

UFC 1-200-01  
1 July 2013  
Change 1, 1 September 2013

# **UNIFIED FACILITIES CRITERIA (UFC)**

---

## **GENERAL BUILDING REQUIREMENTS**



**APPROVED FOR PUBLIC RELEASE; DISTRIBUTION UNLIMITED**

**UFC 1-200-01**  
**1 July 2013**  
**Change 1, 1 September 2013**

## UNIFIED FACILITIES CRITERIA (UFC)

### GENERAL BUILDING REQUIREMENTS

Any copyrighted material included in this UFC is identified at its point of use. Use of the copyrighted material apart from this UFC must have the permission of the copyright holder.

U.S. ARMY CORPS OF ENGINEERS

NAVAL FACILITIES ENGINEERING COMMAND (Preparing Activity)

AIR FORCE CIVIL ENGINEER CENTER

Record of Changes (changes are indicated by \1\ ... /1/)

<b>Change No.</b>	<b>Date</b>	<b>Location</b>
1	1 Sep 2013	<u>Paragraph entitled, "Implementation, Administration, and Enforcement": added additional information.</u>

---

**This UFC supersedes UFC 1-200-01, dated 16 August 2010, including change 2, implemented 28 November 2011.**

**UFC 1-200-01**  
**1 July 2013**  
**Change 1, 1 September 2013**

## FOREWORD

The Unified Facilities Criteria (UFC) system is prescribed by MIL-STD 3007 and provides planning, design, construction, sustainment, restoration, and modernization criteria, and applies to the Military Departments, the Defense Agencies, and the DoD Field Activities in accordance with [USD \(AT&L\) Memorandum](#) dated 29 May 2002. UFC will be used for all DoD projects and work for other customers where appropriate. All construction outside of the United States is also governed by Status of Forces Agreements (SOFA), Host Nation Funded Construction Agreements (HNFA), and in some instances, Bilateral Infrastructure Agreements (BIA.) Therefore, the acquisition team must ensure compliance with the most stringent of the UFC, the SOFA, the HNFA, and the BIA, as applicable.

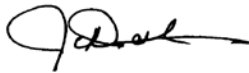
UFC are living documents and will be periodically reviewed, updated, and made available to users as part of the Services' responsibility for providing technical criteria for military construction. Headquarters, U.S. Army Corps of Engineers (HQUSACE), Naval Facilities Engineering Command (NAVFAC), and Air Force Civil Engineer Center (AFCEC) are responsible for administration of the UFC system. Defense agencies should contact the preparing service for document interpretation and improvements. Technical content of UFC is the responsibility of the cognizant DoD working group. Recommended changes with supporting rationale should be sent to the respective service proponent office by the following electronic form: [Criteria Change Request](#). The form is also accessible from the Internet sites listed below.

UFC are effective upon issuance and are distributed only in electronic media from the following source:

- Whole Building Design Guide web site <http://dod.wbdg.org/>.

Hard copies of UFC printed from electronic media should be checked against the current electronic version prior to use to ensure that they are current.

### AUTHORIZED BY:




---

JAMES C. DALTON, P.E.  
 Chief, Engineering and Construction  
 U.S. Army Corps of Engineers




---

JOSEPH E. GOTT, P.E.  
 Chief Engineer  
 Naval Facilities Engineering Command




---

JOE SCIABICA, SES  
 Director  
 Air Force Civil Engineer Center




---

MICHAEL McANDREW  
 Director, Facilities Investment and Management  
 Office of the Deputy Under Secretary of Defense  
 (Installations and Environment)

**UFC 1-200-01**  
**1 July 2013**  
**Change 1, 1 September 2013**

## **UNIFIED FACILITIES CRITERIA (UFC) SUMMARY SHEET**

**Document:** UFC 1-200-01, *GENERAL BUILDING REQUIREMENTS*, dated 1 July 2013.

**Superseding:** UFC 1-200-01, *GENERAL BUILDING REQUIREMENTS*, dated 16 August 2010 with Change 2 dated 28 November 2011.

**Description:** This update to UFC 1-200-01 represents the joint Services effort to bring uniformity to the military use of non-government model building codes. Technical representatives of each of the four Services developed in this document to require the use of the International Building Code (IBC) 2012 consistent with the scope of current military requirements and procedures. This revision of UFC 1-200-01 contains modifications in the following areas:

- DoD criteria guidance approved as late as 17 June 2013 has been cited.
- Requirements for compliance with the Randolph-Sheppard Act (vending facilities for the blind) have been added.
- Non-unified criteria may be found in Chapter 2, the paragraph entitled, "Explosive Safety".

**Reasons for Document:** The existing guidance was inadequate for the following reasons:

- This document replaces the IBC2009 with the use of the IBC2012 revised and replaced in 2012 by the International Code Council.
- The previous version of the UFC 1-200-01 did not properly reference and identify the most recently updated UFC.
- DoD requires the use of the National Fire Protection Association (NFPA) Fire and Life Safety Codes instead of the International Fire Code (IFC). The UFC 3-600-01 is the governing document for fire and Life Safety protection.

**Impact:** The following direct benefits will result from the update of UFC 1-200-01:

- Creation of a single source reference for the latest building code.
- This document reduces interpretation and ambiguity that could lead to design and construction conflicts.
- Costs of DoD facilities are not expected to increase as a result of this revision.

