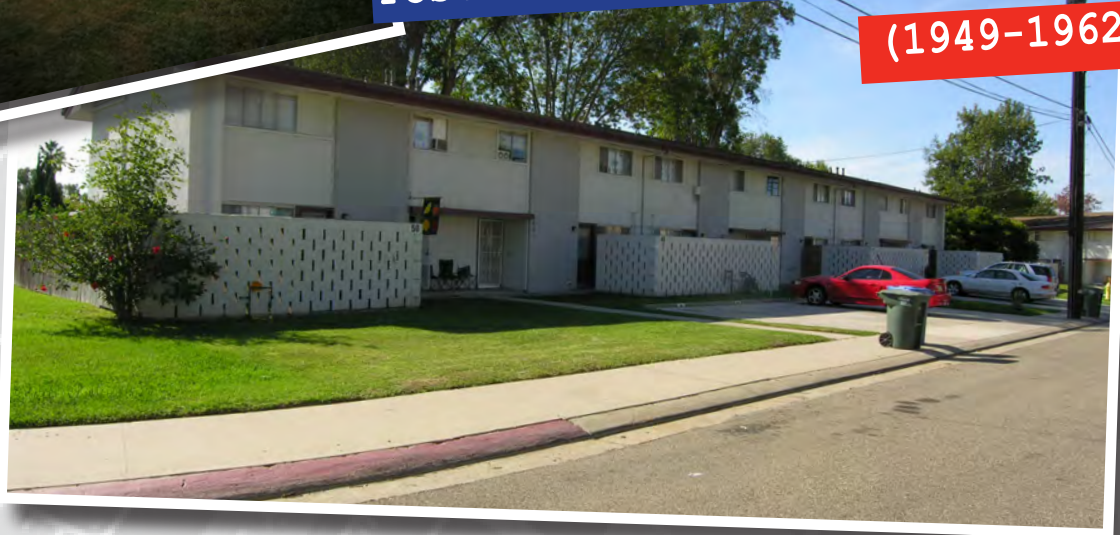




**Housing an Air Force and a Navy:  
The Wherry and Capehart Era Solutions  
to the  
Postwar Family Housing Shortage  
(1949-1962)**



**Prepared for:  
Department of the Air Force  
Department of the Navy**




**Approved for Public Release**





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THE WHERRY AND CAPEHART ERA SOLUTIONS TO THE  
POSTWAR FAMILY HOUSING SHORTAGE (1949-1962)**

**Final Report**



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**June 2007**

**Prepared for**

**United States Department of the Air Force  
United States Department of the Navy**



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## 1.0 EXECUTIVE SUMMARY

This historic context, *Housing an Air Force and a Navy: The Wherry and Capehart Era Solutions to the Postwar Family Housing Shortage (1949-1962)*, was prepared to support the Departments of the Air Force and the Navy in executing the *Program Comment for Capehart and Wherry Era Housing at Air Force and Navy Bases*. The Advisory Council on Historic Preservation issued the draft program comment on 10 September 2004 and the final comment on 18 November 2004. The Department of the Air Force and the Department of the Navy published their acceptance of the program comment in the *Federal Register* on 18 November 2005. This programmatic treatment for residential properties was developed in accordance with Section 106 of the National Historic Preservation Act of 1966 (NHPA), as amended, to take into consideration the effects of future management activities upon Air Force and Navy housing constructed between 1949 and 1962.

The provisions for Program Comments contained in 36 CFR 800.14(e) of the Advisory Council on Historic Preservation's regulations were applied by the Air Force and the Navy in developing an integrated and cost-effective approach to NHPA requirements that is consistent with the Air Force's and Navy's need to provide quality military family housing. The programmatic treatment includes the current study, neighborhood design guidelines, a brochure for developers highlighting the Federal Rehabilitation Tax Credit program, and oral interviews with former residents of Air Force and Navy Capehart and Wherry era family housing. In addition, the Air Force and the Navy were required to identify Properties of Particular Importance as part of the revised and expanded context study. The Air Force and Navy will consider the Properties of Particular Importance in planning efforts.

Wherry and Capehart era family housing is included in the real property inventories of all three branches of the U.S. Armed Forces. A total of 25,770 single-family and multi-family buildings dating from the era currently are located at Air Force, Navy, and Marine Corps installations and are subject to a current housing privatization initiative. The 2006 Air Force inventory includes 19,965 buildings from the period. The Navy family housing inventory includes 6,151 buildings and the Marine Corps inventory incorporates 2,665 buildings.

The current study supplements an earlier investigation, *Housing an Army: The Wherry and Capehart Era Solutions to the Postwar Family Housing Shortage (1949-1962)*, prepared for the United States Army Environmental Center (USAEC). This earlier study developed an historic context for Army housing of the era and included discussions on the broad social history of housing in the postwar United States, changing Army demographics, the legislative history of the Wherry and Capehart Acts, and housing design. The current investigation expands upon this earlier Army work to present data on the Air Force and the Navy housing programs. The two studies are independent, but complementary investigations. R. Christopher Goodwin & Associates, Inc., completed the current investigation on behalf of the Departments of the Air Force and the Navy through the U.S. Army Medical Research Acquisition Activity (USAMRAA).

The armed forces faced an unprecedented family housing shortage in the years following World War II. This housing shortage strained Air Force and Navy morale and impacted personnel retention rates. The Air Force and the Navy sought to solve their housing shortages through the construction of dwellings comparable to those found in the civilian market.

Congress traditionally funded Navy construction through the Federal appropriations process. The Air Force, which was established in 1947, had no established housing program. Generally, Air Force housing stock historically was associated with Army Airfields; these assets were transferred to the Air Force after the service was created. In the first years of the postwar military housing shortage,

Congress authorized the construction of family housing but limited appropriations. Low funding levels translated to slow progress in meeting military family housing demand.

The Wherry Act and later Capehart Act were the legislative vehicles for addressing the military family housing shortage. Innovative solutions were developed involving the private sector through financial incentives administered by the Federal Housing Administration (FHA). Between 1949 and 1962, an estimated 62,475 Wherry units and 77,208 Capehart family housing units were added to the Air Force, Navy, and Marine Corps family housing inventories. The Air Force constructed a significantly larger number of units than the Navy due to the fact that it was the newest of the military services and it had the smallest number of housing units in its inventory. In fact, the Air Force constructed more Capehart units than the Army and Navy combined. The Wherry and Capehart units were augmented through the construction of an additional 6,607 housing units built through the Federal appropriations process. Table 1 summarizes Wherry and Capehart housing built between 1949 and 1962, and the current inventory.

**Table 1. Wherry and Capehart Housing Constructed between 1949 and 1962 and Current Inventory**

Service	Wherry Units		Capehart Units	
	1949-1962 Inventory	Current Inventory	1949-1962 Inventory	Current Inventory
Air Force	38,014	5,388	62,816	19,933
Navy	17,434	3,196	10,020	7,049
Marines	7,027	496	4,372	2,786

Note: See Appendices D and E for breakdowns by installation

Source: For historic inventory, see Page D-1. For current inventory, Air Force Real Property Inventory (RPI), Internet Navy Facility Assets Data Store Management System Database (iNFADS)

Implementation of the Wherry and Capehart programs was a complex process. Base Commanders provided general information to sponsors on base housing needs and were involved in the preliminary design and site selection for Wherry and Capehart era neighborhoods. Installations assumed responsibility for selecting the civilian architects and developers. The Army Corps of Engineers, in the case of the Air Force, and the Bureau of Yards and Docks, in the case of the Navy, acted as construction managers. Each service consulted with the FHA to ensure compliance with FHA guidelines, and provided project oversight applying program criteria and department policies and instructions for Wherry and Capehart proposals.

Per-unit size and cost limitations resulted in a housing stock characterized by restrained exterior design, uniformity, and standardization in plans and materials. Neighborhoods were created that were dominated by single-family and duplex dwellings and that reflected the plans of civilian housing developments in street plan, lot organization, and landscaping.

Wherry and Capehart era military housing represents a nationwide construction campaign that reflected significant changes in the peacetime military. When constructed, the Wherry and Capehart era buildings and neighborhoods reflected their era of construction through such character-defining features such as windows and doors, exterior materials, roof form and sheathing, landscaping and, amenities. Many Wherry and Capehart era neighborhoods have undergone considerable change since constructed during the 1950s and 1960s.

In accordance with the Program Comment published by the Advisory Council on Historic Preservation, the Air Force and the Navy reviewed the historic context study to identify potential properties of particular importance. Based on the analysis of the historic context, the following properties were identified as properties of particular importance within the Wherry and Capehart era due to their historical association and resource integrity:

- Three senior officer housing designed in the International Style by Richard J. Neutra located at Mountain Home Air Force Base, which represent the work of an important architect for the military under the Capehart Act, and
- The Catalina Heights neighborhood at Naval Base Ventura County as a collection of Capehart program dwellings that collectively convey the principles of postwar suburbanization adapted to a military context.

The current illustrated study is the result of an integrated program of archival research, site investigation, data analysis, and report preparation undertaken in 2005. The results of the study are presented in the following technical report.





## **2.0 INTRODUCTION AND METHODS**

### **2.1 INTRODUCTION**

The Department of the Air Force (Air Force) and the Department of the Navy (Navy) are the stewards of historic properties located on their installations. These non-renewable resources include properties associated with the historical development of the Air Force and the Navy, as well as resources important in American history and prehistory. Cultural resources include real property, personal property, records, and community resources. Historic properties are defined as those resources that possess those qualities of significance and integrity necessary for listing in the National Register of Historic Places (36 CFR 60.4 [a-d]). The Air Force and the Navy undertake ongoing programs to identify, evaluate, and manage their vast collections of cultural and historic resources in accordance with Federal laws, directives, and Air Force and Navy regulations.

As part of the Conference Committee Report to the Defense Appropriations Act for Fiscal Year 1997, Congress directed the armed services to develop strategies to reduce costs associated with the management of historic properties. The large inventory of family housing constructed under the Wherry and Capehart era programs (1949-1962) presented a unique opportunity to develop an innovative and cost-effective programmatic approach to compliance with Section 106 of the National Historic Preservation Act (NHPA) of 1966, as amended. The Air Force and the Navy developed a programmatic treatment for the management of Wherry and Capehart era housing as a class of resources that addressed both the Congressional mandate and the requirements of Section 106.

A total of 6,151 Wherry and Capehart era buildings currently are located at Navy installations, 2,665 buildings are located at Marine Corps installations, and 16,954 buildings are found at Air Force installations. This housing stock is approaching or has attained the 50-year age generally required for consideration for listing in the National Register of Historic Places, as well as consideration under Section 106 of NHPA. To take into account the effects of management activities on Wherry and Capehart era housing that might be historic, the Air Force and the Navy utilized the provisions for Program Comments contained in 36 CFR 800.14(e) of the Advisory Council on Historic Preservation's regulations. The programmatic treatment for this class of military housing includes this current study, which expands the earlier historic context prepared for the U.S. Army Environmental Center, *Housing an Army: The Wherry and Capehart Era Solutions to the Postwar Family Housing Shortage (1949-1962)*; neighborhood design guidelines; a brochure for private developers highlighting the Federal Rehabilitation Tax Credit program; and, oral interviews with past Air Force and Navy residents of Wherry and Capehart era housing.

### **2.2 PROJECT DESCRIPTION**

This report is the first phase of this proactive, programmatic approach to Wherry and Capehart era Air Force and Navy family housing. The study discusses post-World War II Air Force and Navy demographics and impacts upon family housing needs, and summarizes the broad social history of post-World War II suburbanization, housing trends, and low-cost housing programs. Legislative solutions to the housing shortage are explored in detail. The report identifies architects, contractors, and builders associated with the Wherry, Capehart, and appropriated-funds housing programs, as well as regional styles and types of buildings constructed under the programs.

Named for their sponsors in the U.S. Senate, the Wherry (1949-1956) and Capehart (1955-1962) programs addressed the severe housing shortage and substandard conditions of existing military housing endemic to active military installations at the end of World War II. A limited number of units

were constructed using funds appropriated by Congress. This housing was concurrent with the Wherry and Capehart programs. Although some units were constructed as early as 1949, the majority of family housing units constructed under this program were built in the late 1950s and early 1960s during a period of increased appropriations for military construction. During the lives of the respective programs, approximately 62,475 Wherry housing units, approximately 77,208 Capehart housing units, and approximately 6,607 appropriated-funds housing units were designed and constructed for the Air Force and the Navy.

Previous contextual studies focused on the legislative background and program implementation for these housing programs. Other investigations have been completed for resources at individual installations. The current study expands the earlier historic context, *Housing an Army: The Wherry and Capehart Era Solutions to the Postwar Family Housing Shortage (1949 – 1962)* to include data on the Air Force and the Navy. The current historic context is designed as an independent study that supplements the Army investigation.

Federal family housing policy during the immediate postwar years through the 1950s was complex. This policy included more than 30 legislative programs with differing goals and requirements (Bailey 1958:30). These housing programs included dwellings constructed under Title II and Title VI of the National Housing Act of 1934. The housing policy also included Housing and Home Finance Agency (HHFA) disposal programs. In some cases, the Navy attempted to acquire previously constructed Public Housing Administration units to address its own needs. The Air Force and the Navy also constructed trailer parks to alleviate their housing shortage.

Off-base residential neighborhoods also were built during this period for military personnel and are not currently included in the Air Force and Navy family housing inventories. These neighborhoods contain dwellings constructed under Title IX, Public Law 139. This law resulted in the construction of approximately 50,500 permanent housing units by authorizing Federal mortgage insurance to private enterprises. Dwellings constructed under Title IX were excluded historically in tabulations of military family housing due to their private ownership and because they were not restricted to military occupancy.

The current investigation focuses on Air Force and Navy housing in the active inventory of military property that was constructed under the Wherry Act and the Capehart Act, and through Federal appropriations during the period 1949–1962. Housing units constructed under other programs; defense housing, which was sold to private parties; and housing whose ownership was transferred to local governments were excluded from the current study. Current Air Force and Navy inventories identify housing units in the active inventory and do not capture units originally constructed as family housing and later converted to other uses.

## **2.3 HISTORIC CONTEXT APPROACH**

### **2.3.1 Definition of the Historic Context**

A historic context is a theoretical framework that is used to group information on related properties based on a theme, geographic area, and chronological period. *Housing an Air Force and a Navy: The Wherry and Capehart Era Solutions to the Postwar Family Housing Shortage (1949-1962)* provides a framework for assessing the relative significance of family housing constructed between 1949 and 1962 that is located at active Air Force and Navy bases. National Register Bulletin 24 *Guidelines for Local Surveys: A Basis for Preservation Planning* (National Park Service [NPS] 1985)

and Bulletin 15 *How to Apply the National Register Criteria for Evaluation* (NPS 1995) provided technical guidance in the development of the historic context.

