



**Photograph 55:** Backyards of the CPO Housing are not separated by fencing; clothesline poles are common site furnishings throughout; view of San Francisco in background.



**Photograph 56:** Big Whites Officers' houses have curved planting bed in the front yards, against building foundations.

## OPERATIONS AREA

In the 1997 “Guide to Preserving the Character of the Naval Air Station Alameda Historic District,” the landplane and seaplane hangars were collectively referred to as the Hangars Area. This cultural landscape report includes the hangars in a larger functional area, the Operations Area, that includes the structures with which they are closely associated, the Control Tower, Airfield, and Seaplane Lagoon and two other related functional areas, the waterfront, south of the Seaplane Lagoon, and the magazines areas adjacent to the Airfield.

The portion of the Operations Area within the historic district is made up of two rectangular spaces that encompass the landplane hangars and Control Tower (Building 19) as well as the seaplane hangars and Seaplane Lagoon. The landplane hangars are Buildings 20 to 23, with Building 20 being the furthest north. These four buildings are situated in a north-south arrangement with Building 24 and Building 19 located at the southernmost end. The seaplane hangars are situated in an east-west arrangement perpendicular to the landplane hangars. They include Buildings 11, 12, 400, 39, 40, and 41. To the south of the seaplane hangars is a parking apron / taxiway and the Seaplane Lagoon. The waterfront portion of the Operations Area is not within the boundary of the historic district.

### Spatial Organization

Building 19 (Control Tower), Building 24, and the landplane hangars are located west of Monarch Street and south of Taxiway D. The Airfield, outside the boundary of the historic district, is to the west. The six buildings are south of West Tower Avenue, north of Taxiway H, and west of Ferry Point Road. Taxiway H and the Seaplane Lagoon are included in this area. Taxiway H is south of the seaplane hangars and is 3,000' x 420'. The Seaplane Lagoon is located south of the taxiway and measures 3,000' x 1,585' (**Photograph 57**).

Building 39 and the Seaplane Lagoon are located on the main north-south axis bisecting the Administrative Core. The north edge of the Seaplane Lagoon is bilaterally symmetrical with two ramps to the east and two to the west. The rip rap stone walls of the Seaplane Lagoon form of an imperfect rectangle; the southeast corner of the lagoon is cut diagonally rather than perpendicularly like the other three corners.

The spatial organization of the Operations Area within the historic district is characterized by vast expanses of pavement without sidewalks, curbs, or pedestrian paths and large buildings sited with aligned façades (**Photograph 58**).

Each hangar is a large, rectangular building, except that Buildings 11, 12, and 400 are abutted and form one large building complex. Historically there was a large expanse between the south side of Building 23 and the Control Tower, which was later infilled with the construction of Building 24 in 1990. The east and west facades of the Control Tower, Building 24, and the landplane hangars are aligned and parallel to Monarch Street.

The space between the building façade and curb on Monarch Street is 140'. To the west of these hangars the space is defined by the building facades and a chain link fence that runs north-south 170' west of the buildings. The distance between Buildings 20 to 23 is 175'. Buildings 11 to 41 are setback 80 feet from West Tower Avenue. Distances between these buildings average 330'.

The cube-like architecture of the hangar buildings and their massive size creates very strong spatial definition. Similarly, the straight lines of Seaplane apron (later Taxiway H) and the straight lines of the Seaplane Lagoon walls also give strong spatial definition to this area of the station (**Photograph 59**).



**Photograph 57:** 2005 aerial photograph, portions of the Operations Area within the boundaries of the historic district.<sup>6</sup>



**Photograph 58:** Operations Area. Note aligned façades of seaplane hangars, Buildings 39, 40, 11, 12, 400, and large expanse of pavement; Building 77 at far right.

<sup>6</sup> 2005 Alameda County Aerial, State of California's GIS website page "CAL-ATLAS GEOSPATIAL CLEARINGHOUSE," available at [www.atlas.ca.gov](http://www.atlas.ca.gov).  
DPR 523B (1/95)



**Photograph 59:** Seaplane hangars aligned with straight line of Seaplane Lagoon, facing northwest.

The density of development in this area is low. Large areas, including seaplane apron / Taxiway H, the Seaplane Lagoon and the spaces surrounding the hangars, have no buildings or other structures.

Buildings, roads and paths are laid out in the characteristic orthogonal pattern. There are no sidewalks and few paths in this area. Generally, there are so few paths and so little planting in this area that they do not contribute to the spatial organization. An exception occurs at the Control Tower and Building 77 where there are wide paths at the entries with deep lawn setbacks.

The primary roads in this area that contribute to the spatial organization are Monarch Street, West Tower Avenue and Ferry Point Road.

Land in the Operations Area is currently used for historic displays, loading docks, treating contaminated soil, vehicular circulation, storage for truck trailers, containers, equipment, drain tiles, vehicles, boats, dumpsters, gas tanks, pallets, and exercise equipment, ship docking, and recreational boating and fishing.

#### Views and Vistas

There are wide views of the area surrounding NAS Alameda from the Operations Area within the historic district because of the unobstructed spaces between hangar buildings, and the flat nature of the adjacent airfield and Seaplane Lagoon. Long internal view west along Tower Avenue terminate at Building 24 (**Photograph 58**). The seaplane hangar area affords views of the Seaplane Lagoon, piers, and ships to the south, and San Francisco and South San Francisco to the west (**Photograph 60** and **Photograph 61**). Looking north from the area east of Building 41 the trees in the Residential / MWR Area are visible, and east from the end of the taxiway, near southeast of Building 77 there is a view of the East Bay hills. From the landplane area, there is an open view of the airfield, and wide views of San Francisco. From the north end of the landplane hangar area, the East Bay hills, the Port of Oakland, and its associated cranes and ships are in view.



**Photograph 60:** View west along West Tower Avenue, seaplane hangar Building 41 at left.



**Photograph 61:** View facing northeast from east side of Seaplane Lagoon; Seaplane ramps in foreground, San Francisco – Oakland Bay Bridge and City of San Francisco in background.

Topography

The Operations Area is essentially flat with minimal pitch.

Vegetation

Planting in the Operations Area is very limited by necessity. The primary purpose of these areas was to service aircraft and aircraft operations; vegetation would conflict with this purpose and was minimized. Planting in the Operations Area is largely limited to building entries and narrow foundation planting beds.

Plant types in the Operations Area include eighteen species of trees, and twenty-eight species of shrubs and perennials. Tree types include six coniferous species, two deciduous trees, eight broadleaf evergreens and two palms. There are two types of fruiting trees; apple and a variety of citrus. Only the purple leaf plum is noted for its flower display. There are many more evergreen and coniferous trees and shrubs than species that lose their leaves in winter. Most tree species are found only at one location within the area. Trees used repeatedly include: the citrus and the fan palm. No particular species of shrub is used in great number.

Planting at landplane hangar Buildings 20 to 23 is limited to a sixteen to twenty foot wide foundation planter bed on the east side (**Photograph 62**). These beds include lawn, some shrubs, two large pines at the southeast corner of Building 22, a row of citrus trees east of Building 21 and a few other trees. There is a planted area on the west side of Building 21, approximately 15' x 40'. This planting area includes picnic tables and wine barrels – amenities for current tenants. Plants include an eclectic mixture of shrubs, grasses, palms and perennials. Similar plantings exist at the southeast corners of seaplane hangar Buildings 39 and 40, including a carpet of artificial turf at Building 40.

The two buildings in this area with traditional-style station planting are the Control Tower (Building 19) and Building 77. Both building have deep panels of lawn that wrap around the corners of the building (**Photograph 62** and **Photograph 63**). The only plants in the lagoon and Pier 1 areas are next to Building 601. The willow at this location, situated at the edge of the riprap edge of the lagoon is within the boundary of the historic district and the redwood at the southwest corner Building 601 is outside the boundary of the historic district.



**Photograph 62:** Lawn panels along east side of landplane hangars.  
Building 21 in foreground and Building 22 in background.



**Photograph 63:** Wide lawn panels with foundation shrubs around Building 19 (Control Tower).

The condition of plants in the Operations Area varies. Much of the vegetation appears to be very young, added within the past five to ten years, and as such has not matured. Building 19's species selection and style of plant layout reflect a more recent design character that likely dates to after the historic period of significance – the entry is flanked by three parallel rows of shrubs, unlike planting elsewhere on the station. Lawns are well maintained and shrubs are pruned throughout the Operations Area.

### Circulation

Circulation elements and patterns in the Operations Area within the historic district accommodate vehicle traffic and aircraft. The role of pedestrian traffic in this area was clearly secondary as evidenced by the lack of sidewalks and paths.

Primary vehicular circulation for the Control Tower, Building 24, and landplane hangar Buildings 20 – 23 are Monarch Street, and West Tower Avenue for seaplane hangar Buildings 11 – 41. West Tower Avenue is two lanes east and one lane west. Other roads in the area are one lane each direction. Driving lanes tee off Monarch Street between each of the landplane hangars and these roads end at the east façade of each building. Pedestrian circulation is not well defined in both areas, however there is an asphalt curb in many areas around the seaplane hangars that defines a “sidewalk area.” The former seaplane apron / Taxiway H runs east-west and would have served as a circulation component similar to the taxiways and airfield west of the landplane hangars. The Seaplane Lagoon and four ramps were historically important components of the circulation.

Ramps in the landplane hangar area provide for pedestrian circulation into the buildings. There are metal, portable access ramps southeast of Building 23, a 6' wide ramp at the east entry to Building 21, a 4' wide concrete ramp at the east side Building 21, and an 8' wide access ramp on the west side of Building 22 near the southern corner. A concrete ramp with metal railings is located at the west side of Building 19.

Existing paths in the landplane area follow an orthogonal path east of the planting bed on the east side of the hangars. The path is 5' wide, the full length of the block, and parallel to the buildings. Paths, 3' to 8' wide, leading to doorways tee

off from this path. No curb or wheel stops are present between this path and the parking area. A 15' wide asphalt path leads to the east entry of the Control Tower. East of Building 77 is an 8' concrete path and a 6' path lead to the building entries.

Generally, there are very few curbs in this area and the existing curbing is not standardized but varies by location. Examples include the curb at the Building 22 planting bed, some curbing at entry drives between hangars, 9" curbs running north-south, parallel to Monarch Street at hangar Buildings 20 – 23, each painted a different color. The curb on Monarch Street is set back 25' with diagonal parking on the street side. At Buildings 20 and 21 there is a double curb at Monarch Street and the second curb is defined by a piece of steel rail. There is 9" high curbing at the east side of the Seaplane Lagoon all the way to Building 64. Concrete curb runs east-west east of Building 40.

#### Water Features

The Seaplane Lagoon, sited on the north-south axis of the station, is the sole body of water within the Operations Area within the historic district.

#### Structures, Furnishing and Objects

The hangars in the Operations Area are large, prominent buildings whose size and alignment strongly characterize these areas of the station. The Seaplane Lagoon, centered on the station's north-south axis is another distinguishing feature. Many of the structures present in the area are utilitarian features designed to support the movement of aircraft.

Numerous utilitarian structures are present in the Operations Area within the historic district, many of which are surrounded by bollards. Aircraft tie downs are ubiquitous throughout both hangar areas. Aircraft tie downs consist of indentations in the concrete with metal bars or brackets set across them allowing a rope or other restraint to be passed underneath the metal without the metal protruding from the ground level. At Buildings 11 – 14 tie downs embedded into the concrete paving are spaced on a 10' x 12' 6" grid with some minor variations. Utility enclosures, fire equipment, and monitoring wells in the pavement are also ubiquitous in the area. Many utilitarian features in this portion of the historic district appear to be remnants.

Site furnishings in the Operations Area within the historic district are typically functional pieces to support personnel working in the area, however a few ornamental elements are also present. The area at the southeast corner of seaplane hangar Building 39 includes five picnic tables six rectangular concrete planters, two round concrete planters, and two trash receptacles. Two round pots and two ash urns sit south of the building. A table and chairs are also present south of Building 77, along with a bicycle rack, and a trash receptacle. In the north-south oriented area from Building 23 to the Control Tower are similar site furnishings, including recycle and trash bins, a picnic table, chairs, a wood bench, two terracotta planters, an ash urn, a communal mailbox, and news-racks. A bus stop on Ferry Point Road also includes a bench, sign, and bollards.

Fencing, lighting, and signage are prevalent features throughout much of the Operations Area, including those portions within the historic district. There are many fences throughout the Operations Area, some permanent but most are temporary/portable 6' or 8' chain link fencing, with and without barbed wire. Fencing is used to control access and to sub-divide large areas for storage and other private activities. Typical cobra head lights are present throughout the area except northeast of Building 40 where there is one unique light. Traffic signs are the most common in the area, but there is also a triangular sign at Building 77 for the museum, and a new Creative Technology sign on Building 22. A round concrete and brick base with a rectangular wood sign is located at the west side of the Control Tower.

Although the location and orthogonal shape of the Seaplane Lagoon are its most prominent features, the presence of utilitarian structures and features helps define the purpose and function of the lagoon. The bulkhead on the north side of

the Seaplane Lagoon is concrete with diagonal supports extending into the bay and four evenly spaced ramps approaching the water. An 8' chain link fence runs east-west along the top of the bulkhead for about 80'. There are 10' long wood curbs, spaced about 50' apart at the edge of the bulkhead. One buoy is floating in the northwest quadrant of the lagoon.

The remnants of a pier and docks are present along the east side of the Seaplane Lagoon. A hexagonal pier, south of center along the east side, was built in the 1970s, however is in disrepair and has been blocked off and marked with a no-trespassing sign warning of potential environmental hazards. There are two dock remains north of the hexagonal pier. Both are concrete structures, one 10' x 13', T-shaped with four ship tie downs, and the second 6' x 7' with two tie downs. There are five additional similar concrete structures at the lagoon south of the hexagonal pier.

A wooden boat dock with gang planks to access boats extends north from Pier 1 on the diagonal southeastern corner of the Seaplane Lagoon. This area also has timber dolphins set in the water to prevent boats from hitting Building 64. Rip rap continues to this point and beyond. Metal and wood bridges provide access to Buildings 15 and 64.

Most of the monuments in the Operations Area are associated with Building 77. Three flagpoles are present around the building, one with a crossbar and no flag, and two on the south side of the building, with flags attached. An anchor and four stone monuments with plaques are also installed at Building 77. There are also historic vehicles on display at this building, but these are not considered monuments in the same sense as the monuments on the north side of Building 1 or the displayed aircraft (on loan to the station) by the East Gate. The three gun saluting battery adjacent to Building 19 installed in the 1950s is identified as Building 380.

There are very few vertical hardscape elements in the Operations Area of the historic district. The Seaplane Lagoon revetment is a coarse stone rip-rap with timbers. There are three small concrete objects or footings at the northeast corner of the lagoon.

Hardscape in the Operations Area includes numerous curbs and beams throughout. There are several 14" x 14" x 15' concrete features, some larger, and some Y-shaped, at various locations. They are used as curbs or barriers or simply stockpiled in places. South of Buildings 12, 39, and 400 there are a series of new large, curbed, rectangular objects in the taxiway area being used to clean soil. There is a row of modular concrete pads about 30" x 36" with steel pieces at Building 15 to Building 601.

## **B10. Significance (cont.):**

### Historic Context

The Navy established NAS Alameda as a component of its national plan to strategically develop naval aviation and to position air stations across the country in the mid to late 1930s. During World War II, NAS Alameda was effectively adapted to support naval air power, which played a central and crucial role in the Pacific theater. The station grew rapidly to enable it to serve and support important wartime activities. NAS Alameda was one of three major air stations on the West Coast to support operations of aircraft carrier groups, patrol squadrons, and utility squadrons, and it conducted critical functions for aircraft assembly and repair. Under the theme of Pre-War Preparedness in the Statewide Study, NAS Alameda is listed among the permanent bases built during the period leading up to World War II. The Statewide Study notes that military facilities like NAS Alameda share characteristics, such as most were constructed in a short period of time and many were built following a "total base design" with adaptations required during rapid war time

construction. The Statewide Study also observed that many late 1930s military facilities were built, like NAS Alameda, following construction and architectural trends of the period, many of which included reinforced concrete buildings.<sup>7</sup> Following naval aviation's successes in World War II, the Navy established the aircraft carrier as a central basis for naval operations, with operations and support activities for aircraft and carriers becoming standard Navy functions during the latter half of the twentieth century. NAS Alameda supported carrier operations as part of naval actions and participation in overseas conflicts during the Cold War era, and continued to carry out its main function of aircraft overhaul and repair. As noted in the Statewide Study, much of the focus for military development during the Cold War, however, was on research and development of innovative aircraft and weapons. While it conducted vital functions, NAS Alameda's support role was part of the Navy's standard operations during this period and thus the station did not play an important direct role in advancement of military research, testing, development, or evaluation of aircraft or weapons systems, which constituted the historically significant themes of Cold War naval missions and activities.

This section presents the historic context for NAS Alameda and the historic development and evolution of features and functions of the landscape located therein. Please note, contemporary street names are used in this narrative context and its illustrations, rather than the historical number and letter street names.

## **Pre-World War II and World War II (1917-1945)**

### **Establishment of NAS Alameda (1917-1940)**

Experiments in naval aviation began as early as 1910 when the first biplane took off from the deck of the cruiser *USS Birmingham* (CL-2). During a 1913 naval exercise off the coast of Cuba, the entire naval aviation contingent participated in scouting and spotting mines and submarines, which marks the first use of Navy aircraft. Despite the growing usefulness of naval aviation – further demonstrated through the use of seaplanes for anti-submarine patrols in World War I, the 1921 demonstration sinking by aircraft of the former battleship *Ostfriesland*, and successful employment of aircraft in 1923 fleet exercises – funding to expand naval aviation activities was limited during a period of post-war low military spending and as the army and navy debated the merits and control of aviation for military purposes. Naval aviation was bolstered by the establishment of the Bureau of Aeronautics in 1921, which promoted integrating aircraft with fleet operations. Available funds for naval aviation were generally spent on aircraft during this period, creating overcrowding at the few facilities that served aircraft, and little money was spent directly on creating naval stations designed for aircraft operations. Two of the earliest naval facilities that had aircraft functions were in San Diego, which was established in 1911 and shared air facilities with an Army air field, and in Pensacola, Florida which was established in 1914 and was an adapted naval yard. Construction in the 1930s would place NAS Alameda on equal footing with these stations.<sup>8</sup> Increases in Depression-era federal spending during the early 1930s and the growing concerns regarding national defense in response to geo-political changes in Europe and Asia boosted funding for naval aviation during this period. The Vinson-Trammell Act of 1934 helped expand naval aviation activities, providing for acquisition of aircraft to accompany new ships, and the improvement of naval bases. At the same time, the military expanded their presence in California.

<sup>7</sup> JRP Historical Consulting Services, "Historic Context: Themes, Property Types, and Registration Requirements," Volume 3, *California Historic Military Buildings and Structures Inventory*, 7-1 and 7-2. As noted, the description "total base design" is not a phrase used historically to describe the master planning process on NAS Alameda. The phrase is presented in the Statewide Study and is applied to NAS Alameda in that document.

<sup>8</sup> Julie L. Webster, United States Army Construction Engineering Research Laboratory, "Historical and Architectural Overview of Military Aircraft Hangars," Prepared for United States Air Force Headquarters, Air Combat Command, 1999 revised 2001, 1-9 to 1-10, 2-13, 3-24 to 3-41, [http://www.cecer.army.mil/TechReports/webster98/webster98\\_idx.htm](http://www.cecer.army.mil/TechReports/webster98/webster98_idx.htm) (accessed September 15, 2009); Kirby Harrison, "U.S. Naval Aviation 75 Years of Pride and Tradition," *Naval Aviation* (May-June 1986): 4, [www.history.navy.mil/nan/backissues/1980s/1986/mj86.pdf](http://www.history.navy.mil/nan/backissues/1980s/1986/mj86.pdf) (accessed January 10, 2009); *Chronology of Significant Events in Naval Aviation, 1910-1915* (Washington, DC: Naval Aviation History Office, 1997) 4, 11; Charles J. Gross, *American Military Aviation: the Indispensable Arm*, (College Station: Texas A&M University Press, 2002) 48-50.

Before this time, a majority of military bases were located in the midwestern, southern, and eastern parts of the country. The Navy reorganized into Atlantic and Pacific fleets during the 1920s, spurring construction of naval facilities in California. California – and the San Francisco Bay Area in particular – offered a mild climate and undeveloped land, an excellent combination for naval operations and training. In 1935, Navy representatives met with Alameda city officials to discuss purchasing 1,000 acres of low, tidal land west of the city for an air station. The negotiations were successful, and in June 1936 Congress passed Public Resolution No. 19, which authorized President Franklin D. Roosevelt to accept the City of Alameda's offer for the land. By the end of the year, the Bureau of Yards and Docks was preparing a plan for development of the new station.<sup>9</sup>

The Navy had long considered the area at the western end of Alameda for naval operations. Beginning in the 1870s and continuing into the early 1900s, the City of Alameda (incorporated in 1872 and re-incorporated as a Charter City in 1884) had experienced significant infrastructure growth, attracted a number of industries, and grown in population. By the 1910s, local businessman John J. Mulvany began promoting Alameda as an attractive site for a military installation. He began pressing the Navy and Congress to establish such a facility at the low-lying area west of the city called Alameda Point.<sup>10</sup> Mulvany's efforts led to the creation of a special congressional fact-finding committee headed by Admiral James Helm in 1917. The subsequent Helm Report, released that same year, recognized Alameda's advantages: local industry and transportation infrastructure, shallow waters to create as many acres as needed through dredging the sandy bay, access to deepwater, and its relatively isolated location. His report recommended that the Navy purchase land at Alameda for development of a supply station, comparable to the facility at Hampton Roads, Virginia that housed and supported Navy aircraft. The Alameda station was to be part of a chain of naval bases along the West Coast stretching from San Diego to Seattle.<sup>11</sup>

Despite local support and continued requests from the Navy, Congress did not approve construction of a naval base at Alameda for nearly two decades. In the interim, the City, private interests, and the Army developed parts of what became NAS Alameda. West of Webster Street in Alameda, the city allowed a private corporation to create 900 acres of filled land and to construct an airport along the Southern Pacific Railroad Mole that jutted into the San Francisco Bay from the western tip of the island. This later became the northwest corner of the station. The Alameda Municipal Airport opened in March 1929 (**Photograph 64**). The airport attracted to its facility the Curtis-Wright Corporation. Later, Pan-American Airways flew seaplanes from the peninsula, including the famous "China Clipper" in 1935 that inaugurated commercial trans-Pacific air service. The site of the aircraft's departure is commemorated by California Historical Landmark #968, located near the base flagpole in front of Building 1, although the actual site of the airport bay was to the west near the intersection of Runway 7-25 and the taxiway that connects it to Runway 13-31. Less than two weeks after

<sup>9</sup> Webster, "Historical and Architectural Overview of Military Aircraft Hangars," 3-41 and 3-43; JRP Historical Consulting, "The History and Historic Resources of the Military in California, 1769-1989," Volume 2, California Historic Military Buildings and Structures Inventory, 1-1; Jones & Stokes, "Pre-Final National Register of Historic Places Nomination for the Naval Air Station Alameda Historic District" (prepared for Naval Facilities Engineering Command, Southwest and Base Realignment and Closure Program Management Office West, January 2008), 8; and LCDR. B.L. Allbrandt, "History of the Naval Air Station and Naval Aviation Depot at Alameda, California" (May 1996), 2, Aerospace Maintenance Duty Officers' Association, <http://www.amdo/history.html> (accessed September 11, 2009); "Construction of 2 Dirigibles By Navy Urged," *Oakland Tribune*, (November 16, 1936): 4.

<sup>10</sup> Alameda Point is the historic name of the west Alameda area. This name is also being used for current planning efforts on former NAS Alameda. This historic name is not be used further in this report so as to avoid confusion with the current planning efforts. For historic reference see: Frederick L. Paxson, "The Naval Station at Alameda, 1916-1940: A Case Study in the Aptitude of Democracy for Defense," *The Pacific Historical Review*, Vol. XIII, No. 3, September 1944: 235-250.

<sup>11</sup> Allbrandt, "History of the Naval Air Station & Naval Aviation Depot," 2; Sue Lemon, "Alameda, Calif., Naval Air Station, 1938," in *United States Navy and Marine Corps Bases, Domestic*, ed. Paolo E. Coletta, assoc. ed. K. Jack Bauer (Westport, Conn: Greenwood Press, 1985), 9; and Paxson, "The Naval Station at Alameda, 1916-1940: A Case Study in the Aptitude of Democracy for Defense," *The Pacific Historical Review*, Vol. XIII, No. 3, September 1944: 235-250.

the completion of the Alameda Municipal Airport, a private venture began construction of the San Francisco Bay Aerodrome on leased acreage in the area bound by Webster Street to the east, present day Atlantic Avenue to the south, and Main Street to the west. The Aerodrome was dedicated in August 1930.<sup>12</sup>



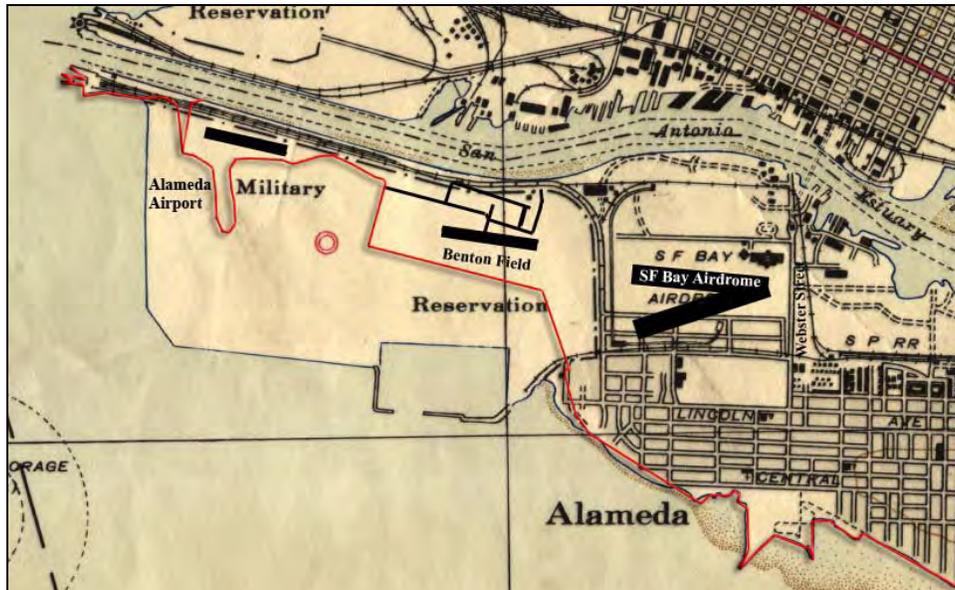
**Photograph 64:** Alameda Municipal Airport, 1936.<sup>13</sup>

During that same year, the Army began building its own airfield, Benton Field, on 128 acres of what had been partially submerged lands between the San Francisco Bay Aerodrome to the east and the Alameda Municipal Airport to the west. The Army dredged and infilled 100 acres in the area that became the northeast corner of the NAS Alameda (**Illustration 2**). With the assistance of the Works Progress Administration in 1935, the Army constructed roads, railroad spurs, utilities, a small runway, and well in the land now occupied by the administrative core of NAS Alameda.<sup>14</sup> None of the facilities associated with these early aviation activities remain on station.

<sup>12</sup> Paxson, "The Naval Station at Alameda, 1916-1940: A Case Study in the Aptitude of Democracy for Defense," *The Pacific Historical Review*, Vol. XIII, No. 3, September 1944: 245. The Navy later used the Airdrome property and this area east of Main Street was an annex to the NAS Alameda station. Most of the former annex / Airdrome property has been transferred out of Navy control and is not addressed in this report.

<sup>13</sup> Alameda Airport- Sunnyvale, Calif., proposed seaplane base, December 18, 1936, California - Alameda -pictures, maps, justifications, RG 5, CEC/Seabee Museum, NBVC, Port Hueneme.

<sup>14</sup> Allbrandt, "History of the Naval Air Station & Naval Aviation Depot," 2; Lemon, "Alameda, Calif., Naval Air Station, 1938," 9; IT Corporation, "Final Comprehensive Guide to the Environmental Baseline Study Alameda Point, Alameda California" (prepared for Department of the Navy Southwest Division, Naval Facilities and Engineering Command, San Diego, 2001), Figure 6-20; US Navy, "Naval Air Station Alameda, California History 1 Nov 40 – 31 Dec 44," Box 1 of 2, NAS Command History, 27 volumes, 1940 to 1992, US Naval Shore Establishments, Record Group 181, National Archives Pacific Region (San Francisco) [hereafter RG 181, NARA (San Francisco)]; and Jones & Stokes, "Pre-Final National Register of Historic Places Nomination for the Naval Air Station Alameda Historic District," 18.



**Illustration 2:** Circa 1938 data overlaid on 1942 USGS Map. Data added to map: location of shoreline (red), Alameda Airport, Benton Field, and San Francisco Bay Airdrome. <sup>15</sup>

The Navy acquired the Alameda Municipal Airport in June 1936 and obtained the unfinished Benton Field from the Army in October 1936, with authorization the following year for the Navy to spend what the Army would have spent for their air base. All of the more than 2,000 acres of the acquisition was submerged or was fill. Natural land west of Main Street, that was to become part of NAS Alameda and was originally part of the Mexican-era Peralta land grant, was privately owned at this time and subsequently acquired / leased. Congress appropriated \$15 million for the construction of a facility at Alameda to support naval aviation in 1937, but Pan-Am required time to move from Alameda Municipal Airport, and so did the Army from Benton Field, delaying commencement of construction for the new naval air station.<sup>16</sup>

Meanwhile, as military tension around the world increased, Congress requested the Secretary of the Navy submit a plan for improving the country's defenses. Admiral Arthur Japay Hepburn headed a board convened to review the country's defense capabilities and make recommendations for improvements. Its work, set forth in the Hepburn Report of 1938, directed Navy expansion. Among its recommendations was the establishment of three types of naval air facilities: 1) major air stations with the ability to assemble and maintain aircraft, along with management of regular operations; 2) secondary stations designed only for regular operations; and 3) training stations. The Hepburn Board boosted the status of the new navy property in Alameda by recommending establishment of NAS Alameda as one of the major air stations on the West Coast supporting both operations and aircraft assembly and repair (A&R). Major stations were planned to accommodate two to four carrier groups, three to six patrol squadrons, and two utility squadrons. The plan called for NAS Alameda to support two carrier groups (with possible expansion to four carrier groups) and five patrol squadrons,

<sup>15</sup> USGS, *Oakland West, Calif*, 1:62,500, topographic map, 1942; Ace and Judy Campbell, *Map of Alameda Airport, Benton Field, and San Francisco Bay Airdrome, circa 1938*, Waterfront Action, [www.waterfrontaction.org/history/55\\_lagoon.htm](http://www.waterfrontaction.org/history/55_lagoon.htm) (accessed July 2010).

<sup>16</sup> Allbrandt, "History of the Naval Air Station & Naval Aviation Depot," 2-3; Paxson, "The Naval Station at Alameda, 1916-1940: A Case Study in the Aptitude of Democracy for Defense," *The Pacific Historical Review*, Vol. XIII, No. 3, September 1944: 245 and 249; Naval Air Station Alameda, *U.S. Naval Air Station Alameda, California* (Baton Rouge, LA: Army and Navy Publishing Company of Louisiana, 1945) np.

along with functions to perform aircraft overhaul.<sup>17</sup> NAS Alameda was one of six major naval air stations that the Hepburn Board recommended for construction. The other stations included NAS Norfolk (Virginia), NAS San Diego (North Island), and NAS Seattle (Sand Point), which were already in use for naval aviation activities, and were expanded in response to the Hepburn Report. NAS Alameda, along with NAS Jacksonville (Florida) and NAS Quonset Point (Rhode Island), were completely new stations recommended for construction under this program, although Congress had already approved funding for NAS Alameda. The design and construction of NAS Alameda occurred around the same time as NAS Jacksonville and NAS Quonset Point. The assertive conclusion of the Hepburn Report was that the need for additional aircraft facilities was greater than for other military craft and the result of the report was that aviation was given priority in naval operations and planning.<sup>18</sup>

### Station Planning and Design

The Navy's BuDocks, Department of Planning and Design, designed the new Alameda station with civilian architects, engineers, and planners under the direction of Captain Thomas Trexel. In general, plans for the station's design followed hierarchal and organizational planning doctrines used for military bases and naval air facilities of the period that had evolved during the early twentieth century. Plans for NAS Alameda – drafted during peacetime – envisioned a 1,000-personnel facility that would house 200 aircraft and serve as home port for two aircraft carriers. Because early military aircraft were shipped in parts for on-site assembly, the station's original plans featured an A&R Department. The layout and construction of NAS Alameda was conducted under a master planning process that has been referred to as a "total base design."<sup>19</sup> The station's original design received an award for functional planning at the Seventh Annual Architectural Exhibition of the Association of Federal Architects in Washington D.C. in 1939.<sup>20</sup> Within a couple of years, the importance of the station's functional design became apparent when the station needed to adapt and expand its operations and increase personnel during war time mobilization. Similar to efforts made by the Army, the Navy adopted this master planning approach to design in the years between World War I and World War II as a way to improve the efficiency and function of its facilities, and to provide greater coherence between naval bases. BuDocks and the design team utilized standardized designs for some buildings that were developed during the previous two decades by the Bureau of Aeronautics (BuAer) and the Bureau of Ordnance, which had standards for siting and constructing structures for various functions. BuDocks employed these standards and plans for many buildings and structures as it developed each station. Following completion of the Hepburn Report, BuDocks and BuAer further refined standards and requirements

<sup>17</sup> Capt. Albert L. Raithel Jr, USN (ret.), "Patrol Aviation in the Pacific in WWII," *Naval Aviation News* (July-August 1992): 32, <http://www.history.navy.mil/nan/backissues/1990s/1992/ja92.pdf> (accessed January 10, 2009); Webster, "Historical and Architectural Overview of Military Aircraft Hangars," 4-22 to 4-23, 4-28; and United States, *Building the Navy's Bases in World War II: History of the Bureau of Yards and Docks and the Civil Engineer Corps 1940-1946*, vol. 1 (Washington, D.C.: United States Government Printing Office, 1947), 232.

<sup>18</sup> Webster, "Historical and Architectural Overview of Military Aircraft Hangars," 3-41 and 3-43; JRP Historical Consulting, "The History and Historic Resources of the Military in California, 1769-1989," Volume 2, *California Historic Military Buildings and Structures Inventory*, 1-1; Jones & Stokes, "Pre-Final National Register of Historic Places Nomination for the Naval Air Station Alameda Historic District," 8; and LCDR. B.L. Allbrandt, "History of the Naval Air Station and Naval Aviation Depot at Alameda, California" (May 1996), 2, available online at: Aerospace Maintenance Duty Officers' Association, <http://www.amdo/history.html> (accessed September 2009); United States, *Building the Navy's Bases in World War II: History of the Bureau of Yards and Docks and the Civil Engineer Corps 1940-1946*, vol. 1, 229.

