UNIFIED FACILITIES CRITERIA (UFC)

DRAFT
TITLE IN UPPER CASE

Use blank pages to ensure the front matter pages start on side one of a two sided printout.

Section breaks are utilized so the vertical alignment of this page can be set to be centered in page setup. To accomplish this, go to Page Setup > Layout tab > under Page > Vertical alignment > choose Center. Make sure the following page has the Vertical alignment set back to Top.

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UNIFIED FACILITIES CRITERIA (UFC)

DRAFT TITLE IN UPPERCASE

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Indicate the Military Department Preparing Activity responsible for the document.

U.S. ARMY CORPS OF ENGINEERS

NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND (Preparing Activity)

AIR FORCE CIVIL ENGINEER CENTER

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

Change No.	Date	Location

This UFC supersedes UFC X-XXX-XX, dated m yyyy.

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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 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, its territories, and possessions 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 Military Department's responsibility for providing technical criteria for military construction. Headquarters, U.S. Army Corps of Engineers (HQUSACE), Naval Facilities Engineering Systems Command (NAVFAC), and Air Force Civil Engineer Center (AFCEC) are responsible for administration of the UFC system. Technical content of UFC is the responsibility of the cognizant DoD working group. Defense Agencies should contact the respective DoD Working Group for document interpretation and improvements. Recommended changes with supporting rationale may be sent to the respective DoD working group by submitting a Criteria Change Request (CCR) via the Internet site listed below.

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

*   Whole Building Design Guide website https://www.wbdg.org/dod.

Refer to UFC 1-200-01, *DoD Building Code*, for implementation of new issuances on projects.

AUTHORIZED BY:

THOMAS P. SMITH, P.E., SES
Chief, Engineering and Construction
U.S. Army Corps of Engineers

S. KEITH HAMILTON, P.E., SES
Chief Engineer and Assistant Commander
Planning, Design and Construction
Naval Facilities Engineering Systems Command

THOMAS P. BROWN, SES
Deputy Director of Civil Engineers
DCS/Logistics, Engineering &
Force Protection (HAF/A4C)
HQ United States Air Force

MARK S. SINDER, SES
Deputy Assistant Secretary of Defense
(Infrastructure Modernization and Resilience)
Office of the Secretary of Defense

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Previous versions of UFCs contained **Summary Sheet. This has been deleted. See info at the end of the Template.**

Table of Contents, Table of Figures, and Table of Tables are automatically generated when the field is updated utilizing the Table of Contents features in Microsoft Word. Only the number, title and page number should appear. If text, figures or tables are visible, they are not linked to the appropriate Style such as UFCtext.

Table of Contents should include chapter titles, major paragraph titles and first level subparagraph titles. This may be expanded to include second level subparagraphs only when it is required based on document content.

TABLE OF CONTENTS

FIGURES

TABLES

This is a Microsoft word template intended to be used in conjunction with UFC 1-300-01, Criteria Format Standard. The intent is to create uniformly formatted documents with the ability to generate Table of Contents and cross references using embedded styles. This template includes customized Styles for chapter headings, subparagraphs, figure titles, table titles, bulleted lists, equation titles, commentary, and general text with custom multilevel lists. Do not modify the customized styles or the multilevel lists linked to the styles in this document.

When reformatting an existing document into the Word Template, the best approach is to copy and paste the content from the original document into this template utilizing the "Keep Text Only (T)" option in Word. This will ensure that no conflicting Word Styles or custom multilevel lists will be introduced into the document.

When editing a document make sure the Navigation Pane is turned on. The Navigation Pane contains links to all the chapters, paragraphs, figures, and tables which makes it easy to navigate through the document.

CHAPTER 1 INTRODUCTION

1-1   BACKGROUND.

Provide subparagraph and text if applicable.

1-2   REISSUES AND CANCELS.

Required, for criteria updates. If the document is a new UFC, remove the entire paragraph.

1-3   INCORPORATES AND CANCELS.

Required, for UFCs incorporating and cancelling documents. If the issuance is not incorporating and cancelling another document, remove the entire paragraph.