**Non-Unified Items:** This document contains non-unified items as noted above.

## TABLE OF CONTENTS

<b>CHAPTER 1 INTRODUCTION .....</b>		<b>1</b>
<b>1-1 PURPOSE AND SCOPE .....</b>		<b>1</b>
<b>1-2 APPLICABILITY.....</b>		<b>1</b>
<b>1-3 LEVELS OF CONSTRUCTION.....</b>		<b>1</b>
1-3.1 Permanent Construction.....		1
1-3.2 Semi-permanent Construction.....		1
1-3.3 Temporary Construction.....		1
<b>1-4 BUILDING CODE AND MILITARY MODIFICATIONS .....</b>		<b>1</b>
1-4.1 Substitutions.....		2
<b>1-5 IMPLEMENTATION, ADMINISTRATION, AND ENFORCEMENT.....</b>		<b>2</b>
<b>1-6 FACILITIES IN SUPPORT OF MILITARY OPERATIONS .....</b>		<b>2</b>
1-6.1 UFC 1-201-01 .....		2
1-6.2 UFC 1-201-02.....		2
1-6.3 UFC 1-202-01.....		3
<b>1-7 REFERENCES AND DATES OF PUBLICATION.....</b>		<b>3</b>
<b>CHAPTER 2 MODIFICATIONS TO THE INTERNATIONAL BUILDING CODE (IBC)...</b>		<b>5</b>
<b>2-1 CHAPTER 1 – ADMINISTRATION.....</b>		<b>5</b>
<b>2-2 CHAPTER 2 – DEFINITIONS.....</b>		<b>5</b>
<b>2-3 CHAPTER 3 – USE AND OCCUPANCY CLASSIFICATION.....</b>		<b>5</b>
<b>2-4 CHAPTER 4 – SPECIAL DETAILED REQUIREMENTS BASED ON USE AND OCCUPANCY.....</b>		<b>5</b>
<b>2-5 CHAPTER 5 – GENERAL BUILDING HEIGHTS AND AREAS.....</b>		<b>5</b>
<b>2-6 CHAPTER 6 – TYPES OF CONSTRUCTION.....</b>		<b>5</b>
<b>2-7 CHAPTER 7 – FIRE-AND SMOKE PROTECTION FEATURES.....</b>		<b>5</b>
<b>2-8 CHAPTER 8 – INTERIOR FINISHES.....</b>		<b>5</b>
<b>2-9 CHAPTER 9 – FIRE PROTECTION SYSTEMS.....</b>		<b>5</b>
<b>2-10 CHAPTER 10 – MEANS OF EGRESS.....</b>		<b>5</b>
<b>2-11 CHAPTER 11 – ACCESSIBILITY.....</b>		<b>6</b>
<b>2-12 CHAPTER 12 – INTERIOR ENVIRONMENT.....</b>		<b>6</b>
<b>2-13 CHAPTER 13 – ENERGY EFFICIENCY.....</b>		<b>6</b>
<b>2-14 CHAPTER 14 – EXTERIOR WALLS.....</b>		<b>6</b>
<b>2-15 CHAPTER 15 – ROOF ASSEMBLIES AND ROOFTOP STRUCTURES.....</b>		<b>6</b>

2-16	CHAPTER 16 – STRUCTURAL DESIGN. ....	6
2-17	CHAPTER 17 – SPECIAL INSPECTIONS AND TESTS.....	7
2-18	CHAPTER 18 – SOILS AND FOUNDATIONS.....	7
2-19	CHAPTER 19 – CONCRETE. ....	7
2-20	CHAPTER 20 – ALUMINUM. ....	7
2-21	CHAPTER 21 – MASONRY. ....	8
2-22	CHAPTER 22 – STEEL. ....	8
2-23	CHAPTER 23 – WOOD.....	8
2-24	CHAPTER 24 – GLASS AND GLAZING. ....	8
2-25	CHAPTER 25 – GYPSUM BOARD AND PLASTER. ....	8
2-26	CHAPTER 26 – PLASTIC. ....	8
2-27	CHAPTER 27 – ELECTRICAL.....	9
2-28	CHAPTER 28 – MECHANICAL SYSTEMS. ....	9
2-29	CHAPTER 29 – PLUMBING SYSTEMS. ....	9
2-30	CHAPTER 30 – ELEVATOR AND CONVEYING SYSTEMS.....	9
2-31	CHAPTER 31 – SPECIAL CONSTRUCTION. ....	9
2-32	CHAPTER 32 – ENCROACHMENT INTO THE PUBLIC RIGHT-OF-WAY. .....	10
2-33	CHAPTER 33 – SAFEGUARDS DURING CONSTRUCTION.....	10
2-34	CHAPTER 34 – EXISTING STRUCTURES. ....	10
2-35	CHAPTER 35 – REFERENCED STANDARDS. ....	10
2-36	APPENDICES. ....	10
CHAPTER 3	OTHER CRITERIA .....	11
3-1	HIGHER AUTHORITY MANDATES.....	11
3-1.1	Vending Facilities for the Blind.....	11
3-2	UNIFIED FACILITY CRITERIA (UFC).....	11
3-2.1	Core UFC.....	11
3-2.2	Other UFC. ....	12
3-3	FACILITY CRITERIA (FC).....	12
3-4	SPECIFICATION REQUIREMENTS. ....	12
3-5	OTHER MILITARY CRITERIA. ....	13
3-5.1	Antiterrorism. ....	13
3-5.2	Explosive Safety. ....	13

**UFC 1-200-01**  
**1 July 2013**  
**Change 1, 1 September 2013**

3-5.3	Physical Security .....	14
<b>APPENDIX A REFERENCES.....</b>		<b>15</b>

**UFC 1-200-01**  
**1 July 2013**  
**Change 1, 1 September 2013**

*This page intentionally left blank.*



## **CHAPTER 1 INTRODUCTION**

### **1-1 PURPOSE AND SCOPE**

This UFC provides general building requirements, establishes the use of consensus building codes and standards, identifies key core UFC, and identifies unique military requirements.

### **1-2 APPLICABILITY.**

This UFC applies to the design and construction of new and renovated Government-owned facilities for the Department of Defense. It is applicable to all methods of project delivery and levels of construction but it is not applicable to public-private ventures (PPV). For facilities supporting military operations refer to paragraph 1-6.

