windows		No Windows
Doors	Type	(1) Hollow metal, single 3'-0" x 7'-0", (1) Hollow metal, pair 3'-0" x 7'-0"
	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	Resilient
	Ceiling	Gypsum board – painted or Exposed structure - painted
Plumbing		
Fire Protection / Life Safety		
Power		Per UFC 3-520-01
Lighting		Per UFC 3-530-01
Communication	Tele.	One per Room
	Data	NIPR
	CCTV	
	CATV	
	Security	
Acoustical		
Furnishings / Equipment / Casework		Shelving racks for supply storage; wire mesh partition for secure tools and material storage.
Special Requirements		Adjacent to arms range with direct access.

Figure 2-D.3.1 Weapons Maintenance Shop Room Data Sheet		
INDEX		D1
Description/Usage		Space to restore/maintain weapons to serviceable condition. Primarily for instructor use.
Ceiling Height		9'-0" minimum
Windows		No Windows
Doors	Type	Hollow metal, Pair 3'-0" x 7'-0"
	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	Resilient
	Ceiling	Gypsum board – painted or Exposed structure - painted
Plumbing		
Fire Protection / Life Safety		
Power		Per UFC 3-520-01
Lighting		Per UFC 3-530-01
Communication	Tele.	One per Room
	Data	NIPR
	CCTV	
	CATV	
	Security	
Acoustical		
Furnishings / Equipment / Casework		Lockable parts storage cabinets; stainless steel workbenches (one per instructor); grinding wheel with stand; shop sink; table with vise; flammable storage cabinets; emergency eyewash
Special Requirements		

Figure 2-D.3.2 Student Weapons Cleaning Room Data Sheet		
INDEX		D2
Description/Usage		Space for instructor-supervised weapons cleaning procedures performed by students.
Ceiling Height		9'-0" minimum
Windows		No Windows
Doors	Type	Hollow metal, 3'-0" x 7'-0"
	Security/ Hardware	
	View Panels/ Kick Plates	
Finishes	Walls	CMU – painted or impact resistant gypsum board - painted
	Floor	Sealed concrete
	Base	Resilient
	Ceiling	Acoustical Ceiling Tile
Plumbing		
Fire Protection / Life Safety		
Power		Per UFC 3-520-01
Lighting		Per UFC 3-530-01
Communication	Tele.	One per Room
	Data	NIPR
	CCTV	
	CATV	
	Security	
Acoustical		
Furnishings / Equipment / Casework		Continuous stainless steel U-shaped perimeter table (standing height); lockable storage cabinets; shop sink; emergency eyewash; flammable storage cabinets; hazardous waste receptacles
Special Requirements		

Figure 2-E.3.1 Issue Room Data Sheet		
INDEX		E1
Description/Usage		Area for students to obtain and safely clear arms.
Ceiling Height		9'-0" minimum
Windows		No Windows
Doors	Type	Hollow metal, single 3'-0" x 7'-0"
	Security/ Hardware	Push-pull
	View Panels/ Kick Plates	No view panels Kick plates on both sides of doors
Finishes	Walls	CMU – painted, impact-resistant gypsum board - painted
	Floor	Sealed concrete
	Base	Resilient
	Ceiling	Gypsum board - painted
Plumbing		
HVAC		
Fire Protection / Life Safety		
Power		Per UFC 3-520-01
Lighting		Per UFC 3-530-01
Communication	Tele.	One per Room
	Data	NIPR
	CCTV	
	CATV	
	Security	Intrusion detection system (IDS)
Acoustical		
Furnishings / Equipment / Casework		GSA-approved two-drawer safe; clearing barrel (design per AFMAN 31-229)
Special Requirements		Maintain 12'-0" clear depth of room, expandable with Arms Vault

