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MEMORANDUM FOR DISTRIBUTION C
MAJCOMs/ FLDCOMs/FOAs/DRUs/

FROM: HQ USAF/A4
1030 Air Force Pentagon, Suite 4E154
Washington DC 20330-1030

SUBJECT: Department of the Air Force Guidance Memorandum (DAFGM) to Department of the Air Force Manual (DAFMAN) 32-1084, *Standard Facility Requirements*

By Order of the Secretary of the Air Force, Air Force Manual (AFMAN) 32-1084, *Standard Facility Requirements*, is re-designated Department of the Air Force Manual (DAFMAN) and this DAF Guidance Memorandum (DAFGM) immediately implements changes to DAFMAN 32-1084. Compliance with this memorandum is mandatory. To the extent its directions are inconsistent with other Department of the Air Force (DAF) publications, the information herein prevails, in accordance with DAFMAN 90-161, *Publishing Processes and Procedures*.

This memorandum provides DAF guidance for establishing lactation rooms for nursing mothers, and Air Force Special Operations Command unique facility requirements in Special Operations Forces weapon systems and supporting agencies.

This memorandum also provides updates on calculating facility authorizations in accordance with the latest standards for Category Group 61, *Administrative and Administrative Support Spaces*.

The guidance in this Memorandum becomes void after one year has elapsed from the date of this Memorandum or upon incorporation in rewrite of DAFMAN 32-1084, whichever is earlier.

TOM D. MILLER
Lieutenant General, USAF
DCS/Logistics, Engineering & Force Protection

Attachment:
DAFMAN32-1084_DAFGM2023-01, *Standard Facilities Requirements*

DAFMAN32-1084_DAFGM2023-01

The below changes to AFMAN 32-1084, dated 15 Jan 2020, are effective immediately. The use of an asterisk (*) identifies a substantive change over the previous guidance. Compliance with **Attachment1** in this publication is mandatory.

***1.3. Changed. Applicability.** This manual is applicable to Department of the Air Force commanders and managers, who plan, program, review, certify, and approve Department of the Air Force facilities. Note that all references to USAF specific terminology should be interpreted to apply to the Department of the Air Force, including the United States Space Force, as appropriate. Civil Air Patrol may adopt this guidance at the discretion of the applicable installation commander, per DAFI 10-2701, *Organization and Function of Civil Air Patrol*. Air National Guard Facility Requirements are defined in ANGH 32-1084, *Facility Space Standards*. Air Force Reserve engineers may supplement this document with Air Force Reserve Command Handbook (AFRCH) 32-1001, *Standard Facility Requirements*. Air Force Special Operations Command (AFSOC) facility requirements unique to Special Operations are defined in AFSOC Instruction 32-1084, *AFSOC Facility Requirements*. A published facility requirements standard on the Whole Building Design Guide (WBDG) does not provide automatic justification for programming new facilities or for including it in the installation development plan. Alternative means may meet facility requirements, such as through a community partnership or inter-customer facility sharing.

***1.4.1.1. Changed.** *Required or authorized gross quantity* is used during the requirements development, planning, and programming phases of asset management. It is calculated IAW **Chapter 4** of this publication, using requirements, standards and applicable multipliers to develop a projected gross need for a function.

***4.3.2.3.1. Changed.** Circulation Multipliers. The following multipliers are added to net administrative area and all special purpose space areas to account for the space needed to circulate in and around these areas: 0.4 for Private Offices, 0.6 for Open Offices, and 0.4 for Administrative and Non-Administrative Special Purpose Space.

***4.3.2.3.2. Changed.** Net-to-Gross Multiplier. Regardless of facility type, determining authorizations (or requirements) for a facility involves adding the sum of required net space and converting it to a gross area. A maximum net-to-gross multiplier of 0.42 may be added to net building area to reach the gross building area. Some facility requirements standards provide requirements in terms of gross area, and thus no multiplier is needed. Some standards may specify the gross-to-net multiplier to use, though most will not. A Category Code (CATCODE) specific net-to-gross multiplier may be established through studies or analysis of existing structures at an installation, such as by performing a mathematic analysis of existing building floorplans, and in those instances programmers should use that in lieu of, but not to exceed 0.42. The net-to-gross multiplier captures the following space: building structure, sustainability features, mechanical and electrical space, anti-terrorism/force protection, fire protection, restrooms, and unusual construction such as force survivability from enemy fire effects.

***4.3.2.3.3. Added.** Additional guidance on Circulation and Net-to-Gross Multipliers can be found in the standard for *Category Group 61, Administrative and Administrative Support Spaces*.

***4.3.2.4.2. Changed.** Military strength is determined from programmed and funded manpower data provided in the Unit Manning Document (UMD) by the MAJCOM/A1 or Installation Force

Support Squadron (FSS). Facility requirements for contracted support is based on the stipulations defined in the associated contract. Transient personnel(such as students, trainees, interns, casual status assignments, or medical patients) should only be included when the CATCODE's facility requirements standard gives specific guidance on the subject.

