

## **Ernest Graves, Jr.**

The career of Ernest Graves reflects the diversity of duties that an engineer officer may be called upon to perform: troop leader, scientist and engineer, project manager, general staff officer, senior commander, and director of national programs.

Lieutenant General Ernest Graves' career as an Army officer began in 1944 when he graduated from West Point and received his commission as a second lieutenant in the Corps of Engineers. That summer he attended the Engineer Officer Basic Course and commanded a platoon in the Engineer Replacement Training Center at Fort Belvoir, Virginia.

In October he flew to Europe for assignment to Headquarters, Communications Zone, in Paris, where he worked in the Control Section, a group that kept statistics on all logistic activity. At the end of 1944 he was reassigned to command a platoon in the 1282d Engineer Combat Battalion, training at the time in England. The battalion deployed to Germany in April 1945, then in June left for the Pacific theater by way of Marseilles and the Panama Canal.

When the 1282d Engineer Battalion arrived in the Philippines at the end of August 1945, it was sent first to Clark Field, then to San Jose in central Luzon. In October Lieutenant Graves transferred to the Engineer Construction Command and deployed with the headquarters to Japan. He ended up in the Construction Division, Engineer Section, of Eighth Army headquarters in Yokohama, becoming chief of the Buildings, Camps, and Hospitals Section with responsibility for this type of construction for the army of occupation throughout the Tokyo–Yokohama area.

Graves left Japan in September 1946 for assignment to the Manhattan Project at Sandia Base in Albuquerque, New Mexico—one of a group of officers selected by Lieutenant General Leslie Groves to form a military unit to assemble nuclear weapons. Graves was in Company B, the assembly company, of the 38th Engineer Battalion (Special) and spent time on a team that assembled the nuclear cores, first at Los Alamos, then at the Sandstone nuclear test series at Eniwetok Atoll.

Captain Graves began his graduate schooling in June 1948, first completing a year of courses in mathematics, physics, and chemistry at the Naval Postgraduate School in Annapolis, Maryland. From 1949 to 1951 he attended the Massachusetts Institute of Technology in Cambridge, Massachusetts, earning a Ph.D. in physics. It was here that he met and married his wife Nancy.

After receiving his degree from MIT in September 1951, Major Graves was assigned to the Supreme Headquarters Allied Powers, Europe, in Paris, France. For the first year in SHAPE he was the assistant executive officer in the Office of the Special Assistant to the Chief of Staff. Then from 1952 to 1954 he was assigned as a staff engineer in the Airfield Construction Section, Engineer Branch, Logistics Division, working on the NATO infrastructure program. One of his first jobs in infrastructure was preparing the NATO airfield standards following the Lisbon meeting of the North Atlantic Council. The standards were a detailed list of operational facilities that had to be provided at each NATO airfield for it to qualify for allied cost sharing.

After attending the Engineer Officer Advanced Course in 1954–1955, Major Graves was assigned for two years as Chief, Training Section, Nuclear Power Branch, U.S. Army Engineer Research and Development Laboratories, at Fort Belvoir. The Army constructed a nuclear power plant at Fort Belvoir, and Graves was in charge of putting together the crew for the plant and organizing the whole training program, both graduate schooling for officers and technical training for crews.

Major Graves attended the Command and General Staff College in 1957–1958, then was assigned to command the 44th Engineer Construction Battalion in Bup Yong, Korea. During his year in command the battalion built a large storage area for Honest John missiles at Osan, did asphalt paving in the area of the 7th Infantry Division just south of the DMZ, and began construction of the depot complex at Waegwan.

In 1959 Graves was assigned as a research associate in the Plowshare Program at the Lawrence Radiation Laboratory in Livermore, California. His mission was to learn about the peaceful use of nuclear explosives to perform excavation, possibly in the construction of a sea-level canal across the Isthmus of Panama. Most of his assignments for the next seven years were spent working on engineering and policy issues affecting the Panama Canal.