<sup>19</sup> H.C. Sullivan, "Base Planning," *U.S. Navy Civil Engineer Corp Bulletin 1*, no.5 (April 1947):118-122; US Navy, Command History 1 of 25, "Naval Air Station Alameda, California History 1 Nov 40 – 31 Aug 45," Box 1 of 2, NAS Command History, 27 volumes, 1940 to 1992, US Naval Shore Establishments, RG 181, NARA (San Francisco); JRP Historical Consulting, "The History and Historic Resources of the Military in California, 1769-1989," Volume 2, *California Historic Military Buildings and Structures Inventory*, 6-1 – 6-4; JRP Historical Consulting Services, "Historic Context: Themes, Property Types, and Registration Requirements," Volume 3, *California Historic Military Buildings and Structures Inventory*, 7-2 – 7-3.

<sup>20</sup> US Navy, Command History 1 of 25, "Naval Air Station Alameda, California History 1 Nov 40 – 31 Aug 45," Box 1 of 2, NAS Command History, 27 volumes, 1940 to 1992, US Naval Shore Establishments, RG 181, NARA (San Francisco).

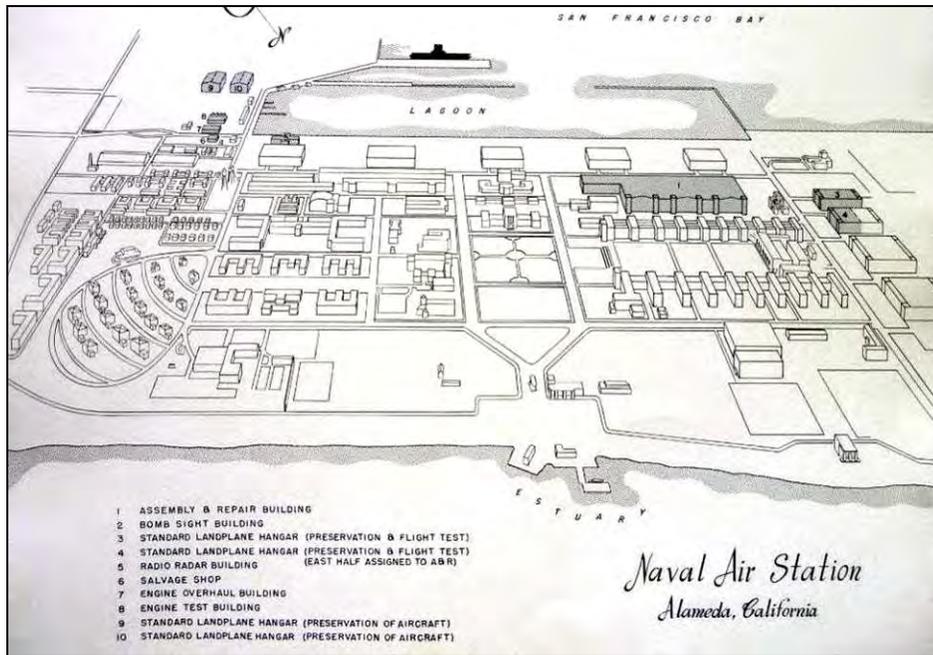
for naval air stations with local conditions necessitating alterations for improved functionality at given locations.<sup>21</sup> NAS Alameda followed many of the standards and requirements of the period. Yet, NAS Alameda has a more formal plan and different architectural character – both of which have been retained – than any of the other stations recommended for construction by the Hepburn Report.

BuDocks developed an approach for NAS Alameda that placed activities and functions in relation to each other, with organization of, and circulation between, station activities and functions receiving highest priority. Following the planning principles of the period, planners located piers, seaplane functions, landplane services, industrial facilities, storage, administration, and personnel activities, in an orderly fashion so that work could flow smoothly. As a result of this organization, naval air stations designed and built in this period share similar organization. This can be seen in the comparison of the general layout of NAS Alameda and NAS Jacksonville, both designed and built starting in the late 1930s (**Illustration 3** and **Illustration 4**). Landing areas for both landplanes and seaplanes are at the edges of the bases. Hangars, both seaplane and landplane, adjoin the landing areas. The A&R facilities are within easy access of both types of hangars. On the opposite side of A&R from the hangars are the storage and materials areas. Administrative functions are placed at the center of the station, between the operational areas and residential areas. Enlisted quarters are closest to the work areas so that enlisted personnel could easily access their assigned duty. Officers' and family quarters were placed further from the operational activities of the stations. Enlisted personnel and officers each had their own separate recreational areas. For safety, hazardous materials and ordnance were furthest from the residences, some of which were on the landing fields. The location of natural features relating to the docks and seaplane facilities determined the final placement of this interlocking system of activities. Important to the master planning was consideration of future expansion, which led some areas to be left undefined in initial plans for station, such as the area east of the Seaplane Lagoon on NAS Alameda.<sup>22</sup>

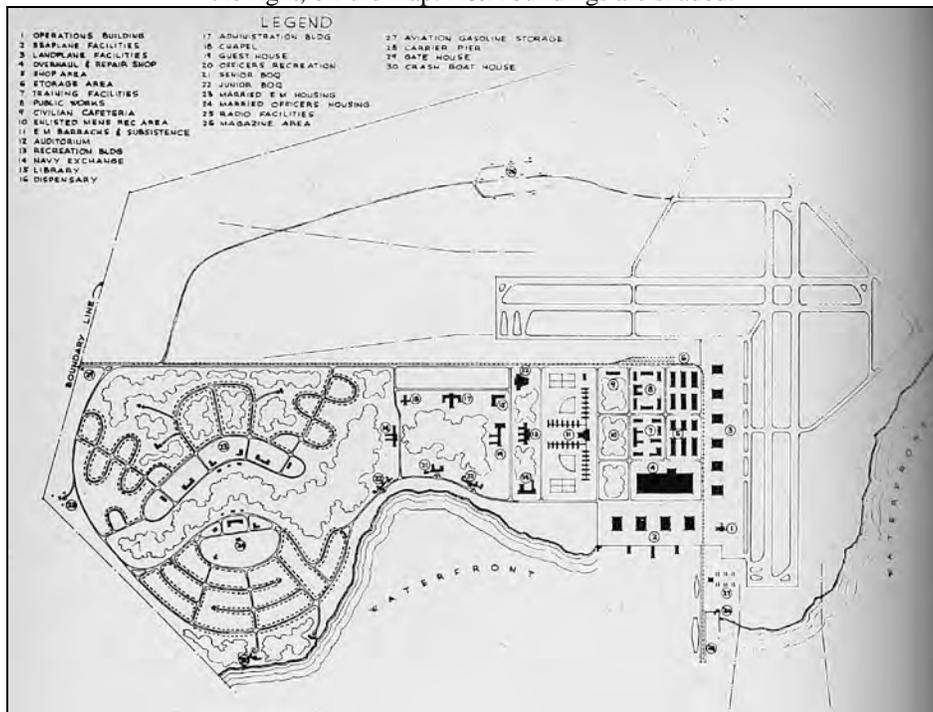
The NAS Alameda base plan also had a comprehensive functional organization. Early plans for NAS Alameda show a station arranged along intersecting axes and divided into functional areas, although without details that would emerge during the station's early years. In the early plans from 1939, the north-south axis ran from the Main Gate bisecting the entry mall and the Administration Building (Building 1) with an east-west axis dividing the administrative / residential area on the north side of the station with the industrial and operations on the south side. This east-west axis was an open area that was to align with the middle of the Airfield on the west end of the station, with landplane hangars flanking this axis. There was also another east-west axis in the original plan that bisected the BEQ quadrangle (Buildings 2, 3, and 4) and crossed the north-south axis in the middle of the entry mall in front of Building 1 and then continued along the median of what is now West Essex Drive (**Illustration 5**). The BEQs with their Galley / Mess Hall (Buildings 2, 3, and 4) were shown in their current location. Bachelor Officers Quarters (Building 17) were to be two mirrored buildings facing a central green space similar to that of the enlisted quadrangle. Officers' Housing was the only non-axial portion of the station, planned as an irregular loop in the northeast corner. The original A&R facility (Building 5) was planned at half its eventual size and the location of several functions were not yet assigned, such as much of the recreation facilities and some of the residences. Early plans for station do not include some support / storage facilities or facilities that required siting and design input from specialized departments.

<sup>21</sup> Charles F. O'Connell, Jr., "Historic American Engineering Record, Quonset Point Naval Air Station HAER RI-15," Historic American Engineering Record, Library of Congress, Washington D.C., <http://memory.loc.gov/habshaer> accessed January 26, 2010, 39-45; United States, *Building the Navy's Bases in World War II: History of the Bureau of Yards and Docks and the Civil Engineer Corps 1940-1946*, vol. 1, 3-9, 61-70.

<sup>22</sup> Webster, "Historical and Architectural Overview of Military Aircraft Hangars," 4-26; US Navy, "Naval Air Station Alameda, California History 1 Nov 40 – 31 Dec 44," Box 1 of 2, NAS Command History, 27 volumes, 1940 to 1992, RG 181, NARA (San Francisco); JRP Historical, "The History and Historic Resources of the Military in California, 1769-1989," 6-22, 6-23; H.C. Sullivan, "Base Planning," *Civil Engineering Corps Bulletin* (April 1947): 118-122.

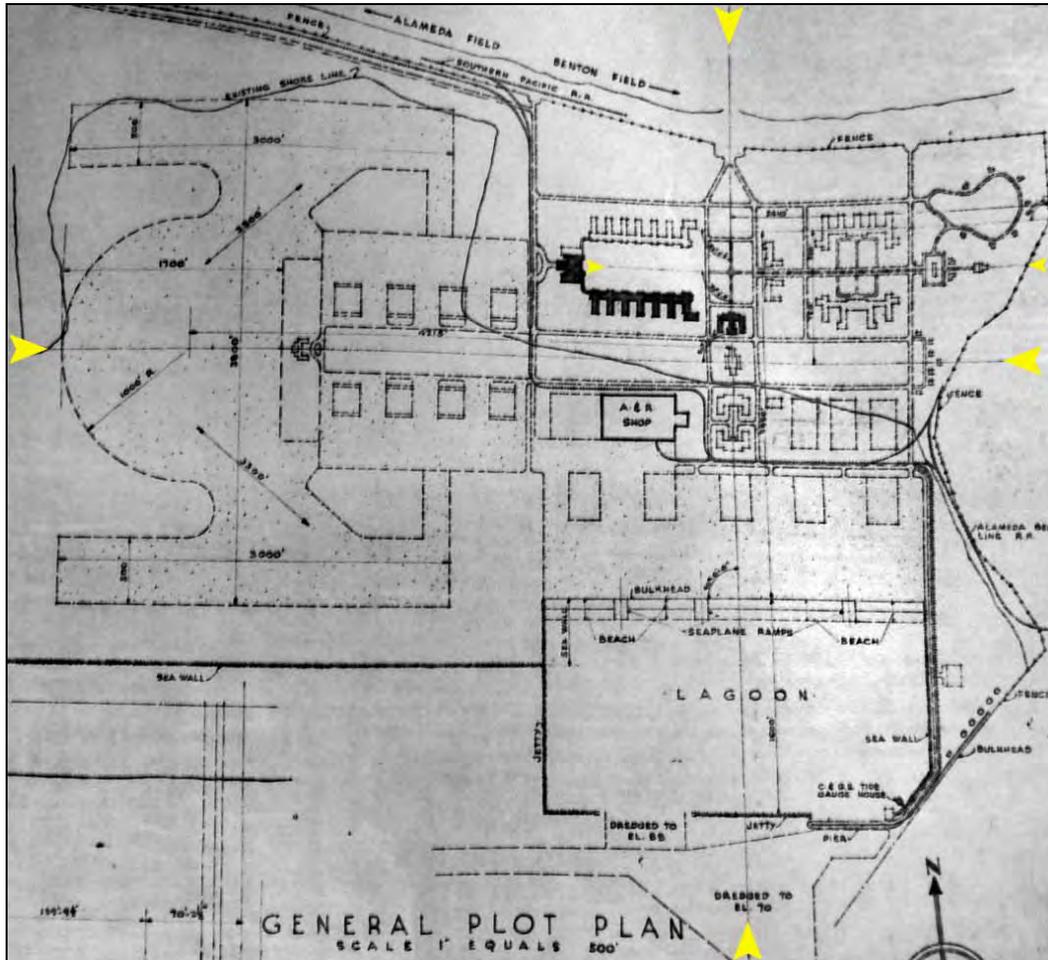


**Illustration 3:** General plan of NAS Alameda at the end of World War II. Airfield is to the right, off the map. A&R buildings are shaded.<sup>23</sup>



**Illustration 4:** General plan of a naval air station master planning. Shown here is a plan for NAS Jacksonville from 1939. Design elements and functional areas are similar to those found on NAS Alameda.<sup>24</sup>

<sup>23</sup> “Naval Air Station Alameda, California Map,” Naval Air Station Alameda, California 1940-1945 photo album, National Archives and Records Administration, Pacific Region, (San Francisco), np; The hangars listed as 9 and 10 were under construction and part of the post-war planning to preserve aircraft returning from the Pacific theater.



**Illustration 5:** 1939 Station Plan. Primary axes highlighted with large arrows; secondary axis highlighted with small arrows.<sup>25</sup>

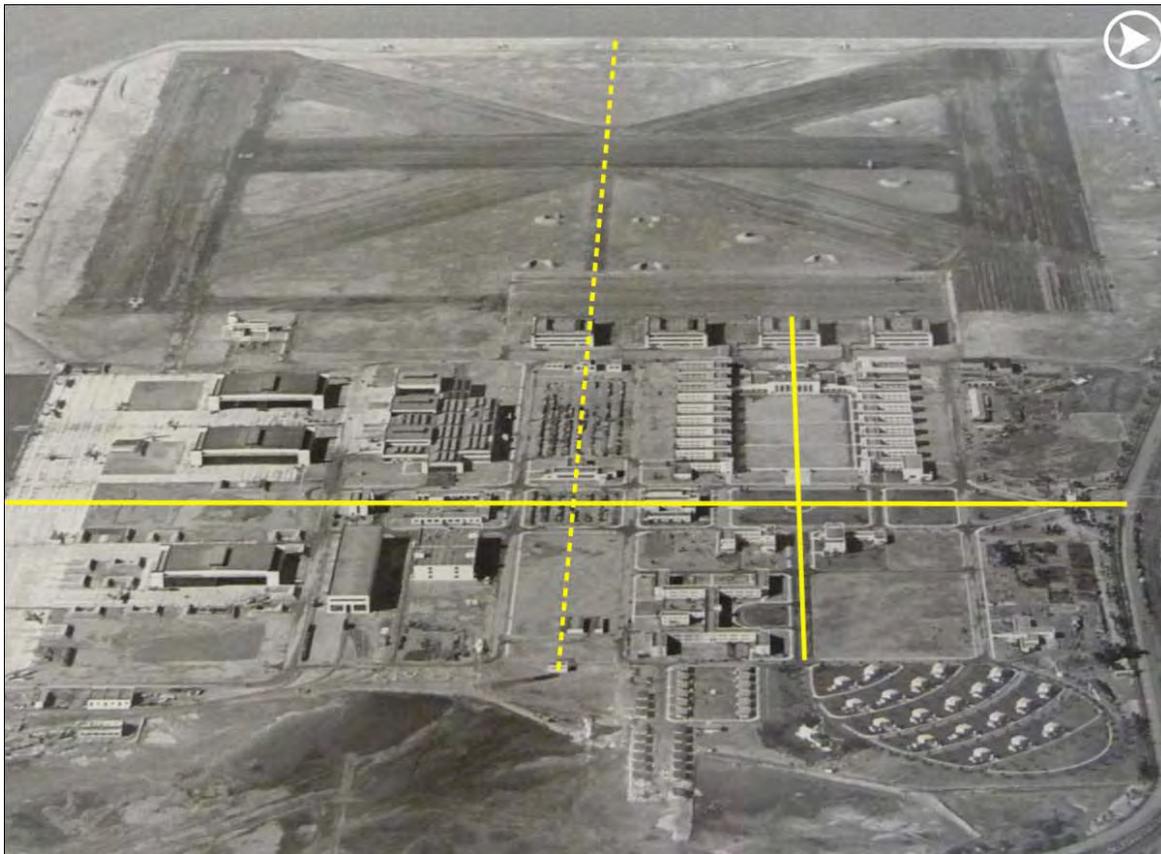
As dictated by their secondary function and/or for safety, some facilities were not placed within the formal hierarchical planning of the station's major functions or were placed away from more densely occupied portions of the station. These included magazines, locomotive repair shop, paint / oil storage, and engine test cells.

Functional and departmental requirements led to specific siting of some facilities and changes in the station's design and plans during the planned phased construction of the new station. The landplane hangars were repositioned parallel to the Airfield and aligned with a secondary axis (**Photograph 65**), and later the open space along the original east-west axis was filled with additional buildings. Placing the additional buildings in that space situated them near the industrial and storage facilities thereby maintaining functional efficiency. The axis from the BEQ quadrangle across the entry mall stretching to the Officers' Housing area thus received prominence. Station planners also increased the number of officers

<sup>24</sup> Oswaldo A. De La Rosa, "The Planning of Naval Air Facilities," *Civil Engineering Corps Bulletin* 6, no. 3 (March 1952): 68. Current aerial photographs show that NAS Jacksonville has only some elements of this layout. It is unclear what components of this design were initially constructed and which were altered over time.

<sup>25</sup> Bureau of Yards and Docks, "US Naval Air Station Alameda Administration Building, Barracks, Mess Hall and Galley General Location Plan and Detail Plot Plan," Yards and Docks #130990, April 1939, not filed, Plans and Maps Room, Building 1 on former NAS Alameda, Alameda, California.

that could be housed in the northeast corner of the station by altering the original single-street loop to an egg-shaped configuration with curved streets (see **Illustration 5** and **Photograph 65**). This modification to the 1939-plan maintained the design concept of setting the Officers' Housing apart from the axial plan and orthogonal grid. Almost all of east side of the station, and its temporary type construction, emerged only with the demands of war. Despite these changes, the evolution of the station's layout during both the initial years of construction prior to U.S. entry into World War II and during the war left intact much of the station's original planning and its important principles of organization, functionality, efficiency, and hierarchy, adapting well to the enormous demands of war. The initial plans for a 1,000 personnel facility evolved during the war to function with 18,000 Navy personnel and 9,000 civilians working on the station.<sup>26</sup>



**Photograph 65:** January 28, 1942. Note landplane hangars, realigned from 1939 station plan, oriented to what was originally a secondary axis (solid east-west line), rather than the original primary axis (dashed line).<sup>27</sup>

<sup>26</sup> Bureau of Yards and Docks, "US Naval Air Station Alameda Administration Building, Barracks, Mess Hall and Galley General Location Plan and Detail Plot Plan," Yards and Docks #130990, April 1939, not filed, Plans and Maps Room, Building 1 on former Alameda City Hall West, NAS Alameda, Alameda, California [hereafter Plans and Maps Room, Building 1 on former NAS Alameda]; US Navy, "Naval Air Station Alameda, California History 1 Nov 40 – 31 Dec 44," Box 1 of 2, NAS Command History, 27 volumes, 1940 to 1992, RG 181, NARA (San Francisco); Bureau of Yards and Docks, "US Naval Air Station Alameda Administration Building, Barracks, Mess Hall and Galley General Location Plan and Detail Plot Plan," Yards and Docks #130990, April 1939, not filed, Plans and Maps Room, Building 1 on former NAS Alameda, Alameda, California; Map of Alameda Naval Air Station Showing Conditions on June 30, 1942, Architectural Drawings, Maps, Box 1, RG 12, CEC/Seabee Museum, NBVC, Port Hueneme.

<sup>27</sup> "NAS Alameda alt. 5000 ft. horizontal distance 15,000, 8 ¼ in. lense looking west, passive defense photo," January 28, 1942, California - Alameda - pictures, maps, justifications, RG 5, CEC/Seabee Museum, NBVC, Port Hueneme.

### Construction of NAS Alameda

The construction of the air station began in February 1938 under the supervision of Commander E.C. Seibert of the Civil Engineer Corps. Working from a small shack, Seibert administered contracts to 25 companies for demolition of extant buildings and structures on site, dredging submerged land, and construction of the new facility. The grounds of the station were scarified in preparation for filling and grading, and fill was obtained through dredging the future sites of the ship channel, turning basin, and Seaplane Lagoon. Before dredging took place, a stone rip-rap seawall was constructed to contain the fill and help convert submerged and partially submerged lands. A suction dredge then drew silt from the three sites and deposited the material on tidal flats and marshes located within the seawall. More than 15 million cubic feet of fill was ultimately used to build the station.<sup>28</sup> **Photograph 66** and **Photograph 67**, taken in January and November of 1941, respectively, show the progress of the fill. Once crews completed filling and grading, underground utility installation and building construction began.

The Navy phased construction of buildings at the station. (See Combined Specific Buildings Evaluation / Cold War Era Evaluation Report for additional discussion regarding construction of buildings and structures on NAS Alameda). Individual barracks, mess halls, and operational buildings were constructed in increments, with planned expansions. For example, only seven of the ten wings of BEQ Building 2 and two of the three mess halls in Building 3 were built in 1939. BEQ Building 4 and the third mess hall were shown on base plans, but construction and contracts were phased to allow growth in operations. Site plans and blueprints indicate that the General Storehouse (Building 8), Aircraft Storehouse (Building 9), Paint and Oil Storehouse (Building 13), Engine test cells (Building 14), and Bachelor Officers' Quarters (Building 17) were similarly phased (**Photograph 68**). Additional locations for hangars were also indicated on the initial plans. Building 1, the Administration Building, was completed in November 1938. By early 1940, many of other buildings were under construction – including Buildings 11 and 12, the seaplane hangars north of the lagoon.<sup>29</sup>

The construction of the Seaplane Lagoon and two of the seaplane hangars prior to building landplane hangars and the Airfield indicates the relative importance for the Navy, at the time, of seaplanes or 'flying boats.' These aircraft lacked the speed and maneuverability of land-based aircraft, but were excellent patrol, rescue, and transport craft. Prior to the widespread use of radar, patrol aircraft located targets for their assigned ships. Seaplanes moved slowly, but could stay aloft for long periods covering large areas of oceans. Their ability to land on water made it possible for them to search for, and rescue, downed aviators and sailors. The large boat hull allowed them to transport materials to locations inaccessible to other aircraft. Each of the air stations established or improved under the Hepburn Board plan included seaplane facilities. The Seaplane Lagoon on NAS Alameda was formed by dredging rather than utilizing a natural feature. Seawalls for the lagoon were formed with two sizes of rock and backfilled with dredged materials in two stages.<sup>30</sup> Construction of the lagoon was integral to the dredging operations and it was largely complete by 1940, when the first of the seaplane ramps were installed (**Photograph 69**).

<sup>28</sup> Naval Air Station Alameda, *U.S. Naval Air Station Alameda, California*, np; Allbrandt, "History of the Naval Air Station & Naval Aviation Depot," 3.

<sup>29</sup> Bureau of Yards and Docks, "US Naval Air Station Alameda, Administration Building, Barracks, Mess Hall and Galley General Location Plan and Detail Plot Plan," Yards and Docks #130990, April 1939, not filed; "US Naval Air Station Alameda, General Aircraft Paint and Oil Storehouses and Power Plant Building General Location Plan and Detail Plot Plan," Yards and Docks # 133376, October 1939, Drawer 4200, Base Development Maps, Plan and Maps Room, Building 1 on former NAS Alameda, Alameda, California; US Navy, "Naval Air Station Alameda, California History 1 Nov 40 – 31 Dec 44," Box 1 of 2, NAS Command History, 27 volumes, 1940 to 1992, RG 181, NARA (San Francisco).

<sup>30</sup> David W. Wragg, *Boats of the Air: An Illustrated History of Flying Boats, Seaplanes and Amphibians* (London: Robert Hale, 1984), 70, 73, 102, 160; Bureau of Yards and Docks, "US Naval Air Station Alameda, Bulkheads, Jetties, Seawall, Dredging and Filling, Location Plan and Sections," Yards and Docks #125969, December 29, 1937, Drawer A-11 Pier no. 1 Brows-Camels, Plans and Maps Room 143, Building 1 on former NAS Alameda, Alameda, California.



**Photograph 66:** Aerial Photograph of NAS Alameda January 20, 1941.  
Note the rows of dredged materials on what is now the Airfield.<sup>31</sup>



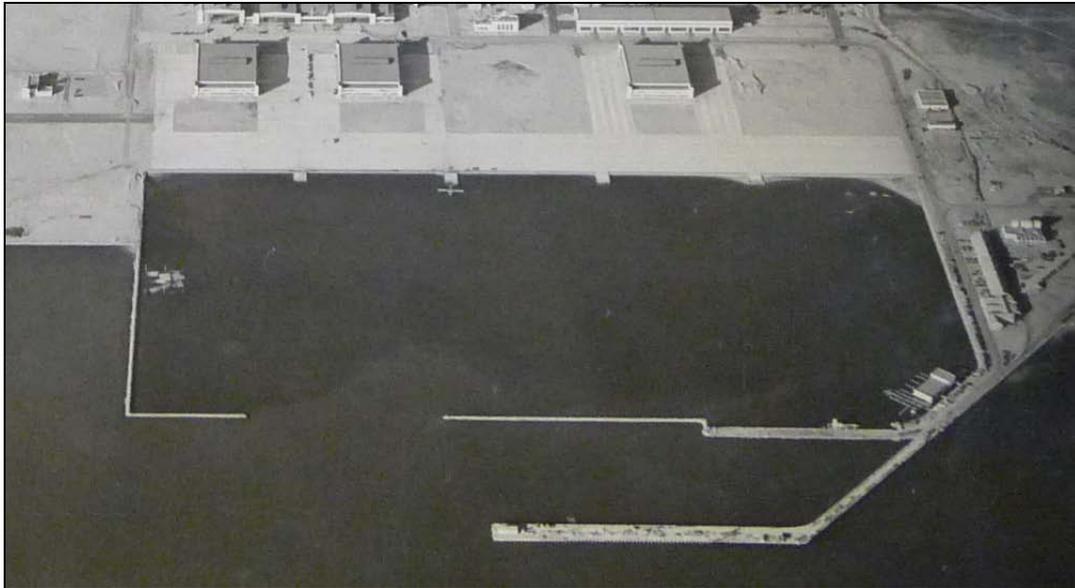
**Photograph 67:** Aerial Photograph of NAS Alameda November 12, 1941,  
showing infill and construction progress within the year.<sup>32</sup>

<sup>31</sup> Aerial Photograph of NAS Alameda January 20, 1941, Box 1, Record 10, Photographic Collection, United States, California, CEC/Seabee Museum.

<sup>32</sup> Aerial Photograph of NAS Alameda November 12, 1941, RG 10, CEC/Seabee Museum.



**Photograph 68:** Aerial photograph of NAS Alameda 1941 showing construction of BOQ (Building 17).<sup>33</sup>



**Photograph 69:** Seaplane Lagoon, November 12, 1941.<sup>34</sup>

<sup>33</sup> "History of Assembly and Repair Dept," Photograph album, 3195B-C, Box 1 of 22, RG 181, NARA (San Francisco).

<sup>34</sup> US Navy, Aerial Photograph of NAS Alameda November 12, 1941, RG 10, CEC/Seabee Museum, Port Hueneme.

The beginning of hostilities in Western Europe in September 1939 stimulated the Navy to quicken the pace of construction on NAS Alameda. In July 1940, a month after Germany invaded France, Belgium, and the Netherlands, Congress approved an additional \$17 million for work on NAS Alameda. Johnson, Drake & Piper Construction Company was awarded the major contract to hasten the station's completion. The company, with main offices in Minneapolis, Minnesota and satellite offices around the nation, secured military construction contracts across the country and overseas during World War II. Whereas the Navy previously issued contracts for individual buildings or structures, Johnson, Drake & Piper's contract covered 35 items. Additions to the contract continued through 1942, and as a result Johnson, Drake & Piper was responsible for constructing most of the station.<sup>35</sup>

On November 1, 1940, although still incomplete, NAS Alameda was commissioned and placed under the command of Captain Frank R. McCrary, with Rear Admiral A.J. Hepburn in attendance at the opening ceremony. The new base was expected to boost the local economy, but few expected the station to become as large as it did as a consequence of World War II. In February 1941, three months after the base opened, the author of an article appearing in the *Alameda Times-Star* speculated that nearly 800 local residents would work on NAS Alameda. The paper could not have anticipated that by the end of the war the thousands of military and civilian personnel stationed and working on the facility. The station's opening also prompted the creation of a number of on-base trade schools for aircraft maintenance, including the Aviation Metalsmiths' School, the Aviation Machinist Mates' School and the Aviation Radiomen's School. These training centers educated civilians as well as enlisted personnel in Building 132 (since demolished), which was located near the enlisted personnel pool.<sup>36</sup>

The first operational aircraft, a squadron of seven seaplanes, arrived on NAS Alameda in January 1941 along with the seaplane tender ship *USS Pelican*. These were the first of 200 aircraft to be assigned to the station.<sup>37</sup> This squadron was able to operate from the completed Seaplane Lagoon, while dredgers were forming the land for runways. Dredging to create the runways continued until September 1941 although runway construction began on the filled land in April (see **Photograph 66** and **Photograph 67**).<sup>38</sup>

### Architectural Design on NAS Alameda

In addition to the careful master planning for the station following principles of organization, functionality, hierarchy, and efficiency, the Navy also designed prominent buildings on the station in a manner that corresponded with the efforts to create a modern and organized facility. This was achieved by adhering the station's plan to a Beaux Arts formal spatial layout and by designing most of its prominent buildings in the Moderne style, which blended neo-classical proportion, symmetry, and order with modern design concepts of the time.<sup>39</sup> The planning and architecture on NAS

<sup>35</sup> "Construction News," *Southwest Builder and Contractor*, August 2, 1940, 107; NOy-4165: contract; *Additional Aviation Facilities at the Naval Air Station Alameda California*, re: Johnson, Drake & Piper, Inc 3 July 1940- 25 July 1943, Box 25, NOy Contracts, Record Group 12, Bureau of Yards and Docks (1862-1966), NAVFAC Archive, CEC/Seabee Museum, NBVC, Port Hueneme. Johnson, Drake & Piper ceased operations in the 1960s.

<sup>36</sup> Allbrandt, "History of the Naval Air Station & Naval Aviation Depot at Alameda, California," 3; Building 132, Box 59 Property Cards, RG#11.2.3, CEC/ Seabee Museum, NBVC, Port Hueneme; US Navy, "Naval Air Station Alameda, California History 1 Nov 40 – 31 Dec 44," Box 1 of 2, NAS Command History, 27 volumes, 1940 to 1992, RG 181, NARA (San Francisco).

<sup>37</sup> "First of Navy Planes Arrive" *Oakland Tribune*, January 4, 1941.

<sup>38</sup> Technical Report and Project History Contract NOy4165 Alameda Air Station, NOy 4165, Folder 9 of 23, Box 26 NOy Contracts, RG 12, CEC/Seabee Museum, NBVC, Port Hueneme.

<sup>39</sup> Paul Venable Turner, *Campus an American Planning Tradition* (Cambridge, Massachusetts: The MIT Press, 1984) 188, 191, 196, 209; Jon A. Peterson, *The Birth of City Planning in the United States, 1840-1917* (Baltimore, Maryland: The John Hopkins University Press, 2003), 319-320. The buildings on NAS Alameda have also been described as being Art Deco. The architectural styles of Art Deco and Moderne are sometimes used interchangeably, but this obscures the differences between them and the development of the modernistic styles in the United States during the 1920s, 1930s, and early 1940s.

Alameda demonstrate trends that BuDocks designers drew upon related to campus planning, modernistic design, and the continued traditional architectural expressions of federal buildings during this period.

The NAS Alameda station plan had a comprehensive aesthetic design based on the Beaux Art planning used in City Beautiful planning. The City Beautiful movement heavily influenced planning in the United States in the first half of the twentieth century, and can be seen in city planning as well as institutional settings such as college campuses. The movement borrowed planning concepts from the French Ecole des Beaux Arts and organized elements through the use of primary and secondary axes, such as those employed on NAS Alameda. Various *partis* or shapes, such as courtyards, would then be arranged in harmony with the overall axial plan. Beaux Arts planning influenced civic planning and the design of public, governmental, and military facilities across the nation during the first half of the twentieth century. Important local examples of Beaux Arts plans include the Civic Center of the City of San Francisco built after the 1906 earthquake, the Pan Pacific International Exhibition (San Francisco) in 1915, and the Golden Gate Exhibition on Treasure Island in 1939. Early development of the campus for the University of California in Berkeley was also influenced by Beaux Art design. The most important aspect of Beaux Arts plans was the establishment of formal symmetrical open spaces and spatial relationships. In many nineteenth century and early twentieth century examples of such plans, the buildings were also in the Beaux Arts style with Classically-derived ornamentation, but as styles evolved, buildings constructed on such plans were of a variety of styles, including the developing Moderne style used on NAS Alameda. The U.S. military had employed Beaux Arts inspired plans since World War I and continued to use such plans throughout the period between the two world wars.<sup>40</sup>

Axial, orthogonal plans organized by bilateral symmetry such as the one present on NAS Alameda are particularly well suited for flat locations because the axial lines do not need to curve around natural features as they would in a hilly or mountainous area, a lesson earlier city planners learned through trial and error. In 1905-06, Daniel Burnham, the director of works for Chicago's 1893 Columbian Exposition, and early city planner known for his successful Chicago Plan (1909), designed a plan for a summer capital in a rugged region of the Philippines. In the design, he attempted to impose a geometrical and orderly arrangement onto the land for which he has been harshly criticized by his later peers. While this type of orderly arrangement was successful at the Columbia Exposition, on the flat lands by Lake Michigan, it did not translate well to hilly environments. In his 1971 study of landscape design, Norman T. Newton remarked, "Had it not occurred to [Burnham] that ground-consuming bilateral symmetry, and unduly extensive level areas, would prove unmanageable in this intricately rugged mountainous terrain...?" Newton further commented that a geometrical and orderly plan could have been worked out, but not with the bilateral balance that Burnham was trying to impose upon the mountainous land.<sup>41</sup> In the same period, Burnham also designed a plan for San Francisco that was never executed because the 1906 earthquake and fire halted the planning process. Although this plan paid some attention to the hilly topography of the city, with wide diagonal boulevards converging on hilltops, the plan essentially called for another system of linear streets and diagonal boulevards imposed over the already extant grid system. Again, Burnham placed higher ideals of balance and order above the reality of the natural topography.<sup>42</sup> In contrast, the flat land the Navy built at Alameda provided an ideal slate on which to design a plan using geometric shapes with bilateral balance and symmetry.

The field of landscape architecture had a closely parallel history with the City Beautiful planning movement following the influential 1893 Columbian Exposition. Shortly after the exposition renewed American interest in classical design

<sup>40</sup> Paul Venable Turner, *Campus an American Planning Tradition* (Cambridge, Massachusetts: The MIT Press, 1984) 188, 191, 196, 209; Jon A. Peterson, *The Birth of City Planning in the United States, 1840-1917* (Baltimore, Maryland: The John Hopkins University Press, 2003), 319-320.

