MILAGRA RIDGE

The National Park Service's Milagra Ridge sits on a 249-acre parcel of land on the northern flank of Sweeney Ridge.[1] The entryway to this portion of the GGNRA is at Sharp Park Road and College Drive in Pacifica. At 1,200 feet it possesses views of the Pacific Ocean, the Farallon Islands, Point Reyes, San Pedro Mountain, Montara Mountain, Mussel Rock, Mori Point, San Pedro Point and the Pacifica city shoreline.[2]

EARLY PEOPLE

Before the Spanish arrived, the Ridge was probably grassland, as the Aramai periodically burned the hillsides in this area.[3] They did so, as other Ohlones did, to encourage grasses as food for game such as deer that were valuable to the people. They also collected grass seed for consumption. Although no "formal archeological surveys have been conducted,"[4] there is little evidence to suggest that Milagra was the site of an Indian village.

During Spanish times, an agricultural outpost was established in the San Pedro Valley (see Sweeney Ridge portion of this study). The hills to the outpost's east were used for grazing cattle. At first the soldiers at the *Presidio* and the missionaries shared the pasturage. The military used an "R" as a brand for *Rancho del Rey* (King's Ranch) and the fathers used the F brand for *Franciscano* (Franciscan).[5] However, about 1791, the open range had become crowded, and the priests convinced Spanish officials that only one herd was necessary. It did not take long before the soldiers began complaining about being overcharged for cattle by the missionaries. *Presidio* commandant Jose Arguello approached Governor Diego de Borica over the issue, and in 1797, the Governor sided with the soldiers and created *Rancho Buri Buri* as pasturage for the army.[6] Although Buri Buri is east of Milagra (Buri Buri included the south part of San Bruno Mountain, South San Francisco, San Bruno, Millbrae and North Burlingame), because this territory was open range, it is likely that the soldiers' herds grazed on the Ridge, possibly along side of those belonging to the Church.

Between 1812 and 1821, a dramatic decrease of the Franciscans' herds of cattle on the Peninsula occurred: from 10,740 head to just 3,700.[7] However, after that date, the numbers of beeves went up again. Haggling between the soldiers and the Franciscans over pasture land continued until the secularization process manifested itself in the mid-1830s.[8]

With secularization, *Rancho Buri Buri* was awarded to Jose Sanchez in 1835. Milagra

Ridge was situated on the *Rancho San Pedro* and was given to Jose's son Francisco Sanchez in 1839. For a dozen or more years it is likely that the herds from both *ranchos* used Milagra for feeding.

Milagra is also said to be the site of the fabled "Sanchez ditch." The story goes that this trench was installed by Francisco Sanchez to keep out squatters after the Gold Rush began. It is true that Sanchez had fewer problems with squatters than his neighbors, but that was probably because of the more inaccessible nature of his property plus his reputation as a fighting man after the Battle of Santa Clara (see Sweeney Ridge portion of this study for more about Francisco Sanchez). It is hard to imagine how any ditch or trench could have kept out squatters unless it was meant to be a simple marker and not a barrier. The team for this study was unable to find evidence that the ditch existed.

After Francisco Sanchez's death in 1862, his estate gradually sold off the rancho properties. Milagra Ridge remained in agricultural use. The Sneath family used it for grazing their dairy cattle, and farmers grew crops there until World War II (again see the Sweeney Ridge portion of this study).

How Milagra Ridge got its name is a murky subject. Back in 1866, a Spanish-language lease for land in the gulch to the west of the Ridge was named *potrero del Milagro* (miracle field). The Coast survey of 1868 describes a Milagra Valley.[9] The "Official" San Mateo County map of that same year shows a "W" shaped parcel in the area, labeled Milagro of 223.74 acres.[10] Local historians have suspected that a Milagro family must have lived here, but neither the 1870 census nor the 1879 Great Register of San Mateo County reveal anybody of that name.

The United States Geological Survey continued to show Milagra Valley in 1892, but in another location (closer to today's Sharp Park Road).[11] After 1900, the Fahey Ranch was in this location, and what had originally been known as Milagra Valley took the name Fahey's Gulch for awhile. Finally, in 1957, the commanding officer at the Nike missile base called the hill east of the valley Milagra Ridge, and the name has stuck.

COAST DEFENSIVE AND MILAGRA RIDGE THROUGH WORLD WAR II

DEFENSE OF SAN FRANCISCO BAY (CONTEXTUAL)

From the time when Spanish explorer Pedro Fages saw the entrance to the Bay from its eastern shore in 1770, it became increasingly clear that the Golden Gate was a strategically important place in *Alta* California. In 1772, Fages, with Franciscan Juan Crespi, in a failed attempt to get around the Bay, made the further discoveries of the Suisun Bay and the Sacramento-San Joaquin River Delta. This gave yet more significance to guarding the Bay since it was now coming to be understood that this was the key for

navigating and controlling the interior of *Alta* California. In 1775, Juan Ayala, aboard the *San Carlos*, proved the Golden Gate could be sailed through. Juan Bautista de Anza sited the mission and presidio at San Francisco the next year, 1776, and a military presence stood guard over the Golden Gate for two centuries thereafter.

Milagra Ridge's place in this story comes at its very end. As weapons became more sophisticated through the decades, their range increased dramatically, and therefore so did the geographical area that needed to be covered by seacoast defenses. As the United States entered World War II, preparations included anti-aircraft guns and radars at Milagra Ridge. Heavy armament for engaging ships at sea and landing forces were also planned. During the Cold War, the weaponry at this place featured a Nike guided missile launching site as defense against aerial attack.

The story begins at the southern edge of the Golden Gate, where the world-renowned bridge touches down on San Francisco today. Building of a *presidio* and a mission together were of utmost importance to the Spanish. This was, at the time, Spain's northernmost outpost on the North American continent. The San Francisco *Presidio* represented Spain's physical commitment to maintaining a permanent military presence. It protected its claim of lands north of Mexico and marked its hegemony of the San Francisco Bay and, indeed, *Alta* California on the whole.[12]

However, at first the *Presidio* consisted of mere housing for a garrison and walls to protect the soldiers. British and Russian interest in the area made it certain that a fortified installation was needed at the tip of the Peninsula, at the Golden Gate's narrowest point. Governor Jose Arrillaga ordered the work to begin. As told in the Phleger Estate portion of this study, redwood from down in the Woodside area was used to help with the construction. The creation of the land battery, *Castillo de San Joaquin* at *La Punta de la Cantil Blanco*, commenced in 1793 and was completed in 1794. The bluff, where it sat, was cut away after the American occupation of California to make way for Fort Point.

