Fort Barry soldiers with dairy cows. In the early years, the military and the dairy community lived peacefully side-by-side. However, cows did not always respect military boundaries and occasionally Fort Barry soldiers had to round up wayward dairy cows. (Photo circa 1920)
Welcome to Fort Barry, a 1908 army post that protected San Francisco with a line of gun batteries perched at the edge of the Pacific Ocean. Fort Barry is one of three historic military posts located in the Marin Headlands. Fort Barry, Fort Baker and Fort Cronkhite were all constructed at different times and the army managed each post separately. However, during wartime, all three posts fell under the jurisdiction of the Harbor Defenses of San Francisco.

The Route
This tour leads you through different parts of historic Fort Barry, covering 5 hilly miles through the Marin Headlands. Stop #1 and Stop #2 are a comfortable, 1-mile walk where you can spend a pleasant hour wandering through the historic buildings. Stops #3 to #7 are farther apart and cover approximately 4 miles so they are better accessed by car. This tour also intersects with the Lagoon Trail and the Coastal Trail.

Length: 5 miles
Number of stops: 7
Time required: From 1–2 hours, depending on your means of travel.
Accessibility: The route around the post is paved but watch for steps and cracked pavement. The batteries are not wheelchair accessible.
Restrooms: Public bathrooms are located at the west end of the Marin Headlands Visitor Center parking lot.
For your safety: If you are driving, please pull over to take photographs. Take extra caution when walking around the batteries as they have deteriorated in some places. Many of the buildings referenced on the tour are occupied by “park partner” non-profit groups conducting business; please be respectful during your visit.

Cover: Fort Barry soldiers on their day off visit Battery Mendell with their lady friends. (Photo circa 1908)
All images from Golden Gate National Recreation Area, Park Archives and Record Center, unless otherwise noted.
The U.S. Army in Marin County

From the Marin Headlands Visitor Center parking lot, please take a moment to look at the landscape around you at Fort Barry to the east and Rodeo Lagoon and the Pacific Ocean to the west. Keep in mind that San Francisco and the Golden Gate straits are close by, just over the hills to the south.

Before Europeans arrived here, the Coast Miwok lived on these lands for centuries. During the 18th and 19th century the Spanish and then later the Mexicans settled here. During the 19th century, prior to the U.S. military moving into the area, Marin County was best known for its very successful dairy ranching community. The open land to the north was once dotted with small, individual ranches that produced quality milk products for San Francisco. San Francisco Bay, just over the ridge to the south, with its sheltered harbor, rich natural resources, and mile-wide entrance, has long been recognized as an ideal location for defense of the naval and port facilities by seacoast fortifications at the harbor entrance. By the 1850s, the U.S. Army realized that Marin’s proximity to the ocean made for excellent defense sites and began to negotiate the purchase of the southernmost tip of Marin for seacoast defense fortifications.

By the end of the 1880s, as military technology expanded, many of the army’s “modern” defense systems had become outdated and the War Department expressed growing concerns about the dilapidated condition of the country’s seacoast fortifications. In response, Secretary of War William C. Endicott made sweeping recommendations for all major seaports, and proposals to modernize and re-arm all the seacoast forts. The “Endicott Program,” as it was informally known, became an expression of America’s new awareness of herself as a growing imperial power, the rise in the country’s industrial strength, and the new developments in military technology.

After the Spanish-American War (1898) was over, the army turned its attention towards the Marin Headlands, focusing on the seacoast fortifications at the outer line of defenses north of the Golden Gate. Between 1901 and 1905, the army constructed five powerful batteries at Fort Barry that represented the new Endicott-period upgrades: Battery Mendell, Battery Alexander, Battery Smith-Guthrie, Battery Samuel Rathbone and Battery Patrick O’Rorke.

2 Fort Barry: An Endicott-Period Military Post

From the Marin Headlands Visitor Center, carefully walk from the parking lot, crossing Field Road onto Bodsworth Street, and proceed up the hill. Turn left onto Simmonds Road and continue straight towards the buildings, following the signs to the Headlands Center for the Arts and the Marin Headlands Hostel. You can also pick up the Coastal Trail here that leads you to the historic rifle range (see Stop # 6) and the Golden Gate Bridge.