The three elements of a historic context are time period, geographic area, and theme. This study explores the historic context defined as:

Time Period:	1949-1962
Geographic Area:	United States
Theme:	Air Force and Navy Family Housing Construction.

The time period defined for this project comprises the years 1949-1962, the active period of the Wherry and Capehart Acts. It includes events initiated under the Wherry Act and extends to events directly related to the expiration of the Capehart Act in October 1962. In addition, the study addresses dwellings constructed using military construction funds appropriated through Congress. The geographic area for this study is the United States, including the contiguous 48 states, Alaska, and Hawaii.

The themes explored in this project relate to the Air Force's and the Navy's post-World War II family housing construction program. The properties associated with these themes represent several facets of history. The research design for this project focused on developing three historic themes within the historic context:

- (1) military – changing military demographics and their relationship to the Cold War Air Force and Navy organizational structures;
- (2) social history – the relationship between Wherry and Capehart era housing and the broad trends of post-World War II suburbanization; and,
- (3) architecture – the evolution of mass-produced housing represented by the Wherry and Capehart era units and associations with prominent architects and builders.

The United States faced a severe housing shortage following World War II that included both the civilian sector and the military. Contemporary accounts recorded in the popular press and in testimony during Congressional hearings on military housing documented housing conditions. The existing inventory of on-base housing was ill-suited to meet the housing demand. Military housing was dominated by limited numbers of permanent housing and temporary quarters designed for wartime training and mobilization rather than postwar family life. The civilian rental market offered little relief for the military housing shortage. The national housing shortage inflated rents in residential markets. Often, military personnel were unable to afford decent housing and, in many cases lived in substandard housing that lacked running water, indoor plumbing, and central heat.

All branches of the military faced re-enlistment problems, in large part due to the family housing shortages and the poor condition of the few existing units. To address the shortfall, the military establishment sought legislative action to increase the number and quality of family housing units. The historic context presents a detailed discussion of the similarities and differences between the Wherry, and Capehart programs and compares Wherry and Capehart housing to housing constructed with appropriated funds. Property types are defined and designers identified. Changes and modifications to the units over time are identified and the impact upon their integrity assessed.

### **2.3.2 Property Types**

A property type is a group of individual properties that share physical or character-defining features. Property types provide the link between history and real property. Several types of housing were constructed under the Wherry and Capehart programs and with appropriated funds to alleviate the military housing shortage. The types include:

Single-family detached dwellings,  
Duplexes, and  
Multi-family buildings comprising three, four, five, six, or eight units.

The Wherry and Capehart Acts resulted in the construction of family housing on a scale previously unseen at Air Force and Navy bases. The programs also incorporated urban planning principles and design philosophies from the 1950s in an effort to provide military housing comparable to civilian housing of the period.

## **2.4 METHODOLOGY**

Four primary tasks were completed during the course of the current study. These tasks were archival research, field investigation, data synthesis, and report preparation. Data were collected and analyzed to identify trends in post-World War II suburbanization, to identify Air Force and Navy family housing policies and programs, to identify post-World War II Air Force and Navy demographics, and to identify architects, contractors, and builders associated with the three housing programs.

### **2.4.1 Archival Research**

Previous studies on Wherry and Capehart era housing were reviewed. Those studies included *“For Want of a Home...” A Historic Context for Wherry and Capehart Military Family Housing* (U.S. Army Environmental Center 1996) and *Housing an Army: The Wherry and Capehart Era Solutions to the Postwar Family Housing Shortage (1949-1962)* (U.S. Army Environmental Center 2003). These reports, which discussed the legislative histories of the two programs and the design of the units, provided the springboard for the current expanded study. In addition, cultural resources surveys completed for the Naval Facilities Engineering Command Engineering Field Division South provided background data and housing conditions at several Navy installations.

A comprehensive literature search of secondary sources uncovered broad themes in postwar suburbanization and Federal housing policy. Researchers consulted resources on changing civilian and military demographics. In addition, resources on contemporary house design and trends were identified and synthesized. The resources consulted yielded information on the numerous reasons for suburbanization and provided detailed analyses of housing policy. Published primary sources reviewed included Congressional reports, hearings, and government documents. The Congressional reports and hearings provided discussions on legislation, as well as statistics on the shortage of family housing units and the number of units constructed. Statistical data obtained from the United States Census Bureau provided information on population and housing trends. Repositories consulted during general data collection included the Library of Congress, Washington, D.C.; the University of Maryland Library, College Park, Maryland; and the Navy Library, Washington, D.C.

Primary sources were reviewed at the National Archives and Records Administration, College Park, Maryland; the Naval Facilities Engineering Command Archives, Port Hueneme, California; and Headquarters, Air Force Housing Office, Crystal City, Virginia.

The collections of the National Archives included the files of key agencies, and provided access to program memos and data collected for Congressional reports and hearings. Cartographic records and still-picture records of the National Archives also were reviewed. The following Record Groups at the National Archives were reviewed:

- 52 – (Navy) Bureau of Medicine and Surgery
- 71 – Bureau of Yards and Docks
- 80 – Department of the Navy (1804-1958)
- 127 – Marine Corps
- 207 – Department of Housing and Urban Development
- 340 – Office of the Secretary of the Air Force
- 341 – Headquarters U.S. Air Force (Air Staff)
- 342 – U.S. Air Force Commands, Activities, and Organizations
- 385 – Naval Facilities Engineering Command
- 428 – Department of the Navy (1941-1981)

Information on Navy projects was obtained from archival files at the Naval Facilities Engineering Command Archives at Port Hueneme. This archives contained base-specific files of architect-engineer and construction contracts and information on the composition and status of projects; general files organized by topic that provided broad information on the Navy Wherry, Capehart, and appropriated-funds programs; photos; and, drawings.

Information on architects and contractors associated with the Air Force Capehart program was obtained from the Progress Reports for Capehart Housing Projects. Each service was required to complete a report for each Capehart project at each installation. The reports included data on the architect and engineering firm, the contractor, the number of units, the completion date, the overall number of units constructed, the number of units constructed by rank and number of bedrooms, and a general description of the materials. The Air Force Progress Reports were obtained from Headquarters, Air Force Housing. A limited number of Progress Reports were found for the Navy and none were found for the Marine Corps. The historical record on Wherry architects and contractors is thin for both services. The lack of archival data suggests the Wherry program was more decentralized than the Capehart program. The number of identified architects associated with the Wherry program was significantly less. Research on the architects involved in the housing programs was conducted at the American Institute of Architects library in Washington, D.C.

#### 2.4.1.1 Research Challenges

The large number and nationwide distribution of Wherry and Capehart era housing presented unique research challenges. Properties from the recent past frequently lack the body of established scholarship associated with older resources. Although the housing programs were national in scope, their decentralized nature resulted in decentralized records. Wherry and Capehart era projects were administered at the installation and regional levels, with the Army Corps of Engineers and the Bureau of Yards and Docks acting as project managers. Although other agencies were involved with project design, the local nature of the projects and the types of records produced suggested that installations kept the data. A review of retention policies indicated that agencies did not retain project-specific

documentation. Data related to program policies were not retained once new policies were developed. Contracts for many individual Navy projects and several Marine Corps projects were retained by the Navy and are housed at the Naval Facilities Engineering Command Archives, but similar data was unavailable for Air Force projects. In many cases, plans, specifications, and contract documents for individual housing projects were not forwarded for archiving on a national level. Each service retained different types of data; what was available for the Navy was not necessarily available for the Air Force.

Data were scattered throughout a number of repositories, including the National Archives and Records Administration; the Library of Congress; the Naval Engineering Facilities Command Archives; Headquarters, Air Force Housing Office; the Navy Library; and, the University of Maryland. Site-specific data was gathered from the housing and real property offices at individual Navy and Air Force bases. Other repositories that might have provided information but were not consulted include the Navy operational archives, which was closed during the research phase, and the National Museum of the Marine Corps, scheduled to open in late 2006.

Another research challenge in preparing this expanded historic context was to provide data on the Air Force and Navy including a discussion on changing military demographics in relation to Air Force and Navy family housing policy. Archival research was undertaken to compile data on the number of married Air Force and Navy officers and enlisted personnel, number of dependents, and general statistical data. The Air Force and Navy compiled little data on military families during the period.

The lack of data on military families has challenged researchers for a number of years. In his 1970 study on enlisted men, Charles Moskos stated “(T)he military family is a most under-researched topic” (Moskos 1970:68). Sociologists studying military families also noted the recent development of the field. Contemporary Air Force memoranda express similar difficulty in obtaining statistics on demographics. As one memorandum stated, the “Air Force Finance Center was asked for statistical data but advised that it was not readily available” (Clark 1961:1).

Only recently has the military family been identified as a meaningful area of research and investigation. This change in perception has arisen largely because of a growing concern and interest by the military community “... as to the effect of the military on the family, and likewise, the effect of the family on the military. Owing to the relative novelty of the topic, research on the military family has suffered from *nonproliferation of reports, difficulty in locating existing reports, and the subsequent isolation of existing reports from the general public*” [emphasis added] (McCubbin et al 1976:320). Research on Navy and Air Force demographics lagged behind that of the Army. When researchers began exploring military demographics, they began with the largest military service: the Army.

Until the late 1970s, research on military families focused on clinical services for families or on families with special needs (Segal 1986:185). Since the late 1970s, the military, the media, and social scientists have paid increasing attention to the study of military families as a broad topic (Segal 1986:185-186). It was not until the early 1970s that the Navy began to seriously study the military family. Although the Navy studied the effects on families of returning prisoners of war, the agency, Family Studies Branch, eventually expanded to include other studies on the Navy family. The Air Force undertook a service-wide study on the family in 1979.

The armed services did not focus on the military family or develop policies or services relevant to military families until the 1980s. The Department of Defense did not establish an office to address family policy until 1986. The office evolved and became the Department of Defense Office of

Family Policy, Support and Services in 1988. Its duties were expanded to include family policy, family advocacy, and military family resource centers (Brown 1993:166). Marine Corps Family Service Centers were established in 1980, and Air Force Family Support Centers were established in 1981. The Navy established Family Service Centers during the early 1980s. These centers provided all manner of social and mental health services for members of the military and their families.

The limited information available on Air Force and Navy demographics was obtained from marriage statistics provided during testimony at Congressional hearings, and in Department of Defense reports on family housing. Limited statistics and overall historical information on women in the armed forces were provided by non-military sources, such as the Women in Military Service for America Memorial Foundation.

## **2.4.2 Field Investigation**

Field visits to five Air Force, Navy, and Marine Corps installations with inventories of Wherry, Capehart, and appropriated-funds housing provided architectural data for the current study. Criteria for site selection were developed in consultation with the Departments of the Navy and the Air Force. A list of active bases with Wherry and Capehart era housing generated by the Air Force's Real Property Inventory Database and the Navy's and Marine Corps' Internet Navy Facility Assets Data Store Management System database provided the basis for selecting the installations. Several criteria were applied to the list to determine the best representative of Wherry and Capehart era neighborhoods. Sites were selected to represent geographic diversity and bases whose housing stock was not privatized by October 2005. In addition, site selection criteria considered the number of types (Wherry, Capehart, or appropriated funds) and diversity of units (i.e. one-, two-, or three-bedroom units); style and association with important architects or designers; ability to demonstrate post-World War II planning principles and suburbanization themes; and, ability to represent post-World War II housing trends.

Field investigations included reviews of on-base historic records and on-site architectural surveys. Building exteriors and interiors were inspected to document different housing types, character-defining features, interior plans, construction materials, and architectural design common to this class of housing. In addition, neighborhood layouts and landscape elements were surveyed. Based on the Air Force, Navy, and Marine Corps databases, the five sites for case studies selected in consultation with the Departments of the Air Force and the Navy, were:

- Naval Base Ventura County (NBVC), California (Naval Aviation Shore Command);
- Naval Support Activity (NSA) Mid-South, Tennessee (Command Navy Region Southeast);
- Marine Corps Air Station (MCAS) Cherry Point, North Carolina (Commander Marine Corps Air Bases East);
- Mountain Home Air Force Base (AFB), Idaho (Air Combat Command); and,
- Travis AFB, California (Air Mobility Command).

In addition to architectural surveys, installation-level investigations included on-site research. Data reviewed at the five installations included original architectural drawings, original floor plans, real property cards that tracked changes over time, and statistics detailing the number of units originally constructed versus the number of units extant. In addition, installation personnel knowledgeable about the housing provided valuable information. The results of these investigations were incorporated into the historic context and the case studies in Appendix A of this document.

### **2.4.3 Data Synthesis and Analysis**

The Secretary of the Interior's Standards for Historic Preservation and technical guidance developed by the National Register Program, the National Park Service, and the Departments of the Navy and the Air Force were consulted in the development of the historic context. An analysis of archival research and field data provided the framework developed for the context. The study developed the historical themes of suburbanization, military history, and public policy as well as identified housing types related to the housing programs. An examination of postwar housing and important architects associated with the housing programs developed the theme of architecture.

## **2.5 REPORT ORGANIZATION**

### **2.5.1 Report Organization**

The current illustrated study is the result of an integrated program of archival research, site investigation, data analysis, and report preparation undertaken in 2005. The results of the study are presented in the following technical report, which is organized into the following chapters.

- Chapter 2, *Introduction and Methods*, details project objectives and methodology.
- Chapter 3, *The Problem*, presents the family housing challenge faced by the Air Force and the Navy in the postwar years. This chapter also provides a brief overview of the broad changes in postwar civilian culture and housing that influenced the development of comparable military housing. Finally, government policies and programs affecting civilian housing patterns in the postwar period are explored.
- Chapter 4, *Legislative Remedy: Wherry and Capehart Acts*, presents a discussion of the enactment and implementation of the Wherry and Capehart Acts.
- Chapter 5, *Housing Constructed under Military Construction, Air Force and Military Construction, Navy*, presents a discussion of Air Force and Navy housing construction funded through Federal appropriations.
- Chapter 6, *The Solution: Wherry, Capehart, and Appropriated-Funds Housing*, discusses the design criteria adopted for Wherry, Capehart, and appropriated-funds housing.. The designs of the resulting neighborhoods and dwellings are analyzed.
- Conclusions and recommendations are presented in Chapter 7.