***4.9 Changed. Periodic Review of Customer Authorizations.** Customer Authorization records shall ultimately be maintained for 100% of customers at all sites by the parent installation. These records will be reviewed and validated by the Facility Space Planner at an interval not to exceed every five years, to parallel the physical inventory validation cycle per DAFI 32-9005, *Real Property Accountability* **(T-2)**

***4.10. Added.** Squadron Commanders will provide rooms for lactation supporting nursing mothers to nurse or express milk. **(T-0)** The location shall be within a facility, secure, lockable, clean, sanitary, not a restroom, and under the control of a unit commander or equivalent. **(T-0)** The room will be established pursuant to Department of Defense (DoD) Unified Facilities Criteria (UFC) 1-200-01, paragraph 1-4.2. **(T-1)** All work that modifies the facility shall be coordinated with the installation's Civil Engineer Squadron or equivalent organization. **(T-1)**

*Changed. **Table 4.1. Space Calculation (Example)**

Required Spaces	Calculation
Total Administrative Areas	Calculated per Facility Class 6
Total Special Purpose Spaces	As directed per the CATCODE's facility requirements standard
Primary Circulation Multiplier	Private Offices: 0.4
	Open Offices: 0.6
	Administrative and Non-Administrative Special Purpose Space: 0.4
Net Building Area	Total of administrative, special purpose, and circulation
Net-to-Gross Multiplier	Up to 0.42, unless specifically directed otherwise
Total	Gross Building Area
NOTES: 1. Use the Net Building Area planning figure provided for the specific CATCODE, plus any additional administrative space requirements. 2. This table is not to be used for those CATCODEs that provide Gross Building Area totals.	

**BY ORDER OF THE SECRETARY
OF THE AIR FORCE**

AIR FORCE MANUAL 32-1084

15 JANUARY 2020

Civil Engineering

**STANDARD FACILITY
REQUIREMENTS**



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This manual implements Air Force Policy Directive 32-10, *Installations and Facilities*, and links space authorizations by category code (CATCODE) using the Whole Building Design Guide (WBDG) website. This manual is applicable to Airmen, to include civilians and Air Force Reserve personnel and units. Air National Guard Facility Requirements are defined in ANGH 32-1084, *Facility Space Standards*. The criteria laid out in this manual and its supporting references are used in assigning occupancy of existing facilities and in programming new facilities. This manual is directive for the use of space authorization standards in facility space planning at Air Force real property and installations. However, this manual does not authorize programming or the use of appropriated funds, non-appropriated funds, or private funds for the construction or conversion of facilities (See AFI 32-1020, *Planning and Programming Built Infrastructure Projects*). Refer recommended changes and questions about this publication to the Office of Primary Responsibility (OPR) using the AF Form 847, *Recommendation for Change of Publication*; route AF Forms 847 from the field through appropriate functional chain of command. Ensure all records created as a result of processes prescribed in this publication are maintained in accordance with Air Force Manual 33-363, Management of Records, and disposed of in accordance with the Air Force Records Disposition Schedule located in the Air Force Records Information Management System. The authorities to waive wing/unit level requirements in this publication are identified with a Tier ("T-0, T-1, T-2, T-3") number following the compliance statement. See AFI 33-360, Publications and Forms Management, for a description of the authorities associated with the Tier numbers. Submit requests for waivers through the chain of command to the appropriate Tier waiver approval authority, or alternately, to the requestors commander for non-tiered compliance items. The use of

the name or mark of any specific manufacturer, commercial product, commodity, or service in this publication does not imply endorsement by the Air Force. This publication may be supplemented at any level, but all Supplements must be routed to the OPR of this publication for coordination prior to certification and approval.

SUMMARY OF CHANGES

This document has been substantially revised and should be completely reviewed. Revisions include removal of the facility requirements standards by category code from this publication. The individual facility requirements standards have been relocated to the WBDG in files organized by Facility Class and Category Groups. These standards are available at <http://www.wbdg.org/ffc/af-afcec/manuals-afm>. Additions and deletions to the specific CATCODE files match the most recent version of the Department of Defense Real Property Classification System (RPCS) listing of authorized category codes. The table of contents below details content retained in this publication, which focuses upon general facility planning considerations.

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Chapter 1

GENERAL

1.1. Objective. This manual is a tool to assist commanders and their management and technical staff to determine facility authorizations for customers (also referred to herein as Customer Authorizations, and referred to as the Basic Facility Requirement for other DoD agencies) using Air Force real property, to support management of the inventory of real property facilities, and to program the requirements for acquisition or renovation of facilities. This manual, used with the requirements standards hosted on the WBDG supplements the Air Force Category Code Guide in correctly identifying classes of real property and assigning CATCODEs. Facility requirements developed per this manual implement the updated methodology for calculation of facility utilization rate, per Department of Defense Instruction 4165.70 *Real Property Management* and Office of Secretary of Defense Assistant Secretary of Defense for Energy, Installations, and Environment memo *Real Property Policy Update for Reporting Utilization of Real Property Assets*, where that value is a calculated ratio of the unit's authorization and its space allocation by CATCODE.

1.2. Background. The Air Force facility requirements process defines the type, number, and size of facilities authorized to Air Force units to perform their mission. Requirements standards are organized by CATCODE according to the Department of Defense Real Property Classification System (RPCS).

1.2.1. Goals: This process promotes economy and efficiency in using and developing facilities and helps realize the following goals:

1.2.1.1. Align planning, programming, design, and construction standards for new and revised functional requirements.

1.2.1.2. Maximize efficient use of existing facilities.

1.2.1.3. Provide comprehensive, standardized programming for the construction, renovation, and operation of needed facilities, and identification of excess.

