

ENGINEER DOCTRINE UPDATE

U.S. Army Maneuver Support Center Training and Doctrine Development Department Doctrine Division, Engineer Branch

Publications Currently Under Revision

Publication Number	Title	Date	Description (and Current Status)
FM 3-34	<i>Engineer Operations</i>	Jan 04	This is the engineer keystone manual. It encompasses all engineer doctrine; integrates the three engineer functions of combat, general, and geospatial engineering; and addresses engineer operations across the entire spectrum of operations. Status: Published.
Organizational Manuals			
FM 3-34.22 (FM 3-34.221) (FM 5-71-2) (FM 5-71-3) (FM 5-7-30)	<i>Engineer Operations –Brigade Combat Team and Below</i>	Pending (Jan 05) (Jun 96) (Oct 95) (Dec 94)	This new manual will encompass engineer operations in support of brigade combat teams (BCTs) (heavy, infantry, and Stryker—the armored cavalry regiment) and their primary subordinate units (infantry battalion, Stryker battalion, combined arms battalion, and the reconnaissance squadron). This manual will supersede FM 3-34.221, FM 5-7-30, FM 5-71-2, and FM 5-71-3. Status: Published February 2009. To be consolidated into FM 3-34 in 4QFY10.
FM 3-34.23 (FM 5-116) (FM 5-100-15) (FM 5-71-100)	<i>Engineer Operations –Echelons Above Brigade Combat Team</i>	Pending (Feb 99) (Jun 95) (Apr 93)	This is a new manual that will encompass engineer operations in support of all engineer operations above the BCTs (division, corps, and theater). The intent is to consolidate and revise three engineer FMs that provide doctrinal guidance for the entire spectrum of engineer operations supporting echelons above the BCT level. This manual will supersede FM 5-71-100, FM 5-100-15, and FM 5-116. Status: To be published in 4QFY09. To be consolidated into FM 3-34 in 4QFY10.
Combat Engineering			
FM 3-90.11 (FM 3-34.2)	<i>Combined Arms Mobility Operations</i>	Aug 00	This is a full revision, to include renaming and renumbering of FM 3-34.2, <i>Combined Arms Breaching Operations</i> . Changes in the force structure have required adjustment of the tactics, techniques, and procedures (TTP) associated with breaching and clearance operations. The United States Marine Corps (USMC) plans to adopt this manual as well. Status: To be published in 4QFY10.
FM 3-90.13 (FM 5-102) (FM 90-7)	<i>Combined Arms Obstacle Integration</i>	Pending (Sept 94) (Mar 85)	This revised manual will contain the basic fundamentals associated with countermobility operations and will incorporate aspects of the contemporary operating environment (COE) and full spectrum operations, along with emerging doctrine on networked munitions. Status: On hold for release of FM 3-90, <i>Tactics</i> .
FM 3-34.300 (FM 5-103)	<i>Survivability</i>	Jun 85	This manual provides survivability information needed by commanders and staffs at the tactical level. It includes guidance on integrating survivability into planning and orders production and creation of the engineer running estimate. It provides examples of a survivability capabilities card, matrix, and timeline to assist with the planning, revision, and conduct of specific survivability tasks. The USMC plans to adopt this manual as well. Status: On hold; no rewrite date projected.
FM 3-34.400 (FM 5-104)	<i>General Engineering</i>	Nov 86	This manual describes the operational environment (OE) and how to apply and integrate general engineering principles in support of full spectrum operations. It focuses on the establishment and maintenance of lines of communication and engineer support to sustainment operations throughout the area of operations. Although not designated as a multi-Service publication, it is intended to inform all Service components of the types of general engineering tasks, planning considerations, the variety of units available to perform them, and the capabilities of Army engineers to accomplish them. The USMC designation will be added to this manual. Status: Published 9 December 2008.