If time permits, walk down along the main parade ground on Simmonds Road or on the upper Rosenstock Road to get a sense of the historic post’s layout. Once you are at the head of the main parade ground, look back to get a great view of the post and glimpses of Rodeo Lagoon, Fort Cronkhite and Rodeo Beach. Feel free to walk around the historic buildings, keeping in mind that some of the buildings are private residences.

Like most army posts, Fort Barry functioned as a small, self-sufficient town that supported the needs of the soldiers. The post had its own barracks, hospital, guardhouse (which jailed the occasional disorderly soldier), spacious officers’ residences, stables, storehouses, even its own bakery. The open, grassy main parade ground in the center of the post was dedicated to drills, marches, parades, and public ceremonies, and served as the physical and organizational center.
of post life. The army intentionally located Fort Barry’s most significant military build-
ings, like the post headquarters, the hospi-
tal, the barracks, and the mess halls, facing the main parade ground. Buildings that served useful but less ceremonial functions, such as the bakery, the storehouses and the coal sheds, were constructed further away from the heart of the post.

The Fort Barry buildings were designed in the Colonial Revival architectural style, which was popular in America at the turn of the 20th century. The goal of this architectural style, which favored clean, simple lines and a minimal use of applied decoration, was to inspire a sentimental remembrance of the United States’ early history, a time when American democracy was in its infancy. The Colonial Revival style is often characterized by large, stocky symmetrical buildings with classical elements, such as columns, porches and wide windows. Most of these historic buildings at Fort Barry still retain much of their original building materials, like metal-pressed ceilings, original plaster walls and built-in cabinetry.

Fort Barry was named in honor of Brig. Gen. William Farquar Barry, a Civil War U.S. Army artillery officer who distinguished himself during the capture of Atlanta.

Below: Fort Barry in 1928 showing the layout of the post. From left to right are the two barracks, the fire station, the hospital steward’s residence, the post hospital, the post headquarters and four duplex officers’ residences. The army planted trees around the buildings to provide necessary breaks from the wind.

Above: Fort Barry soldiers proudly showing off their state-of-the art, Model 1903 Springfield rifles. Notice that the soldier fourth from the left is holding a bugle. The army used bugle calls for marking the events of the day and company buglers frequently entered into friendly competitions. (Photo circa 1908)

Fort Barry’s wood-frame, three-story barrack buildings represented an improvement in military housing. Prior to the Endicott-period upgrades, living conditions in the U.S. Army were dismal; most buildings were poorly constructed, cramped and unsanitary. However, by the early 1900s, in order to stem the flow of deserters and encourage recruitment, the army began to design larger barracks with a new emphasis on proper ventilation, clean running water and modern toilet facilities. The Fort Barry barracks, which housed over a hundred soldiers each, reflected a new standard for a healthy living environment and provided the men with open, spacious sleeping wards, numerous windows and real beds and mattresses. The barracks’ first floor contained a large kitchen, a mess hall (the dining room for the enlisted soldiers) and a latrine (bathroom); the dormitories, day rooms (shared recreation rooms), and separate quarters for the non-commissioned officers were located on the second and
third floor. Each barracks building even had its own tailor and barber shop. All the Fort Barry buildings were built with electricity, hot and cold running water, and proper toilets and shower facilities.

The fort continues to live on through the activities of the park’s non-profit partners. The Headlands Center for the Arts, located in Buildings 944 and 945, provides a dynamic environment for artists’ residences, public programs, lectures and performances. The building is open to the public weekdays, 10 AM to 5 PM and Sundays, noon to 5 PM. Feel free to go inside the building to view the current artist exhibits and to see the interior of a historic barracks building. As you travel through Fort Barry, you may encounter both artists and their works-in-progress.

The Marin Headlands Hostel, located in Building 941, offers affordable overnight accommodations in the post’s historic hospital. The Hostel welcomes visitors during business hours.

The National Park Service is conducting a fuel reduction program in this area which removes hazardous trees to reduce potential fire danger and will help bring back the original look and feel of the historic parade ground.

After exploring Fort Barry’s main parade ground, take Rosenstock Road or Simmonds Road back out of the post, towards the visitor center, and turn left onto Field Road. Continue southwest for one mile on this road to the next stop. You will pass the park’s Nike Missile Site. While the site is not included in this tour, it is open to the public Wednesdays through Fridays and the first Saturday of every month from 12:30 to 3:30 p.m. (call 415.331.1453 for more information).