Thirteen technical appendices support the narrative report.

- Summarized site reports for five installations containing Wherry, Capehart, and appropriated-funds housing are contained in Appendix A.
- Architects and sponsors identified for Wherry, Capehart, and appropriated-funds housing projects are found in Appendices B and C.
- A comprehensive list of Air Force and Navy Wherry, Capehart, and appropriated-funds housing projects by installation is contained in Appendix D.
- A comprehensive list of Wherry, Capehart, and appropriated-funds housing in the current Air Force and Navy inventories is provided in Appendix E.
- A analysis of case studies to determine properties of particular importance and recommendations for properties of particular importance are included in Appendices F and G.
- A list of Federal Housing Administration square footages by building type is included in Appendix H.
- Federal housing legislation related to Wherry and Capehart era housing is provided in Appendix I.
- A glossary of key terms is included in Appendix J.
- A List of Acronyms is included as Appendix K.
- Oral history interviews with former residents of Wherry and Capehart housing are provided in Appendix L.
- Resumes of project personnel appear in Appendix M.



## **3.0 THE PROBLEM**

### **3.1 SUMMARY**

Following World War II, world political conditions mandated that the United States maintain a large active-duty military comprising highly trained personnel. All branches of the military invested substantially in training and recognized the advantages of personnel retention. Military family housing conditions and shortages in the postwar years affected morale and force retention. Military officials sought to encourage long-term commitments to military service by improving military family housing to levels comparable to those found in the private sector (U.S. Senate 1954:26-7).

Several factors contributed to the housing problem. In the postwar period, the military revised its housing policies, entitling enlisted personnel to family housing. The standing military was larger than during earlier periods of peace, and greater numbers of enlisted personnel were accompanied by dependents. As a result, military families competed for a limited number of living quarters.

In addition, much of the military's housing stock consisted of deteriorating temporary housing that had been built to support rapid military mobilization during the war years. Military spending in the immediate postwar period focused on reorganization and readiness, not on the construction of family housing. Finally, nationwide economic prosperity created higher national living standards and released a pent-up demand for housing dating from the Depression and World War II. The resulting civilian housing shortage gave military families few options for economical and convenient rental housing. Military housing development comparable to that found in the private sector was one tool for retaining quality personnel (U.S. Army Environmental Center [USAEC] 2003:3-1). The Air Force and the Navy drew upon a successful history of family housing for officers, but faced the added challenge of providing family housing on a large scale to enlisted personnel (USAEC 2003:3-1).

The following explores the factors contributing to the Air Force and Navy housing crisis. The discussion provides overviews of the postwar Air Force and Navy, military family housing policies, housing trends in the civilian market that influenced military family housing, and government policies that influenced housing construction during the postwar period.

## **3.2 THE POSTWAR AIR FORCE AND NAVY**

### **3.2.1 Introduction**

The United States armed forces dramatically expanded in size when compared to pre-World War II levels. The adversarial relationship between the Soviet Union and Western allies evolved into the prolonged tensions of the Cold War period (USAEC 2003:3-2). Previously isolationist, U.S. foreign policy shifted focus to deterring worldwide Communist expansion. The military services developed new technologies, including nuclear weapons, to counter this threat. The Air Force, with its air delivery power, was essential to this strategy. The Navy expanded its worldwide presence and developed new conventional and nuclear capabilities (USAEC 1997:16, 23; Isenberg 1993:134).

In order to attract and to retain the skilled military professionals necessary to support foreign policy, the Department of Defense recognized the need to revise its restrictive policies on married personnel and to provide more family housing. Both the Air Force and Navy faced massive housing shortages, and neither service immediately received funding to alleviate the problem in a meaningful way through traditional military construction procedures. As a result, both services relied on

temporary World War II-era buildings. Congress soon began to address the housing shortage through legislation.

### **3.2.2 Post-World War II Foreign Policy**

The United States pursued an expanded role in international policy after World War II, as relations deteriorated with the Soviet Union, one of the four allied powers during the war. Communist governments assumed power in Poland, Hungary, Bulgaria, Romania, and Czechoslovakia. In a well-known 1946 speech in Fulton, Missouri, Great Britain's Prime Minister, Winston Churchill, declared that the Soviets were lowering an "Iron Curtain" across Europe. Following these developments, American foreign policy shifted focus to deterring Communist expansion. In April 1949, the United States, Canada, and ten western European nations formed the North Atlantic Treaty Organization (NATO) as part of a pact to provide mutual defense. Meanwhile, the Soviet Union formed the Warsaw Pact of Communist-controlled nations. These new military obligations required quick mobilization and an ongoing military presence in friendly foreign nations (USAEC 2003:3-2; USAEC 1997:15-20). The United States also addressed national defense. Earlier in its history, the United States had relied on the country's isolation between two oceans for protection from foreign aggression, but potential adversaries now could attack the country by air.

Despite this threat, both the Truman and the Eisenhower administrations favored fiscal austerity in U.S. military budgets. The United States and the Soviet Union both possessed the technology for nuclear weapons. The United States deployed atomic bombs over Hiroshima and Nagasaki at the end of World War II, while the Soviet Union successfully detonated an atomic bomb in September 1949. U.S. foreign policy emphasized containing Communist expansion through the threat of nuclear retaliation. Eisenhower's approach was called the "New Look" policy. For budgetary as well as strategic reasons, the New Look policy increased reliance on air power for both weapons delivery and domestic defense, and decreased reliance on more expensive conventional ground forces (USAEC 2003:3-2; USAEC 1997:16, 19, 23).

### **3.2.3 Armed Forces Reorganization and Weapons and Doctrine Development**

The National Security Act of 1947 consolidated the Army, Navy, and newly independent Air Force under the National Military Establishment headed by the Secretary of Defense. Each of the three branches was led by a civilian secretary who reported to the Secretary of Defense. Amendments to the National Security Act in 1949 changed the name of the National Military Establishment to the Department of Defense. Previously, the Army and the Navy operated autonomously from each other. The Army operated the air branch. The Navy had its own department. The Marines had some autonomy from the Navy. The postwar consolidation allowed the military to marshal its resources holistically toward confronting the nuclear threat (USAEC 1997:19; USAEC 2003:3-2, 3-3).

The need to address the postwar nuclear threat and to respond to global defense influenced weapons development and doctrines in both the Air Force and the Navy. The Air Force emerged as the primary military branch responsible for the delivery of nuclear weapons and defense of the nation. The Navy expanded its global presence to provide conventional military support, while also developing technologies that would enable it to respond to a nuclear threat.

The Truman and Eisenhower presidential administrations endorsed increased funding for the Air Force, particularly for long-range strategic bombers (USAEC 1997:16). Eisenhower also favored funding for missile development for the Air Force's Intercontinental Ballistic Missiles (ICBMs) and

the Navy's Submarine Launched Ballistic Missiles (SLBMs) (USAEC 1997:23). Supercarriers were developed that were large enough to support aircraft that carried nuclear weapons (Isenberg 1993:342).

Navy planners envisioned an offensive strategy combining submarine warfare and aerial bombardment, via aircraft carrier, of Russian airfields, depots, factories, shipyards, and bases (Isenberg 1993:130-1). The strategy also maintained an ongoing Naval presence in areas of the world, such as the Mediterranean, where tensions existed between Communist-allied and western-allied groups (Isenberg 1993:134).

### **3.2.4 Postwar Military Budgets**

Although higher than pre-World War II levels, military spending was reduced drastically after the war. President Eisenhower was noted for his fiscal conservatism. When he became president in 1953, Eisenhower cut the previous administration's \$50 billion annual military budget to \$40 billion, and maintained this level until he left office in 1961 (Isenberg 1963:573). The Air Force, however, received the majority of this funding because of its primary role in addressing the nuclear threat (USAEC 2003:3-3).

Cost-cutting affected the Army more than the Navy, but the Navy struggled to identify its postwar funding requirements as it worked to redefine its mission (Isenberg 1993:81-2). The Navy maintained a global presence, but "around the world, the fleet operated on a relative shoestring, with a true worldwide strategic role seemingly denied by the Air Force and its atomic bomb" (Isenberg 1993:141). In mid-1949, the Navy's global presence included two cruisers, one destroyer squadron, and one small amphibious assault group in the western Pacific; a cruiser and four destroyers supporting the occupation of Japan and Korea; and a carrier, four cruisers, and one or two destroyer squadrons in the Mediterranean.

### **3.2.5 Size of the Air Force and the Navy**

While the size of the armed forces was reduced during the immediate postwar period, personnel numbers were consistently high during the Cold War (USAEC 2003:3-4). The size of the military was reduced from more than 10.7 million personnel in 1945 to approximately 1.3 million in 1947. The personnel level of more than 2 million during the 1950s and 1960s was higher than any peacetime military in U.S. history (U.S. Department of Defense 2004:41). Strength levels further peaked in response to military mobilization during such military actions as Korea and Vietnam.

In 1949, Air Force strength totaled 418,000 (U.S. Senate 1949b:74). Air Force size nearly doubled in 1951, to 788,381, and totaled nearly 1 million by 1955. While the size of the Air Force declined through 1960, the service was close in size to the Army, the branch with the most personnel (U.S. Department of Defense Directorate for Information Operations and Reports n.d.). This personnel strength reflected the Air Force's central role in the U.S. policy to contain Communism through nuclear deterrence.

The size of the Navy was 451,276 in 1949, approximately 20 per cent of its strength in 1946. Following a peak of 824,265 in 1952 during the Korean Conflict, the Navy's strength declined steadily through the 1950s. In 1962, Navy strength was 655,964, and increased throughout the decade (Naval Historical Center 1997). The size of the Marine Corps dropped from 93,053 in 1947 to 74,279 in 1950 (U.S. Marine Corps History and Museums Division 2005). In response to the Korean Conflict, Marine

**Table 2. Army Air Forces, Navy, and Marine Corps Personnel Strength 1935-1945**

Fiscal Year	Army Air Forces*	Navy	Marine Corps
1935	15,945	95,053	17,260
1936	16,863	106,292	17,248
1937	18,572	113,617	18,223
1938	20,196	119,088	18,356
1939	22,387	125,202	19,432
1940	51,185	215,273	28,345
1941	152,125	383,150	54,539
1942	764,415	1,259,167	142,613
1943	2,197,114	2,381,116	308,523
1944	2,372,292	3,201,755	475,604
1945	2,282,259	3,405,525	474,680

\*The Army Air Forces, located within the Army, was the predecessor to the independent Air Force created in 1947

Source: [www.usaaf.net](http://www.usaaf.net), Naval Historical Center, United States Marine Corps History and Museums Division

**Table 3. Air Force, Navy, and Marine Corps Personnel Strength 1950-1962**

Fiscal Year	Air Force	Navy	Marine Corps
1950	411,277	380,739	74,279
1951	788,381	736,596	192,620
1952	983,261	824,265	231,967
1953	977,593	794,440	249,219
1954	947,918	725,720	223,868
1955	959,946	660,695	205,170
1956	909,958	669,925	200,780
1957	919,835	676,071	200,861
1958	871,156	639,942	189,495
1959	840,435	625,661	175,571
1960	814,752	616,987	170,621
1961	821,151	626,223	176,909
1962	884,025	664,212	190,962

Source: United States Department of Defense, Directorate for Information Operations and Reports

Corps strength was increased. The USMC grew to 192,920 in 1951 and reached a wartime peak of 249,219 in 1953. Staffing levels declined through 1960, only to rise again during that decade in response to the conflict in Vietnam (U.S. Marine Corps History and Museums Division 2005).

### **3.2.6 Air Force and Navy Family Housing Policies**

The Department of Defense recognized the need to provide family housing to a large active-duty military force. Trained, skilled professionals were required to develop and operate military weapons and technology of increased complexity and sophistication. The military competed with private-sector industry to retain highly trained personnel. The military recognized that poor housing conditions were a deterrent to personnel retention and worked to correct these conditions as an inducement to re-enlistment. Most officers and upper-grade enlisted personnel were married and accompanied by dependents, a drastic change from military life in the pre-World War II period. Surveys completed by departing personnel indicated that the lack of adequate family housing was a

primary reason for separating from the service. Departure rates were highest among the most highly skilled personnel (Office of the Secretary of Defense 1961:1-2).

Providing family housing to large numbers of personnel represented a change from family housing policies before World War II. The Army, the home service for many aviators prior to the establishment of the Air Force in 1947, “historically provided officer family housing on permanent installations but did not extend family housing to lower-ranking enlisted personnel” (USAEC 2003:3-5). Indeed, before 1940, enlisted men were discouraged from marrying (USAEC 2003:3-5).

The Navy began to assign ships to home ports in 1905 and added amenities to shipyards to support sailors and their families (Department of Defense 2004:18). Family housing was not, however, extended to enlisted men. After World War II, the Navy extended family housing to all officers and enlisted men assigned to isolated stations, and to key officers and enlisted men at other stations. On 16 September 1948, the Acting Secretary of the Navy directed that annual public works programs identify the family housing needed to implement this policy (Phillips 1948:1-2, 4-5).

### **3.2.7 Historical Overview of Policies on Marriage, Family, and Social Services**

Historically, the armed forces did not accommodate married enlisted personnel or provide services to their families. Married personnel accompanied by families usually were officers; enlisted men did not serve accompanied by wives or children (USAEC 2003:3-5, 3-6).

In the nineteenth-century Navy, both officers and enlisted men primarily lived aboard ships, even while in port. These accommodations did not afford room for families (Fairbanks and Lovelace 1956:18-19).

Formal family support services for enlisted personnel were not available on Army installations in the early twentieth century during the period when the Army developed its first aviation divisions. Schools were not incorporated into installation designs, and military benefits, such as rations and medical care, were not extended to the families of enlisted men (USAEC 2003:3-6).

During World War II, Army policies changed as married people enlisted or were drafted. Nevertheless, military families received minimal support. Before the 1942 Army Emergency Relief Program, Army families facing crises arising from the upheaval of rapid mobilization were addressed informally (USAEC 2003:3-6). Sailors were willing to endure long periods of separation from their families to support the war effort (Zumwalt 1978). After the war, many sailors left the Navy and re-enlistment rates dropped (Zumwalt 1978). Re-enlistment rates rose when personnel were granted two months leave immediately after the war ended (Zumwalt 1978). Admiral Elmo Zumwalt Jr. observed that during peace, many military personnel expressed anger and frustration over limited time spent with their families (Zumwalt 1978).

