Organization and Responsibilities

by Martin Reuss

In World War II, the Corps of Engineers was a sprawling organization with operations akin to a major international corporation. Its responsibilities reached from the production line in the United States to overseas battlefields. In 1941, when the Corps obtained broad military construction functions, it also had responsibilities to train engineer troops; procure, maintain, repair, and distribute engineer equipment for use in the theaters of war; produce maps; collect intelligence; build military highways and railroads; and cooperate with a variety of civilian organizations on efforts relating to industrial mobilization.

The War Department building in Washington, DC during World War II. Headquarters of the Corps of Engineers moved there in 1941. In 1947 the State Department took over the building and later substantially enlarged it.

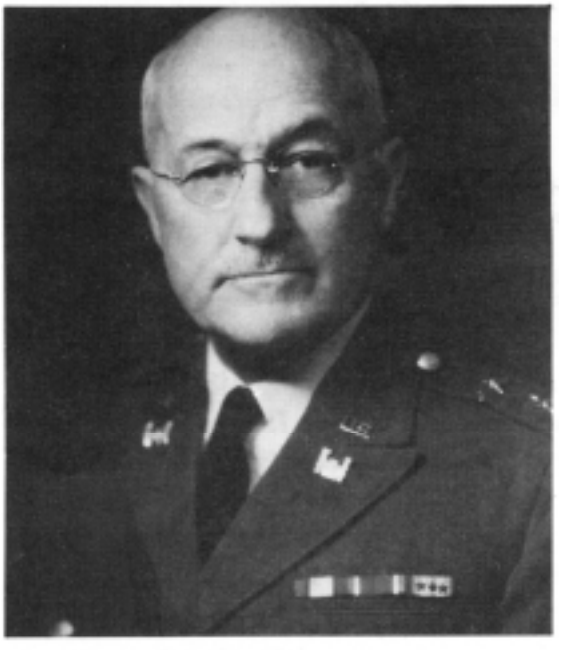
Besides all these activities, the Corps retained its civil works responsibilities to develop and maintain navigable waterways, help control floods, and provide hydropower. The Corps of Engineers combined the functions of a school, research laboratory, department store, shipper, engineering

firm, repair shop, and construction organization. The challenges were enormous, but no organization, civilian or military, was better equipped to handle them.

While the wartime Corps, in keeping its traditional methods of operation, often delegated authority to the organizational element with direct responsibility for execution, the Headquarters of the Corps of Engineers retained overall oversight and coordination functions.

The Chief of Engineers personally retained broad responsibilities and a large span of control. For instance, although actual engineer training was the responsibility of three replacement training centers and three unit training centers under the jurisdiction of the service commands, the Chief of Engineers continued to oversee the evolution of engineer training doctrine and publications; and he supervised the development of engineer equipment for the Army ground and air forces and some items of engineer equipment used by the Navy and the Allied forces (under the lend-lease program).

After December 1941 the Chief of Engineers oversaw the acquisition and disposal of military real estate, carrying out the responsibilities assigned him by the Under Secretary of War, and the construction and maintenance of buildings and other facilities for the Army. He supervised the Army Map Service, established as an Army engineer field office in 1942 to develop topographic maps of actual or potential combat areas. Under the direction of the Secretary of War, he continued to discharge his civil works responsibilities. Finally, he advised the Chief of Staff on all Army engineer matters.



Major General Julian Schley, Chief of Engineers from October 1937 to October 1941.

The wartime Chiefs of Engineers were Major General Julian L. Schley, who held the post from October 1937 to October 1941, and Major General Eugene Reybold, the incumbent

from October 1941 to October 1945. In 1939-40 an Assistant Chief of Engineers served as head of the civil works section, while another Assistant Chief headed the military section. Both were general officers. From 1941 to 1943 four Assistant Chiefs of Engineers supervised the Administration, Construction, Supply, and Troops divisions. During this period, each Assistant Chief was a brigadier general except for the Construction Division head who was a major general. From early 1943 to April 1945, a Deputy Chief of Engineers, several special assistants, and two Assistant Chiefs of Engineers, one for military supply and one for war planning, reported directly to the Chief of Engineers.

Lieutenant General Eugene Reybold, Chief of Engineers from October 1941 to October 1945. Reybold was promoted to Lieutenant General on 15 April 1945, the first to hold that rank while serving as Chief of Engineers.