In its plan of 1850, the United States military decided to place batteries close to the water at Fort Point and Alcatraz. A cross fire would be achieved by placing similar works at Point San Jose and on Angel Island.

The work at Fort Point, including leveling of *La Punta de Cantil Blanco*, was completed about 1853.[13] Bricks for the project were made on site. Granite had to be procured from places as close by as Point Reyes and as far away as China. The multi-tiered, casemate fort with 90 guns was largely completed by 1860. The only such structure constructed on the west coast of the United States, its very existence spoke to the continued concern of military leaders about the need to secure the Golden Gate. Fort Point is today part of the GGNRA.

As the Civil War began, the United States Army started planning how to defend the Bay Area. A strategy evolved centered on holding a line of defense from San Bruno Mountain to Lake Merced. This basic scheme remained the cornerstone of army preparations for an attack on the San Francisco Bay through to the World War II era.

An immediate step to strengthen the Bay's defenses was improved fortification of Alcatraz and placement of temporary structures at other sites. By 1864, Union leaders were not only worried about possible attack by Confederate raiding ships, like the *C.S.S. Shenandoah*, but about increased British activity in western Canada and French intervention in Mexico. War with both European powers seemed possible, considering the United States' perceived preoccupation with fighting its Civil War. By the War's end, the Army had mounted huge 15-inch Rodmen smoothbore guns at Alcatraz. These weapons had proven effective against the South's best armored fighting vessels.

In 1870, a new plan surfaced to make use of other lessons learned during the Civil War. Earthwork batteries and concrete gun emplacements replaced masonry works. Parapets were thickened, and silhouettes were lowered. On the bluffs of the *Presidio*, two new batteries were installed to supplement the now obsolete Fort Point. The new guns were spaced wider apart so that a direct hit could not knockout two at once. Battery ranges increased to 4,200 to 5,000 yards.[14]

In 1882, a Gun Foundry Board again studied technical advances as they related to seacoast defense. It inspired President Grover Cleveland to organize the Board on Fortifications or Other Defenses in 1885. Known as the Endicott Board, after its chairman, Secretary of War William C. Endicott, it first convened in 1886.

The Endicott Board made recommendations for fortifications at 22 seaports along the coasts of the United States. Over a significant length of time, its efforts resulted in so much work that its name, Endicott, became synonymous with an entire era of defense strategy.

From its initial meetings the Endicott Board ranked San Francisco Bay as most important for acquiring new construction only behind New York. The New York Board of Engineers planned the new San Francisco project in 1890. Over the next 15 years, it called for an expansion of the outer defenses of the Bay reflecting new capabilities in coastal artillery firepower. Pieces could now reach targets ten and even 12 miles out at sea. Naval guns had similar ability, of course. Defense strategy called for engaging potential enemies as far away from the Bay as possible. And so, batteries were planned for Point Lobos, Lake Merced and across the Bay at Point Bonita.

The Endicott batteries were constructed of concrete and buried behind earthen

parapets. The guns were placed in individual locations or sometimes in pairs. They were also more widely spread than ever before. Enclosed command positions were built into structures. Magazines were installed below the surrounding earth. They lacked overhead protection, as air attack was not yet a threat. For the San Francisco Bay project, engineer Charles Suter designed the improvements and oversaw their construction.

The first work on the Endicott improvements began on the western portion of the *Presidio* in 1891 with the creation of Battery Marcus Miller which possessed three 10-inch rifled guns on disappearing carriages. A mortar system was begun nearby in 1893. In 1894 an experimental battery of three 15-inch pneumatic guns, capable of hurling dynamite, was constructed. One of only two such installations ever put in place in the United States, the new weapons were declared failures by 1904. In 1895, Battery Godfrey at the *Presidio* became the first to have a 12-inch gun platform in the United States. Its breech-loading rifle was the first of its kind on the West Coast. Two other batteries of this type followed soon after. In 1896, the Board of Regulations of Seacoast Artillery Fire advanced the capabilities of the defenders of the Bay by introducing a new unified fire control system, allowing improved accuracy of weaponry.

The installation of the Endicott system around the Bay was a manifestation of a new feeling within the United States. With the western frontier gone, Americans began pondering the possibilities of becoming an imperial power with overseas objectives in the Pacific a primary consideration. The declaration of war with Spain, in 1898, increased interest in seacoast defense and all manner of warfare.

The new century brought further advancement. In 1905, President Theodore Roosevelt assigned the Taft Board, named for Secretary of War William Howard Taft, to renovate the now dated Endicott systems. Improvements in this era included deployment of searchlights, more use of electricity, telephone communications and yet further steps forward in the aiming of weapons with a modernized system featuring new devices for enabling rapid mathematical calculations.

The 1900s also brought about change in the organization of seacoast defense. The Army assumed the entire mission of protecting naval bases by this time. The realization of how sophisticated seacoast defense was becoming inspired the Army to establish the Coast Artillery Corps in 1907 as a separate arm.

In the years that followed, the Taft system guarding the Golden Gate began coming online. It saw to the installation of more than 25 fire control stations by 1908. The effectiveness of mine warfare impressed the Taft Board. Laying minefields outside the Golden Gate became a priority.

While Henry P. Bowie of the *El Cerrito* estate at old *Rancho San Mateo* (see Phleger Estate portion of this study) was a devotee of Japanese culture and society -- so much so that he organized the Japan Society of America in 1905 to encourage more friendly intercourse between the United States and Japan[15] -- tensions were growing between the two Pacific powers which kept seacoast defense important. Not only were both countries recognizing a rivalry for hegemony for the Pacific Ocean, but racist attitudes on the West Coast, and particular at San Francisco, flared periodically into international incidents further exacerbating the situation. Therefore Taft-era defense programming around the Bay continued with added urgency.

World War I brought more strategic change. The new battleships brought into service during the War by the British, and then by others, featured 15-inch rifled guns that could lie off San Pedro Point and shell San Francisco into dust. With their 21,000 yard range, they could do so without fear of return fire from the Golden Gate's defense system.

