# Introduction to Architectural Design: Fire Stations

Course No: A02-003

Credit: 2 PDH

J. Paul Guyer, P.E., R.A., Fellow ASCE, Fellow AEI

Continuing Education and Development, Inc.
9 Greyridge Farm Court
Stony Point, NY 10980

P: (877) 322-5800
F: (877) 322-4774

info@cedengineering.com

# An Introduction to Architectural Design: Fire Stations

**GUYER PARTNERS**
44240 Clubhouse Drive
El Macero, CA 95618
(530) 758-6637
jpguyer@pacbell.net

## J. PAUL GUYER, P.E., R.A.

Paul Guyer is a registered architect, civil engineer, mechanical engineer and fire protection engineer with over 35 years experience designing all types of buildings including libraries. He is a graduate of Stanford University and has held numerous local, state and national offices with the American Society of Civil Engineers.

This course is adapted from the *Unified Facilities Criteria* of the United States government, which is in the public domain, has unlimited distribution and is not copyrighted.

## CONTENTS


1. INTRODUCTION

2. PLANNING AND LAYOUT

2.1 SITE DETERMINANTS

2.2 SPACE PROGRAM

2.3 LOCATION DETERMINANTS

2.4 COST

2.5 LAYOUT AND ADJACENCIES


 

## 1. INTRODUCTION

Architectural design is a largely subjective process that is best illustrated using a "casebook" approach. In this course the "case" is fire stations.

This course provides guidance for development of fire stations appropriate for fighting the two primary types of fires: Structure fires and Airport Crash fires. This information may be used by architects, engineers, designers, and others involved in the development and approval of fire station projects. It is intended to help all participants better understand fire station requirements, programs, and design criteria so they can effectively participate in the project development process. This course is not intended to provide all of the information needed to identify project requirements or successfully prepare project designs. Additional information on the unique program and design requirements of projects must be obtained.

## 2. PLANNING AND LAYOUT

### 2.1 SIZE DETERMINANTS.

Several factors determine the size of the facility.

**2.1.1 General**. Generally, the size of the station depends on the class of station, the number of companies housed, the number and types of vehicles housed, and any additional spaces required. The class of station will partially drive the number of spaces required.

**2.1.2 Needs Validation Assessment**. Conduct a Needs Validation Assessment to determine the class and required capacity in terms of personnel and vehicles of the new or renovated station.

**2.1.3 Types of Spaces**. For a complete list of spaces, see Table 2-1. Fire Station functional spaces fall into three main categories:

**2.1.3.1 Maintenance and Apparatus**. This includes the Apparatus Room which houses the firefighting vehicles and the supporting maintenance spaces. The maintenance spaces include both vehicle maintenance and storage and equipment maintenance and storage (fire extinguishers, self-contained breathing apparatus (SCBA), protective clothing, hoses, firefighting agents, etc.)

**2.1.3.2 Administration and Training**. This includes the appropriate offices, training spaces, dispatch areas, administrative areas, etc.

**2.1.3.3 Residential and Living**. This includes the on-duty firefighters' bedrooms, toilets/showers, kitchen/dining, recreation, and "living room" areas.

| Space | Notes |
|---|---|
| **Maintenance and Apparatus** | |
| Apparatus Room/Bays | Made up of bays—either single- or double-length bays. Sized according to truck modules: See Paragraph 2-2.2.1. |
| Personal Protective Equipment (PPE) Gear Storage | One per station. |
| Hose Storage | One per station. |
| SCBA Compressor Room | At least one per department. |
| SCBA Maintenance | One per department. |
| Protective Clothing Laundry | One per station. |
| Equipment Wash/Disinfection | One per station. |
| Work Room/Equipment Maintenance | One per station. |
| Vehicle Maintenance Equipment Storage | One per station. Tools and minor parts. |
| EMT Storage (basic first aid supplies) | One per station. |
| Medical Storage Cabinet/Locker (drugs, needles, etc.) | One per station. Lockable. This may be combined with or a sub-space of the EMT Storage Room. |
| HAZMAT/CBRNE Equipment Storage | One per department. (CBRNE = Chemical, Biological, Radiological, Nuclear, Explosive.) |
| Agent Storage | At least one per department. |
| Spare Gear Storage | At least one per department. |
| Fire Extinguisher Maintenance and Storage | One per department, as dictated by Installation mission requirements. |
| Flightline Fire Extinguisher Maintenance and Storage | One per department. |
| Vehicle Maintenance Bay | Addition to Apparatus Room, as dictated by Installation mission requirements. |
| Vehicle Maintenance Office | As dictated by Installation mission requirements if Vehicle Maintenance Bay is provided. |
| Reserve and Active Duty Mobility/Deployment Gear Storage | As dictated by Installation mission requirements. |
| **Administration and Training** | |
| Station Officer Office | One per station. |
| Watch Desk | One per station only if no Dispatch in station and then made part of Station Officer Office. (Receives calls from Dispatch.) |
| Fire Chief Office | One per department. |
| Chief's Conference Room | One per department. May be a part of the Fire Chief's Office. |

Table 2-1
Fire Station Program Spaces

| Space | Notes |
|---|---|
| Deputy Chief Office | The requirement for a Deputy Chief is driven by the size of the department. |
| Administrative Assistant | Provided only in conjunction with Chief and Deputy Chief. |
| Lobby Area | Generally provided only in conjunction with Chief and Deputy Chief. |
| Assistant Chief/Shift Supervisor | One per department. |
| Assistant Chief of Fire Prevention | One per department, as dictated by Installation mission requirements. |
| Inspector(s) Offices | Several workstations per department—may be located in several stations. |
| EMS Office | Space for EMS to complete confidential paperwork, as dictated by Installation mission requirements. |
| HAZMAT/Safety Office | One per department. |
| Logistics Office | One workstation per department, as dictated by Installation mission requirements. |
| Department Training Room | At least one per department (in HQ station). May be provided in other stations, as dictated by Installation mission requirements. |
| Training Officer Office | One per department. |
| Computer Training/testing Area | One per station. Separate room or alcove. |
| General Admin Storage | One per station. |
| Fire-only Dispatch | One per department; provided only if no requirement for Consolidated Dispatch. Dispatch receives emergency calls from the public. |
| Consolidated Dispatch | Provided in lieu of Fire-only Dispatch. Combines fire, security, and medical dispatch functions. |
| Dispatch Supervisor | Provided in conjunction with Consolidated Dispatch. |
| Dispatch Bathroom | Dedicated facilities close to Dispatch. |
| Dispatch Kitchenette | Dedicated facilities close to Dispatch. |
| Information Technology (IT) Room | One per station. Consider presence/size of dispatch and/or watch room in size and location of room. |
| Generator Space | One per station. May need to be located inside as a security concern. |
| **Residential and Living** | |
| Day/Training Room | One per station. Includes kitchen, training/dining, and lounge areas. The station training area is incorporated as part of the dining portion of the Day Room. |
| Dorm Rooms | Per station. Quantity depends on number of crews. |
| Bathrooms/shower/changing | Male and female facilities per station. |
| Fitness Room | One per station. |
| Laundry Room | One per station. |
| Physical Therapy/sauna | Addition to Fitness Room, as dictated by Installation mission requirements. |
| Recreation Room | Addition to Day Room for noisier activities such as games, as dictated by Installation mission requirements. |
| Covered Outdoor Patio | One per station. |
| **Other Spaces** | |

Table 2-1 (continued)
Fire Station Program Spaces

**2.2 SPACE PROGRAM**. The space program for Fire Stations may be developed through the use of an interactive worksheet. It is completed by first entering the appropriate Service branch and then selecting the following: the type of station, the class of station, the number of companies to be housed/dorm room count, the number and class of vehicles to be housed, and the additional spaces required. As selections are made, the program areas are calculated and summed for both the building and the site. The worksheet must be filled out in collaboration with the appropriate fire department representative(s). This interactive worksheet is available as a downloadable Microsoft© Excel© file from the Whole Building Design Guide Web site (http://dod.wbdg.org).

**2.2.1 Critical Dimensions**. To understand how the numbers in the interactive worksheet are calculated, there are several critical dimensions that must be understood.

**2.2.2.1 Apparatus Bays.**

The apparatus bays are sized based on the class of truck to be housed. See Table 2-2 for a list of common truck types. These types have been classified as follows in order to standardize the size criteria:

- **Large.** These typically include structural aerial (ladder) trucks or large tanker trucks with lengths greater than 11.58 m (38 ft.). The standardized footprint (floor space occupied by the truck, not considering the space around it) is 3.05 m by 15.24 m (10 ft. by 50 ft.).

- **Medium.** This class covers a wide range of vehicles from structural pumper trucks and smaller tanker trucks to rescue and HAZMAT trucks.

- **Small.** These typically include ambulances, small rescue or HAZMAT trucks, small brush units, and command vehicles. Small trucks have lengths less than 9.14 m (30 ft.). A separate vehicle bay size class is not designated for these trucks. Depending on the actual size of the Small class truck, it may be housed in

its own bay or in a bay with another truck. For example, two 6.10-m- (20-ft.-) long vehicles may be housed in a Large bay, either Aircraft Rescue Fire Fighting (ARFF) or not. The interactive worksheet makes a recommendation for the area of additional Apparatus Bays, as appropriate, for the quantity of Small vehicles indicated. However, this area must be carefully reviewed by the planning team to ensure it provides the correct space, accounting for the actual length of the Small vehicles anticipated and the space that may be available in other bays. In addition to the truck footprint, the space program takes into account the space around the parked truck. This space varies depending on whether the truck is parked next to a wall or another truck. The space program uses the middle-sized bay for each truck class to calculate an "average" sized bay for the given vehicle.

| Type of vehicle | Size Class of Vehicle |
|---|---|
| **Structural** | |
| Pumpers | Medium |
| Telesquirts | Medium |
| Aerial/Ladders | Large |
| Tankers | Medium or Large |
| **ARFF** | |
| Large Water Tankers | ARFF Medium |
| ARFF Foam (vary from 5700 L (1500 gal.) up to 24,600 L (6500 gal.) | ARFF Medium or ARFF Large |
| **Ambulance** | |
| Ambulances | Small |
| **Rescue** | |
| Small/Light Rescue | Small |
| Medium Rescue | Medium |
| Heavy Rescue | ARFF Medium |
| **HAZMAT** | |
| HAZMAT Support/Small | Small |
| HAZMAT Squad | Medium |
| **Brush** | |
| Small Brush | Small |
| Large Brush | Medium |

Taable 2-2
Common Types of Vehicles and Their Size Classes

**2.2.2.2 Dorm Room Counts.** The worksheet uses two methods to calculate the number of dorm rooms needed (dorm room count). First, the user enters the number of Structural companies and the number of ARFF companies, as appropriate. (If it is a Structural station, ARFF companies are not permitted and vice versa.) The worksheet will calculate the number of dorm rooms using the number of companies entered. Second, the user adds or subtracts dorm rooms to accommodate ambulance companies, rescue companies, or cross-staffing of companies. The initial number of rooms plus or minus the modified number of rooms is the Final Dorm Room count. Dorm room counts must be coordinated with the Fire Chief. Cross staffed (x-staffed) vehicles are staffed on an as needed basis by personnel assigned to another vehicle or vehicles. X-staffed vehicles have no dedicated staff of their own.

| Type of vehicle | | | | |
|---|---|---|---|---|
| **Structural** | | | | |
| Pumpers | 4 | 4 | 4 | 4 |
| Telesquirts | 4 or x-staffed | 4 | 4 | 4 |
| Aerial/Ladders | 4 or x-staffed | 4 | 4 | 4 |
| Tankers | x-staffed | 1 or x-staffed | n/a | 1 or x-staffed |
| **ARFF** | | | | |
| Large Water Tankers | x-staffed | 1 or x-staffed | 1 | 1 or x-staffed |
| ARFF Foam | 3 | 3 | 3 | 4 |
| **Ambulance** | | | | |
| Ambulances | 2 or x-staffed | 2 | n/a | 2 or x-staffed |
| **Rescue** | | | | |
| Small/Light Rescue | x-staffed | 3 or x-staffed | 3 | 3 or x-staffed |
| Medium Rescue | x-staffed | 3 or x-staffed | 3 | 3 or x-staffed |
| Heavy Rescue | x-staffed | 3 or x-staffed | 3 | 3 or x-staffed |
| **HAZMAT** | | | | |
| HAZMAT Support/Small | x-staffed | x-staffed | x-staffed | x-staffed |
| HAZMAT Squad | x-staffed | x-staffed | x-staffed | x-staffed |
| **Brush** | | | | |
| Small Brush | x-staffed | x-staffed | x-staffed | x-staffed |
| Large Brush | x-staffed | x-staffed | x-staffed | x-staffed |

Table 2-2
Sample Staffing by Vehicle Type

**2.2.3 Total Area**. The space program developed through the use of the interactive worksheet serves as a guideline for the Fire Station planning team and generally represents the maximum space allowed. The final space program for a new Fire Station will need to be carefully determined by Installation representatives and the appropriate program office.