1-4   PURPOSE AND SCOPE.

Description of purpose and scope.

1-5   APPLICABILITY.

[This UFC follows the same applicability as UFC 1-200-01, paragraph 1-3, with no exceptions.] [In addition to the applicability of UFC 1-200-01, paragraph 1-3, this UFC applies to...] [This UFC follows the same applicability as UFC 1-200-01, paragraph 1-3, except for...].

1-6   GENERAL BUILDING REQUIREMENTS.

Comply with UFC 1-200-01, *DoD Building Code*. UFC 1-200-01 provides applicability of model building codes and government unique criteria for typical design disciplines and

building systems, as well as for accessibility, antiterrorism, security, high performance and sustainability requirements, and safety. Use this UFC in addition to UFC 1-200-01 and the UFCs and government criteria referenced therein.

1-7   CYBERSECURITY.

All facility-related control systems (including systems separate from a utility monitoring and control system) must be planned, designed, acquired, executed, and maintained in accordance with UFC 4-010-06, and as required by individual Service Implementation Policy.

1-8   GLOSSARY.

APPENDIX B contains acronyms, abbreviations, and terms.

1-9   REFERENCES.

APPENDIX C contains a list of references used in this document. The publication date of the code or standard is not included in this document. Unless otherwise specified, the most recent edition of the referenced publication applies. Refer to UFC 1-200-01, for the applicable publication date for International Building Code®. Refer to UFC 1-200-02, for the applicable publication date for ASHRAE Standard 90.1, Energy Standard for Buildings Except Low-Rise Residential Buildings.

CHAPTER 2 TECHNICAL REQUIREMENTS

Style for Chapter Titles is UFCchapter

2-1 MAJOR PARAGRAPH TITLE.

Style for Major Paragraph Titles is UFCpara1. Style for paragraph text is UFCtext.

2-1.1 First level subparagraph title.

Style for First level subparagraph titles is UFCpara2. Style for paragraph text is UFCtext.

2-1.2 First level subparagraph title.

Style for First level subparagraph titles is UFCpara2. Style for paragraph text is UFCtext.

2-1.3 First level subparagraph title.

Style for First level subparagraph titles is UFCpara2. Style for paragraph text is UFCtext.

2-1.3.1 Second level subparagraph title.

Style for second level subparagraph titles; if used, is UFCpara3. Style for paragraph text is UFCtext.

2-1.3.2 Second level subparagraph title.

Style for second level subparagraph titles; if used, is UFCpara3. Style for paragraph text is UFCtext.

2-1.3.2.1 Third level subparagraph title.

Style for Third level subparagraph titles; if used, is UFCpara4. Style for paragraph text is UFCtext.

2-1.3.2.2 Third level subparagraph title.

Style for Third level subparagraph titles; if used, is UFCpara4. Style for paragraph text is UFCtext.

2-2 FIGURES.

Style for figure titles is UFCfigure. Style for the actual figure is UFCtext + Centered. Per UFC 1-300-01, Font size may be reduced to a minimum 8-point. See Figure 2-1. If using multiple graphics for one figure, use a table to align graphics. Example is shown in Figure 2-2. Utilize the cross-reference capability in Word to link the text reference to

the appropriate figure. This will allow for the future insertion of Figures and the reference will update when the fields are updated.