Meanwhile, air warfare had become a factor. In 1921, hangars for observation balloons were built at Forts Funston, Winfield Scott and Barry. More importantly, that same year, Crissy Field, an Army Air coast defense station, was completed and became the earliest of its kind in the West.

The Washington Naval Treaty of 1922 did several things that affected the Bay Area's defense system. While placing a limit on construction of capital ships, such as battleships and battle cruisers, it allowed for converting such vessels into aircraft carriers. Thus while surface fleets might decrease in size, the threat from the air increased. Projects to build American capital ships were scrapped as a result of the treaty. However their 16-inch naval rifles were already forged. These weapons, that could hit targets 44,600 yards away, became available for seacoast defense. Since there was a moratorium on further fortifications on most of the islands in the Pacific, some of these guns could come to the Bay. In the ensuing years only the Panama Canal and Hawaii were regarded with higher priority. The 16-inch gun became central to defensive strategies here.

During the 1930s, the Army updated its designs for 16-inch batteries by incorporating overhead cover to protect them against air attack. Plans were also developed for modern batteries for smaller 8-inch and 6-inch guns. As world tensions rose, construction began in 1936 on mammoth Battery Davis at Fort Funston near Lake Merced. With its two 16-inch guns fully protected from overhead bombardment, it became a prototype for future heavy seacoast defense works. After the completion of a similar battery at Fort Cronkhite (in Marin County) in 1940, San Francisco Bay possessed the most strongly fortified seacoast defense network in the United States. Covering an area from San Pedro Point in the south to Wildcat Ridge in the north, the 16-inch guns of

the Golden Gate could hit back at any surface vessel afloat. No ship's guns could bear on the Bay without threat of significant retaliatory fire.

However, with war clouds gathering again, further projects seemed necessary. Defense of the San Francisco Bay remained the highest priority on the Pacific Coast of the continental United States. In a plan known as the 1937 Project for San Francisco Harbor Defenses, Fort Funston was provided with firing platforms so that artillery could protect its blind spots. Three-inch anti-aircraft guns were mounted at Fort Funston, Winfield Scott and Barry and eventually at other locations including Fort Cronkite. The 1937 plan also called for greater use of searchlights. In order to manage the greatly increased flow of information, "groupment command posts" were placed at Fort Barry and Fort Funston. Many of these projects were started in 1940 and were completed in time for America's entry into World War II.

Also proposed in the 1937 plan were two new batteries of pairs of 6-inch guns with overhead cover: one at Fort Miley in San Francisco and the second at Milagra Ridge in the south. Both were eventually completed, as were an expanded system of observation stations that included installations at Devil's Slide and Pillar Point.[16]

The Army purchased both the promontory at Devil's Slide (9.61 acres) from Hibernia Bank and the promontory at Pillar Point (13.7 acres also referred to as Gray Whale Cove Promontory) to create fire control stations. Fire control stations were necessary in order to increase the accuracy of the modern long-range artillery pieces being installed. The pillbox-like stations were furnished with radar equipment and high-powered telescopes to take bearings on targets. They possessed telephone connections to the plotting rooms at their assigned gun batteries.

By the end of Sunday, December 7, 1941, the day during which the Japanese attacked American forces at Pearl Harbor, the seacoast fortifications protecting San Francisco Bay were fully manned and functional. Furthermore mobile artillery had been moved into planned positions and two infantry battalions had been deployed south and north of the Golden Gate.

The next day, all around the Bay, additional steps were taken. In San Mateo County, previously designed precautions included placement of sentries at the Crystal Springs Dam, the ship building works at South San Francisco and San Francisco Municipal Airport. County Sheriff James J. McGrath ordered fishing boats to stay moored at Pillar Point to prevent espionage or sabotage.[17]

As the days wore on, more measures took place. Minefields were placed around the Golden Gate. By war's end, some 481 mines had been laid. "Anti-motor torpedo

boat" batteries, mounting machine guns and 3-inch guns, were installed on the San Francisco and Marin County shorelines.

On the Bayside of San Mateo County, Coyote Point Park became the Merchant Marine Cadet Academy. The Cow Palace became an Army Storage installation. Tanforan Racetrack became an assembly center for Japanese American internees. San Francisco Airport was turned over to the Army for supply missions. The Army built Dibble General Hospital in Menlo Park.

On the Coastside, sudden response included enforced blackouts in the residential areas. Additionally soldiers and Coast Guard personnel began patrolling the beaches almost immediately. In fact the old McCloskey Castle (see Mori Point section of this study) served as a station for an Army platoon. Just south of the Castle, a detention camp was established at Sharp Park (see Mori Point section).

According to Stephen A. Haller, Park Historian for the GGNRA, while much of the evidence of the defense complex of World War II has been obliterated over time (such as that at Pillar Point for example) and for the most part do not retain sufficient integrity to qualify for the National Register of Historic Places, "...the dramatic fire control complex at Devil's Slide is plainly visible to drivers on Highway 1 to this day,"[18] and does have historic value.

For this study, Haller elaborates:[19]

> ***Devil's Slide Military Reservation*** *is located on State Highway 1 between the towns of Pacifica and Half Moon Bay, California, approximately 17 miles southwest of the Golden Gate Bridge. The geographic center of the reservation is at approximately 37° 34'28.16"N and 122° 31'9.39"W. The land was acquired in stages beginning in 1939 by the U.S. Army for construction of Fire Control stations assigned to the Harbor Defenses of San Francisco.*
>
> *Beginning in June 1939 the United States acquired 9.61 fee acres and .72 easement acres on a rocky promontory south of Pacifica for the construction of fire control stations and associated structures. The land was disposed of by the U.S. Army following the war and was apparently transferred to the U.S. Navy. San Mateo County Assessor's records indicate that in 1983 Mr. Alfred J. Wiede of Stockholm, Sweden, purchased the property from the Department of the Navy. The State of California is the believed to be present owner of the property.*
>
> *The reservation contains three fire control stations (two of them in a combined, two-level structure), a transmitter building for an SCR 296 radar set, and a generator room/power plant that provided AC current to the fire control facili-*

ties. The power plant is located adjacent to State Highway 1, but the fire control stations and the transmitter building are located several hundred feet higher atop a rocky promontory that can only be accessed by climbing a flight of several hundred stairs. It is a spectacular location. Over the years the site has suffered from neglect and as a result has been badly vandalized with spray can graffiti on nearly every surface. No fixtures remain inside any of the structures. However, the site's location and setting are unchanged and give an overwhelming feeling of time, place and purpose.