**2.3 LOCATION DETERMINANTS**. Several factors determine the most appropriate and cost-effective location for a Fire Station.

**2.3.1 Access/Response Time**. The most critical determinant for the location of a Fire Station is response time. In addition to response time, consider access to the station by delivery vehicles, staff, and visitors. Consider that direct access and response time may conflict with tightening antiterrorism (AT) criteria—ensure that trucks will not have to cross access control points to reach a target structure or flightline. Facility site should be prominent and easily visible from the target areas (structures or flightlines).

**2.3.2 Size.** Ensure adequate site space is available to accommodate the firefighting vehicular turning radii, personnel parking, visitor parking, storage requirements, and reserve vehicles (if applicable).

**2.3.3 Sustainable Design**. The location of a facility can have a significant impact on achieving sustainable design rating points. Consider issues such as brownfield redevelopment, access to public transportation, and reuse of existing paving and hardscape when selecting a site.

**2.4 COST.** Facilities should be designed with the objective of achieving the lowest life cycle cost over a 30-year period. To do so, the project's design program must adequately define the scope and performance requirements and match those needs against a budget. Conversely, the budget must adequately support an appropriate and high quality program and performance requirements.

**2.5 LAYOUT AND ADJACENCIES**. As with the location determinants, the key internal adjacencies are driven by response time. The location of the residential and living areas must accommodate quick and clear access to the Apparatus Room for response in the event of an alarm. The appropriate layout and adjacencies are illustrated through a bubble diagram and a series of illustrative layout diagrams. In HQ/Main Stations and Large HQ Stations, consider the relationship between the administrative areas and the living areas. There may be a desire to separate these areas to provide a sense of functional identity for each.

**2.5.1 Functional Relationship Bubble Diagram**. The bubble diagram in Figure 2-1 indicates the acceptable relative adjacencies of the functional spaces. Some of these key adjacencies may be accommodated through a hallway rather than a direct entrance/exit from one space to another. This is particularly true with the Apparatus Room and the Day Room as many facility spaces need an adjacency with these two spaces. Note that the “Apparatus Bay Support” area indicated in the diagrams includes the following spaces, some of which may not be included in every station, depending upon Installation mission requirements:

- SCBA Maintenance
- SCBA Compressor Room
- Work Room/Equipment Maintenance
- Equipment Wash/Disinfection
- Protective Clothing Laundry
- EMT Storage
- HAZMAT/CBRNE Equipment Storage
- Spare PPE Gear Storage
- Fire Extinguisher Inspection
- Fire Extinguisher Maintenance & Storage
- Flightline Fire Extinguisher Maintenance

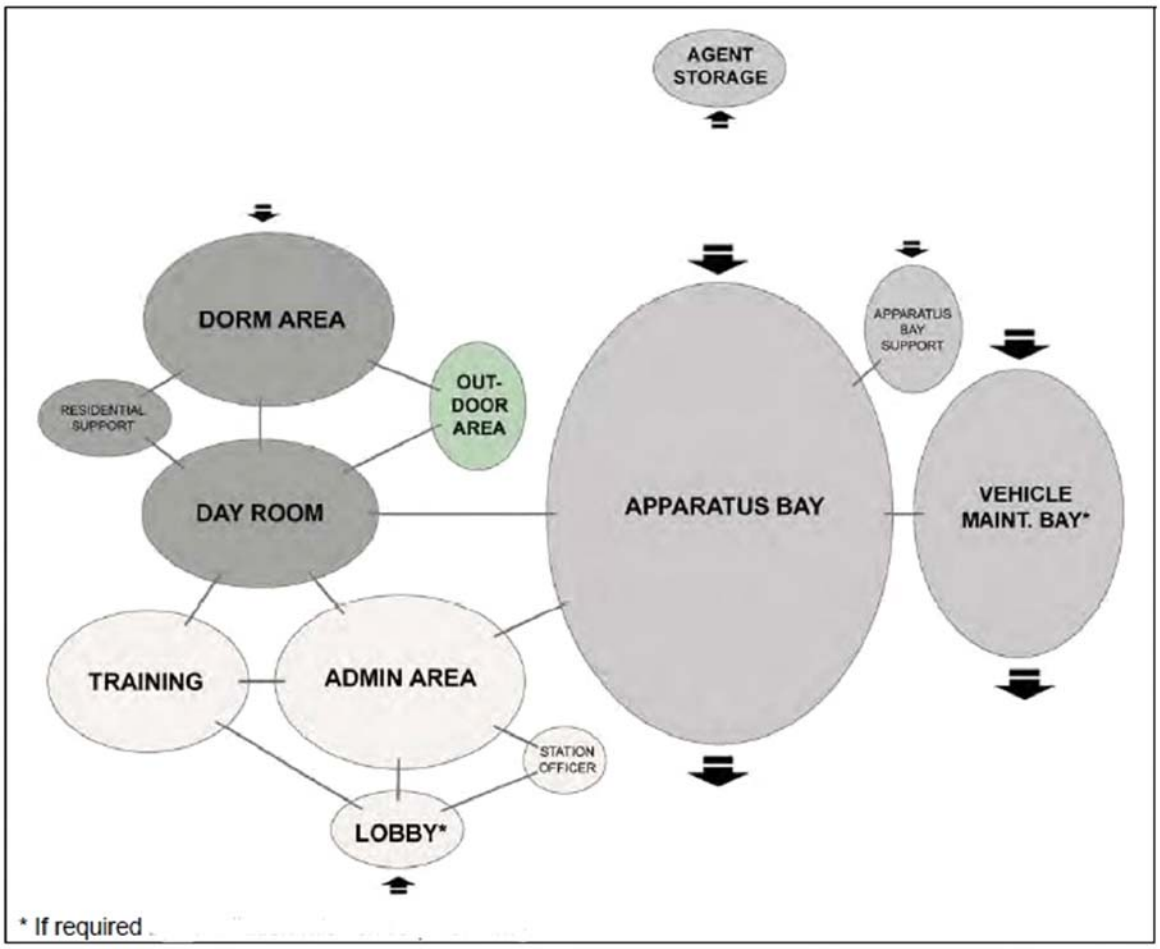


Figure 2-1
Functional Relationship Bubble Diagram

**2.5.2 Illustrative Diagrams**. The illustrative diagrams include Figures 2-2 through 2-4. They do not represent mandatory or even suggested layouts but are provided to expand on Figure 2-1 and illustrate the relative sizes of the functional spaces along with the acceptable adjacencies. By including the relative sizes of the spaces, these diagrams convey a possible means to accommodate the needed adjacencies.

### 2.5.2.1 Figure 2-2.

This diagram illustrates a layout for a small, one- or two-company Satellite station.

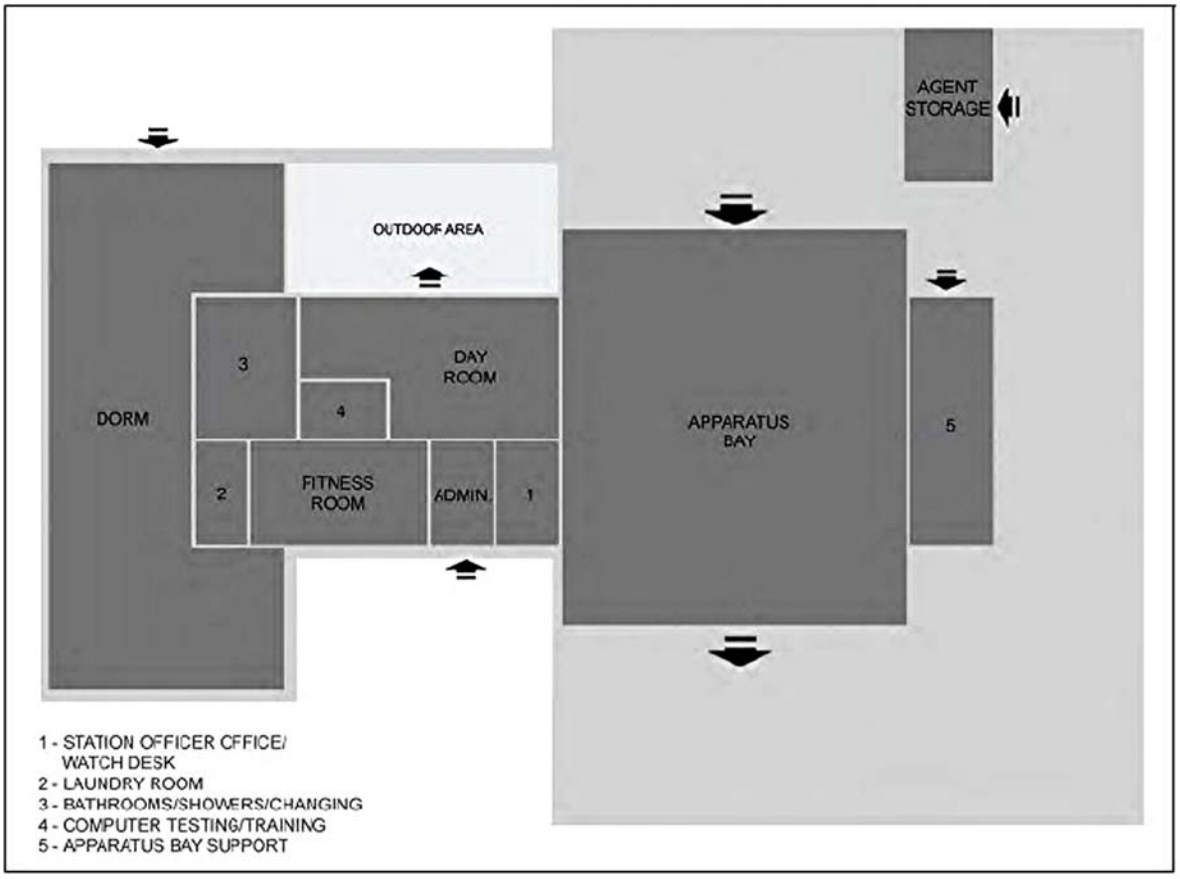


Figure 2-2

Illustrative Layout Diagram A – Small Satellite

**2.5.2.2 Figure 2-3**. This diagram illustrates a layout for an HQ/Main station with larger administrative and training components.

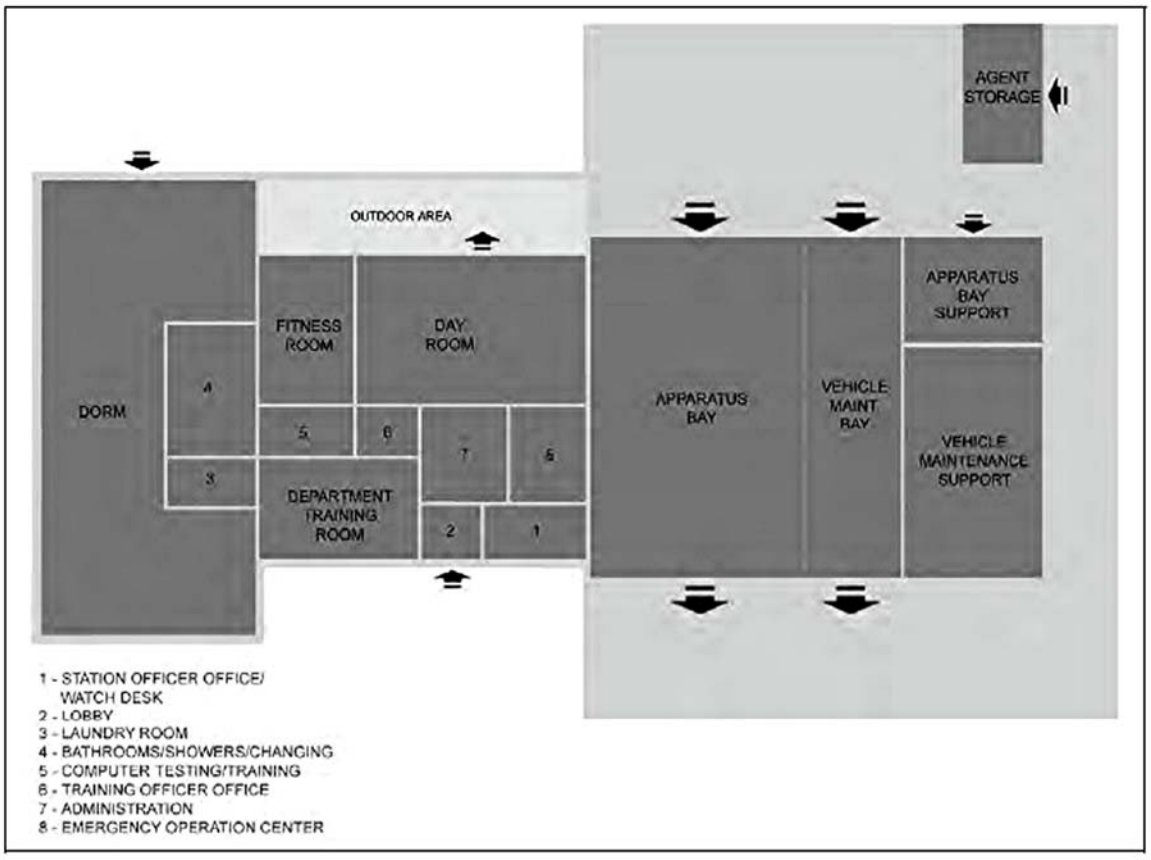


Figure 2-3
Illustrative Layout Diagram B – Headquarters (HQ)/Main Station

**2.5.2.3 Figure 2-4.** This diagram illustrates a layout for a Large HQ station. This diagram also captures some of the key relationships for any combination station, regardless of size—in particular the need for separation of ARFF and Structural trucks relative to a flightline.