<sup>41</sup> Norman T. Newton, *Design on the Land: The Development of Landscape Architecture* (Cambridge, Massachusetts: Belknap Press of the Harvard University Press, 1971), 419-420.

<sup>42</sup> Gray Brechin, *Imperial San Francisco: Urban Power, Earthly Ruin* (Berkeley: University of California Press, 1999), 151-154; Newton, *Design on the Land*, 416-417.

and architecture, Charles A. Platt exerted considerable influence on the expanding field of landscape architecture in the United States, leading to a shift away from the relatively formless, romantic style “landscape gardens” that were the norm in the nineteenth century until the 1880s when architectural forms became more geometric and landscape designers integrated those geometric forms with buildings. This was the beginning of the Country Place Era of landscape architecture over which Platt exerted considerable influence. After an extended trip to Italy where he studied the character and form of the Italian Villa, Platt returned to the United States with an appreciation for the integration of indoor and outdoor space, and the integration of architecture and landscape architecture, each fit to their natural sites and designed to suit the needs of the period. Norman T. Newton noted that in both Platt’s work, and in the Italian Villa, space was organized based on a pair of fundamentals, lines of sight connecting one space or a series of spaces with one another, giving the observer a sense of inter-relationship, structure, and strength, and, defining or implying the boundaries of these visually connected spaces with vertical planes so that each individual space read as a distinct entity. In his landscape designs, Platt used geometric, usually rectilinear forms for individual spaces in order to achieve structural form. Integrating buildings and grounds resulted in strength and continuity of design. While bilaterally symmetrical spaces did occur in both Platt’s design, and the Italian Villas upon which he drew inspiration, this was not crucial to his designs, rather the sight-lines were the essential part of the design. Not only was Platt known for the overall strength of his design, but for attention to the smallest detail, which earned him the respect and admiration of a young generation of landscape architects through the 1920s. So astute was he at the integration of building and landscape, that in some cases he was commissioned to design plans for both. One of the first such commissions was an institutional project, Timberline at Bryn Mawr College. From the 1910s to the early 1930s, Platt was involved in many institutional projects where, working both solo and collaboratively, he created some outstanding works of landscape architecture to add to the design of existing buildings. He worked on plans for the University of Illinois, University of Rochester, and Phillips Andover Academy. The overall station design and planting plan for NAS Alameda reflects many of the principles of design popularized by Platt.<sup>43</sup>

At the same time, Beaux Art and City Beautiful planning remained popular and prominent in civic and military design, architects worldwide began to abandon historical revival styles during the late 1920s and especially during the 1930s in favor of designs that consciously illustrated modernity and technological progress using simplified geometric forms and ornamentation. This trend developed mostly from European modernistic art and industrial design, but transferred to architecture wherein it presented sleek and spare designs. Often buildings designed in the new style(s) of the period retained proportion, symmetry, and order found in buildings inspired by Classical architecture, but without direct allusion to historical styles. Materials such as concrete, metals, and glass block – all of which were used on NAS Alameda – were prominently used to illustrate a directness regarding building fabric to help portray the machine / technological-inspired aesthetic. The “modern” architecture of the time evolved through various phases and was called by several names. Art Deco was the earliest phase. Its buildings often emphasized verticality and included intricate geometric ornamentation like stylized floral decoration or patterns such as chevrons. Prominent nearby examples include the Paramount Theatre on Broadway in Oakland. Many of the major buildings at the Golden Gate International Exposition on Treasure Island held in 1939-1940 were also in the Art Deco style. This was followed by Moderne (also referred to as Art Moderne or Streamline Moderne) that was less ornamental than Art Deco. As seen on the nearby Alameda Theater on Central Avenue in Alameda and on NAS Alameda, it expressed modernity by using curving wall surfaces and columns with highlighted simplified geometric ornamentation such as the wall panel striations (**Photograph 70**) and stylized Pegasus and eagle figures in the BEQ quadrangle (Buildings 2, 3, and 4) (**Photograph 71** and **Photograph 72**). Aspects of the station’s Moderne design were also implemented on operational buildings, such as the hangars, the designs of which included broad rectangular corner piers with decorative horizontal bands running from pier to pier across the façade, long industrial steel sash windows, and prominent copper flashing / roofing (**Photograph 73**).

<sup>43</sup> Newton, *Design on the Land*, 344-346, 372, and 416-417.  
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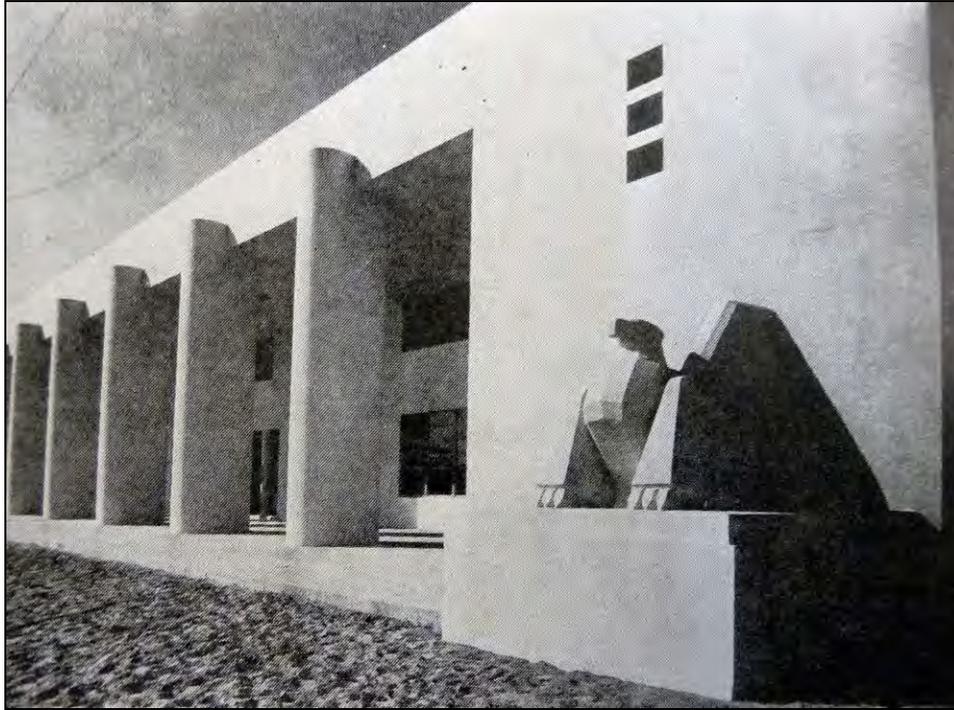


**Photograph 70:** Building 16, photo dated 1945.<sup>44</sup>



**Photograph 71:** East end of Building 2, May 1945.<sup>45</sup>

<sup>44</sup> "Building 16," November 13, 1945, California - Alameda -pictures, maps, justifications, RG 5, CEC/Seabee Museum, NBVC, Port Hueneme.



**Photograph 72:** Building 3, circa 1940.<sup>46</sup>



**Photograph 73:** Building 23, circa 1945.<sup>47</sup>

<sup>45</sup> "Alameda, California NAS, Enlisted Bks, and Mess," May 1945, California - Alameda -pictures, maps, justifications, RG 5, CEC/Seabee Museum, NBVC, Port Hueneme.

<sup>46</sup> *Oakland Tribune Yearbook*, 1941, 29.

<sup>47</sup> "Preservation & Flight Test Hangar (No. 23) A.A.&T Division," Naval Air Station Alameda, California 1940-1945 photo album, National Archives and Records Administration, Pacific Region, (San Francisco), np.

The International Style was also evolving during the 1930s, striving to create an aesthetic purposely devoid of any ornamentation in favor of highlighting efficiency in design as well as material and functional honesty. The three terms apply to the early modern architecture in the United States. Art Deco and Moderne were most prominent prior to World War II and International Style ascended to prominence following the war, as seen in the Ordnance & Optical Shop at Hunter's Point Naval Shipyard (built in 1948) and in the Oakland and San Francisco skylines of the 1950s and 1960s.<sup>48</sup>

The rapid evolution of aviation and other forms of transportation during the 1920s and 1930s particularly inspired designers to illustrate in architecture and industrial design modern society's departure from the past that seemed apparent, or was being sought, at the time. The expansion of civilian and military aviation was symbolic of modern technological achievement and streamline forms appeared in, and influenced the design of, seaplane and landplane aircraft as well as in the buildings of the growing nationwide network of civilian airports. The airport in Long Beach, California built in 1941 is a well known example of a civilian airport built in the Moderne style. Other examples include the Washington-Hoover Air Terminal in Washington, D.C. and the Swan Island Airport in Portland, Oregon, both of which were built in the late 1920s, Dinner Key Terminal in Miami, Florida built in 1934, and the Marine Air Terminal that became LaGuardia Airport in New York built in the late 1930s.<sup>49</sup> This design trend may have influenced design decisions BuDocks made for its new aviation facility at Alameda.

Architects working on Federal contracts during the 1930s developed a "style" that sought to maintain form, symmetry, and organization of the classical traditions that had guided Federal design since the early years of the Republic, but which drew upon the evolving modern styles of the decade that were increasingly popular in private construction. Various architectural historians have attempted to develop a specific name for this style, including "Starved Classicism" and "PWA Moderne." The latter of these terms denotes the use of the style for buildings constructed from the Public Works Administration program, such as the Alameda County Courthouse in Oakland.<sup>50</sup> This is the style of the NAS Alameda Historic District, particularly in the Administrative Core Area. The style is found throughout California, particularly in the dozens of post offices built during the 1930s.<sup>51</sup> The style was rarely used, however, in the design of military buildings, and as a result they are treated as their own property type within the Statewide Study as "Concrete, Art-Deco

<sup>48</sup> The development of Art Deco and Moderne is discussed in many general works on American architectural history and guidebooks of San Francisco Bay Area architecture, including: Sally B. Woodbridge, *California Architecture: Historic American Buildings Survey* (San Francisco: Chronicle Book, 1988); Carla Breeze, *American Art Deco: Architecture and Regionalism* (New York: W.W. Norton & Company, 2003), 9-33 and 222-277; Mark A. Wilson, *A Living Legacy: Historic Architecture of the East Bay* (Lexikos, 1987), 42, 56, and 59; David Gebhard and Harriette Von Breton, *Los Angeles in the Thirties: 1931-1941*, 2<sup>nd</sup> edition (Los Angeles: Hennessey & Ingalls, Inc, 1989), 75-91; David Gebhard, Eric Sandweiss, and Robert Winter, *Architecture in San Francisco and Northern California*, (Salt Lake City: Gibbs-Smith Publisher, 1985), 576-579. For discussion of International Style Modernism in Northern California see: Pierluigi Serraino, *Icons of Northern California Modernism* (San Francisco: Chronicle Books, 2006).

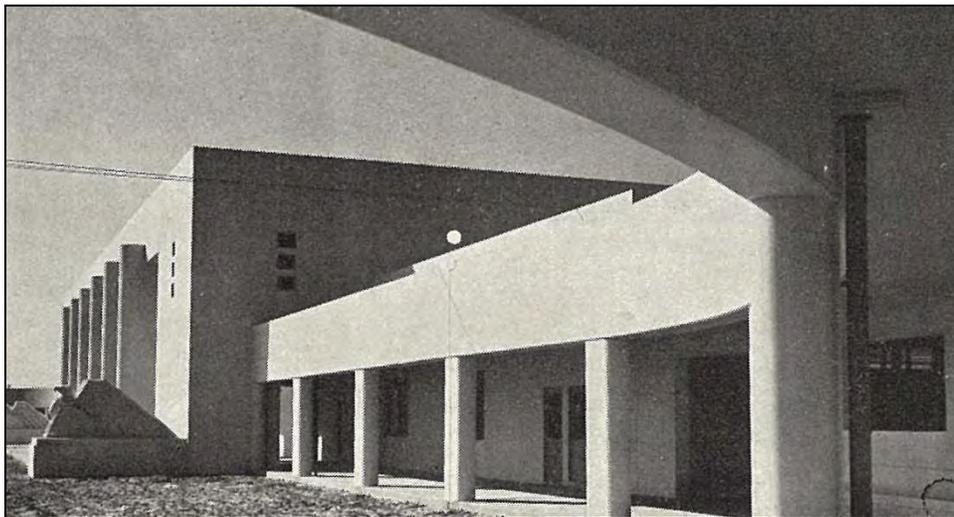
<sup>49</sup> Donald J. Bush, *The Streamline Decade*, (New York: George Braziller, 1975), 26-42 ; Gerrie Schipske, *Early Aviation in Long Beach*, (Charleston, SC: Arcadia Publisher, 2009); Allastair Gordon, *Naked Airport: A Cultural History of the World's Most Revolutionary Structure*, (Chicago: University of Chicago Press, 2008); Geza Szurvoy, *The American Airport*, (St. Paul, MN: MBI Publishing Co, 2003), 70, 82, and 90-95.

<sup>50</sup> See, for example, Lois A. Craig and Staff of the Federal Architecture Project, *The Federal Presence: Architecture, Politics, and Symbols in U.S. Government Building* (Cambridge, MA: MIT Press, 1984); David Gebhard, et al, *A Guide to Architecture in San Francisco & Northern California*, (Santa Barbara: Peregrine Smith, Inc., 1973); David Gebhard, Eric Sandweiss, and Robert Winter, *Architecture in San Francisco and Northern California* (Salt Lake City: Gibbs-Smith Publisher, 1985). The Alameda County Courthouse was featured in the PWA publication: C.W. Short and R. Stanley-Brown, *Public Buildings: Architecture under the Public Works Administration, 1933-1939* (New York: A Da Capo Paperback, 1939, republished 1986), 62-63.

<sup>51</sup> Some of the best examples of this federal PWA Moderne / Starved Classicism style (also referred to as "Stripped Classicism) are found in Los Angeles, as discussed in David Gebhard and Harriette Von Breton, *Los Angeles in the Thirties, 1931-1941* (Los Angeles: Hennessey & Ingalls, 1989).

Influenced Permanent Base Designs.”<sup>52</sup> In California, there appear to be only two other examples of this style on military bases or buildings. One – another Navy-owned property – is the Naval and Marine Corps Reserve Center in Los Angeles. The other property, most comparable to NAS Alameda, is McClellan Air Force Base near Sacramento. The Reserve Center was designed by a private architect, Stiles O. Clements, while the buildings at McClellan AFB were designed directly by the Quartermaster Corps, at the time the Army’s equivalent of the Bureau of Yards and Docks.<sup>53</sup>

BuDocks’ efforts to pursue modernistic design trends in the late 1930s and early 1940s was noted in design literature at the time and celebrated on NAS Alameda soon after the station’s construction. BuDocks and NAS Alameda are highlighted in an issue of *Architectural Forum* from November 1940 that presents the growing demand in military construction for national defense during the buildup prior to the United States’ entry into World War II. The “Naval Air Station, West Coast,” as NAS Alameda was labeled, was featured in a two-page photograph spread (**Photograph 74**) and touted as representing the “forward-looking trend in naval building.”



**Photograph 74:** Building 3, circa 1940.<sup>54</sup>

The article went on to point out BuDock’s exceptional efforts to create efficient designs following modernistic design trends, especially for standardized officers housing, rather than following the traditional architectural expressions of Colonial Revival or Spanish Revival for housing seen elsewhere on military facilities.<sup>55</sup> The proposed standardized designs illustrated in the *Architectural Forum* article have remarkable similarities to the officer housing on NAS Alameda (**Illustration 6** and **Photograph 75** and **76**). As previously noted, the station’s original design received an award at the Seventh Annual Architectural Exhibition of the Association of Federal Architects in Washington D.C. in 1939. One description of that award stated that the prize was for BuDock’s design that combined “modern architectural

<sup>52</sup> JRP Historical Consulting Services, “Historic Context: Themes, Property Types, and Registration Requirements,” Volume 3, *California Historic Military Buildings and Structures Inventory*, 7-43 – 7-44.

<sup>53</sup> Mikesell (JRP Historical Consulting Services), “Guide to Preserving the Character of the Naval Air Station Alameda Historic District,” 7-8; JRP Historical Consulting Services, “Historic Context: Themes, Property Types, and Registration Requirements,” Volume 3, *California Historic Military Buildings and Structures Inventory*, 7-47.

<sup>54</sup> *Architectural Forum*, November 1940, 356. Some of the photographs taken for *Architectural Forum* were republished in the *Oakland Tribune Yearbook*, 1941, 28-29.

<sup>55</sup> “Military and Naval Buildings,” *Architectural Forum*, November 1940, 342-373. The photographs of NAS Alameda and BuDocks officers housing designs are on pages 356-359. The entire issue is focused on building for national defense.

beauty and simplicity of line with maximum effect.”<sup>56</sup> Furthermore, a few years after the station’s construction, the Navy boasted about the modernity of its facilities in the station newspaper, observing several aspects of the design that contribute to its Moderne character. The BEQs and their quadrangle were noted for their symmetry, “classic lines,” and “wide and circular arcade” that was “a pleasing study in squares and curves.” The effect was promoted as being “modern in every respect.”<sup>57</sup>

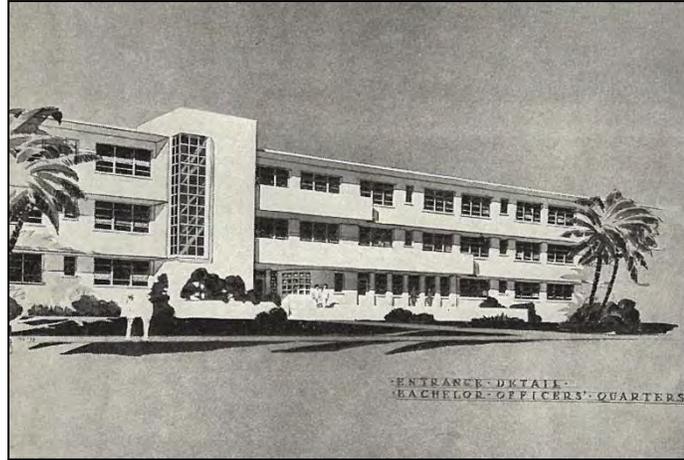
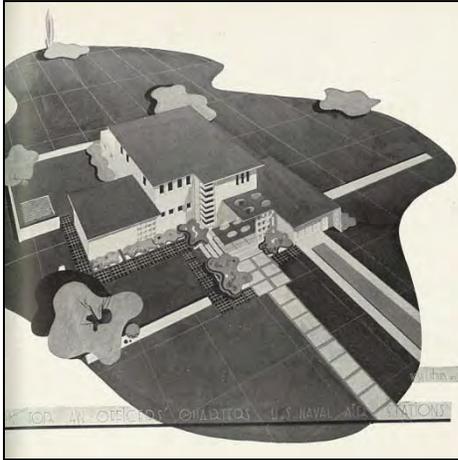
Alameda was not the Navy’s only naval air station that was designed in the Moderne style. Both NAS Jacksonville and NAS Quonset Point, the other two naval air stations newly built in response to the Hepburn Report, also had multiple buildings constructed using architectural language similar to NAS Alameda (**Photograph 74, Photograph 77, Photograph 78, and Photograph 79**). The BuDocks designs for Alameda may have influenced the architecture on Jacksonville and Quonset Point, as well as influenced the work toward standardized officers housing illustrated in *Architectural Forum*. No specific documentation identified for this report links the three stations architecturally, but available photographs and plans show there were distinct similarities that were even continued by private architect Albert Kahn for his designs on Quonset Point, albeit in brick rather than concrete. The implications of the similarities, along with the BuDocks design trends noted in *Architectural Forum*, are that the Navy was purposely employing modernistic designs as part of their expressed efforts to enhance efficiency and functionality at its new naval air stations in the late 1930s and early 1940s.

### Planting Plan

Initial plans for NAS Alameda did not include a designed planting plan; however, the need to vegetate the newly created land quickly became apparent to those living and working on the station. Because this end of Alameda was largely marshland and the station had been built on fill, it was susceptible to soil movement and erosion. Blowing winds created dust-storms that were abrasive to machinery, and also made it difficult to maintain acceptable standards of cleanliness for a military installation (**Photograph 80**). To alleviate the situation, in 1940 Johnson, Drake, and Piper contracted Emery A. LaVallee to design a planting plan for NAS Alameda that would cover the open areas of the station with vegetation. LaVallee was a landscape architect who designed the planting plan for the Sunnyvale Naval Air Station and who worked as an assistant horticulturalist for the 1939 Golden Gate International Exposition (GGIE). The plans for Alameda were completed in early 1941 and at that time, the Navy only made a small appropriation for planting the station. Fortunately, however, the GGIE was simultaneously being dismantled at Treasure Island, just a short distance northwest of NAS Alameda. Because Treasure Island had also been built on fill, the plants selected for that location were also ideally suited to NAS Alameda, and because the distance of transport was short, it was not an expensive proposition to move plants from Treasure Island to Alameda. Rather than transferring some of the delicate ornamental plants that had been sold after the exposition closed, the Navy transferred heartier plants: ice plant, acacias, coastal pines, and cypress. Ice plant had been used at the GGIE to create a stunning array of color referred to as the “Magic Carpet” (**Photograph 81**).

<sup>56</sup> US Navy, Command History 1 of 25, “Naval Air Station Alameda, California History 1 Nov 40 – 31 Aug 45,” Box 1 of 2, NAS Command History, 27 volumes, 1940 to 1992, US Naval Shore Establishments, RG 181, NARA (San Francisco); WPA Writer’s Program, *Alameda: The Island City*, 118 (available at the Alameda Free Library).

<sup>57</sup> “Through these Portals,” *The Carrier*, December 15, 1944, 2.



**Illustration 6:** BuDocks Officer Housing Designs, *Architectural Forum*, November 1940.



**Photograph 75 and Photograph 76:** NAS Alameda, Officer House B and Building 17, BOQ, 2009 and 2010.



**Photograph 77:** NAS Quonset Point, RI, Building 7, Administration Building, 1979.<sup>58</sup>

<sup>58</sup> "Historic American Engineering Record, Quonset Point Naval Air Station HAER RI-15," Historic American Engineering Record, Library of Congress, Washington D.C., <http://memory.loc.gov/habshaer>.  
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**Photograph 78:** Buildings 30 and 31, NAS Alameda, 2009.

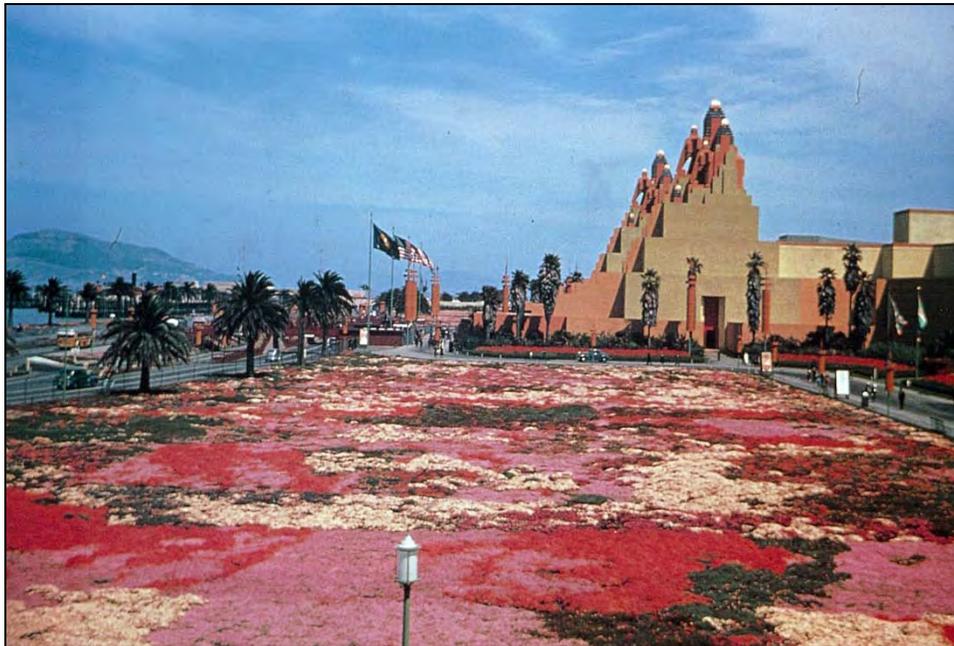


**Photograph 79:** Buildings 10 and 850, NAS Quonset Point, RI, 1979.<sup>59</sup>

<sup>59</sup> “Historic American Engineering Record, Quonset Point Naval Air Station HAER RI-15,” Historic American Engineering Record, Library of Congress, Washington D.C., <http://memory.loc.gov/habshaer>.  
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**Photograph 80:** January 1941, note lack of vegetation throughout station.<sup>60</sup>



**Photograph 81:** "Magic Carpet" of ice plant at main entrance to GGIE on Treasure Island, ca. 1939.<sup>61</sup>

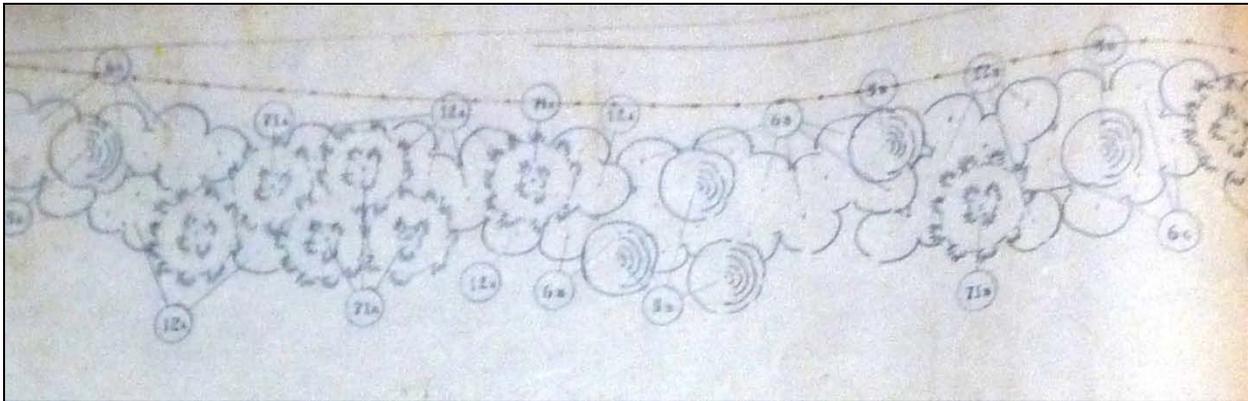
<sup>60</sup> Aerial Photograph of NAS Alameda January 20, 1941, Box 1, Record 10, Photographic Collection, United States, California, CEC/Seabee Museum, NBVC, Port Hueneme.

<sup>61</sup> Photograph credit: Karl Jacobs in Patricia F. Carpenter & Paul Totah, eds., *The San Francisco Fair, Treasure Island: 1939-1940* (San Francisco: Scottwall Associates, 1989), 26.

Although the Navy transferred the plants from the exposition, planting plans for the ice plant on NAS Alameda depicted an orderly segregation of color, rather than the wild array planted on Treasure Island. The commanding officer of the station, Captain Frank R. McCrary, had a personal interest in gardening and was reportedly active overseeing the station planting. By June 1942, approximately one-fifth of the station was under cultivation, and the Public Works department maintained an on-site nursery where they grew iceplant and young acacia trees to line the streets of the station.<sup>62</sup>

LaVallee designed a traditional planting plan for NAS Alameda that complemented the master station plan, existing buildings, and landscape by emphasizing the axes and orthogonal layout that organized functional areas and reinforced hierarchical distinctions. The planting plan also left the open sightlines intact along the main entry mall and BEQ quadrangle that visually tied different functional areas of the station together. LaVallee used a palette of plants in his plan that included a wide variety of species, many of which were drought-resistant, and not native to California. Although research revealed little information about LaVallee, it is likely that he gained a wide knowledge of plant species that thrived in the San Francisco Bay Area climate while working at the GGIE. The varied palette of plants that LaVallee drew upon resulted in a rich, yet still traditionally designed planting plan.

The planting plan focused on the northern portion of the station in the administrative areas, housing (for both officers and enlisted personnel), and northern station border (**Illustration 7**), including the Main Gate. This formally designed plan called for single species tree-lined streets laid out with consistent spacing and setback from the sidewalk, street trees flanking building entries, ground cover, consistently spaced shrubbery at building foundations, and clusters of trees punctuating the corners of the large quadrangles at the station core. At the entry mall in front of Building 1, the plan included a patterned arrangement of different colors of ice plant (*mesembryanthemum*) with the center circle planted with gazania and trees accenting the corners of the space (**Illustration 8**).



**Illustration 7:** Portion of the 1941 planting plan for the north border of the station. This dense line of trees was designed to extend from the Main Gate, northeast along the station border.<sup>63</sup>

<sup>62</sup> Johnny Noble, "Hundreds of Plants Hold Down Naval Air Station," *Oakland Tribune*, June 24, 1942, 13; US Navy, "Naval Air Station Alameda, California History 1 Nov 40 – 31 Dec 44," Box 1 of 2, NAS Command History, 27 volumes, 1940 to 1992, RG 181, NARA (San Francisco); Map of Alameda Naval Air Station Showing Conditions on 30 June 1942, Architectural Drawings, Maps, Box 1, RG 12, CEC/Seabee Museum; Bureau of Yards and Docks, "Landscaping Street Tree Planting Plan," December 1941, Drawer 170, Plan and Maps Room, Alameda City Hall West.

<sup>63</sup> Johnson, Drake, and Piper, "Landscaping Section 1, Unit A – Pt. 3 Planting Plan," July 1941, Drawer 141, Plan and Maps Room, Alameda City Hall West.



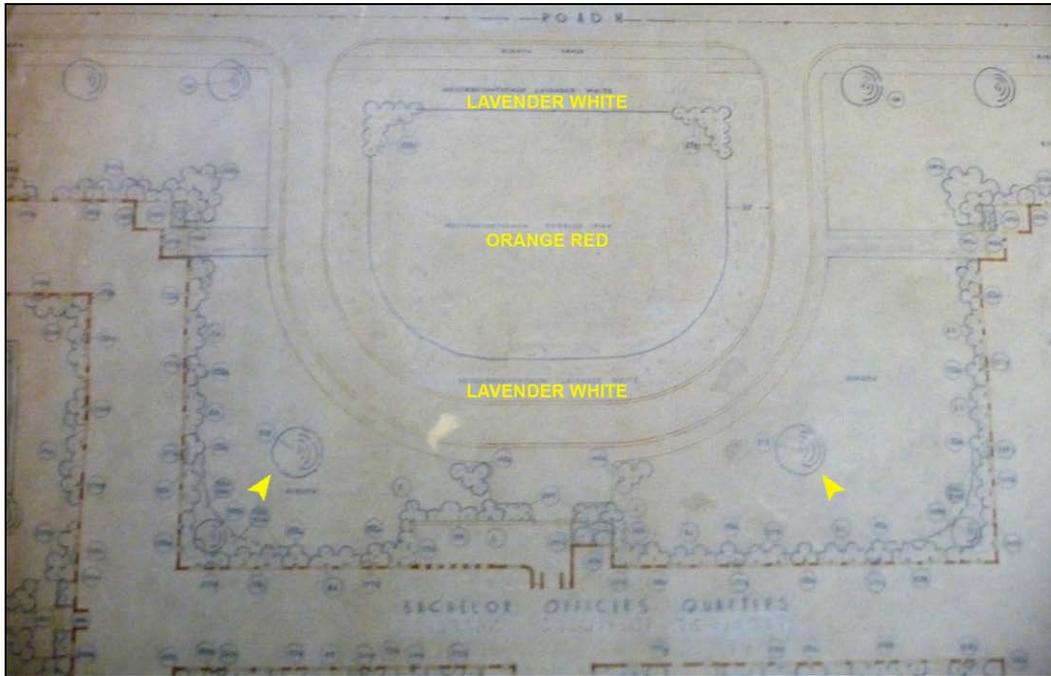
**Illustration 8:** Entry mall, 1941 planting plan. Indicates color scheme of ice plant (*Mesembryanthemum*); also note trees punctuating the corners of the main quadrangle. It is unclear whether gazania was ever planted in the center circle.<sup>64</sup>

Decoratively designed plantings of ice plant (*mesembryanthemum*) were also slated for the circle drive on the north side of the BOQ (Building 17). As with other orthogonal blocks in the administrative and residential areas of the station, the plan for this block also featured tree-lined streets and shrubbery at the foundation of the building. Other plantings planned for this block included a single tree in each of the two triangular spaces between the north side of the building and the circular drive, and trees lining the parking areas on the east and west ends of the block (**Illustration 9**).

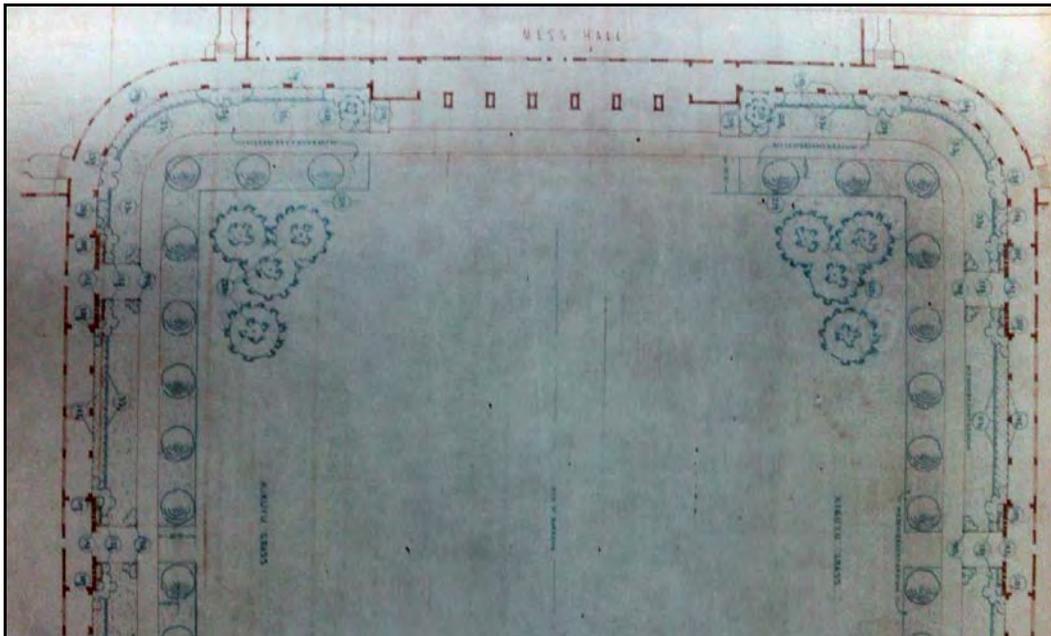
The planting plan for the BEQ quadrangle (Buildings 2, 3, and 4) mirrored the bilateral symmetry of the open space formed by the surrounding buildings. Rows of broadleaf trees lined the walkways on the interior edges of the quadrangle. Paired plantings demarcated the pathways approaching each of the building entries and clusters of Monterey Pines accented the western corners of the quadrangle. The plans called for the quadrangle to be planted with Kikuyu grass (*Pennisetum clandestinum*), the preferred turf for the station (**Illustration 10**).