1.2.1.4. Enable timely acquisition of facilities through improved management of real property space utilization records and standardizing the programming process.

1.2.1.5. Support equitable space allocation in existing facilities.

1.2.1.6. Improve ability to divide limited assets among competing functions.

1.2.2. Real Property Classification System (RPCS) The organization of the Facility Requirements Standards is based on the DoD RPCS. The RPCS is a hierarchical scheme of real property types and functions that forms the framework for identifying, categorizing, and analyzing DoD's inventory of land and facilities. The scheme is a tiered structure represented by numerical codes, with one-digit codes being the most general and five- or six-digit codes representing the most specific types of facilities.

1.2.2.1. Each Military Service has established its own set of numerical codes, commonly known as facility Category Codes (CATCODEs), to represent each type of facility in its inventory. The Air Force uses a six-digit hierarchy.

1.2.2.2. Category Codes (CATCODEs) are generally similar but not identical between Military Services. However, DoD established a higher-level facility classification that groups facilities with similar functions and units of measure from the Military Services into common Facility Analysis Categories (FAC) at the four-digit level. These FACs allow consistent macro-level analysis and planning across DoD. Successively smaller groupings of facility types are represented by three-, two-, and one-digit numerical classifications. The RPCS structure is numerically consistent between the one-digit and four-digit levels, but it is not always consistent across the Military Services at the five and six-digit level. Further information on the DoD RPCS can be viewed on the Office of the Deputy Under Secretary of Defense, Installations and Environment Web site: <https://extranet.acq.osd.mil/ie>

1.3. Applicability. This manual is applicable to Air Force commanders and managers, who plan, program, review, certify, and approve Air Force facilities. Civil Air Patrol may adopt this guidance at the discretion of the applicable installation commander, per AFI 10-2701, *Organization and Function of Civil Air Patrol*. Air National Guard Facility Requirements are defined in ANGH 32-1084, *Facility Space Standards*. Air Force Reserve engineers may supplement this document with Air Force Reserve Command Handbook (AFRCH) 32-1001, *Standard Facility Requirements*. A published facility requirements standard on the WBDG does not provide automatic justification for programming new facilities or for including it in the installation development plan. Alternative means may meet facility requirements, such as through a community partnership or inter-customer facility sharing.

1.3.1. This manual, and its associated requirements standards on the WBDG, take precedence over Air Force design guides for developing requirements for Air Force facilities (T-1).

1.3.2. This manual applies to the requirements definition in the planning and design of construction projects: to include, new facilities in the military construction program; minor construction projects; non-appropriated fund projects; sustainment, restoration, and modernization (SRM) projects (T-1). This manual governs the requirements for both projected and existing Air Force mission customers (T-1).

1.3.3. Application to Existing Facilities. Commanders will use this manual as a baseline in determining the authorization for a customer's allocation of space within existing facilities (T-3). The configuration of existing spaces may preclude the exact application of the requirements standards contained in this document, but space planning should adhere as closely to this guidance as possible. Consider all available existing space when establishing a space deficiency and a justification for programming action.

1.3.4. Non-Air Force tenants' facility requirements are governed by their Host-Tenant Support Agreement, IAW AFI 25-201 *Intra-Service, Intra-Agency, and Inter-Agency Support Agreements Procedures*. For other DoD agencies, their requirements should be determined by their service's respective requirements standard, and those requirements supplied to the host installation by the respective service's facilities command.

1.3.5. Space requirements in this manual apply to all building and construction alternatives including permanent construction, semi-permanent construction, temporary construction, mobilization construction, relocatable buildings, leases, and portable buildings.

1.3.6. This direction applies equally to contingency mission sets as it does to permanently assigned missions, unless otherwise stated in an individual requirements standard, or supplemented by a Combatant Command's (CCMD) internal requirements standard. Facility requirements in support of contingency missions, which may include operational surge, expeditionary force modules, or forward deployments, should be developed by the mission owner (such as a MAJCOM, CCMD, Component Command, or Task Force) in coordination with Civil Engineers. Duration of the mission may be reflected in the means of construction, such as the choice between constructing a permanent, temporary, or expeditionary facility, as governed by the applicable Air Force Instructions.

1.4. Gross quantities. A key element of real property asset management is the gross quantity of the asset.

1.4.1. There is a distinction to be drawn between two usages of gross quantity.

1.4.1.1. *Required* or *authorized gross quantity* is used during the requirements development, planning, and programming phases of asset management. It is often an estimate, and is calculated IAW [chapter 4](#) of this publication, using requirements standards and applicable multipliers to develop a projected gross need for a function.

1.4.1.2. *Actual* or *accountable gross quantity* is used during the design, construction, operation, and disposal phases of asset management. This uses the facility's actual dimensions (or designed dimensions if not yet constructed) to calculate the gross quantity of the asset for use in capitalization and accountability of the asset.

1.4.2. Gross square footage of buildings is calculated to include all fully enclosed area within the exterior perimeter of every occupied or operated floor with the only additions or exceptions as noted in this paragraph's subsection. See [Table 1.1](#) for additional clarification.