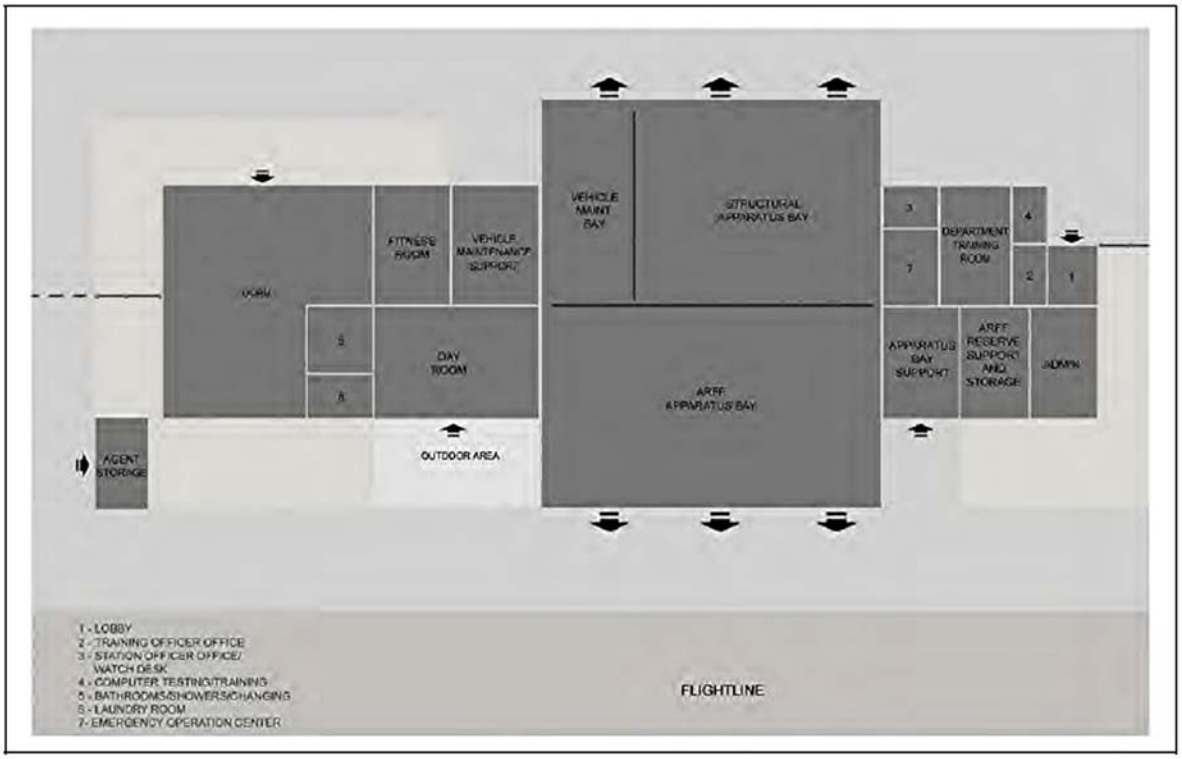


Figure 2-4
Illustrative Layout Diagram C – Large HQ

**2.5.3 Sample Floor Plans**. Sample floor plans below further expand on these illustrative diagrams. These do not represent mandatory or even suggested floor plans. They are provided to illustrate possible means to accommodate the needed adjacencies.