The site contains examples of two different World War II-era fire control stations designs, an underground radar operating room, and a generator hut. A 1950s steel radar platform installed by the U.S. Navy is located directly atop the 1940s radar operating room. The concrete generator hut is a rare structure that contained two different sized generators: a 3 KVA 120 v generator that provided power to the fire control stations and a 25 KVA generator that powered the SCR 296 radar set. There are no similar structures anywhere within the former Harbor Defenses of San Francisco.

Sometime in the 1950s, the U.S. Navy replaced the original tower with a still-standing steel platform used when they assumed control of the minefields protecting the harbor. This is a rare example of two military agencies using the same structure for the same purpose, while adapting it to their changing needs. The several hundred foot concrete staircase leading up to the stations is also evidence of the unique construction techniques developed by the Coast Artillery to reach their fire control facilities.

Despite the graffiti vandalism to the structures, Devil's Slide still maintains a strong feeling of authenticity to the World War II era. This is due to the reservation's nearly unaltered location and setting, and to the sweeping views of the defensive sea area of the Harbor Defenses. The climb up the stairs to the stations is especially evocative of wartime military life on this isolated outcrop. The area is closely associated with the important events of World War II and the military's defense of the West Coast. It is a key feature associated with the Harbor Defenses of San Francisco. Devil's Slide Military Reservation retains sufficient integrity to merit inclusion in a National Register or National Landmark Historic District.

The following individual structures contribute to the potential historic property:

Fire Control Station B S Construction #129-Contributing Building: Constructed 1943. Consists of a single-room range finding and observation station measuring 13'4" x 11'8" with a 6'10" ceiling. It sits at an elevation of 392' above sea level. Structure is a standard World War II-era steel dome design with counterbalanced

steel visor over the viewing aperture. Primary access is via an L-shaped rear entrance corridor and a steel door. Secondary access is through a square manhole hatch in the roof and steel ladder. Structure was assigned to the never-completed Battery Construction #129 at Fort Barry, California.

Fire Control Station (combined) B S Townsley & B S Davis-Contributing Building: Constructed 1941. Consists of a two-story fire control station with the upper station set slightly back from the lower. Both stations have standard World War II-era steel dome design with counterbalanced steel visors over observing instruments. Access to both stations is through square manholes in their roofs and steel ladders. Elevation of the upper station is 415' above sea level. It contains a single range finding and observation room measuring 13'4" x 11'8" with a 6'10" ceiling. Lower station contains an identical-sized range finding and observation room, and a 'back room' with interior of 12'4" x 13'9" with an 8' ceiling for crew quarters and a battery rack. The first floor was assigned to Battery Townsley at Fort Cronkhite, California, and the second story was assigned to Battery Davis at Fort Funston, San Francisco, California.

SCR 296 radar set #1 Transmitter Building & Tower Base-Contributing Building: Constructed in 1944. Consists of an underground concrete operating room (also called a Transmitter Building) measuring 26'6" x 15' with an 8' ceiling. Interior originally held operating equipment for an SCR 296 Model RAD 9-183. Room is accessed by a flight of stairs, a short hallway, and a steel door. An escape hatch leads up from the operating room an open second story that originally supported the radar antenna with a wooden enclosure built to resemble a water tank. The original tower is gone, and in its place is a steel tower erected by the U.S. Navy c1955.

Generator Hut/ Power Plant - Contributing Building: Constructed 1944. Consists of a two-room concrete shelter for two standby generators, measuring 32'6" x 9" overall with an 8' ceiling. Interior is accessd via a 17' concrete entrance corridor. Building originally contained a 3 KVA 120 v generator that provided power to the fire control stations and a 25 KVA generator that powered the SCR 296 radar set. This is the only structure of this design (i.e., two generators for different missions) built within the Harbor Defenses.

Further down the coast, at Moss Beach, stood an observation tower. The Navy had an anti-aircraft training center at Montara. At Pillar Point (see *Rancho Corral de Tierra* section for more about the wartime activities at Montara Point and Pillar Point) there were Army improvements, including a transmitter building, powerhouse, radar tower, a fortified searchlight position, anti-aircraft machine guns and, as mentioned above, two fire control stations. These two stations were built in 1943. One, of 131 square

feet, served Fort Berry. The other, of 162 square feet, was meant to provide information for Milagra Ridge. Just east of Pillar Point was the Army's airfield with its single 5,200 foot runway, and just east of it, at El Granada, the 56th Coast Artillery of the U.S. Army maintained four 155mm mobile guns.[20]

As the war advanced, so did technology and an understanding about what worked and what did not. By 1945, the Army had decided that only 12 of the most modern 16-inch and 6-inch batteries would be necessary after the War. This included the guns destined for Milagra Ridge.

MILAGRA RIDGE AND ITS 6-INCH GUNS

According to Park Historian Stephen Haller:[21]

> *Milagra Ridge Military Reservation was the site of the southernmost coastal defense fortification built by the U.S. Army to defend the entrance to San Francisco Bay.*
>
> *During World War II, a 6-inch caliber gun emplacement was located there along with several "fire control" observation stations and an early target ranging radar. The gun battery was disarmed in 1950, and later, during the Cold War, the summit of Milagra Ridge was used as a launch site for a Nike antiaircraft missile battery. The missile site was deactivated in 1974.*
>
> *Following the end of WWII, some of the land was transferred to private ownership while other portions eventually became part of the Golden Gate National Recreation Area. Today, the only surviving military features are the deserted Battery 243, two fire control stations (one moved from its original location), parts of the WWII radar site, and the buried Nike storage magazines.*
>
> *As early as 1937, U.S. Army planners envisioned a long-range battery in the Pacifica area that would protect the southern approaches to San Francisco Bay. It wasn't until 1942, however, that the government acquired a total of 330.1 acres along Milagra Ridge for use as a coastal defense site. The original reservation consisted of 327.97 fee acres, 0.58 license acres, and 1.46 easement acres.*
>
> *The primary purpose of the new Military Reservation was to be the site of a long-range gun battery mounting a pair of 6-inch caliber rifles enclosed by cast-steel shields. This fortification, called Battery Construction #244, was commenced in March 1943 and was transferred to the Coast Artillery Corps in September 1944. The battery's two guns were emplaced on either side of an underground traverse containing magazines, a power plant, plotting room, and crew quarters. The*

guns were officially designated T2M1 guns mounted on M4 long-range barbette carriages.