Figure 2-E.3.2 Arms Vault Room Data Sheet		
INDEX		E2
Description/Usage		Weapons and ammunition Vault storage and distribution. Vault constructed area to provide secure storage of arms and separate secure ammunition storage.
Ceiling Height		9'-0" minimum
Windows		No Windows
Doors	Type	Hollow metal, Single 3'-0" x 7'-0" to exterior
	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		
HVAC		
Fire Protection / Life Safety		
Power		Per UFC 3-520-01
Lighting		Per UFC 3-530-01
Communication	Tele.	One per Room
	Data	N/A
	CCTV	
	CATV	
	Security	IDS
Acoustical		
Furnishings / Equipment / Casework		Cleaning barrel; issue window; GSA-approved Class V vault door; wire mesh partition for ammunition storage; desk and chair; computer; arms rack.
Special Requirements		Day gate based upon specific base installation; expandable with range size.

Figure 2-F.3.1 Women's Toilet, Shower, Locker Room Data Sheet		
INDEX		F1
Description/Usage		Women's toilet, locker, showers
Ceiling Height		9'-0" minimum
Windows		No Windows
Doors	Type	Hollow metal, single 3'-0" x 7'-0"
	Security/ Hardware	Push-pull
	View Panels/ Kick Plates	No view panels Kick plates on both sides of doors
Finishes	Walls	Ceramic tile or quartz epoxy full height at wet walls, showers, gypsum board - painted
	Floor	Porcelain tile or quartz epoxy
	Base	Porcelain tile or quartz epoxy
	Ceiling	Gypsum board - painted
Plumbing		
HVAC		
Fire Protection / Life Safety		
Power		Per UFC 3-520-01
Lighting		Per UFC 3-530-01
Communication	Tele.	N/A
	Data	N/A
	CCTV	
	CATV	
	Security	
Acoustical		
Furnishings / Equipment / Casework		
Special Requirements		

Figure 2-F.3.2 Men's Toilet, Shower, Locker Room Data Sheet		
INDEX		F2
Description/Usage		Men's toilet, locker, showers
Ceiling Height		No ceiling, 9'-0" minimum clearance
Windows		No Windows
Doors	Type	Hollow metal, single 3'-0" x 7'-0"
	Security/ Hardware	Push-pull
	View Panels/ Kick Plates	No view panels Kick plates on both sides of doors
Finishes	Walls	Ceramic tile or quartz epoxy full height at wet walls, showers, gypsum board - painted
	Floor	Porcelain tile or quartz epoxy
	Base	Porcelain tile or quartz epoxy
	Ceiling	Gypsum board - painted
Plumbing		
HVAC		
Fire Protection / Life Safety		
Power		Per UFC 3-520-01
Lighting		Per UFC 3-530-01
Communication	Tele.	N/A
	Data	N/A
	CCTV	
	CATV	
	Security	
Acoustical		
Furnishings / Equipment / Casework		
Special Requirements		

Figure 2-F.3.3 Laundry Room Data Sheet		
INDEX		F3
Description/Usage		Laundry room for instructors to remove lead contamination
Ceiling Height		9'-0 minimum
Windows		No Windows
Doors	Type	Hollow metal, single 3'-0" x 7'-0"
	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		
HVAC		
Fire Protection / Life Safety		
Power		Per UFC 3-520-01
Lighting		Per UFC 3-530-01
Communication	Tele.	N/A
	Data	N/A
	CCTV	
	CATV	
	Security	
Acoustical		
Furnishings / Equipment / Casework		Washer, dryer.
Special Requirements		

Figure 2-F.3.4 Janitor's Closet Room Data Sheet		
INDEX		F4
Description/Usage		Custodial room for general maintenance for facility
Ceiling Height		No ceiling, 9'-0 minimum clearance
Windows		No Windows
Doors	Type	Hollow metal, single 3'-0" x 7'-0"
	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	Sealed concrete
	Base	No base
	Ceiling	Gypsum board - painted
Plumbing		
HVAC		
Fire Protection / Life Safety		
Power		Per UFC 3-520-01
Lighting		Per UFC 3-530-01
Communication	Tele.	N/A
	Data	N/A
	CCTV	
	CATV	
	Security	
Acoustical		
Furnishings / Equipment / Casework		
Special Requirements		