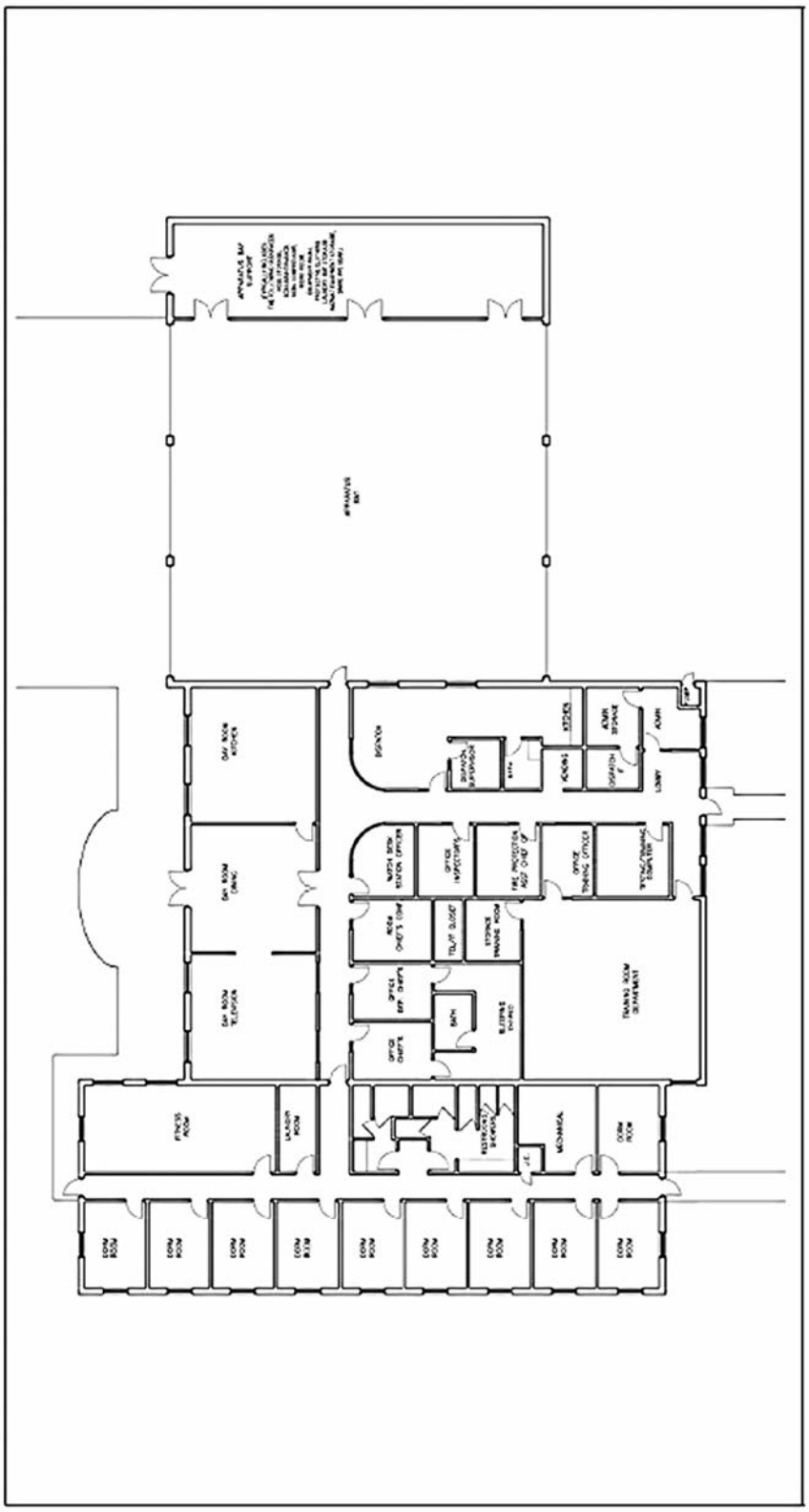

Figure 2-5
Headquarters Station

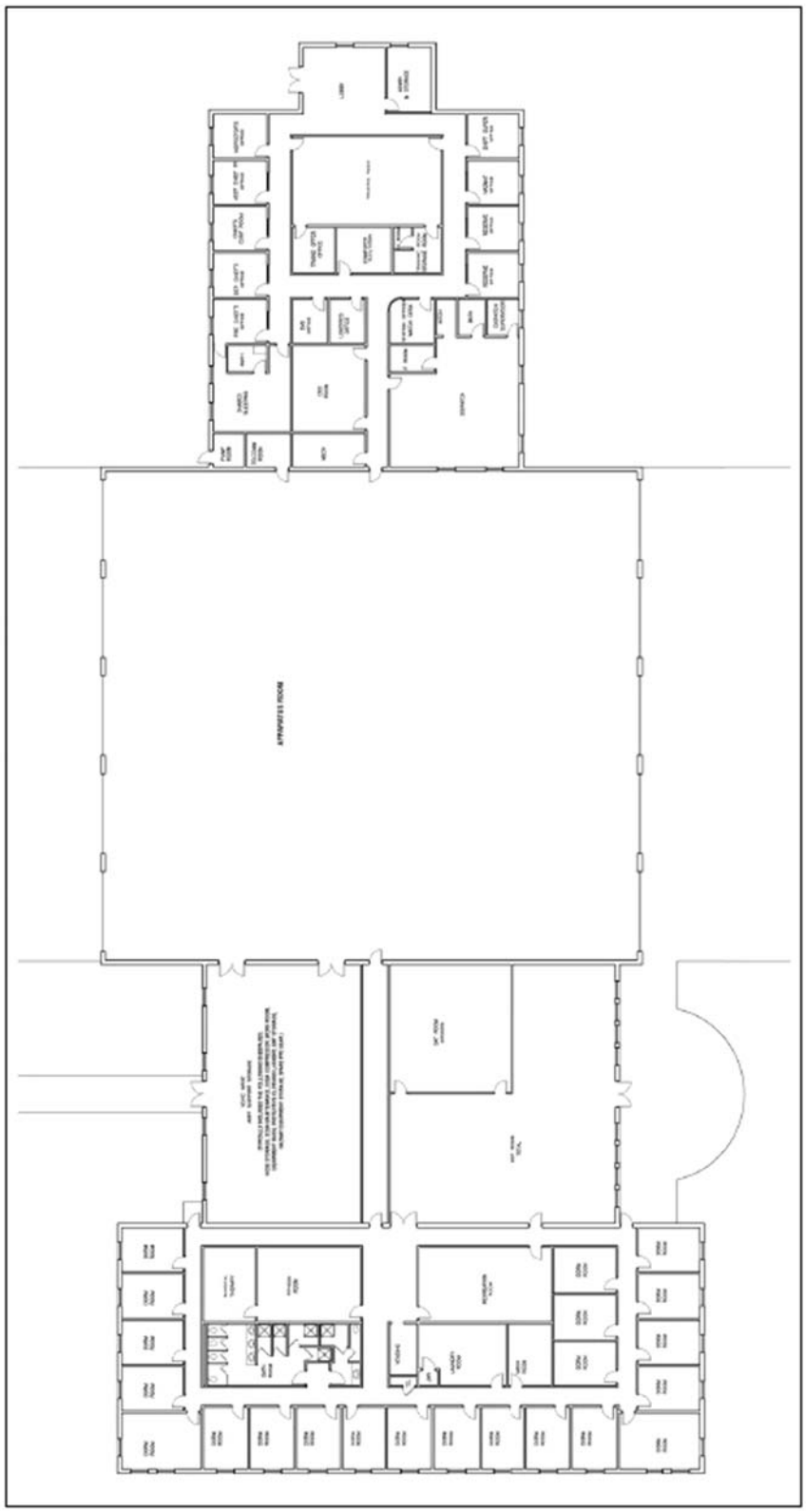

Figure 2-6
Large Headquarters Station

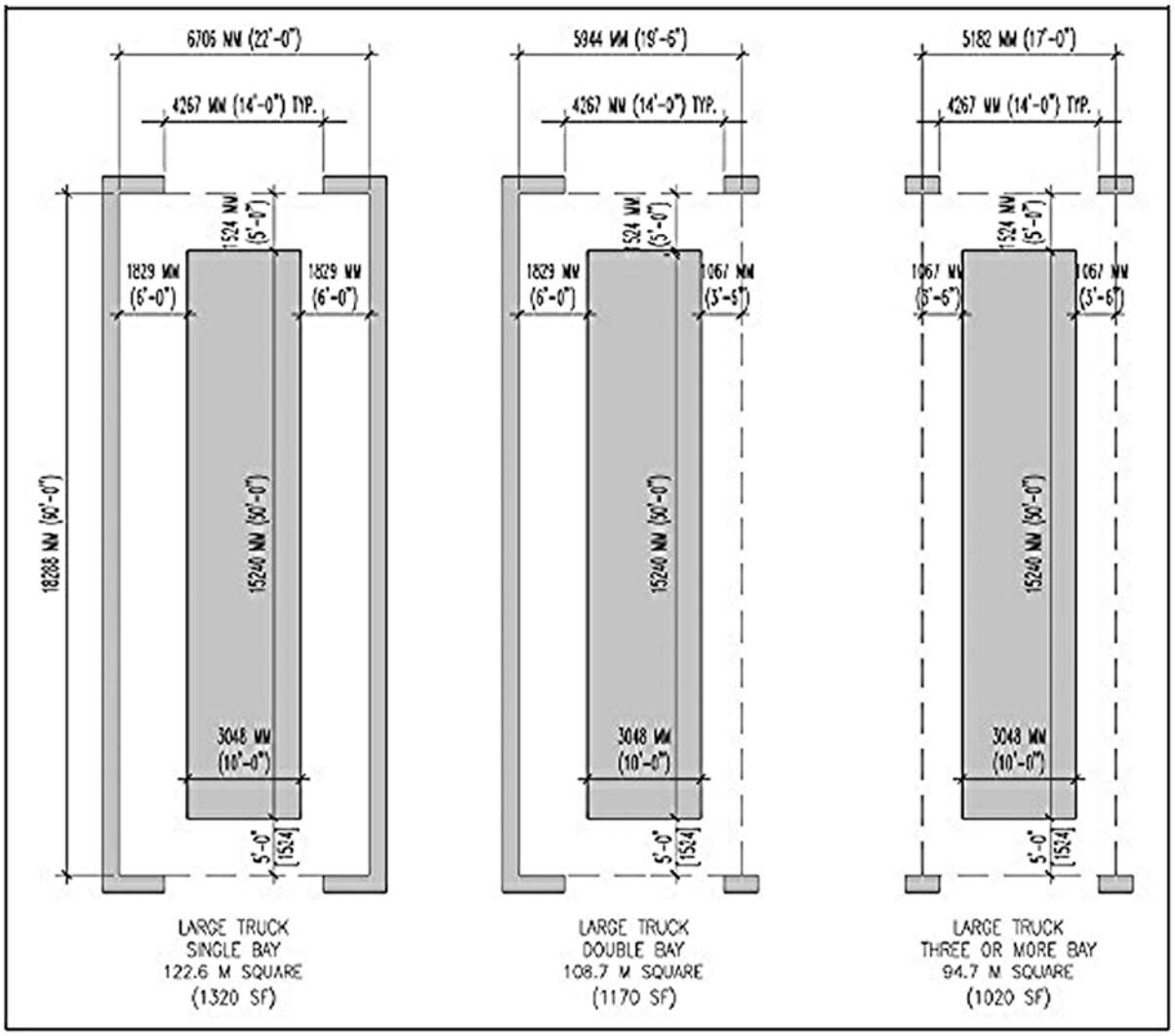


Figure 2-7
Apparatus Bays – Large Vehicle Class

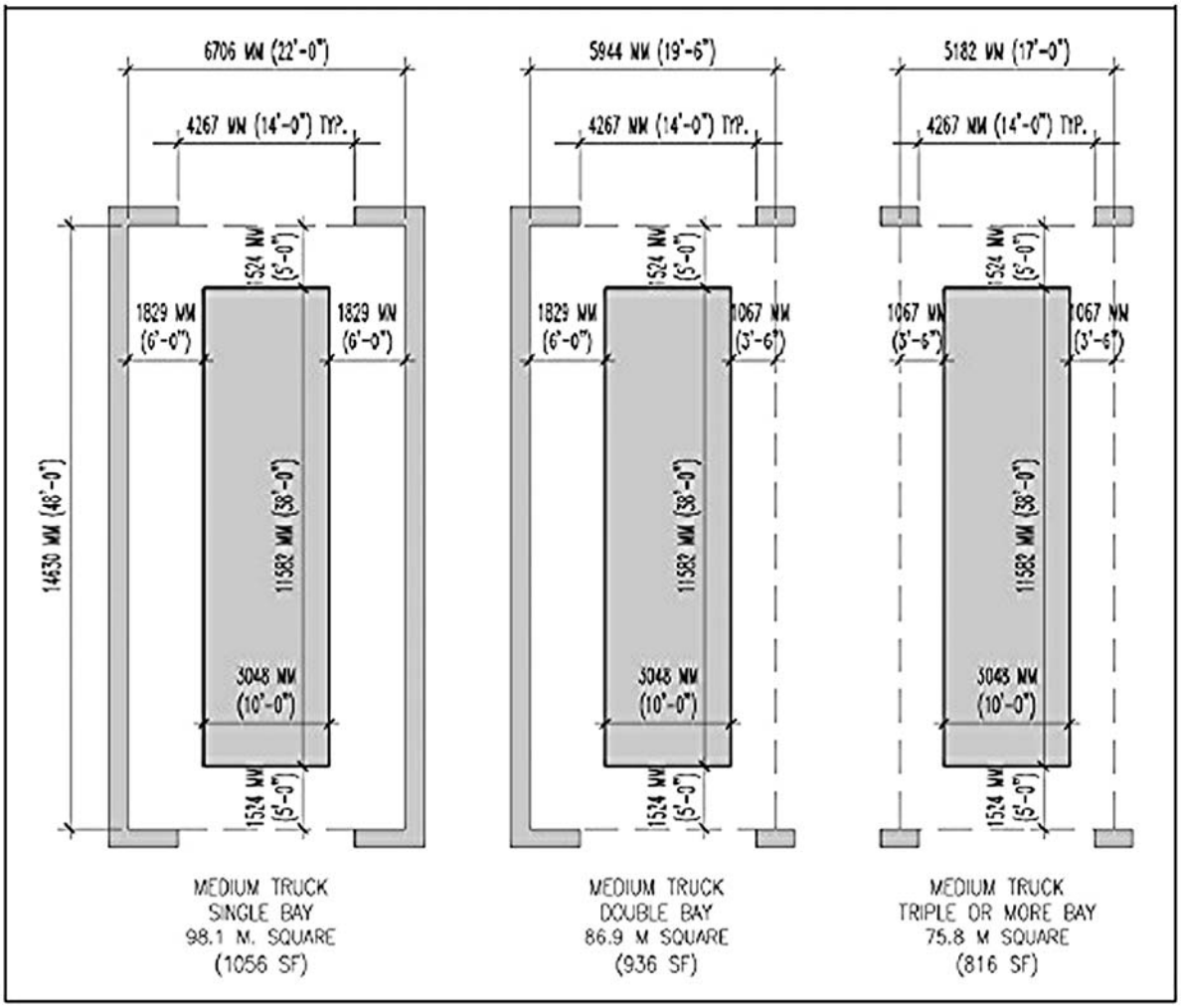


Figure 2-8
Apparatus Bays – Medium Vehicle Class

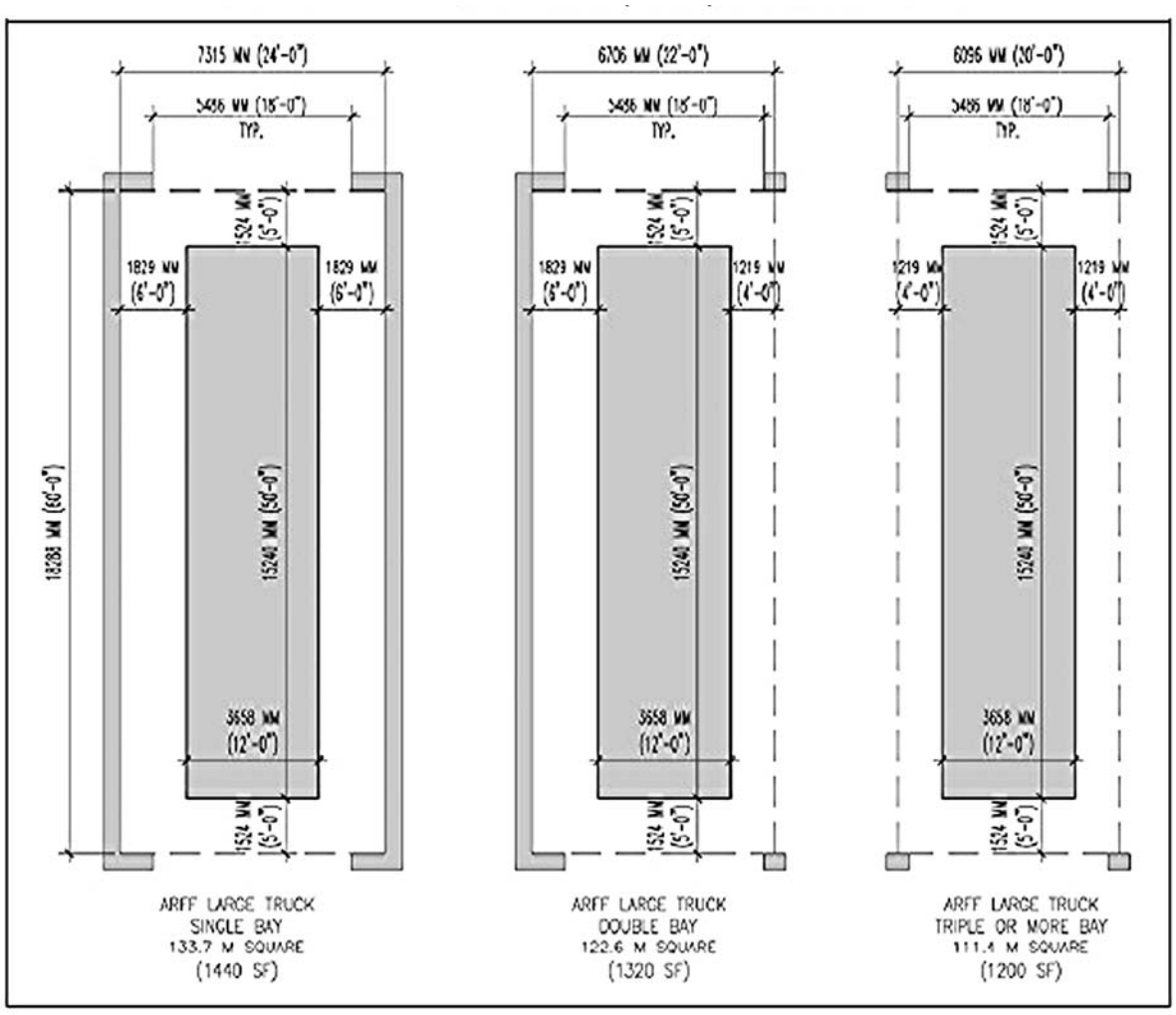


Figure 2-9
Apparatus Bays – Large ARFF (Wide) Vehicle Class

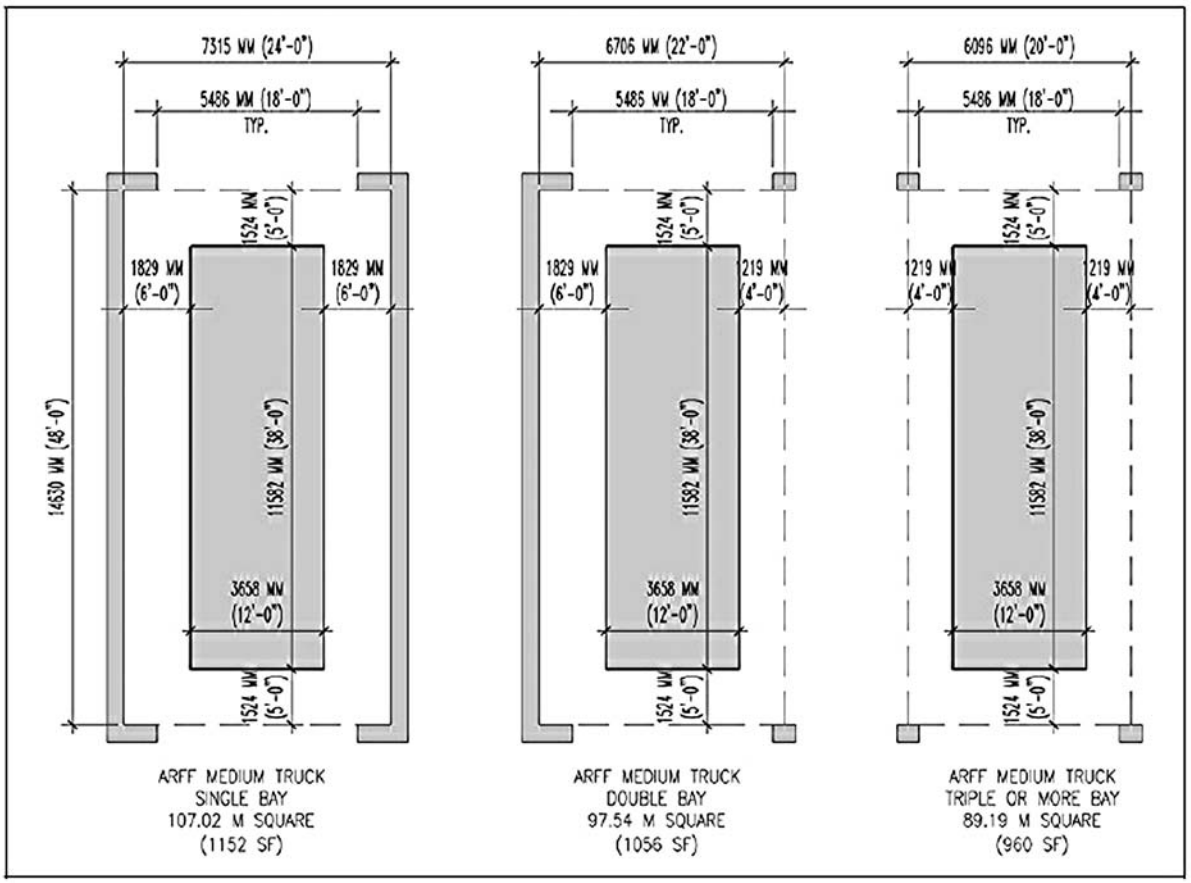


Figure 2-10
Apparatus Bays – Medium ARFF (Wide) Vehicle Class

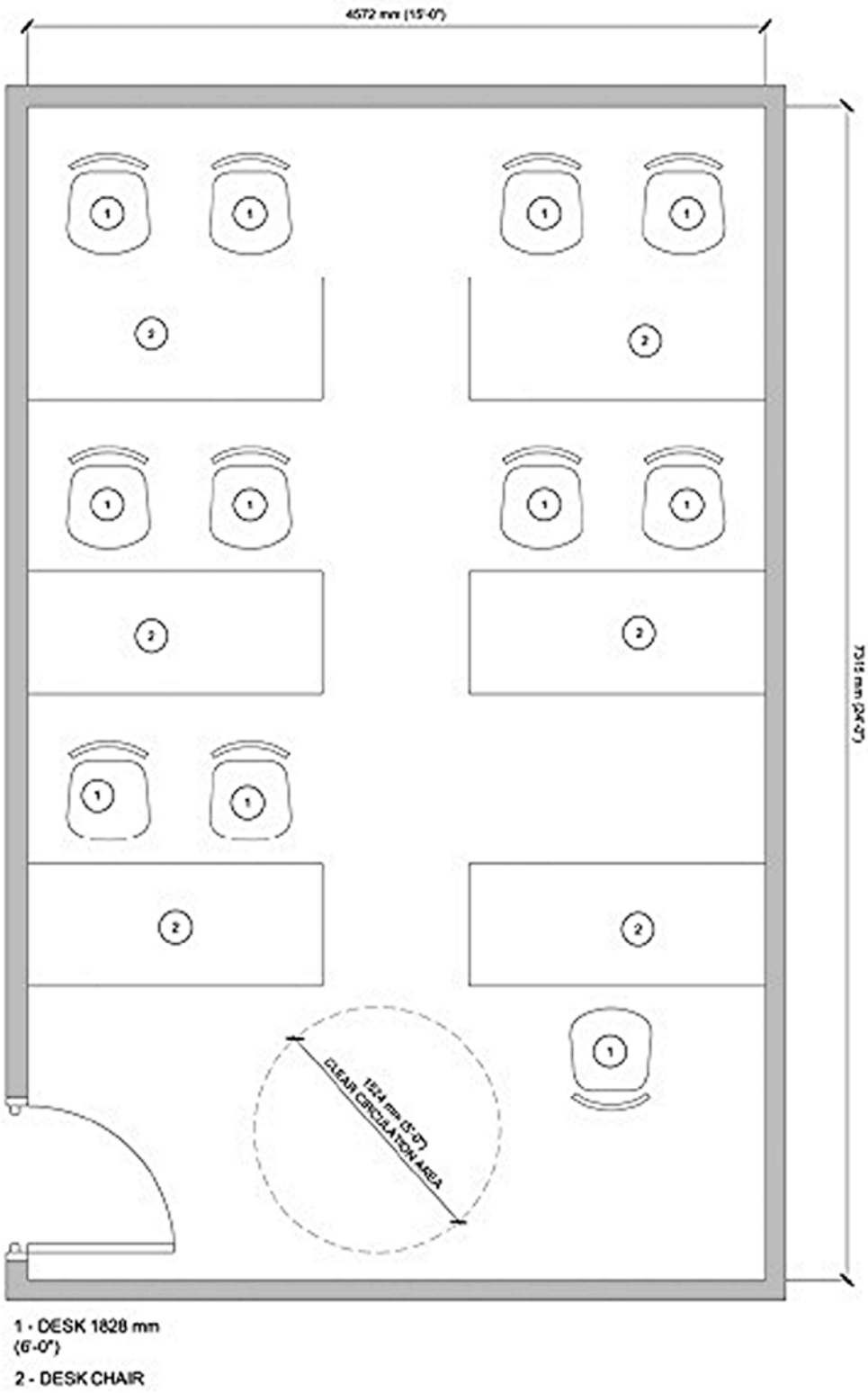


Figure 2-11
Department Training Room

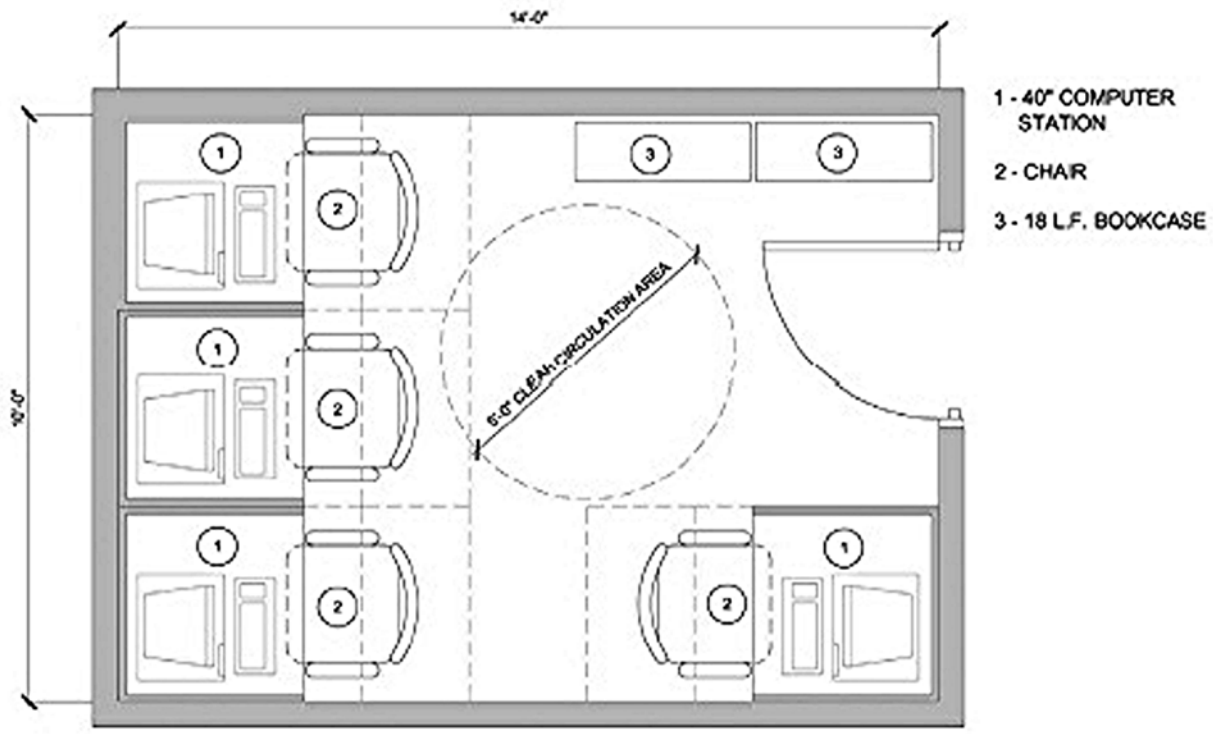


Figure 2-12
Testing/Individual Study Area

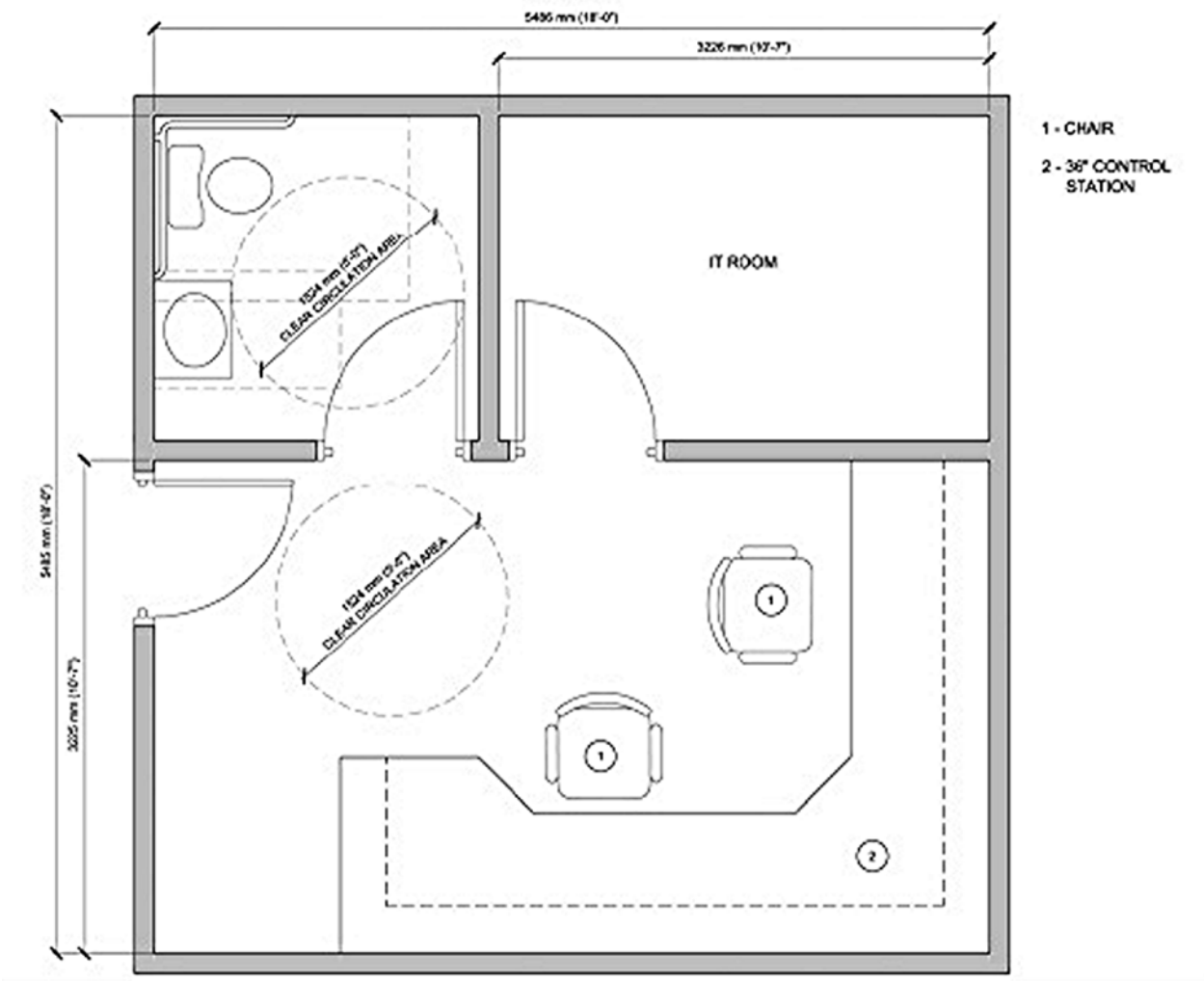


Figure 2-13
Small Dispatch Room

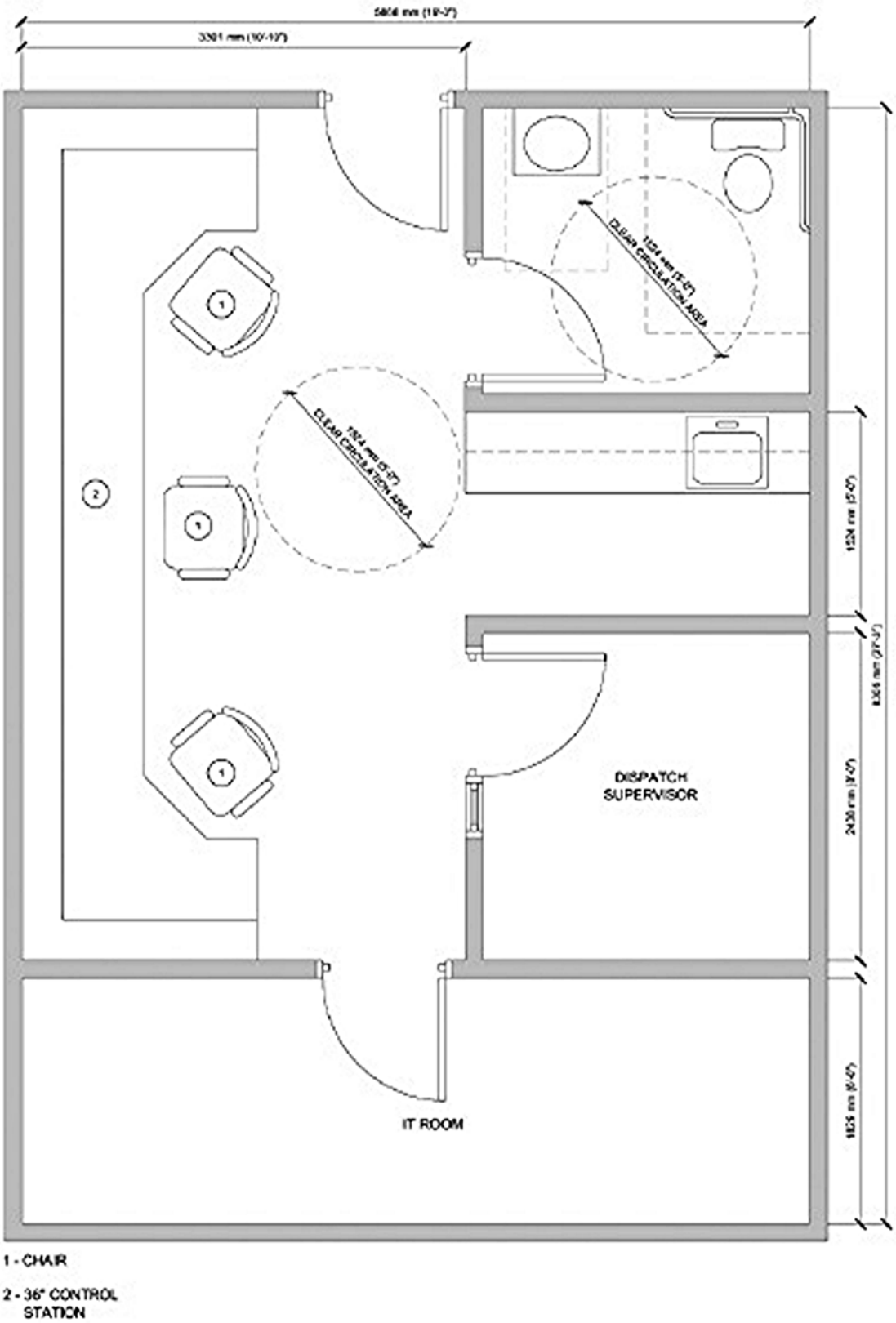


Figure 2-14
Larger Dispatch Room

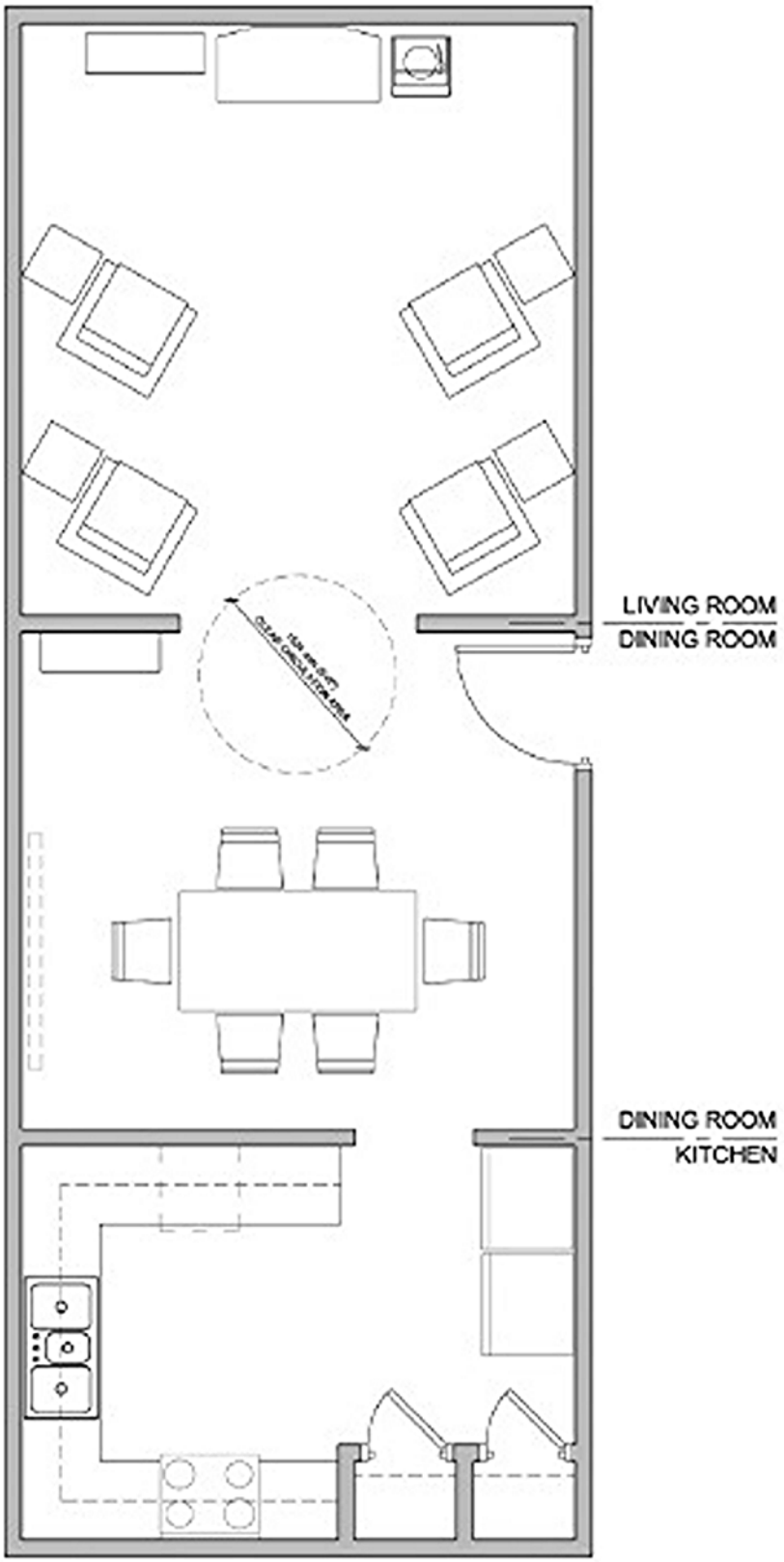


Figure 2-15
Day Room

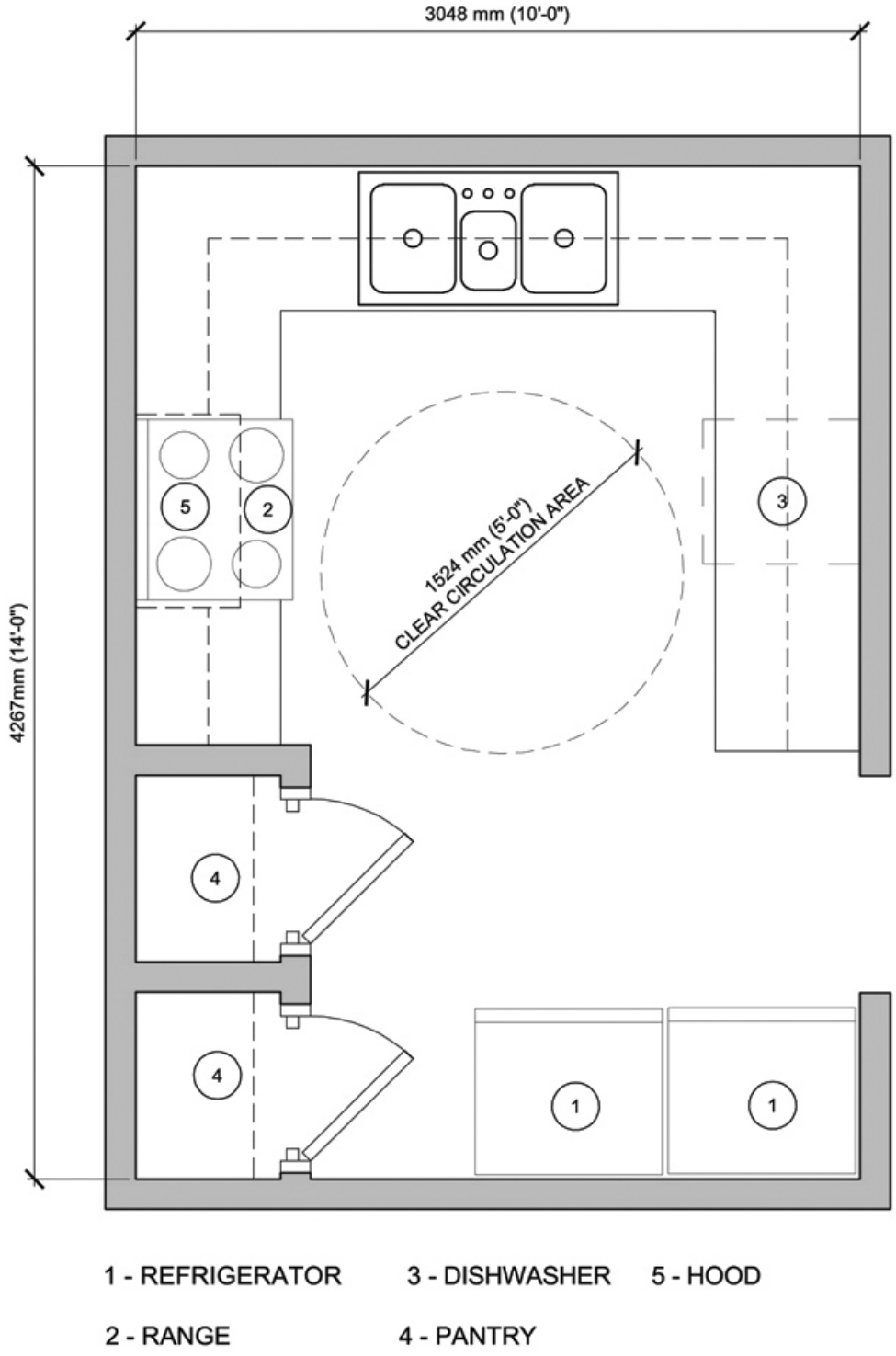


Figure 2-16
Day Room - Kitchen

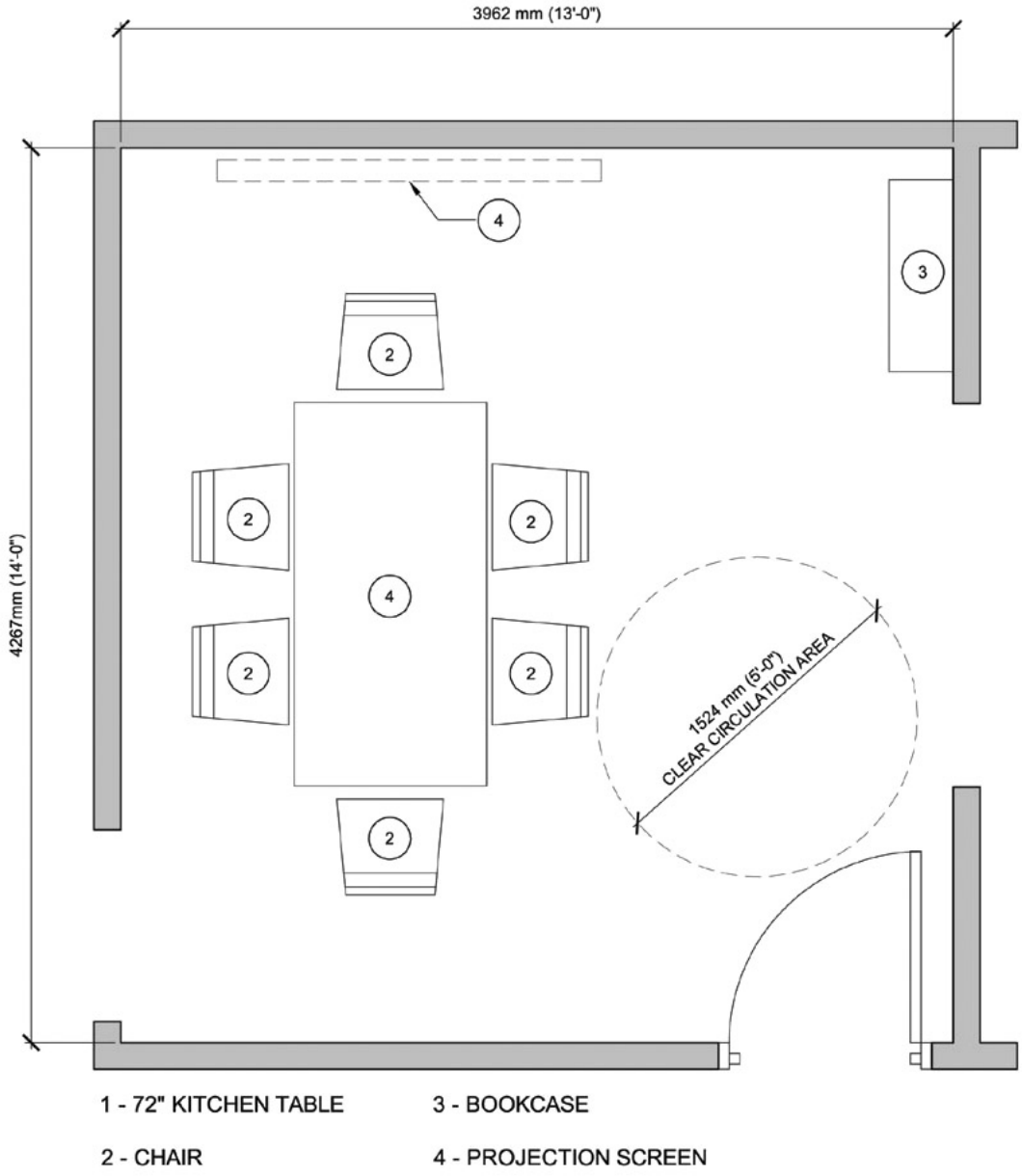


Figure 2-17
Day Room – Dining/Training Area

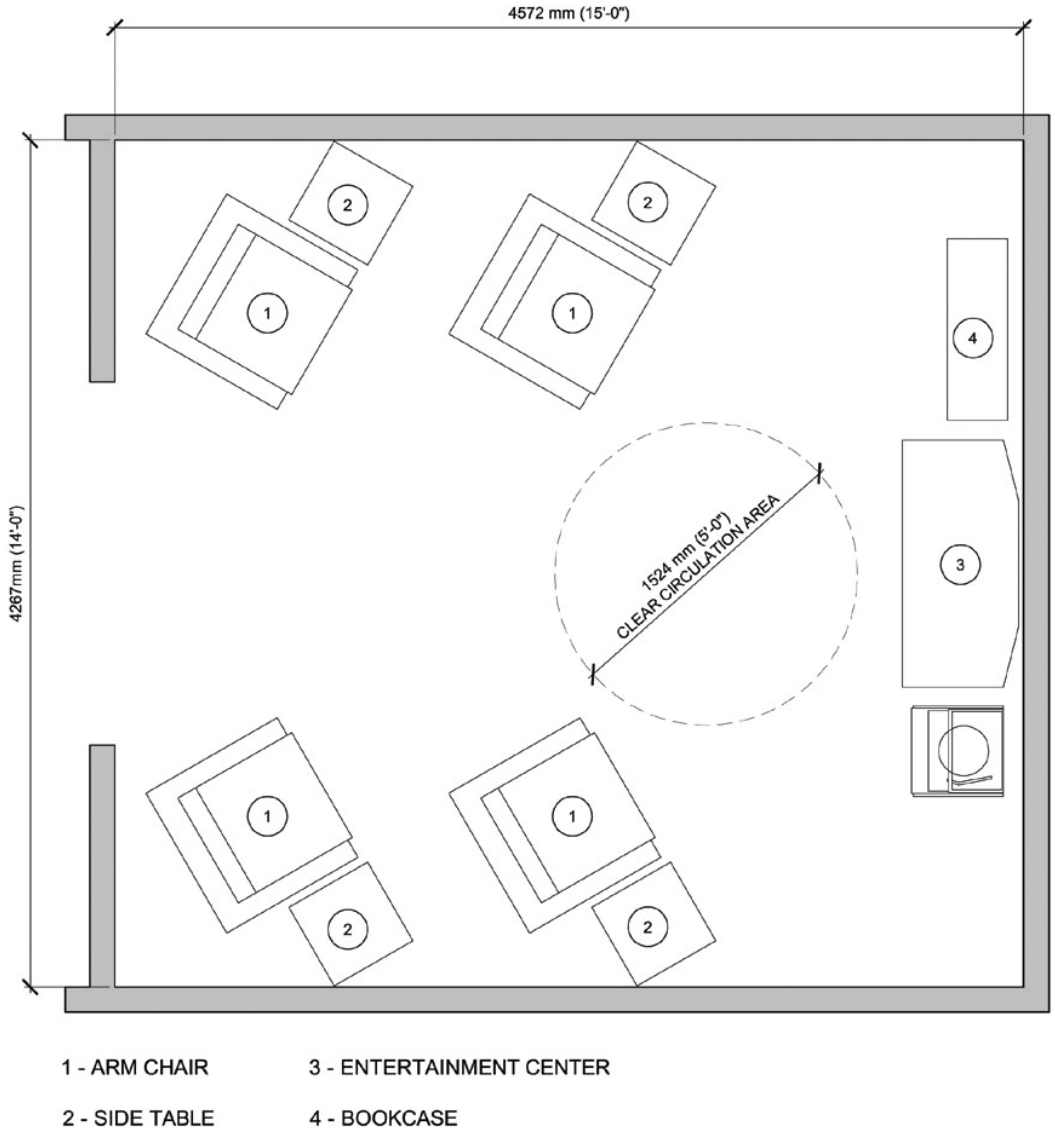


Figure 2-18
Day Room – Living Room Area

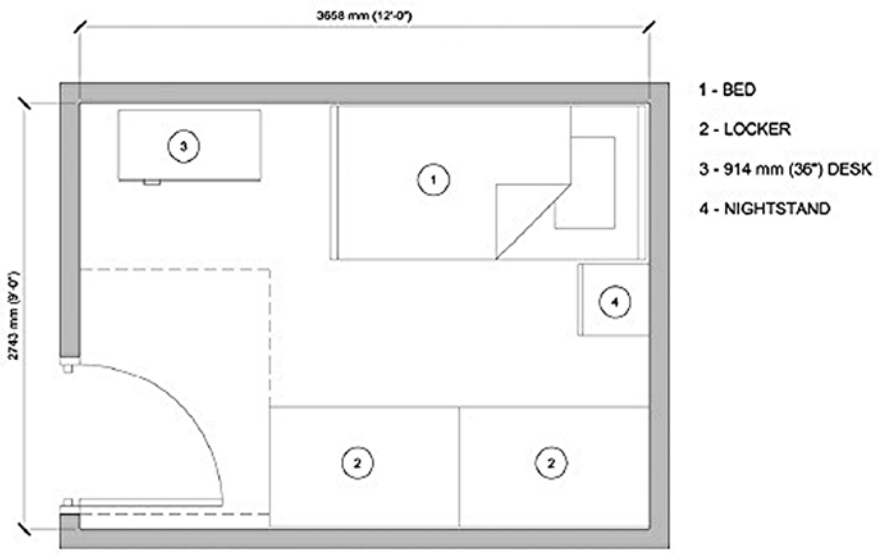


Figure 2-19
Dorm Room – One Bed

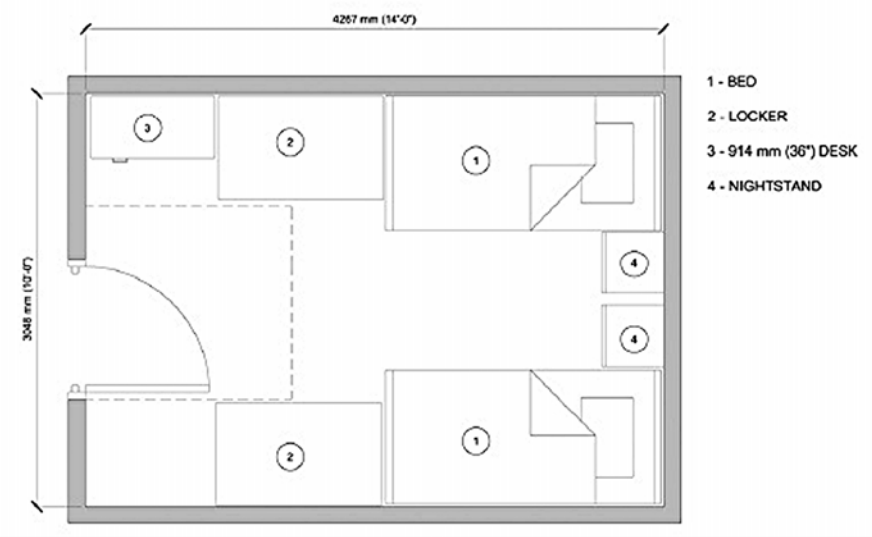


Figure 2-20
Dorm Room – Two Beds

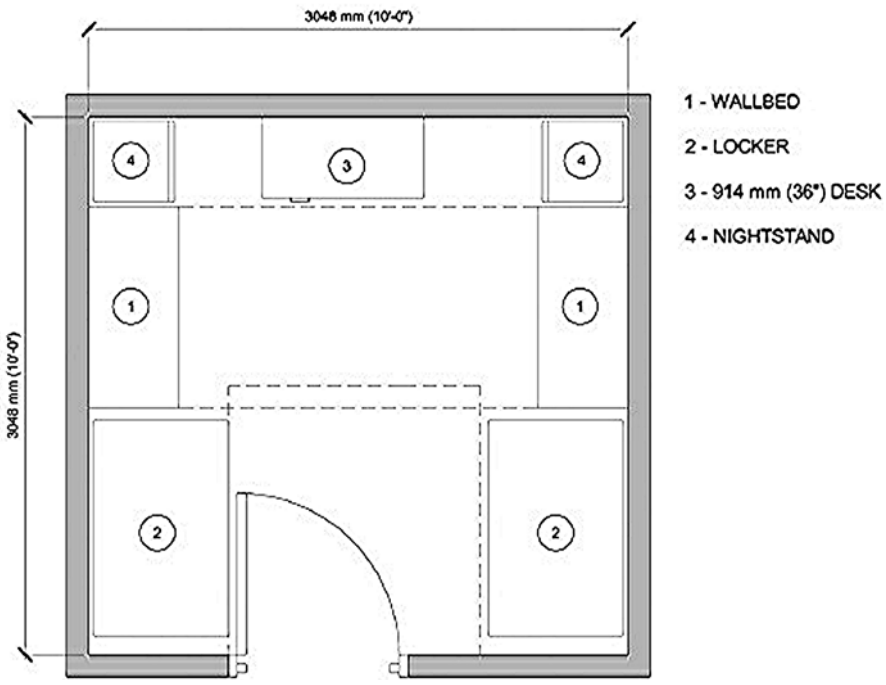


Figure 2-21
Dorm Room with Two Foldup Beds

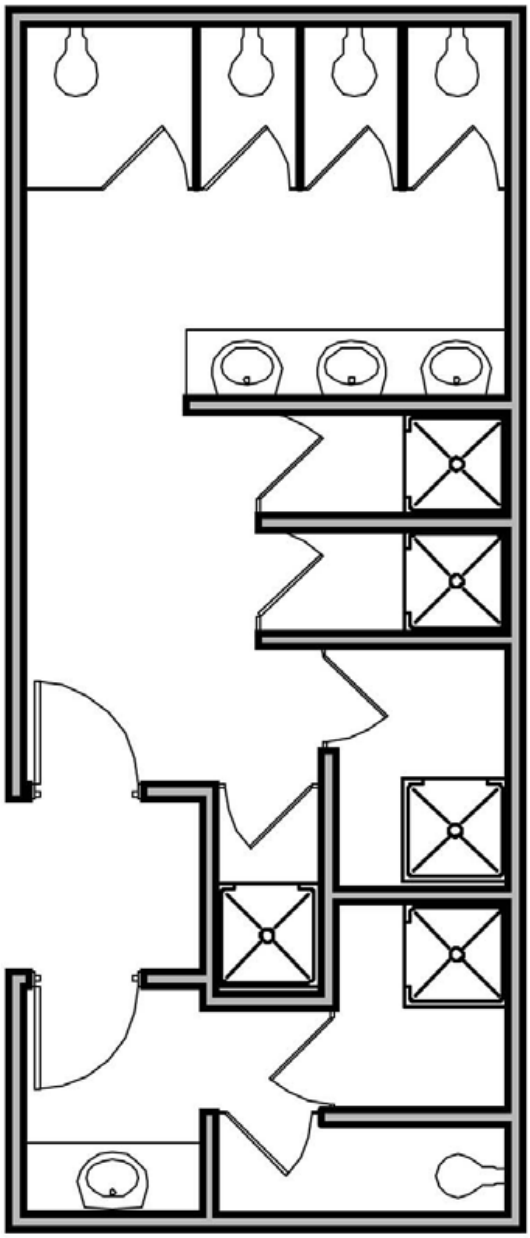

Figure 2-22
Bathroom, Showers, Changing

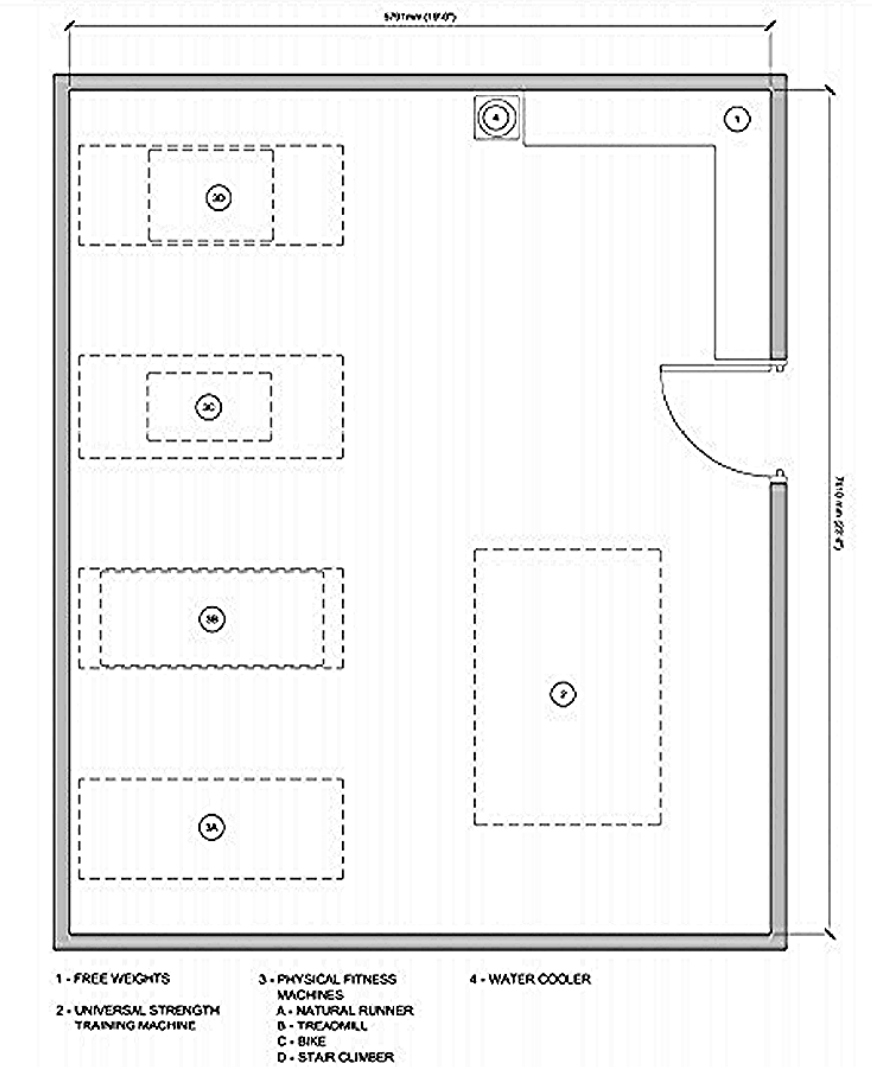


Figure 2-23
Fitness Room

| Functional Component | Space Allocation Standard | | | Notes |
