

Fort Barry Radio and Switchboard Room

Matthew W. Kent

The fire control switchboard for the 4th Fire Command (Batteries Mendell and Guthrie) at Fort Barry consisted of a small, 12 ft x 20 ft type-B switchboard room at Battery Alexander, installed in 1909 and transferred to the coast artillery on November 11, 1910. It remained in use at Battery Alexander until early 1943.(1)

After the Japanese bombed Pearl Harbor on December 7, 1941, the division engineer at San Francisco, Col. Warren T. Hannum, authorized emergency construction of a new dug-in bomb-proof reinforced-concrete facility to house the radio and switchboard rooms for Fort Barry, at an estimated cost of \$77,100.(2) The site chosen was approximately 400 feet west of and behind Battery Guthrie, at an elevation of 139 feet MLLW. (GPS coordinates 37-49'-3806", 122-31'-49.3")

The new dug-in radio and switchboard room was transferred to the coast artillery on November 23, 1943.(3) The main part of the structure was roofed with reinforced concrete, with a burster course and earth cover for overhead protection. The structure, concealed from aerial view by earth and vegetation, provided 11,350 cubic feet of gas-proof space, and its interior was sound-proofed with acoustic tile. The standard manning detail was four men.(4)

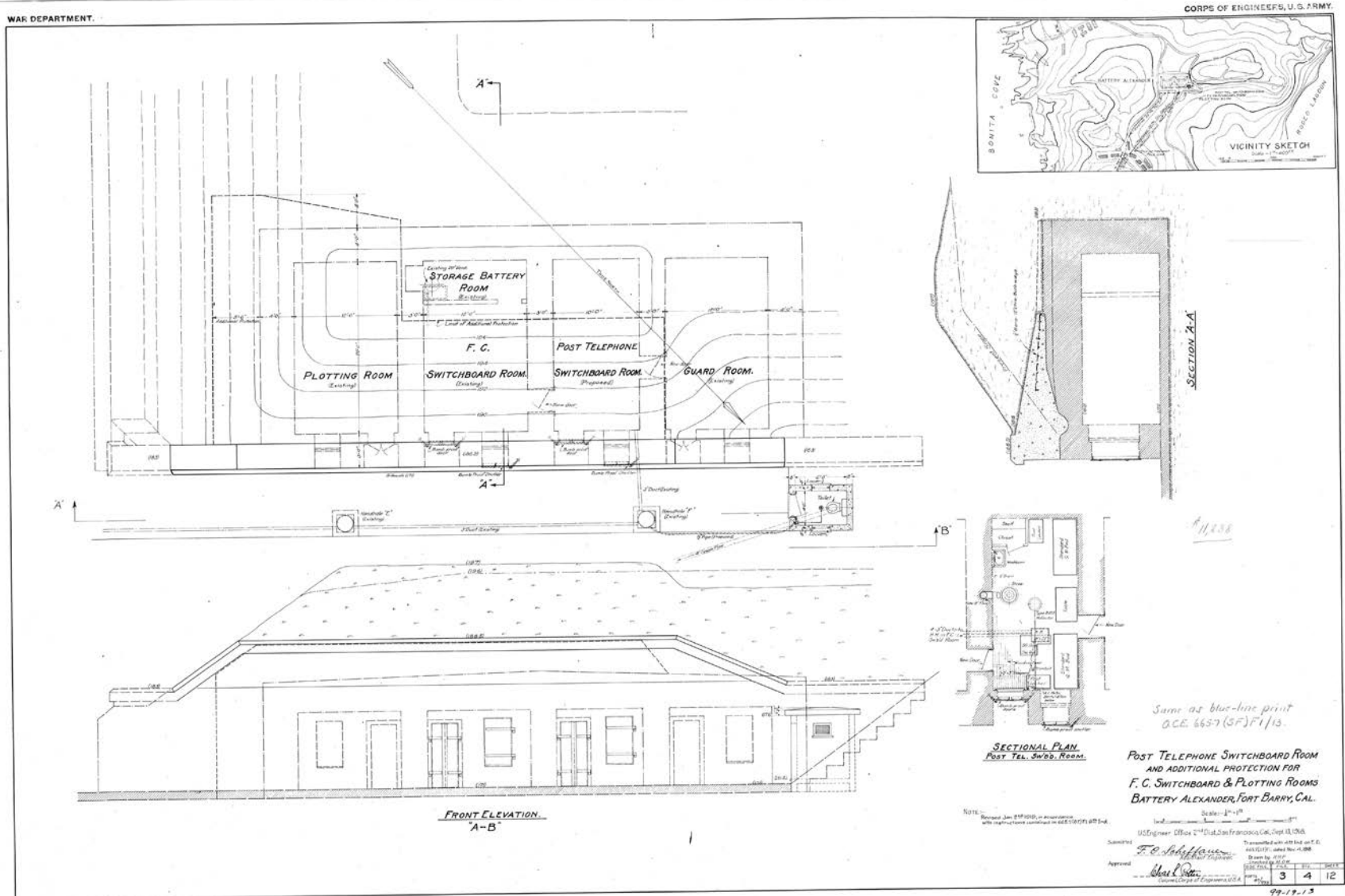
This switchboard room was used during World War Two. When it was abandoned after the war has not been determined, but facility 4-digit numbers written on the wall suggest it was used through the Nike era.