Office of the Chief of Engineers		
Assistant Chief of Engineers	**Assistant Chief of Engineers**	**Boards and Commissions**
Personnel Division Intelligence Division Operations and Training Division Supply Division Construction Division Plans and Development Budget Design and Operations Railway Division	Rivers and Harbors Division Navigation Projects Flood Control Projects Miscellaneous Civil Division Finance and Accounting Division	Mississippi River Commission Beach Erosion and Shore Protection Boards Board of Engineers for Rivers and Harbors Engineering Administration Review of Reports Statistics Special Studies Cost Accounting Safety

1 August 1940 Reorganization, Office of the Chief of Engineers.

As chief of a technical service, the Chief of Engineers reported to the Commanding General of the Army Service Forces (ASF), Lieutenant General Brehon B. Somervell (also an engineer officer), on questions relating to military supply activities. However, the Corps of Engineers, like other technical services such as the Ordnance, Transportation, and Signal

Corps, successfully resisted efforts by General Somervell to divest it of field functions and make the Office of the Chief of Engineers purely a functional staff component within the ASF.

On 27 February 1941, a few months after the transfer of airfield construction, the Office of the Chief of Engineers was reorganized into nine sections: personnel, intelligence, supply, operations and training, railways, fortifications, general office administration, construction, and miscellaneous civil engineering. Then, on 10 November 1941, the Chief of Engineers consolidated organizational elements of his office in anticipation of receiving broadened responsibility for general Army construction and related functions. He replaced the nine sections with four divisions—Construction, Supply, Troops, and Administration—two independent sections, and various boards and commissions.

Office of the Chief of Engineers		
Assistant Chief of Engineers Construction Division	**Assistant Chief of Engineers Supply Division**	**Assistant Chief of Engineers Troops Division**
Labor Relations Branch Engineering Branch Real Estate Branch Repairs and Utilities Branch Operations Branch Utilities Contracts Branch	Supply Control Section Administration Branch Requirements, Storage and Issue Branch Procurement Branch Development Branch Construction Materials Branch	Intelligence Branch Operations and Training Branch Railways Branch
Assistant Chief of Engineers Administration Division	**Boards and Commissions**	
Office Services Branch Civilian Personnel Branch Fiscal Branch Military Personnel Branch Contracts and Claims Branch Legal Branch	Board of Engineers for Rivers and Harbors Beach Erosion Board Shore Protection Board Mississippi River Commission Construction Contract Board Coast Artillery Advisory Committee	

6 June 1942 Reorganization, Office of the Chief of Engineers.

The Construction Division performed both civil and military activities. The Engineering and Operations branches, for example, did rivers and harbors work as well as military construction. The Supply Division addressed the development, procurement, storage, and distribution of military engineer equipment. The Troops Division encompassed training, operations, and intelligence functions. The Administration Division included the usual support operations, including personnel, financial, and legal responsibilities. The two

independent sections were Control (largely to insure proper coordination of staff actions) and Public Relations.

With one exception—the establishment of a separate Engineering Division in May 1943—the basic organizational structure of the Office of the Chief of Engineers remained generally unchanged until the end of 1943 although several small units were added. Occasionally, the Secretary of War or Headquarters, ASF, required new offices to be established. These included price adjustment and cost analysis sections, a technical information branch (which included public relations), strategic studies, reproduction control, and a manpower board.

The Engineering Division consolidated several functions that had formerly been divided between the Construction and Supply divisions. The new division prepared engineering studies; developed and prepared plans, specifications, and design criteria for facilities and equipment; and drafted the engineering sections of manuals and other publications.

The complete rearrangement of functions on 1 December 1943 demonstrated the flexibility of the Chief of Engineers to meet rapid changes in the combat situation. Attention shifted from activities in the United States to military operations overseas as the Army expedited the flow of men, materiel, and scientific and technical information. The centralization of engineering and development functions continued. This was partially accomplished with the establishment of the Engineering Division the previous May. The Chief integrated war planning and military intelligence more closely, and he established better coordination among military procurement, supply, and maintenance activities.