|---|---|---|---|---|
| | $m^2$ | $ft^2$ | Standard | |
| **Apparatus, Equip, & Maintenance** | | | | |
| Apparatus Bay - Extra Large | 108.69 | 1,170 | per truck | Station |
| Apparatus Bay - Large | 86.95 | 936 | per truck | Station |
| Apparatus Bay - ARFF | 122.63 | 1,320 | per ARFF truck | Station |
| PPE Gear Storage | 0.93 | 10 | per person | Station |
| Hose Storage | 5.02 | 54 | per 52-Hose storage unit | Department |
| SCBA Maintenance Room | 13.38 | 144 | per four staffed vehicles | Department |
| SCBA Compressor Room | 4.65 | 50 | per four staffed vehicles | Department |
| Protective Clothing Laundry | 9.29 | 100 | per staffed vehicle | Station |
| Equipment Wash/Disinfection | 13.94 | 150 | per room | Station |
| Work Room/Equipment Maint. | 11.15 | 120 | per room | Station |
| Vehicle Maint. Equipment Storage | 37.16 | 400 | per station | As dictated by installation mission requirements |
| EMT Storage (incl. locked Meds stor.) | 1.11 | 12 | per station | Station |
| HAZMAT/CBRNE Equip. Storage | 11.15 | 120 | Tech. level / Tier 3 req. | Department |
| Spare PPE Gear Storage | 5.95 | 64 | per room | Department - storage for 30% total crew gear |
| Fire Extinguisher Inspection | 2.23 | 24 | per inspection station | Dept. - dictated by installation mission requirements |
| Non-FL Fire Exting. Maint. & Storage | 11.15 | 120 | per room | Dept. - dictated by installation mission requirements |
| Flightline Fire Exting. Maintenance | 14.86 | 160 | per station | Dept. - dictated by installation mission requirements |
| Flightline Fire Exting. Tank Recovery Exterior Covered Storage | 3.72 | 40 | per room | Dept. - dictated by installation mission requirements |
