The Military Construction Mission

by Frank N. Schubert

At the outset of World War II, the mission of the Corps of Engineers underwent the most dramatic change that it had experienced in over a century. Beginning from traditional roles as sappers and builders of coastal fortifications during the American Revolution, the Corps had evolved into a major instrument in the development of the nation's water resources, the builder of dams, powerhouses, navigation locks and canals, and flood control works. In two quick steps during 1940 and 1941, the Corps became the construction agent first for the Army Air Corps and then for the entire War Department, replacing the Quartermaster Department, which had traditionally built the Army's facilities.

The expansion in the missions of the Corps came separately. They were not intended as two steps in a single process. Designation of the Corps to build facilities for the Air Corps in November 1940 was seen as a legitimate and adequate effort to reduce the massive workload that faced the Quartermaster Department, not as a prelude to further changes. In fact, the expanding construction requirements of mobilization were even seen as opportunities for expansion by bureaucracies outside of the War Department, and the Works Progress Administration (WPA)—a New Deal agency designed to create employment on public construction projects—had even made an unsuccessful bid to take over a substantial portion of Army construction in 1939.

During 1941, as war moved closer, the magnitude of the construction tasks ahead became increasingly clear. Meanwhile, questions emerged about the ability of the Quartermasters to carry out the program, and it became clearer that the problem of responsibility for this activity had to be resolved.

At the same time, the Air Corps program gave the engineers confidence with an unfamiliar and challenging mission. The Corps of Engineers already had significant experience with heavy construction, but the prewar work in rivers and

harbors and fortifications was not like the structural work supervised by the Quartermasters. War construction would include airfield pavement, which was a new and generally unfamiliar area to all concerned; industrial production lines; and troop facilities. By the early summer of 1941, the Corps' organization was immersed significantly in military construction, which was increasing while rivers and harbors work declined. The work of the Corps in fiscal year 1940, already dominated by the Air Corps mission, was 80 percent military.

Once a consensus was reached in the War Department that the Quartermasters were ill equipped to take on the job, the only question that remained was whether the mission should stay within the War Department and go to the Corps of Engineers, or be given to a new agency established just for the purpose. By the early summer of 1941, Michael J. Madigan, a canny millionaire construction engineer and special assistant to Under Secretary of War Robert F? Patterson-"an adviser:' according to Lenore Fine and Jesse Remington, authors of the official volume on Corps of Engineers construction in the United States, "who knew the score in the public works construction game"-was at work trying to figure out how to resolve this question about who was responsible for military construction. Patterson was disturbed by reports of slow progress; Madigan had complaints about two systems of regulations and bookkeeping.

Michael J. Madigan, special assistant to the Under Secretary of War, testifies before a Senate subcommittee.

Madigan's evaluation of the situation for the Under Secretary of War, dated 15 August 1941, is the key document in the evolution of the decision to move the construction mission to the Corps of Engineers. Madigan's report, so significant in Corps of Engineers' history, was an unprepossessing "Memorandum to the Under Secretary of War," printed from

a stencil for limited distribution as was the usual practice in those days before photoduplication. It was nine pages long with eight brief annexes, one of which was a two-paragraph draft of a law designating the Chief of Engineers as responsible for "the direction of all work pertaining to the construction, maintenance, and repair of buildings, structures, and utilities for the Army, including acquisition of all real estate and the issuance of licenses in connection with Government reservations." Another annex listed applicable statutes and six annexes analyzed the construction programs of the Corps of Engineers and the Construction Division of the Quartermaster Department.

The main body of the report emphasized the duplication of construction effort on a national scale, resulting, according to Madigan, in "inefficiency, lack of coordination, and confusion, particularly in the minds of the public which must deal with two separate agencies with varying procedures in one department." Madigan believed consolidation under the Corps of Engineers would end competition for materials, personnel, and construction firms; maximize use of technical personnel; save money; and increase efficiency.