1.4.2.1. Calculate the following spaces as half area: covered (but not enclosed) walkways, ramps, porches and balconies; covered and uncovered open stairs; uncovered raised loading platforms; covered ground level and covered/uncovered below grade loading facilities.

1.4.2.2. Exclude the following spaces: roof overhangs, utility tunnels, exterior uncovered walks, ramps, paved terraces, enclosed crawl and utility spaces with an average ceiling height of less than 2.1 m (7 ft) that are not considered half scope.

Table 1.1. Calculating Net – Circulation – Gross.

Space Type		Area Inclusions		
Offices / Administrative	Net Usable Space	Total Net Space	Total Gross SF	
Administrative Special Purpose and Shared Space				
Storage with Associated Materiel Circulation				
Special Purpose Space with Functional Circulation				
Occupied (Non-Mechanical) Mezzanines, Basements, and Penthouses w/ Ceiling Height > 7'				
Secondary Circulation (In/Around Open Admin, Shop Space, and Equipment)				
Corridors and Hallways, Core Facility Navigation and Egress	Primary Circulation			
Elevators and Stairwells				
Building structure and permanent walls				
Core Building Services (Custodial / Janitorial, Mechanical, Telecom, Restrooms)				
Vertical Penetrations				
Raised and/or Covered Loading Platforms				
Covered Walkways, Ramps, Porches, and Balconies (0.5)				
Uncovered Exterior, and All Below-Grade, Loading Docks / Platforms (0.5)				
Exterior Stairs (Covered or Uncovered) (0.5)				
Exterior Uncovered Walkways, Ramps, Balconies, and Patios	Excluded from Gross Total			
Utility Tunnels or Crawl Spaces with Ceiling Height < 7'				
Roof Eaves				

Chapter 2

RESPONSIBILITIES

2.1. The Deputy Assistant Secretary of the Air Force for Environment, Safety and Infrastructure (SAF/IEE): Establishes Air Force facility requirements policy consistent with DoD policy and standards for facility requirements.

2.2. The Deputy Assistant Secretary of the Air Force for Installations (SAF/IEI): Provides policy, governance and oversight to ensure Air Force missions and installations are aligned effectively through Strategic Basing, Integrated Installation Planning, and Real Property Management.

2.3. Director of Civil Engineers (AF/A4C):

2.3.1. Implements policies for the determination of facility requirements.

2.3.2. Monitors Air Force-wide programs for changes that could drive creation of or updates to facility requirements standards, and initiates actions with Air Force Installation and Mission Support Center, Air Force Civil Engineer Center, and functional OPRs to review and incorporate those changes.

2.3.3. Approves standard facility requirements and oversees AFCEC/_CPP management on the WBDG.

2.4. Functional OPRs: As identified in the CATCODE OPR List on the WBDG website, OPRs ensure facility requirements supporting new and changing functions are identified early and take action to develop new facility requirements standards for approval and publishing. OPRs such as Major Commands (MAJCOM), field operating agencies, and weapon system program offices, establish active programs to:

2.4.1. Investigate current facility operations to determine if existing facility requirements standards are adequate.

2.4.2. Submit proposals for new or revised standard facility requirements for publication IAW this manual.

2.4.3. Coordinate with AF/A4CF and AFCEC/_CPP during review and revision process.

2.5. Air Force Installation and Mission Support Center (AFIMSC/IZ).

2.5.1. Serves as the integrator of facility requirements associated with basing and beddown actions. Provides coordination between mission owners and AFCEC as required to develop facility requirements IAW approved standards.

2.5.2. Through its MAJCOM-facing Detachments, serves as the liaison to weapon system program offices or MAJCOM-unique mission owners to collect and vet facility requirements associated with the operations, maintenance, or logistical support of those systems or missions. Detachment engineers should provide subject matter expertise to program offices as necessary to assist in the requirements development. AFIMSC coordinates those requirements for inclusion into the Facility Requirements Standards on the WBDG.

2.6. Air Force Civil Engineer Center (AFCEC):

2.6.1. Issues guidance for the specific programs and procedures, data table structures and formats that Air Force installations should use for submissions of the Air Force Enterprise Real Property Inventory data and annual submissions of Air Force real property inventory. Provides policy clarification support to installations. For policy clarification that cannot be resolved at AFCEC, AFCEC provides a complete report with recommendation to AF/A4C for final adjudication.

2.6.2. AFCEC/CP provides management of the facility requirements standards that are maintained on the WBDG and provides installation support for standard clarification. For standard clarification that cannot be resolved at AFCEC, AFCEC provides a complete report with recommendation to the functional OPR for that facility requirements standard if applicable and to AF/A4C for final adjudication.

2.6.3. AFCEC/CP provides technical reviews of proposed changes to or creation of new facility requirements standards in support of AF/A4C.

2.6.4. AFCEC/CP is responsible for facility requirements standards with RPA Type Code B (Buildings), as well as Structures measured in SF.

2.6.5. AFCEC/CP verifies requirements developed to support MILCON and SRM project programming as part of MILCON and SRM program management responsibility.

2.6.6. AFCEC/CP adjudicates proposed exceptions to facility requirements standards submitted by installations.

2.6.7. AFCEC/CO is responsible for facility requirements standards with Real Property Accountability (RPA) Type Code LS (Linear Structures), as well as RPA Type Code S (Structures) not measured in square feet (SF).