The switchboard room contained a Kellogg Switchboard and Supply Co. switchboard, serial No. 189791, built in 1938. It housed 200 equipment lines with 20 equipment trunks, providing 3 trunked connections each to Sausalito, Fort Baker, San Francisco, Fort Scott, and the Presidio of San Francisco. The post switchboard was tied in to two separate systems, both working over the same cable net. The fire control telephone system, with manually operated switchboards, provided the tactical information and control necessary to utilize the batteries of the harbor defenses. The administrative system, using dial telephones, somewhat paralleled the fire control system, but was intended for the more routine communications, in both peace and wartime. To interconnect the administrative system with the tactical telephone systems at Forts Scott, Baker, and Barry, the tactical post telephone switchboard at Fort Barry was provided with trunks to the Presidio dial system. The administrative system was used primarily at Forts Scott, Miley, and Funston.

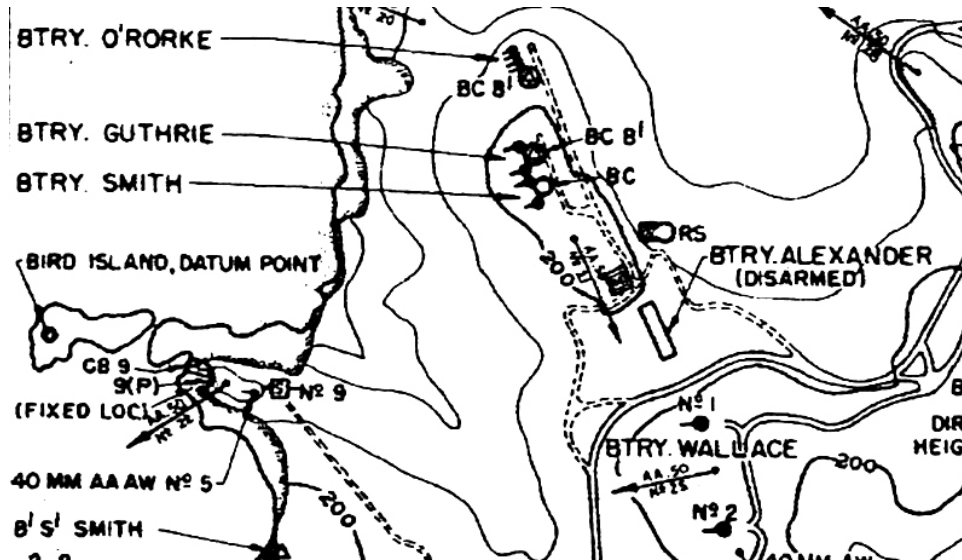
The fire control post telephone system consisted of three manually operated switchboards; one two-position switchboard each at Forts Scott and Barry, and a one-position switchboard at Fort Baker. Communications were distributed from these switchboards over the fire control cable net. This system was primarily used in fire control stations, guard stations, "non-ballistic" fire stations, and in the offices of the harbor defense headquarters. It was also used as an administrative system where dial facilities were not provided at Forts Baker, Barry, and Cronkhite.

The switchboards at Forts Scott, Barry, and Baker had trunks to each other and each had a trunk to both the Presidio dial system and to the Pacific Telephone and Telegraph commercial system.