Candidates for first enlistments in the Navy could not be married, and Navy nurses were unmarried women (Greenleaf and Zeran 1942:16, 20). Single or married men could volunteer for the Army Air Forces as air or ground crew aviation cadets, but these officer candidates were required to submit a signed statement confirming that their dependents had means of support (Greenleaf and Zeran 1942:12, 13). Aviation students, who served as enlisted personnel, could enlist only if they were single, while married enlisted technicians were accepted (Greenleaf and Zeran 1942:14, 15).

During the early 1950s, the ratio of time at sea to time on shore for Navy personnel favored sea assignment. For example, a radarman served 13.6 years at sea for every year of shore duty and machinist mates served 18 years at sea to every two-year tour of shore duty (Zumwalt 1978).

In a 1977 speech delivered at a conference on military family research, Admiral Zumwalt attributed the postwar emphasis on family time to the influence of military wives (Zumwalt 1978). Historically, wife and children were secondary to commitments to the armed services (Kaslow and Ridenour 1984:xiii). Women who married military officers agreed “to become part of the service way of life that revolves around and flows from the man’s military obligations and relationships” (Kaslow and Ridenour 1984:xiii).

By the late 1960s, “many more wives than in the earlier years were not going to put up with the continual moving around” that disrupted careers and undermined family and community ties (Zumwalt 1978). Many military spouses contributed to the support of their families and were reluctant to derail careers and uproot children to move to another base. Postwar military working spouses were asked to make greater personal and financial sacrifices than the historical military wife who did not work outside the home (Zumwalt 1978). Those who made the sacrifice “were finding themselves increasingly less enchanted with military careers of their husbands” (Zumwalt 1978). This disenchantment influenced requests for extended shore duty and requests for reassignment (Zumwalt 1978).

The end of the military service draft and the establishment of the all-volunteer military in 1973 forced a re-evaluation of the role of dependents. In order to attract and retain qualified personnel, the military was forced to respond to the needs of military families (Kupchella 1993:242). The military competed with the private sector for qualified, highly trained personnel (Kupchella 1993:242). Changes included expanding career opportunities for women, relaxing policies on women’s dependents, and developing more family-oriented programs, such as day-care centers, youth programs, and family advocacy (Kupchella 1993:242).

In 1972, the Navy established a research office to collect research data and to provide rehabilitation and medical care to former prisoners of war and their families. The Family Studies Branch within the Center for Prisoner of War Studies was established to provide assistance to these families (Brown 1978). The Navy convened the first Navy-wide conference on the family in 1978 (Brown 1993:165). The Navy’s first Family Service Center opened at Norfolk Naval Base in 1980 (Brown 1993:165).

*The Families in Blue*, published in 1980, presented the results of a service-wide survey of family life in the Air Force (Brown 1993:165). In spring 1980, the Air Force created the Air Force Office of Family Matters, which sponsored the first Air Force Conference on Families in September 1980 (Brown 1993:165). The first Family Support Center program was established in July 1981 (Brown 1993:165).

### **3.2.8 Postwar Marriage Rates and Demographics**

During the 1950s, the Air Force and the Navy shifted from services staffed predominantly by single men to services staffed predominantly by married personnel accompanied by dependents. In 1955, 85 per cent of Air Force officers and 80 per cent of Navy officers were married (Secretary of Defense 1961:22). The Navy figure represented a dramatic increase over the 1920s, when one in four officers was married. The shift prompted Assistant Secretary of the Navy Albert Pratt to describe the Navy as a “married Navy” (U.S. Senate 1957:1). In addition, the average age at which officers



married declined. Before World War II, Naval officers' average age at marriage was 26; after the war, it was 22 (U.S. Senate 1957:1).

The number of married Air Force enlisted men doubled during the late 1950s, from 20 per cent in 1955 to 40 per cent in 1961. Twenty per cent of enlisted Navy men were married in 1955, while 32 per cent were married in 1961 (Secretary of Defense 1961:22).

Women represented another demographic group in the military of the 1950s. Both the number of women and role that they served in the military had grown steadily during the first half of the twentieth century. Nearly 400,000 women served in the armed forces during World War II, more than the entire male troop strength in 1939 (Women in Military Service for America Memorial Foundation, Inc. n.d.). Women were poised to play a significant and expanded role in the military after the war. The Women's Armed Services Integration Act of 1948 permitted women to serve in all military branches (Women in Military Service for America Memorial Foundation, Inc. n.d.).

However, the cultural norms of the 1950s limited the opportunities available to women. The Integration Act established quotas and limited the number of enlisted women to two per cent of total enlisted strength; female officers further were restricted in number to ten per cent of enlisted female personnel strength. Female officers were prohibited from advancing above the rank of Lieutenant Colonel in the Army and Air Force or above Commander in the Navy (Burrelli 1996:3). In 1951, Executive Order 10240 authorized the armed forces to discharge women who became pregnant, gave birth, or became a parent through adoption (U.S. House of Representatives 2002). "(T)he military offered women far more restrictive opportunities than in World War II. During the 1950s, opportunities for any but traditional job assignments declined significantly. More than half the women worked in 'pink collar' positions such as personnel and administration, and their basic training included stereotypical 'women's' classes such as makeup and etiquette lessons" (Women in Military Service for America Memorial Foundation, Inc. n.d.).

Congress did not redress gender-based limits in the military until 1967, when it repealed the two per cent quota on female enlisted strength. The minimum enlistment age without parental consent was equalized with men in 1974. Women were admitted to the three major service academies in 1976. Other changes made between 1978 and 1994 removed restrictions on duty assignments in the Navy and the Air Force (Burrelli 1996:3).

The armed services did not compile demographic data on personnel and their families during the postwar period. Researchers conducting research on military families as late as the 1990s lamented the lack of demographic data on the armed services. One researcher noted that "there are no DoD-wide standard sources currently available to accurately describe demographic characteristics of military members and their families" (Kupchella 1993:243). The methodologies used to compile the limited available data often conflicted. For example, some studies defined a single parent as a parent with a cohabitating minor dependent, while other defined a single parent as a service member who paid child support (Kupchella 1993:243). The Army, as the armed forces' largest service, was the first to develop a family demographics system in 1990 (Kupchella 1993:243). By the late twentieth century, the military evolved from a predominately single, white male force to a military reflecting cultural diversity in its personnel and dependents (Kupchella 1993:244).

### **3.2.9 Postwar Air Force and Navy Housing Conditions**

In the postwar period, family housing competed for Federal dollars with other operational priorities in military budgets. In a 1951 report on substandard housing and rent gouging, Secretary of

Defense Robert Lovett noted that “the competing demands for operational facilities, for armament, and for other items have usually found high positions in priority, with the result that funds for housing have been relatively meager” (Gilpatric 1951:2-3). The Air Force determined that a total of 121,000 family housing units were needed in 1949. Only 17,954 units were included in the Air Force inventory and 36 per cent, or 6,397 of these units, were substandard. Housing construction did not keep pace with need. The Air Force built 4,318 houses in 1947, none in 1948, and 907 in 1949 (U.S. House of Representatives 1949a:8). A 1951 survey of off-base housing availability near 135 major U.S. Air Force bases found reasonably priced family housing available in sufficient numbers near 12 bases. Near 75 bases, there was either no family housing or extremely limited, expensive housing. Personnel assigned to these bases were advised against bringing their families. At the remaining 48 bases, reasonably priced family housing was limited (U.S. Senate 1951:32-34).

The situation was similar for the Navy. In 1951, 44,000 shore-based Navy personnel required family housing. At that time, the Navy controlled 39,842 temporary low-cost rental units consisting of defense housing, Quonset huts, and trailers. Fourteen thousand of the Navy’s low-cost rental units were substandard. The Navy also needed additional family housing at home ports for families of Naval personnel stationed at sea (U.S. House of Representatives 1949:13).

The acute housing shortage forced Air Force and Navy personnel to rent substandard housing at exorbitant rents. Personnel could not be assigned to bases and activities without housing, thus affecting the mission. As late as 1951, the housing shortage in Wichita, Kansas was so acute that production of the new B-47 bomber was “seriously delayed” (Gilpatric 1951:5). The Wichita Area Labor-Management Committee and the Kansas City Regional Defense Mobilization Committee requested that the military take immediate action to build several thousand housing units (Gilpatric 1951:5). A Rear Admiral testified to a Senate committee in 1949 that Naval personnel “are occupying accommodations far below acceptable standards – in trailers, tourist cabins, and so forth” (U.S. Senate 1949b:49).

In an Air Force survey conducted in September 1948, 59 per cent of married men reported they intended to re-enlist; positive responses rose to 79 per cent of respondents queried on whether housing would influence their re-enlistment decisions (U.S. Senate 1949b:64). One reason cited for the Navy’s housing crisis was the discrepancy between private sector rents and rents enlisted men could afford (U.S. Senate 1949b:54).

The Department of Defense advocated the passage of Federal rent-control legislation to protect service members and defense workers. Under amendments to the Defense Production Act of 1950, the Secretary of Defense and the Director of Defense Mobilization were charged with identifying critical defense housing areas appropriate for government rent controls (Gilpatric 1951:3). During 1951, the services worked with the Federal Office of Rent Stabilization and other Federal agencies to encourage property owners in such communities to provide military family housing. They encouraged property owners to use loans guaranteed through the Federal Housing Administration (FHA) to rehabilitate substandard or vacant housing and to convert large houses or non-residential buildings to multi-family residential use.

Property owners were assisted in determining fair and reasonable rental rates (U.S. Senate 1951:35-38). In 1950, the Navy increased the amount of off-base family housing available for rent near the Camp Lejeune Marine Corps base, in North Carolina, by publicizing its housing need through radio and newspaper announcements, speeches to civic organizations, and notifications to real estate agents and local government officials. Within 30 days, 623 vacancies were located (U.S. Senate 1951:90-91).

### 3.2.9.1 Postwar Housing Conditions in Alaska

During the early postwar period, Alaska was considered a strategic location “in the first line of national defense” (“Development Program of the Alaskan Command” 1949:3). However, Alaska installations consisted mostly of temporary World War II buildings erected to support the wartime mission as layover or launching points. Existing infrastructure could not accommodate the proposed deployment of larger numbers of personnel (“Development Program of the Alaskan Command” 1949:3). Housing shortages in Alaska were particularly acute. Little housing was available on base, and the nearby small towns were unable to provide rental units. In 1948, Ladd AFB, near Fairbanks, had a housing inventory of 133 housing units for 869 families of officers and enlisted men. In addition, 24 units were available for 417 civilian families (Goodyear 1948:1). At Eielson AFB, approximately 25 miles south of Fairbanks, 1,206 family quarters were needed in 1949; none were available. Projections for 1950 and 1951 forecasted that approved construction would reduce the shortage by 241 units (“Construction Plans, Alaskan Command” 1949:4). At the three bases comprising the Alaskan Air Command, the family housing shortage for 1952 was projected at 4,664 units (“Staff Study” 1949:2).

Little housing was available off-base in surrounding towns. Landlords charged exorbitant rates for limited, low-quality housing. For example, in Fairbanks, outside Ladd AFB, a Second Lieutenant and his family rented two rooms of a log cabin for \$150 per month, a price that did not include access to water or a bathroom. Often, multiple families shared houses, with common kitchens and bathrooms. Non-residential buildings and structures, such as Quonset huts and GI vehicle crates, were adapted for housing. In addition to excessive rents, landlords also imposed such terms as advance rental payments and curfews (Goodyear 1948:1-11).

High construction costs contributed to the state’s housing deficit. Building materials cost 200 to 500 per cent more than in the continental United States (Goodyear 1948:1-11). Utilities, such as water, sewer, and electricity, were not widely available, but were a requisite to new housing. Severe weather conditions necessitated the installation of equipment to heat water and sewer lines to prevent freezing (Cone 1949:1).

The lack of adequate family housing affected military readiness. The housing shortage affected morale as military family members were separated from one another. These effects were noted by the chaplains of Ladd AFB in their support for the installation of 100 trailers on the base in 1948. Wing Chaplain William E. Powers wrote: “This separation of husbands from wives and fathers from their children is beginning to eat cancer-like into the fiber of the foundation of our nation — the home” (Powers 1948:1).

Among the supporting documentation for the 1948 Ladd trailer proposal was a resignation letter submitted by the general manager of the base exchange. This letter read, in part, “It was my sincere desire that I could fulfill the terms of the contract and particularly at Ladd A.F.B. Exchange which offers a challenge to one’s ability, but due to apparently uncontrollable circumstances, especially as applying to quarters for my wife and myself on the post, I feel I could not justifiably subject her to the undesirable, outrageously priced housing facilities offered in the city of Fairbanks” (Henry 1948).

The family housing deficiency also affected troop deployment to Alaska, especially for enlisted personnel. Existing bachelor officer quarters generally could accommodate married officers in accordance with guidelines allowing temporary overcrowding. However, at Ladd AFB and Fort Richardson, existing barracks could not house all married enlisted men, forcing the installations to

resort to substandard, temporary construction. Thus, the number of personnel approved for deployment could not be housed (“Construction Plans, Alaskan Command” 1949:5-6).

### **3.2.10 Postwar Air Force and Navy Pay Rates and Basic Allowance for Quarters**

#### 3.2.10.1 Pay Rates

Monthly pay was based on grade and years of service. In the immediate postwar period, Congress noted that while sections of the military pay structure had been adjusted during the twentieth century, an overall realignment had not been made for more than 40 years. Lawmakers sought to revise technical provisions of the pay system and to increase pay scales. Congress hoped “to establish for the uniformed services a compensation pattern which will tend to attract and retain first-class personnel in the armed services” (U.S. Senate 1949a:2089-91).

In April 1949, pay for enlisted personnel ranged from \$75 for a private with less than three years experience to \$247.50 for a master sergeant with more than 30 years experience. For warrant officers, pay ranged from \$180 for those with less than three years experience, to \$412.50 for a chief warrant officer with more than 30 years experience. Officer pay ranged from \$180 for a second lieutenant with less than five years experience to \$733.33 for a General with more than 30 years experience (U.S. Senate 1949b:66-67) (Table 4).

Later that year, the Career Compensation Act of 1949 increased the monthly pay scale. For enlisted personnel, the new scale ranged from \$75 for the lowest grade with less than four months experience to \$294 for the highest grade with more than 30 years experience. Warrant officers received a range of \$210.98 for the lowest grade with less than two years experience to \$465.60 for the highest grade with more than 30 years experience. Commissioned officers received \$213.75 for the lowest grade with less than two years experience to \$954.75 for the highest grade with more than 30 years experience (U.S. Public Law 351 1949:819-820).