Figure 2-1 Example Figure
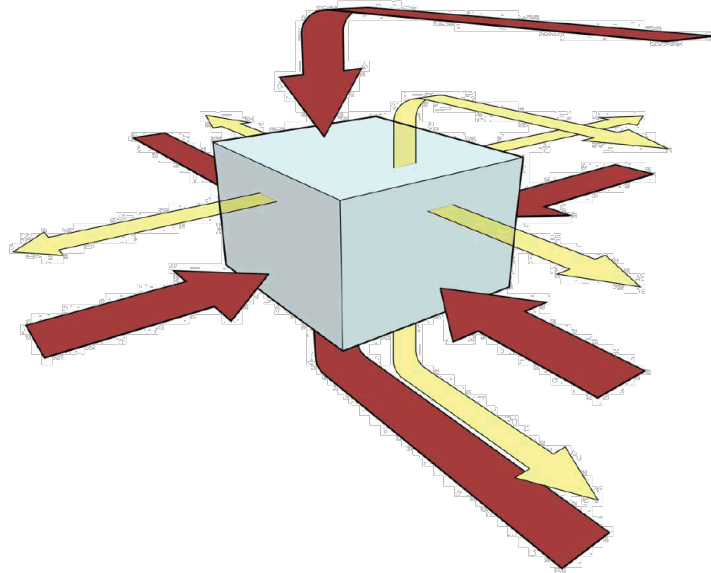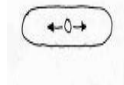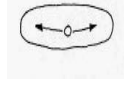
Figure 2-2 Example Using a 2x1 Table to Align Graphics

2-3   TABLES.

Style for table titles is UFCtable. Style for tables is UFCtext . Per UFC 1-300-01, Font size may be reduced to a minimum 8-point to enhance the presentation of data within a table. See Table 2-1. Again, utilize the cross-reference capability in Word to link the reference to the appropriate Table similar to Figures.

Table 2-1   Example Table

Type	Description	Plan View
Type I	Narrow, symmetric illuminance pattern.	
Type II	Slightly wider illuminance pattern than Type I.	
Type III	Wide illuminance pattern.	
Type IV	Widest illuminance pattern.	
Type V	Symmetrical circular illuminance pattern.	
Type VS	Symmetrical, nearly square illuminance pattern.	

2-4   EQUATIONS.

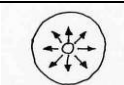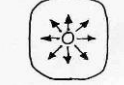Style for Equation titles is UFCEquation. Use MS Word® built-in support for writing and editing equations. Per UFC 1-300-01, Font size may be reduced to a minimum 8-point to enhance the presentation of data within a table. See Equation 2-1.

Equation 2-1.   Steel Thickness to Prevent Projectile Perforation

$$T_S = D \left(\frac{vm^{0.5} \cos^{0.8} \theta}{1.125 D^{1.5} \log_{10} BHN} \right)^{1.25}$$

Where:
v = impact velocity (m/s)
D = projectile diameter (mm)
T_S = thickness of steel plate to prevent perforation (mm)
θ = angle of obliquity (degrees)
m = mass of projectile (kg)
BHN = Brinnell Hardness Number

2-5   BULLETED LISTS.

Per UFC 1-300-01, use alphabetical or numerical bullets when the list must be followed in order and use symbol bullets when no order is required.

- Use bulleted lists when the order does not matter.
- Style for bulleted list is UFCbullet.

a.   Use lettered when the list must be followed in order.

b.   Style for lettered list is UFCletter bullet

1.   Numbered list may also be used when the list is must be followed in order.

2.   Style for lettered list is UFCnumber bullet.

2-6   COMMENTARY.

When commentary is provided, use 25% gray highlight. The following is an example of the formatting for commentary. Refer to UFC 1-300-01 for example paragraph associated with commentary.

[C] 1613.1 – Scope [Supplement]

Although Chapter 14 of ASCE 7-16 is not adopted by the 2021 IBC, occasional references to ASCE 7-16 Chapter 14 sections are made in this UFC.

2-7   FUNCTIONAL DATA SHEET.

When required, Figure 2-3 is an example of a Functional Data Sheet. Refer to UFC 1-300-01 for example paragraph associated with Functional Data Sheets.

Figure 2-3 Example Functional Data Sheet

Description/Usage	
Ceiling Height	
Windows	
Doors	
Interior Construction / Built-in Equipment	
Finishes	Walls
	Floor
	Base
	Ceiling
Plumbing	
HVAC	
Fire Protection and Life Safety	
Power	
Lighting	
Telecommunications	Telephone
	Data
	CATV
Security	IDS
	ACS
	VIDEO
Acoustics	
Furnishings and Equipment	
Special Requirements	
Adjacencies / Location within Facility	
	For Use during project execution by appropriate Service
Occupancy	Staff
	Other
Min. net Ft^2 (m^2)	

Use blank pages to ensure new chapters start on side one of a two sided printout.