In spring 1961 Lieutenant Colonel Graves was reassigned as the Deputy District Engineer in the Los Angeles District of the Corps of Engineers. However, that fall he was ordered on temporary duty to Washington to serve as a technical consultant to the Inter-Agency Study Group on Panama Canal Policy and Relations with Panama. With the study group's recommendations approved in a national security action memorandum signed by President Kennedy in spring 1962, Graves was ordered back to Livermore to establish the U.S. Army Engineer Nuclear Cratering Group. He served as the group's director from 1962 to 1964, leading the Corps of Engineers portion of the research program aimed at determining the feasibility of using nuclear excavation to dig a sea-level canal.

After attending the Army War College at Carlisle Barracks, Pennsylvania, in 1964–1965, Graves became a staff officer in the Office of the Deputy Under Secretary of the Army (International Affairs) in the Pentagon. In February 1967 he was appointed Executive to the

Secretary of the Army. While in that position he attended the Advanced Management Program at the Harvard Business School in Cambridge, Massachusetts.

In September 1968 Colonel Graves assumed command of the 34th Engineer Group in the Mekong Delta of Vietnam. The five battalions in the group supported the 9th Infantry Division and the IV Corps Area Adviser and rebuilt major sections of QL-4, the main highway extending south into the delta.

On returning from Vietnam in September 1969, Graves became Deputy Director of Military Construction in the Office of the Chief of Engineers. This directorate was in charge of approximately \$1 billion of military construction annually, including the entire Army program and a large portion of the Air Force program. Graves' responsibilities also included direction of Corps of Engineers construction for the National Aeronautics and Space Administration and Corps support of Army facilities engineers worldwide. During this period Brigadier General Graves also served for six months as president of the Air Defense Evaluation Board tasked to recommend whether or not to undertake engineering development of the Patriot air defense missile system.

In December 1970 Graves became Division Engineer of the North Central Division of the Corps in Chicago, Illinois. He was responsible for Army Corps of Engineers water resource activities in all or parts of 12 states, including the Upper Mississippi River basin and the Great Lakes. Major activities during his three years in Chicago were the program of diked disposal of dredge spoil, flood protection against record high levels on the Great Lakes, and reaching decisions with his Canadian counterparts in his capacity as Chairman, U.S. Section, of five different boards under the jurisdiction of the International Joint Commission for U.S.-Canadian boundary waters.

In December 1973 Major General Graves returned to Washington to become Director of Military Application in the Atomic Energy Commission, then the Energy Research and Development Administration. In this position he was responsible for all U.S. nuclear weapons development, testing, and production, as well as cooperation with the British government's nuclear weapons program. His job was to put the program together each year, defend it before Congress, then oversee its execution by the weapons laboratories at Los Alamos, Livermore, and Albuquerque; the test site in Nevada; and the production contractors throughout the United States.

General Graves became Director of Civil Works in the Office of the Chief of Engineers in September 1975, with responsibility for directing a \$2.5 billion annual program of investigation, design, construction, operation, and maintenance of works for navigation, flood control, hydroelectric power production, water supply, water quality, recreation, fish and wildlife protection, and beach and shore protection. Of the many issues addressed during his two years

in the position, the most challenging was the review of all the Corps' water projects, undertaken when President Carter ordered 35 projects stopped in February 1977.

In July 1977 General Graves became Deputy Chief of Engineers, serving as the principal assistant and adviser to the Chief of Engineers for both the military and civil missions of the Corps.

General Graves became Director of the Defense Security Assistance Agency in March 1978 and was promoted to lieutenant general. In this position he was responsible for managing and administering the entire program of security assistance and arms sales carried out by the Department of Defense. During this period the largest sales were to the Middle East, including Iran, Saudi Arabia, Israel, and Egypt. The programs for Israel and Egypt were tied closely to the Camp David peace accords.

General Graves retired from the Army in July 1981 and later that year became a consultant to the Center for Strategic and International Studies (CSIS) in Washington. As a senior adviser at CSIS he took part in a series of studies on the use of foreign assistance as an instrument of foreign policy and national security, several times serving as the study director. In the late 1990's he was concentrating on helping CSIS with its financial management and introduction of new computer systems and software.