Although structurally complete in 1944, the battery did not actually receive its gun barrels until 1948, when it was test fired a few times. Like many WWII-era batteries, the fortification never received a formal name. Only two years later, the guns were removed from Battery #244 giving it the distinction of being the last element of the Harbor Defenses of San Francisco to be disarmed. (Milagra Military Reservation was also proposed as the site of a 16-inch caliber battery similar to Battery Davis at Fort Funston in San Francisco. Designated Battery Construction #130, no work was ever begun on this fortification.)

In addition to Battery #244, Milagra Ridge was also the site of several fire control stations used by the Coast Artillery for taking optical sightings on targets at sea. The resulting angles of observation were used to triangulate ranges to the target. Four separate stations were once located within the reservation: the Battery Commander's (BC) Station atop Battery #244, and stations for Battery Townsley at Fort Cronkhite, Battery Davis at Fort Funston, and Battery Construction #129 at Fort Barry. Of these fire control stations, only BC Battery #244 remains in place.

The final WWII defensive feature element was a Signal Corps radar site used for directing the gunfire of Battery Wallace at Fort Barry in Marin County. Designated SCR-296 Set No. 9 in the Harbor Defenses of San Francisco, it consisted of a radar antenna atop a steel tower, an aboveground power plant, and an underground operating room.

Today, the only features at Milagra Ridge considered to retain sufficient integrity to be contributing elements to the proposed *San Francisco Harbor Defenses National Historic Landmark District* are these:

Battery Construction #244, completed in 1944 and disarmed in 1950

Battery Commander's Station (BC B1S1), Battery #244, completed in 1944

Tower pylons and operating room for SCR-296 No. 9, completed in 1944

See Appendix XIX in this study for plans from 1943 that show the elevations of how the gun emplacements at Milagra appeared. Appendix XX illustrates how Milagra looked from the air that year. Appendix XXI diagrams the massive underground improvements that supported the guns. While sealed off to protect the public today,

these below surface improvements are the most tangible evidence of the existence of the armed forces at Milagra during World War II.

Thus the end of an era transpired on Milagra Ridge. Since the 1700s, the concept of artillery guarding the Golden Gate, in one form or another, had guided military strategists. Their energy and resources were dedicated to defend a critical harbor within an immensely important part of North America. However, lessons learned at great cost during World War II called for different priorities. Seacoast artillery could not endure the new threat of air attack. Amphibious warfare had evolved to the point that landings around fixed seacoast defenses were possible. Finally, the atomic bomb required a complete overhaul of all past theories on warfare, resulting in little need for conventional seacoast defense.

Indeed while the significance of Milagra is great, the actual above ground structural World War II reminders are sparse, making it difficult to picture the place when it was active. Of course Milagra had a second life as a defensive position during the Cold War.

MILAGRA RIDGE AND THE COLD WAR

The euphoria of victory after World War II did not last long. A "Cold War" between the United States and the Soviet Union soon manifested itself. Within five years another shooting conflict, the Korean War, strained relations between the super-powers yet more. Defense was again on the minds of Americans, and once more the Bay Area was felt to be of crucial importance and required protection. Conventional air defense was in place, but the threat of airborne nuclear attack required more sophisticated preparations. The United States Army Air Defense Command (ARADCOM) eventually took over the role of the Army's old Coast Artillery branch and was given charge of maintaining the new weapons and deploying them if challenged. The advanced systems centered around the Nike anti-aircraft missile. In 1953, Milagra Ridge was designated as a site for launching the missiles in case of attack.

In the face of nuclear devestation, ARADCOM's concept for defense was to prove readiness with an anti-aircraft system so effective that an enemy would see that an assault was not worth the risk. However, if this deterrent failed, the goal became to deny to the enemy the ability to destroy key industrial and defensive centers. ARADCOM was itself made a component (1957) of the North American Air Defense Command charged with the overall defense of North America.[22]

ARADCOM's chief weapon was the Nike missile. After World War II, the Army went to Bell Telephone Laboratories and asked them to plan an anti-aircraft guided missile. Bell joined with Douglas Aircraft in creating the new Nike system. The Army then

contracted with Western Electric to manufacture Nikes in adequate quantity. Some 6,000 suppliers helped Western Electric create the 1.5 million parts necessary to create each Nike missile.

The Nike was actually meant to be the second line of defense. In case of an aerial attack, fighter squadrons would be first to engage the enemy. If any bombers slipped through, the Nike system would respond. Long range radar would pick up the approach; more radars would then target the plane. The Nike would then be fired. A last radar would follow the missile's flight and guide it, 3.5 times faster than the speed of sound, to the enemy. In stages ARADCOM called on the Army National Guard to man the Nike units. ARADCOM's immediate predecessor, the Army Anti-aircraft Command, established on July 1, 1950, just four days after the start of the Korean War, had 19 of its 38 battalions manned to good effect by the National Guard. These early units were armed with conventional 90 and 120 mm guns.[23] In 1953, ARADCOM initiated a program to phase out the old World War II type defenses and replace them with what was touted as the first successful, surface-to-air missile, the Ajax, the initial Nike system.

The Ajax (MIM-3A) had a gross weight of 2,259 pounds and was 32.5 feet long. It was armed with conventional warheads and had a range of 30.7 miles. It could gain 60,000 feet in altitude. Its speed was mach 2.3. Each cost the Army about $19,000.[24]

Milagra was one of nearly a dozen Nike sites surrounding the Bay Area to become permanent launch facilities. (They were San Pablo Ridge, Rocky Ridge, Lake Chabot and Coyote Hills in the East Bay; Milagra Ridge, Fort Winfield Scott and Fort Funston, south of the Golden Gate; and Fort Cronkite, Fort Barry, Angel Island and San Rafael in the north.) The units were to receive target information from the Army air defense command post at the radar installment at the Mill Valley Air Force Station on Mount Tamalpais in Marin County.[25]