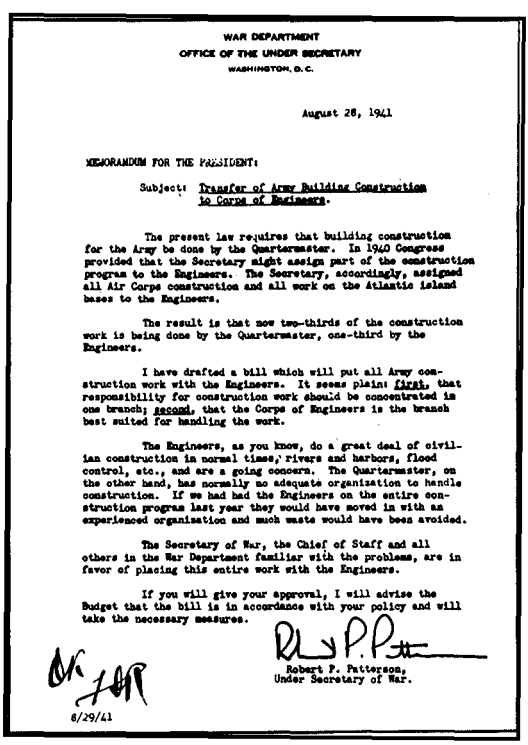
About half of the report was devoted to why the Corps of Engineers should be in charge. While Madigan had a list of eight reasons, overall they stressed the construction experience of the Corps, including success with its recently acquired mission of construction for the Air Corps, and its decentralized system of division and district offices. Madigan recommended against creating a new organization for the work. Establishing new agencies, he believed, always led to difficulties in defining their status and the scope of their activities, jurisdiction, and functions. He thought it would be much easier to transfer Quartermaster Construction Division functions and people—many of whom were in fact engineer officers—to the Corps of Engineers, without disrupting construction work and other Quartermaster functions that were unrelated to construction.

After reading and approving Madigan's report, Patterson moved fast. On the same day that Madigan delivered the paper, Patterson recommended to Secretary of War Henry Stimson that the Corps get the job. Stimson, in his turn, was not one to drag his feet. He approved it the next day.

Then Madigan met with the Chief of Staff, General George C. Marshall, who was inclined to want a separate construction corps. Madigan later recalled that he convinced Marshall by saying: "Every member of Congress knows the Chief of Engineers by name. If you want to throw away the best political contact anyone ever had with Congress, I can't stop you." After Marshall agreed, Madigan also persuaded him not to order a staff study so that the proposal would not be examined to death. Marshall countered by asking Madigan to handle the defense of a bill before congressional committees. Madigan assented. Army officers would not have to get involved.

Meanwhile Stimson got President Roosevelt to approve the proposal. Staff work was indeed much simpler in those days. Stimson carried Patterson's "Memorandum for the President, Subject: Transfer of Army Building Construction to Corps of Engineers" over to the White House, where the President scrawled "OK FDR" in the lower left-hand corner of the one-page note. In it, Patterson had concluded that construction should be in one branch, and that branch should be the Corps of Engineers. The nub of the argument was summed up in one paragraph:

> The Engineers, as you know, do a great deal of civilian construction in normal times, rivers and harbors, flood control, etc., and are a going concern. The Quartermaster, on the other hand, has normally no adequate organization to handle construction. If we had had the Engineers on the entire construction program last year they would have moved in with an experienced organization and much waste would have been avoided.



WAR DEPARTMENT
OFFICE OF THE UNDER SECRETARY
WASHINGTON, D. C.

August 28, 1941

MEMORANDUM FOR THE PRESIDENT:

Subject: Transfer of Army Building Construction to Corps of Engineers.

The present law requires that building construction for the Army be done by the Quartermaster. In 1940 Congress provided that the Secretary might assign part of the construction program to the Engineers. The Secretary, accordingly, assigned all Air Corps construction and all work on the Atlantic Island bases to the Engineers.

The result is that now two-thirds of the construction work is being done by the Quartermaster, one-third by the Engineers.

I have drafted a bill which will put all Army construction work with the Engineers. It seems plain: first, that responsibility for construction work should be concentrated in one branch; second, that the Corps of Engineers is the branch best suited for handling the work.

The Engineers, as you know, do a great deal of civilian construction in normal times, rivers and harbors, flood control, etc., and are a going concern. The Quartermaster, on the other hand, has normally no adequate organization to handle construction. If we had had the Engineers on the entire construction program last year they would have moved in with an experienced organization and much waste would have been avoided.

The Secretary of War, the Chief of Staff and all others in the War Department familiar with the problems, are in favor of placing this entire work with the Engineers.

If you will give your approval, I will advise the Budget that the bill is in accordance with your policy and will take the necessary measures.

Robert P. Patterson,
Under Secretary of War.

8/29/41

Memo on transfer of Army building construction to the Corps of Engineers, 28 August 1941.