Planting just south of the Main Gate continued the planting scheme of the entry mall into the triangular shaped area, calling for a lavender white ice plant around the perimeter and golden ice plant within. Single conifer trees were placed at the two southern points of the triangle. Trees lined the streets south of the gate, and dense vegetative cover wrapped around the curved parking area. Kikuyu grass filled in the open spaces between scattered clusters of trees of either side of the triangle (**Illustration 11**).

<sup>64</sup> Johnson, Drake, and Piper, "Landscaping Section 7 Units C & D Planting Plan," illeg. 1941, Aperture Card 49627, BRAC PMO West Caretaker Site Office, Treasure Island.  
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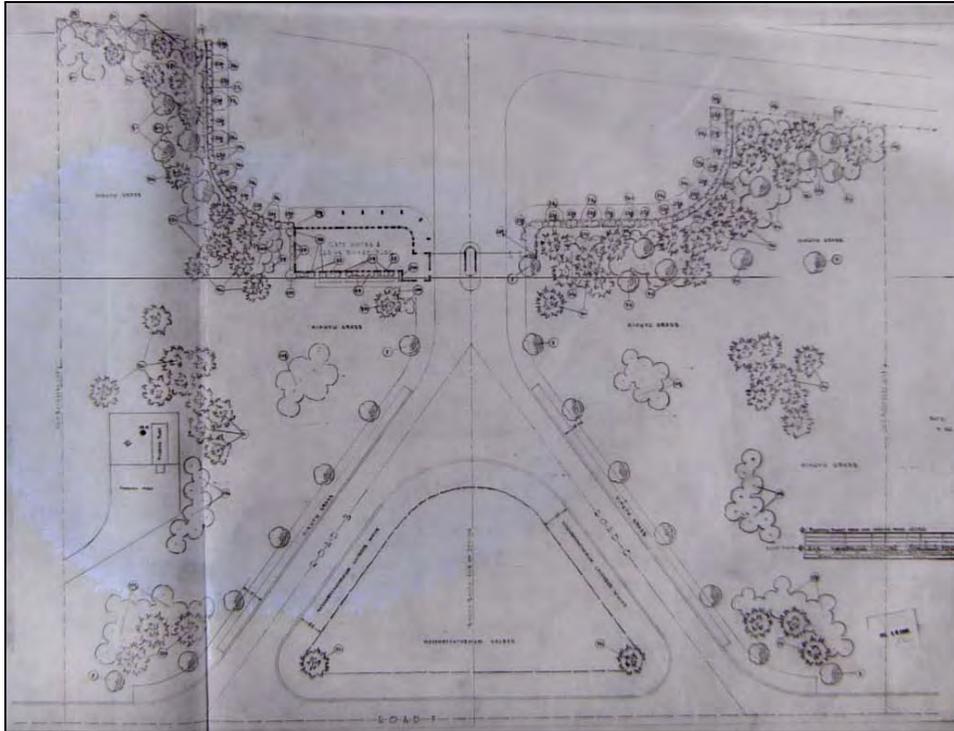


**Illustration 9:** Portion of BOQ (Building 17) block, 1941 planting plan. Note decoratively planned planting of ice plant within bilaterally symmetrical space formed by circular drive and single trees emphasizing spatial symmetry.



**Illustration 10:** Portion of 1941 planting plan showing west end of BEQ quadrangle. Note bi-laterally symmetrical plan with tree-lines along walkways, paired trees at building entries, and two clusters of trees punctuating corners of the quadrangle.<sup>65</sup>

<sup>65</sup> Johnson, Drake, and Piper, "Landscaping Section 7, Unit A – Pt. 1 Planting Plan," August 1941, Drawer 141, Plan and Maps Room, Alameda City Hall West.  
DPR 523B (1/95)



**Illustration 11:** Portion of 1941 planting plan showing Main Gate.

The patterned planting of ice plant extends north from entry mall into the triangular area.<sup>66</sup>

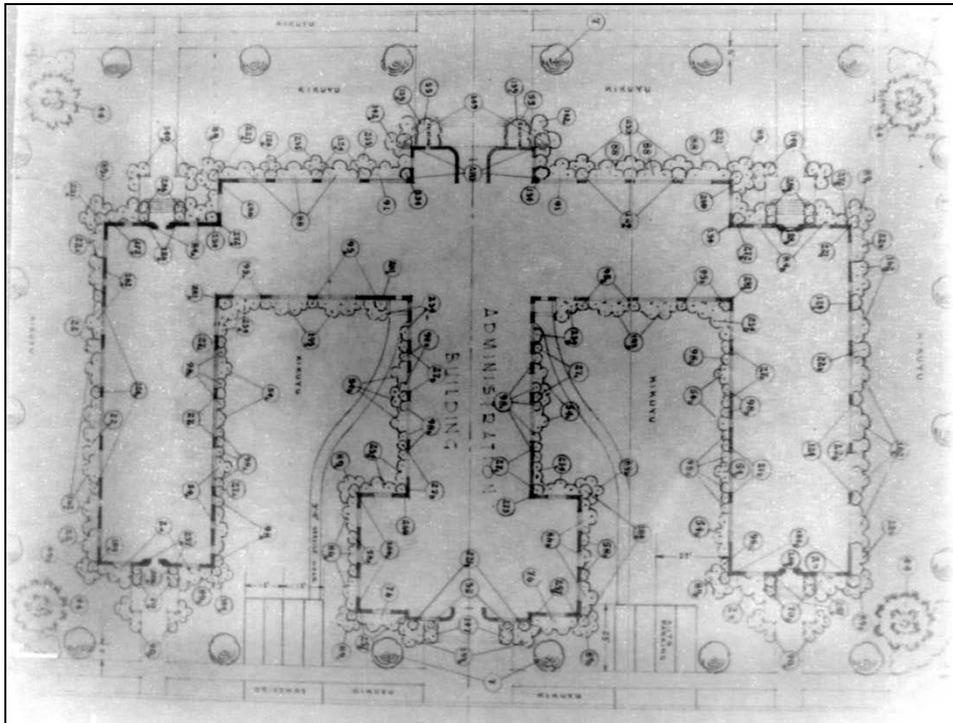
Tree lines, particularly those composed of black acacia (*Acacia melanoxylon*), were designed to line many of the streets in the northern part of the station, particularly in the administrative and residential areas, which emphasized the orthogonal layout of the station plan. Also common to the planting plans for the administrative and residential areas were mixed varieties of shrubbery placed at building foundations. Plans laid out street trees on all sides of the orthogonal blocks that contained Buildings 1, 16, and 18 (**Illustration 12** and **Illustration 13**).

The planting plan accentuated the median demarcating West Essex Drive as a main axis, rather than a typical interior roadway, with a single line of plantings of fan palms (*trachycarpus*), cross-leaved speedwell (*Veronica decussata*), and New Zealand Flax (*Phormium tenax*) (**Illustration 14**).

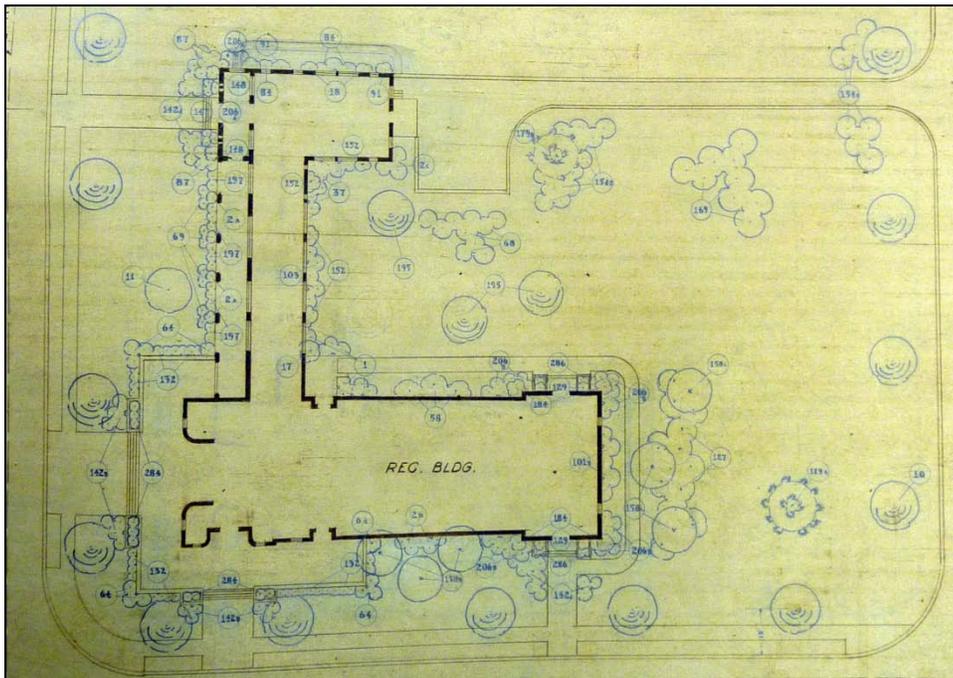
The plans also called for tree lines along the curvilinear interior streets of the Officers' Housing and formal gardens behind each officer's house. In addition to the gardens, each officer's house also had an informal sheltered drying yard to the side of the residence (**Illustration 15**).

Although wartime contingencies prevented full installation of LaVallee's planting plan because funds and effort focused on completion of buildings, housing personnel and vital station activities, the administrative and residential areas of the station all received at least modest, and in some instances, modified implementation of the plan, as discussed herein.

<sup>66</sup> Johnson, Drake, and Piper, "Landscaping Section B – Unit C Planting Plan," July 1941, Aperture Card 49574, BRAC PMO West Caretaker Site Office, Treasure Island.



**Illustration 12:** Building 1 from 1941 planting plan. Note tree lined streets and foundation shrubbery.<sup>67</sup>



**Illustration 13:** Building 18 from 1941 planting plan. Note tree lined streets and foundation shrubbery.<sup>68</sup>

<sup>67</sup> Johnson, Drake, and Piper, "Landscaping Section 7 – Unit B Planting Plan," April 1941, Aperture Card 49628, BRAC PMO West Caretaker Site Office, Treasure Island.



## World War II (1941-1945)

The demands on naval aviation during World War II transformed NAS Alameda dramatically, requiring the new station to adapt to increased demands and an expansion of its capability. This resulted in additions to and alterations of the station's original design, particularly in the intentionally unplanned, secondary spaces. Although adjustments to the original plan were necessary to accommodate wartime mobilization, the primary elements of the plan – axial layout, spatial relationships, land use, circulation pattern, sightlines – remained generally unaltered from the original execution of the plan during the initial phases of construction. After transferring trees and plants from the GGIE in Spring 1941, the Navy began executing the planting plan Johnson, Drake, and Piper subcontracted Emery LaVallee to design.

In some cases, the need for additional facilities resulted in modifications to the station's original 1939 plan. In peacetime the Navy had a phased program to build the station, which likely would have taken years to complete. Many of these phases were rapidly sped up and completed during the war years. Pre-war construction tended to be of permanent concrete construction, while most buildings constructed under President Roosevelt's national emergency declaration and wartime contingencies were of temporary, wooden construction.<sup>70</sup> Along with different building designs and materials, the changing war needs resulted in additional construction and modifications to the station's original 1939 plan. Original plans called for the primary east-west axis to create a wide spatial division between the administrative and industrial functions of the station (see **Illustration 5** and **Photograph 65**). Although this axis was first abandoned before the first phase of construction when the landplane hangars were aligned parallel to the Airfield, during the war, the space was filled with shops and training facilities (**Photograph 82**). Initial construction through the space was small, consisting of two engineering buildings (Buildings 42 and 44) and a small weapons shop (Building 43) at the west end. Construction continued in the area with the civilian cafeteria (Building 62) in 1942, Ground Training Building (Building 101) in 1942, Ordinance Office (Building 102) in 1943, Public Works Shop (Building 114) in 1944, and Storage Racks (Building 191) in 1944.<sup>71</sup> The last portion of this axis to be filled was the northern expansion of Building 5, the Interim Overhaul Building, in 1945, which was usually referred to as Building 5A. This addition had not been included in the original station plans and nearly doubled the size of Building 5. Construction through the space originally slated as the primary east-west axis further elevated the primacy of the east-west axis stretching from West Essex Drive through Building 3.<sup>72</sup>

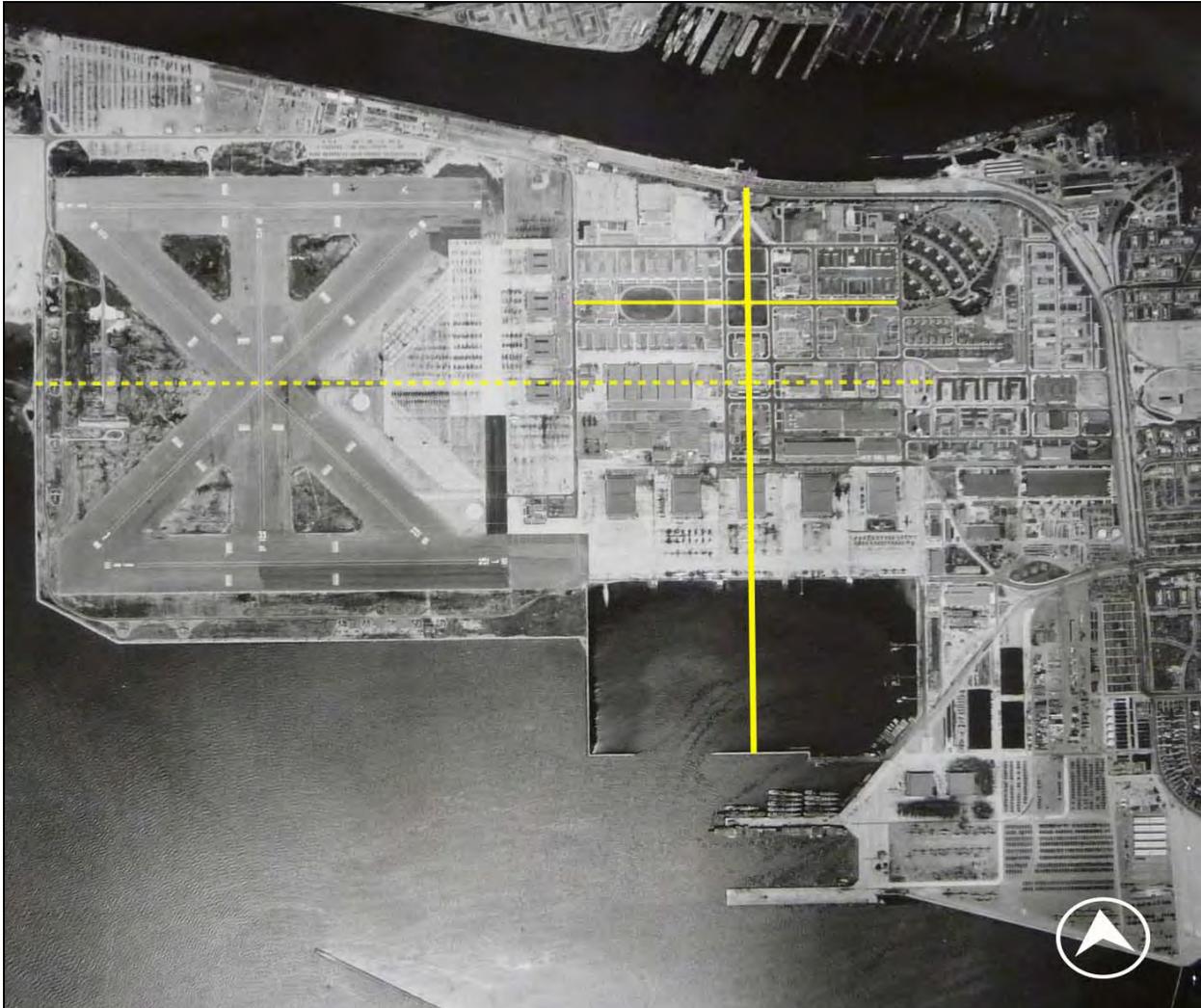
Some wartime construction completed the station's 1939 plan, as some buildings were placed appropriately within the functional layout of the station's original plan, and many buildings were constructed during the war in areas that had been previously unplanned. The Navy, for example, expanded Building 10 in 1945 into the area between Lexington Street (Second Street) and Saratoga Street (Third Street) in order to accommodate additional generators. This building completed the symmetrical design that had been intended for that location.<sup>73</sup>

<sup>70</sup> Technical Report and Project History Contract NOy4165 Alameda Air Station, NOy 4165, folder 9 of 23, Box 26 NOy Contracts, RG 12, CEC/Seabee Museum, NBVC, Port Hueneme.

<sup>71</sup> Buildings 42,43,44,62,101,102,114,191, United States Navy, *NAS Alameda Internet Naval Facilities Assets Data Store (iNFADS)*, 2008; Bureau of Yards and Docks, "US Naval Air Station Alameda, General Aircraft Paint and Oil Storehouses and Power Plant Building General Location Plan and Detail Plot Plan," Yards and Docks # 133376, October 1939, Drawer 4200, Base Development Maps, Plan and Maps Room, Building 1 on former NAS Alameda, Alameda, California; Jones & Stokes, "Historic Properties Inspection Report for the Naval Air Station Alameda Historic District Alameda, California, Final" (prepared for Naval Facilities Engineering Command, Southwest and Base Realignment and Closure Program Management Office West, July 2007), 6-73.

<sup>72</sup> Bureau of Yards and Docks, "US NAS Alameda, California, Interim Overhaul Building, Elevations and Sections A, B, C, D, &E," Yards and Docks #291658, December 16, 1945, Drawer 47, Maps and Plans Room 146, Building 1 on former NAS Alameda, Alameda, California.

<sup>73</sup> US Navy, "History of U.S. Naval Air Station Alameda, California, First Quarterly Installment, 1945," Box 1 of 2, NAS Command Histories, 27 Volumes 1940 – 1992, RG 181, NARA (San Francisco).



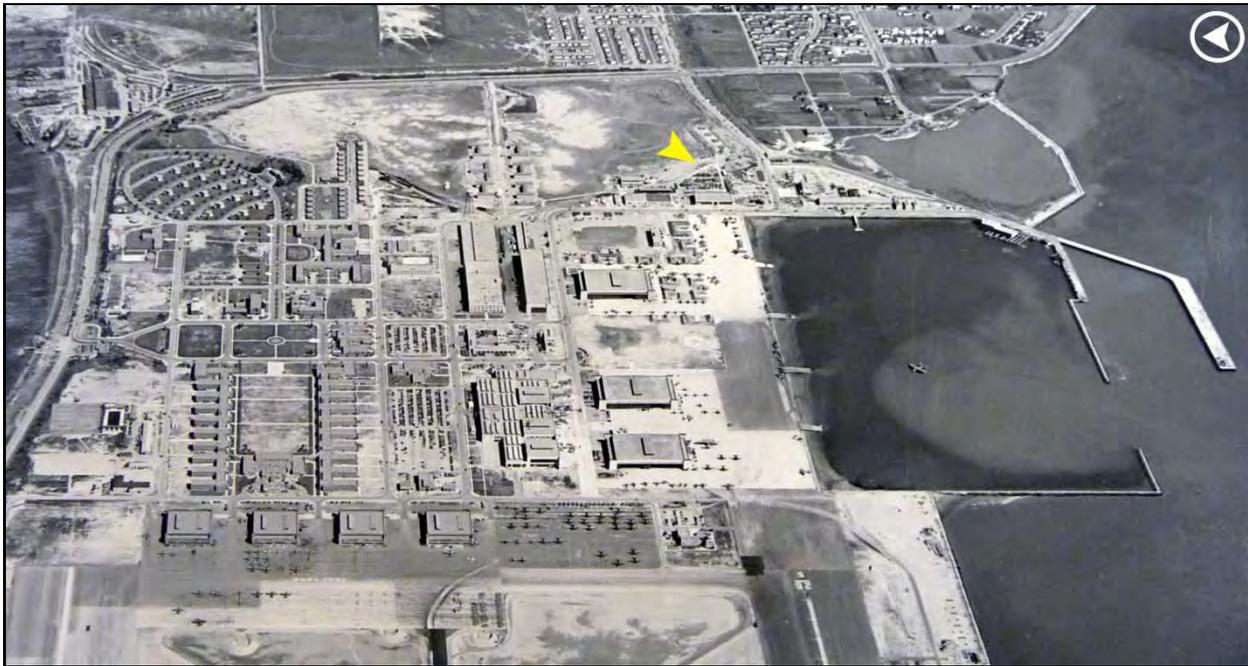
**Photograph 82:** NAS Alameda axes illustrated on 1948 aerial photograph. The dashed line is the station's initial east-west axis that was not built.<sup>74</sup>

The expanding Supply Department constructed wooden warehouses (Buildings 91 and 92), built in alignment with Buildings 8 and 9, filling in space that had been intended for storage facilities. Increasing numbers of personnel during the war made necessary the expansion of the Enlisted Barracks (Buildings 2 and 4) from 14 to 20 wings, completing their original designs. Previously unplanned buildings included temporary buildings, like the corrugated metal Armco Huts and wood frame barracks.

Growth in station personnel and activities pushed the Navy toward quicker development of unplanned, secondary spaces outside the original design's axial and formal layout. This initially occurred in the triangular shaped area on the east side of the Seaplane Lagoon delineated by railroad tracks and spurs, hemmed in by marsh and undeveloped land (**Photograph 83**). The tracks roughly paralleled the extension of Atlantic Avenue west of Main Street before turning southwest to the single pier that was built with the Seaplane Lagoon. A spur turned northwest providing service to the supply department's buildings in the southeast quadrant of the station core. The original East Gate was located west of where it

<sup>74</sup> Aerial photograph of NAS Alameda, 1948, Box 1, RG 10, CEC / Seabee Museum, NBVC, Port Hueneme.  
DPR 523B (1/95)

eventually was placed. It was originally located on the extension of Atlantic Avenue where Orion Street is now. This entry was the apex of the triangular land form. The initial plans had treated the area as secondary to the station's main functioning, placing hazardous facilities in the area, such as paint and oil storage and engine test cells. The angular borders prevented a clear orthogonal plan.



**Photograph 83:** June 1943. Triangular area east of Seaplane Lagoon (area indicated with yellow arrow) was secondary to the station plan. As the Supply Department expanded during the war, the area developed a utilitarian layout and landscape.<sup>75</sup>

During the war, the Navy expanded the Supply Department in this triangular shaped area, east of the Seaplane Lagoon. Assembly and Repair (A&R) would not have been functional without the Supply Department, established on station along with A&R in 1940. It managed purchase and inventory control of aircraft and parts for A&R, aviation supply for forward overseas stations, and station supplies for the exchange, mess halls, and cafeterias. As NAS Alameda's operations expanded, the Supply Department also provided material for the system of outlying fields and auxiliary fields that provided safe landing and operational bases for patrol and carrier squadrons attached to NAS Alameda.<sup>76</sup> In 1941 the supply staff grew from 50 to 100 and its materials on hand increased from several hundred items to over 20,000. During the first year of the war the department received over \$1.5 million worth of materiel a month and doubled in physical size. Tons of equipment were accepted and shipped from NAS Alameda and sent to the Pacific theater. To support this activity the supply department began warehouse operations in Building 105 (since demolished) along the east side of the Seaplane Lagoon in 1940.<sup>77</sup> In 1942, four new support buildings (Buildings 66, 67, 77, and 98) were constructed in this area east of the Seaplane Lagoon.

<sup>75</sup> Aerial photograph of NAS Alameda, June 17, 1943, Box 27, RG 12, CEC/Seabee Museum, NBVC, Port Hueneme

<sup>76</sup> "Know Your Station: The Story of Supply" *The Carrier*, December 29, 1944, 8.

<sup>77</sup> US Navy, "History of U.S. Naval Air Station Alameda, 1 November 1, 1940 to 31 December 1958," Box 1 of 2, 5757.1b, NAS Command Histories, 27 Volumes, 1940 to 1992, RG 181, NARA (San Francisco).

In 1942 – 43, the Navy also expanded the station into the former Peralta land grant between the tide lands and Main Street (**Illustration 16**).<sup>78</sup> Dredging added land to the station east of Piers 1 and 2 (**Photograph 84**). This allowed for the construction of the two wharfs and Pier 3 in 1945. The original East Gate was moved eastward to its current location (and the location where the East Gate buildings were removed in the 2000s, near Building 90). New buildings constructed in this eastern portion of the base were utilitarian and standardized types, and not in the station's cohesive Moderne architectural style.

This area was also outside the boundary of the planting plan LaVallee designed for the primary parts of the station. This newly reclaimed land was immediately divided into a grid, but unlike the main station north of the Seaplane Lagoon, this area did not have a major central axis, nor did it correspond directly to the station's major north-south axis. Its street and block layout was further differentiated in that the blocks south of Atlantic Avenue and the East Gate were oriented in a more north-south direction, while those in the core area of the station were oriented east west.

The railroad tracks following Atlantic Avenue running diagonally across this portion of the station also disrupted the grid pattern. These tracks pre-dated the Navy's occupation of the site and had determined the southeastern corner of the Seaplane Lagoon and the angle between Piers 1 and 2. The Navy needed rail service and retained them, as well as constructing new spurs to serve Pier 3. Railroad spurs constructed to serve the supply area of the station aligned with the orthogonal plan in the area west of Pan Am Way.<sup>79</sup> Other changes to the overall size and shape of this part of the station included improvements to navigation that addressed silting in the pier area and turning basin<sup>80</sup>

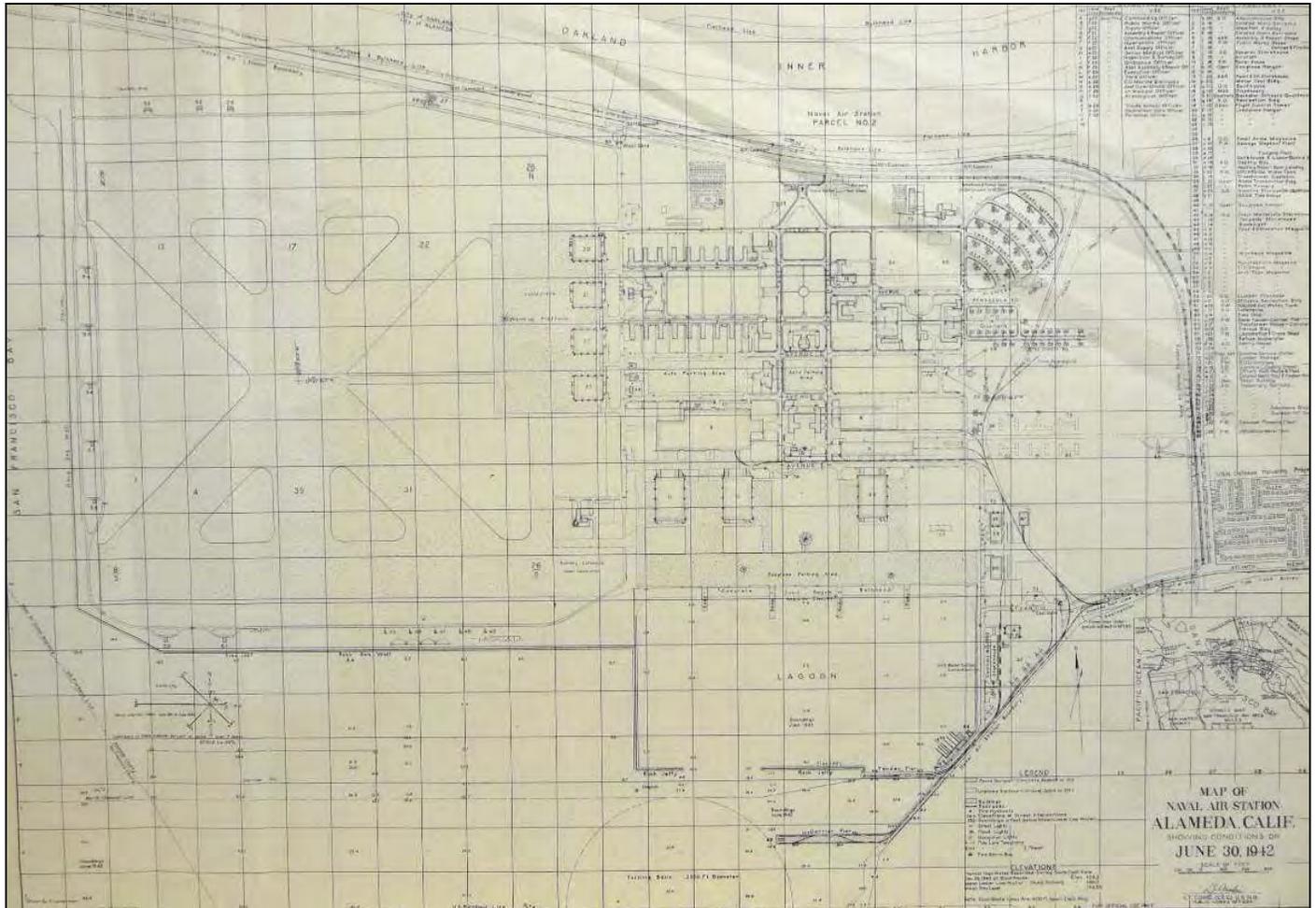
These new east and southeast areas of the station, largely built as part of the Navy's response to World War II, provided additional space for the supply and A&R departments on NAS Alameda. Warehouses and outdoor storage occupied most of the area south of Atlantic Avenue and the landscape and architecture reflected this utilitarian use (**Photograph 85**). Areas surrounding the additional warehouses and shops were paved to provide easy access for loading and unloading materials into them and the remaining area was either paved roadway or fallow. Southeast of Pier 2, the area remained open for aircraft parking.<sup>81</sup>

<sup>78</sup> Map of Alameda Naval Air Station Showing Conditions on June 30, 1942, Architectural Drawings, Maps, Box 1, RG 12, CEC/Seabee Museum, NBVC, Port Hueneme.

<sup>79</sup> Aerial Photograph of NAS Alameda, 1945, Box 1, RG 10, CEC / Seabee Museum; Aerial photograph, 1943, NOy 4165, folder 23 of 23, Box 26 NOy Contracts, RG 12, CEC/Seabee Museum; Aerial View Alameda, California, 1944, Folder 1-21, Box 1, RG 10, CEC/Seabee Museum.

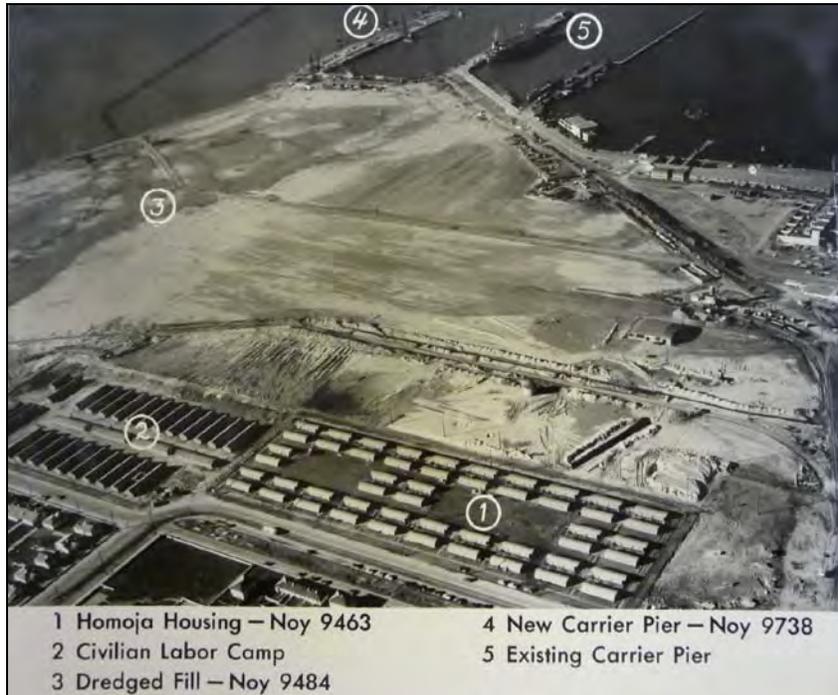
<sup>80</sup> "History of U.S. Naval Air Station Alameda, California Second Quarterly Installment, 1945," Box 1 of 2, NAS Command Histories, 27 Volumes 1940 to 1992, RG 181, NARA (San Francisco).

<sup>81</sup> NAS Alameda ceased using the Homoja housing in 1968 although the Quonset huts remained in place for several more years. The Navy dismantled the civilian labor camp shortly after World War II. Aerial Photograph of NAS Alameda, 1945, Box 1, RG 10, CEC / Seabee Museum; Aerial View Alameda, California, 1944, Folder 1-21, Box 1, RG 10, CEC/Seabee Museum; United States, Building the Navy's Bases in World War II, 374. According to *Popular Science* in March 1946 (page 67), Homoja is a compound word derived from the names of Admirals Horne, Morcell, and Jacobs.



**Illustration 16:** 1942 Station map showing the encroachment onto Peralta grant land and the addition of buildings east of the Seaplane Lagoon.<sup>82</sup>

<sup>82</sup> Map of Alameda Naval Air Station Showing Conditions on June 30, 1942, Architectural Drawings, Maps, Box 1, RG 12, CEC/Seabee Museum.  
DPR 523B (1/95)



**Photograph 84:** November 1944. Newly dredged and filled southeast portion of the station. This area was outside the original station plan, and outside the original planting plan. (Numbers and labels from original photo identification.)<sup>83</sup>



**Photograph 85:** September 1945. Southeast portion of the station retained a utilitarian appearance throughout World War II, distinct from the formal design of the core of the station. (Numbers from original photo identification.)<sup>84</sup>

<sup>83</sup> “NAS Alameda Homoja Housing looking southwest, Alt. 1000,” November 28, 1944, California- Alameda – pictures, maps, justifications, RG 5, CEC/Seabee Museum, NBVC, Port Hueneme.

The need for station housing – like almost every aspect of activities on the station – increased throughout the war. In 1942 the Navy planned for five new temporary barracks on NAS Alameda.<sup>85</sup> They were also located in one of the unplanned, secondary spaces of the original station plan, south of the original east-west axis and east of the storehouses. The five temporary barracks (Buildings 78 through 82) were constructed according to the Navy's B-1 plan for H-type barracks.<sup>86</sup> The Navy had adopted the B-1 barracks design at the end of World War I, and used it through 1942. Only one of these barracks (Building 78) remains on NAS Alameda.<sup>87</sup> These barracks did not solve the housing problem, so the Navy built additional standard barracks south of Midway Avenue (Avenue C), again in one of the originally unplanned spaces. These barracks used the B-1-B standard plan developed after 1942 that utilized fewer construction materials.<sup>88</sup> On NAS Alameda, three rectangular B-1-B barracks were arranged in U shapes. These were constructed in two phases in 1943 and 1944, and filled the remaining northeast corner of the station from Tower Avenue (Avenue F) to Main Street (**Photograph 86**).<sup>89</sup> Quonset huts were erected south of the East Gate under the Homoja Program for temporary housing of sailors' families staying on base for 60 days or less.<sup>90</sup> All of the temporary housing in the east portion of the station bound by West Midway Avenue to the north, Orion Street to the east, West Tower Avenue to the south and Moonlight Terrace to the west, except Buildings 78, 135 and 137, were subsequently demolished over several decades following World War II.