### **1-3 LEVELS OF CONSTRUCTION.**

#### **1-3.1 Permanent Construction.**

Buildings and facilities designed and constructed to serve a life expectancy of more than 25 years.

#### **1-3.2 Semi-permanent Construction.**

Buildings and facilities designed and constructed to serve a life expectancy of more than 5 years, but less than 25 years. This construction level is typically only used for support of military operations. Expediency of construction and material availability may be a factor. Facility intended for a more enduring presence with operational characteristics and functional performance similar to permanent construction. Maintainability of finishes and systems must be commensurate with facility life expectancy and available maintenance capabilities. A moderate level of energy and water efficiency must be considered.

#### **1-3.3 Temporary Construction.**

Buildings and facilities designed and constructed to serve a life expectancy of five years or less using low cost construction. Temporary construction typically cannot be economically converted to a higher level of construction. Temporary facilities have limited flexibility for conversion and re-use.

### **1-4 BUILDING CODE AND MILITARY MODIFICATIONS**

Use the 2012 International Building Code (IBC2012) as the building code for the Department of Defense except as modified by this UFC. The IBC2012 has been modified in Chapters 2 and 3 of this UFC through reference to "core" UFCs, "non-core" UFCs as identified in Appendix A, *References*, and other listed military criteria. Core UFCs provide the unique military building criteria that parallel the building code and

**UFC 1-200-01**  
**1 July 2013**  
**Change 1, 1 September 2013**

apply to *building systems* found in most DoD facilities. In conflicts between the International Building Code 2012 and military criteria, use the military requirements.

**1-4.1 Substitutions.**

- All references in the IBC2012 to the International Fire Code (IFC) must be considered to reference to UFC 3-600-01 Fire Protection which cites NFPA 1.
- All references in the IBC2012 to the International Fuel Gas code must be considered to be references to NFPA 54 and NFPA 58.

\1\

**1-5 IMPLEMENTATION, ADMINISTRATION, AND ENFORCEMENT.**

UFC are effective upon issuance for projects as follows:

- Design-Bid-Build projects that have not proceeded beyond 35% design completion.
- Design-Build projects that have not proceeded beyond date of RFP issuance. When an RFP is issued in multiple phases or steps, use the date of the last phase of the RFP issuance.

/1/

The terms “Building Official” and “Authority Having Jurisdiction” (AHJ) as used in the codes and standards referenced in this UFC mean the component office of responsibility, i.e., U.S. Army, HQ USACE/CECW-CE; U.S. Navy, NAVFACENCOM HQ Code CHE; U.S. Marine Corps, HQMC Code LFF-1; and U.S. Air Force, \1\ AFCEC /1/. The enforcement of the codes and standards as they pertain to facility projects can be delegated to the local Components Office’s Chief Engineer’s Technical Representative at the discretion of the components aforementioned office.

**1-6 FACILITIES IN SUPPORT OF MILITARY OPERATIONS**

The following UFC are primarily intended for use outside of the United States (OCONUS) and its territories and possessions. Also, Joint Publication 3.0, *Joint Operations*, provides typical examples of military operations where uses of these UFC are appropriate.

**1-6.1 UFC 1-201-01**

Use UFC 1-201-01 for design of non-permanent facilities constructed for use by Department of Defense personnel in support of military operations.

**1-6.2 UFC 1-201-02.**

**UFC 1-200-01**  
**1 July 2013**  
**Change 1, 1 September 2013**

Use UFC 1-201-02 to assess existing facilities for life safety and habitability for use by DOD personnel in support of military operations. This document is in production June 2013, with target completion Sept 2013.

**1-6.3            UFC 1-202-01.**

Use UFC 1-202-01 for design of host nation facilities that support military operations. This document is in production June 2013, with target completion September 2013.

**1-7                REFERENCES AND DATES OF PUBLICATION.**

Appendix A contains a list of references used in this document. The publication date of the code or standard is not included in this document, except for the International family of codes as referenced within the document and in Appendix A. In general, the latest available issuance of the reference is used.

**UFC 1-200-01**  
**1 July 2013**  
**Change 1, 1 September 2013**

*This page intentionally left blank.*

**CHAPTER 2 MODIFICATIONS TO THE INTERNATIONAL BUILDING CODE (IBC)**

**2-1 CHAPTER 1 – ADMINISTRATION.**

Use Sections 101, 102, 110, and 112 of IBC Chapter 1.

**2-2 CHAPTER 2 – DEFINITIONS.**

Use IBC Chapter 2. Definitions in this chapter apply to terms used in the model code and are not intended to replace definitions and terms in military documents. It is essential that the code defined meaning be known to understand the intent and correctly interpret the code.

**2-3 CHAPTER 3 – USE AND OCCUPANCY CLASSIFICATION.**

Use IBC Chapter 3 and UFC 3-600-01. If conflict occurs between IBC Chapter 3 and UFC 3-600-01, the requirements of UFC 3-600-01 take precedence.

**2-4 CHAPTER 4 – SPECIAL DETAILED REQUIREMENTS BASED ON USE AND OCCUPANCY.**

Use UFC 3-600-01 instead of IBC Chapter 4.

**2-5 CHAPTER 5 – GENERAL BUILDING HEIGHTS AND AREAS.**

Use IBC Chapter 5. Note that the building area for funding and planning purposes may be calculated differently than the method defined in IBC Chapter 5.

**2-6 CHAPTER 6 – TYPES OF CONSTRUCTION.**

Use IBC Chapter 6 and UFC 3-600-01. If conflict occurs between IBC Chapter 6 and UFC 3-600-01, the requirements of UFC 3-600-01 take precedence.