While signal equipment is listed in Annex G in the Harbor Defense Annex, the author is unable to determine what specific Signal Corps radio equipment was installed in the radio room inside the facility. However, the switchboard room contained two BD-74 and two BD-75 switchboards, as well as one EE-86 time-interval apparatus.(5)

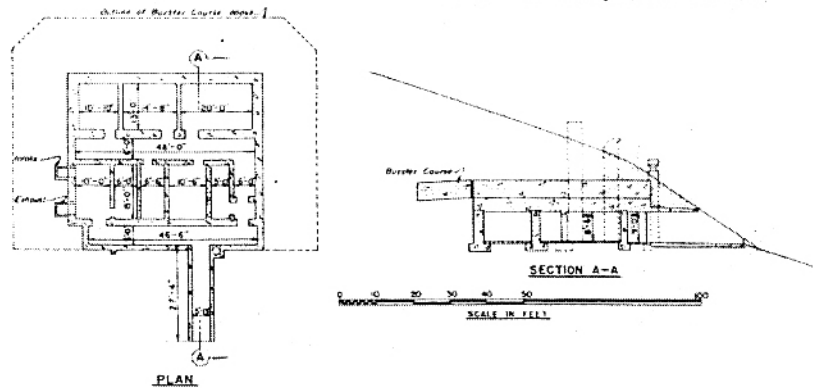


Original Fort Barry switchboard room, 1918. *NARA Cartographics*, 99-19-13.



1945 map of Fort Barry with radio & switchboard room location.
 Supplement to HD Project, HD of San Francisco, 1945.

RADIO & SWITCHBOARD ROOM
 FORT BARRY, CALIFORNIA



U. S. ENGINEER OFFICE, SAN FRANCISCO, CALIFORNIA. 3-2-42

New Fort Barry Radio & Switchboard Room.

Report of Completed Works, Radio & Switchboard Room, Fort Barry, October 1943. NARA

The radio and switchboard room contains a total of 8 rooms along with an air lock – a power room, radio room, chemical warfare (gas-proofing) equipment room, latrine, storeroom, and switchboard room, in addition to two unidentified rooms. All are very well preserved.(6) When the site was visited in January 2011, much of the original gas-proofing equipment with associated ductwork and plumbing was still intact.

The primary source of power was commercial, but a standby generator was provided and the power room still contained the engine and generator, along with metal cabinets housing GE circuit breakers. All lighting and most electrical conducts still remained intact throughout the installation. Electric heating units inside various rooms are also in varying degrees of preservation.

Cables are still in the cable trenches leading to and from the switchboard room. The original soft-metal cable tags embossed with the cable number and the status of the cable are still attached. Cables



Largely intact power room inside the radio & switchboard room. *Matthew Kent*



Buffalo Forge Co. blower unit inside the CWS (gas-proofing) room. *Matthew Kent*



Prison-type metal bunk in the main corridor of the radio & switchboard room. *Matthew Kent*



Surviving switchboards with the remaining wire lines and terminal boards inside the switchboard room.
Matthew Kent



Cable manhole with intact cables, inside the main corridor of the facility. *Matthew Kent*

are clearly visible running in front of the entrance to the structure through a Signal Corps manhole with original Signal Corps MC-85 metal manhole cover.

The switchboard room contains the remains of the switchboard installed in 1943. What is left of the switchboard still houses the terminal boards along with most of the associated wiring. Handwritten pencil notations for various switchboard numbers survive on the wall behind the switchboard. Of note, there appears to be a recent Pacific Bell telephone line installed inside the cable trench in the switchboard room.

Inside the main corridor are mounts for bunks to house personnel. One prison-type bunk rack still hangs at the end of the main corridor; several others have been moved to various other rooms. All gas-proof steel shutter closures still function and could be closed after all these years underground. The steel doors to the interior of the facility still function, although they can not be locked from the inside due to rust. All in all, this is a one-of-a-kind structure within the harbor defenses of San Francisco due to its high degree of preservation.

Footnotes

1. "Historic California Posts Fort Barry: Battery Alexander," n.d., <<http://www.militarymuseum.org/BtyAlexander.html>> (accessed January 22, 2011).
2. Erwin N. Thompson, *Historic Resource Study, Seacoast Fortifications, San Francisco Harbor, GGNRA* (Denver: Denver Service Center Historic Preservation Team, NPS, 1979), pp. 376-77.
3. Report of Completed Works (RCW), Radio & Switchboard Room, Fort Barry, October 1943, RG 77, Entry 1007, NARA, College Park, MD.
4. War Department, *Supplement to the Harbor Defense Project, Harbor Defenses of San Francisco*, 1945, Annex F, Gas Defense, p. 4; Annex B, Fire Control, p. 24.
5. *Ibid.*, Annex B, Fire Control, pp. 22-24.
6. Site inspection by author, January 23, 2011.