Completion of the runway system on NAS Alameda was a pressing wartime concern. Dredging and landfill created the Seaplane Lagoon and central portion of the station first, with construction starting on station buildings before the Airfield was complete. The initial runway layout was a sideways W shape; however, the Navy modified this plan by 1940, opting for a layout of five runways that resembled a capital "I" superimposed over a capital "X." Two short runways ran west to east and formed the top and bottom bars of the "I" and a single, north-south runway formed the center stem of the "I." Two runways, running northwest to southeast and southwest to northeast respectively, formed the "X." The center axis of the three runways was aligned with the main east-west axis of the station (**Photograph 87**). The number of runways and their alignment were designed to ensure that aircraft could operate regardless of wind direction. Construction of the Airfield lagged behind the rest of the station as the extensive dredging project worked to generate enough fill to create more than 348 acres of land. Dredging continued until September 1941 and two months later, despite work having barely begun on the Airfield, the Navy began using it. Entry into World War II hastened completion as station authorities quickly built earthen revetments on the Airfield and near the hangars for the protection of aircraft and materiel. The Navy also installed weapons magazines around the edge of the Airfield to keep hazardous items a safe distance from other station activities. Despite its flat appearance the grade of the Airfield was slightly domed to assist drainage. By November 1942 the combined I and X shaped runway system was complete and was installed with no traditional landscaping.<sup>91</sup>

<sup>84</sup> "History of Assembly and Repair Dept," Photograph album, 3195B-C, Box 1 of 22, RG 181, NARA (San Francisco).

<sup>85</sup> US Army Corps of Engineers, *World War II Temporary Military Buildings* (Champaign, IL: US Army Corps of Engineers Construction Engineering Research Laboratories, 1993), 48.

<sup>86</sup> USGS, *Oakland West Quadrangle* (Washington, D.C.: USGS, 1949); US Army Corps of Engineers, *World War II Temporary Military Buildings*, 50.

<sup>87</sup> US Army Corps of Engineers, *World War II Temporary Military Buildings*, 48; Building 78, *iNFADS*, 2008.

<sup>88</sup> US Army Corps of Engineers, *World War II Temporary Military Buildings*, 48.

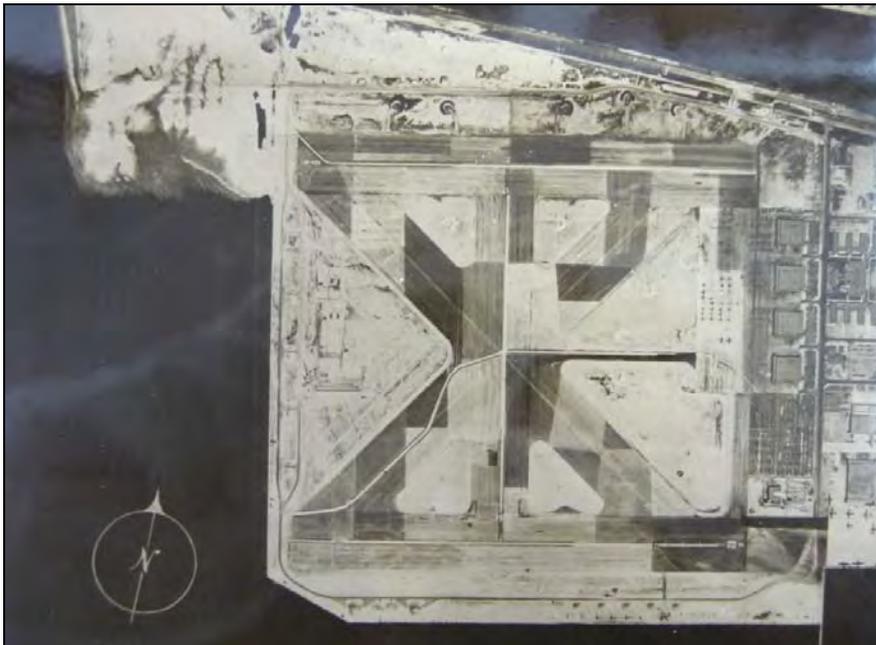
<sup>89</sup> Naval Operating Base San Francisco, California, Twelfth Naval District, "Naval Air Station Alameda California, B-1-B Barracks Triple Unit Plan and Details," Yards and Docks Specification # 12146, November 24, 1943, Drawer 123 Demolished Housing B-1-B Barracks, Plan and Maps Room, Building 1 on former NAS Alameda, Alameda, California; Naval Operating Base San Francisco, California, Twelfth Naval District, "Naval Air Station Alameda California, B-1-B Barracks, Bachelor Officers Quarters and Sea Plane Hangar Foundation Plot Plan Barracks Area," Yards and Docks # 317552, April 10, 1944, Drawer 123 Demolished Housing B-1-B Barracks, Plan and Maps Room, Building 1 on former NAS Alameda, Alameda, California.

<sup>90</sup> United States, *Building the Navy's Bases in World War II*, 374.

<sup>91</sup> Technical Report and Project History Contract NOy4165 Alameda Air Station, NOy 4165, Folder 9 of 23, Box 26 NOy Contracts, RG 12, CEC/Seabee Museum; and Michael D. Roberts, *Dictionary of American Naval Aviation Squadrons* (Washington, D.C.: U.S. Department of the Navy, Naval Historical Center, 2000), 737.



**Photograph 86:** Construction of temporary style barrack on east end of NAS Alameda, 1944. Numbers indicated specific projects on original photograph.<sup>92</sup>



**Photograph 87:** The Airfield in 1943.<sup>93</sup> Note shape and size, compared to modifications made in the 1950s (see below). Also note that it is a vast, paved space without formal plantings.

<sup>92</sup> NAS Alameda B1B Barracks Looking NW, Alt. 1000', November 28, 1944, California- Alameda – pictures, maps, justifications, RG 5, CEC/Seabee Museum, NBVC, Port Hueneme.

During the war the Navy further modified the Airfield to accommodate growing station activities. The warm-up and parking apron was increased from a rectangle in front of Buildings 20-23 to a larger triangular shaped area set between two diagonal runways. On the north edge of the Airfield, there was storage for aircraft requiring repair and a supply department salvage yard. The station landfill at the northwest corner of the Airfield continued to expand the station's landmass.<sup>94</sup>

The station workforce expanded to 18,000 military personnel and 9,000 civilian workers during the war, putting a strain on available transportation and newly established circulation patterns on station.<sup>95</sup> The orthogonal organization of roads within the station continued to function well; however, the need to get civilian workers efficiently on and off station challenged officials. Public transportation in the form of buses, trains, and ferries, left workers at the station gates, and the increasing numbers of workers who carpooled to the station parked at the north and later east gates, also had to walk relatively long distances. Inadequate parking space was a problem from the beginning and continued to plague the station throughout the subsequent Cold War era. Parking was originally provided for officers in their housing areas and there was some limited parking in the administrative areas, but it fell woefully short of the spaces needed. Station officials developed an early solution by creating additional parking along the former east-west axis and around shop facilities. A transportation hub was created in the center of the station just south of the Administration Building (Building 1) at the center of the main axis (**Photograph 88**). Parking in the administrative area increased significantly south of Building 16 (where Building 7 now sits) during the war (as well as during the 1950s to 1980s), and filled a quarter of the block. The station constructed parking for the CPO Housing in 1945, just as the war came to an end. Throughout the changes made to address the growing need for parking, the station retained the open spaces at the entry mall and BEQ quadrangle.



**Photograph 88:** War time shift change at Building 5 showing transportation pool behind Building 1 and Building 6 on the right. Also note building setback, lawn and foundation shrubbery at Building 6.<sup>96</sup>

<sup>93</sup> "Mosaic map of NAS Alameda, Calif., Alt. 8,250 ft., June 17, 1943, California - Alameda - pictures, maps, justifications, RG 5, CEC/Seabee Museum, NBVC, Port Hueneme.

<sup>94</sup> Technical Report and Project History Contract NOy4165 Alameda Air Station, NOy 4165, Folder 9 of 23, Box 26 NOy Contracts, RG 12, CEC/Seabee Museum; Aerial photograph of NAS Alameda, 1945, Box 1, RG 10, CEC / Seabee Museum.

<sup>95</sup> Jean Ebbert and Marie-Beth Hall, *Crossed Currents: Navy Women from WWI to Tailhook* (Washington, D.C: Brassey's, 1993) 27-34; Susan H. Godson, *Serving Proudly: A History of Women in the U.S. Navy* (Annapolis, Maryland: Naval Institute Press, 2001), 106-112, 117-119; and Allbrandt, *History*, 5; "Wave Lengths," *The Carrier*, January 28, 1944; "Wave Lengths," *The Carrier*, May 5, 1944; "Girls in Blue Perform Many Tasks at NAS," *The Carrier*, August 20, 1945, 3.

<sup>96</sup> *The Carrier*, December 15, 1944.

### Execution of the Planting Plan during World War II

By January 1942, one month after the United States entered World War II, many of the trees transferred from Treasure Island, and called for in LaVallee's plan, had been planted on the station. Black acacias lined the curvilinear streets of the Officers' Housing, clusters of trees punctuated the four corners of the entry mall, the south corners of the triangle south of the main entry, and the west end of the BEQ quadrangle, and the median along West Essex Drive had an evenly spaced row of plantings (**Photograph 89** and **Photograph 90**).

Aerial photographs indicate that by 1943 the Navy had implemented the planned decorative planting of ice plant throughout the entry malls and triangle (**Photograph 91**). Colorized postcards depicting the station feature the ice plant prominently, exaggerating the vibrancy of the colors (**Photograph 92** and **Photograph 93**). By 1945, historic photographs indicate that the iceplant had become rather unruly with an uneven, un-manicured appearance (**Photograph 94** and **Photograph 95**).



**Photograph 89:** January 1942. Street trees in Officers' Housing (1); Plantings along West Essex Drive (2); Clusters of trees planted at west end of BEQ quadrangle (3); Clusters of trees planted at four corners of entry mall (4); and trees planted at south corners of entry mall triangle (5).<sup>97</sup>

<sup>97</sup> Graphic base from "NAS Alameda, Alt. 5000 ft horizontal distance 10,000 8 ¼ in lens looking west, passive defence photo," January 28, 1942, California- Alameda – pictures, maps, justifications, RG 5, CEC/Seabee Museum, NBVC, Port Hueneme.



**Photograph 90:** Housing for married officers circa 1945 as seen from back (southwest side). Implemented landscaping included foundation plantings and shrubs and street trees.<sup>98</sup>



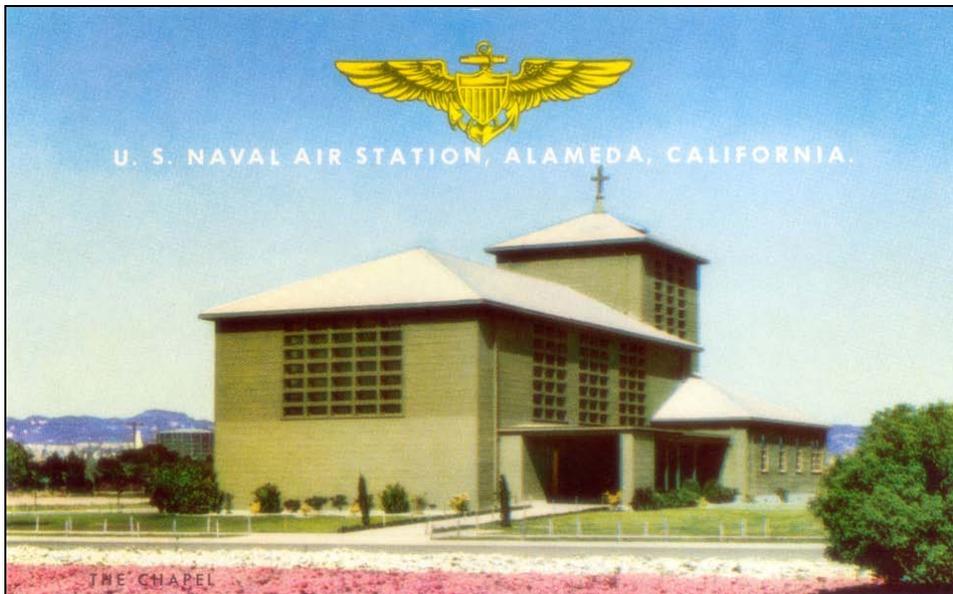
**Photograph 91:** 1943.<sup>99</sup> Monochromatic sections of ice plant plantings visible around edges of entry mall and through paths and around circle large quadrangle.

<sup>98</sup> Photograph 121-3, circa 1945, RG5, CEC / Seabee Museum.

<sup>99</sup> "Mosaic map of NAS Alameda, Calif., Alt. 8,250 ft., June 17, 1943, California- Alameda – pictures, maps, justifications, RG 5, CEC/Seabee Museum, NBVC, Port Hueneme.



**Photograph 92:** Period postcard depicting Building 1, circa 1943. Colorized postcard exaggerated the vibrancy of ice plant in entry mall.



**Photograph 93:** Period post card depicting Building 94, circa 1943. Colorized postcard produced contemporaneously with **Photograph 92**. Again, vibrancy of the color scheme of ice plant is exaggerated. The photo does, however, indicate that the bi-chromatic planting scheme was executed.



**Photograph 94:** 1945. Photo taken from northeast side of large entry mall facing west toward BEQ quadrangle. Tree at right foreground is at the northeast corner of the entry mall; trees at right background are those located at northwest corner of entry mall. Also note un-manicured groundcover in entry mall and sporadic coverage in planting strip in foreground.<sup>100</sup>



**Photograph 95:** 1945. Building 1, facing south from circular space in the center of the entry mall.<sup>101</sup>

<sup>100</sup> “General View of Enlisted Barracks & Mess,” May 1945, California- Alameda – pictures, maps, justifications, RG 5, CEC/Seabee Museum, NBVC, Port Hueneme.

<sup>101</sup> Naval Air Station Alameda, *U.S. Naval Air Station Alameda, California.*, 27.

The formal entry mall was not the only area of the station that received vegetation during World War II. As the war progressed, the Navy made continued progress executing the primary elements of the planting plan in the designed areas. Administrative buildings and major buildings in the Administrative Core received formal plantings – street trees, foundation shrubbery, and ground cover. Neatly tended grass, foundations shrubs, and street trees were planted at buildings along the entry mall. Paired plantings were found throughout the planting plan, and many of these were also executed during the war, particularly flanking the walkways at the approaches to the BEQ (**Photograph 96, Photograph 97, Photograph 98**).<sup>102</sup>

The Shops Area, a functional area expanded during the war, also had some formally planted areas, particularly at the buildings adjacent to the main north-south axis, Buildings 6, 8, 62 (see **Photograph 96**), and 114. Buildings at the northwest corner of the Shops Area – Building 42, 43, 44 and 102 – also had deep setbacks planted with lawn and foundation shrubbery.<sup>103</sup>

Between 1944 and 1945 adaptations were made to the large quadrangles in the Administrative Core, both the entry mall, and the BEQ quadrangle. The east-west path bisecting the large entry mall was extended through the circular center circular path, creating a more direct route across the quadrangle. In the BEQ quadrangle, the westernmost path was removed and a sporting field was added. The addition of the field did not appear to have disrupted other plantings in the immediate vicinity (**Photograph 99**).



**Photograph 96:** 1944. In addition to the plantings present by January 1942, this photograph indicates the presence of foundation shrubbery around the east ends of Buildings 2 and 4 (1), and on the south side of Building 18 (2). Street trees are present around Building 1 (3). Also present are paired plantings flanking the pathways approaching the east ends of Buildings 2 and 4 (4) and the BEQ quadrangle (5). Parts of the Shops Area also had formal plantings, as seen here at Building 62 (6).<sup>104</sup>

<sup>102</sup> Aerial photograph of NAS Alameda, 1945, Box 1, RG 10, CEC/Seabee Museum; Photograph, Building 16, 1945, RG #5, CEC/Seabee Museum; Photograph, Control Tower, 1945, RG#5, CEC/Seabee Museum.

<sup>103</sup> Aerial photograph of NAS Alameda, 1945, Box 1, RG 10, CEC/Seabee Museum; Photograph, Building 16, 1945, RG #5, CEC/Seabee Museum; Photograph, Control Tower, 1945, RG#5, CEC/Seabee Museum.

<sup>104</sup> "Assembly & Repair Department, NAS Alameda- January 1, 1944," Naval Air Station Alameda, California 1940-1945 photo album, National Archives and Records Administration, Pacific Region, (San Francisco), np.



**Photograph 97:** 1945. Building 4 at left, camera facing west. The tree line depicted in the planting plan had been executed (right), and like other buildings in the Administrative Core, Building 4 had foundation shrubbery.<sup>105</sup>



**Photograph 98:** 1945. Building 18 taken from center circle of entry mall. Note consistent spacing of foundation shrubbery on west side of building and free-standing concrete planter left of entry.<sup>106</sup>

<sup>105</sup> "Alameda, California NAS, Enlisted Bks, and Mess," May 1945, California - Alameda -pictures, maps, justifications, RG 5, CEC/Seabee Museum, NBVC, Port Hueneme.

<sup>106</sup> "Theater," May 1945, California - Alameda -pictures, maps, justifications, RG 5, CEC/Seabee Museum, NBVC, Port Hueneme.



**Photograph 99:** September 1945. The western pathway bisecting the BEQ quadrangle was removed to make room for a sporting field. Also note the extension of the path through the circular area in the center of the entry mall.<sup>107</sup>

## Summary of the World War II Era

By the end of the war, the station had grown to accommodate 158 buildings with remarkably little interruption to the original 1939 station plan. The operational units remained intact, with only minor adjustments to their boundaries (Shops Area expanded north to West Midway Avenue) as the Navy built core portions of the original layout. Extensions of the functional areas were developed during the war in the southern and eastern portions of the station. Station personnel and employees, of course, quickly nicknamed various areas. The massive concrete BEQ constructed before the war was known as the “Marble Mansion,” whereas the temporary wooden barracks became known as “Splinterville.”<sup>108</sup> Splinterville, first used to orient quickly-inducted Navy personnel to military life, was initially the Receiving Unit, and operated semi-autonomously. Later official records refer to the area as East Barracks.<sup>109</sup> Land at the northern edge of the Airfield where damaged aircraft were stored before overhaul was commonly known as “Siberia.”<sup>110</sup>

Throughout the war the Navy continued construction to increase the operational capacity of the station. Pier 2, the aircraft carrier pier, was constructed of reinforced concrete on cast concrete pilings in 1941.<sup>111</sup> Pier 3, a second, larger carrier pier, was added in 1945 late in the war to accommodate the Navy’s ever larger ships. Navigation in the station’s channels was hampered by silting in the pier area and turning basin. In 1945 the Navy hired the Basalt Rock Company of Napa to build another mile-and-a-quarter breakwater south of the piers, to protect them from storm damage and reduce

<sup>107</sup> Graphic base from: “Assembly & Repair Buildings, NAS, Alameda-September 1, 1945,” Naval Air Station Alameda, California 1940-1945 photo album, National Archives and Records Administration, Pacific Region, (San Francisco), np.

<sup>108</sup> Helen James Jansen Collection (AFC/2001/001/33440), Veterans History Project, American Folklife Center, Library of Congress.

<sup>109</sup> US Navy, “History of U.S. Naval Air Station Alameda, California First Quarterly Installment, 1945,” Box 1 of 2, NAS Command Histories, 27 Volumes 1940 to 1992, RG 181, NARA (San Francisco).

<sup>110</sup> Helen James Jansen Collection (AFC/2001/001/33440), Veterans History Project, American Folklife Center, Library of Congress.

<sup>111</sup> Technical Report and Project History Contract NOy4165 Alameda Air Station, NOy 4165, folder 9 of 23, Box 26 NOy Contracts, RG 12, CEC/Seabee Museum, NBVC, Port Hueneme.

silting in the channel and turning basin.<sup>112</sup> The new breakwater was the result of three years of design and testing by the Army Corps of Engineers.<sup>113</sup>

Vegetation was added throughout the Administrative Core, the Residential Area, and to a lesser degree, the Shops Area. In most cases, the vegetation that was planted followed the planting plan LaVallee designed in 1941, however, adjustments, modifications, and editing also occurred in the implementation of the planting plan.

Throughout the war years, NAS Alameda served a valuable role in naval operations and demonstrated the critical role aviation had within Navy strategy and operations. Swarms of Navy and civilian personnel carried on activities aimed at providing support services to the striking arm of the fleet. Its training facilities prepared service personnel for duties in forward areas, and air crews in flight operations. Its shops and repair facilities assembled aircraft and returned battle-damaged aircraft to the fight. It provided a homeport for combat ships, and a resupply and service location for their crews and equipment. In all of this, NAS Alameda was like the many naval facilities around the San Francisco Bay, along the Pacific Coast, and along the Atlantic seaboard – it helped keep the Navy fighting.

### **Cold War Era (1946-1989)**

At the end of World War II, the United States and Soviet Union emerged as the world's two major powers. Fueled by a clash of ideologies, a new state of hostile relations between the United States and its allies against the Soviet Union, the Peoples' Republic of China, and their client states developed into a "Cold War" of propaganda, economic pressure, and covert actions. From its beginning in 1946 until the dismantling of the Berlin Wall in 1989, the Cold War era was a period of great military expansion to meet the perceived threat from the nation's adversaries. While the United States followed its policy to contain communism, the international community widened its influence in dealing with conflicts around the world through the efforts of the United Nations. In the United States, the race to develop and deploy advanced weapons for defense and deterrence led to the rise of an extensive defense industry, which provided the military with a flow of new technologies and improved equipment. Although the Cold War was marked by expanding nuclear capabilities, conventional weapons and strategies were the major instruments used by the U.S. military to shape the outcome of conflicts throughout the period. Specialized facilities of this period – for example what is now Naval Air Weapons Station China Lake – contributed to the improvement, development, testing, and evaluation of new weapon technologies; however, NAS Alameda, like most stations, continued to support active military and routine missions and operations. Through the early Cold War, NAS Alameda and other air stations adapted to service new technologies and equipment developed elsewhere by adding facilities to accommodate and maintain jet aircraft and other conventional weapons. However, technology outpaced the station's development. The expansion of San Francisco Bay Area urban development, expense of maintaining facilities, and reorganization of Naval shore establishments with changing missions and military requirements led to the eventual decommissioning of the station after the Cold War ended.

The conclusion of World War II with the atomic attacks on Japan encouraged a belief that future conflicts would involve strategic nuclear bombing. The Army and Air Force took the view that the Navy, despite its successes in World War II, was obsolete. The Navy struggled for survival, focusing on efficiency, modernization, and fighting limited to conventional warfare. During this period the Navy increased carrier capacity to accommodate strategic bombers, updated aircraft technology, and initiated guided missile programs. This placed the Navy in a strong position when the Korean War, a limited conventional war, began in 1950.<sup>114</sup>

<sup>112</sup> "History of U.S. Naval Air Station Alameda, California Second Quarterly Installment, 1945," Box 1 of 2, NAS Command Histories, 27 Volumes 1940 to 1992, RG 181, NARA (San Francisco).

<sup>113</sup> R. A. Jackson and R. Y. Hudson, United States Department of the Army, Corps of Engineers, Mississippi River Commission, *Technical Memorandum No. 2-242, Breakwater Location U.S. Naval Air Station, Alameda, California, Model Investigation* (Vicksburg, Mississippi, Waterways Experiment Station, December 1947), 1-2.

<sup>114</sup> Nathan Miller, *The US Navy: A History* (Annapolis, Maryland: Naval Institute Press, 1997), 247-250.

In the years immediately following World War II, NAS Alameda's main role was storage. Seventeen ships of the Pacific reserve fleet were moored at the station. The A&R department continued to process aircraft, applying coating parts to preserve them. The Navy stored aircraft and aircraft components both on the station and in other repositories nationwide. Meanwhile tons of equipment, supplies, and parts were returning from the Pacific Theater and the supply department processed these for sale or reuse.

NAS Alameda, like many other military installations in the immediate aftermath of World War II, experienced a rapid reduction in force. The Navy's demobilization plan called for the service to shrink to one-third its 1945 size. By August 1946, a year following the Japanese surrender, the station's force had been reduced from 18,000 military personnel to 187 officers and less than 1,800 enlisted personnel. Aircraft and aircraft parts were preserved and stored for future use; and seventeen vessels, including two decommissioned aircraft carriers, *Enterprise* (CV-6) and *Hancock* (CV-19), were moored at piers on NAS Alameda as part of the Pacific Reserve Fleet. The reduction in staff and material led to a station-wide emphasis on efficiency and the goal of completing more with less. Consolidation of activities and the development of new services helped keep NAS Alameda an active part of the Navy's operations.

The elements of the landscape that had taken shape during initial construction and wartime – station layout, circulation patterns, land use areas, sightlines and view sheds, and implementation of the planting plan – remained intact during this period of NAS Alameda's development. The planting plan, the most transient of landscape elements, matured in the early years of the Cold War, and elements of the original planting design were modified, particularly in the entry mall. Rather than the wide swaths of ice plant bisecting the entry mall as depicted in the original design and implemented by 1943, shortly after the war, the swaths were replaced by two lines of plantings running north-south through the entry malls (**Photograph 100** and **Photograph 101**).

By the early 1950s, the Public Works department on NAS Alameda had a crew of 24 workers whose job was to keep the grounds of the station in "park-like shape." In 1951, *The Carrier* published an article that listed the inventory of vegetation on station as 60 acres of lawn, 8,000 – 9,000 trees and shrubs, and acres of flower beds. The gardener in charge of the greenhouse was tasked with making sure there were always enough plants available to "replace plants past their peak or to go into new locations."<sup>115</sup>

NAS Alameda entered the jet age as a well-organized and complete air station at rest, but the Korean War catapulted the station back into action. In June 1950 communist North Korean forces crossed the 38<sup>th</sup> parallel and invaded South Korea. The United States, in conjunction with United Nations forces, came to the defense of South Korea. Unlike the nuclear war for which the Air Force and Army had prepared, this was a limited conventional war. Because of small targets and fewer bases in the combat theater for bombers, most aerial combat operations fell to the Navy and its aircraft carriers. Successful operations in Korea resulted in additional funding for the Navy, construction of the larger *Forrestal* class aircraft carriers, and accelerated conversion to jet aircraft.<sup>116</sup>

The outbreak of the Korean War in 1950 prompted the Navy to expand operations on NAS Alameda. With President Harry Truman's authorization of U.S. air and sea forces to assist South Korea, NAS Alameda-based Carrier Division 3 launched the first air strikes against North Korean troops. The station itself returned to a wartime footing with well-understood organization, both administrative and spatial. NAS Alameda inaugurated a 48-hour workweek and the O&R Department (name changed from A&R to reflect the change in tasks that did not include aircraft assembly) instituted 10-hour shifts. The Navy brought back into service nearly 270 mothballed aircraft, re-commissioned previously decommissioned ships, and called in reservists. A thousand additional civilians were hired to meet expected wartime demands for aircraft repair and support. By the fall 1951, NAS Alameda was the largest naval air station in the county

<sup>115</sup> *The Carrier*, "PW Crew Keeps Station Green," June 1, 1951: 6.

<sup>116</sup> Miller, *The US Navy*, 251 and 253.

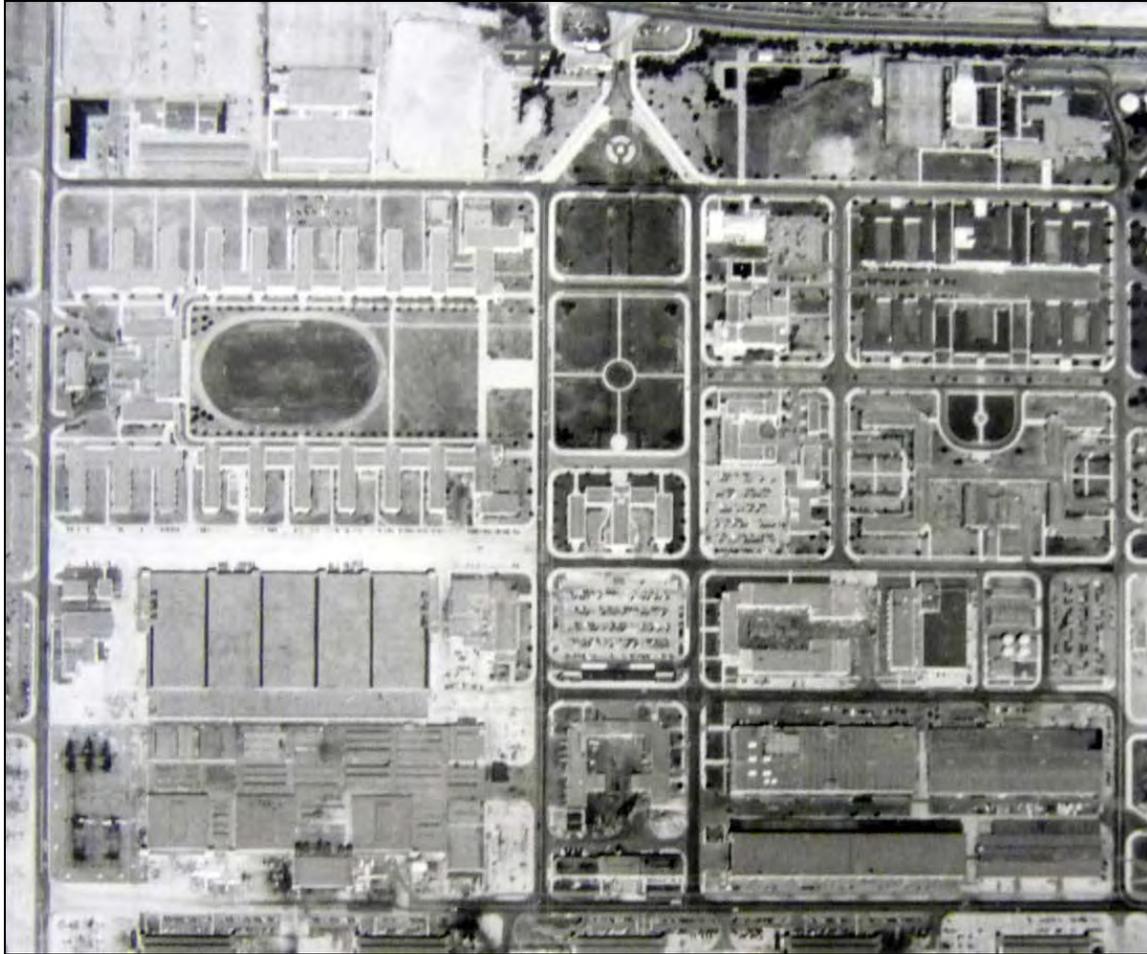
\*Recorded by: PGAdesign and JRP Historical

\*Date: Sept. 2009-Dec. 2009

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with 15,000 military and civilian personnel in eight departments.<sup>117</sup> As during World War II, NAS Alameda teemed with activity as an industrial facility, airfield, and small city. There was constant activity on base, punctuated by civilian employee commuting rush hours that were handled in three shifts to accommodate the great number of personnel coming aboard and leaving the base (**Photograph 102**). Most of the activity occurred in the facilities that had been built and used during World War II.<sup>118</sup>



**Photograph 100:** Ariel Photograph, 1948.<sup>119</sup> After World War II, vegetation matured, more trees were planted along the northern border, and the planting plan in the entry mall was altered.

<sup>117</sup> Allbrandt, "History of the Naval Air Station & Naval Aviation Depot at Alameda, California," 9-10.

<sup>118</sup> Baack, oral history interview, December 8, 2009; Bronson "Chief" Parry, former Navy Chief Petty Officer who served on NAS Alameda (1966-1976), oral history interview with Christopher McMorris and Meta Bunse, JRP Historical Consulting, LLC, December 22, 2009.

<sup>119</sup> "N.A.S. Alameda, Calif. Vertical alt. 10,000' F-6," May 10, 1948, California- Alameda – pictures, maps, justifications, RG 5, CEC/Seabee Museum, NBVC, Port Hueneme.



**Photograph 101:** Oblique aerial photograph, 1950.<sup>120</sup> Entry mall, facing south. Planting plan has been altered from original design to include the lines of plantings running north-south through the entry mall. Also note installation of new planting around monument in triangle.



**Photograph 102:** Overhaul & Repair Department shift change, Building 5A, ca. 1954.<sup>121</sup>

<sup>120</sup> *The Carrier*, October 19, 1950: 1.

<sup>121</sup> NAS Alameda Yearbook, 1954, Naval Air Station Alameda Photograph Albums, Oakland Library History Room, np.

Aircraft technology had changed since the beginning of World War II through the outbreak of the Korean War and as a result, NAS Alameda updated its facilities to accommodate these new aircraft. The new faster, larger, and heavier aircraft required longer runways and maintaining them required larger engine re-work facilities and test facilities. Modifications would change the relationship between the Airfield and the rest of the station and continue filling the entire station with operational facilities.

The changed position of the United States in the world meant that demobilization following the Korean War was more limited than that following World War II. This new position, along with the introduction of new technologies to the military continued the expansion of NAS Alameda that began during the Korean War into the following decade. The station received additional facilities to support jet aircraft and updated facilities for nuclear powered ships. Between 1947 and 1952, the percentage of jet-powered Navy aircraft increased from less than one percent to almost 20 percent. By the late 1950s, more than half of the engines that propelled Navy aircraft were either turboprop or turbojet. The Navy operated nearly 10,000 aircraft, making it the third largest air force in the world behind the U.S. Air Force and the military of the Soviet Union. By the early 1960s, NAS Alameda was no longer servicing propeller aircraft. More sophisticated jet aircraft had more demanding maintenance requirements, and NAS Alameda was among the Navy's facilities best suited to do so.<sup>122</sup> The Navy's growing reliance upon new technology also required a highly trained support staff. Retention of military personnel with such expertise required upgraded housing, morale, and recreational facilities.