**2-7 CHAPTER 7 – FIRE-AND SMOKE PROTECTION FEATURES.**

Use IBC Chapter 7 and UFC 3-600-01. If conflict occurs between IBC Chapter 7 and UFC 3-600-01, the requirements of UFC 3-600-01 take precedence.

**2-8 CHAPTER 8 – INTERIOR FINISHES.**

Do not use IBC Chapter 8. Use UFC 3-600-01 in lieu of IBC Chapter 8 in conjunction and coordination with UFC 3-120-10 *Interior Design*.

**2-9 CHAPTER 9 – FIRE PROTECTION SYSTEMS.**

Do not use IBC Chapter 9. Use UFC 3-600-01 in lieu of IBC Chapter 9.

**2-10 CHAPTER 10 – MEANS OF EGRESS.**

Do not use IBC Chapter 10. Use UFC 3-600-01 in lieu of IBC Chapter 10.

## **2-11            CHAPTER 11 – ACCESSIBILITY.**

Delete IBC Chapter 11. Use the *ABA Accessibility Standard for Department of Defense Facilities* as signed and adopted by the Deputy Secretary of Defense Memorandum dated October 31, 2008. Where the ABA references the IBC 2003 and supplements; the latest version of the IBC is acceptable when it meets or exceeds the latest ABA requirements.

## **2-12            CHAPTER 12 – INTERIOR ENVIRONMENT.**

Use IBC Chapter 12 as modified below. IBC Chapter 12 provides the minimum standards for the interior environment of a building by addressing minimum space sizes, and temperature, light, and ventilation levels for occupancy. It also addresses minimum sound transfer, ventilation of attics and under floor spaces, and provides for minimum moisture resistance standards for toilets and bathrooms. Use IBC Chapter 12, except as modified below:

- Delete IBC paragraph 1204.1, including the exception, and replace with the following: “1204.1 *Equipment and Systems*. Use the applicable Unified Facilities Criteria and individual military service standards for temperature control criteria.”
- For Navy and Marine Corps Unaccompanied housing facilities, delete IBC paragraphs 1207.2, 1207.3, 1208.3 and 1208.4, and use FC 4-721-10N for air-borne and structure-borne sound transmission criteria, for minimum room sizes, and for dwelling unit criteria. Also use UFC 3-101-01 *Architecture*, and UFC 3-120-10, *Interior Design*.

## **2-13            CHAPTER 13 – ENERGY EFFICIENCY.**

Delete the use of IBC Chapter 13 and use UFC 1-200-02. The DoD has replaced this IBC chapter with a new unified criteria for High Performance and Sustainable Buildings.

## **2-14            CHAPTER 14 – EXTERIOR WALLS.**

Use IBC Chapter 14. This chapter addresses requirements for exterior walls of buildings, provides minimum standards for wall covering materials, their installation and their ability to provide weather protection.

## **2-15            CHAPTER 15 – ROOF ASSEMBLIES AND ROOFTOP STRUCTURES.**

Use IBC Chapter 15, and UFC 3-101-01 *Architecture* and UFC 3-110-03, *Roofing*. IBC Chapter 15 provides standards for roof assemblies as well as rooftop structures. It also provides some requirements for fire resistance in roofing.

## **2-16            CHAPTER 16 – STRUCTURAL DESIGN.**

Use IBC Chapter 16 as modified by UFC 3-301-01. Use IBC Chapter 16 and UFC 3-310-04 for the seismic design of buildings. IBC Chapter 16 describes minimal structural loading requirements, minimum design loads (live and dead, snow and wind, rain, flood and earthquake), as well as load combinations, and permitted design methodologies.

## **2-17            CHAPTER 17 – SPECIAL INSPECTIONS AND TESTS.**

Use IBC Chapter 17 as modified by UFC 3-301-01 and UFC 3-600-01. The Structural Tests and Special inspections described in IBC Chapter 17 provide a variety of procedures and criteria for testing materials and assemblies, labeling materials and assemblies, and for some special inspection of certain structural assemblies. Some DoD requirements are more stringent and these take precedence as identified in these UFCs. Replace Paragraph 1704.2 as follows:

**Modified Paragraph 1704.2 Special Inspections** - The contractor must employ one or more *approved agencies* to perform inspections during construction on the types of work listed under Section 1705 *Required Verification and Inspection*. These inspections are in addition to the inspections defined in Section 110. The inspecting agency must provide reports of the special inspections directly to the government.

## **2-18            CHAPTER 18 – SOILS AND FOUNDATIONS.**

Use IBC Chapter 18 and UFC 3-220-01. IBC Chapter 18 is modified by UFC 3-301-01, and as noted below:

- Supplement to IBC 1804.3: Ensure that the grading and associated storm water runoff do not adversely affect surrounding sites.
- Supplement to IBC 1808.7.4: Establish finished floor elevations a minimum of 8 inches (200mm) above finished grade at the perimeter of the building.

## **2-19            CHAPTER 19 – CONCRETE.**

Use IBC Chapter 19 as modified by UFC 3-301-01, and UFC 1-200-02. IBC Chapter 19 provides only minimum accepted practices for the use of plain concrete and reinforced concrete in construction.

## **2-20            CHAPTER 20 – ALUMINUM.**

Use IBC Chapter 20. Chapter 20 contains standards for the use of aluminum, but only the structural applications of aluminum are addressed. The chapter does not address the use of aluminum in specialty products such as window framing or architectural hardware. For aluminum use in Heating, Ventilation, Air Conditioning (HVAC), use the International Mechanical Code (IMC) adopted by the DoD. Also, consult the Aluminum Design Manual by the Aluminum Association for use of aluminum in building construction.

**2-21            CHAPTER 21 – MASONRY.**

Use IBC Chapter 21 as modified by UFC 3-301-01. Comprehensive and practical requirements for masonry are found in this chapter by addressing material specifications, and test methods, types of wall construction, Criteria for empirical and engineered designs. Masonry foundations are also addressed in Chapter 18 and modified for DoD use.