Amendments to the Career Compensation Act in 1958 increased basic pay for all grades based on years of service. The pay scale for enlisted personnel ranged from \$78 for less than four months of service at the lowest grade to \$440 for more than 30 years of service at the highest grade. Warrant officers were paid \$219.42 for less than two years of service at the lowest grade to \$595 for over 30 years of service at the highest grade. For commissioned officers, pay ranged from \$222.30 for less than two years of service at the lowest grade to \$1,700 for more than 30 years of service at the highest grade (U.S. Public Law 85-422 1958:148-150). Table 5 compares pay rates authorized in the Career Compensation Act of 1949 with the 1958 amendments.

#### 3.2.10.2 Quarters Allowances

The Career Compensation Act of 1949 authorized a basic allowance for quarters commensurate with pay grade and existence of dependents. The first three grades of enlisted personnel and grade four personnel with less than seven years of service received \$45, regardless of dependents. The quarters allowance for grade four enlisted personnel with more than seven years’ experience and the top three enlisted grades was \$45 without dependents and \$67.50 with dependents. Quarters allowances ranged from \$60 without dependents and \$75 with dependents for first-grade warrant and commissioned officers to \$82.50 without dependents and \$105 with dependents for fourth grade warrant and commissioned officers. For the top four grades of commissioned officers, quarters allowances ranged from \$90 without dependents and \$120 with dependents for grade five officers to

Table 4. Postwar Monthly Pay Rates, April 1949

Pay Grade	Under 3 Years (base)	Over 3 Years	Over 6 Years	Over 9 Years	Over 12 Years	Over 15 Years	Over 18 Years	Over 21 Years	Over 24 Years	Over 27 Years	Over 30 Years
<b>COMMISSIONED OFFICERS</b>											
General	\$733.33	\$733.33	\$733.33	\$733.33	\$733.33	\$733.33	\$733.33	\$733.33	\$733.33	\$733.33	\$733.33
Lt. General	733.33	733.33	733.33	733.33	733.33	733.33	733.33	733.33	733.33	733.33	733.33
Major General	733.33	733.33	733.33	733.33	733.33	733.33	733.33	733.33	733.33	733.33	733.33
Brigadier General	550.00	550.00	550.00	550.00	550.00	550.00	550.00	550.00	550.00	550.00	550.00
Colonel	366.67	385.00	403.33	421.67	440.00	458.33	476.67	495.00	513.33	531.67	550.00
Lt. Col. over 30 years	550.00	--	--	--	--	--	--	--	--	--	550.00
Lt. Col. under 30 years	320.83	336.87	352.92	368.96	385.00	401.04	417.08	433.12	449.17	465.21	--
Major over 23 years	433.12	--	--	--	--	--	--	--	449.17	465.21	481.25
Major under 23 years	275.00	288.75	302.50	316.25	330.00	343.75	357.50	371.25	--	--	--
Captain over 17 years	343.75	--	--	--	--	--	357.50	371.25	385.00	398.75	412.50
Captain under 17 years	230.00	241.50	253.00	264.50	276.00	287.50	--	--	--	--	--
1 <sup>st</sup> Lt. over 10 years	264.50	--	--	--	276.00	287.50	299.00	310.50	322.00	333.50	345.00
1 <sup>st</sup> Lt. under 10 years	200.00	210.00	220.00	230.00	--	--	--	--	--	--	--
2 <sup>nd</sup> Lt. over 5 years	210.00	--	220.00	230.00	240.00	250.00	260.00	270.00	280.00	290.00	300.00
2 <sup>nd</sup> Lt. under 5 years	180.00	189.00	--	--	--	--	--	--	--	--	--
<b>WARRANT OFFICERS</b>											
Chief/commissioned over 20 years	\$357.50	--	--	--	--	--	--	\$371.25	\$385.00	\$398.75	\$412.50
Chief/commissioned over 10 years	264.50	--	--	--	\$276.00	\$287.50	\$299.00	310.50	322.00	333.50	345.00
Chief/commissioned	210.00	220.50	231.50	241.50	252.00	262.50	273.00	283.50	294.00	304.50	315.00
Junior/warrant officer	180.00	189.00	198.00	207.00	216.00	225.00	234.00	243.00	252.00	261.00	270.00
<b>ENLISTED PERSONNEL</b>											
Master sergeant	\$165.00	\$173.25	\$181.50	\$189.75	\$198.00	\$206.25	\$214.50	\$222.75	\$231.00	\$239.25	\$247.50
Technical sergeant	135.00	141.75	148.50	155.25	162.00	168.75	175.50	182.25	189.00	195.75	202.50
Staff sergeant	115.00	120.75	126.50	132.25	138.00	143.75	149.50	155.25	161.00	166.75	172.50
Sergeant	100.00	105.00	110.00	115.00	120.00	125.00	130.00	135.00	140.00	145.00	150.00
Corporal	90.00	94.50	99.00	103.50	108.00	112.50	117.00	121.50	126.00	130.50	135.00
Private 1 <sup>st</sup> class	80.00	84.00	88.00	92.00	96.00	100.00	104.00	108.00	112.00	116.00	120.00
Private	75.00	78.75	82.50	86.25	90.00	93.75	97.50	101.25	105.00	108.75	112.50

Source: U.S. Senate 1949b:66-69



**Table 5. Monthly Pay Rates in Career Compensation Act of 1949 and 1958 Amendments, by Years of Service**

Pay Grade	Under 2 Years		Over 2 Years		Over 3 Years		Over 4 Years		Over 6 Years		Over 8 Years		Over 10 Years	
	1949	1958	1949	1958	1949	1958	1949	1958	1949	1958	1949	1958	1949	1958
<b>COMMISSIONED OFFICERS</b>														
O-10	--	\$1,200.00	--	\$1,250.00	--	\$1,250.00	--	\$1,250.00	--	\$1,250.00	--	\$1,300.00	--	\$1,300.00
O-9	--	1,063.30	--	1,100.00	--	1,122.00	--	1,122.00	--	1,122.00	--	1,150.00	--	1,150.00
O-8	\$926.25	963.30	\$926.25	1,000.00	--	1,022.00	\$926.25	1,022.00	\$926.25	1,022.00	\$926.25	1,100.00	\$926.25	1,100.00
O-7	769.50	800.28	769.50	860.00	--	860.00	769.50	860.00	769.50	900.00	769.50	900.00	769.50	950.00
O-6	570.00	592.80	570.00	628.00	--	670.00	570.00	670.00	570.00	670.00	570.00	670.00	570.00	670.00
O-5	456.00	474.24	456.00	503.00	--	540.00	456.00	540.00	456.00	540.00	456.00	540.00	456.00	560.00
O-4	384.75	400.14	384.75	424.00	--	455.00	384.75	455.00	384.75	465.00	399.00	485.00	413.25	520.00
O-3	313.50	326.04	313.50	346.00	--	372.00	327.75	415.00	342.00	440.00	356.25	460.00	370.50	480.00
O-2	249.38	259.36	263.63	291.00	--	360.00	277.88	370.00	292.13	380.00	306.38	380.00	320.63	380.00
O-1	213.75	222.30	228.00	251.00	--	314.00	242.25	314.00	256.50	314.00	270.75	314.00	285.00	314.00
<b>WARRANT OFFICERS</b>														
W-4	\$320.10	\$332.90	\$320.10	\$376.00	--	\$376.00	\$320.10	\$383.00	\$334.65	\$399.00	\$349.20	\$416.00	\$363.75	\$435.00
W-3	291.00	302.64	291.00	343.00	--	343.00	291.00	348.00	298.28	353.00	305.55	380.00	312.83	398.00
W-2	254.63	264.82	254.63	298.00	--	298.00	254.63	307.00	254.63	328.00	261.90	342.00	269.18	355.00
W-1	210.98	219.42	210.98	266.00	--	266.00	210.98	285.00	218.25	299.00	225.53	313.00	232.80	334.00
<b>ENLISTED PERSONNEL</b>														
E-9	--	--	--	--	--	--	--	--	--	--	--	--	--	\$380.00
E-8	--	--	--	--	--	--	--	--	--	--	--	\$310.00	--	320.00
E-7	\$198.45	\$206.39	\$198.45	\$236.00	--	\$236.00	\$205.80	\$250.00	\$213.15	\$260.00	\$220.50	270.00	\$227.85	285.00
E-6	169.05	175.81	169.05	200.00	--	200.00	176.40	225.00	183.75	235.00	191.10	245.00	198.45	255.00
E-5	139.65	145.24	147.00	180.00	--	180.00	154.35	205.00	161.70	210.00	169.05	220.00	176.40	240.00
E-4	117.60	122.30	124.95	150.00	--	160.00	132.30	170.00	139.65	180.00	147.00	190.00	154.35	190.00
E-3	95.55	99.37	102.90	124.00	--	124.00	110.25	141.00	117.60	141.00	124.95	141.00	132.30	141.00
E-2	82.50	85.80	90.00	108.00	--	108.00	97.50	108.00	105.00	108.00	112.50	108.00	120.00	108.00
E-1 (over 4 months)	80.00	83.20	87.50	105.00	--	105.00	95.00	105.00	95.00	105.00	95.00	105.00	95.00	105.00
E-1 (under 4 months)	75.00	78.00	--	--	--	--	--	--	--	--	--	--	--	--

Pay Grade	Over 12 Years		Over 14 Years		Over 16 Years		Over 18 Years		Over 20 Years		Over 22 Years		Over 26 Years		Over 30 Years	
	1949	1958	1949	1958	1949	1958	1949	1958	1949	1958	1949	1958	1949	1958	1949	1958
<b>COMMISSIONED OFFICERS</b>																
O-10	--	\$1,400.00	--	\$1,400.00	--	\$1,500.00	--	\$1,500.00	--	\$1,600.00	--	\$1,600.00	--	\$1,700.00	--	\$1,700.00
O-9	--	1,200.00	--	1,200.00	--	1,300.00	--	1,300.00	--	1,400.00	--	1,400.00	--	1,500.00	--	1,500.00
O-8	\$926.25	1,150.00	\$926.25	1,150.00	\$926.25	1,200.00	\$926.25	1,250.00	--	1,300.00	\$926.25	1,350.00	\$926.25	1,350.00	\$926.25	1,350.00
O-7	769.50	950.00	769.50	1,000.00	769.50	1,100.00	769.50	1,175.00	--	1,175.00	769.50	1,175.00	798.00	1,175.00	826.50	1,175.00
O-6	570.00	670.00	570.00	690.00	584.25	800.00	612.75	840.00	--	860.00	641.25	910.00	669.75	985.00	698.25	985.00
O-5	470.25	590.00	484.50	630.00	498.75	680.00	527.25	720.00	--	745.00	555.75	775.00	584.25	775.00	584.25	775.00
O-4	427.50	550.00	441.75	570.00	456.00	610.00	484.50	630.00	--	630.00	498.75	630.00	513.00	630.00	513.00	630.00
O-3	384.75	510.00	399.00	525.00	413.25	525.00	427.50	525.00	--	525.00	441.75	525.00	441.75	525.00	441.75	525.00
O-2	334.88	380.00	349.13	380.00	349.13	380.00	349.13	380.00	--	380.00	349.13	380.00	349.13	380.00	349.13	380.00
O-1	299.25	314.00	313.50	314.00	313.50	314.00	313.50	314.00	--	314.00	313.50	314.00	313.50	314.00	313.50	314.00
<b>WARRANT OFFICERS</b>																
W-4	\$378.30	\$465.00	\$392.85	\$486.00	\$407.40	\$504.00	\$421.95	\$516.00	--	\$528.00	\$436.50	\$543.00	\$451.05	\$575.00	\$465.60	\$595.00
W-3	320.10	412.00	327.38	427.00	334.65	441.00	349.20	458.00	--	470.00	363.75	487.00	378.30	506.00	392.85	506.00
W-2	276.45	369.00	283.73	381.00	291.00	393.00	305.55	406.00	--	417.00	320.10	440.00	334.65	440.00	349.20	440.00
W-1	240.08	345.00	247.35	354.00	254.63	364.00	269.18	375.00	--	390.00	283.73	390.00	298.28	390.00	298.28	390.00
<b>ENLISTED PERSONNEL</b>																
E-9	--	\$390.00	--	\$400.00	--	\$410.00	--	\$420.00	--	\$430.00	--	\$440.00	--	\$440.00	--	\$440.00
E-8	--	330.00	--	340.00	--	350.00	--	360.00	--	370.00	--	380.00	--	380.00	--	380.00
E-7	\$235.20	300.00	\$242.55	310.00	\$249.90	325.00	\$264.60	340.00	--	350.00	\$279.30	350.00	\$294.00	350.00	\$294.00	350.00
E-6	205.80	265.00	213.15	275.00	220.50	280.00	235.20	290.00	--	290.00	249.90	290.00	249.90	290.00	249.90	290.00
E-5	183.75	240.00	191.10	240.00	198.45	240.00	213.15	240.00	--	240.00	227.85	240.00	227.85	240.00	227.85	240.00
E-4	161.70	190.00	169.05	190.00	176.40	190.00	191.10	190.00	--	190.00	191.10	190.00	191.10	190.00	191.10	190.00
E-3	139.65	141.00	147.00	141.00	147.00	141.00	147.00	141.00	--	141.00	147.00	141.00	147.00	141.00	147.00	141.00
E-2	120.00	108.00	120.00	108.00	120.00	108.00	120.00	108.00	--	108.00	120.00	108.00	120.00	108.00	120.00	108.00
E-1	95.00	105.00	95.00	105.00	95.00	105.00	95.00	105.00	--	105.00	95.00	105.00	95.00	105.00	95.00	105.00

Source: U.S. Public Law 351, U.S. Public Law 85-422





\$120 without dependents and \$150 with dependents for grade eight officers (U.S. Public Law 351 1949:826).

Amendments to the Career Compensation Act in 1958 increased the rates for warrant and commissioned officers. The increased basic allowance for quarters ranged from \$68.40 without dependents and \$85.50 with dependents for grade one warrant and commissioned officers, to \$94.20 without dependents and \$119.70 with dependents for grade four warrant and commissioned officers. The top six grades of commissioned officers ranged from \$102.60 without dependents and \$136.80 with dependents for grade five officers to \$136.80 without dependents and \$171 with dependents (U.S. Public Law 85-422 1958:155). Table 6 compares quarters allowances authorized in the Career Compensation Act of 1949 with the 1958 amendments.