As Milagra was the launch site, the control or radar site was a 3.2 acre station on Sweeney Ridge.[26] See the Sweeney Ridge portion of this study for a description of the activities there. Together, Milagra and Sweeney were designated Site SF 51, C, L and A (SF 51 C - - C - - for control at Sweeney Ridge; SF 51 L - - L - - for launch at Milagra Ridge; SF 51 A - - A - - for administration at Milagra Ridge). All Nike sites had C, L and A components. By 1961, the Nike sites in the San Francisco Defense Area composed the sixth ARADCOM Region.[27]

Planning for Milagra began in 1953.[28] Construction commenced with an expansive excavation to provide underground storage for the missiles.[29] Typically all the sites included a large paved area, powerful elevators to lift the missiles to the surface, offices

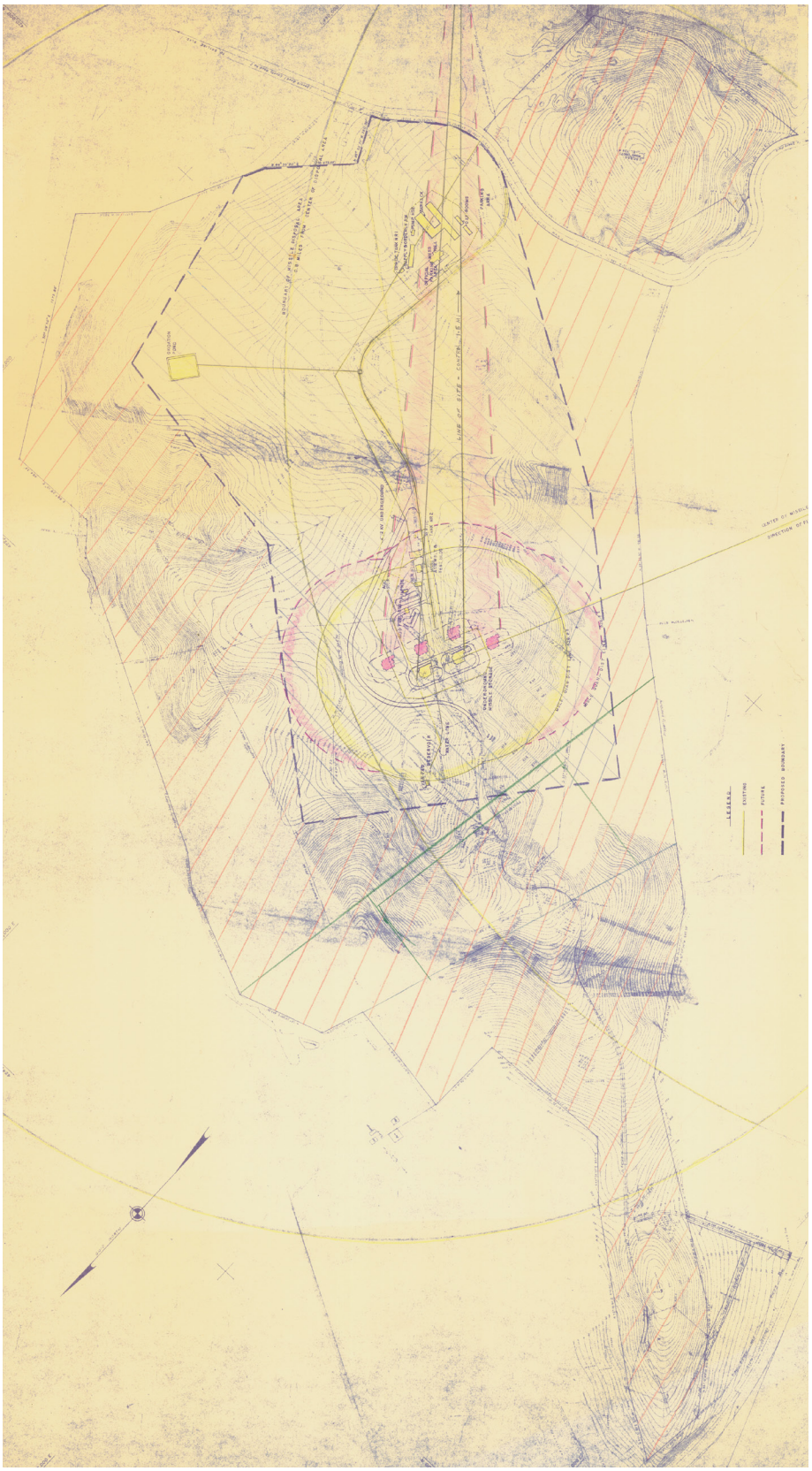

Fig. 6.2: A 1957 map of the defense installation at Milagra Ridge. Yellow signifies existing structures, and pink signifies proposed future additions. Golden Gate National Recreation Area, Park Archives.

and barracks. These areas were fenced with barbed wire and patrolled by troops with guard dogs. SF 51 became operational in 1956.[30]

The launch area at SF 51 was dug out southeast of the World War II, 6-inch gun works, within the present National Park. The administrative headquarters building and support structures were a half mile southeast of this, a site currently occupied by a condominium complex at Sharp Park Road and College Drive, on the north side of the intersection.

The Army Corps of Engineers' map of 1957 to the left shows the underground missile chambers (or magazines) completed, along with the ready room, missile assembly and test building and generator building on the launch site. At the administrative site the barracks, day rooms, mess hall and offices were in place. Dog kennels, southwest of the launchers were not constructed yet, but in the plans. Also shown were four more underground missile

Fig. 6.3: Photograph of Milagra Ridge.

Fig. 6.4: Photograph of the headquarters area at Milagra Ridge.

chambers that were never actually added.

The pair of underground magazines used to store the missiles included elevators, loading radars and control rooms (typical of a Nike site). When the missiles were to be set for practice launchings, doors would open up and the missiles would be brought to the surface for launching. Of course no missile was ever actually launched from SF 51-L. The photo to the left of Milagra shows no evidence of a missile on site. All were stored below ground. Note that by the time this photo was taken, the dog kennels (in the foreground) had been installed. A second photo includes the headquarters area. Note that the motor pool and tennis courts at the top had been added.

David Bridgman, who served SF 51, as did his father Richard H. Bridgman (1928-2009), recently indicated that SF 51 had about 100 men assigned to it. At the launch site there were three shifts of 12 to 15 men each round the clock. The control site had a similar schedule and number of men. The administration office also had 12 to 15 working but just one shift a day.[31]

A property inventory of the site reveals some other details indicative of the activities and personnel at Milagra when it was an active launch site.[32] Considering the basic needs of its all male personnel, the Barracks had 10 showers, nine urinals and one lavatory, while the ready room had two showers, one urinal and one lavatory.

