



U.S. Department  
of Transportation  
**Federal Aviation  
Administration**

# Advisory Circular

Consolidated file includes Change 1

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**Subject:** Surface Drainage Design

**Date:** 9/29/2006

**AC No:** 150/5320-5C

**Initiated by:** AAS-100

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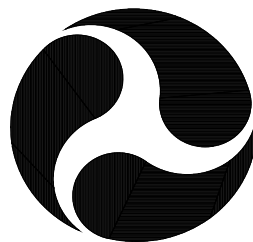
- 1. Purpose.** This Advisory Circular (AC) provides guidance for engineers, airport managers, and the public in the design and maintenance of airport surface drainage systems.
- 2. Cancellation.** This AC cancels AC 150/5320-5B, *Airport Drainage*, dated July 1, 1970.
- 3. Background.** The Federal Aviation Administration (FAA) evaluated options for revising the airport drainage manual and decided it would be beneficial to participate in the cooperative effort undertaken by the Department of Defense (DOD). This effort combines existing surface drainage topics covered in different agency manuals into one Unified Facilities Criteria (UFC) document. The resulting manual/advisory circular will serve as the design and analysis standard for surface drainage for DOD and FAA. The current techniques and practices have been evaluated in order to take advantage of recent advances in the field of drainage engineering, changes in drainage technology, national regulations, and local requirements.
- 4. Application.** FAA recommends the information and procedures contained in the manuals for use by airports as appropriate.

David L. Bennett  
Director of Airport Safety and Standards

# **UNIFIED FACILITIES CRITERIA (UFC)**

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## **SURFACE DRAINAGE DESIGN**



U.S. Department of Transportation  
**Federal Aviation Administration**

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**UNIFIED FACILITIES CRITERIA (UFC)**  
**SURFACE DRAINAGE DESIGN<sup>1</sup>**

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U.S. ARMY CORPS OF ENGINEERS (Preparing Activity)

NAVAL FACILITIES ENGINEERING COMMAND

AIR FORCE CIVIL ENGINEER SUPPORT AGENCY

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

<b>Change No.</b>	<b>Date</b>	<b>Location</b>

<sup>1</sup>This UFC supersedes TM 5-820-1/AFM 88-5, Chap 1, dated August 1987; TM 5-820-2/AFM 88-5, Chap 2, dated March 1979; TM 5-820-3/AFM 88-5, Chap 3, dated June 1991; TM 5-820-4/AFM 88-5, Chap 4, dated October 1983; TM 5-852-7/AFM 88-19, Chap 7, dated April 1981; NAVFAC DM 21.06, dated April 1986; EI 02C202, dated October 1995.

The format of this document does not conform to UFC 1-300-01.

## FOREWORD

The Unified Facilities Criteria (UFC) system is prescribed by Military Standard (MIL-STD) 3007 and provides planning, design, construction, sustainment, restoration, and modernization criteria, and applies to the Military Departments, the Defense Agencies, and the Department of Defense (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.

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 Headquarters Air Force Civil Engineer Support Agency (HQ 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 site listed below.

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

- Whole Building Design Guide web site DOD page: (<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.

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**UNIFIED FACILITIES CRITERIA (UFC)  
NEW DOCUMENT SUMMARY SHEET**

**Document:** UFC 3-230-01/AC 150/5320-5C

**Description:** UFC 3-230-01/AC 150/5320-5C provides comprehensive and practical guidance to the Tri-service community and Federal Aviation Administration (FAA) for the design of storm drainage systems associated with transportation facilities. Criteria are provided for the design of storm drainage systems which collect, convey, and discharge stormwater on and around pavements and other transportation facilities.

**Reasons for Document:**

- Previous criteria associated with this topic were outdated and did not take advantage of recent developments in the field of hydrologic engineering.
- Multiple documents covering various topics on the subject matter were in circulation and this document provides a consolidated and comprehensive guide for all users.
- Many new environmental practices have been developed and were not addressed in previous criteria.
- User feedback indicated that published criteria from multiple documents was often confusing and contradicting.

**Impact:** There are negligible cost impacts; however, these benefits should be realized:

- Providing one location for criteria associated with storm drainage will allow users to be more efficient and effective when applying the procedures and principles contained in this document.
- The updated criteria in this document are considered standard practice and will allow users to take advantage of concepts and methods which are widely understood and accepted throughout the industry today.

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