**Table 6. Quarters Allowances, 1949 and 1958**

Pay Grade	With Dependents		Without Dependents	
	1949	1958	1949	1958
<b>COMMISSIONED OFFICERS</b>				
O-10	--	\$171.00	--	\$136.80
O-9	--	171.00	--	136.80
O-8	\$150.00	171.00	\$120.00	136.80
O-7	150.00	171.00	120.00	136.80
O-6	120.00	136.80	105.00	119.70
O-5	120.00	136.80	90.00	102.60
O-4	105.00	119.70	82.50	94.20
O-3	90.00	102.60	75.00	85.50
O-2	82.50	94.20	67.50	77.10
O-1	75.00	85.50	60.00	68.40
<b>WARRANT OFFICERS</b>				
W-4	\$105.00	\$119.70	\$82.50	\$94.20
W-3	90.00	102.60	75.00	85.50
W-2	82.50	94.20	67.50	77.10
W-1	75.00	85.50	60.00	68.40
<b>ENLISTED PERSONNEL</b>				
E-9	--	\$67.50	--	\$45.00
E-8	--	67.50	--	45.00
E-7	67.50	67.50	45.00	45.00
E-6	67.50	67.50	45.00	45.00
E-5	67.50	67.50	45.00	45.00
E-4 (7 or more years service)	67.50	67.50	45.00	45.00
E-4 (less than 7 years service)	45.00	45.00	45.00	45.00
E-3	45.00	45.00	45.00	45.00
E-2	45.00	45.00	45.00	45.00
E-1	45.00	45.00	45.00	45.00

Source: U.S. Public Law 351, U.S. Public Law 85-422

### 3.2.11 Overview of Air Force and Navy Family Housing – 1790 to 1949

The history of Air Force and Navy construction and policies related to family housing influenced the development and implementation of solutions to the postwar housing shortage. The Air

Force shares the Army history of family housing. Numerous permanent quarters were constructed for the Army Air Corps during the inter-war period. Prior to World War II, the Army Quartermaster Corps oversaw all construction on Army installations. At the beginning of World War II, all construction responsibilities for the Army and the Army Air Corps were transferred to the Army Corps of Engineers.

The Navy traditionally focused its resources upon ships at sea. These ships were manned by sailors who were not provided on-shore military quarters. The Navy maintained few on-shore installations prior to the twentieth century. Married senior officers generally occupied quarters at on-shore installations. Marine Corps personnel traditionally were housed in compounds located at Naval installations. Marine Corps compounds typically included one barracks and three to five officer quarters. The Bureau of Yards and Docks oversaw construction of Navy and Marine Corps installations.

During the twentieth century, the Air Force, Navy, and Marine Corps experienced major personnel increases and assumed expanded permanent duties in the United States military establishment. As a result, an increased number of personnel required training and occupied larger and larger permanent military installations. Long-term personnel frequently were married and accompanied by families. The number of family quarters constructed at permanent installations increased particularly after World Wars I and II.

#### 3.2.11.1 Air Force Housing History

The Air Force traces its family housing history in the pre-World War II period to the Army; the majority of military aviation was under the command of the Army prior to the creation of Air Force as an independent service in 1947. The earliest airfields were located at established Army installations. The first permanent installation established solely to support aviation activities was Langley AFB in 1916. When the United States entered World War I on 6 April 1917, the Aviation Section included 65 officers (35 of whom were pilots), 1,087 enlisted personnel, and fewer than 300 aircraft (Glines 1980:72). During the war, the number of airfields built for personnel training expanded substantially and generally contained temporary mobilization buildings.

The Air Corps Act of 2 July 1926 officially established the Air Corps as a separate organization within the Army. The new corps functioned as an air service to support ground forces and national air defense (Maurer 1987:73ff). The act authorized personnel levels at 1,650 officers, 16,000 enlisted men, and 2,500 cadets. The number of aircraft authorized by the act was 1,800 (Brown 1990:73; Glines 1980:122; War Department 1926:34). In 1926, the Air Service comprised 919 officers and 8,725 enlisted personnel (Glines 1980:122). The total aircraft strength stood at 1,254 planes (Glines 1980:122; Maurer 1987:196). The expanded force authorized by the act was to be implemented by 1931.

The expanding role of the corps necessitated new permanent facilities (Brown 1990:73-74). In 1927, the Chief of the Air Corps proposed constructing two new airfields and expanding 32 existing fields. The primary types of installations proposed for expansion were training bases located in warm weather regions, making possible year-round flying, and bases supporting the national air defense program. The national air defense program consisted of two wings: one based on the West Coast and one based on the East Coast. A bombardment and pursuit group of three squadrons composed each proposed wing. Additional air defense units were stationed in the central region of the United States to allow rapid deployment to either coast (Maurer 1987:196-197). The implementation of this program required new permanent installations with housing for airmen and officers.

Funding for the new Air Corps installations came from two sources: Congressional appropriations and the Military Post Construction Fund. Congressional appropriations for the Air

Corps between 1927 and 1932 primarily were spent to construct hangars, landing fields, and operations support buildings. Money to construct barracks, housing, and hospitals came from the Military Post Construction Fund. This fund was established under Public Law 45 passed in 1926, which authorized the Secretary of War to dispose of 43 military installations or portions thereof to finance the fund. The fund was dedicated to improving living conditions on Army posts through the construction of permanent buildings. Improvements to military housing were planned for installations in the United States, Hawaii, and the Panama Canal Zone. The program was designed to fund improvements over a ten-year period and was estimated at \$110 million (U.S. House of Representatives 1927:7).

At the beginning of the construction program, only Langley Field in Virginia, and Crissy and Rockwell Fields in California, had permanent buildings, including housing. All other Air Corps installations comprised temporary construction dating from World War I. In 1927, Assistant Secretary of War Trubee Davison expressed the Air Corps' critical needs for better housing.

I found that much of the Air Corps personnel is housed in temporary structures, built during the war with an anticipated life at the time of construction not in excess of five years. That time has long since passed, and these structures, providing as they do very poor quarters at best, have been maintained as well as possible by the expenditure of sums for repairs out of all proportion to the value of the buildings. While I realize that this condition is general in the Army, the Air Corps, however, is peculiarly placed because, [of its] having grown up entirely during the war...(War Department 1927:44)

The Army Quartermaster Corps oversaw all Army and Air Corps construction during the inter-war period. Led by Major General B.F. Cheatham, Quartermaster General, the Construction Division of the Quartermaster Corps, employed a group of distinguished professionals, both uniformed and civilian, to apply the latest theories in city planning to installation planning. Lt. Col. Francis B. Wheaton served as the first Chief of the Engineering Division in the Construction Service. Luther M. Leisenring, formerly associated with prominent architect Cass Gilbert, served as Supervising Architect in the Office of the Quartermaster General in 1937. George B. Ford, a noted urban planner, was retained by the Quartermaster Corps to review installation plans. The goal of the professional team was to develop efficient, cohesive, and pleasant environments within reasonable budgets (Ford 1929:19).

The new permanent installations constructed during the inter-war period were larger and accommodated more personnel than installations constructed during previous military construction periods. More officers and non-commissioned officers (NCOs) required housing. Installation designs grew more complex in order to incorporate the requirements of new technologies, such as aviation. The designs of the new installations were planned to be harmonious with the natural surroundings, while affording functionality. The new installation designs maximized the use of open space near public areas of the post, while integrating irregular street patterns where appropriate. Ford acknowledged that use for aviation had an impact on post design. Development patterns seen from the air were reviewed to ensure attractive post plans (Ford 1929:19-22; Nurse 1928:14-16).

While the parade ground had been center of the traditional Army post, the flightline was the functional center of activity for new Air Corps installations. The placement of the flightline dictated the location of other functional areas, including housing. At Langley Field, family housing was sited south of the airfield. The houses were sited in rectangular blocks and were arranged by rank (Figure 1). By the mid-1920s, Air Corps installations adopted a triangular plan based on a square mile. The flightline was placed on the diagonal of the square with support buildings defining the edge of the

flightline. The plan of Barksdale AFB, Louisiana, illustrated this layout (Figure 2). Barksdale AFB had a central boulevard leading to the flightline from which radiated streets lined with housing. The most dramatic plan for an Air Corps installation was developed for Randolph Field, now Randolph AFB, Texas (Figure 3). Randolph AFB was designed as a training base and had four active flightlines. The administrative and housing areas were sited in the center of the installation. The design for Randolph AFB was attributed to a young Air Corps officer, Harold Clark, who presented it for approval to Brigadier General Lahm (Manning 1987).

Housing constructed during the inter-war period generally reflected designs and floor plans found in civilian construction, particularly the single-family house plans promulgated during the 1920s (Loizeaux reprint 1992). Single-family houses were preferred for officers and NCOs, although duplexes and four-family apartment buildings also were constructed. Spending caps were set by Congress to limit costs of officer housing. Allowable costs for housing construction ranged from \$14,500 for dwellings occupied by those above the rank of Captain; to \$12,500 for units occupied by those holding the rank of Captain and below; to \$5,000 to \$7,000 for NCOs (U.S. House of Representatives 1927:31).

Standardized plans for houses were revised to reflect cost considerations and contemporary designs. The house plans were designed to respond to local climates and to reflect local architectural history. The Georgian Colonial Revival Style was used for installations from New England to Virginia, in the Midwest, and in the Pacific Northwest (Figure 4). Spanish Colonial Revival styles were employed in the South, Western Plains, Southwest, and California (Figure 5). Other regional designs were constructed at specific installations, such as the English Tudor Revival Style at Langley AFB and Wright-Patterson AFB and the French Provincial Style at Barksdale AFB (Wheaton 1928:10-13; Lamb 1932:35).

Floor plans and house sizes reflected the military organizational hierarchy. Company officers (e.g., Captains and below) were allotted a living room, dining room, kitchen, three bedrooms, two baths where possible, a maid's room and bath, closets, and storage space. Field and general officers were allowed an additional bedroom and a second bathroom. NCO housing contained a living room, kitchen, two bedrooms, a bathroom, closets, and storage space (Grashof 1986, v.1:48-53).

By 1931, the Army's permanent construction program provided housing for 292 commissioned officers, 304 NCOs, and 19,800 enlisted personnel. Housing provided at Air Corps installations was included in those totals. The program cost more than \$30 million, and projects totaling an additional \$16 million were under contract. During the 1930s, additional construction funds became available under the National Industrial Recovery Act of 1933, the Work Relief and Public Works Appropriations Act of 1938, and the Public Works Administration. This money was spent for permanent construction on 64 installations, including 1,091 sets of quarters. Air Corps installations where family quarters were constructed included: Maxwell Field, Alabama; March, Hamilton, McClellan, and Moffett Fields, California; Lowry Field, Colorado; MacDill and Chapman Fields, Florida; Chanute and Scott Fields, Illinois; Barksdale Field, Louisiana; Westover Field, Massachusetts; Selfridge Field, Michigan; Mitchel Field, New York; Wright Field, Ohio; Kelly, Brooks, and Randolph Fields, Texas; Langley Field, Virginia; McChord Field, Washington; and, Bolling Field, Washington, D.C. (Craven and Cate 1983:122; "Building for Defense" 1940:39).

The inter-war housing program officially ended on 15 June 1940, when the War Department halted all new construction of permanent buildings including family quarters and began to construct temporary mobilization buildings in preparation for possible war. A few family housing construction projects already in the planning stages were completed in the second half of 1940, notably at several Air

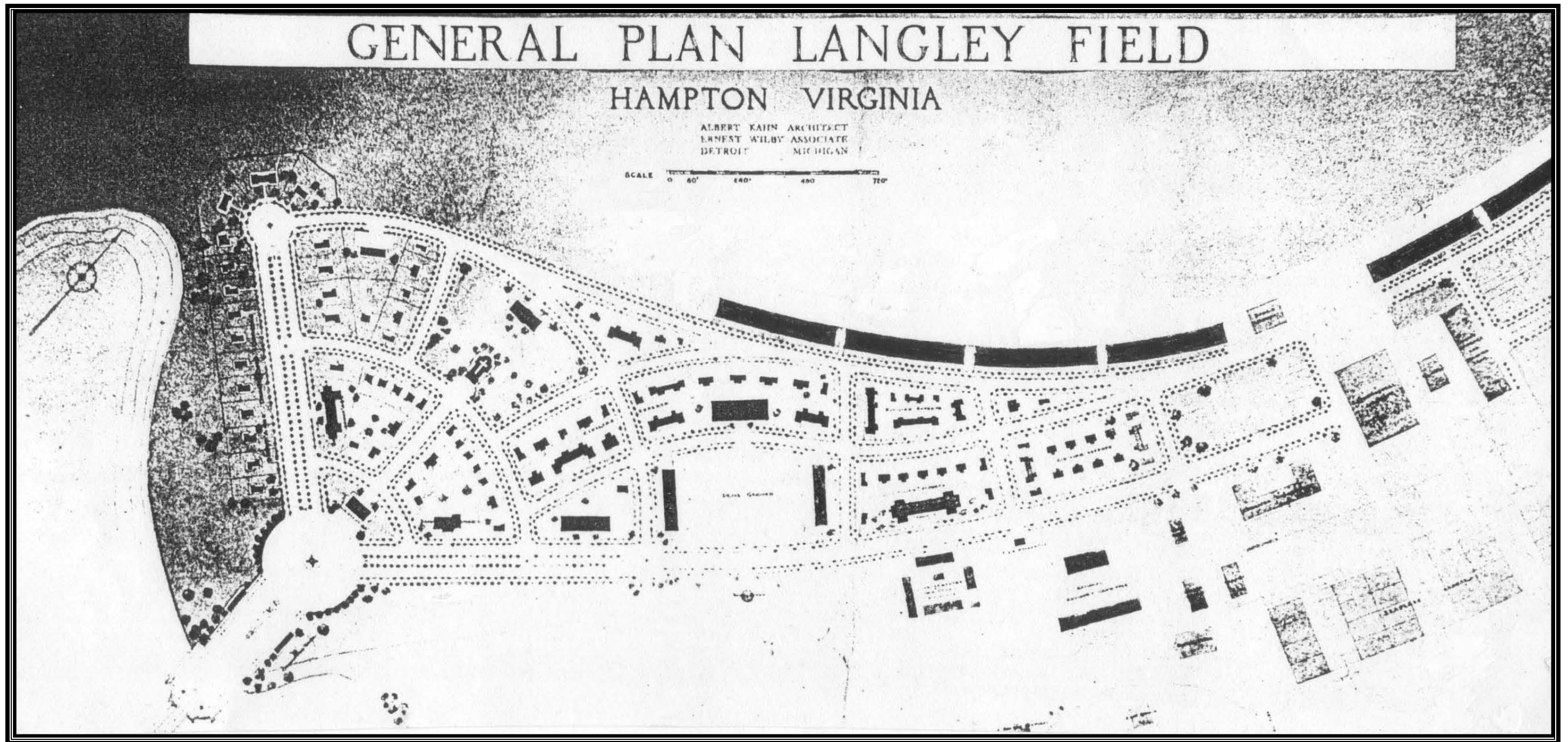


Figure 1. 1917 general plan of Langley AFB designed by Albert Kahn showing family housing areas south of the flightline. (Courtesy of Headquarters Air Combat Command, Historian's Office)





Figure 2. Ca. 1932 Photograph of Barksdale AFB, Louisiana (Courtesy of Barksdale AFB, Louisiana)

Corps depots, where streamlined, Moderne or International Style designs were introduced (Figure 6). These last designs before the start of World War II were a preview of the more minimalist designs favored during the postwar years.