Figure 2-G.3.1 Mechanical Room Data Sheet

INDEX		G1
Description/Usage		Mechanical equipment
Ceiling Height		No ceiling, 9'-0 minimum clearance
Windows		No Windows
Doors	Type	Hollow metal, Pair 3'-0" x 7'-0" to exterior
	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		
HVAC		
Fire Protection / Life Safety		
Power		Per UFC 3-520-01
Lighting		Per UFC 3-530-01
Communication	Tele.	One per room
	Data	NIPR
	CCTV	
	CATV	
	Security	
Acoustical		
Furnishings / Equipment / Casework		
Special Requirements		

Figure 2-G.3.2 Electrical Room Data Sheet		
INDEX		G2
Description/Usage		Electrical equipment
Ceiling Height		No ceiling, 9'-0" minimum clearance
Windows		No Windows
Doors	Type	Hollow metal, single 3'-0" x 7'-0" to exterior
	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		
HVAC		
Fire Protection / Life Safety		
Power		Per UFC 3-520-01
Lighting		Per UFC 3-530-01
Communication	Tele.	N/A
	Data	NIPR
	CCTV	
	CATV	
	Security	
Acoustical		
Furnishings / Equipment / Casework		
Special Requirements		

Figure 2-G.3.3 Telecomm Room Data Sheet		
INDEX		G3
Description/Usage		Communications equipment
Ceiling Height		No ceiling, 9'-0" minimum clearance
Windows		No Windows
Doors	Type	Hollow metal, single 3'-0" x 7'-0" to exterior
	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		
HVAC		
Fire Protection / Life Safety		
Power		Per UFC 3-520-01
Lighting		Per UFC 3-530-01
Communication	Tele.	N/A
	Data	N/A
	CCTV	
	CATV	
	Security	
Acoustical		
Furnishings / Equipment / Casework		
Special Requirements		

Figure 2-G.3.4 Fire Pump Room Data Sheet		
INDEX		G4
Description/Usage		Fire pump water supply
Ceiling Height		No ceiling, 9'-0" minimum clearance
Windows		No Windows
Doors	Type	Hollow metal, Pair 3'-0" x 7'-0" to exterior
	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		
HVAC		
Fire Protection / Life Safety		
Power		Per UFC 3-520-01
Lighting		Per UFC 3-530-01
Communication	Tele.	One per room
	Data	NIPR
	CCTV	
	CATV	
	Security	
Acoustical		
Furnishings / Equipment / Casework		
Special Requirements		

Entrance/ Lobby Room Data Sheet		
INDEX		
Description/Usage		Building entrance from general parking area
Ceiling Height		9'-0" minimum
Windows		N/A
Doors	Type	(1) 3' x 7' Pair - Aluminum Storefront
	Security/ Hardware	Keyed lock set
	View Panels/ Kick Plates	Side light, 12" wide 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		
HVAC		
Fire Protection / Life Safety		
Power		Per UFC 3-520-01
Lighting		Per UFC 3-530-01
Communication	Tele.	N/A
	Data	N/A
	CCTV	
	CATV	
	Security	
Acoustical		
Furnishings / Equipment / Casework		
Special Requirements		Walk-off mat

Corridor / Circulation Room Data Sheet		
INDEX		
Description/Usage		This data sheet is for general circulation or corridor spaces not associated with individual modules.
Ceiling Height		9'-0" minimum
Windows		N/A
Doors	Type	Hollow metal, single 3'-0" x 7'-0" (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
Plumbing		
HVAC		
Fire Protection		
Power		Per UFC 3-520-01
Lighting		Per UFC 3-530-01
Communication	Tele.	N/A
	Data	N/A
	CCTV	
	CATV	
	Security	
Acoustical Requirements		
Furnishings, Equipment and Casework		
Special Requirements		

2.4.F. Floor Plan

The floor plan below is a composite of the Modules for 14 lanes 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.

