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

## Dod MINIMUM ANTITERRORISM STANDOFF DISTANCES FOR BUILDINGS



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#### **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 <a href="https://www.uscale.com/www.uscale.com/www.uscale.com/www.uscale.com/www.uscale.com/www.uscale.com/www.uscale.com/www.uscale.com/

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 Support Agency (AFCESA) 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 (CCR). 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 sources:

- Unified Facilities Criteria (UFC) Index http://65.204.17.188//report/doc\_ufc.html.
- USACE TECHINFO Internet site http://www.hnd.usace.army.mil/techinfo .
- NAVFAC Engineering Innovation and Criteria Office Internet site <a href="http://criteria.navfac.navy.mil">http://criteria.navfac.navy.mil</a>.
- Construction Criteria Base (CCB) system maintained by the National Institute of Building Sciences at Internet site <a href="http://www.ccb.org">http://www.ccb.org</a>.

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:** 

Chief, Engineering and Construction Division U.S. Army Corps of Engineers

Kathleen I. Ferguson, P.E. (

The Deputy Civil Engineer DCS/Installations & Logistics

Department of the Air Force

Dr. James W Wright, P.E.

Chief Engineer

**Naval Facilities Engineering Command** 

Dr. Get W. Moy, P.E.

Director, Installations Requirements and Management

Office of the Deputy Under Secretary of Defense (Installations and Environment)

#### **FOREWORD** (continued)

This specific document is also issued under the authority of DoD Instruction Number 2000.16, *DoD Antiterrorism Standards* which requires DoD Components to adopt and adhere to common criteria and minimum construction standards to mitigate antiterrorism vulnerabilities and terrorist threats.

This document applies to the Office of the Secretary of Defense (OSD); the Military Departments (including their National Guard and Reserve Components); the Chairman, Joint Chiefs of Staff and Joint Staff; the Combatant Commands; the Office of the Inspector General of the Department of Defense; the Defense Agencies; the Department of Defense Field Activities; and all other organizational entities within the Department of Defense hereafter referred to collectively as "the DoD Components."

The standards established by this document are minimums set for DoD. Each DoD Component may set more stringent antiterrorism building standards to meet the specific threats in its area of responsibility.

Any changes, updates, or amendments to this particular UFC must have the approval of the DoD Engineering Senior Executive Panel (ESEP).

This document is effective immediately and is mandatory for use by all the DoD Components.

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#### INTRODUCTION

- GENERAL. This document includes tables 1 and 2, which identify the minimum standoff distances and separation for new and existing buildings and expeditionary and temporary structures. The last column of each table, titled "Applicable Explosive Weight", includes specific explosive weights in kilograms (pounds) of TNT, which makes these tables for official use only (FOUO). These tables are identical to tables B-1 and D-1 in UFC 4-010-01, *DoD Minimum Antiterrorism Standards for Buildings*, except that these tables include the explosive weights while those in UFC 4-010-01 do not. Incorporating tables 1 and 2 of this document into UFC 4-010-01(replacing tables B-1 and D-1), will make UFC 4-010-01 FOUO. The explosive upon which the separation distance recommendation (Recommendation 10) in Appendix C of UFC 4-010-01 is based is not included in Table 1, but explosive weight III in Table 2 is the appropriate explosive for application to that recommendation.
- 1-2 **INFORMATION SENSITIVITY.** Some information in this document is exempt from mandatory disclosure under the Freedom of Information Act. The sensitive information that is exempt is the explosive weights upon which the minimum standoff distances are based. Allowing potential aggressors to know the minimum explosive weights that all DoD inhabited buildings are designed to resist could constitute a vulnerability. To minimize the possibility of that information being used against DoD personnel, the following provisions apply:
- 1-2.1 **Distribution.** Follow governing DoD and Component guidance for specific requirements for handling and distribution of For Official Use Only information. In general, distribution of this document is authorized only to U.S. Government agencies and their contractors, although portions of the document that are not indicated to be For Official Use Only can be removed from the document and may be distributed to the public without limitation. In addition, where it is within Status of Forces Agreements (SOFA) or other similar information exchange agreements, the information in these standards may be distributed to host-nation elements for the purposes of their administration and design of host-nation funded or designed construction.
- 1-2.2 **Posting To The Internet.** Because this document is For Official Use Only it cannot be posted in its entirety to any web site that is accessible to the general public. It can, however, be posted if the For Official Use Only information is removed (Specific explosive weights in kilograms (pounds) of TNT). In addition, other documents that include information from this document that are identified as For Official Use Only cannot be posted to web sites accessible to the general public. For Official Use Only information may be posted to protected, non-publicly accessible web sites that comply with standards established by DoD for administration of web sites.
- 1-2.3 **Plans and Specifications.** The explosive weights used in this document shall not be entered into the plans and specifications unless the plans and specifications are properly safeguarded. Plans and specifications may be posted to the Internet in accordance with existing DoD Component guidance, but such documents will not include For Official Use Only information. All plans and specifications for inhabited