Following the end of the Korean War, the United States and Soviet communist forces met largely in proxy wars using conventional weapons. The Navy continued to be an important tool in these conflicts because it was able to project force around the world, illustrating support for U.S. allies. This period, however, was exemplified by deployment of many new, technologically-advanced weapons developed in the previous years. The launch of Sputnik in 1957 accelerated the arms race. No longer were aircraft required for the delivery of nuclear warheads. The Air Force, Army, and Navy all developed their own Intercontinental Ballistic Missiles (ICBMs). The Navy's Polaris ICBM could be launched from a submarine. The Navy constructed new nuclear powered ships armed with guided missiles. Throughout this period the Navy, like the other service branches, focused on developing and deploying these and other new military technologies.<sup>123</sup>

Although American military advisors had been involved in Vietnam since the 1950s, direct involvement in the conflict of personnel stationed on NAS Alameda did not occur until North Vietnamese torpedo boats reportedly fired upon two American destroyers operating in the Gulf of Tonkin. The incident resulted in passage of the Gulf of Tonkin Resolution by Congress in August 1964. Thereafter President Lyndon Johnson increased the United States role in 'containing' the North Vietnamese Communists. The Navy participated in bombing targets in North Vietnam and operated blockades and patrols in the Mekong Delta. With increased involvement in Vietnam, the Navy faced the challenges and increased demands were placed upon military personnel. Physical and mental hazards as well as casualties increased, and repeated deployments to Vietnam were challenging for personnel and their families. During this time, Secretary of the Navy Admiral Elmo Zumwalt initiated a program focused on paying more attention to MWR needs of personnel. NAS Alameda worked to improve its MWR facilities on station, as well as repair and supply facilities, to support military personnel during increased Vietnam operations. As part of the morale boosting efforts of the station when incoming carriers from Vietnam came to port on NAS Alameda, there was an effort to honor returning military personnel with large welcoming crowds.<sup>124</sup>

<sup>122</sup> Allbrandt, "History of the Naval Air Station & Naval Aviation Depot," 12 and 15.

<sup>123</sup> Nathan Miller, *The US Navy*, 255-260; JRP, "History and Historic Resources of the Military in California, 1769 to 1989," 8-6 – 8-10.

<sup>124</sup> Nathan Miller, *The US Navy*, 263-270; JRP, "History and Historic Resources of the Military in California, 1769 to 1989," 8-10 – 8-12; Baack, oral history interview, December 8, 2009.

Following the Vietnam Conflict the U.S. military entered a period of uncertainty as the nation's foreign policy adapted to new conditions. After 1977, President Carter's administration focused on supporting the North Atlantic Treaty Organization rather than exceeding the Soviet military build-up. As a result, Congress cut budgets for new ships and deferred improvements to the Pacific Theater forces. The military also became a completely volunteer force, necessitating changes in recruitment, retention, and advancement policies for military personnel. This continued the demand for increased attention for MWR facilities. The trend for reduced spending and the European focus of the late 1970s was completely reversed in the 1980s by the Regan administration, with increased spending on new and technologically-advanced ships and submarines. The new focus was on technologically superior weaponry, and quick military responses required the use of naval forces to dispel unrest around the world through the end of the Cold War. Congress again cut military spending in the late 1980s and the Cold War ended with the dismantling of the Berlin Wall that accompanied shifts in power in Eastern Europe in 1989. Contracts for new ships, submarines, and aircraft were cancelled. During this period, Congress initiated a process known as Base Realignment and Closure (BRAC) to reduce the number of military installations to sustainable levels.<sup>125</sup>

### **Evolution of the NAS Alameda Landscape during the Cold War**

The following discussion addresses the evolution of and changes over time to NAS Alameda and its landscape during the Cold War period (1946-1989). It is presented by functional area, corresponding with the description of existing conditions. The functional areas are: Administrative Core, Shops, Residential / MWR, and Operations. These functional areas were first established as an organizational tool for understanding the station's design in the 1997 "Guide to Preserving the Character of the Naval Air Station Alameda Historic District." This CLR changes the name for one of the functional areas. The Hangars Area from the 1997 report is now the Operations Area, reflecting the wider functions of the area in which the hangars are situated and their relationship with adjacent spaces including the Seaplane Lagoon and the Airfield. The Operations Area also includes the waterfront / piers area.

#### **Administrative Core**

Through the Cold War period, the entry mall continued to serve NAS Alameda as a formal space at the center of the Administrative Core. By the late 1950s, aspects of the entry mall had been altered, perhaps to provide a suitable space for parade grounds. A photograph dated May 1958 shows that the decorative plantings bisecting the entry mall that were present in the early 1950s, until at least 1954, had been removed and the ice plant had been replaced with turf throughout the entry mall (**Photograph 103** and **Photograph 104**). Also visible in the 1958 photograph are sailors in formation on the streets around the entry mall. The following year, another photograph shows the sailors in marching formation in the entry mall itself (**Photograph 105**). This photograph also indicates that the planting strips originally designed and constructed around the entry mall had been removed to create wider perimeter sidewalks. At this point, vegetation in the large entry mall also included trees flanking the east-west walkway on the west side, trees along the south border, and low shrubbery bordering the quadrangle on the east and west sides. The pathway bisecting the circular area in the center of the quadrangle had been removed and the area was planted with groundcover encircled by turf and the walkway.

The permanent versus temporary nature of the housing in the east side of the Administrative Core became apparent during the Cold War period. The Navy removed most of the temporary barracks north of West Essex Drive, however, the BOQ (Building 17) remained relatively unchanged through the Cold War. In 1952, the BOQ appeared much as it did at the end of the war, and much as it does today. Both vegetation and circulation features accentuated the symmetry of the building. Carefully manicured hedges lined the curved drive on the north side of the building, and paths in the courtyards on the east and west ends of the building were mirror images of one another (**Photograph 107**). Over time, the

<sup>125</sup> Miller, *The U.S. Navy*, 272-278; JRP, "History and Historic Resources of the Military in California, 1769 to 1989," 8-13 – 8-15.

introduction of new plants at new locations around the building, and reduced maintenance altered some of the vegetation around the building.



**Photograph 103:** Photograph featured in 1954 NAS Alameda Yearbook; note long views down main north-south streets, Lexington and Saratoga.<sup>126</sup>



**Photograph 104:** May 1958. Entry mall, looking south from Main Gate. Note that decorative plantings bisecting the entry mall have been removed, and ice plant appears to have been replaced with turf throughout the entry mall..<sup>127</sup>

<sup>126</sup> NAS Alameda Yearbook, 1954, Naval Air Station Alameda Photograph Albums, Oakland Library History Room, np.

<sup>127</sup> *The Carrier*, May 23, 1958.



**Photograph 105:** July 1959. Plantings and hardscape in entry mall have been modified to include turf, additional trees, perimeter shrubbery, and wider sidewalks. The pathway bisecting the center of the circular area has been removed.<sup>128</sup>



**Photograph 106:** July 1963. Facing south toward Building 1 from north end of entry mall. Note decorative planting in center of entry mall, and maturation of trees.<sup>129</sup>

<sup>128</sup> *The Carrier*, July 10, 1959.

<sup>129</sup> *The Carrier*, July 12, 1963.



**Photograph 107:** 1952. East side of Administrative Core showing BOQ Building 17 (labeled) and temporary barracks (adjacent to BOQ in foreground).<sup>130</sup>

Unlike the block containing the BOQ, changes in the number of officers housed on the station and shifts in functions on station during the Cold War had a substantial visual impact on the block containing the temporary BOQs. The Navy constructed five temporary barracks and a subsistence building opposite the permanent BOQ during World War II, in lieu of a mirror image permanent BOQ originally planned for the site. Improved housing elsewhere on station and reduced personnel levels and rendered the temporary buildings obsolete. The station demolished Building 124 (**Photograph 108**), centermost on the south side of the block, by 1958, and three more temporary barracks were demolished between 1968 and 1973 (**Photograph 109**). The station replaced the barracks with paved parking areas as the use of automobiles continued to increase throughout the station, necessitating increased parking demands. The two remaining buildings, Building 135 and 137, became morale, welfare, and recreation facilities, housing day care, youth recreation, family services, and Officers Wives' Clubs.<sup>131</sup> As the station continued to improve personnel services it constructed a new CPO Club in the southwest corner of the block and a new electrical substation on the eastern side of the block. Neither of these buildings maintained the setback established by the original temporary BOQs and without this common setback, the block lost some of its definition that it originally had (**Photograph 109**). Portions of the lawns between the original buildings were retained, but this did not define the space as well as the two-story barracks and adjacent landscaping. Despite the reduction of force on the station after World War II, parking remained an issue as changing social economics increased car ownership. The station added parking on the north side of Building 4 following the war. In a single year, between 1948 and 1949, the parking space at this building was expanded from the area between two wings to spanning four wings.<sup>132</sup>

<sup>130</sup> US Navy, *US Naval Air Station's Photograph Album, Alameda, California, c. 1952*, Oakland History Room, Oakland Public Library, Oakland, California.

<sup>131</sup> USDA, Alameda County, 1958, [www.historicaerials.com](http://www.historicaerials.com) accessed January 28, 2010; Oblique Aerial, c. 1965, Photo 1, Box 4, 319 B-C, RG 181, NARA (San Francisco); USGS, Aerial Photo, 3HTG13034-239, 1966, USGS Earth Explorer; USGS, Aerial Photo, 7ARD09031-069, 1968, USGS Earth Explorer; Building 553 and 585, United States Navy, *NAS Alameda Internet Naval Facilities Assets Data Store (iNFADS)*, 2008.

<sup>132</sup> Aerial Photograph 1948, Folder 03-02, Box 2, RG 10, CEC/Seabee Museum, Port Hueneme; Aerial Photograph 1949, RG-10, CEC/Seabee Museum.



**Photograph 108:** Circa 1965. Building 124 (temporary barracks) was removed to create more parking. Building 17 (background) has retained its symmetrical design characteristics.<sup>133</sup>



**Photograph 109:** Aerial Photograph, 1985. Only two temporary barracks remain in block north of the BOQ (Building 17).<sup>134</sup>

<sup>133</sup> 1960s oblique aerial, Box 4, Photo 1, US Naval Shore Establishments, Record Group 181, 3195B-C, National Archives and Records Administration Pacific Region (San Francisco).

<sup>134</sup> Naval Facilities Engineering Command Southwest, Aerial Photograph, "1985-A-38\_AV-2655-3-13\_5-13-1985," provided by the Navy.

Changes to playing fields in the officers' recreation area to the east of the main gate and the BEQ quadrangle changed vegetation patterns in these areas. The football field in the BEQ quadrangle was dismantled in the early 1960s and was eventually replaced with two baseball fields (and have more recently been converted to soccer fields). Open green space east of the main gate that was the station plant nursery, became a six-hole 'pitch and putt' golf course in 1960. Infrastructure improvements to the station, including an improved sewage treatment system clipped the eastern side of the enlisted baseball field west of the main gate, resulting in a truncated right field.<sup>135</sup>

The Navy modified recreational facilities throughout the station core in the mid-1960s. The Brunswick Company constructed a new, 24-lane bowling alley (Building 525) east of Building 18, in an area that had previously been open space.<sup>136</sup> This new, large building was sited with a narrower setback than typical of other buildings in the area. The new building and its accompanying parking lot, adjacent to the south, filled in a space that had previously included open green space (see **Photograph 109**) and a Chaplain's Office.

Throughout the Cold War, the vegetation on station required periodic maintenance when diseased or dead plants required removal, or storm damaged trees needed clearing. In 1970, *The Carrier* reported that 50 cypress trees were being removed on the station because they had been found to be infected with a serious fungal disease. Most of the infected trees were located in the northeast portion of the station in the area between West Midway Avenue and the north border. Plans were approved in 1977 for spraying, pruning, and removing the cypress trees on the station. Also in the late 1970s, the Facilities Management Office coordinated the planting of 200 trees and shrubs to replace plants killed by drought, disease, and storms (a storm in 1958 felled several trees on station). Trees planted in this period included blackwood acacia, Aleppo pine, and Chinese evergreen elm. Ivy was also planted along the perimeter fence on Main Street to replace the screening effect of the removed cypress trees.<sup>137</sup>

Renovations continued in 1979 with refreshing of planters in front of residential and administrative buildings and installation of informal groupings of shrubs that utilized a mixed variety of plant materials. The program updated each of the planters at the BOQ, moving trees from other portions of the station, and adding new material. Material removed from the foundations of Building 8 thinned the groupings and was replaced with more tree-like vegetation. Trees now lined the walkway to the building in addition to the street. Designers created a bermed screen for the parking lot at the northeast corner of the former temporary BOQ block to provide a more pleasing view for the adjoining Officers' Housing and Officers' Club. The Officers' Club landscaping included gardens flanking the sidewalk. At the theater (Building 19), trees were relocated from the grassy verge to the planters, closer to the building. Additional shrubs were added to the informal grouping of trees and shrubs at the southern end of the mall. This landscaping improvement project in the late 1970s introduced trees into new locations on the station, particularly the cypress tree in the center of the entry mall

<sup>135</sup> "Aviation Historical Summary (OPNav form 5750-2) 1 October 1960 – 31 March 1961," Box 1 of 2, NAS Command Histories, 27 Volumes 1940 to 1992, RG 181, NARA (San Francisco); Building 562 and 525, United States Navy, *NAS Alameda Internet Naval Facilities Assets Data Store (iNFADS)*, 2008; Oblique Aerial, c. 1965, Photo 1, Box 4, 319 B-C, RG 181, NARA (San Francisco); USGS, Aerial Photo, 3HTG13034-239, 1966, USGS Earth Explorer; USGS, Aerial Photo, 7ARD09031-069, 1968, USGS Earth Explorer.

<sup>136</sup> US Navy, "Aviation Historical Summary(OPNAV Form 5750-2), 1 April 1966 – 30 September 1966," and "1967 Command History, U.S. Naval Air Station Alameda, California," Box 1 of 2, NAS Command Histories, 27 Volumes 1940 to 1992; "1968 Command History, U.S. Naval Air Station Alameda, California," and "1970 Command History, U.S. Naval Air Station Alameda, California," Box 2 of 2, Naval Air Station Command History, 30 Volumes, 1968 to 1997, RG 181, NARA (San Francisco).

<sup>137</sup> *The Carrier*, "50 Cypress Trees To Be Removed," September 25, 1970: 1 (col. 1); *The Carrier*, "Planting Project yields new 'roots' for NAS," August 11, 1978: 1 (col. 1); US Navy, "1976 Command History, U.S. Naval Air Station Alameda, California," and "Naval Air Station Alameda Command History 1978," Box 2 of 2, Naval Air Station Command History, 30 Volumes, 1968 to 1997, RG 181, NARA (San Francisco); Naval Facilities Engineering Command, "Spray Prune & Remove Cypress Trees," August 12, 1977, Drawer 141, Plan and Maps Room, Alameda City Hall West.

(**Photograph 110**), the line of Chinese elms in front of (east side) Building 3, and new trees throughout the Officers' housing area.<sup>138</sup>

Subsequent changes in the station's landscape were relatively minor. In 1987, landscapers removed and replaced dead and ailing trees from the entry mall. More plantings added new groups of trees at the southern end of the mall deepening the groups flanking the flagpole and approximately two-thirds of the shrubbery surrounding Building 1 was replaced.<sup>139</sup>



**Photograph 110:** Oblique Aerial, early 1980s. Note Cypress tree at center of large entry mall, and long views south down Saratoga Street (left) and Lexington Street (right).<sup>140</sup>

The Navy added one Shops building to the Administrative Core during this period. Naval Depot (NADEP) Alameda (successor command to the A&R / O&R department on the station) initiated a number of new construction projects that improved its competitiveness with private industry in the 1980s and these projects included the completion of a new 15,000 square-foot Material Engineering Laboratory (Building 7) in 1986.<sup>141</sup> While the clean unornamented lines of the modern building could have blended well with the existing Moderne architecture, the selection of a landscaping plan inconsistent with the surrounding blocks of the Administrative Core differentiates it from the whole. The building did retain the setback established by the Medical Clinic (Building 16) to the north and its corner location highlighted the orthogonal plan.

<sup>138</sup> Naval Facilities Engineering Command, "Landscape Renovations Planting Plan," June 28, 1979, Drawer 141, Plans and Maps Room, Alameda City Hall West.

<sup>139</sup> Navy Public Works Center, "Entrance Mall Repair at Main Gate Landscaping and Irrigation Improvements, Planting Plan," 1987, Drawer 141, Maps and Plans Room, Alameda City Hall West.

<sup>140</sup> 1980s oblique aerial, Box 21 of 22, US Naval Shore Establishments, Record Group 181, 3195B-C, National Archives and Records Administration Pacific Region (San Francisco).

<sup>141</sup> Allbrandt, "History of the Naval Air Station & Naval Aviation Depot," 21-22.

### Shops Area

Following World War II, NAS Alameda had been designated a repair and overhaul facility for several new aircraft engines, including reciprocating engines used on large transports and jets; however, few specialized facilities for these new tasks had been constructed. In 1947, the Navy began to request appropriations for jet engine test cells on NAS Alameda and these requests were not funded until the expansion of naval aviation facilities in 1951, in response to the Korean War, when NAS Alameda received approval for major runway improvements, NAS Alameda also received funding for a new engine overhaul and repair shop (Building 360), and neighboring turbo prop test cells (Building 372) (**Photograph 111**).<sup>142</sup> Construction of these facilities occurred along the eastern edge of the station, just south of Atlantic Avenue in an area previously used for outside storage. Like many of the buildings south of Atlantic Avenue, Building 360 was large, nearly four acres in area.

NAS Alameda continued to evolve during the Korean War as construction increased in the southeastern portion of the station and the Navy called its reserve ships back to service, emptying the piers and the disestablishing the Alameda Group of the Pacific Reserve Fleet in June 1951.<sup>143</sup> Other major changes that year included Navy acquisition of new land east of Main Street to construct new storage facilities,<sup>144</sup> which opened former exterior storage areas for additional development.<sup>145</sup>



**Photograph 111:** Aerial view, 1960s. Buildings 360, 372, and 297 have been built in the southeast portion of the station in the additional Shops Area.<sup>146</sup>

Additional test facilities for air turbine and turbo jets were added in 1957 and 1958 (Buildings 397 and 398) and air turbine overhaul test cells were installed in Building 399 among the existing engine overhaul facilities north of Atlantic Avenue in the Shops Area in the southeast portion of the station. While the new construction filled some of the empty

<sup>142</sup> General Information for Supporting Requests for Additional Public Works Projects, February 15, 1946, California – Alameda – pictures, maps, justifications, RG 5, CEC/Seabee Museum.

<sup>143</sup> US Navy, “History of U.S. Naval Air Station Alameda, 1 January 1951 to 30 June 1951,” Box 1 of 2, NAS Command Histories, 27 Volumes 1940 to 1992, RG 181, NARA (San Francisco).

<sup>144</sup> This land has since transferred out of Navy possession and is not a part of this study.

<sup>145</sup> US Navy, “History of U.S. Naval Air Station Alameda, 1 November 1940 to 31 December 1958,” Box 1 of 2, NAS Command Histories, 27 Volumes 1940 to 1992, RG 181, NARA (San Francisco); “Construction Project Nears Halfway Mark,” *The Carrier*, February 13, 1953. The warehouse buildings east of Main Street are not a subject of this study.

<sup>146</sup> 1960s oblique aerial, Box 21 of 22, US Naval Shore Establishments, Record Group 181, 3195B-C, National Archives and Records Administration Pacific Region (San Francisco).

space in that part of the station, the layout of these buildings did not continue the station's orthogonal pattern in the area. These buildings also did not have a unifying architecture like those built during World War II. As a result, the southeast portion of the station did not develop a unified landscape or design aesthetic because the new construction simply continued the general industrial landscape of the area. The only non-industrial uses in this area of the station were the temporary camps that had been established along Main Street south of East Gate, and these camps were disappearing as the Navy demolished the former civilian labor camp near Pacific Avenue and Main Street and built a parking lot for the CPO Club, then located near Pacific Avenue (Avenue K).<sup>147</sup>

In the 1960s, the area south of Building 118 had served as outdoor storage and included several earthen bunkers that were removed for construction of new facilities, including restaurants, banking, and shopping surrounded by plenty of paved parking. Removal of fences, piles of supplies, and the bunkers created a new flatter landscape. The new buildings constructed south of Building 118 were contained within the orthogonal street pattern, but their placement along the center of the block or in the center of the parking area did not highlight the orthogonal plan or tie it aesthetically to other station construction. The architecture of these buildings includes a variety of styles, rather than a single, cohesive style like that found in the Administrative Core.

Closer to the southern end of the station, the Naval Air Rework Facility (NARF), formerly A&R / O&R, constructed several new facilities to increase its shop capabilities. A new cleaning facility (Building 410) was constructed east of Buildings 166 and 167. As the station serviced more missiles, it needed more space for the program and constructed Building 530 in 1973. Both of these moderately sized buildings occupied former open air aircraft parking. Construction of small buildings to house infrastructure improvements, ship services, and hazardous materials handling south of Ticonderoga Avenue also broke up that open space. Again the construction was utilitarian and lacked a continuity of style. The results of this construction created an industrial space with large irregular paved areas set with buildings of all sized and no clear plan. As plane storage no longer dominated the area, rows of automotive angled parking took its place (**Photograph 112**).

NAS Alameda had two primary entrance points: the Main Gate on the north side of the station and the East Gate, which was moved in 1944 to its location closer to Main Street in order to provide easy access for workers arriving from Alameda via the city street system. The Main Gate, while ornamental, faced the Inland Harbor rather than Alameda, and was less convenient for personnel working in the operational areas. Paved parking areas were provided at both gates. From 1944 until 1977 a parking lot adjoined the East Gate and civilians and visitors parked outside the gate and either walked or were escorted aboard the station. The Main Gate had similar parking areas along the Inland Harbor. As vehicular access rules changed, less off-station parking was necessary. The parking outside the East Gate was removed in 1977 and replaced with a landscaped entry, including curbs and sidewalks that lined Atlantic Avenue and the parallel railroad track. The former parking lot was lined with a variety of shrubs including Pacific wax myrtle (*myrica*), buckthorn (*rhamnus*), and photinia and groups of red flowering gum (*Eucalyptus ficifolia*) adorned the northeastern and southeastern corners. A third group was planted just north of the actual gate and grass filled the area between the lining shrubs and the sidewalk. The overall intent was to create a more attractive gateway between the station and the city, and as California recovered from drought and became more water aware, the landscaping utilized non-potable water and low maintenance materials.<sup>148</sup> The newly landscaped area subsequently underwent several modifications. The station added trees along the edges in 1978, and in 1979 created raised berms within the plantings replanting dead or damaged plants. A lighted sign was also installed in the green space to greet and direct visitors, along with the sign spanning the arch over

<sup>147</sup> US Navy, "History of U.S. Naval Air Station Alameda, 1January 1950 to 30 June 1950," Box 1 of 2, NAS Command Histories, 27 Volumes 1940-1992, RG 181, NARA (San Francisco) 20.

<sup>148</sup> US Navy, "Naval Air Station Alameda East Gate Improvements Planting Plan," 1977, Drawer 170, Maps and Plans Room, Alameda City Hall West; C.A. Heinrichs, "Progress-Removing Concrete and Planting Trees," *The Carrier*, August 19, 1977; "East Gate Improvement Project Nears End," *The Carrier*, May 20, 1977; US Navy, "Naval Air Station Alameda Command History 1977," NAS Command History, 30 Volumes 196801997, 5757-1b, RG 181, NARA (San Francisco).

the guardhouse (now demolished). Improvements continued southward from the East Gate as the station planted Algerian Ivy in the narrow planting strip to the south.<sup>149</sup>



**Photograph 112:** 1985. Aerial photograph showing portions of the Shops Area. Infill of buildings in southeast portion of station.<sup>150</sup>

Atlantic Avenue and the parallel railroad tracks had divided space in a manner unlike any other on station since it was incorporated into the station in 1943. This was emphasized by the placement of underground storage tanks north of the tracks just west and inside the original East Gate. Control structures northwest of the tanks prevented a circular traffic pattern until 1987. As a part of continuing station beautification efforts the underground tanks were removed and replaced by a decorative oval lawn set with a mounted A-7 *Corsair* that created a central focal point. While original plans included informal clumps of trees in the oval, they were never planted. A single cypress at the east end that had been in place since the 1960s was and is the only tree on the oval. A row of trees and shrubs planted on the southern side of Atlantic Avenue formed a boundary between the landscaped oval and the industrial area. Later, the addition of large planters along north of Atlantic Avenue was an attempt to increase the formal border and provide traffic control. This oval became the only formal space in the southeastern portion of the station and its oval shape also differentiates it from the formal orthogonal plan in the core of the station and does not contribute to the overall station plan.<sup>151</sup> Changes such as this reflected the relatively small scale and incremental changes to the landscape that occurred in the Shops Area

<sup>149</sup> US Navy, "Alameda Naval Air Station Landscape Renovation Planting Plans," 1979, Drawer 141, Maps and Plans Room, Alameda City Hall West; US Navy, "Landscape Improvement from East Gate to Gas Station Planting Plan," 1978, Drawer 141, Maps and Plans Room, Alameda City Hall West.

<sup>150</sup> Naval Facilities Engineering Command Southwest, Aerial Photograph, "1985-A-38\_AV-2655-3-13\_5-13-1985," provided by the Navy.

<sup>151</sup> US Navy, "Landscape East Gate Circle Irrigation and Planting Plan," 1987, A-7 Pedestal East Gate, Building History Files, Maps and Plans Room, Alameda City Hall West.

during the Cold War period. These landscaping projects were beautification projects with modest goals to improve the aesthetic appearance of a specific area of the station. While following general landscape architecture practices of their period, they do not themselves represent important examples of developments in the theory and practice of landscape architecture from the latter half of the twentieth century.

### Residential / MWR Area

The most substantial change made to the housing areas on NAS Alameda during the Cold War was the elimination of temporary housing barracks constructed during World War II and the addition of new family housing on the east side of the station. Construction of Capehart family housing units during the Cold War resulted in the reshaping of the roads in the northeast part of the egg-shaped Officers' Housing, however few other changes were made to the Officers' Housing, CPO Housing, or the Commanding Officers' Quarters (Quarters A). Vegetation changes throughout the Cold War period were made in response to the loss of trees and shrubs to storm-damage and disease. The biggest change made to the vegetation was in the Officers' Housing area. Additional MWR facilities and areas were added to the station as older structures were removed, and new housing areas were installed.

With the construction of NAS Alameda just prior to and during World War II when the number of military personnel would expand, the base included housing for officers (19 "Big Whites"), 30 units for married enlisted men (CP-1 – CP-30, see **Photograph 86**), and plenty of housing for single enlisted men in permanent barracks (Buildings 2 and 4) and temporary barracks (now demolished, previously situated between Midway Avenue and Tower Avenue, and the eastern base boundary and Orion Street).<sup>152</sup> The station was also centrally located in the San Francisco Bay Area, providing its personnel plenty of off-base housing opportunities. Consequently, NAS Alameda did not receive any housing improvements until the 1960s.

The Navy had constructed temporary housing on NAS Alameda throughout World War II and this continual construction prevented the installation of a detailed landscape elements. The orderly and repetitive form of the U-shaped barracks defined the residential area on the east side of the station from the time of their World War II construction through their demolition in the 1960s. The Navy generally sought to provide recreational facilities and other amenities that would help retain service members during the Cold War era, and examples of this program include three baseball fields created west of Orion Street north of Corpus Christi Road. A community garden behind Quarters A is the only remnant of these fields. Basketball and volleyball courts were also added between several of the barracks. The landscaping of these areas was typified by rectilinear walkways, courtyards, and lawns. Cars were relatively absent in this area of orderly blocks with an orthogonal street pattern offset from the rest of the station. Parking remained limited just like the area around the BEQ, with one parking lot located east of the Commissary (Building 152).<sup>153</sup>

The Navy planned NAS Alameda at the beginning of the automotive age. While the Navy selected the location because of its relative isolation, allowing for expansion, it anticipated that many of the employees and personnel would live on or near the station. Throughout World War II the Navy constructed civilian workers' housing on the edges of the station. The station encouraged the use of public transportation with transportation centers and ridesharing pools. Following the war, emphasis on public and shared transportation waned. The number of automobiles on station steadily increased.

<sup>152</sup> Buildings A-U and CP 1-30, *iNFADS*, 2008; USGS, *Oakland West* (Washington, D.C.: USGS, 1959); USGS *Oakland West* (Washington, D.C.: USGS, 1968). The term "Big Whites" is a common nickname for Naval officers' housing, these being usually the largest quarters at a station and were usually painted white.

<sup>153</sup> Kuranda, "Housing an Air Force and a Navy," 18-19; US Navy, "History of U.S. Naval Air Station Alameda, California, 1 October 1947 to 30 June 1948," Box 1 of 2, NAS Command Histories, 27 Volumes 1940 to 1992, RG 181, NARA (San Francisco); Twelfth Naval District, San Francisco, Public Works Department, Naval Air Station Alameda California, "Remodeling of B-1-B Buildings M-E-M Apartments Key Plans and typical Floor Plans Units A and C," Yards and Docks # 402285, June 17, 1946, Drawer 123 Demolished Housing B-1-B Barracks, Plan and Maps Room, Alameda City Hall West .

Residential areas gained the most parking. The area between the southwest wing and core of the BOQ (Building 17) became parking by 1955. Parking replaced one of the temporary BOQs between 1955 and 1958. Removal of the island planting strips along West Essex Drive between 1956 and 1958 provided horizontal parking. Parking on station continued to expand through 1960 as the transportation parking lot behind Building 1, previously used for public transit and rideshares, was transformed into private parking.<sup>154</sup>

Changing modes of housing rendered the dense, regulated, orthogonal plan for the housing obsolete and the temporary housing area east of the permanent housing outlived its usefulness in the 1950s. In 1947 NAS Alameda converted the temporary World War II barracks formerly referred to as “East Barracks” into married enlisted housing dubbed the “Carrier Courts.” The work consisted of dividing the barracks into apartments and adding separate entrances for the units.<sup>155</sup> In this east area one Carrier Courts building was demolished, and portions of a subsistence building were demolished leaving concrete foundations and reducing the orderly rhythm of the development. The temporary housing was declared substandard in 1958; however, replacement housing units were not completed until 1963.<sup>156</sup>

The first improvements to the residential area on the east side of the station were carried out under the Capehart program. In 1963 NAS Alameda completed the first and only Capehart housing program on station. Under the Capehart program, the military planned and managed the housing, while private contractors secured mortgages to construct the housing and were paid back through the rental fees for the units. The Capehart program was discontinued in 1962 as the first developments were under construction on NAS Alameda. BuDocks constructed additional family housing in the following years through direct appropriations. Housing built under either program followed the same guidelines regarding total square footage and architectural styles and cannot be visually differentiated. On NAS Alameda, Capehart and appropriated fund housing replaced existing World War II housing between Midway and Tower roads and east of the older officers’ quarters. Additional units were built east of Main Street and north of Webster Street (this area was transferred to the City of Alameda in 2000 and is no longer under Navy control). Most of the units in that area have since been demolished. NAS Alameda constructed a total of 200 units under these programs.<sup>157</sup>

During this period, the Navy instituted family housing to help retain skilled personnel, and was influenced by civilian federal housing programs. It developed its own set of standards that referred to civilian Federal Housing Authority (FHA) guidelines. In 1960 the Navy developed what it called a “family” of standard floor plans. Exterior alterations and variations were acceptable, but deviation from the floor plan required bureau level authorization. However, standardized building materials introduced after World War II were required for all buildings. BuDocks and the Navy preferred single-family units and duplexes, actively avoiding row houses and larger multifamily buildings. NAS Alameda combined multi-unit housing into four and six-plexes, a slightly irregular exemption (**Photograph 113**).<sup>158</sup>

<sup>154</sup> “New Parking,” *The Carrier*, February 19, 1960, 4; Aerial Photograph, 1955, RG 10, CEC/Seabee Museum; Aerial Photograph, 1956, RG 10, CEC/Seabee Museum; USDA, Alameda County, 1958, www.historicaerials.com accessed January 28, 2010.

<sup>155</sup> Kuranda, “Housing an Air Force and a Navy,” 18-19; US Navy, “History of U.S. Naval Air Station Alameda, California, 1 October 1947 to 30 June 1948,” Box 1 of 2, NAS Command Histories, 27 Volumes 1940 to 1992, RG 181, NARA (San Francisco); Twelfth Naval District, San Francisco, Public Works Department, Naval Air Station Alameda California, “Remodeling of B-1-B Buildings M-E-M Apartments Key Plans and typical Floor Plans Units A and C,” Yards and Docks # 402285, June 17, 1946, Drawer 123 Demolished Housing B-1-B Barracks, Plan and Maps Room, Building 1 on former NAS Alameda, Alameda, California.

<sup>156</sup> Aerial Photograph, 1956, RG 10, CEC/Seabee Museum; US Navy, “History of U.S. Naval Air Station Alameda, 1 November 1940 to 31 December 1958,” “Aviation Historical Summary (OPNav form 5750-2) 1 October 1961 – 31 March 1962,” “Aviation Historical Summary (OPNav form 5750-2) 1 October 1962 – 31 March 1963,” “Aviation Historical Summary (OPNav form 5750-2) 1 October 1960 – 31 March 1961,” Box 1 of 2, NAS Command Histories, 27 Volumes 1940 to 1992, RG 181, NARA (San Francisco).

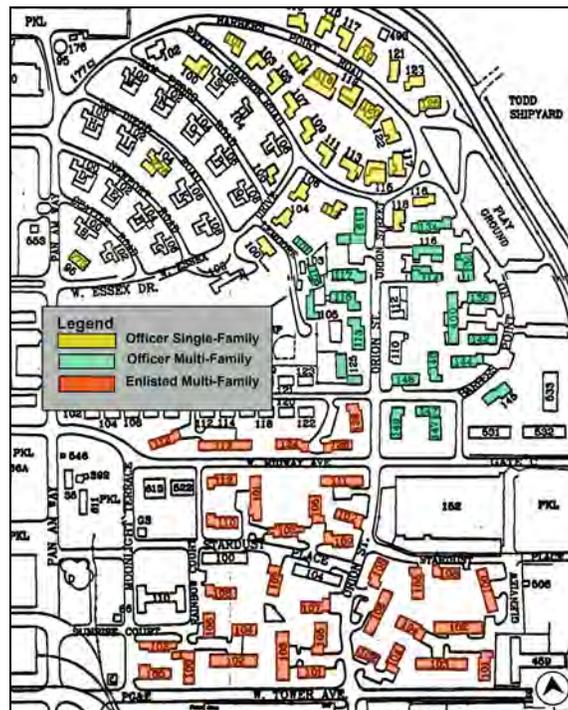
<sup>157</sup> Kuranda, “Housing an Air Force and a Navy,” 83-84, and 93; Buildings FH-730-837, *INFADS*, 2008; USGS, *Oakland West* (Washington, D.C.: USGS, 1959); USGS *Oakland West* (Washington, D.C.: USGS, 1968).

<sup>158</sup> Kuranda, R., “Housing an Air Force and a Navy,” 68, 88-89, 91, and 114.

The new programs promoted overall neighborhood development and encouraged curving streets for traffic control and aesthetics (**Illustration 17**).



**Photograph 113:** Typical Capehart multiple family unit, Building 754, camera facing northeast, November 12, 2009.



**Illustration 17:** Map showing housing area in northeastern portion of NAS Alameda with 1960s construction highlighted. Note realigned loop at the northeast area of the Officers' Housing, and scattered, rather than orderly, siting of new housing units to the south.