**2-22            CHAPTER 22 – STEEL.**

Use IBC Chapter 22 as modified by UFC 3-301-01. Chapter 22 provides the minimal commercial requirements for the design and construction of structural steel, including composite construction), cold-formed steel, steel joists, steel cable structures, and steel storage racks. Steel for structures is generally classified as Type I and Type II construction, however steel is permitted in all types of construction. DoD specific requirements which are specifically mission oriented, are included in UFC 3-301-01.

**2-23            CHAPTER 23 – WOOD.**

Use IBC Chapter 23. This chapter provides minimum requirements for the design of buildings and structures that use wood and wood based products in framing and fabrication. In general, only (IBC designated) Types III, IV, or V buildings may be constructed of wood. Refer to IBC Chapter 3 for Occupancy Types. Refer to UFC 3-301-01 Structural Engineering, and 3-600-01 for more detailed requirements.

**2-24            CHAPTER 24 – GLASS AND GLAZING.**

Use IBC Chapter 24. This Chapter establishes regulations for glass and glazing that when properly installed, are able to meet required resistance to wind, snow, and dead loads. The engineering and design requirements are included in the chapter.

**2-25            CHAPTER 25 – GYPSUM BOARD AND PLASTER.**

Use IBC Chapter 25. This chapter contains the provisions and referenced standards that regulate the design, construction and quality of gypsum board and plaster. They represent the most common interior and exterior finish materials in the commercial building industry and the DoD. This chapter addresses quality control issues, material specifications, and installation requirements, under the control of industry requirements. However, it is the responsibility of the AHJ to inspect and ensure that the appropriate products are used and properly installed for the intended use and location.

**2-26            CHAPTER 26 – PLASTIC.**

The use of plastics in building construction and components is addressed in IBC Chapter 26, addressing flammable materials such as foam plastic insulation, foam plastics, used as exterior and interior trim, and other plastic veneers such as fiberglass reinforced polymers which may be quite flammable and create toxic smoke. Therefore, use IBC Chapter 26, and use UFC 3-600-01. If conflicts occur, use the more restrictive



UFC 3-600-01. These requirements and limitations to the minimal requirements of IBC Chapter 26 are necessary to control the use of plastic and foam plastic products such that they do not compromise the increased safety needed in DoD buildings for occupants and mission.

## **2-27            CHAPTER 27 – ELECTRICAL.**

The IBC2012 references the National Electrical Code, (NEC). In addition, IBC Section 2702 addresses emergency and standby power requirements, which relies on the IFC (not currently used by the DoD). Therefore, use IBC Chapter 27 as modified by the following:

- Use UFC 3-501-01 for general electrical requirement criteria.
- Use UFC 3-520-01 for interior electrical systems criteria.
- Use UFC 3-530-01 for interior and exterior lighting and controls criteria.
- Use UFC 3-550-01 for exterior power distribution systems criteria.
- Use UFC 3-560-01 for electrical safety and electrical Operations and Maintenance (O&M) criteria.
- Use UFC 3-580-01 for building telecommunications criteria.
- Use UFC 4-021-01 for mass notification systems criteria.

## **2-28            CHAPTER 28 – MECHANICAL SYSTEMS.**

IBC Chapter 28 provides references to the International Mechanical Code (IMC) which has been adopted by the DoD. However, the International Fuel Gas Code has not been adopted. The DoD uses the National Fuel Gas Code (NFPA 54, ANSI Z223.1) for the design and installation of fuel gas piping systems:

- Use IBC Chapter 28 as modified by UFC 3-401-01 for Mechanical criteria.

## **2-29            CHAPTER 29 – PLUMBING SYSTEMS.**

Use IBC Chapter 29, as modified by UFC 3-420-01 for plumbing criteria. Chapter 29 regulates the number of plumbing fixtures that must be provided by each type of building, and gender separations except for certain types of small buildings.

## **2-30            CHAPTER 30 – ELEVATOR AND CONVEYING SYSTEMS.**

Use IBC Chapter 30 and UFC 3-600-01. Refer to the local elevator subject matter expert (SME) for detailed Service specific elevator guidance. If conflict occurs between the IBC and UFC 3-600-01, the requirements of the UFC take precedence.

## **2-31            CHAPTER 31 – SPECIAL CONSTRUCTION.**

Use IBC Chapter 31 for criteria for special building construction including membrane structures, temporary structures, pedestrian walkways and tunnels addressed in IBC Section 3104, automatic vehicular gates, awnings and canopies, marquees, signs, and towers and antennas.

## **2-32            CHAPTER 32 – ENCROACHMENT INTO THE PUBLIC RIGHT-OF-WAY.**

Use IBC Chapter 32. Buildings and structures from time to time are designed to extend over a property line or into the public right of way. Local regulations outside the building usually set limits to such encroachments, and government criteria may perform the same function in various locations. Such military criteria should always take precedence over provisions of this chapter.

## **2-33            CHAPTER 33 – SAFEGUARDS DURING CONSTRUCTION.**

Use IBC Chapter 33 and UFC 3-600-01. Chapter 33 provides safety requirements during construction and demolition of buildings and structures. If conflict occurs between the IBC, and UFC 3-600-01, the requirements of the UFC take precedence.

## **2-34            CHAPTER 34 – EXISTING STRUCTURES.**

Use IBC Chapter 34, except as modified below. Provisions in Chapter 34 deal with alternative methods of compliance requirements when dealing with existing building constraints. This IBC chapter allows for a controlled departure from full compliance with the technical codes, without compromising the minimum standards of life safety and fire prevention of the rehabilitated building as required in the UFC 3-600-01. An example may be concerning fire escape requirements that differ in the UFC 3-600-01.