2.6.8. AFCEC/CI is responsible for facility requirements standards with RPA Type Code L (Land).

2.6.9. AFCEC/CI supports and assists installations with CATCODE determinations.

2.6.10. AFCEC/CF consults on architectural, engineering and other design aspects of proposed facility requirements.

2.6.11. AFCEC/CZ provides support for environmental aspects of proposed facility requirements such as environmental permitting, design, and the Environmental Impact Analysis Process.

2.7. Installation: Application of this manual and its associated facility requirements standards relies on a coordinated effort of various offices at the installation level.

2.7.1. Installation Commanders, as chair of the Facilities Board per AFI 32-1015, *Integrated Installation Planning* oversee the Base Comprehensive Activity Management Plan, which drives the development of customer facility authorizations needed to support programmed facility actions. The Facilities Board has the responsibility of validating and approving all drafted customer authorizations.

2.7.2. Community Planner/Facility Space Program Manager and Facility Space Sub-AMP Manager serve as the integrators of allocation and authorization data for the purpose of developing planning actions. They provide direction on the development and maintenance of customer authorization data to support installation development planning.

2.7.3. The Installation Programmer manages customer authorization data for the installation.

2.7.3.1. Works with installation customers to develop and maintain a space authorization for all installation units IAW **Chapter 4** of this manual.

2.7.3.2. Prepares draft authorization packages for approval by the FB.

2.7.3.3. Maintains the customer authorization summary and supporting data on the approved system of record.

2.7.4. The Civil Engineering Real Property Accountability Officer is responsible for oversight of the installation customer list in the real property Accountable Property System of Record (APSR), and the utilization rate data field in the APSR which may be calculated from the facility requirement.

2.7.5. Installation Customers designate a representative to coordinate with the Programmer on development of the customer authorization data. The customer representative provides all supporting information required to support authorization calculation IAW **Chapter 4** of this manual.

2.8. Other Organizational Tiers: As possible deficiencies are identified during application of facility requirements standards, document users may develop and submit proposals to facility type OPRs to improve facility requirements standards and use facilities more efficiently.

2.8.1. AF Reserve Command and the Air National Guard are provided separate and distinct appropriations for construction and facility sustainment, restoration and modernization. As a result, each proponent has statutory responsibilities to maintain separate processes for oversight of space utilization and management. Their roles span what is currently described as Functional OPR, AFIMSC, and AFCEC roles.

Chapter 3

FACILITY REQUIREMENTS STANDARDS DETERMINATION

3.1. Facility requirements standards, by CATCODE: Provides a description of the facility function, methodology for calculating the quantity of the facility for a given customer, and additional programming factors or criteria. These are used by installation programmers as a building block of requirements calculation of customer facility authorizations for planning and project programming efforts. Facility requirements standards are developed for this manual through coordination between AF/A4CF, AFCEC engineers, and functional SMEs who are identified as the OPR for that CATCODE standard. Facility requirements standards are developed under a wide variety of procedures and techniques. Use the processes in this chapter to guide creation of new facility requirements standards where needed and to improve existing facility requirements standards.

3.1.1. Requirements Standards determination: Requirements standards determination is a process to develop authoritative requirements standards, by CATCODE, for use in facility planning and programming. It does so by:

3.1.1.1. Identifying the requesting organization to establish the facility requirement and the subject matter expert for content.

3.1.2. Acquiring a full understanding of the proposed facility functions by a) analyzing the relationship of the functions to mission objectives, operational concepts, or other programs, b) gathering detailed information from experts on published material and functions, c) researching and investigating any aspect of functions requiring clarification, and d) evaluating similar operations comparable to the operations in question.

3.1.3. Validating the proper CATCODE for the function.

3.1.4. Determining the viability of combining or integrating the proposed facility requirement standards with other existing or proposed facility requirement standards.

3.1.5. Translating functional requirements into planning and programming criteria by identifying driving factors.

3.2. Basic Elements of Facility Requirements Standards. Proposed facility requirements standards shall provide the following basic elements:

3.2.1. For each type of facility, the FAC, CATCODE, OPR, Office of Collateral Responsibility, and description.

3.2.2. The elements of the function being performed in or by the facility, and the principal activities or tasks supported. Reference the RPCS and Air Force Category Code book published by AFCEC/CIT to ensure functions described in the standard align with the approved facility use for the CATCODE.

3.2.3. Requirements Determination. Provide the methodology for calculation of the facility quantity. This should provide a straightforward, repeatable facility requirements standard for calculation of the required quantity, using the unit of measure designated for the CATCODE per the RPCS. The methodology is determined by the functional OPR of each facility requirements standard.

3.2.3.1. The methodology should be based on scalable driving factors, such as personnel count or number of assigned aircraft, to ensure standards meet functional mission requirements objectively without undue influence by local preference. Facility requirements standards should be aligned with similar CATCODE standards where applicable, such as using the approved administrative space standards for Facility Class 6 for all administrative space in the facility.

3.2.3.2. Facility requirements standards should draw a distinction between net and gross quantities. For assets measured in square feet (SF), the authorization calculation process applies multipliers for circulation and net-to-gross to account for non-usable space such as the structure or mechanical spaces. Multipliers are discussed further in Section 4.2.