The assertion that followed, that "the Secretary of War, the Chief of Staff, and all others in the War Department familiar with the problems, are in favor of placing this entire work with the Engineers:' was not true. The Quartermaster General, Lieutenant General Edmund B. Gregory, was actually kept in the dark about the impending transfer measure until after Roosevelt had initialed the memo. Once he found out, he certainly disagreed, arguing that construction in a theater of operations, an engineer responsibility, was unlike routine Zone of the Interior construction, and the combination of these disparate functions would redound to the disadvantage of both the Corps of Engineers and the Army. He took his dissent to Chief of Staff **Marshall but no further. He was a soldier and never made public his disagreement.**

Construction industry leaders were not excited about the change. AGC, the Associated General Contractors of America, took no position on the matter. *Engineering News-Record*, the major trade weekly, was wary at first because its editors thought the Corps of Engineers would revert to in-house design and engineering. However, Lieutenant General Eugene Reybold, who was Chief of Engineers, gave assurances that the government's way of doing business would not change.

After hearings and debate that went through much of the autumn, Congress passed a bill authorizing the change that

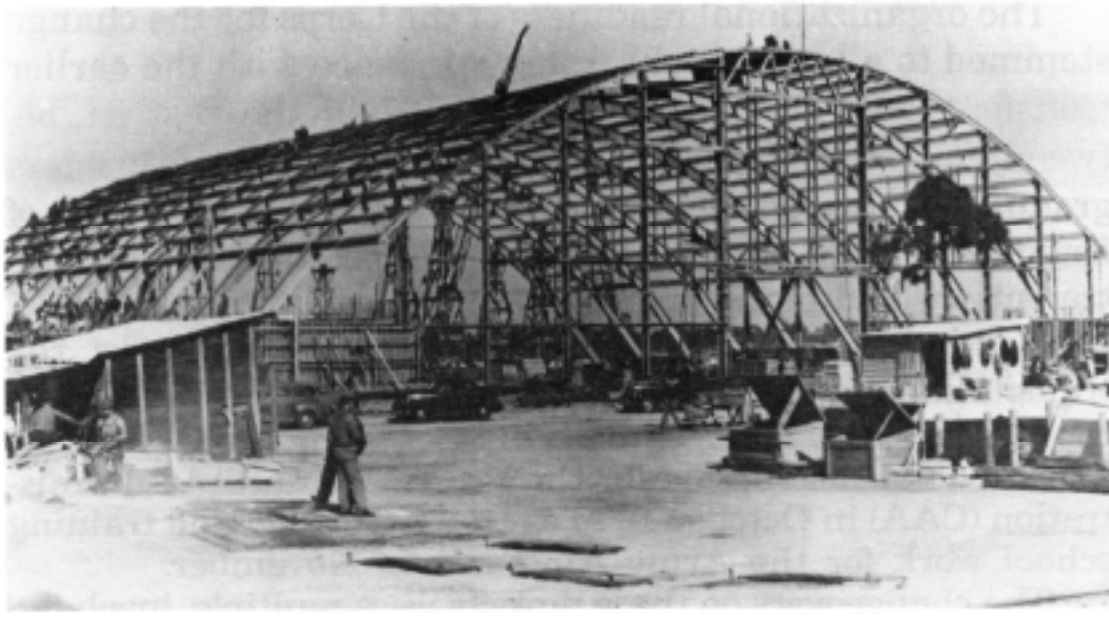
Brigadier General Brehon B. Somervell addresses construction workers at the St. Louis Ordnance Works.

President Roosevelt signed into law on 1 December 1941. By that time, planning for consolidation was already months along. Brigadier General Brehon B. Somervell, the ambitious Corps of Engineers officer who was in charge of the Construction Division in the Office of the Quartermaster General, drafted the plan. Somervell said the new mission represented "the greatest change of activities of the Corps in its entire history." His proposal envisioned different division boundaries for military work than for civil works, which followed major river basins.

The change was implemented on 15 December, eight days after the Japanese attack on Pearl Harbor. Two systems and teams had to be combined to work together. Major General Thomas M. Robins, Chief of the Construction Division in the Office of the Chief of Engineers, became responsible for all Army construction, including the declining civil works program. This arrangement lasted until late 1943, when Robins, who had a reputation for "sound judgment, cool-headedness, and tact," became the Deputy Chief of Engineers. At that time, military and civil works construction were split into separate divisions, starting an arrangement that continued into the postwar years.

While the change at the headquarters level took place in a very short period of time, the transition in the field was controlled so it would not happen too quickly. Quartermaster-run projects were turned over to the Corps of Engineers gradually, in accordance with the suggestion made by Robins that no more than one major project be turned over in each Corps district within a given week. Meanwhile, in keeping with the long-standing engineer approach, Robins spread authority to the field, allowing division engineers to execute contracts worth up to $5 million and approve nearly all plans and specifications. He authorized districts to approve contracts up to $2 million and prepare most designs. He also put responsibility for real estate, repairs and utilities, labor relations, and construction operations out to the field. As General Reybold said in March 1942, "The Army engineers are operating on the principle of decentralization."