buildings shall include an annotation that cites the version of the standards that was used for design.

1-2.4 **Design – Build Contracts.** Where design – build contracts are employed, prospective contractors will be responsible for developing a design proposal for that project that may be impacted by provisions of DoD Minimum Antiterrorism Standards for Buildings, UFC 04-010-01 and this document. Where that is the case, consider alternate means to provide sufficient information to support their proposals. Consider for example, either specifying specific design loads or specifying the required standoff distance and providing candidate structural systems that would allow for mitigation of the applicable explosive if that standoff was less than the minimum. Once the design – build contract is awarded the contractor will be eligible to receive this document for use in the development of the final design package, but that contractor will be responsible for protecting the integrity of the information throughout the contract and through any subcontracts into which that contractor might enter.

### Table 1 (FOUO) Minimum Standoff Distances for New and Existing Buildings

Location	Building Category	Standoff Distance or Separation Requirements				
		Applicable	Conventional	Effective	Applicable	
		Level of	Construction	Standoff	Explosive	
		Protection	Standoff	Distance <sup>(1)</sup>	Weight	
			Distance		(TNT)	
					(FOUO) (2)	
Controlled	Billeting	Low	45 m <sup>(3)</sup>	25 m <sup>(3)</sup>	ì	
Perimeter			(148 ft.)	(82 ft.)	100 kg	
or			(2) (4)	(3) (4)	(220 lbs.)	
Parking	Primary Gathering	Low	45 m <sup>(3) (4)</sup>	25 m <sup>(3) (4)</sup>	I	
and	Building		(148 ft.)	(82 ft.)	100 kg	
Roadways	Laborate Manual Discillation on	\/I	05 (3)	40 (3)	(220 lbs.)	
without a Controlled	Inhabited Building	Very Low	25 m <sup>(3)</sup>	10 m <sup>(3)</sup>	100 1/2	
Perimeter			(82 ft.)	(33 ft.)	100 kg (220 lbs.)	
1 chineter					(220 105.)	
Parking	Billeting	Low	25 m <sup>(3)</sup>	10 m <sup>(3)</sup>	II	
and			(82 ft.)	(33 ft.)	25 kg	
Roadways			(3) (4)	(3) (4)	(55 lbs.)	
within a	Primary Gathering	Low	25 m <sup>(3) (4)</sup>	10 m <sup>(3) (4)</sup>	II	
Controlled	Building		(82 ft.)	(33 ft.)	25 kg	
Perimeter	11 12 15 22		40 (3)	40 (3)	(55 lbs.)	
	Inhabited Building	Very Low	10 m <sup>(3)</sup>	10 m <sup>(3)</sup>	 	
			(33 ft.)	(33 ft.)	25 kg	
Trash	Billeting	Low	25 m	10 m	(55 lbs.)	
Containers	Billeting	LOW	(82 ft.)	(33 ft.)	25 kg	
Containers			(02 10.)	(00 11.)	(55 lbs.)	
	Primary Gathering	Low	25 m	10 m	II	
	Building		(82 ft.)	(33 ft.)	25 kg	
			, ,	, ,	(55 lbs.)	
	Inhabited Building	Very Low	10 m	10 m	ll ll	
			(33 ft.)	(33 ft.)	25 kg	
					(55 lbs.)	