- Use Section 3410 with UFC 3-600-01. If conflict occurs between Chapter 34 and UFC 3-600-01, the requirements of the UFC take precedence.
- Use IBC2012 Chapter 34 with UFC 3-310-04 for seismic evaluation and seismic rehabilitation of existing buildings.

## **2-35            CHAPTER 35 – REFERENCED STANDARDS.**

Use IBC Chapter 35. Chapter 35 contains numerous references to standards that are used to regulate materials and methods of construction. It contains a comprehensive list of all standards that are referenced in the IBC. Also refer to IBC Chapter 1, Section 102.4 for a detailed explanation of applicability of referenced codes and standards.

## **2-36            APPENDICES.**

Delete IBC2012 Appendices A through Appendix M.

## **CHAPTER 3 OTHER CRITERIA**

In addition to the International Building Code as modified in Chapter 2 of this UFC, comply with the following criteria:

### **3-1 HIGHER AUTHORITY MANDATES.**

Design and Construction must be in compliance with Public Laws (P.L.), Executive Orders (E.O.), Code of Federal Regulations (CFR), Department of Defense Instructions (DODI), and Department of Defense Directives (DODD) or other higher authority documents as applicable, as listed in MIL-STD-3007F, Appendix B.

#### **3-1.1 Vending Facilities for the Blind.**

Verify with the using activity the requirement to provide blind-operated vending facilities in compliance with the Randolph-Sheppard Act and DoD Instruction 1125.3. This requirement generally applies in buildings that are over 1,400 SM (15,000 SF) that will contain over 100 employees, but may also apply in other situations at the discretion of the using activity.

### **3-2 UNIFIED FACILITY CRITERIA (UFC).**

Comply with the UFC (Latest Version) , FC, and other related criteria as noted herein

#### **3-2.1 Core UFC.**

Core UFC are criteria that provide requirements for the majority of traditional building systems that are prevalent on DoD facility construction projects. Core UFC also identify additional criteria such as Antiterrorism, High Performance, and Sustainable Building requirements mandated by law and policy. Comply with the Core UFC listed here, and other UFC identified in Appendix A as they are applicable.

- 1-200-02, High Performance and Sustainable Building Requirements
- 3-101-01, Architecture
- 3-110-03, Roofing
- 3-120-10, Interior Design
- 3-201-01, Civil Engineering
- 3-201-01 Landscape Architecture
- 3-210-10, Low Impact Development
- 3-220-01, Geotechnical Engineering
- 3-230-01, Water Storage, Distribution, and Transmission
- 3-230-03, Water Treatment
- 3-240-01, Wastewater Collection

- 3-301-01, Structural Engineering
- 3-310-04, Seismic Design for Buildings
- 3-401-01, Mechanical Engineering
- 3-410-01, Heating, Ventilating and Air Conditioning
- 3-420-01, Plumbing Systems
- 3-501-01, Electrical Engineering
- 3-520-01, Interior Electrical Systems
- 3-530-01, Design: Interior and Exterior Lighting and Controls
- 3-550-01, Exterior Electrical Power Distribution
- 3-560-01, Electrical Safety O&M
- 3-580-01, Telecommunications Building Cabling Systems Planning and Design
- 3-600-01, Fire Protection Engineering for Facilities
- 4-010-01, DoD Minimum Antiterrorism Standards for Buildings
- 4-010-02, DoD Minimum Antiterrorism Standoff Distances for Buildings (FOUO)
- 4-021-01, Design and O&M: Mass Notification Systems

### **3-2.2 Other UFC.**

In addition to the "Core UFC", comply with other UFCs as applicable to the system, structure, or facility type defined in the scope of the construction project.

### **3-3 FACILITY CRITERIA (FC).**

The designation, "Facility Criteria (FC)" has been adopted for criteria that are not applicable to all DoD Components. This applies to facility-type documents only; for example: FC 4-721-10N "Navy and Marine Corps Unaccompanied Housing" which has a final "N" designation because it is used by the Navy, including its Component, the U.S. Marine Corps. FC provide functional requirements (i.e., defined in more detail by the users and operational needs of a particular facility type). Differences in functional requirements between DoD Components may exist due to differences in their policies and more specific operational needs. FC are applicable only to the DoD Component(s) indicated in the title, and are intended for use with unified technical requirements published in UFC. Comply with the FC for the designated facility type and the DoD Component.

### **3-4 SPECIFICATION REQUIREMENTS.**

Use Unified Facilities Guide Specifications (UFGS) for all projects, including Design-Build design submittals, and in accordance with UFC 1-300-02. Download, use, and edit

the most current UFGS database available from the Whole Building Design Guide website at [http://www.wbdg.org/ccb/browse\\_cat.php?c=3](http://www.wbdg.org/ccb/browse_cat.php?c=3). Modify and edit the UFGS as necessary to suit the work required by the specific project, including editing for metric or inch-pound and to reflect the latest proven technology, materials, and methods for the project. Follow Order of Precedence requirements for each Design-Agent on use of Regional, Agency, Unified, and Other guide specifications. Other guide specifications are only allowed as a basis for information when not available in the UFGS. These developed specifications must be provided in UFGS format and modified to meet the requirements of UFC 1-300-02.

### **3-5 OTHER MILITARY CRITERIA.**

Military criteria other than those listed in this UFC may be applicable to specific types of structures, building systems, or building occupancies. Such structures, systems, or buildings must meet the additional requirements of applicable military criteria.

#### **3-5.1 Antiterrorism.**

Antiterrorism is defined as defensive measures used to reduce the vulnerability of individuals and property to terrorist acts. UFC 4-010-01 sets the minimum requirements for DoD buildings, and the Geographic Combatant Commander Antiterrorism Construction Standards address unique requirements specific to their area of responsibility. Refer to UFC 4-010-01 and the Geographic Combatant Commander Antiterrorism Construction Standards for the minimum antiterrorism requirements.