| Spare FL Fire Exting. Tank Exterior Covered Storage | 16.72 | 180 | 9 sf/tank x 10% of total tanks | As dictated by installation mission requirements |
| Vehicle Maintenance/Storage Bay | 111.48 | 1,200 | per station | Department - AF only |
| Vehicle Maintenance Office | 13.94 | 150 | per office | Tied to Vehicle Maintenance Bay |
| **Administrative and Training** | | | | |
| Station Officer's Office/ Watch Desk | 11.15 | 120 | per office | Station |
| Fire Chief's Office | 32.06 | 345 | per office | Department |
| Chief's Conf. Room | 11.15 | 120 | per room | Department - tied to chief & deputy chief |
| Deputy Chief's Office | 11.15 | 120 | per office | Dept. - dictated by installation mission requirements |
| Lobby Area | 9.29 | 100 | per lobby | Department - tied to chief & deputy chief |
| Admin. Asst. | 5.95 | 64 | per office | Department - tied to chief & deputy chief |
| Asst. Chief/ Shift Supervisor | 11.15 | 120 | per office | Dept. - dictated by installation mission requirements |
| Asst. Chief of Fire Prevention | 11.15 | 120 | per office | Dept. - dictated by installation mission requirements |
| Inspector(s) Offices | 4.46 | 48 | per workstations | Department (may be spread-out over several stations) |
| EMS Office | 7.43 | 80 | per office | Station - dictated by installation mission requirements |
| HAZMAT/ Safety Office | 11.15 | 120 | per office | Dept. - dictated by installation mission requirements |
| Logistics Office | 7.43 | 80 | per office | Dept. - dictated by installation mission requirements |