Stop at the Point Bonita parking lot. The Point Bonita Lighthouse is not on this tour. The trail is open to visitors on Saturdays, Sundays and Mondays, 12:30 to 3:30 p.m.

From the parking lot, take a moment to look around the Bonita Cove area. In front of you are two rounded, 19th century brick water cisterns associated with the lighthouse. Further out are the Golden Gate Bridge and the opening to the bay. The area to the left of the parking lot, now hidden from view by trees, is not open to the public but in 1901, it was home to the Fort Barry Engineer Camp.
The construction of Fort Barry’s five new seacoast fortifications at the edge of the rural Marin Headlands represented a huge engineering undertaking. By 1901, the U.S. Army Corps of Engineers, responsible for the construction of coastal fortifications, established an “engineer’s camp” at Point Bonita Reservation. The self-contained construction camp complex included two 150-man bunkhouses, an office, a mess house, a cement mixing plant, stables for 24 horses, and a combination carpenter and blacksmith shop – all the necessary functions and facilities to get the large construction jobs done as quickly as possible.

Once the construction camp was in place, the army engineers had to address the challenges of getting an enormous amount of materials out to a site. At the time, the outer Marin Headlands were so remote from San Francisco and Sausalito (the main shipping town in southern Marin) that the only way to get the men, the building materials, and the large steel gun parts out to the construction sites was on a slow, crude and dangerous mountain road. Taking the topographical challenges into consideration, the engineers determined that it would be cheaper and safer to transport the goods by water. They constructed a wharf at Point Bonita to aid in the transport of materials, ensuring a smoother construction process for the new fortifications.
Above: A view of the engineers’ wharf and trestle down at Bonita Cove, as well as the tunnels and walkways leading to the Point Bonita Lighthouse in the background. (Photo circa 1915)

Bonita Cove supported by a 250-foot trestle topped with a railroad track that led from the wharf to the top of the cliff. A powerful hoisting apparatus transferred the heavy goods from the top of the tramway to waiting horses and buggies.

The engineers needed an endless supply of sand, crushed rock and water, which were the key ingredients in making hundreds of tons of concrete. To reduce material costs and to speed up production, they manufactured their own crude materials directly onsite. A rock quarry was opened below the crest of the hill, and a steam-driven derrick lifted the stone over 90 feet to a crusher. Sand from Rodeo Beach was transported to the concrete mixer on a 1,600-foot tramway and a 20,000-gallon water reservoir was constructed. In the winter months, a steam engine pumped water to the reservoir from a gulch; in the windy summer months, the army used a windmill. Site excavation prior to the batteries’ construction involved substantial moving of soil. The site was prepared by using plows, scrapers and dynamite blasting after day laborers had removed the undergrowth and trees. Excavated material not reused in “strengthening” the concrete was typically placed in an immediately adjacent dump site. During this time, the U.S. Army Corps of Engineers’ recent experiments with different mixtures of sand and gravel resulted in improved concrete quality. As a result, the Fort Barry batteries were constructed with a much stronger concrete than previous fortifications elsewhere around the bay.
Above: Construction of Battery Mendell. To construct these huge batteries, workers erected structural forms created by braced vertical wood planks (at left). They then poured wet concrete into forms and left it to harden or "cure" for several days. Once the concrete had dried and set, the wooden forms were then peeled off from the finished concrete wall. Note the amount of lumber necessary for this project. (Photo circa 1902)

4 Battery Mendell

The engineers began construction of Battery Mendell at the edge of a cliff overlooking the Pacific in July, 1901. Battery Mendell was named in honor of Col. George Mendell, Corps of Engineers, who was the driving force behind all of San Francisco’s early Endicott coastal defenses. Endicott-era batteries were characterized by concrete construction, partially buried behind thick parapets of earth. The cannon were fewer in number, but very powerful, mounted in pairs or occasionally individually, and were more widely separated than in previous designs. Magazines (ammunition rooms) became an integral part of the batteries, placed below the level of the surrounding terrain and enclosed battery commander stations were built into the structure. These
Endicott-period batteries did not provide any covering or overhead protection for the guns because aerial attack wasn’t yet considered a threat.

The purpose of Battery Mendell was to fire 1,100 pound artillery shells at enemy ships up to eight miles away. Much of the gun’s value came from its ability to protect itself.