While the Chief consolidated some functions, he further decentralized others to maintain a reasonable span of control. Nine headquarters divisions replaced the five old ones. Previously, all division heads had reported directly to the Deputy Chief of Engineers. Henceforth, six of the division chiefs reported to two Assistant Chiefs of Engineers. The Procurement, Supply, and International divisions reported to the Deputy Chief of Engineers through the Assistant Chief of Engineers for Military Supply, while the Engineering and Development, Military Intelligence, and War Plans divisions reported to the Deputy Chief of Engineers through the

Assistant Chief of Engineers for War Planning. The remaining three divisions—Civil Works, Military Construction, and Real Estate—reported directly to the Deputy Chief of Engineers. This was also the chain of command for the independent branches that dealt with fiscal, legal, personnel, safety, and public relations matters.

Two new divisions appeared during the first half of 1944. The Maintenance Division was established on 1 January 1944. It was formerly the Maintenance Branch of the Supply Division but its increasing workload and personnel resulted in its upgrade to a division. Its chief reported to the Assistant Chief of Engineers for Military Supply. The second new division was Readjustment, established on 15 May 1944. This division consisted of the Price Adjustment, Demobilization Planning, Contract Termination, and Redistribution and Salvage branches, all of which had been previously activated for the economical termination and disposition of contracts and equipment at the close of the war. The Price Adjustment Section had been set up during fiscal year 1943 to renegotiate contracts that were expiring and had been made a branch by December 1943. The Demobilization Planning Branch was formed on 17 January 1944 to plan for adjusting construction, real estate, distribution, procurement, and lend–lease activities at the end of the war. The Chief of Engineers charged it with the direction, control, and supervision of demobilization planning for all agencies under his jurisdiction.

In further anticipation of the close of the war, the Contracts Termination Branch was created on 21 February 1944, to negotiate the termination of contracts whose completion was no longer required. The Office of the Chief of Engineers drafted new regulations and procedures to supervise these activities, which were mainly performed in field offices. Further changes removed the Redistribution and Salvage Branch from the Supply Division. It was made a separate branch on 20 March 1944 in order to meet the increasing workload in the disposal of surplus material. The merger of the four branches into the Readjustment Division facilitated the coordination and integration of long-range planning so demobilization, redeployment, and readjustments could be made in an economical and expeditious manner.

During the latter half of 1944, redeployment and readjustment problems became the focus of attention. Corps officials exhaustively studied headquarters and field offices in order to recommend changes to enable the Corps to respond effectively to these new concerns. Subsequently, on 30 April 1945, a new organizational structure placed the operating divisions under six directors: military supply, military operations, military construction, real estate, readjustment, and civil works. Division office structures in the field were generally made to parallel that of the Office of the Chief of Engineers.

Office of the Chief of Engineers		
Director of Military Supply	**Director of Military Operations**	**Director of Military Construction**
International Division Requirements and Stock Control Division Storage and Issue Division	Plans and Training Division Military Intelligence Division Requirements, Storage and Issue Branch Procurement Branch Development Branch Construction Materials Branch	Engineering Division Command Construction Division Industrial Construction Repairs and Utilities Division
Director of Real Estate	**Director of Readjustment**	**Director of Civil Works**
Acquisition Division Reality Requirements Division Management and Disposal Division	Demobilization Planning Division Price Adjustment Division Contract Termination Division Redistribution and Salvage Division	Administration Division Engineering Division Flood Control Division Rivers and Harbors Safety and Accident Prevention

30 April 1945 Reorganization, Office of the Chief of Engineers.

Only when we turn our focus from headquarters to actual operations in the field can we truly appreciate the enormous scope and complexity of Army engineer activities. The complexity was not simply a result of the many engineer responsibilities. It also reflected overlapping lines of authority. For example, division engineers in the field assumed direct control of the repairs and utilities activities at Army military bases, once these functions, along with military construction responsibilities, were transferred to the Corps in December 1941. However, after General Somervell transferred repair and utilities responsibilities to the service commands on 22 July 1942, the division engineers became staff officers to the service commanders. As a member of the service commander's staff, the division engineer was first given the title of Director of Real Estate, Repairs and Utilities, but later was called the Service Command Engineer.

This assignment of dual functions presented a problem to division engineers because the boundaries of the divisions and service commands were not identical. There were 11 divisions but 9 service commands. Furthermore, since the divisions were originally established for civil works, their boundaries followed drainage basins, while the service commands utilized state boundaries. In some cases, division and service command headquarters were not located in the same city. Accordingly, on 1 December 1942 all but two of the 11 divisions were made coterminous with those of the 9 service commands.