This altered the orthogonal plan of the east side of NAS Alameda as the housing was reconstructed in the 1960s. Housing density was limited to five units for each acre for semi-detached units at the densest, and four units per acre for single family houses. The Navy deemphasized landscaping in favor of constructing the largest and most comfortable houses for the available funds. Sidewalks were located on a single side of the street, except for the southernmost section of CPO Housing, which has sidewalks flanking Corpus Christi Road, and sidewalks are lacking where the officer and enlisted housing adjoined each other. The Navy encouraged the inclusion of family friendly amenities like playgrounds during this period, yet, these were not constructed until 1967. The station created six playgrounds amid the multifamily housing that included play structures of metal poles installed in the lawn areas.

Residents cleaned up one of the play areas west of Orion Street in 1975, and all playgrounds were improved the following year. The station's Seabees installed concrete curbs to contain a new sand ground cover for the playgrounds and connected play structures, with a space theme, replaced some of the earlier equipment. None of this play equipment remains, although current tenants have renovated two playgrounds, adding new play structures.<sup>159</sup>

These construction programs resulted in subareas of new housing with different characteristics. The single family officers' houses were single story, while the multi-family buildings were two-story. Single family homes also used a variety of materials on the exterior to give visual interest and break up the volume in space.

The multi-family units used fewer materials and appeared larger in the more open landscape. The new housing also accommodated the changing role of the automobile in American life. In accordance with Navy specifications one parking space was provided for each unit; in warm climates, like California's and NAS Alameda's, carports were preferred to garages. Single family residences had carports attached to one side of the house, bridging the outdoors and indoors. Multi-family buildings either had attached carports or incorporated carports into the mass of the building. In addition, communal uncovered parking adjoined the multifamily units. Later residential developments, consisting of six buildings constructed in 1966, no longer incorporated carports into the multifamily dwellings and instead the station provided separate open-sided covers for communal off street parking. Multifamily housing also included drying yards that bridged the divide between indoor and outdoor at the ends or back of the buildings. Each yard had a concrete pad surrounded with a tall, wood screening fence and hooks provided anchors for clothes lines which stretched across the area. From afar they often read as a part of the building.<sup>160</sup>

The additional new and improved officer and enlisted housing constructed in the 1960s to replace the temporary World War II barracks meant that the last of the Homoja units, temporary Quonset hut housing, could be removed from the southeastern part of the station in 1968.<sup>161</sup> The station retained the green space instead of converting it to outdoor storage or parking which typified the adjacent area and built a soccer field on the former Homoja housing area in 1985. This was also an unusual inclusion of green space within the southeastern portion of the station. This area, however, had always been an anomaly in the area providing housing in an area typified by industrial shop uses and warehouses.<sup>162</sup>

Between 1962 and 1965 the station relocated the Exchange from Building 2 to Building 118 in the southern portion of the station. This relocation placed the Exchange in proximity to the family housing area which was also being updated, while a smaller exchange operated in the former location in Building 2 to provide the basic needs of the enlisted sailors.

<sup>159</sup> "Kids Benefit from 'Self-Help' Effort," *The Carrier*, July 21, 1975; "Playgrounds Undergo Cinderella Change," *The Carrier*, August 27, 1976; Kuranda, "Housing an Air Force and a Navy," 118-119, 129, and 132.

<sup>160</sup> Kuranda, "Housing an Air Force and a Navy," 87-88, 91, 114-116, and 118-119.

<sup>161</sup> US Navy, "Aviation Historical Summary (OPNAV Form 5750-2), 1 April 1965 to 30 September 1965," Box 1 of 2, Naval Air Station Command History, 27 Volumes 1940 to 1992; "1968 Command History, U.S. Naval Air Station Alameda, California," Box 2 of 2, Naval Air Station Command History, 30 Volumes, 1968 to 1997, RG 181, NARA (San Francisco); and "Housing 'Deferred' in Cutback," *The Carrier*, January 6, 1966.

<sup>162</sup> US Navy, "Command History 1985," Command History 1985, NAS Command History, 30 Volumes 1968-1977, 5757-1b, 2 of 2, RG 181, NARA (San Francisco).

The relocation of the Exchange and subsequent construction of other buildings to provide amenities to station personnel replaced prior supply activities.

Following the Korean War, the Navy constructed ever larger aircraft carriers and as these new carriers came to call NAS Alameda home, the station needed to increase facilities for the personnel assigned to those ships. Beginning with a recreational marina in 1958 the station provided new recreational opportunities along the southern edge of the station, including a complete recreational complex of several playing fields and a recreation center that was completed in 1975 (**Photograph 114**). The Marina area picnic area received a facelift in 1985, and the same year a picnic area was constructed at the Fleet Recreation Center, as well as two new softball fields. In 1993 a new basketball court was also constructed at the Fleet Recreation Center.



**Photograph 114:** Circa 1990, MWR area added to southern end of station in 1975 and expanded in 1985.<sup>163</sup>

These changing functional uses altered the landscape of the southeastern portion of the station. The recreation center created an unusual planted space at the end of the station separated from other planted areas. Because the area was mainly playing fields, grass dominated the landscape with a few trees planted between Hornet Avenue and the recreation center building. The recreation center included baseball fields, tennis courts and a picnic area with covered pavilions.

Changes to vegetation in the Residential / MWR area during the Cold War period largely occurred with the removal and replacement of diseased or damaged trees. By the mid-1980s, this maintenance work had resulted in a substantial shift in the vegetation in the Officers' Housing area. Many of the evenly placed street trees had been removed, and new trees scattered throughout (**Photograph 115** and **Photograph 116**).

<sup>163</sup> 1990s oblique aerial, US Naval Shore Establishments, Record Group 181, 3195B-C, National Archives and Records Administration Pacific Region (San Francisco).



**Photograph 115 and Photograph 116:** Officers' Housing, 1944 (left) and 1993 (right).<sup>164</sup>

### Operations Area

The Seaplane Lagoon, Airfield, and Control Tower, the primary elements of the Operations Area, remained functionally important to the station during the Cold War era (**Photograph 117**). Modifications were made to accommodate the aircraft developed during this period. The main support areas, the landplane hangars (Buildings 20-23) and seaplane hangars (Buildings 11, 12, 39, 40, 41), underwent some changes in function and setting as portions of the Operations Area became more functionally associated with the Shops Area.

The addition of JRM *Mars* aircraft, among the largest seaplanes operated by the Navy, at the end of World War II required new docking facilities at the Seaplane Lagoon, as well as alterations to the seaplane ramps. Three docks were added to the east side of the lagoon, two of which were large enough to allow aircraft to be accessed from both sides simultaneously for easy loading and unloading. The station also added a dock alongside Ramp 4 on the northern edge of the lagoon. The lagoon itself maintained its original size and shape.<sup>165</sup>

During the 1950s new construction in the Operations Area mainly occurred on the Airfield and in the southeast portion of the station; however, the construction of Building 400, a substantial building between the former hangars Buildings 11 and 12, also began in 1955. The seaplane hangars had been symmetrical and evenly spaced to either side of the central north south axis. Building 400 filled the space between the western-most hangars creating an Electric and Electronic Overhaul Building with more mass than any of the hangars. While Building 400 had distinct functions, it created a complex of the three buildings and its location between the two hangars significantly altered the formerly separate seaplane hangars (**Photograph 118**).<sup>166</sup>

Airfield expansion was the major project for NAS Alameda during the 1950s. The Bureau of Aeronautics located four carrier wings, two landplane patrol squadrons, two seaplane patrol squadrons, and a Fleet Logistics Air Squadron on NAS Alameda in 1952 and the station responded to meet the demands of the new assignments. The increased size of aircraft following World War II and the introduction of jet aircraft made the original runways obsolete. Requests to lengthen the runways were first made in 1945 and appeals continued until 1951 when Congress appropriated funds for a naval runway expansion program. The runway improvements were part of a \$270 million project to update runways at 32

<sup>164</sup> "NAS Alameda B1B Barracks Looking NW, Alt. 1000," November 28, 1944, California- Alameda – pictures, maps, justifications, RG 5, CEC/Seabee Museum, NBVC, Port Hueneme; Naval Facilities Engineering Command Southwest, Aerial Photograph, "1993- A-33\_5009-2-1\_9-30-1993-Images from the Navy-D2," provided by the Navy.

<sup>165</sup> US Navy, "History of U.S. Naval Air Station Alameda, California, 1 October 1947 to 30 June 1948," Box 1 of 2, NAS Command Histories, 27 Volumes 1940 to 1992, RG 181, NARA (San Francisco).

<sup>166</sup> Aerial Photograph, 1956, RG 10, CEC/Seabee Museum.

Naval Air Stations and Marine Corps Air Stations and BuDocks allocated \$2,886,000 for NAS Alameda to update its runway system. This project reconfigured the runway system, strengthened and lengthened the northern most east-west runway, creating the new Runway 7-25, and included construction of Runway 13-31. The latter was a new southeast-northwest runway that required additional filled land between the Seaplane Lagoon and western edge of the runway (**Photograph 119**).<sup>167</sup>

Preparation for the construction of Runway 7-25 forced the relocation of Boone Baseball field from its location north of Building 20 of the landplane hangar row in the early 1950s. The field had been the primary baseball field for the station, but the area was destined to become the east end of Runway 7-25, so the Navy improved the field (now known as Building 422), east of the gymnasium (Building 134) and pool (Building 76), to serve as the main baseball field. The station also added new pick up, or less formal fields, to the BEQ quadrangle east of the football field, in opposite corners of the remaining open space west of the wide walk and stairs.<sup>168</sup>



**Photograph 117:** Operations Area at the end of the Korean War period, ca. 1954. Note long views west toward San Francisco from the landplane hangars, and general scarcity of vegetation in this area.<sup>169</sup>

<sup>167</sup> Naval Air Station, Alameda, California PW 1946, March 12, 1945, California- Alameda – pictures, maps, justifications, RG 5, CEC/Seabee Museum, NBVC, Port Hueneme; “Navy Leaders Make Tour of Alameda Aircraft Base” *Oakland Tribune*, March 29, 1950; USGS, *Oakland West 7.5 minute Quadrangle* (Washington D.C.: USGS, 1949); USGS, *Oakland West 7.5 minute Quadrangle* (Washington D.C.: USGS, 1959); Structure 201253 and 201254, *iNFADS*, 2008; “Air Facilities Dominate ’51 – ’52 Public Works Programs,” *Civil Engineering Corps Bulletin* 6, no. 4 (April 1951): 108-110.

<sup>168</sup> NAS Alameda Photo Album, Oakland History Room, Oakland Public Library; Aerial Photograph, 1951, RG 10, CEC/Seabee Museum; “Open House Here Sunday,” *The Carrier*, May 19, 1950, 1; “NAS Alameda’s Open House Attracts Record Crowds,” *The Carrier*, May 25, 1956, 5; *The Carrier*, May 23, 1958, 4.

<sup>169</sup> NAS Alameda Yearbook, 1954, Naval Air Station Alameda Photograph Albums, Oakland Library History Room, np.



**Photograph 118:** 1960s oblique aerial showing Building 400 in the foreground, located between Hangars 11 and 12.<sup>170</sup>

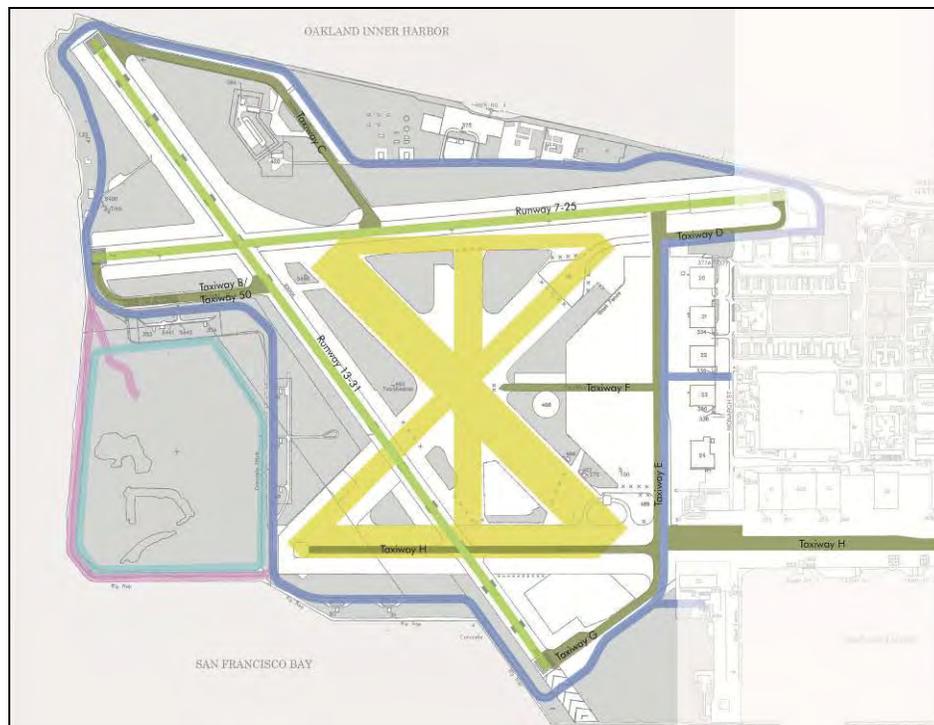


**Photograph 119:** 1954 aerial photograph showing the expansion of NAS Alameda runway system. Elements of the World War II-era runways can be seen in the middle of the field.<sup>171</sup>

<sup>170</sup> 1960s oblique aerial, Box 4, Photo 1, US Naval Shore Establishments, Record Group 181, 3195B-C, National Archives and Records Administration Pacific Region (San Francisco).

<sup>171</sup> "Oblique NAS Alameda, Calif. Looking east, Alt. 8000ft.," July 23, 1954, California - Alameda - pictures, maps, justifications, RG 5, CEC/Seabee Museum.

The original World War II runway system was not only designed to serve the aircraft of that era, it was also scaled to mirror components of the Administrative Core of the Beaux Arts plan, projecting the orderly orthogonal plan of the station out into the Airfield. Although the runways were not orthogonal, the east-west runways aligned with the north and south boundaries of the station and the overall foot print of the original system of runways was symmetrical and continued the axial theme of the station. The reconfiguration of the overall runway system and construction of the two new runways affected the relationship between the runway system and the station. The new runways were asymmetrical in plan and aligned to prevalent wind directions and not with the major axes of the station plan. The east-west runway (Runway 7-25) was several degrees off from the original northern east-west runway and obliterated the northern corners of the early runway system. The diagonal northwest-southeast runway (Runway 13-31) was also several degrees off from the original diagonal runways (**Illustration 18**).



**Illustration 18:** Airfield diagram showing remaining components of original runways (yellow) and added runways (green). Taxiways (dark green) and other roadways (blues and red) are shown too.<sup>172</sup> Graphic prepared by PGAdesign.

Construction of the runways also affected other aspects of the Airfield. The Airfield itself expanded to accommodate the runways and the northern end of the runways took over the former landfill area. The station constructed a new seawall westward from the Seaplane Lagoon as it expanded the field to the south in 1952. Dredging reclaimed more land in the area in the following years, and additional seawalls constructed to the west established an area for a new landfill. Unlike the dredging carried out in the 1940s to create the station, the entire dredged area was not graded. Contractors only graded the area for the runways and taxiways. As a result, marshy areas and ponds developed adjacent to the active areas of the airfield.<sup>173</sup>

<sup>172</sup> Labels for taxiways were reassigned in the 1990s. Mapping when the station was decommissioned provided letter labels for the taxiways. Former Taxiway 1 became B; 2 became C; 3 became D; 4 became E; 5 became F; 6 became G; and H became 7. There was no Taxiway A.

<sup>173</sup> "Navy Leaders Make Tour of Alameda Aircraft Base" *Oakland Tribune*, March 29, 1950; "Air Facilities Dominate '51 - '52 Public Works Programs," *Civil Engineering Corps Bulletin* 6, no. 4 (April 1951): 108-110.

The expansion of the airfield also required the relocation of magazines originally located along the southern edge of the Airfield. The station constructed new magazines along the northern edge of the airfield previously used for aircraft parking. Establishment of the supply department annex east of Main Street, begun in 1953, reduced the need for the salvage yard along the northern edge of the station. The relocation freed the northern edge of the Airfield for new development. A new fuel storage and distribution area developed on the site. Facilities for the fuel area included tanks and a wooden pier (Pier 4) extending into the Oakland Inner Harbor.

Along with constructing two new runways, the Control Tower instrumentation was improved, allowing for instrumented landings. The new runways posed a problem because the east end of Runway 7-25 was not visible from the Control Tower. The solution was to build of a secondary control tower on the roof of seaplane hangar Building 20, to provide a partial view of the east end of the runway.<sup>174</sup>

While much of the functional plan devised by pre-World War II planners continued to be used during the Cold War period, changes in use were necessary to keep the station functional. Perhaps one of the most notable changes was the cessation of seaplane operations in the Operations Area as the Navy's increased reliance on jet aircraft led to the decline of the use of flying boats. Transportation Squadron 2 (VR-2), which had been stationed on NAS Alameda since 1942, was disestablished in 1958. Following additional shifts in patrol squadron assignments, NAS Alameda was without a permanent seaplane squadron beginning in 1960, and although the station continued to maintain the seadrome landing area through 1966, it completed only periodic seaplane operations.<sup>175</sup> Following the termination of seaplane operations, the Seaplane Lagoon facility received little attention. The extended piers constructed to accommodate the *Mars* seaplane deteriorated and were removed. The station remodeled one former seaplane pier into a recreational fishing pier on the east side of the lagoon in the 1970s. The seaplane hangars, no longer supporting seaplane operations, became maintenance shops. These changes did not require major physical modifications to the buildings or structures that were converted, but indicated the increasing dominance of the role of aircraft maintenance and repair on the station. The former seaplane apron in front of the seaplane hangars became Taxiway H during this period.

At the end of World War II, waterfront operations largely consisted of the three piers built before and during the war, railroad tracks, a large crane on tracks, and some small buildings. These were situated adjacent open spaces that had been used for aircraft parking and there was no vegetation. The piers were modified and changed over the following decades and new buildings added to the area. Some railroad tracks and the crane were removed, and changes were made to power ships berthed at the piers so that they could be serviced more effectively. The southernmost portion of the southeast area was converted for use as the Fleet Recreation Center in the 1970s.

Pier 2, for example, was extensively modernized in the early 1970s, including a 200 foot extension of the pier to accommodate larger vessels, installing a sewer to receive sanitary waste discharge of berthed ships, and upgrading the pier's utility system. In the interim, to supply power to Pier 2, a Mobile Utility Support Equipment (MUSE) boiler was installed along with a new electric line, and temporary steam, potable water, and compressed air lines. The electric line ran from south to north across the pier and provided cold iron power, i.e. power supplied by ports to berth vessels to permit vessel to continue operating onboard equipment such as refrigeration, cooling, heating, and lighting. These

<sup>174</sup> US Navy, "History of U.S. Naval Air Station Alameda 1 January 1952 to 30 June 1952," and "History of U.S. Naval Air Station, Alameda, 1 July 1952 to 31 December 1952," Box 1 of 2, NAS Command Histories, 27 Volumes 1940 to 1992, RG 181, NARA (San Francisco); "Navy Leaders Make Tour of Alameda Aircraft Base," *Oakland Tribune*, March 29, 1950; USGS, *Oakland West 7.5 minute Quadrangle* (Washington D.C.: USGS, 1949); USGS, *Oakland West 7.5 minute Quadrangle* (Washington D.C.: USGS, 1959); "Air Facilities Dominate '51 - '52 Public Works Programs," *Civil Engineering Corps Bulletin* 6, no. 4 (April 1951): 108-110.

<sup>175</sup> Allbrandt, "History of the Naval Air Station & Naval Aviation Depot," 14. By 1968, the Navy had completely replaced its seaplanes with the P-3 *Orion*. US Navy, "Aviation Historical Summary (OPNav form 5750-2) 1 October 1960 – 31 March 1961," and "Aviation Historical Summary (OPNav form 5750-2) 1 October 1965 – 31 March 1966," Box 1 of 2, NAS Command Histories, 27 Volumes 1940 to 1992, RG 181, NARA (San Francisco).

changes also necessitated moving the MUSE Transformer located at from Pier 3 (installed in 1971) to Pier 2.<sup>176</sup> Today, Pier 2 is presently undergoing construction to move electrical transformers below its deck. The pier continues to berth many types of large seagoing vessels.

In 1977, the continuing demand for power to the pier was resolved when the Pier Utilities Boiler Plant (Building 584) was built and went online. This was a permanent power plant that could support cold iron power requirements to ships at both Piers 2 and 3, and replaced the MUSE system of cold iron power. The ability to berth the *Nimitz*-class aircraft carriers at Pier 3 enabled Alameda to become one of two naval air stations on the West Coast to support all phases of carrier aviation.<sup>177</sup> In 1981 as the aircraft carriers increased in size and the demand for cold iron power grew, Pier 3 electrical systems were upgraded to provide a *Nimitz*-class vessel – among the largest aircraft carriers ever built at 1,040 feet in length – to shut down its nuclear reactors and use land-based energy. This upgrade was completed in June 1983 and allowed Pier 3 to provide power both the supercarrier *Enterprise* and a *Nimitz*-class carrier.<sup>178</sup> Such changes continued the pattern of development on NAS Alameda during this period, wherein the station adapted to continue its core functions of servicing the fleet, modifying facilities (and the landscape) as needed.

### Post-Cold War to Closure (1989-1997)

In 1989, the Cold War that had defined global politics after World War II came to an end, and with it came changes to the sprawling military force that had developed in the latter half of the twentieth century. The First Persian Gulf War (1991) notwithstanding, policymakers looked to reduce the facilities of the American armed forces through the BRAC process. In 1990, Secretary of Defense Richard Cheney proposed closing all Navy facilities in the San Francisco Bay Area. Despite his recommendation, and with local support, NAS Alameda avoided the initial rounds of BRAC closures. In March 1993, Cheney's successor as Secretary of Defense, Les Aspin, renewed the call for the closure of NAS Alameda and other San Francisco-area naval facilities, and in September, Congress accepted the BRAC commission's recommendation to close NAS Alameda. NAS Alameda was closed in 1997.<sup>179</sup> At the time of the station's closure, Naval Aviation Depot (NADEP) Alameda employed 2,861 military personnel and 4,025 civilians. Many NADEP Alameda employees were able to transfer to other stations, including a group of NARF maintenance workers who relocated to Naval Base San Diego.<sup>180</sup> Closing ceremonies for NADEP Alameda took place on April 25, 1997 after 57 years of naval operations.<sup>181</sup>

<sup>176</sup> US Navy "Map of NAS Alameda, Calif. Showing conditions on June 30, 1942," CEC/Seabee Museum, NBVC, Port Hueneme, California ; "\$7 million NAS Construction program told," n.p., 5 September 1973, NAS Alameda General Clippings File, Naval Air Station VII 6/22/73 – 4/19/74 Clipping File, Alameda Free Library, Alameda, California; and United States Navy, *NAS Alameda Command History 1973*, 85-86, *NAS Command History 1968-1997*, 5757-1b, Box 2 of 2, RG 181, NARA (San Francisco).

<sup>177</sup> "Celebrating 40<sup>th</sup> anniversary: NAS looking forward," *Alameda Times-Star* 1980 Progress Edition, July 4, 1980.

<sup>178</sup> "NAS prepared for Nimitz-class nuclear-powered aircraft carrier," *Alameda Times-Star*, September 25, 1980, Naval Air Station 1979-1980s clippings file, NAS Alameda General Clippings File, Alameda Free Library, Alameda, California; "NAS construction gets green light," np, December 19, 1981, Naval Air Station 1979-1980s clippings file, NAS Alameda General Clippings File, Alameda Free Library, Alameda, California.

<sup>179</sup> NAS Alameda, "Naval Air Station Alameda 1940-1997 Disestablishment 25 April 1997," Naval Air Station Alameda General Clippings File, Alameda Free Library; "Alameda Point," Global Security.org, <http://www.globalsecurity.org/military/facility/alameda.htm> (accessed December 15, 2009)

<sup>180</sup> NAS Alameda, "Naval Air Station Alameda 1940-1997 Disestablishment 25 April 1997," Naval Air Station Alameda General Clippings File, Alameda Free Library; "Alameda Point," Global Security.org, <http://www.globalsecurity.org/military/facility/alameda.htm> (accessed December 15, 2009); York, oral history interview, December 8, 2009.

<sup>181</sup> NAS Alameda, "Naval Air Station Alameda 1940-1997 Disestablishment 25 April 1997," Naval Air Station Alameda General Clippings File, Alameda Free Library; "Alameda Point," Global Security.org, <http://www.globalsecurity.org/military/facility/alameda.htm> (accessed December 15, 2009); *The Carrier*, final edition, 23 May 1997.

### Evaluation

The identified historic designed landscape on NAS Alameda is a contributor to the NAS Alameda Historic District, but is not individually eligible for listing in the NRHP / CRHR. No element or area of the landscape on NAS Alameda is significant as a resource that individually appears to meet the criteria for listing in the NRHP / CRHR. The resources that are NRHP / CRHR eligible are like the buildings and structures that are contributors to the historic district, as discussed in the Combined Specific Buildings and Cold War Evaluation Report. The NAS Alameda is a historically significant and distinguishable entity whose components lack individual distinction, but which comprise an important concentration and continuity of buildings, structures, objects, and landscape features that are united historically and aesthetically by overall plan and physical development.

Inventory of existing conditions of NAS Alameda, review of previous historic resources reports regarding NAS Alameda, and extensive historical research conducted for this CLR lead to the conclusion that there is a historic designed landscape that is a contributing element to the previously identified NAS Alameda Historic District. A “historic designed landscape” is a category of cultural landscape. The NPS defines “historic designed landscape” as:

. . . a landscape that was consciously designed or laid out by a landscape architect, master gardener, architect, engineer, or horticulturist according to design principles, or an amateur gardener working in a recognized style or tradition. The landscape may be associated with a significant person, trend, or event in landscape architecture; or illustrate an important development in the theory and practice of landscape architecture. Aesthetic values play a significant role in designed landscapes. Examples include parks, campuses, and estates.<sup>182</sup>

This definition largely focuses on the significance of a historic designed landscape under NRHP Criterion C / CRHR Criterion 3, for importance under the NPS established theme of landscape architecture as well as (potentially) the theme of community planning and development. *National Register Bulletin 18* also notes that historic designed landscapes can be significant for association with important historical events and trends related to other historical themes established by NPS. Established historical themes include the military. This is further emphasized in the USACERL’s guidelines for documenting and evaluating historic military landscapes.<sup>183</sup> NAS Alameda’s historic designed landscape is significant under both NRHP Criterion A / CRHR Criterion 1 and NRHP Criterion C / CRHR Criterion 3.

This historic designed landscape is not individually significant, but rather is similar to other buildings and structures that are contributors to the historic district. The district, as discussed in the Combined Specific Buildings and Cold War Evaluation Report, is a historically significant and distinguishable entity whose components lack individual distinction, but which comprise an important concentration and continuity of buildings, structures, objects, and landscape features that are united historically and aesthetically by overall plan and physical development. The identification and analysis of the historic designed landscape on the station concludes that the historic district should include the historic designed landscape as a contributing element.

Under NRHP Criterion A / CRHR Criterion 1, the historic designed landscape on NAS Alameda is a contributing element to the NAS Alameda Historic District because of its important association with, and as an expression of, the strategic development of naval air stations in the 1930s, development of naval facilities in the San Francisco Bay Area during World War II, and for its important associations with the station’s role in Pacific Theater naval operations during World

<sup>182</sup> National Park Service, *The Secretary of the Interior’s Standards for the Treatment of Historic Properties with Guidelines for the Treatment of Cultural Landscapes*, 1996. The current edition of these guidelines is available online at <http://www.nps.gov/tps/standards/four-treatments/landscape-guidelines/organization.htm>.

<sup>183</sup> *National Register Bulletin 18*, 6; *National Register Bulletin 16A*, 41; USACERL, “Guidelines for Documenting and Evaluating Historic Military Landscapes: An Integrated Landscape Approach,” 23-24, 45, and 50-51.

War II. Under the historical theme of military, highlighting the important components of national defense, NAS Alameda is significant as one of the major naval air stations constructed in the years prior to World War II in response to national defenses demands in the Pacific Ocean and on the West Coast. NAS Alameda was the only one of the three air stations built on the West Coast that was completely new construction.

Navy architects and planners consciously designed, laid out, and established NAS Alameda following military traditions of master planning that stressed hierarchical and functional qualities. The historic designed landscape's organizational features that integrated sea and land aircraft operations and maintenance that supported the increased focus on the Navy's aircraft carrier strategy, along with improved facilities for personnel, illustrates and provides a direct link to the naval strategy of the mid to late 1930s for expanded facilities to serve the Pacific Fleet that were to increase efficiency and functionality for naval aviation in support of the military's mission of that period. The Navy's extensive attention to detail in the plan and execution of this major station, including the components of the historic designed landscape, demonstrates the importance of this facility and the value the Navy was placing on aviation as part of its strategic development for the Pacific Fleet. This level of consideration was further emphasized as completion of the station was sped up and successfully used by the Navy in its role during World War II, wherein the new air station was an important component of fleet support for naval air power and strategic operations centered around aircraft carriers. Thus, the historic designed landscape is importantly associated with, is an expression of, and provides a direct link to NAS Alameda support of a central and vital role in the Pacific Theater during World War II.

Under Criterion C, the historic designed landscape within the NAS Alameda Historic District is significant under historical themes of military, landscape architecture, and community development and planning. As noted, Navy architects and planners consciously designed and laid out NAS Alameda. They did so following established design principles in a recognized style / tradition, following military practices of the period. The military traditions and practices followed were influenced by civilian landscape architecture and community planning design trends of the early twentieth century. The historic designed landscape on NAS Alameda illustrates an important and highly successful integration of these practices that resulted in an outstanding functional military installation with high aesthetic value.

Navy architects and planners designed NAS Alameda as one of a series of stations designed prior to the war that had similar functional layouts and organization following master planning principles that have been called "total base design." The design of NAS Alameda integrated a strong Beaux Arts style plan – that was fundamental to the station layout – with assiduous attention to the integration and organization of its various functions. Also integrated into the station design were expressions of military cultural traditions of hierarchy, uniformity, and order, expressed on a large scale in the siting of the landplane and seaplane operations along the primary axes, precisely laying out spaces and buildings symmetrically, and, at a smaller scale, with details such as evenly spaced trees that conveyed a sense of order and uniformity. By the 1930s, the military had integrated Beaux Arts style civilian community planning concepts that had been highly influential in the early twentieth century City Beautiful Movement to refine and enhance efficiency and functionality of its major facilities. NAS Alameda's careful arrangement of spatial organization (bilateral symmetry / orthogonal layout), land use configuration, views and vistas, and circulation, along with the integration of architecture and landscape, use of Moderne style architecture, and a traditional and orderly style planting plan, demonstrate the Navy's distinct efforts to provide a modern facility in support of aviation as part of its strategic development for the Pacific Fleet. The station plan clearly expressed the primacy of the mission in support of Navy aviation with the alignment of the primary operational components, the landplane and seaplane operations, along the primary station axes, and by designing sightlines that connected the Administrative Core to those areas. Refined details in station vegetation, structures, and objects further support the importance placed on the design. Integration of buildings and landscape was an important principle in the field of landscape architecture in the early twentieth century, and LaVallee's planting plan integrated vegetation into the extant station plan in a manner that emphasized and mirrored elements of the overall station plan. The Navy's appropriation of valuable land created with fill to wide open formal spaces at the center of the station designed to make an aesthetic impact upon entry reflects both the investment and pride in the station.

The Navy's extensive attention to detail in the plan and execution of this major station, along with the importance placed on aesthetic enhancements in the architecture and integration of landscape and buildings, demonstrates the importance of this facility and the value the Navy was placing on aviation as part of its strategic development for the Pacific Fleet. This level of consideration was further emphasized as completion of the station plan was sped up and successfully used by the Navy in its role in the Pacific Theater during World War II, wherein the new air station was an important component of fleet support for the strategic operations centered around aircraft carriers. The flexibility of the spatial organization and functional layout enabled the station to rapidly expand to serve and support this important wartime activity.

The station does not, however, have significance as the important work of a master as neither the designers at BuDocks, Emery LaVallee, or any of the builders of NAS Alameda have been recognized for greatness in their respective field. The station also does not articulate its design plan in a manner that it fully expresses an aesthetic ideal and thus does not have significance for possessing high artistic value.

The historic designed landscape that contributes to the NAS Alameda Historic District is significant and it retains sufficient historic integrity to convey that significance. It has the physical features that relate to its significance, and it retains elements of all aspects of integrity: location, design, setting, materials, workmanship, feeling, and association. Much of the historic designed landscape's design intent and setting, reflected in the station layout and refined details remains intact. While functions of buildings have changed, the essential land use pattern from the period of significance can still be understood. Changes to the historic designed landscape include the replacement in kind of materials such as vegetation and paving, as well as additions to the built environment and vegetation. These alterations and additions have changed the station over time, however, both large-scale character-defining features of the historic designed landscape such as the spatial organization, land use configuration, circulation patterns, and integration of architecture with the landscape, as well as small-scale character-defining features such as the important structural details, objects, and features of the vegetation, provide one an understanding of the station's historical associations and design significance. This provides comprehension of the workmanship inherent in the station's design along with the aesthetic and historic sense of district's period of significance and a direct link to the important events of that time. The boundaries of the NAS Alameda Historic District, discussed below, were drawn to exclude areas of the station that lack historic integrity.

The historic designed landscape that is a contributor to the NAS Alameda Historic District is, however, not historically significant within the context of the Cold War period on the station. The history of the station during the Cold War illustrates that the historic district, its contributing elements including the historic designed landscape, had no direct or important associations with historically significant Cold War Era themes.

The evaluation of resources on NAS Alameda within the context of the Cold War, including examination of potential cultural landscape, took into account the Statewide Study, which presents important Cold War themes. Within the Statewide Study, Cold War themes fall within two general categories: the "high technology" themes that define much of the significance of the achievement of California military bases during this period; and the more routine thematic areas, such as training and support, which have typified the role of California military installations for more than a century. Within the "high technology" themes, the sub-themes are: weapons research and development, weapons and aircraft testing and evaluation, early warning systems and electronic warfare, strategic nuclear capabilities, intercontinental and anti-ballistic missile installations, and man in space sites. Examples of NRHP-eligible Cold War military properties in California under these sub-themes include: Michelson Laboratory at Naval Air Weapons Station China Lake; Test stands of the Air Force Research Laboratory at Edwards Air Force Base (AFB); and Atlas, Titan, Minuteman, and Peacekeeper launch facilities at Vandenburg AFB. The emphasis on non-routine, leading edge technology, while consistent with the requirements to establish exceptional significance, can lead to a biased presentation of the history of the military during this period. The vast majority of men and women who served in the military during the Cold War, as well as the majority of civilian employees at California bases, were involved with so called "routine" functions. The use of the term "routine" does not imply that these people were not doing vital or crucial work. Rather, the emphasis upon non-routine leading-

edge developments is pursued in recognition of the historically significant aspects of Cold War-era history, as well as the higher burden of proof that is required in determining NRHP eligibility for properties that may have achieved significance during the last 50 years. Within the Cold War themes, routine sub-themes include: support for troops overseas, total Army and Navy coordination of Regular Forces, Reserve, and National Guard, and a separate theme of military architecture of the Cold War era. At the time of publication of the Statewide Study in 2000, no military properties within the sub-themes of support for military personnel overseas and total Army and Navy coordination of Regular Forces, Reserve, and National Guard, had been found to be eligible to qualify for listing in the NRHP.<sup>184</sup>

NAS Alameda continued to support carrier operations in overseas conflicts, and other overseas operations, during the Cold War era, as well as its main function of aircraft overhaul and repair, but the station did not play an important direct role in advancement of military research, testing, development, or evaluation of aircraft or weapons systems, which constituted the historically significant themes of naval missions and activities during that time. The historical record did not illustrate a direct link between specific development, building / structure construction or alteration, shift in station planning, or alteration to components of the landscape tied to specific operations. Cold War resources on NAS Alameda, including components of its landscape, served general support functions for the fleet and its personnel. The history of the station during the Cold War, therefore, illustrates that neither the historic district, nor its contributing elements, nor any other components of the former NAS Alameda facility, had direct or important associations with historically significant Cold War-era themes.