3.2.3.2.1. Net Space is a term defined as the usable space for an occupying organization in a facility, directly related to mission performance that includes office spaces, administrative support areas, organizational special purpose spaces, and accompanying circulation space.

3.2.3.2.2. Gross building area is the total constructed footprint of a facility, calculated from exterior dimensions. In addition to the usable space calculated in the net space calculation, gross area also includes non-usable space such as the building structure, sustainability features, mechanical and electrical space, antiterrorism/force protection, or fire protection.

3.2.4. Provide design considerations beyond facility quantity that serve as key cost drivers for the facility and would affect the programmed amount for new construction or renovation.

3.2.5. List applicable Air Force instructions, unified facilities criteria, design standards, approved weapons system requirements plans, or other policy or technical documentation that detail why the facility is necessary to support Air Force missions and provide additional background on facility requirements to support programming or design.

3.3. Developing Proposed New Standards or Changes to Existing Standards.

3.3.1. Initiators submit proposed facility requirements standards and changes to standards via the email address linked on the WBDG website. The AFCEC standards managers, with the functional OPR, adjudicate the request, and if found valid, initiate the creation or change process. AFCEC/CPP and the CATCODE OPR evaluate the proposed facility requirements standards for implementation, and preparation for publishing. The draft submission includes a draft text, in the same format as those maintained on the WBDG, and supporting documentation.

3.3.1.1. See section 3.2 for the basic elements to include in a submitted draft facility requirements standard, whose initial proposal is the responsibility of the functional OPR.

3.3.1.2. Initiators provide supporting documentation, which explains in detail the descriptions, and facility requirements standards expressed in condensed form in the draft text, and how facility space requirements or other quantitative limits were derived.

3.3.2. Draft facility requirements standards are approved IAW section 3.4 below.

3.4. Approval Process for Drafted Requirements Standards.

3.4.1. The CATCODE OPR and the AFCEC POC, as identified above in **Chapter 2**, shall come to a concurrence on the draft facility requirements standard.

3.4.2. Where a MAJCOM requests a MAJCOM-specific change to a weapon system's facility requirements where it is not the system's lead MAJCOM, updates are coordinated with the lead MAJCOM weapons system program office(s).

3.4.3. AFCEC/CP will route the draft standard with a copy of the original facility requirements standard (if one existed), plus a summary of changes with rationales, for formal concurrence by the AFCEC 3-letter and the OPR at the O-6 or equivalent level (T-2).

3.4.4. The draft facility requirements standard, with AFCEC/CP and OPR concurrence, should be sent to AF/A4C, or to a delegated authority, for final approval, where new requests are reviewed on a quarterly basis. Once final approval is obtained, the approved standard is sent to AFCEC/CP for incorporation on the WBDG. AFCEC/CP may approve administrative updates, such as updating office symbols or technical terminology.

Chapter 4

FACILITY AUTHORIZATION CALCULATION

4.1. Installation programmers are responsible for: The calculation of the customer's facility authorization in support of planning and programming efforts. This chapter lays out the methodology for applying requirements standards contained on the WBDG in the calculation of customer authorizations.

4.1.1. Programmers should work closely with a representative of the subject customer during this process, as the representative can provide details on the various CATCODEs required for the performance of their mission, the factors driving their facility requirements in those CATCODEs, and additional information supporting their requirements.

4.2. Identification of Authorized CATCODEs. Units are only authorized a limited selection of facility types to perform their mission. Installation programmers and Real Property Officers will not authorize a CATCODE if it cannot be justified by policy or standard (T-3). For standard unit types, the WBDG facility requirements standards website provide summaries of authorized CATCODEs. Requests to be allocated space types outside of those listed should be adjudicated by the Functional OPR, AFCEC, and AFIMSC.

4.3. Calculation of Authorized Quantities

4.3.1. Individual facility requirements standards form the basis of calculation of authorized facility quantities for a given CATCODE. These can be found at the National Institute of Building Sciences WBDG website at: <http://www.wbdg.org/ffc/af-afcec/manuals-afm>. Refer to this website for the latest version of specific facility requirements standards for a given CATCODE.

4.3.2. Calculation of net facility requirements for facility space, which includes buildings as well as structures measured in SF, are addressed using the following steps. See section 1.4 above for a definition of net space and gross building area. See **Table 4.1** below for a tabular representation of these steps:

4.3.2.1. **Net Space Requirements for Administration.** Facility authorizations for administration facilities are covered in the WBDG's facility requirements standards entry for Facility Class 6, Administrative. These standards also apply to the calculation of administrative space requirements contained in facilities under other facility classes as well.

4.3.2.2. **Net Space Requirements for Special Purpose Space.** Special purpose spaces, alternatively called non-administrative spaces, are calculated based on a variety of CATCODE-specific factors, such as assigned aircraft or installation population. Rely on the direction in the CATCODE's requirement standard for calculation of the net special purpose space.

4.3.2.3. **Application of Multipliers.** For facility space calculations resulting in a subtotal of net authorized space, programmers should apply the following multipliers:

4.3.2.3.1. **Circulation Multipliers.** A multiplier of up to 10% may be added to authorized net facility specific special purpose spaces for primary circulation.