Because flood control and navigation remained the principal responsibilities along the Mississippi River, the Corps retained watershed boundaries for the Upper and Lower Mississippi Valley divisions. Headquarters offices were also moved so that, where possible, the division and service command offices were located in the same or adjacent buildings. Where this was not possible, they were at least in the same city.

Thus, by the end of 1942, 11 division engineers were engaged in Army construction. They decentralized the work to 60 district engineers who either performed the duties or further decentralized them to some 840 area engineers. Although districts were set up or abolished in accordance with work demands, this field organization remained generally unchanged throughout the war. At this time, the Corps employed 70,000 civilians in its field offices.

Civil works construction had long been carried out by 11 division and around 50 district engineers. When military construction became an engineer function, it too was performed by this same organization; but since some of the military construction was located in territories outside the United States, two additional divisions, and within them several districts, were created—the Northwest Division with headquarters at Edmonton, Canada, and the Pan American Division with headquarters at Miami, Florida. The Northwest Division handled engineer matters in Canada and Alaska, while the Pan American Division handled those in Central and South America and the Caribbean area.

The major types of military structures the Corps built were "command" facilities used in military operations such

as airfields, training areas, hospitals, storage depots and port facilities, together with related access roads, bridges, and utilities; "industrial" facilities, especially munitions plants and other factories under contract with the Technical Services; Manhattan District (atomic bomb project) structures; and the many civil works projects for which the engineers had long been responsible. Outside the continental United States, the Corps of Engineers built Army airfields, constructed air and naval bases in British possessions between Newfoundland and British Guiana, worked on the CANOL Project for building oil refineries and pipe lines in northwest Canada, and helped construct the Alaska (ALCAN) Highway through northwest Canada and the Pan-American Highway in Central America.

Insofar as possible, supply activities were also decentralized to the field. At the beginning of the war, responsibility for the procurement of engineer items of military supply was assigned to six procurement districts, headed by Army engineers who also served as heads of traditional Corps districts. These procurement chiefs reported directly to the Supply Division in the Office of the Chief of Engineers. In the ensuing war years, the responsibility was further divided so that at the height of procurement activity 55 field offices were involved, including all 11 continental United States engineer divisions. The Office of the Chief of Engineers made procurement allocations to the division engineers who selected the contractors and made letter purchase orders. A final adjustment in the field procurement organization was made one month later when the division engineers assumed jurisdiction over specific depots similar to their jurisdiction over engineer districts.

Sixteen engineer depots controlled the storage and issue of engineer supply items. At first, the Office of the Chief of Engineers set the stock level for each depot, but during fiscal year 1944 each depot determined its own stock level based on past issue experience and additional information furnished by the Supply Division, Office of the Chief of Engineers. In performing their mission, the depots initiated requisitions to maintain and replenish their stocks through regional control offices established for that purpose. The Office of the Chief of Engineers reviewed stock levels and, when gross requirements made it necessary, adjusted them.

The Corps' procurement system got the job done, although success in timely procurement and distribution varied from item to item. Despite the overall impressive record, critics within the Army, including some within the Corps of Engineers itself, thought the system grossly inefficient. Some accused the Corps of using the procurement function to hide its civil works personnel assets until after the war was over. In other words, in order to protect the civil works organization, which had a declining number of projects during the war, the Chief of Engineers involved civil works personnel in procurement operations and increased the number of procurement offices. Then, to protect its expanding procurement activity, the Corps enlisted the aid of congressional friends of rivers and harbors improvements. It is true that both the Quartermaster and Signal Corps, which also had substantial procurement and contracting responsibilities, managed with far fewer procurement offices in the field. The Signal Corps had 3 and the Quartermaster Corps had 28. The chief was understandably concerned to have experienced personnel in place once postwar civil works construction began.