#### **3-5.2 Explosive Safety.**

This document does not contain requirements for explosives safety. Facilities that involve DoD Ammunition and Explosives (AE) storage, handling, maintenance, manufacture or disposal, as well as facilities within the explosives safety quantity distance (ESQD) arcs of AE facilities, must comply with the requirements found in DoD Manual 6055.09-M, as well as implementing Service criteria found in DA PAM 385-64 (Army), NAVSEA OP 5 (Navy and Marine Corps), and AFMAN 91-201 (Air Force). DoD facilities exposed to potential explosion effects from AE belonging to other nations are also required to meet DoD and Service explosives safety criteria.

- It is essential that the planning and design of new facilities, and occupation and renovation of existing AE-related facilities, or other facilities within ESQD arcs be accomplished in close coordination with knowledgeable explosives safety professionals in theater, or with the Services' Explosives Safety Centers. This coordination should occur as early as possible in the planning and design process to avoid issues or problems and to ensure compliance.
- Facility construction or use within ESQD arcs requires review for compliance with explosives safety criteria, and must have either an approved explosives safety site plan or an approved explosives safety deviation. Refer to the DoD Service documents mentioned above for further applicable guidance.

### 3-5.3 Physical Security.

Physical security is defined as that part of security concerned with physical measures designed and placed to safeguard personnel; to prevent unauthorized access to installations, equipment, material and documents, to safeguard them against espionage, sabotage, damage, and theft. Many buildings require some level of physical security. When required, integrate physical measures into the site, building, room(s), or area(s) as applicable. The Intelligence Community (IC) and DoD documents requirements for physical security related to specific assets in IC and DoD publications, in directives, and in DoD instructions. The Services have related documents that implement the IC and DoD policy for the Services. Below are the main DoD and IC documents that contain the physical security requirements for the protection of specific DoD assets. This does not include the policy documents associated with the protection of nuclear and chemical assets.

**Table 3-1 Policy Related to Physical Security**

<b>Asset</b>	<b>Policy and Documents</b>
Classified Information	DoD 5200.1-R, <i>DoD Information Security Program</i> ; <a href="http://www.dtic.mil/whs/directives/corres/pub1.html">http://www.dtic.mil/whs/directives/corres/pub1.html</a>
Sensitive Compartmented Information (SCI)	UFC 4-010-05, <i>Sensitive Compartmented Information Facilities Planning, Design, and Construction</i> . Intelligence Community Directive (ICD) 705, <i>Sensitive Compartment Information Facilities</i> ; <a href="http://www.dni.gov/electronic_reading_room/ICD_705_SCIFs.pdf">http://www.dni.gov/electronic_reading_room/ICD_705_SCIFs.pdf</a> Intelligence Community Standard Number 705-1 (ICS-705-1), <i>Physical and Technical Security Standards for Sensitive Compartmented Information Facilities</i> ; <a href="http://www.wbdg.org/pdfs/dod_at/ics_705_1.pdf">http://www.wbdg.org/pdfs/dod_at/ics_705_1.pdf</a> Intelligence Community Standard Number 705-2 (ICS 705-2), <i>Standards for the Accreditation and Reciprocal Use of Sensitive Compartmented Information</i> ; <a href="http://www.wbdg.org/pdfs/dod_at/ics_705_2.pdf">http://www.wbdg.org/pdfs/dod_at/ics_705_2.pdf</a> IC Tech Spec-for ICD/ICS 705, <i>Technical Specifications for Construction and Management of Sensitive Compartmented Information Facilities</i> ; <a href="http://www.wbdg.org/pdfs/dod_at/ic_techspeg_705.pdf">http://www.wbdg.org/pdfs/dod_at/ic_techspeg_705.pdf</a>
Special Access Program (SAP) Information	JAFAN 6/9 Manual, <i>Physical Security Standards for Special Access Program Facilities</i> ; <a href="http://www.ncms-isp.org/documents/JANAF_6-0.pdf">http://www.ncms-isp.org/documents/JANAF_6-0.pdf</a>
Arms, Ammunition and Explosives	DoD Manual 5100.76-M, <i>Physical Security of Sensitive Conventional Arms, Ammunition and Explosives</i> ; <a href="http://www.dtic.mil/whs/directives/corres/pub1.html">http://www.dtic.mil/whs/directives/corres/pub1.html</a>
Weapons Systems and Platforms	DoD 5200.08-R, <i>Physical Security Program</i> ; <a href="http://www.dtic.mil/whs/directives/corres/pub1.html">http://www.dtic.mil/whs/directives/corres/pub1.html</a>
Bulk Petroleum Products	
Communications Systems	
Controlled Inventory Items	

## **APPENDIX A REFERENCES**

### **AMERICAN SOCIETY OF CIVIL ENGINEERS**

<http://www.asce.org>

ASCE/SEI 41-13, Seismic Evaluation and Retrofit of Existing Buildings

### **INTERNATIONAL CODE COUNCIL**

<http://www.iccsafe.org>

International Building Code, 2012

International Existing Building Code, 2012

### **NATIONAL FIRE PROTECTION ASSOCIATION**

<http://www.nfpa.org>

NFPA 1, Fire Code, 2012

NFPA 54, National Fuel Gas Code, 2012

NFPA 58, Liquefied Petroleum Code, 2012

### **NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY**

ICSSC RP8/NIST GCR 11-917-12, Standards of Seismic Safety for Existing Federally Owned and Leased Buildings, [http://www.wbdg.org/ccb/NIST/nist\\_gcr11\\_917\\_12.pdf](http://www.wbdg.org/ccb/NIST/nist_gcr11_917_12.pdf)