Section breaks are utilized so the vertical alignment of this page can be set to be centered in page setup. To accomplish this, go to Page Setup > Layout tab > under Page > Vertical alignment > choose Center. Make sure the following page has the Vertical alignment set back to Top.

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CHAPTER 3 DESIGN

3-1   MAJOR PARAGRAPH TITLE.

Style for Major Paragraph Titles is UFCpara1. Style for paragraph text is UFCtext.

3-1.1   First level subparagraph title.

Style for First level subparagraph titles is UFCpara2. Style for paragraph text is UFCtext.

3-1.1.1   Second level subparagraph title.

Style for second level subparagraph titles; if used, is UFCpara3. Style for paragraph text is UFCtext.

3-1.1.1.1   Third level subparagraph title.

Style for Third level subparagraph titles; if used, is UFCpara4. Style for paragraph text is UFCtext.

3-2   MAJOR PARAGRAPH TITLE.

3-2.1   First level subparagraph title.

3-2.1.1   Second level subparagraph title.

3-2.1.1.1   Third level subparagraph title.

3-3   MAJOR PARAGRAPH TITLE.

3-4   MAJOR PARAGRAPH TITLE.

3-4.1   First level subparagraph title.

3-4.2   First level subparagraph title.

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CHAPTER 4 TITLE

4-1 **MAJOR PARAGRAPH TITLE.**

Style for Major Paragraph Titles is UFCpara1. Style for paragraph text is UFCtext.

Any additional chapters should be created utilizing the same Styles and paragraph numbering as previous chapters.

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APPENDIX A BEST PRACTICES

Appendix Title is UFCAppendix.

Best Practices; if required, starts with Appendix A. This information is considered to be guidance and not requirements. The main purpose is to communicate proven system/facility solutions and lessons learned and may not be the only solution to meet UFC requirements. It is not intended to be a textbook or to repeat information from industry standards and non-government references. The Best Practices Appendices are not intended to parallel the chapter organization and numbering of the technical requirements section of the main text.

A-1   MAJOR PARAGRAPH TITLE.

Style for Major Paragraph Titles is UFCAppendixpara1. Style for paragraph text is UFCtext.

A-1.1   First level subparagraph title.

Style for First level subparagraph titles is UFCAppendixpara2. Style for paragraph text is UFCtext.

A-1.1.1   Second level subparagraph title.

Style for second level subparagraph titles; if used, is UFCAppendixpara3. Style for paragraph text is UFCtext.

A-1.1.1.1   Third level subparagraph title

Style for Third level subparagraph titles; if used, is UFCAppendixpara4. Style for paragraph text is UFCtext.

A-2   MAJOR PARAGRAPH TITLE.

Style for Major Paragraph Titles is UFCAppendixpara1. Style for paragraph text is UFCtext.

A-2.1   First level subparagraph title.

Style for First level subparagraph titles is UFCAppendixpara2. Style for paragraph text is UFCtext.

A-2.1.1   Second level subparagraph title.

Style for second level subparagraph titles; if used, is UFCAppendixpara3. Style for paragraph text is UFCtext.

A-2.1.1.1   Third level subparagraph title

Style for Third level subparagraph titles; if used, is UFCAppendixpara4. Style for paragraph text is UFCtext.

A-3   MAJOR PARAGRAPH TITLE.

Style for Major Paragraph Titles is UFCAppendixpara1. Style for paragraph text is UFCtext.

A-4   MAJOR PARAGRAPH TITLE.

Style for Major Paragraph Titles is UFCAppendixpara1. Style for paragraph text is UFCtext.

A-5   MAJOR PARAGRAPH TITLE.

Style for Major Paragraph Titles is UFCAppendixpara1. Style for paragraph text is UFCtext.

If the definition of a term has a source, provide citation using the "Insert Citation" function.