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General Engineering			
FM 3-34.410 Volumes I & II (FM 5-430-00-1 & 5-430-00-2)	<i>Design of Theater of Operations Roads, Airfields, and Helipads</i>	Aug 94; Sep 94	This manual will serve as a reference for engineer planners in support of joint and theater operations (TO) in the design of roads, airfields, and helipads. It is currently dual-designated with the Air Force. The Air Force (as well as the Navy and USMC) plans to adopt the new manual also. Status: Pending completion of drainage chapter.
FM 3-34.451 (FM 5-472)	<i>Materials Testing</i>	Dec 92	This manual will provide technical information for obtaining samples and performing engineering tests and calculations on soils, bituminous paving mixtures, and concrete. For use in military construction. The test procedures and terminology will conform to the latest methods and specifications of the American Society for Testing and Materials (ASTM), the American Concrete Institute (ACI), and the Portland Cement Association (PCA), with alternate field testing methods and sampling techniques when complete lab facilities are unavailable or impractical to use. The USMC plans to adopt this manual as well. Status: Preparing final approved draft: to be published in 1QFY10.
FM 3-34.465 (FM 3-34.465 & FM 3-34.468)	<i>Quarry Operations</i>	Mar 05; Dec 03 (Apr 94)	This manual outlines the methods and procedures used in the exploration for and operation of pits and quarries. It provides information on equipment required for operating pits and quarries and for supplying crushed mineral products, but does not cover the operation of the stated types of equipment. This is a collaborative effort with the Navy and Air Force and includes the newest technologies and current practices. Status: Preparing Volume II. Initial draft staffing of both volumes in 1QFY10.
FM 3-34.469 (FM 5-484)	<i>Multi-Service Well Drilling Operations</i>	Mar 94	This manual is a guide for planning, designing, and drilling wells. It focuses on techniques and procedures for installing wells and includes expedient methods for digging shallow water wells, such as hand-dug wells. This collaborative effort with the Navy, Air Force, and USMC includes the newest technologies, current practices, and revised formulas. Status: Estimated date for posting to Army Knowledge Online (AKO) is 4QFY09.
FM 3-34.485 (FM 5-415)	<i>Firefighting Operations</i>	Feb 99	This manual gives directions on deploying and using engineer firefighting teams. These teams provide fire prevention/protection, aircraft crash/rescue, natural cover, and hazardous material (HAZMAT) (incident) responses within a TO. This is a parallel effort with the revision of the firefighting Army regulation (AR) to bring both policy and doctrine current with required certifications, newest technologies, and current practices. Status: Initiating the program directive and developing the initial draft.
FM 3-34.500 (FM 3-100.4)	<i>Environmental Considerations in Military Operations</i>	Jun 00	This manual provides environmental protection procedures during all types of operations. It states the purposes of military environmental protection, a description of legal requirements, and a summary of current military programs. It also describes how to apply risk management methods to identify actions that may harm the environment and appropriate steps to prevent or mitigate damage. Status: Estimated date for posting to AKO is 4QFY09.
Geospatial Engineering			
FM 3-34.600 (FM 3-34-230)	<i>Geospatial Operations</i>	3 Aug 00	This full revision of FM 3-34.230, <i>Geospatial Operations</i> , will incorporate changes as a result of FM 3-34, <i>Engineer Operations</i> , and FM 3-0, <i>Operations</i> . Geospatial engineering consists of engineer capabilities and activities that contribute to a clear understanding of the physical environment by providing geospatial information and service to commanders and staffs. Status: Estimated date for posting to AKO is 1QFY10.
<p>NOTES: Current engineer publications can be accessed and downloaded in electronic format from the Reimer Digital Library at http://www.adtdl.army.mil or the MSKN website at https://www.us.army.mil/suite/page/500629. The manuals discussed in this article are currently under development. Drafts may be obtained during the staffing process or by contacting the engineer doctrine branch at: Commercial 573-563-0003, DSN 676-0003, or douglas.merrill@us.army.mil. The development status of these manuals was current as of 24 November 2009.</p>			