Battery Mendell was outfitted with the army’s modern innovation: a pair of 12-inch guns on “disappearing carriages.” When the guns were ready to fire, they would rise into position, fire a single shot and then recoil down and out of sight for reloading; guns and the soldiers were hidden from enemy view behind a huge concrete parapet camouflaged into the surroundings.

“When they had gun practice, they sent a notice around to take your pictures off the walls. We had to go outside at school and put cotton in our ears. One time it moved the schoolhouse walls—if even though the walls were two inches thick.” —Eleanora Alma Hoop, whose father was stationed at Fort Barry in 1909.
During this early period, the engineers constructed four other batteries: Battery Alexander (1902), Battery Smith-Guthrie (1904), Battery Samuel Rathbone (1905) and Battery Patrick O’Rorke (1905). Later, the army constructed Battery Wallace (1917-1921), Antiaircraft Battery No. 2 (1920-1925), and Battery Construction No. 129 (1942-1944). A complex underground system of communication cables connected all the batteries so that the men stationed throughout the fort could communicate with one another.

Please feel free to explore the other Fort Barry batteries at your leisure, keeping your safety in mind.

The construction of the Fort Barry tunnel in 1918 was critical to the post’s activities. The viability of Fort Barry and the new powerful coastal batteries depended heavily on reliable access to Fort Baker and to Sausalito, the post’s sources for military supplies, the railroad and groceries. Before 1918, when the surf was too rough for boats to land at the Bonita Cove wharf, connection to the outside world was only available by the treacherous road that followed the coastline from Fort Barry to Fort Baker. After several near-fatal accidents, Fort Barry commanders repeatedly requested funding for a tunnel that would make travel safer. Every request was denied. The country’s entry in World War I and the need to make the coast defense batteries as accessible as possible finally underscored the need for the tunnel; Congress approved the tunnel construction funds shortly after the outbreak of the war. The 2,200 foot tunnel, bored through serpentine rock and lined with ten-by-ten inch timbers, was finished in 1918.
From Battery Mendell, return to Field Road and continue back towards the Marin Headlands Visitor Center, traveling 1.8 miles to the next stop. As you travel on Field Road, you will pass through a cluster of three, small, wood-frame buildings. These building are remnants of Fort Barry’s service area, which originally included a storehouse, a bakery and stables. After the Visitor Center, turn right onto Bunker Road and continue east to the stables at the Presidio Riding Club. While this area is closed to the public, you can easily see the large, unusually-shaped building behind the stables.

Fort Barry is home to one of the two remaining Balloon Service hangars on the West Coast. The U.S. Army began experimenting with air balloons as early as the Civil War, using them to spot artillery fire and watch enemy troop movements. During World War I, both the Allies and Germans experimented with using balloons during combat and by the 1920s, the United States Army Air Service dispatched several balloon companies to the Pacific Coast where they assisted with range finding for the Coast Artillery’s big guns.

Before the army constructed the hangar in 1921, the balloons were stored out in the open valley, where they were tethered to the soft grass with screw anchors and vulnerable to rain and high winds. The army soon realized that the balloon companies...
would need permanent structures for the balloons to avoid damage. Three new balloon hangars, constructed at Fort Barry, Fort Winfield Scott at the Presidio, and Fort Funston in San Francisco, were enormous, galvanized-iron shed buildings with a unique gambrel shape that allowed for the balloon to be stored either inflated or deflated. A generator house, connected to the hangar by a buried 6" pipe, provided the highly flammable hydrogen gas used for inflating the balloons. To the north of the hangar was a designated “balloon field,” an open space where the men could lay out their ground tackle and the airships could be launched and retrieved.

The Fort Barry air balloons were used for gun firing training. Soldiers suspended in the balloon’s basket worked together with the soldiers at the batteries to track and spot the accuracy of the batteries' gunfire. A single balloon with two soldiers in the wicker basket would be tethered over the shoreline as a tugboat pulled a target that represented an enemy ship. As a gun battery fired at the target, the soldier in the balloon basket would lean over and with the help of a telescope, watch for the splash of the shot. Once he saw the splash, he verbally relayed his corrections to the second man in the balloon basket who radioed the information to the plotting room at the battery. These corrections, usually stated simply as “Up 200 yards,” would be factored into the next aiming directions relayed to the gun crew. Then they would conduct the training again to improve the accuracy of the shots.