## Personal Data

**Date and Place of Birth:** 6 July 1924, New York City

**Parents:** Colonel Ernest Graves and Lucy Birnie Graves

**Marriage:** Nancy Herbert Barclay, Paoli, Pennsylvania, 12 May 1951

**Children:** Ralph Henry, Robert Barclay, William Hooper, Emily Birnie

## Career Summary

### 1941–1944

Cadet, United States Military Academy, West Point, New York  
Second lieutenant, 6 June 1944

### 1944

Basic Officer Course, The Engineer School, Fort Belvoir, Virginia  
Control Section, Headquarters, Communications Zone, European Theater of  
Operations, Paris, France  
First lieutenant, 6 December 1944

### 1945–1946

Platoon leader, 1282d Engineer Combat Battalion, England and European Theater  
of Operations  
Staff Officer, Construction Division, Headquarters, Eighth Army, Yokohama, Japan  
Captain, 3 January 1946

### 1946–1947

Assembly Company, Engineer Battalion, Manhattan Project, Sandia Base and Los  
Alamos, New Mexico

### 1948–1949

U.S. Naval Postgraduate School, Annapolis, Maryland

### 1949–1951

Ph.D. in physics, Massachusetts Institute of Technology, Cambridge, Massachusetts  
Major, 25 July 1951

**1951–1954**

Assistant Executive Officer, Office, Special Assistant to the Chief of Staff, Supreme Headquarters Allied Powers, Europe, Paris, France, 1951–1952  
Staff Engineer, Airfield Construction Section, Engineer Branch, Logistics Division, Supreme Headquarters Allied Powers, Europe, Paris, France, 1952–1954

**1955–1957**

Chief, Training Section, Nuclear Power Branch, U.S. Army Engineer Research and Development Laboratories, Fort Belvoir, Virginia

**1957–1958**

Command and General Staff College, Fort Leavenworth, Kansas

**1958–1959**

Commander, 44th Engineer Construction Battalion, Bup Yong, Korea

**1959–1961**

Research Associate, Lawrence Radiation Laboratory, Livermore, California  
Lieutenant Colonel, 29 March 1960

**1961**

Deputy District Engineer, Los Angeles District, U.S. Army Corps of Engineers, Los Angeles, California

**1961–1962**

Consultant, Inter-Agency Study Group on Panama Canal Policy and Relations with Panama, Washington, D.C.

**1962–1964**

Director, U.S. Army Engineer Nuclear Cratering Group, Lawrence Radiation Laboratory, Livermore, California

**1964–1965**

Army War College, Carlisle Barracks, Pennsylvania

**1965–1967**

Staff Officer, Office of the Deputy Under Secretary of the Army (International Affairs), Washington, D.C.  
Colonel, 6 April 1966

**1967–1968**

Executive to the Secretary of the Army, Washington, D.C.  
Advanced Management Program, Harvard Business School, Cambridge,  
Massachusetts, 1968

**1968–1969**

Commander, 34th Engineer Group, Vung Tau and Can Tho, Vietnam

**1969–1970**

Deputy Director of Military Construction, Headquarters, U.S. Army Corps of  
Engineers, Washington, D.C.  
Brigadier General, 10 October 1969  
President, U.S. Army Air Defense Evaluation Board, Washington, D.C., 1970

**1970–1973**

Division Engineer, North Central Division, U.S. Army Corps of Engineers, Chicago,  
Illinois  
Major General, 1 August 1971

**1973–1975**

Director of Military Application, U.S. Atomic Energy Commission and U.S. Energy  
Research and Development Administration, Washington, D. C.

**1975–1977**

Director of Civil Works, Headquarters, U.S. Army Corps of Engineers, Washington,  
D. C.

**1977–1978**

Deputy Chief of Engineers, U. S. Army, Washington, D. C.

**1978–1981**

Director, Defense Security Assistance Agency, Washington, D. C.  
Lieutenant General, 1 March 1978

**1981–present**

Senior Adviser, Center for Strategic and International Studies, Washington, D.C.  
Consultant, Burdeshaw Associates, Bethesda, Maryland (until 1992)

## **Awards**

Defense Distinguished Service Medal  
Army Distinguished Service Medal  
Legion of Merit (with Oak Leaf Cluster)  
Bronze Star Medal  
Air Medal (with Oak Leaf Cluster)  
Army Commendation Medal (with three Oak Leaf Clusters)