4.3.2.3.2. **Net-to-Gross Multiplier.** Regardless of facility type, the initial programming of a facility involves adding the sum of required net space and converting it to a gross area. A maximum net-to-gross multiplier of 25% may be added to net building area to reach the gross building area. Some facility requirements standards provide requirements in terms of gross area, and thus no multiplier is needed. Some standards may specify the gross-to-net multiplier to use, though most will not. A CATCODE-specific net-to-gross multipliers may be established through studies or analysis of existing structures at an installation, such as by performing a mathematical analysis of existing building floorplans, and in those instances programmers should use that in lieu of, but not to exceed 25%. The net-to-gross multiplier captures the following space: building structure, sustainability features, mechanical and electrical space, anti-terrorism/force protection, fire protection, restrooms, and unusual construction.

Table 4.1. Space Calculation (Example)

Required Spaces	Calculation
Total Administrative Areas	Calculated per Facility Class 6
Total Special Purpose Spaces	As directed per the CATCODE's facility requirements standard
Primary Circulation Multiplier	Up to 10% of administrative and special purpose areas
Net Building Area	Total of administrative, special purpose, and circulation
Net-to-Gross Multiplier	Up to 25%, unless specifically directed otherwise
Total	Gross Building Area
<p>NOTES:</p> <ol style="list-style-type: none"> 1. Use the Net Building Area planning figure provided for the specific CATCODE, plus any additional administrative space requirements. 2. This table is not to be used for those CATCODEs that provide Gross Building Area totals. 	

4.3.2.4. **Space Requirements based on Personnel or Population.** If space requirements are based upon the documented military strength or the base population of the installation, use the approved person count based at the anticipated time of project completion. Short duration spikes in military strength or base population should not be used as the basis for justifying larger facilities than is reasonable for the long-term, steady-state population.

4.3.2.4.1. Military strength includes permanent party, supporting agencies, and assigned transients (such as trainees, students, or medical patients) as described below. Military strength in this usage applies to those who are to be served by the facility, which may include personnel of other Services.

4.3.2.4.2. Military strength is determined from programmed and funded manpower data provided in the unit manning document by the MAJCOM/A1. Transient personnel (such as students, trainees, interns, casual status assignments, or medical patients) should only be included when the CATCODE's facility requirements standard gives specific guidance on the subject.

4.3.2.4.3. Base populations, as they apply to some of the facilities in this manual, are varied and complex. In addition to military strength described above, it may include some combination of civilian employees, contractors, dependents, and retirees. Population strength and makeup must be based on authorized data sources (T-2). For facilities that depend on base populations for space authorization, rely on guidance in the CATCODE's requirement standard for direction on how population sectors (such as dependents, Guard/Reserve, or retirees) should be included. The installation population data can usually be provided by the host Wing Plans Office (XP) or the Force Support Squadron.

4.3.2.4.4. When multiple installations or concentrations of military personnel and other base population demographics are located close to one another, such as in a metropolitan area, the total number and size of facilities provided collectively by those installations is governed by the aggregate military strength in that area.

4.3.3. **Requirements for Non-Space Facilities.** Utilize the facility requirements standards contained on the WBDG and other applicable design criteria to program the requirements for structures and linear structures needed to support mission operations or associated with the primary facilities under consideration.

4.4. Facility Requirements for Contracted Functions

4.4.1. Contracted functions should be evaluated with a higher level of scrutiny for the generation of facility requirements. These should only count towards a facility authorization when they meet one of the following criteria:

4.4.1.1. Projected period of performance is in excess of three years. The contracts should be reflected in the unit's program of record and the budget reflects funding of the contracted function. This may include full-time equivalent positions listed on the contract proponent's unit manning document. Additionally, one of the two following conditions must be satisfied:

4.4.1.2. The contract proponent validates that their mission reliability dictates that contractor personnel should be fully integrated with government civilian / military counterparts, or proponent mission execution relies on daily contractor use of AF-unique infrastructure, such as secure IT networks or Research, Development, Test and Evaluation equipment not available off-installation, neither locally nor by remote delivery.

4.4.1.3. Function is a component of a Base Operations and Support contract, such as formerly governmental functions converted to contract in accordance with an Office of Management and Budget Circular A-76 action.

4.4.2. Units requesting contractor assigned space must provide written proof of the requirements justifications outlined in section 4.3.1. Include the contractual period of performance and the number of contracted personnel. The requesting unit must update the installation's Civil Engineering function with new contractual data when the previous period of performance expires. In addition, the requesting unit must show contractual language granting the contractor dedicated use of AF-owned or operated facilities. If the above criteria are not met, then it is assumed the contract function could be performed off-installation and it does not count towards that unit's facility authorization (T-2).

4.4.3. For the purposes of accountability, the requirements of a contracted functions should be assigned to their proponent unit or organization, as should their allocations in the real property records. Contractors should not be considered a unique facility customer unless they have signed a lease or other reimbursable agreement with the installation for use of a government facility.

4.5. Facility Standards Not Defined. Standard facility requirements have not been determined for all facilities. If a standard is not completed, project programming or authorizations are accomplished based on requirements analysis, input from the facility type OPRs identified in the OPR list hosted on the WBDG website, and justification through established project approval procedures. Those determinations shall be submitted to the publication OPR and the facility type OPR for adjudication and inclusion into the facility requirements standards in accordance with the procedures identified in [Chapter 3](#).