| Dept. Training Room | 2.60 | 28 | per person | Department - total on-duty Fire Department Staff |
| Training Room Storage | 7.43 | 80 | per training room | Tied to Department Training Room |
| Training Officer Office | 9.29 | 100 | per office | Department |
| Satellite Computer Training/Testing Ro | 13.01 | 140 | per four testing stations | Satellite Station |
| HQ Computer Training/Testing Room | 17.65 | 190 | per six testing stations | HQ Station |
| General Admin Storage | 7.43 | 80 | per station | Station |
| IT Room | 1.86 | 20 | per room | Station |
| Dispatch | 17.84 | 192 | per dispatcher | Department - either fire or consolidated |
| Dispatch Supervisor | 5.95 | 64 | per workstation | Department - tied to dispatch |
| Dispatch Bathroom | 4.46 | 48 | per fixture (ADA) | Department - tied to dispatch |
| Dispatch Kitchenette | 1.86 | 20 | per kitchenette | Department - tied to dispatch |
| Additional IT Room Space | 5.57 | 60 | per room | Tied to dispatch |
| **Residential and Living** | | | | |
| Day/Training Room | 60.20 | 648 | per staffed vehicle | Station = kitchen + dining/training + lounge |
| Dorm Room with one bed | 10.03 | 108 | per room | Station = staffed vehicle count + 1/company |
| Dorm Room with two beds | 13.01 | 140 | per room | Station = staffed vehicle count + 1/company |
| Dorm Room with two fold-up beds | 9.29 | 100 | per room | Station = staffed vehicle count + 1/company |
| Bathrooms/Showers/Changing | 23.23 | 250 | per staffed vehicle | Station |
| Fitness Room | 40.60 | 437 | per station | Station - to accommodate 4 working out at one time |
| Laundry Room | 7.43 | 80 | per staffed vehicle | Station - 1 washer, 2 dryers, sink, folding table |