Continue further down Bunker Road away from the beach for another 0.4 miles. Pull over on the left-hand side onto the dirt road and continue towards the small white building. In the open field in front of you are the remnants of the Department Rifle Range.

6 The West Cost Departmental Rifle Range at Fort Barry

This now quiet, man-made outdoor space used to ring loudly with sounds of rifle shots. During the late 1800s, the rifle target scores for all of the army companies within the Pacific Division were so poor that the army was forced to take action. In early 1904, Gen. Arthur MacArthur (then Commander of the Pacific Division) appointed a Board of Officers to explore the idea of creating a single Department-wide target range, open to all infantrymen in the Pacific Division. The Board of Officers identified this area in Fort Barry as the most suitable location, but the Secretary of War declined to forward MacArthur’s proposed $125,000 construction project to Congress. Not to be deterred by the lack of funds, Gen. MacArthur found a solution by using his most readily-available resource: the ample supply of Fort Barry soldiers and Alcatraz Island military prisoners. By the end of 1904, the army transferred 100 Alcatraz prisoners to Fort Barry to construct the rifle range.

Once completed, the Departmental Rifle Range operated as a separate entity from the Fort Barry command. A steady stream of units from all sections of the military,
Between 1922 and 1938, there was no permanent garrison assigned to Fort Barry. During this quiet period, visiting military units trained at the rifle range and troops from the Presidio maintained the mostly-empty buildings. But in 1939, on the eve of World War II, the post was officially reactivated and troops were again assigned to man the batteries. Fort Barry now fell under the jurisdiction of the Harbor Defenses of San Francisco (HDSF). The HDSF was assembled and headquartered at Fort Scott on the Presidio. With its area of responsibility stretching 60 miles from Point Reyes in the north to Half Moon Bay in the south, the HDSF was charged with protecting the coastline from naval attack, supporting land defenses against beach assault, and ensuring the safety of friendly ships entering and leaving the San Francisco Bay.

The army made many significant upgrades during World War II to incorporate the latest military technology and bring the Endicott-period batteries up to prevailing military standards. Because of advances in military aviation, the military could now expect enemy fire not only from ships, but now also from the sky, in the form of accurate bombers and strafing fighter planes. As a response, anti-aircraft guns were installed along the coast to protect the uncovered and vulnerable batteries from aerial attack. Because chemical warfare was now a possibility, the plotting rooms and other structures were made gas-proof.

On Sunday morning, December 7, 1941, Japan attacked the U.S. Navy and Army bases at Pearl Harbor, Hawaii. Assuming that the next attack would be on the West Coast Artillery men in front of the Fort Barry post headquarters’ building. Because of inadequate supplies during the the early days of World War II, soldiers were outfitted with left-over World War I-era helmets, rifles and other gear. (Photo circa 1941)
Coast, the posts of the Harbor Defenses of San Francisco were put on “A” alert, requiring the guns to be prepared to open fire at a moment’s warning. The Coast Artillery soldiers at Fort Barry quickly reported to their duty stations at the batteries. A battalion of infantry troops were rushed to Rodeo Beach to defend the beach from enemy assault. There, infantrymen laid barbed wire, dug slit trenches and cleared fields of fire for automatic weapons. Overnight, the soldiers’ lives went from one of daily tedious training to real military action requiring all their focus and skill.

By the fall of 1942, fears of an immediate enemy attack faded. The alert warning for the coastal defenses was downgraded to a level “B,” which allowed men to return to their barracks as long as they could reach their battery stations in 15 minutes. By the end of 1942, the tide of the war with Japan was beginning to turn to America’s advantage. Believing that the Pacific Coast was secure from enemy fire, the army began to dismantle the harbor defenses. Between 1943 and 1946, Fort Barry’s battery armaments were removed and scrapped and in the fall of 1946, the last of the Coast Artillery troops left Fort Barry.

This marks the end of the tour. Please feel free to explore the Marin Headland’s other historic forts—Fort Baker and Fort Cronkhite. The park hosts monthly workdays and volunteer programs where you can become a docent, help restore historic buildings, remove non-native vegetation, and collect data on our wildlife. For more information, talk to the staff at the Marin Headlands Visitor Center, or visit the park’s website at: www.nps.gov/goga/