4.6. Exceeding Facility Requirements Limits. Sizes and scopes addressed by this manual are maximum limits (T-2). When customers require exceeding published facility requirements standards, the rationale should be submitted to AFCEC/CP for adjudication, who should coordinate with the functional OPR's to review as necessary. The result should be a standard revision, creation of a new facility requirements standard to support facility authorizations prior to any action or project, a written exception, or disapproval.

4.7. Adjustments for Shared Use, Partnerships, or Outsourcing. In some instances, a customer may be authorized space per a requirements standard, but that customer has opted to meet that operational requirement through alternative means. This could mean entering into a partnership with a civilian agency or another nearby military installation to utilize their resources. It could mean the customer has chosen to outsource that function to a private entity located off the installation. It could also mean that two customers on the installation have chosen to share facility space in the interest of efficiencies or expediency. In these types of instances, a calculated authorization should be adjusted to reflect that the need is being met through other measures, and it should not count towards that customer's total facility space requirement. Should the circumstances change, such as when a partnership expires and that customer resumes responsibility for that mission aspect, the authorization can be recalculated to ensure that the requirement is included. In the instance of space shared between two units, the programmer works with the customers involved to equitably divide that requirement between those customers, or one customer may ultimately elect to assume the full responsibility for that space requirement. However that space requirement is apportioned, the supporting documentation for all customers involved should be noted to reflect this methodology.

4.8. Customer Authorizations for non-Air Force Tenants. For non-Air Force customers, the customer authorization should reflect the facility requirement as provided by the Host-Tenant Support Agreement, which for other DoD agencies should be determined by their service's respective requirements standard and provided by their agency's or service's respective facility command function. Host-Tenant Support Agreements and facility requirements documentation should be reviewed annually.

4.9. Periodic Review of Customer Authorizations. Customer Authorization records shall ultimately be maintained for 100% of customers at all sites by the parent installation. These records will be reviewed and validated by the programmer at an interval not to exceed every five years, to parallel the physical inventory validation cycle per AFI 32-9005, *Real Property Accountability and Reporting* (T-2).

CHAPTER 5

NATIONAL CODES AND STANDARDS

5.1. The Air Force requires that each building constructed or altered by the Air Force shall: To the maximum extent feasible, be in compliance with nationally recognized model building codes and with other state and local codes, and in concurrence with criteria mandated by MIL-STD-3007. The technical requirements of these nationally recognized codes supplement other Air Force requirements mandated by federal laws and executive orders, as well as other criteria noted within this document that has been establish to meet mission needs and their unique requirements (T-1).

WARREN D. BERRY, Lt General, USAF
DCS/Logistics, Engineering and Force Protection

Attachment 1**GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION*****References***

AFI 10-2701, *Organization and Function of the Civil Air Patrol*, 7 August 2018

AFI 25-201, *Intra-Service, Intra-Agency, and Inter-Agency Support Agreements Procedures*, 18 October 2013

AFI 32-1020, *Planning and Programming Built Infrastructure Projects*, December 2019

AFI 32-9005, *Real Property Accountability and Reporting*, 16 April 2019

AFI 32-1015, *Integrated Installation Planning*, 30 July 2019

AFI 33-360, *Publications and Forms Management*, 1 December 2015

AFMAN 33-363, *Management of Records*, 1 March 2008

AFPD 32-10, *Installations and Facilities*, 4 March 2010

AFRCH 32-1001, *Standard Facility Requirements*, 14 August 2018

ANGH 32-1084, *Facility Space Standards*, 27 January 2015

DoDI 4165.03, *DoD Real Property Categorization*, 24 August 2012

MIL-STD-3007, *Standard Practice for Unified Facilities Criteria and Unified Facilities Guide Specifications*

OSD Policy Memo, *Real Property Policy Update for Reporting Utilization of Real Property Assets*, 19 December 2016

Adopted Forms

AF Form 847, *Recommendation for Change of Publication*

Abbreviations and Acronyms

AFCEC—Air Force Civil Engineer Center

AFI—Air Force Instruction

AFMAN—Air Force Manual

AFPD—Air Force Policy Directive

AFRCH—Air Force Reserve command Handbook

APSR—Accountable Property System of Record

CATCODE—Category Code

MAJCOM—Major Command

MILCON—Military Construction

OPR—Office of Primary Responsibility

RDS—Records Disposition Schedule

RPA—Real Property Accountability

RPCS—Real Property Classification System

SRM—Sustainment, Restoration, and Modernization

WBDG—Whole Building Design Guide

Terms

Circulation Multiplier—application of a percentage increase to the authorized net facility specific Special Purpose Spaces to account for primary circulation.

Gross Building Area—the total constructed footprint of a facility, calculated from existing exterior dimensions or by applying a Net-to-Gross Multiplier to a programmatic Net Space estimate.

Net Space—the usable space for an occupying organization in a facility.

Net-To-Gross Multiplier—application of a percentage increase to a given Net Space calculation to derive the Gross Building Area.

Type Code B—RPA code for facility requirements standards where the facility is defined as a Building

Type Code L—RPA code for facility requirements standards where the facility is defined as Land

Type Code LS—RPA code for facility requirements standards where the facility is defined as a Linear Structure

Type Code S—RPA code for facility requirements standards where the facility is defined as a Structure.