As plans progressed to arm the Nike sites with nuclear capable Hercules missiles in 1958, the sentry dog security program materialized. ARADCOM initiated training of dogs in November of that year. By 1961, some 500 teams had been trained. The purpose was to guard the sites against sabotage, theft, arson and trespassing. German shepherds were the preferred breed. Handlers and dogs trained as teams. Each Nike site employed at least four teams. While the dogs were not trained "to kill or injure" they could "stop an intruder in his tracks." In order that the dog and his handler work as a highly developed team, only the dog's handler could "exercise control over him."[33]

In 1958, Milagra's Company A, 740th Antiaircraft Missile Battalion received the new Nike-Hercules missiles. According to ARADCOM the Nike Hercules (MIM-14B) was the first "combat-ready surface-to-air missile with an atomic capability to enter the active air defenses of the United States."[34] Following the Ajax, the new weapon was considered "second generation" of the "Army's Nike family." Generally speaking the nuclear capability of the new system allowed for much greater defensive ability: "What Nike Ajax can do against single targets, Nike Hercules can accomplish against entire formations of aircraft…" explained ARADCOM.

The Hercules weighed nearly five times more than the Ajax at 10,711 pounds. It was seven feet longer at 39.5 feet. It could obtain an altitude of 150,000 feet, more than 100% higher than Ajax. At mach 3.65, it was 37% faster. It could hit targets 85 to 100 miles away, three times the range. At $55,200 per missile, it was nearly three times more expensive.[35] Douglas Aircraft Company originally developed and produced the Hercules. Later prime contractors were Western Electric Company and Mitsubishi.

According to ARADCOM, the mission of the Hercules Group in the San Francisco Bay Region was "…to maintain its nuclear capable… firing batteries in a constant state of combat readiness to protect the vital industrial, population, and military centers within the San Francisco - Travis Air Force Base area."[36] In 1959, the regular Army, just after it completed its conversion from Ajax to Hercules, began to be relieved by the California National Guard personnel in the San Francisco Region. This included responsibility for SF 51. After its crews were trained at Fort Bliss, the National Guard completed its replacement of Army Personnel at SF 51 in June of 1963.[37] Full National Guard replacement within the San Francisco Region was completed in April of 1964.

Through various reorganizations, SF 51's unit identification had the following designations:[38]

Battery C/ 740th AAABn	Sept. 1956 -- Sept. 1958
Battery C, 4th Missile Battalion, 61st Artillery	Sept. 1958 -- July 1959
Battery D, 2nd Missile Battalion, 51st Artillery	July 1959 -- June 1963
Battery A, 1st Missile Battalion, 250th Artillery	June 1963 -- April 1974

By 1961, the surplus nature of some of the property at Milagra was acknowledged by locals. That year San Mateo County and the City of Pacifica proposed that the old World War II bunkers and magazine be converted into a combined emergency County civil defense headquarters and a Pacifica police station. The Pacifica City Council eventually quashed the idea, citing limited access to the bunkers. However, in May of 1962, 73 acres of Milagra were disposed of and eventually were converted into residential development. In 1970, Pacifica leased underground space and subleased some of the square footage to the County for records storage. In January of 1971, some Oceana High School students hacksawed their way into the storage area and burned records and stole emergency civil defense equipment. Again, in March of 1972, arsonists broke in with hammer and chisel and set fires with highway flares. The fires smoldered for a full day before being discovered.[39] After this second incident, local officials stopped utilizing the bunkers.

SF 51 had its greatest moments in the latter part of its history (1972-1973), when its crews achieved record breaking scores during practice competitions. Even earlier, SF 51 tested highly. In 1966, it was awarded the "newly instituted" ARADCOM award "for excellence in combat proficiency," and repeated this distinctive level of readiness in 1969, 1970 and 1971.[40] In fact in 1970, it was ranked the best battery in the command, and in 1971, the finest in California. However it was in 1972 that SF 51 became perfect at its business when it scored 100% during a competition at McGregor Missile Range in New Mexico. Its terrific performance involved a launch using a new system. The 44 men involved served under Captain Michael V. Ivanoff and were given a "free shot"[41] (they were allowed to launch a second Hercules missile) as an award. Among those serving under Ivanoff were Chief Warrant Officer Richard H. Bridgman (who received the honor of initiating the second shot) and Chief Warrant officer William L. Hauger. As if that were not enough, the next year, 1973, SF-51 went "back to back"[42] by scoring 100% again at McGregor in this "short notice" annual practice. No other firing battery in the history of ARADCOM ever equaled this record. A trophy honoring this feat is on display at the California Military Museum in Sacramento.

The emergence of the Inter Continental Ballistic Missile by the superpowers, with their tremendous range, heights and speeds, made the Nikes obsolete. In 1972 another 36 acres were declared excess at Milagra and transferred to the Department of Interior with the intention of allowing locals the opportunity to create a public park. While the federal government still held 220 acres, in May of 1974, these 36 acres were given to the City of Pacifica.

On February 4 of that same year, Secretary of Defense, James R. Schlesinger, announced a "planned reduction of Army Air Defense NIKE HERCULES missile batteries in the Continental United States."[43] By this time 27 of the 48 batteries were operated by the National Guard. Among these on the initial list for decommission was SF

51. Only four batteries in Florida were retained. The Milagra and Sweeney unit was decommissioned in March. On June 20 a "Bon Voyage" party took place for the Sixth Region (San Francisco Region) Nike personnel. Among those making presentations were Colonel C.A. Miller, Commanding Officer, 13th Artillery Group and Brigadier General R.M. Mullens, Commanding General, 6th Region. Captain C. Patania, Jr. was listed as the Commander for Battery A, 1st Missile Battalion, 250th Artillery (SF 51).[44]

All that had been the Nike installation, which mostly existed east of the World War II bunkers, was destroyed. The buildings were demolished, the elevators and missile storage areas were buried. Even the asphalt was removed. After thirty-five years of service, Milagra no longer had a military function.