### **UNITED STATES AIR FORCE**

AFMAN 91-201, Explosives Safety Standards, <http://www.e-publishing.af.mil>

### **UNITED STATES ARMY**

DA PAM 385-64, Ammunition and Explosives Standards,  
<http://acc.dau.mil/CommunityBrowser.aspx?id=237824>

### **UNITED STATES DEPARTMENT OF DEFENSE**

ABA Accessibility Standard for Department of Defense Facilities, <http://www.access-board.gov/ada-aba/aba-standards-dod.cfm>

DOD Instruction Number 1125.03, Vending Facility Program for the Blind on DoD-Controlled Federal Property, <http://www.dtic.mil/directives/corres/pdf/112503p.pdf>

DoD Manual 5100.76-M, Physical Security of Sensitive Conventional Arms, Ammunition and Explosives, <http://www.dtic.mil/whs/directives/corres/pub1.html>



**UFC 1-200-01**  
**1 July 2013**  
**Change 1, 1 September 2013**

DoD Manual 5200.1, DoD Information Security Program,  
<http://www.dtic.mil/whs/directives/corres/pub1.html>

DoD Manual 5200.08R, Physical Security Program,  
<http://www.dtic.mil/whs/directives/corres/pub1.html>

DoD Manual 6055.09-M, DoD Ammunition and Explosives Safety Standards,  
<http://www.dtic.mil/whs/directives/corres/html/605509m.html>

Intelligence Community Directive (ICD) 705, Sensitive Compartment Information Facilities (Effective: 26 May 2010), [http://www.dni.gov/files/documents/ICD\\_705\\_SCIFs.pdf](http://www.dni.gov/files/documents/ICD_705_SCIFs.pdf)

Intelligence Community Standard Number 705-1 (ICS-705-1), Physical and Technical Security Standards for Sensitive Compartmented Information Facilities,  
[http://www.wbdg.org/pdfs/dod\\_at/ics\\_705\\_1.pdf](http://www.wbdg.org/pdfs/dod_at/ics_705_1.pdf)

Intelligence Community Standard Number 705-2 (ICS 705-2), Standards for the Accreditation and Reciprocal Use of Sensitive Compartmented Information,  
[http://www.wbdg.org/pdfs/dod\\_at/ics\\_705\\_2.pdf](http://www.wbdg.org/pdfs/dod_at/ics_705_2.pdf)

IC Tech Spec-for ICD/ICS 705, Technical Specifications for Construction and Management of Sensitive Compartmented Information Facilities (Effective: 5 May 2011), [http://www.wbdg.org/pdfs/dod\\_at/ic\\_techspec\\_705.pdf](http://www.wbdg.org/pdfs/dod_at/ic_techspec_705.pdf)

JAFAN 6/9 Manual, Physical Security Standards for Special Access Program Facilities  
[http://www.ncms-isp.org/documents/JANAF\\_6-0.pdf](http://www.ncms-isp.org/documents/JANAF_6-0.pdf)

Joint Publication JP 3.0. Joint Operations,  
[http://www.dtic.mil/doctrine/new\\_pubs/jp3\\_0.pdf](http://www.dtic.mil/doctrine/new_pubs/jp3_0.pdf)

MIL-STD-3007F, Standard Practice for Unified Facilities Criteria and Unified Facilities Guide Specifications, 13 December 2006,  
<http://www.wbdg.org/ccb/FEDMIL/std3007f.pdf>

**UNITED STATES DEPARTMENT OF DEFENSE, FACILITIES CRITERIA (FC) /  
UNIFIED FACILITIES CRITERIA (UFC)**  
<http://dod.wbdg.org/>

UFC 1-200-02, High Performance and Sustainable Building Requirements

UFC 1-201-01, Non-Permanent DoD Facilities in Support of Military Operations

UFC 1-201-02, Assessment of Existing Facilities for Use in Military Operations. This document is in production as of June 2013 with target completion September 2013.

UFC 1-202-01, Host Nation Facilities in Support of Military Operations. This document is in production as of June 2013 with target completion September 2013.



UFC 3-101-01, Architecture

UFC 3-110-03, Roofing

UFC 3-120-10, Interior Design

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 3-230-03, Water Treatment

UFC 3-240-01, Wastewater Collection

UFC 3-301-01, Structural Engineering

UFC 3-310-04, Seismic Design for Buildings

UFC 3-400-02, Design: Engineering Weather Data

UFC 3-401-01, Mechanical Engineering

UFC 3-410-01, Heating, Ventilating, and Air Conditioning Systems.

UFC 3-420-01, Plumbing Systems

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 3-560-01, Electrical Safety, O&M

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 1-200-01**  
**1 July 2013**  
**Change 1, 1 September 2013**

UFC 4-010-02, DoD Minimum Antiterrorism Standoff Distances for Buildings (FOUO)

UFC 4-010-05, Sensitive Compartmented Information Facilities Planning, Design, and Construction

UFC 4-021-01, Design and O&M: Mass Notification Systems

FC 4-721-10N, Navy and Marine Corps Unaccompanied Housing

#### **UNITED STATES DEPARTMENT OF HOMELAND SECURITY**

FEMA-310, Handbook for the Seismic Evaluation of Buildings,  
<http://www.wbdg.org/ccb/DHS/ARCHIVES/fema310.pdf>

FEMA-356, Prestandard and Commentary for the Seismic Rehabilitation of Buildings,  
<http://www.wbdg.org/ccb/DHS/ARCHIVES/fema356.pdf>

#### **UNITED STATES NAVY**

ITG 01-01, Elevator Design, [http://www.wbdg.org/ccb/NAVFAC/INTCRIT/fy01\\_01.pdf](http://www.wbdg.org/ccb/NAVFAC/INTCRIT/fy01_01.pdf)

NAVSEA OP 5, Ammunition and Explosives Safety Ashore,  
<https://acc.dau.mil/CommunityBrowser.aspx?id=278680>