The merger process was completed by the end of February 1942. According to a House of Representatives Military Affairs Committee report, it was done "with a minimum of



Hangar under construction at MacDill Field, Florida, 22 January 1942.

disturbance and without any disruption to the work whatever." Organizational adjustments continued through 1942, and to a lesser extent into later years, but overall the new arrangement proved up to the task. And the task was big! To describe it, General Reybold said, "I must borrow a word from Hollywood: the job is colossal." And it dwarfed even the Panama Canal and the World War I emergency construction program of 1917-1918. "In urgency, complexity, and difficulty as in size;' Reybold said, "it surpassed anything of the sort the world had ever seen."

Construction peaked quickly after the Corps got the mission. In 1942 almost 85 percent of the nearly $11 billion program was completed. Then came its rapid decline, as emphasis moved from construction to production and from home front to overseas.

By early 1942, when the transition in the field began in earnest, the divisions and districts of the Corps of Engineers already had substantial experience with transfers of partially completed projects. For example, Philadelphia District, where the acceptance of the military mission turned a $6 million coastal fortification project at the end of 1941 into a program worth over $111 million in a year, was ready even before the President signed the transfer bill. On 17 October 1941, the district published a memorandum listing all Quartermaster projects to be assumed by the Corps.

The organizational readiness of the Corps for the change stemmed to a large extent from experience with the earlier transfers of Air Corps facilities. In the Omaha District, between August 1940 and March 1941, the Quartermasters gradually released 81 Air Corps projects to the Corps of Engineers. There, Quartermaster employees assured a smooth transition, and many of them went to work for the district office along with their projects. In the Louisville District, the transition was also underway. However, it involved a more complex series of changes. This district along the Ohio River had started construction for the Civil Aeronautics Administration (CAA) in October 1940 as well as airfield and training school work for the Army Air Force in November.

The changeovers on these projects were multiple, involving New Deal agencies as well as the Army. At Godman Field at Fort Knox, the Quartermasters had started construction with WPA labor in January 1940. In Galveston District, with projects coming in from both the CAA and the Quartermasters, the district established separate groups to handle each. Both routinely worked seven-day weeks.

Transitions still took place with minimum disruption. The general procedure in Louisville was to appoint former constructing quartermasters at projects as area engineers, changing only the chain of command so that they reported to the district engineer instead of to the Quartermaster Department. During the peak period in 1942, "the magnitude of mission expansion was almost overwhelming" in Louisville, with daily expenditures of over $1 million, a sum almost equal to what the district had spent in entire years on civil works before the flood control projects.

In other districts as well, the turnover involved New Deal work relief agencies as well as the Army. The Connellsville, Pennsylvania, airfield began as a WPA project in 1935. It was converted to a military base by Quartermaster officers in 1938–1940 and finished by the Pittsburgh Engineer District. For the prisoner-of-war internment camp at Crossville, Tennessee, Nashville District engineers dismantled Civilian Conservation Corps buildings at Wartburg and Jamestown and transported them to the camp site.

In the Portland District, where the earliest military work included supervision of WPA airport projects, the Portland

airport started with WPA funds and evolved into a group-sized military aviation base. There military experience within the district was virtually nonexistent when the war emergency started, and the district had very little to fall back on. As District Historian William Willingham wrote, "textbooks on road-building plus an occasional inspector loaned from the Bureau of Public Roads proved helpful. . . ."

No sooner was the transition into the mission completed than its decline became noticeable. From placement of over $700 million worth of construction in the peak month of July 1942, the level of activity dropped to $150 million only one year later. The war was far from over, but the stateside construction that was needed to support the effort was largely in place. Successful and prompt accomplishment of this new mission brought the Corps of Engineers a reputation for flexibility and validated its practice of decentralizing mission execution to its divisions and districts. On the local level, engineer districts repeatedly took over work relief and Quartermaster jobs and completed them successfully. They proved that the decision to assign military construction to the Corps was a sound one.

Sources for Further Reading

The best book on Corps of Engineers construction during World War II—and the major source of this essay—is Lenore Fine and Jesse A. Remington, *United States Army in World War II. The Technical Services. The Corps of Engineers: Construction in the United States* (Washington, DC: Office of the Chief of Military History, 1972).

A number of histories of engineer districts provide information on the impact of the new mission on the field organization of the Corps of Engineers.