APPENDIX B GLOSSARY

B-1   **ACRONYMS.**

AFCEC   Air Force Civil Engineer Center

BIA   Bilateral Infrastructure Agreement

DoD   Department of Defense

HQUSACE   Headquarters, U.S. Army Corps of Engineers

HNFA   Host Nation Funded Construction Agreements

NAVFAC   Naval Facilities Engineering Systems Command

SOFA   Status of Forces Agreements

UFC   Unified Facilities Criteria

U.S.   United States

B-2 **DEFINITION OF TERMS.**

UFCAppendFigure: Custom Microsoft Word Style used for the titles of Figures located in an appendix.

UFCAppendix: Custom Microsoft Word Style used for Appendix titles.

UFCAppendixpara1: Custom Microsoft Word Style used for Major Paragraph Titles in appendixes

UFCAppendixpara2: Custom Microsoft Word Style used for First level subparagraph titles in appendixes

UFCAppendixpara3: Custom Microsoft Word Style used for Second level subparagraph titles in appendixes

UFCAppendixpara4: Custom Microsoft Word Style used for Third level subparagraph titles in appendixes

UFCAppendTable: Custom Microsoft Word Style used for the titles of Tables located in an appendix.

UFCbullet: Custom Microsoft Word Style used for bulleted lists

UFCchapter: Custom Microsoft Word Style used for Chapter titles

UFCfigure: Custom Microsoft Word Style used for the titles of Figures

UFCpara1: Custom Microsoft Word Style used for Major Paragraph Titles

UFCpara2: Custom Microsoft Word Style used for First level subparagraph titles

UFCpara3: Custom Microsoft Word Style used for Second level subparagraph titles

UFCpara4: Custom Microsoft Word Style used for Third level subparagraph titles

UFCreference: Custom Microsoft Word Style used for Reference Text

UFCreferenceOrg: Custom Microsoft Word Style used for Reference Organization

UFCtable: Custom Microsoft Word Style used for the titles of Tables

UFCtext: Custom Microsoft Word Style for paragraph text

APPENDIX C REFERENCES

Style for Appendix Title is UFCAppendix.

Style for reference organization is UFCreferenceOrg. Style for Reference is UFC reference with reference titles in italics. The following are provided as an example organized by reference type. References listed here must be referenced in the UFC.

UNDERWRITER'S LABORATORY

UL 681, *Installation and Classification of Burglar and Holdup Alarm Systems for alarm system installation*

UL 2050, *National Industrial Security Systems* UL 2050 materials are restricted and only distributed to those demonstrating relevant national industrial security involvement.

UNIFIED FACILITIES CRITERIA

https://www.wbdg.org/dod/ufc

UFC 1-200-01, *DoD Building Code*

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

UFC 4-010-01, *DoD Minimum Antiterrorism Standards for Buildings*

UFC 4-010-06, *Cybersecurity of Facility-Related Control Systems (FRCS)*

UFC 4-020-01, *DoD Security Engineering Facilities Planning Manual*

UFC 4-020-02, *DoD Security Engineering Facilities Design Manual*, currently in Draft and unavailable

UFC 4-021-02, *Electronic Security Systems*

UNIFICATION AND IMPACT STATEMENT

The original Summary Sheet including Impact and Unification Issues has been deleted from the front end of new and revised UFCs. Provide a separate Impact and Unification issues document to justify service specific requirements and document criteria impacts.

Do not include the following with UFC, create a separate document. Upload the completed document into CMS with the CP/ESEP Approval Session. Title the document "UFC X-XXX-XX CP Impact and Unification Statement".

Document: UFC X-XXX-XX, Title

Reissues and Cancels: List applicable documents that are being reissued, canceled or None

Working Group:

Date:

Impact.

The following direct impacts will result from the [publication][update] of this UFC. Describe both positive and negative impacts. If there are no impacts, state "No impact". Topics to include:

- Initial cost
- Life cycle cost
- Safety
- Efficiency
- Security

Unification Issues.

List all unification issues in the order they appear in the UFC.

- Identify paragraph number.

- Identify the Service(s) the unification issue applies to.

- Provide justification for each issue. Cite any Service specific policy, regulation, mission or operational justifications why the criterion cannot be unified.