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None of these facilities played an important role in the technological advancements that were historically significant during the Cold War, nor did they play a historically significant role in Navy operations overseas; rather, NAS Alameda performed functions in support of operations similar to those undertaken at other air stations and naval facilities around the nation.<sup>185</sup> Furthermore, none of the individual landscape features constructed during World War II gained significance simply because they were utilized during NAS Alameda operations and functions during the Cold War period.

No areas of the station's landscape evaluated within the context of the Cold War, therefore, meet the criteria for listing in the NRHP or CRHR because they do not have direct or important associations with either the important events or trends of that era (NRHP Criterion A / CRHR Criterion 1), or an historically significant individual of that era (NRHP Criterion B / CRHR Criterion 2). These landscape features and areas of station do not exemplify important types, periods, or methods of construction of the Cold War era (NRHP Criterion C / CRHR Criterion 3), nor are they likely to reveal important historical information about that period (NRHP Criterion D / CRHR Criterion 4). None of the landscape on NAS Alameda has historic significance within the Cold War period of operations or functions of the station. This

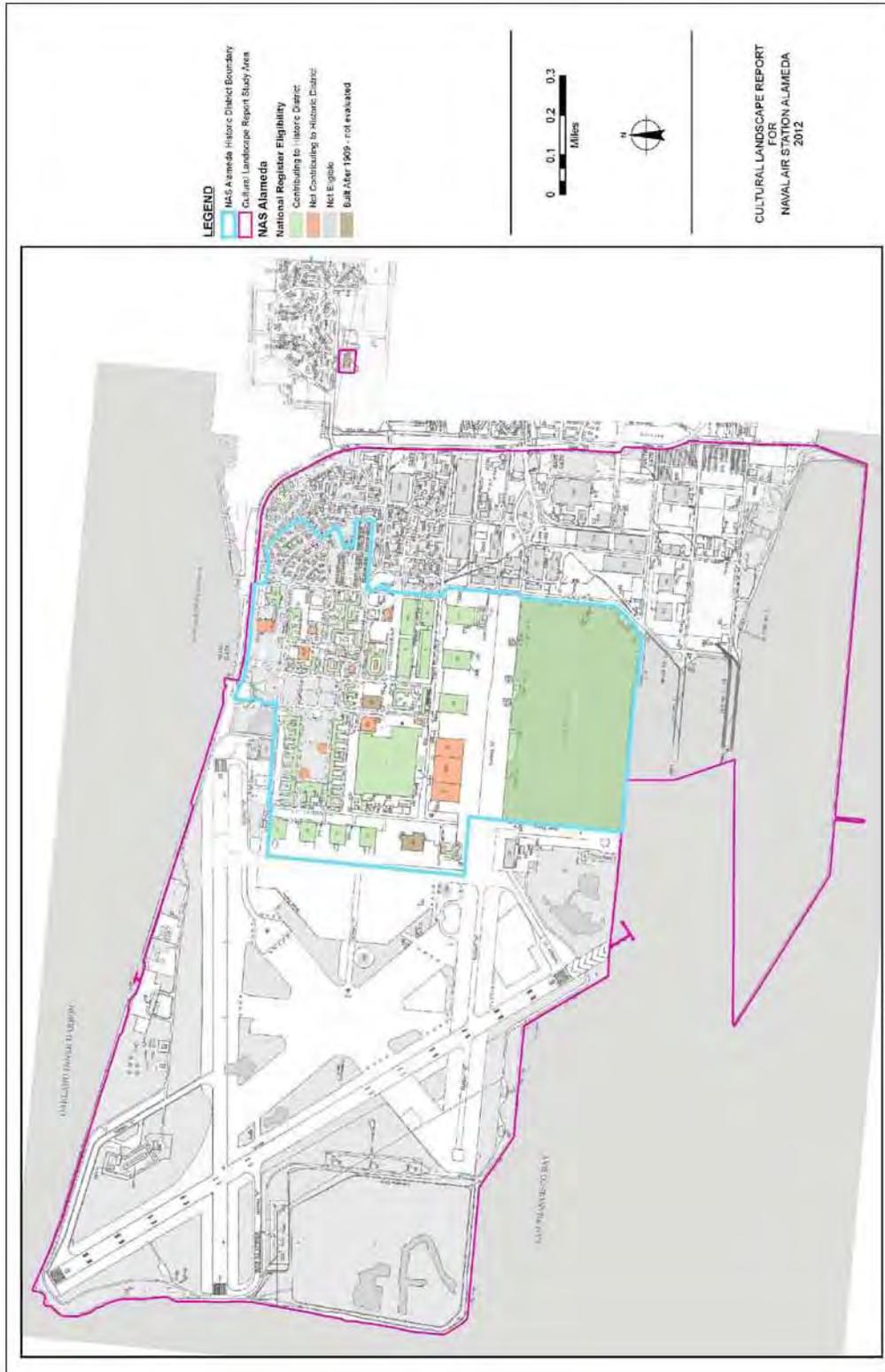
<sup>184</sup> JRP Historical Consulting Services, "Historic Context: Themes, Property Types, and Registration Requirements," Volume 3, *California Historic Military Buildings and Structures Inventory*, 8-1 to 8-60.

<sup>185</sup> JRP, "Historic Context: Themes, Property Types, and Registration Requirements."

applied to landscape features considered individually on NAS Alameda, as well as to any potential collection of landscape features on station designed or built during the Cold War period. The lack of significance of the station during the Cold War in general, and of the separate landscape features on NAS Alameda, supports the conclusion that a distinguishable entity that has a significant concentration, linkage, or continuity of resources for a Cold War-era historic district does not exist on this facility.

Furthermore, some components of landscape on NAS Alameda were designed and installed after 1962 and are less than fifty years old. These resources were not only subject to the thresholds of significance described above, but were also subject to NRHP Criterion Consideration G for properties less than fifty years old, and the similar special consideration under CRHR. NRHP guidance dictates that properties less than fifty years old can only be eligible for listing if they: 1) meet one or more of the NRHP criteria of significance; 2) retain historic integrity; and 3) are of “exceptional importance,” the latter of which would require sufficient historical perspective and scholarly research to consider and provide an extraordinary level of significance. Resources on NAS Alameda dating to post 1962 fall within the context of the Cold War, and were evaluated for potential important associations within this context. While NAS Alameda served a vital support function during the Cold War era and there is sufficient historical perspective to evaluate these resources, none of these facilities rose to the level of exceptional importance as required to meet NRHP Criterion Consideration G (and similar CRHR special consideration).

Sketch Map:



State of California — The Resources Agency  
DEPARTMENT OF PARKS AND RECREATION  
**PRIMARY RECORD**

Primary #  
HRI #  
Trinomial  
NRHP Status Code 6Z

Other Listings  
Review Code

Reviewer

Date

Page 1 of 108

\*Resource Name or #: NAS Alameda – Landscape Outside Historic District

**P1. Other Identifier:**

\*P2. Location:  Not for Publication  Unrestricted

\*a. County: Alameda

and (P2b and P2c or P2d. Attach a Location Map as necessary.)

\*b. USGS 7.5' Quad: Oakland West Date: 1993 T

; R ;  $\frac{1}{4}$  of  $\frac{1}{4}$  of Sec ; M.D.B.M.

c. Address:

City: Alameda

Zip: 94501

d. UTM: Zone: 10 ; mE/ mN (G.P.S.)

e. Other Locational Data: (e.g., parcel #, directions to resource, elevation, etc., as appropriate)

On former Naval Air Station (NAS) Alameda

\*P3a. Description: (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)

This form addresses the landscape on NAS Alameda that is outside the NAS Alameda Historic District. The description of existing conditions of the cultural landscape outside the NAS Alameda Historic District is divided into three areas: the Administrative Core, the Shops Area, Residential / Morale, Welfare, and Recreation (MWR) Area, and the Operations Area. These functional areas are based on historic land uses on the former station. (See Continuation Sheet.)

\*P3b. Resource Attributes: (List attributes and codes) HP 34 (Military Property)

\*P4. Resources Present:  Building  Structure  Object  Site  District  Element of District  Other (Isolates, etc.)

P5b. Description of Photo: (View, date, accession #) **Photograph 1:**  
Oblique aerial 1990s camera facing northwest.

P5a. Photo or Drawing (Photo required for buildings, structures, and objects.)



\*P6. Date Constructed/Age and Sources:  
 Historic  Prehistoric  Both  
1938-1997, Naval Records

\*P7. Owner and Address:  
Navy BRAC PMO  
1455 Frazee Road, Suite 900  
San Diego, CA 92108

\*P8. Recorded by: (Name, affiliation, and address)

PGAdesign, Inc. and JRP  
Historical Consulting, LLC  
(See Continuation Sheet.)

\*P9. Date Recorded: September –  
December 2009

10. Survey Type: (Describe)  
Intensive

P11. Report Citation: (Cite survey report and other sources, or enter "none.") JRP Historical Consulting, LLC, "Cultural Landscape Report, NAS Alameda," prepared for NAVFAC Southwest, 2012.

\*Attachments:  NONE  Location Map  Sketch Map  Continuation Sheet  Building, Structure, and Object Record  
 Archaeological Record  District Record  Linear Feature Record  Milling Station Record  Rock Art Record  
 Artifact Record  Photograph Record  Other (List):

**BUILDING, STRUCTURE, AND OBJECT RECORD**

\*Resource Name or # (Assigned by recorder) NAS Alameda –Landscape Outside Historic District

B1. Historic Name: NAS Alameda

B2. Common Name: NAS Alameda

B3. Original Use: Naval Air Station

B4. Present Use: Commercial, Industrial and Residential

\*B5. Architectural Style: Utilitarian

\*B6. Construction History: (Construction date, alterations, and date of alterations) 1938-1941 initial fill and construction, 1943-1945 additional fill and construction, 1951-1955 Airfield expansion; 1966-1968 removal and reconstruction of housing; 1973 recreation area construction, 1987 entry oval addition

\*B7. Moved? No Yes Unknown Date:

Original Location:

\*B8. Related Features:

B9a. Architect: US Navy Bureau of Yards and Docks

b. Builder: Multiple

\* B10. Significance: Theme:

Area:

Period of Significance:

Property Type:

Applicable Criteria: N/A

(Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity.)

The landscape and areas outside the boundary of the NAS Alameda Historic District do not appear to meet the criteria for listing in the National Register of Historic Places (NRHP) or California Register of Historical Resources (CRHR) as a cultural landscape. The NAS Alameda Historic District was determined eligible for listing in the NRHP in 1992 with a period of significance of 1938-1945. The landscape and areas outside of the historic district are inventoried and evaluated in the cultural landscape report cited in P11. Besides the historic designed landscape that is a contributor to the NAS Alameda Historic District (evaluated on a separate DPR 523 form), no other cultural landscape has been identified on NAS Alameda. Based on recordation of existing conditions and historical research conducted for this report, there are three factors regarding this conclusion regarding potential cultural landscape on NAS Alameda that are not part of the identified historic designed landscape. (See Continuation Sheet.)

B11. Additional Resource Attributes: (List attributes and codes)

\*B12. References: US Navy building records, plans, and photographs (CEC/Seabee Museum, NBVC, Port Hueneme; Plans Room, Alameda City Hall West); NAS Alameda Command Histories, 1940-1992, and Base Directories (US Naval Shore Establishments, RG 181, NARA Pacific Region); Allbrandt, "History of the Naval Air Station ... Alameda, California," AMDO Association (1996); JRP Historical Consulting, *California Historic Military Buildings and Structures Inventory* (2000); *The Carrier*, 1941-1960; *Alameda Times-Star*, 1952-1988; *Oakland Tribune*, 1941-1967; see also footnotes, B10.

B13. Remarks:

\*B14. Evaluator: C. McMorris / H. Norby

\*Date of Evaluation: September 2010

(Sketch Map with north arrow required.)

(See Continuation Sheet)

\*Recorded by: PGAdesign and JRP Historical

\*Date: Sept. 2009-Dec. 2009

Continuation

Update

\*P8. Recorded by (cont.): Field recordation primarily preformed by PGAdesign, Inc., 444 17<sup>th</sup> Street, Oakland, California 94612, under the direction of Chris Pattillo. JRP Historical Consulting, LLC, 2850 Spafford Street, Davis, CA 95618, recorded portions with field crews led by Christopher McMorris.

\*P3a. Description (cont.):

The description of existing conditions of the landscape outside the boundary of the NAS Alameda Historic District is divided into the Administrative Core, Shops, Residential / MWR, and Operations areas. While some fragmentary elements of the historic designed landscape exist outside the boundary of the historic district, they are not character defining of the cultural landscape. In many cases, the areas outside the historic district boundary were not included in the original station plan or planting plan and therefore do not have a strongly articulated design. Generally, the elements of the landscape outside the historic district are far less defined or have lost substantial historic integrity. The rigid cross-axis around which most of the station's orthogonal grid is sited is less of an organizing principle in the areas outside the historic district, particularly in those portions of the station in the Shops Area, Residential / MWR Area, and Operations Area. The formal planting found in the Administrative Core, Shops Area, and Residential / MWR Area of the historic district are also almost completely absent in the parts of the station outside the boundary of the historic district. Finally, the architectural styles found in the district are absent outside of the district where most buildings are simple functional or utilitarian structures with little or no stylistic detail.

**ADMINISTRATIVE CORE**

The portion of the Administrative Core not within the boundary of the historic district is the former enlisted personnel recreational area located north of West Redline Avenue and west of Lexington Street. This area includes the Enlisted Men's Swimming Pool (Building 76), Gymnasium (Building 134), a baseball playing field (Building 422) and bleachers (Building 381). An industrial waste pumping station (Building 562) clips the northeast corner of the playing field. A modern skate park has been built on the west side of the gymnasium and pool parking lot.

Spatial Organization

West Redline Avenue is the only street running through this area that is aligned with the main organizing axes of the station. The spatial organization of this area has changed with the removal of buildings on the north side of West Redline Avenue for the expansion of Runway 7-25 in the early 1950s. Historically, the area west of Building 134 was densely developed with nine buildings / structures and with twelve tennis courts north of Building 76.

Presently, a large percentage of the land in this area is sparsely developed with a large open paved area for surface parking and open space for a playing field.

Views and Vistas

The panoramic view from West Redline Avenue includes San Francisco, Yerba Buena Island, the Oakland-San Francisco Bay Bridge, and Mount Tamalpais (**Photograph 2**). This view is also present within the historic district.

Topography

The Administrative Core is essentially flat, except as noted.

Vegetation

The southwest corner of Building 134 has a similar setback planted with lawn found at other buildings in the Administrative Core, and is the only remaining original landscape feature in this area. Foundational shrubs along the south and east sides of Building 134 and flanking the entrance on the south side of the building appear to be modern

\*Recorded by: PGAdesign and JRP Historical

\*Date: Sept. 2009-Dec. 2009

Continuation

Update

replacements. Weeds have grown in the area between Buildings 76 and 134. A row of trees are planted along the west side fence around Building 562. The playing field lawn and skate park lawn is maintained. A row of shrubs have been planted along the west fence line of the skate park.

### Circulation

Circulation in this area is designed to accommodate vehicle and pedestrian traffic. Roads within this area are all two-lane, one in each direction. Pedestrian sidewalks wrap around the south and west sides of Building 134 and a sidewalk along the south side of the playing field connects to the sidewalk from main gate. A large parking lot with diagonal striping is located north of West Redline Avenue (**Photograph 3**).

### Water Features

There are no bodies of water located within the Administrative Core.

### Structures, Furnishings and Objects

The various buildings and structures present in the Administrative Core reflect the recreational land use found in this area. As previously noted, there is also a high proportion of open area in this part of the station. Buildings 76, 134, and 562 have little or no stylistic architectural details. Structures consist of the general utilitarian infrastructural elements like fencing, lighting, signage, and utility enclosures found in other areas of the station. Like other areas of the station, fencing is generally chain link. A half-barrel wood planter is located at the main entry of Building 134. A built-in concrete planter is located at the southwest corner of the playing field backstop, which is a raised concrete base with metal bleachers.



**Photograph 2:** West Red Line Avenue Building 134 at right, view of San Francisco in background.



**Photograph 3:** Large open paved area west of Buildings 76 and 134.

## SHOPS AREA

The southeast area of the station is defined generally by the Shops and Operations areas of the station south of West Tower Avenue and east of the Seaplane Lagoon and waterfront area. Organized in terms of functions, it also includes a small rectangular area north of West Tower Avenue, between the Shops Area and the residential family housing, and a narrow strip of developed land between the west edge of the Seaplane Lagoon and a marshy area in the southeast corner of the Airfield. It does not include the areas south of West Hornet Avenue, east of Skyhawk Street, north of Oriskany Street, or east of Orion Street, north of West Atlantic Avenue, which are MWR Areas described in the Residential / MWR Area.

### Spatial Organization

The southeast Shops Area of the station is laid out loosely on an orthogonal grid, but with a number of prominent exceptions. West of the East Gate, the oval lawn that traffic circulates around prevents West Atlantic Avenue from being a linear spatial organizer stretching from the north edge of the Seaplane Lagoon east through the East Gate. The diagonal path of the railroad running southwest to Pier 2 also visually and physically interrupts the orthogonal grid. The natural contour of the southern edge of the station creates the triangular wedge that makes up the southern portion of the Residential / MWR Area. West Tower Avenue is the only street running through this area that is aligned with the main organizing axes of the station. Other secondary streets like West Seaplane Lagoon, West Pacific Avenue, and West Ticonderoga Avenue form a grid, but the spaces do not read as strongly orthogonal. The sparsely placed buildings in this area also detract from the sense of a strong grid because there are not closely aligned buildings that create a straight “edge.” The small area west of the Seaplane Lagoon is only spatially tied to the rest of the station by the visual extension of Monarch Street south along the west edge of the lagoon; the few buildings in this area face this street.

A large percentage of the land in the southeast area Shops Area is sparsely developed (**Photograph 4**). There are many acres of land that are either fallow, open paved areas for surface parking, or enclosed by fencing for storage of equipment. As such these areas lack strong spatial definition. The roads are the predominant spatial organizing feature, and many of

them lack demarcating features found on other roads throughout the station, such as curbs, gutters, or sidewalks, and many also lack clear, visible striping to mark the driving lane.

The southeast Shops Area of the station is extensively paved in asphalt or concrete. Typically, spaces between buildings are paved and there are no curbs, sidewalks, or paths. The density of development is sparse in the southeast area of NAS Alameda, and the few large buildings are interspersed with larger vacant spaces (**Photograph 5**). The scale of buildings also varies from small storage containers to large, warehouse buildings such as Building 117. The size of the blocks also varies in the Southeast area. North of West Atlantic Avenue there are six blocks, generally of the same size and proportion – 990' east-west and 325' north-south. South of West Atlantic Avenue block size and orientation is inconsistent and generally larger.

A variety of land uses are currently visible in the southeast Shops area of the station. These uses include storage of equipment, vehicles, dumpsters, boats, boat trailers, shipping containers; as well as truck, trailer, and motor-home storage; a corporation yard; and various commercial enterprises including self-storage.

Several sets of railroad tracks traverse the Southeast area, running north-south, parallel to Orion Street, or diagonally between West Atlantic and the piers. This track draws a strong diagonal line through the area that detracts from the grid pattern of the streets and divides buildings and functional spaces. In the places where the railroad tracks turn, curved tracks subdivide blocks or spaces between buildings with arcs.

#### Views and Vistas

The relatively sparse and low-profile development in the southeast Shops Area of the station, and its proximity to the shoreline along the southern edge, provides the setting for many views of the environment surrounding NAS Alameda. A wide view from Ferry Point Road, north of Building 68, takes in the City of San Francisco, the Transamerica Building, both spans of the San Francisco Oakland Bay Bridge, the Marin Headlands, the Seaplane Lagoon, the seaplane hangar buildings, cranes in the Port of Oakland, the East Bay Hills, and downtown Oakland and Tribune tower. From West Atlantic Avenue at the East Gate there is a view of Bayporte Housing east of the station. The City of San Francisco is in view from West Seaplane Lagoon (**Photograph 6**). At Orion on West Atlantic Avenue, there is a view of the East Bay hills. Looking east on West Oriskany Avenue there is a view of trees in the City of Alameda.

#### Topography

The Shops Area is essentially flat.

#### Vegetation

Planting in the southeast Shops Area is sparse, reflecting the industrial nature of the operations located in this area. The only formally planted area is in the oval lawn just west of the East Gate. The other limited planned vegetation occurs in planters and along the rip rap edges of the station. Shrubs in raised planters accent three entries to Buildings 167, and iceplant, coyote bush and pride-of-madera grows in small clusters along the rip rap edge.

The formally planted area in the oval shaped lawn surrounded by the split of West Atlantic Avenue has a Monterey cypress with a trunk diameter measuring 8'6" in diameter (**Photograph 7**). This large, sculptural tree at the east end of the oval-shaped lawn is a focal point. Shrubs are used as an accent in a circular planting around the A-7 Corsair aircraft mounted on a pedestal in this lawn. There are a variety of flowering shrubs and perennials here including: Iceland poppies, pansies, pelargonium, woolly-blue-curls, euryops daisies, breath-of-heaven, lavender, and dusty miller.



**Photograph 4:** Buildings in the Southeast area are not a strong spatial organizer. Also note lack of curbing. Camera facing west at intersection of Skyhawk Street and West Pacific Avenue.



**Photograph 5:** Many spaces in the Southeast area are sparsely developed; facing northwest from West Oriskany Avenue, Building 169 in foreground, Building 168 in background.



**Photograph 6:** Looking west on West Seaplane Lagoon, east of Orion Street. Notice low density of building development, lack of vegetation, extensive paving, and view of San Francisco in background.



**Photograph 7:** Monterey cypress tree at oval-shaped lawn, near the East Gate; facing southwest.

### Circulation

Circulation in the southeast Shops Area of the station accommodates heavy vehicles and trains, with very few sidewalks or paths present in this area.

Roads in the southeast Shops Area are typically straight, paved, and two lanes, one lane in each direction with faded striping. Some atypical roads are also present. In a deviation from the orthogonal alignment, the roadway curves around the oval lawn near the East Gate, and there are also two and three lanes in each direction around the lawn. East of the Piers 1-3 there is a poorly defined paved area, with unclear or non-existing markings for the driving lanes.

Several sets of railroad tracks run throughout the southeast Shops Area including the blocks between Ferry Point Road and Orion Street. Two sets of tracks run through Building 67.

Although curbs are largely absent from the southeast Shops Area of the station, there are a few segments of curbs at various locations. Often, long wooden beams are used as barriers in this area instead of formal curbing. Curbs appear north of Building 66, on West Seaplane Lagoon, Ferry Point Road, West Atlantic Avenue (with integral gutter) and Orion Street. On West Atlantic Avenue there is a 12" wide x 10" high curb on the south side of the road, and there is a 9" curb west of the fence on the east side of Skyhawk Street. Few ramps are present in the Southeast area to help facilitate circulation; one is present on the north side of Building 564.

This area has the most, and the largest parking areas on the station. As such, the design of the southeast Shops Area does not accommodate pedestrian traffic and there is only one formal sidewalk present in the area. There is a 12' concrete sidewalk on the north and south sides of West Atlantic Avenue. A curving path crosses the oval lawn at the mounted aircraft west of the East Gate. There is one example in this area of railroad tracks that have been converted to trails to accommodate pedestrians. A 4' wide concrete trail, paved between the railroad tracks, parallels West Atlantic Avenue through the site to Ferry Point Road north of Building 68.

### Water Features

There are no permanent bodies of water located within the Shops Area; however, it is located adjacent to the Seaplane Lagoon.

### Structures, Furnishings and Objects

The various buildings and structures present in the southeast Shops Area reflect the variety of land uses found in this area. As previously noted, there is also a high proportion of open or fallow area in this part of the station. Buildings vary in construction material and scale, with little or no stylistic architectural details. Structures consist of the general utilitarian infrastructural elements like fencing, lighting, signage, and utility enclosures found in other areas of the station.

Like other areas of the station, fencing in the southeast Shops Area is generally chain link, with and without barbed wire, with and without slats, and either 4', 6', or 8' tall. Other styles of fencing are present in specific areas. There is an ornamental iron fence at the East Gate, and at the entry to the commercial self-storage yard. A wood rail fence is present at the park area in the southeast corner of the station, and there is a solid board, wood fence at Building 414. Signage in the area is almost exclusively traffic signs.

Site furnishings in the southeast Shops Area of the station are a typical eclectic mix of utilitarian and recreational elements, similar to what is found in other areas of the station. Utilitarian features include various styles of trash receptacles, fire hydrants surrounded by bollards, vaults, and monitoring wells, shed structures, containers, tanks, loading docks and ramps, chain link enclosures, mailboxes, and an observation tower north of Building 292. There are eighteen

planters on West Atlantic Avenue west of Orion Street. Precast concrete bollards, 12" diameter and 3' high sit between each planter. Other elements in the Shops Area are tie downs, modular, and concrete pavers.

The only monument in the southeast Shops Area is the mounted aircraft near the East Gate.

## **RESIDENTIAL / MWR AREA**

Most of the area of the station outside the boundary of the NAS Alameda Historic District to the east, and extreme southeast was devoted to residential family housing and MWR activities. The family housing area is located in the northeast corner of the station and is bound by Main Street to the north and east, West Tower Avenue to the south, and the edges of the Officers' and CPO Housing to the west. The area south of this to West Oriskany Avenue and bound roughly by Orion and Skyhawk streets, and the triangular shaped wedge south of West Hornet Avenue is an area previously used primarily for subsistence and recreational activities.

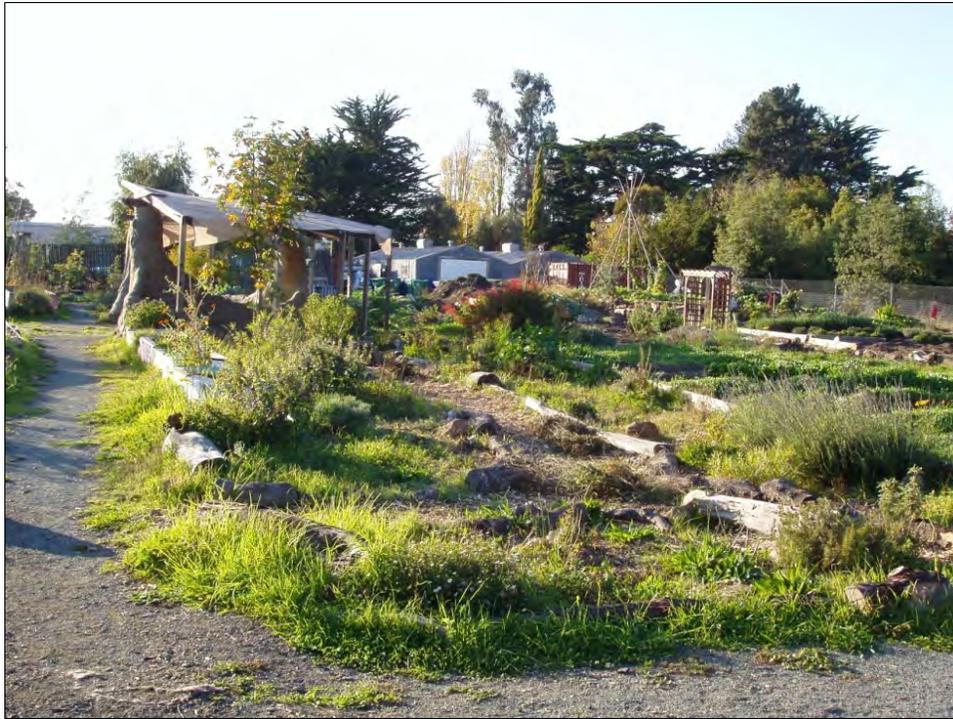
### Spatial Organization

The 1960s family housing area is one of three types of residential housing found in the northeast corner of the station; the other two are Officers' Housing and CPO Housing, which are both within the boundary of the historic district. Each grade of housing is separated from the other with park-like open spaces. A large open space, now a community garden, is a buffer where the three types of housing meet (**Photograph 8**). The 1960s family housing area is further divided by rank into officers' family housing and enlisted family housing. This division occurs on Corpus Christi Road west of the CPO Housing, along Corpus Christi Road to Orion Street then south on Orion Street to Midway Avenue with officers' family housing north, and enlisted family housing south. Officers' family housing is further divided into single family homes along Pearl Harbor Road and Barbers Point Road, and multi-family homes south of the loop formed by Pearl Harbor Road and Barbers Point Road.

The density of development in the Residential / MWR Area is generally uniform, but there are subtle differences. The proportion of land covered by buildings in the multi-family housing area is the lowest density of all residential areas on the station. Although this area has the greatest amount of open space, it also has the highest density of population because of the use of multi-family housing units.

The streets within the officers' single family area echo the original Officers' Housing layout (**Photograph 9**), with single family homes orientated towards the street, although without a rigid set back. The street layout in the multi-family housing area is not as clearly defined as it is in the Officers' and CPO Housing areas. Here, the layout of the buildings, within large areas defined by major streets, is the primary organizing feature. The streets themselves are a mixture of curved and straight, with turnouts into off-street parking areas and carports. Trees in the family housing areas are generally sparse.

The layout of buildings in both enlisted and officers' multi-family housing creates central open spaces in each block (**Photograph 10**). These spaces provide communal play areas for children and most have playgrounds. They are planted with lawn and trees, and with occasional shrubs.



**Photograph 8:** Central community garden, camera facing west.



**Photograph 9:** Single family housing general view; camera facing northeast.



**Photograph 10:** Organization of multi-family area between Tower Avenue and Stardust; camera facing northwest.

Spatial organization in the MWR Areas within the southeast portion of the station is even less dictated by the axial layout than other areas. The Residential / MWR Area along the eastern boundary of the station is loosely organized into large blocks; however, building density is low and does not emphasize the grid. The other Residential / MWR Area at the farthest southeastern corner of the station deviates entirely from the orthogonal layout because it follows natural contours and is wedge-shaped.

Current land uses within the Residential / MWR Area include vehicular and pedestrian circulation, private backyards, ornamental planting, playgrounds, dumpster storage, trash and recycling bins, open space, clothes drying, community gardening, commercial activity, recreational soccer fields, auto hobby shop, a soccer club, a park, picnic area, and marina facilities. The marina facilities are a collection of features no longer in use with the bridges and docks fenced off. The park is associated with the Bay Trail and includes a 5' wide rails-to-trails path, an asphalt path out to and along the shoreline, a kiosk with notices, signage, picnic tables and benches, and boat tie downs.

#### Views and Vistas

Most views within the Residential Area are limited because the curvilinear streets prevent long views and irregular building orientation and vegetation prevents focal points. Along the northern edge of the Residential Area, the Port of Oakland and East Bay hills are visible between and above screening trees. Along Midway Avenue, one of the few straight streets in the area, Alameda Bayporte housing, is visible outside of the station (**Photograph 11**). The central community garden is visible from various locations throughout. Wide views of the San Francisco Bay and San Francisco are available from the MWR Area at the southern edge of the station.



**Photograph 11:** View along Midway Avenue, only long view within housing area, camera facing east.

### Topography

The Residential / MWR Area is essentially flat with minimal pitch as needed for drainage.

### Vegetation

Planting in the residential areas in the northeastern quadrant of NAS Alameda is the densest on the entire station but there are fewer trees and shrubs in the 1960s family housing areas than in the Officers' or CPO Housing areas. The MWR Areas are sparsely planted in relationship to formally planted areas of the station, even though they are the most planted parts of the southeast area of the station.

Lawns are characteristic of all residential areas on the station. Lawns fill the interior spaces enclosed by the multi-family housing buildings, which would have provided a protected play area for children, and an area surrounding each of the single family homes. The multi-family and single family units are deeply set back, as in other portions of the station, although their orientation towards each other does not clearly define the set back. Portions of the multi-family housing are no longer occupied and the lawns are not as well maintained as in other residential areas, and have died. This is the case in the unoccupied areas east of Orion Street (**Photograph 12**). There are planting strips between the curb and sidewalk on portions of West Midway Avenue and on Orion Street. In contrast, there is a well maintained area near the occupied apartments at West Tower Avenue and Moonlight Terrace.



**Photograph 12:** Typical vegetation in the enlisted family housing area; camera facing north.

Although trees do not strongly characterize the setting of the family housing area, there are instances where tree plantings do contribute to the spatial organization of the area. One of the most defined tree-rows on the entire station is a row of *Eucalyptus polyanthemos* on West Tower Avenue west of Orion Street. A row of myoporum also lines the north side of West Tower Avenue. Other trees in the family housing areas are mulberry on Stardust Place, sycamore on Rainbow Court and Orion Street east of Building 152, and sweetgum on West Midway Avenue at the gate. There is also a square of lawn east of Rainbow Court with four sycamore trees.

There are few to no shrubs throughout the family housing areas. The only hedges in the area are a row of photinia in the parking strip on the south side of West Midway Avenue that has not yet formed a hedge, and an escallonia hedge at a dumpster in the southwest quarter of enlisted family housing area.

There is a community garden between Main Street and Barbers Point Road in the officers' family housing area. Features include wire fencing, an outdoor oven, picnic tables, drip irrigation, fruit trees, berry vines, raised beds, plastic greenhouse, a storage container, a shade structure, compost, and a basketball backstop. To the north of the garden is a fallow open space, and north of that is a commercial nursery.

Plant types in the MWR Areas include thirty-six species of trees, and forty-four species of shrubs and perennials. Tree types include eight coniferous species, seven deciduous trees, twenty-one broadleaf evergreens and two palm species. Only two species are for flower display. There are much greater numbers of evergreen and coniferous trees and shrubs than species that lose their leaves in winter. Most tree species are found only at one location within the area. Trees used repeatedly include: black acacia, Monterey and Italian cypress, ironbark eucalyptus, Monterey pine, and Lombardy poplar. No particular species of shrub is used in great number.