| Physical Therapy/Sauna | 18.58 | 200 | per station | Station - dictated by installation mission requirements |
| Recreation Room | 33.44 | 360 | per station | Optional - station = one or two "game units" |
| Vending | 1.86 | 20 | per vending machine | Station |
| **Other Spaces** | | | | |
| Reserve Offices | 11.15 | 120 | per office | AF only - dictated by installation mission requirements |
| Reserve and Active Duty Mobility/ Deployment Gear Storage | 18.58 | 200 | per station | AF only - dictated by installation mission requirements |
| Reserve Firefighter PPE Gear | 0.93 | 10 | per person | AF only - dictated by installation mission requirements |
| EOC Situation Room* | 29.73 | 320 | per room | Dept. - dictated by installation mission requirements |
| Public toilet (ADA-compliant, unisex) | 4.18 | 45 | per room | Station |

Table 2-3
Space Program Data – Building

| Functional Component | Space Allocation Standard | | | Notes |
|---|---|---|---|---|
| | $m^2$ | $ft.^2$ | Standard | |
| Staff Parking | 41.81 | 450 | per space (incl. circ.) | Station |
| Visitor Parking | 41.81 | 450 | per space (incl. circ.) | Station |
| Bicycle Rack Area | 14.86 | 160 | per 10-bike Rack | Station |
| Site Approach to Apparatus Bays | 185.80 | 2,000 | per bay | Station |
| Agent Storage (ARFF) | 6.97 | 75 | per ARFF truck | Station or Department - Foam + 2nd agent |
| Agent Storage (Structural) | 4.46 | 48 | per Station (Struct. trucks) | Station - Class A Foam |
| Patio | 13.94 | 150 | Min. (1 to 2 companies) | Station - add 100 sf for 3-4 cos, add 100 sf for > 4 cos. |

Table 2-4
Space Program Data - Site