A major shift in the organization of Air Corps construction occurred in spring 1941, when the Army Corps of Engineers assumed oversight of construction at Air Corps installations. The Army Corps of Engineers was assigned responsibility for all Army construction in November 1941 (Whelan et al 1997:33).

Under the protective mobilization stage that preceded World War II, the Army Corps of Engineers oversaw construction of numerous new aviation installations established in response to changing mobilization plans. By November 1941, aviation needs identified in war plans required 54 combat groups totaling 136,000 personnel. By the end of 1943, the Army Air Forces flew out of 345 main bases, 116 sub-bases, and 322 auxiliary fields in the United States (Office of Statistical Control 1945; USAEC 2001:50). Most of the new installations were training bases and were constructed using temporary mobilization buildings. As training needs decreased in 1943 and 1944, General Hap Arnold issued an order in February 1944 prohibiting all new construction in the continental United States without his personal approval (Webster et al. 1999:4-13).

In summary, housing constructed at Air Corps installations prior to World War II was funded primarily through the sale of excess property, Federal appropriations, or emergency spending measures enacted during the Great Depression. The Quartermaster Corps, and later the Army Corps of Engineers, oversaw design and construction of housing. Family housing was provided only to married officers and non-commissioned officers. Enlisted personnel were assigned to barracks. “Supplemented by the



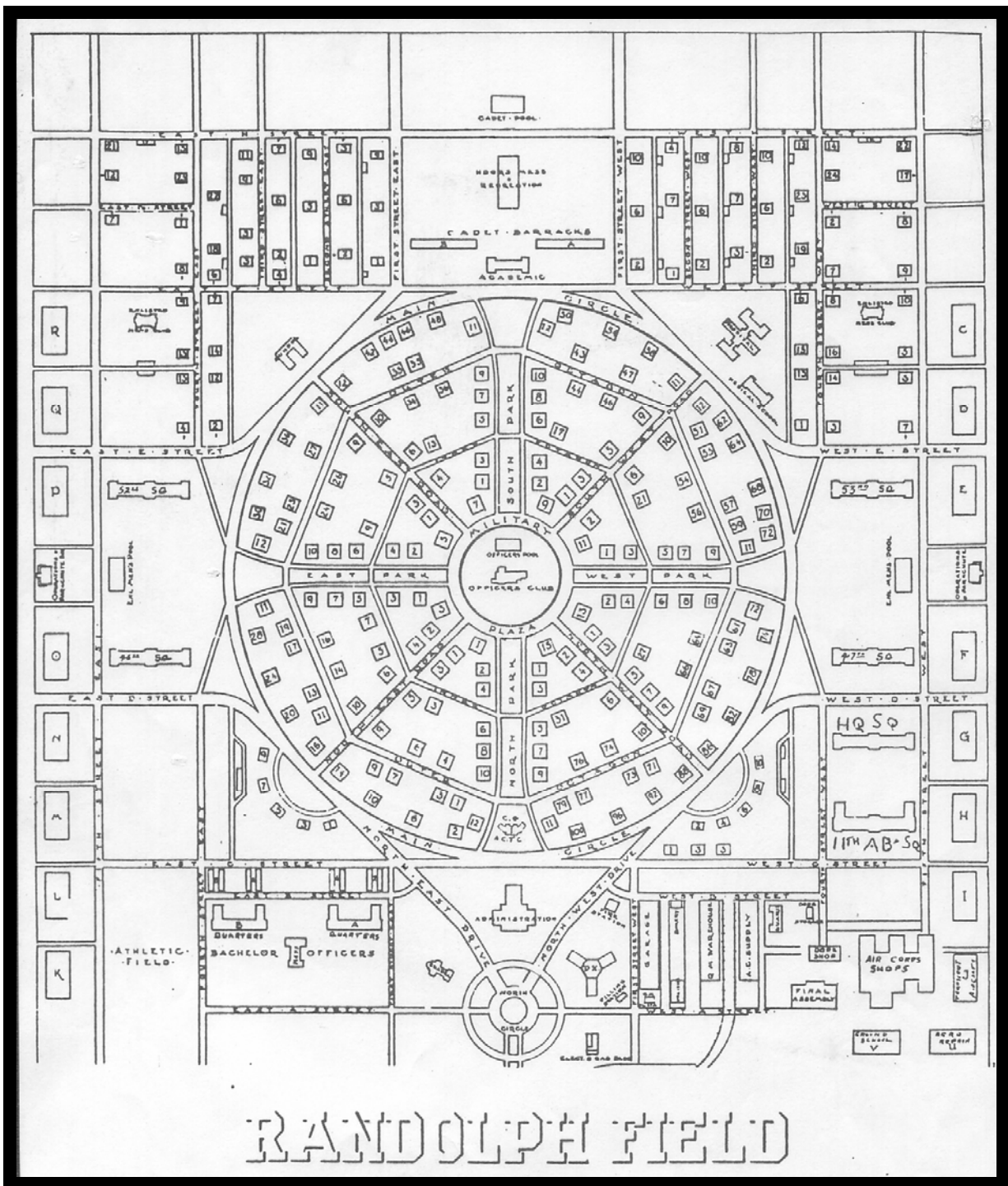


Figure 3. 1928 Plan of Randolph Field (now Randolph AFB), Texas. (U.S. Army Corps of Engineers 1995).





Figure 4. 1935 Georgian Colonial Revival officer quarters at Selfridge Air National Guard Base, Michigan. (Photo taken by RCG&A)



Figure 5. 1934 Spanish Mission Revival officers quarters at Randolph AFB, Texas. (Photo taken by RCG&A)



Figure 6. 1940 officers quarters at Kelly AFB, Texas. (Photo taken by RCG&A)

plentiful supply of private housing, these quarters [constructed during the inter-war period] were adequate to accommodate the small per centage of married men who served in the armed forces of the 1930s” stated the 1957 report of a Senate committee that studied military family housing (Senate 1957:4).

### 3.2.11.2 Navy and Marine Corps Housing History

The modern Navy traces its formal organization following the Revolutionary War to the Naval Act of 1794, which authorized the construction of six frigates. The act, however, did not authorize the Navy to acquire on-shore facilities to build the frigates. Subsequent funding appropriations were used to establish the Navy’s first on-shore installations. By 1802, the Navy owned six shipyards at the following major ports: Washington, D.C.; Portsmouth, New Hampshire; Charlestown near Boston, Massachusetts; Brooklyn, New York; Philadelphia, Pennsylvania; and, Gosport south of Norfolk, Virginia. The acreage of the entire inventory of Naval shore installations totaled 150 acres (Fairbanks and Lovelace 1956:18-21). By 1860, four additional Naval shipyards had opened: Sacketts Harbor on Lake Ontario, New York, in 1809; Pensacola, Florida, in 1825; Memphis, Tennessee, in 1843; and Mare Island, California, in 1853. The shipyards were primarily industrial facilities to build and repair ships, and to warehouse supplies, particularly in isolated areas, as in the case of the shipyards located at Pensacola, Florida, and Mare Island, California.

Throughout the nineteenth century, the size of the Navy generally numbered under 10,000 officers and enlisted men (Naval Historical Center ca. 1997). Most Navy personnel were stationed on shipboard and not quartered on land. The only quarters provided by the Navy were for senior officers in charge of shipyards or other installations, such as Naval hospitals or the Naval observatory. Shipyard workers were generally civilians who lived in nearby urban areas in cases where shipyards were located near major port cities.

Nineteenth- and early twentieth-century Navy installations typically had few public quarters to house senior officers, such as the Commandant and perhaps a few other senior officers. Officer quarters were located either next to the Commandant's house or near the activity supervised by the resident officer. For example, quarters might be constructed for the surgeon near a Navy hospital. The Navy typically did not employ standardized plans for quarters. Though building designs sometimes were repeated at an installation, identical designs were not constructed at different installations. Nineteenth-century Naval officer family housing often was comparable to high-style architecture found in civilian residential design from the same period. Federal or Greek Revival architectural styles were constructed at Navy shipyards during the first half of the nineteenth century. The Commandant's house at the Washington Navy Yard in the District of Columbia is a brick Federal Style house constructed in 1804 (Figure 7). At the Norfolk Navy Yard, Virginia, three senior officers quarters were built between 1827 and 1837; the Flemish-bond brick houses include simple, Greek Revival detailing. The Norfolk quarters were designated for the Commandant, Master Commandant, and Surgeon. Family quarters included all essential rooms and furniture (Fairbanks and Lovelace 1956:18). At shipyards with multiple officer housing, quarters typically were sited in a line along a street at the periphery of the industrial area.

The Marine Corps was established following Congressional passage of the Marine Corps Act of 1798. This act authorized a force of 33 officers and 832 enlisted men. Marines served on ships to maintain discipline and to suppress mutiny among sailors; they also served in landing parties and in close combat situations. One duty of the Marines was to protect on-shore Navy property, such as shipyards. Typically, each shipyard had a Marine barracks. The Marine barracks was a complex of buildings with a barracks to house enlisted Marines and a few individual officer quarters (U.S. Army Corps of Engineers [USACE], Baltimore District 1995:vol 1:18). The Marine Corps Commandant's house constructed in 1801 at the Marine Corps Barracks in Washington, D.C., is the oldest Marine Corps officer quarters in the United States (Figure 8). The house was constructed in the Federal Style and features a symmetrical facade, arched door surround with fanlight, and cornice molding; a mansard roof was added in 1891. Few other examples of nineteenth-century Marine Corps officers quarters survive (USACE 1995: vol 2:373ff).

In 1842, the Navy was organized into bureaus. The Bureau of Yards and Docks assumed responsibility for all construction at shore installations for the Navy and the Marine Corps (Fairbanks and Lovelace 1956:18). Throughout the nineteenth century, both the Navy and the Marine Corps continued to construct limited numbers of quarters for senior officers using a variety of contemporary popular architectural styles. At Pensacola Navy Yard, Florida, the 1874 Commandant's Quarters exhibited Italianate ornamentation. The Naval War College President's House at Newport, Rhode Island, constructed in 1896, was an example of Colonial Revival design. At the new Puget Sound Navy Yard, Washington, the wood-frame officer quarters exhibited Neoclassical detailing (Figure 9). The Navy also began to construct duplex and multi-family housing by the end of the nineteenth century (USACE 1995: Vol 2:373ff). Four sets of Warrant Officer quarters constructed in 1871 at Portsmouth Naval Shipyard, New Hampshire, were contained in a two-story building. Each dwelling had a parlor, a dining room, a kitchen and a laundry on the first floor and a single chamber measuring 13 by 13 feet on the second floor. Bathrooms were included in family housing units a few years later (Fairbanks and Lovelace 1956:18-19). Construction at Navy installations occurred as needed, so that shipyards established during the nineteenth century do not necessarily exhibit a cohesive architectural style. Housing constructed at a Navy yard could represent many architectural styles from many time periods.

In 1899, the Navy instituted a policy to provide officers of Navy ships with on-shore quarters or with a monetary allowance for housing. In 1908, the policy was expanded to provide rental allowances in lieu of quarters to all commissioned officers on the active duty list. The size of the public quarters or the amount of the housing allowance was related to the rank of the officer and length of service. No



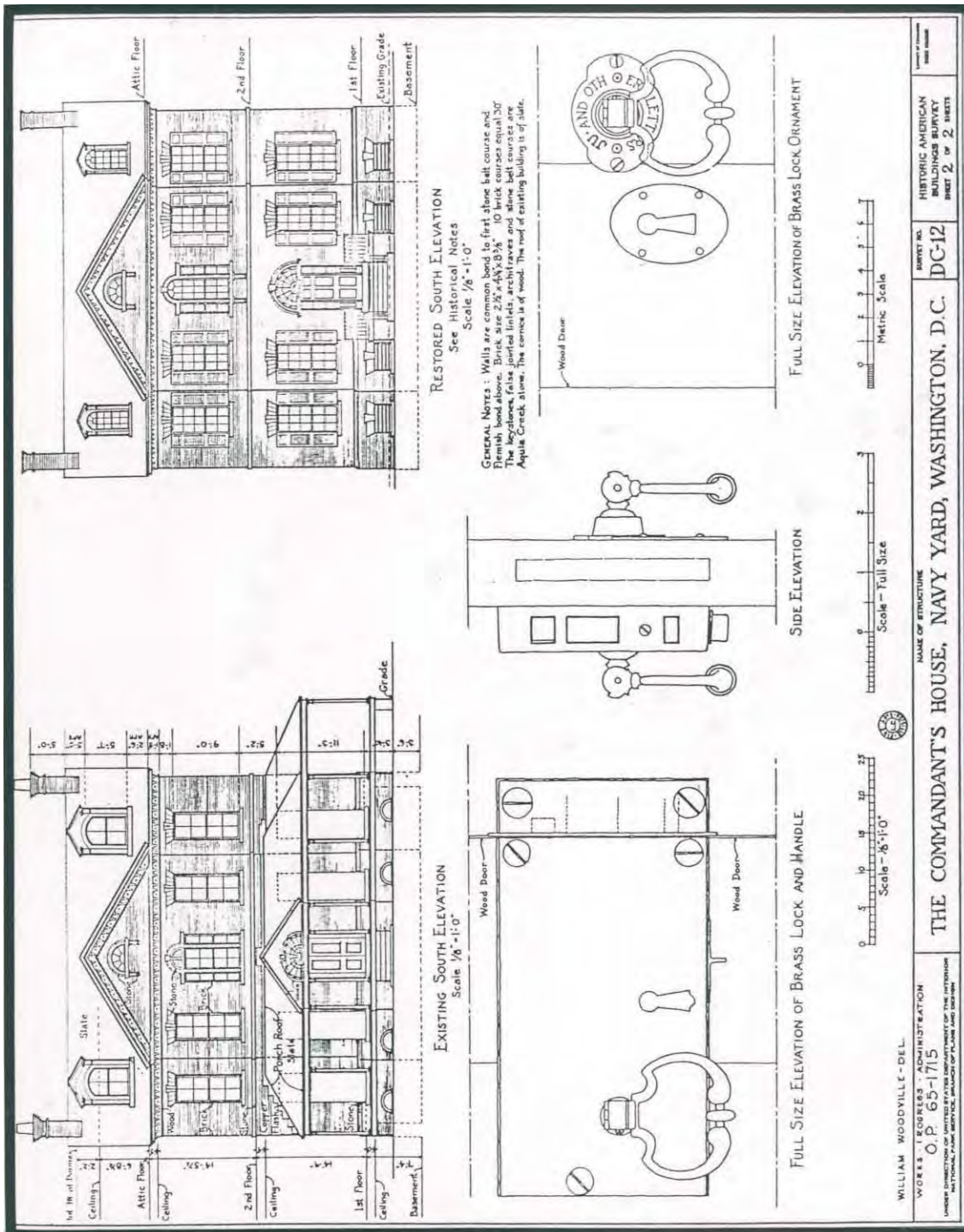


Figure 7. 1804 Commandant's House, Washington Navy Yard, Washington, D.C. (From Prints and Photographs Division, Library of Congress, Historic American Buildings DC-12)



Figure 8. Commandant's House, Marine Corps Barracks, Washington, D.C. (Courtesy of U.S. Marine Corps)

allowances for family housing were provided to enlisted personnel until World War II. Enlisted personnel were accommodated in barracks (Fairbanks and Lovelace 1956:19).