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 ADMINISTRATION								
A1	QUEUING			1	305	305	28.33	1, 4, 5
A2	OPEN OFFICE			1	235	235	21.83	1, 4, 5
A3	NCOIC OFFICE			1	120	120	11.15	1, 4, 5
A4	ADMINISTRATIVE STORAGE			1	70	70	6.50	1, 4, 5
A5	READY ROOM			1	405	405	37.62	1, 4
SUBTOTAL ADMINISTRATION AREA						1,135	105.44	
B TRAINING								
B1	CLASSROOM			1	950	950	88.26	1, 5
B2	OBSERVATION ROOM			1	105	105	9.75	
B3	WEAPONS SIMULATOR			1	850	850	78.97	1, 5
B4	STORAGE			2	60	120	11.15	
SUBTOTAL TRAINING AREA						2,025	188.12	
C ARMS RANGE								
C1	ARMS RANGE			1	9,610	9,610	892.77	1, 5
C2	RANGE SUPPLIES			1	605	605	56.20	1, 5
SUBTOTAL ARMS RANGE AREA						10,215	948.97	
D MAINTENANCE / CLEANING								
D1	WEAPONS MAINTENANCE SHOP			1	550	550	51.10	1, 5
D2	STUDENT WEAPONS CLEANING			1	695	695	64.57	1, 5
SUBTOTAL MAINTENANCE/CLEANING AREA						1,245	115.66	
E STORAGE								
E1	ISSUE ROOM			1	285	285	26.48	3
E2	ARMS VAULT			1	365	365	33.91	1, 5, 6
SUBTOTAL STORAGE AREA						650	60.39	
F TOILET, SHOWER, LOCKER								
F1	WOMEN'S RESTROOM			1	280	280	26.01	1, 7
F2	MEN'S RESTROOM			1	450	450	41.81	1, 7
F3	LAUNDRY			1	75	75	6.97	
F4	JANITOR			1	50	50	4.65	
SUBTOTAL TOILET AREA						855	79.43	
G BUILDING SUPPORT								
G1	MECHANICAL			1	835	835	77.57	1, 8
G2	ELECTRICAL			1	140	140	13.01	8
G3	TELECOMM			1	140	140	13.01	8
G4	FIRE PUMP			1	200	200	18.58	
SUBTOTAL BUILDING SUPPORT AREA						1,115	103.58	
H CIRCULATION								
	CORRIDOR			1	2,210	1,545	143.53	1, 9
SUBTOTAL CIRCULATION AREA						1,545	143.53	
TOTAL FACILITY NET FLOOR AREA						16,125	1,498.01	
CIRCULATION MULTIPLIER 8.0%						17,415		9
NET TO GROSS MULTIPLIER 19.0%						20,725		9
TOTAL FACILITY GROSS ARE (ROUNDED)						20,700	1,925	9, 10, 11
COMMENTS:								
1	This area is based on the requirements for a 14 lane facility occupancy. SF to be adjusted and verified for alternative lane options (21 or 56) per base installation.							
2	Reference Air Force Manual 32-1084, Chapter 1 and Chapter 6 for general Air Force Facility standards							
3	These areas are User Defined/Justified. SF to be adjusted and or verified for each base installation.							
4	Administration Area include circulation factor of 10% per Chapter 1 Air Force Manual 32-1084.							
5	Small arms range requirements per ETL 11-18							
6	Arms vault requirements per AFI 31-101							
7	Male/Female ratio of 75/25. 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 ratio shall be verified at each installation.							
8	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)							
9	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.							
10	All area SF's are rounded to the nearest whole 5 number.							
11	This worksheet represents a 14 lane facility rounded up to 20,700 Square Feet.							