<sup>(1)</sup> Even with analysis, standoff distances less than those in this column are not allowed for new buildings, but are allowed for existing buildings if constructed/retrofitted to provide the required level of protection at the reduced standoff

<sup>(2)</sup> When the explosive specific weights in this column are moved from this table, the table is no longer For Official Use Only

<sup>(3)</sup> For existing buildings, see paragraph B-1.1.2.2 in UFC 4-010-01 for additional options.
(4) For existing family housing, see paragraph B-1.1.2.2.3 in UFC 4-010-01 for additional options.

<sup>(5)</sup> Refer to Appendix A of UFC 4-010-01 for definitions necessary for application of this table.

# Table 2 (FOUO) Minimum Standoff Distances and Separation for Expeditionary and Temporary Structures

Location	Structure	Standoff Distance or Separation Requirements				
	Category	Applicable	Fabric	Other	Applicable	
		Level of	Covered/Metal	Expeditionary	Explosive	
		Protection	Frame	and	Weight	
			Structures <sup>(1)</sup>	Temporary	(TNT)	
				Structures <sup>(1)(2)</sup>	(FOUO) (3)	
Controlled	Billeting	Low	31 m	71 m	I	
Perimeter			(102 ft.)	(233 ft.)	100 kg	
Or Darking and	Driman, Cathorina	Low	31 m	71 m	(220 lbs.)	
Parking and Roadways	Primary Gathering Structure	Low	(102 ft.)	(233 ft.)	100 kg	
without a	Structure		(102 11.)	(233 it.)	(220 lbs.)	
Controlled	Inhabited Structure	Very Low	24 m	47 m	(220 isc.)	
Perimeter		,	(79 ft.)	(154 ft.)	100 kg	
				,	(220 lbs.)	
Parking and	Billeting	Low	14 m	32 m	II	
Roadways			(46 ft.)	(105 ft.)	25 kg	
within a	D: 0 " :	,	4.4	00	(55 lbs.)	
Controlled Perimeter	Primary Gathering	Low	14 m	32 m	 	
Perimeter	Structure		(46 ft.)	(105 ft.)	25 kg (55 lbs.)	
	Inhabited Structure	Very Low	10 m	23 m	(55 ib3.)	
		10.7 20.1	(33 ft.)	(75 ft.)	25 kg	
			()	( )	(55 lbs.)	
Trash	Billeting	Low	14 m	32 m	II	
Containers			(46 ft.)	(105 ft.)	25 kg	
					(55 lbs.)	
	Primary Gathering	Low	14 m	32 m	05 1.5	
	Structure		(46 ft.)	(105 ft.)	25 kg (55 lbs.)	
	Inhabited Structure	Very Low	10 m	23 m	(33 lbs.)	
	illiabiled Structure	Very Low	(33 ft.)	(75 ft.)	25 kg	
			(00 11.)	(7011.)	(55 lbs.)	
Structure	Separation	Low	18 m	18 m	III	
Separation <sup>(4)</sup>	between Structure		(59 ft.)	(59 ft.)	1 kg <sup>(5)</sup>	
	Groups				(2.2 lbs.)	
	Separation	Low	9 m	9 m		
	between Structure		(30 ft.)	(30 ft.)	1 kg <sup>(5)</sup>	
	Rows	Vondlow	3.5 m	3.5 m	(2.2 lbs.)	
	Separation between Structures	Very Low	(12 ft.)	(12 ft.)	1 kg <sup>(5)</sup>	
	in a Row		(12 11.)	(12 11.)	(2.2 lbs.)	
	Definitions for a community		L	<u> </u>	(2.2 103.)	

<sup>(1)</sup> See Definitions for a complete description of these structure types.

<sup>(2)</sup> For container structures, Appendix B in UFC 4-010-01 applies.

<sup>(3)</sup> When the explosive specific weights in this column are moved from this table, the table is no longer For Official Use Only

<sup>(4)</sup> Applies to Billeting and Primary Gathering Structures only. No minimum separation distances for other inhabited structures.

<sup>(5)</sup> Explosive for building separation is an indirect fire (mortar) round at a standoff of half the separation distance.

<sup>(6)</sup> Refer to Appendix A of UFC 4-010-01 for definitions necessary for application of this table.