National Park Historian Stephen Haller sums up Milagra's appearance today:

> *The integrity of Milagra Ridge Military Reservation has been severely impacted since the end of its historic period in 1974 when the Nike site closed down. The original reservation has been reduced in size by approximately 22%; two of the three fire control stations are gone and the third has been moved; . . .Today, the only remaining structures of Nike SF 51 L are the two magazine elevator doors and the personnel hatches. The elevator doors themselves have been capped with concrete slabs about 8" thick. . . The Reservation's setting has also been severely impacted by encroaching residential developments...*

The structures at Milagra's Administration area were destroyed in 1983 to make room for the still present condominium complex. As described in the Sweeney Ridge portion of this study, much more is left of SF 51's control site. Fortunately for anyone who wishes to see what one of the missile launch sites looked like and, actually, how they operated, they can visit the GGNRA's Fort Barry. It has a restored launching complex, felt to be the best historical presentation of such a weapons system in the United States.

Whether at Milagra Ridge or Fort Barry, or other Nike sites, the historic meaning of these places speaks to the concern of Americans during the Cold War over nuclear attack. Readiness became a part of life, and the Nike sites, so close to residential neighborhoods throughout the Bay Area, were a constant reminder that the ultimate in devastating warfare was a possibility.

Defense during the Cold War was an absolute priority, and the Nike missile system was an integral part of the overall strategy. The Nikes were deployed in greater numbers and were located in more areas (300 sites) than any other missile system. The Nike system was the most expensive ever placed on alert and stayed operable longer than any other (between 1954 and 1974 in the Bay Area and 1954 through 1979 nationally).

From a local perspective, the Bay Area's Nikes represented the end of the line for fixed defenses for the Golden Gate and San Francisco Bay.[45] For nearly two hundred years, guarding them, and the people residing here, had represented a significant concern and manifested itself as an integral part of the human experience of living in this region.

MILAGRA RIDGE TO THE GGNRA

With Milagra's decommissioning in 1974, the City of Pacifica began using its 36 acres as a park. Then on August 12, 1975, the County of San Mateo's Board of Supervisors voted in favor of acquiring 238 acres of the Ridge, declared surplus by the United States General Services Administration, for purposes of creating a "public park or recreation area."[46] In September of 1978, the federal government executed a quit claim deed to the County for 229 acres of Milagra without cost as a 100% "public benefit grant."[47]

Thus the Ridge became a popular place for locals to hike and run dogs. Unfortunately, the old bunkers became dangerous play areas for youngsters. San Mateo County Parks and Recreation had proposed that hiking and biking trails would be built and even a youth hostel be located at Milagra. However, 1978 was the year of California's Proposition 13 that limited spending by state and local government. The plans were mostly placed on hold. The County was obligated to render biannual reports to the Division of Grants Assistance for the Heritage Conservation and Recreation Service. In his October 14, 1980 letter, County Parks and Recreation Director Duane Mattison had to remark on the lack of progress and mentioned the ramifications of Proposition 13 on the finances of the County.[48]

In the meantime, the GGNRA's 1980 General Management Plan, put priority status on preserving fortifications as historic resources "...to be managed and used primarily for the purpose of facilitating public enjoyment, understanding, and appreciation of their historic values..."[49] While the document pertained to the Park Service's Marin County properties, the philosophy was well suited to other places, such as Milagra Ridge, if they became part of the GGNRA.

By the spring of 1985, the County had realized it needed to let go of Milagra. On June 7, the *San Mateo Times* reported that the Parks and Recreation Commission would recommend to the Board of Supervisors turning the property over to the GGNRA. The article revealed that the Supervisors had for years discussed the advisability of such a move, along with transference of 120 additional acres at Sweeney Ridge[50] (not already within the GGNRA - - see the Sweeney Ridge portion of this study).

By July of 1987, County officials and the GGNRA were close to agreement. An article

in the *Pacifica Tribune* declared "World War II Relics Surrender to Vandals,"[51] as beleaguered County ranges made way for the new park presence.

In part because of its historical values, and the great views that can be gained from it, on September 15, 1987, the GGNRA acquired Milagra Ridge from the County.

ENDNOTES

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[4] Barker, "Archaeological," p. 9.

[5] Stanger, *South*, p. 25.

[6] Hynding, *From*, p. 24.

[7] *Ibid*., p. 26.

[8] Babal, *Top*, pp. 13-14.

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[10] A.S. Easton, Surveyor, *Official Map of the County of San Mateo*, 1868.

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[13] Emanuel Raymond Lewis, *Seacoast Fortifications of the United States: An Introductory History*, Pictorial Pictures Histories Publishing Company, Missoula, MT, 1990, p. 31.

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[15] Svanevik, *San Mateo County*, p. 42.

[16] United States General Services Administration, *Installation Survey Report: Milagra Ridge Reservation*, E.O. 11508, GSA, OSD, CONARC, March, 1972, p. 1.

[17] Svanevik, *San Mateo County*, pp. 87-88.

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[22] United States Army Air Defense Command, "Fact Sheet," August, 1962, p. 1.

[23] *Ibid*., p. 2.

[24] Mark L. Morgan and Mark A. Berhow, *Rings of Supersonic Steel - - Air Defenses of the United States Army 1950-1979*, Fort MacArthur Military Press, Bodega Bay, CA, Second Edition, 2002, p. 17.

[25] Freeman, *Historical*, Chapter 2.

[26] Barker, *Archeological*, p. 13.

[27] *Ibid*., p. 21.

[28] U.S. Army Corps of Engineers, (Map) "Milagra Ridge Military Reservation, Topograph," May 27, 1957.

[29] "Pacifica is a Hiker's Paradise," *Pacifica Tribune*, June 25, 1997.

[30] William Hauger, CW4, USA (Ret.), a retired Chief Warrant Officer 4 who served at SF 51 and presented his historical notes to the GGNRA in 2010.

[31] David Bridgman interviewed by Mitch Postel, Redwood City, August 18, 2010.

[32] James Jones, LT., Battery Commander, Btry A/1st Msl Bn 250 Arty, "Engineer Real and Installed Property, Milagra and Sweeney Ridge, Site 51 C & L," undated, archives of the San Mateo County History Museum.

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[36] U.S. Army Air Defense Command, "Welcome to the 13th Artillery Group," undated.

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[48] Duane Mattison, Director of Parks and Recreation, San Mateo County, letter to Rober F. Angle, Chief, Division of Grants Services, Heritage Conservation and Recreation Service, October 14, 1980.

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