As the war progressed, the maintenance of equipment became increasingly important. Under the technical supervision of the Supply Division in the Office of the Chief of Engineers, maintenance responsibility was delegated to the Engineer Field Maintenance Office in Columbus, Ohio, and seven regional maintenance offices located at various depots. Shops located at 16 depots, supplemented by government-owned and contractor-operated commercial shops under the jurisdiction of division engineers, performed difficult maintenance on engineer troop equipment. The regional maintenance offices provided specialized assistance to troops, depots, ports, and other supply agencies in the preventive maintenance, repair, and packing of equipment. In fiscal year 1944, the responsibility for the supervision and operations of the regional offices was transferred to the division engineers, who sometimes further decentralized this function to district engineers.

Several committees and boards reported to the Chief of Engineers. These included the Engineer Board at Fort Belvoir and the Board of Engineers for Rivers and Harbors (BERH). The BERH, established in 1902, continued during the war

to execute its congressionally mandated responsibility to review rivers and harbors reports emanating from the field offices. It also continued to compile statistics on waterborne commerce in the United States, prepared a "Port Series" on U.S. ports, and collaborated with the Military Intelligence Division in the Office of the Chief of Engineers on preparing studies of foreign ports for inclusion in the division's wartime "Strategic Engineering Studies."

The Engineer Board at Fort Belvoir and its various test branches developed and tested engineer equipment and developed field doctrine for the use of the equipment in the field. The major types of equipment procured by the engineers and serviced by engineer troops included floating and fixed bridges, heavy construction equipment, camouflage materials, antiaircraft searchlights, barrage balloons (before 1942 handled by the Air Corps), airfield landing mats, demolition equipment, water purification and distributing equipment, firefighting equipment, mobile shops, field fortification supplies, and gasoline and fuel-dispensing equipment. The Engineer Board would occasionally call upon Corps civilian engineers and on the expertise at the Waterways Experiment Station for assistance in evaluating and designing new equipment. As already mentioned, engineer replacement training centers and unit training centers, all under the jurisdiction of the service commands, provided engineer training. However, they followed doctrine prepared in the Office of the Chief of Engineers.

The Beach Erosion Board, which was established in 1930, continued its studies of coastal erosion problems around the United States. However, it also collaborated with the Military Intelligence Division to prepare studies on foreign beach and port areas for the division's "Strategic Intelligence Studies." Finally, a short-lived group called the Art Advisory Committee existed for a few months in 1943. The committee was established to advise the Chief of Engineers on measures to promote the painting of wartime battle scenes and other related subjects. It made recommendations on the recruitment of civilian, military, and overseas artists.

During World War II, military and civilian officials from the Office of the Chief of Engineers served on a number of committees outside of the Corps of Engineers. These included

the Highway Traffic Advisory Committee and its successor, the Joint Action Highway Board. Headed by the Public Roads Commissioner, these committees advised on the routing of Army troop movements and military supply traffic over public roads in the United States. Other committees on which the Corps was represented included the National Civil Technological Protection Committee and the War Production Board's Facilities and Construction Committee.

The Army Corps of Engineers faced major challenges during World War II in procuring and distributing engineer equipment, expediting construction of major installations, and fulfilling the ongoing mission of keeping United States rivers and harbors maintained for both commercial and national defense purposes. These responsibilities had to be fulfilled while time, manpower, and seasoned officers were in short supply. Although there were certainly major frustrations, and organizations were occasionally jury-rigged to respond to immediate exigencies, by the end of the war the Corps had earned increased respect from both military and civilian agencies. Innovation, responsiveness, flexibility, and decentralization were key elements in the engineers' success.

Sources for Further Reading

The most important source for this essay was a master's thesis by Mabel E. Deutrich entitled "The Office of the Chief of Engineers During World War II" (American University, 1950).

Other sources included Blanche D. Coll, Jean E. Keith, and Herbert H. Rosenthal, *The Corps of Engineers: Troops and Equipment, United States Army in World War II: The Technical Services* (Washington, DC: Office of the Chief of Military History, Department of the Army, 1958); General Service Administration, National Archives and Records Service, *Federal Records of World War II: Military Agencies*, Volume II (Washington, DC: National Archives and Records Service, 1951); and James E. Hewes, Jr., *From Root to McNamara: Army Organization and Administration, 1900–1963, Special Studies* (Washington, DC: Center of Military History, United States Army, 1975).

The Office of History, Headquarters, U.S. Army Corps of Engineers, has in its research collection a number of organization charts from the World War II era, and the Headquarters library holds Engineer General Orders pertaining to the establishment and disestablishment of engineer field agencies during the war.