During the early 1900s, both the Navy and the Marine Corps undertook major expansion programs to improve existing facilities and to construct new installations. By 1910, the Navy had 2,645 officers and 46,076 enlisted men (Naval Historical Center ca. 1997). At Navy installations, Classical Revival designs in the Beaux Arts academic tradition dominated this period of construction. Between 1900 and 1910, the Navy selected prominent civilian architects to design new installations. These architects were influenced by the design approach promoted by the Ecole des Beaux Arts as reflected in formal urban plans and classically-inspired architectural designs. Jarvis Hunt designed the Great Lakes Training Station, Illinois, with its Beaux Arts master plan with classically-inspired architecture. Officer housing was located in two distinct areas; a row of eleven residences located behind the administration buildings overlooking Lake Michigan, and three quarters for medical officers are sited next to the hospital (Figure 10). At the U.S. Naval Academy, Maryland, the Navy constructed a new officer education facility designed by noted architect Ernest Flagg, a proponent of Beaux Arts principles. Flagg's officer quarters also displayed classical detailing to complement the overall installation design (Figure 11).



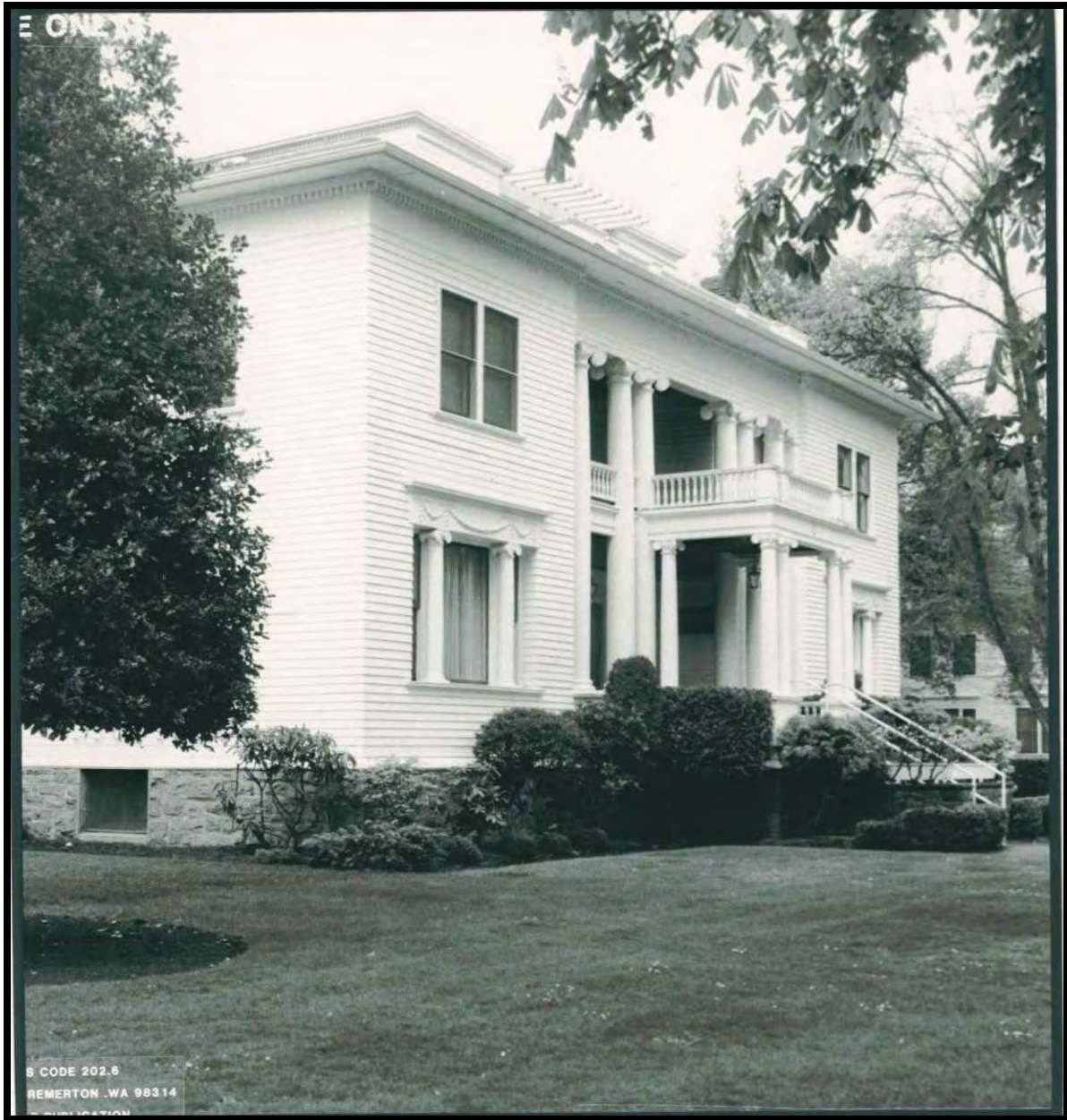


Figure 9. 1896 officers housing, Puget Sound Naval Shipyard, Washington. (Courtesy of U.S. Navy)

The Marine Corps also initiated a major building program to improve and to expand facilities. This building program coincided with the evolution of the Marine Corps into an independent fighting force that operated in foreign expeditions. Between 1903 and 1907, the Marine Corps Barracks in Washington, D.C., received a new barracks and new officer housing, which was designed by the local architectural firm of Hornblower and Marshall. New Marine Corps reservations, including barracks and officer housing, were constructed at the Naval Academy, Maryland; Philadelphia Navy Yard, Pennsylvania; and, Norfolk Navy Yard, Virginia. The housing constructed during this period reflected the influences of classical or Colonial Revival architectural styles.

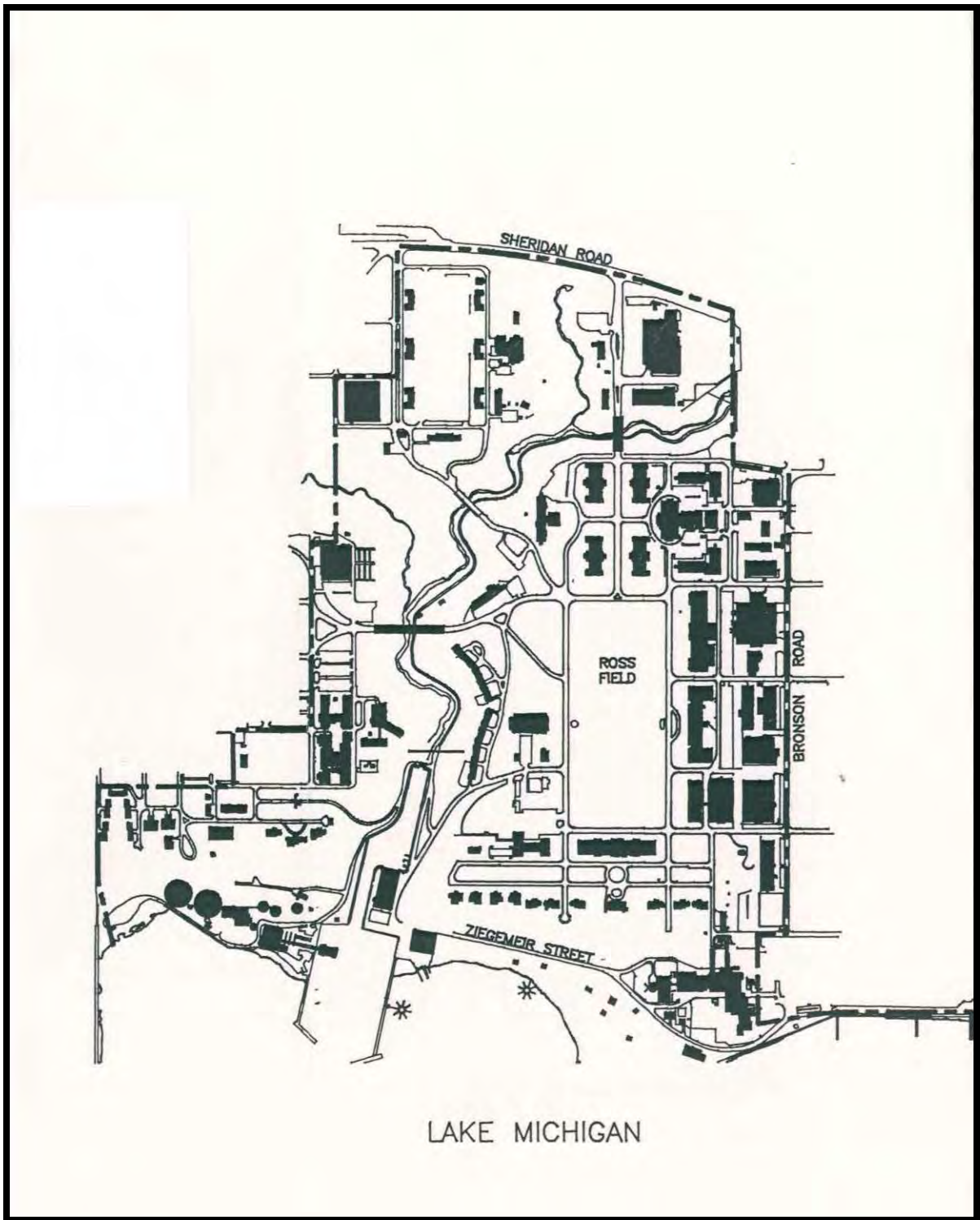


Figure 10. Beaux Arts-inspired plan of Naval Training Center Great Lakes, Illinois. (U.S. Army Corps of Engineers 1995)





Figure 11. 1905 duplex officers housing designed by Ernest Flagg, U.S. Naval Academy, Maryland. (Photo taken by RCG&A)

During World War I, both the Navy and the Marine Corps required additional facilities to train recruits. The Navy also required facilities for building more technically advanced ships, storing ordnance and general supplies, and supporting new shore-based technologies, such as air stations and radio stations. When the United States entered the war in April 1917, the Navy had four training stations with a total capacity to house 6,000 men. In 1918, Navy personnel numbered 31,194 officers and 495,662 enlisted men (Naval Historical Center ca. 1997). By November 1918, the Navy had 40 stations with accommodation for 191,000 men in winter and 204,000 men in summer (Fairbanks and Lovelace 1956:19). The majority of personnel were accommodated first in tent camps, then in wood-frame temporary barracks. The same pattern of providing accommodations occurred at Marine Corps training bases, such as Quantico, Virginia.

After the end of World War I, personnel levels in the Navy and the Marine Corps remained substantially higher than during the nineteenth century. Between 1923 and 1936, Navy personnel ranged between 94,000 and 98,000 officers and enlisted personnel (Naval Historical Center ca. 1997). The Navy owned a large number of installations that supported many technological innovations that were no longer tied to the traditional Navy shipyards. New types of installations required to support Naval operations included training stations, air stations, ordnance and supply stations, Naval stations, and Naval operating bases to support fleet activities. The Marine Corps primarily required expanded training bases. Each new installation required staffing, and the Navy and Marine Corps added more housing to accommodate increasing numbers of shore-based personnel, both at newly established shore facilities and expanding installations. At Navy yards, quarters were assigned, based on availability, to the following personnel: Captain of the Yard, Manager of the Yard, Engineering Officer, Construction Officer, Medical Officer, Supply Officer, Public Works Officer, Aid to Commandant, Inspection Officer, Senior Assistant in the Machinery Division, Senior Assistant in the Hull Division, Senior Assistant to the Captain of the Yard, and Senior Assistant in the Inspection Department. A limited number of houses



were available for civilians employed in the yard on an impermanent basis (Bureau of Yards and Docks 1923:2501-02). At other types of Navy installations, such as hospitals, air stations, and supply depots, public quarters were reserved for senior officers supervising the installation.

During the 1930s, Navy construction programs benefited from additional construction funds available under the National Industrial Recovery Act of 1933 and subsequent work-relief and public-works appropriations acts passed during the mid-1930s during the Great Depression. The National Industrial Recovery Act authorized the expenditure of approximately \$30 million for shore construction work (Bureau of Yards and Docks 1937:1). The Navy used the funds to expand and improve existing installations, as well as build new ones. One aspect of this construction program was to continue to expand the amount of available family housing.

The Bureau of Yards and Docks oversaw construction programs for the Navy and Marine Corps during this period. New installations and expansions to existing installations were undertaken according to master plans. Building designs usually adopted elements of the regional architecture of the installation's location. It was the policy of the Bureau of Yards and Docks to design officer quarters to reflect local climate, site, and local style of architecture within cost limitations and using available construction materials. It was recommended that the quarters be sited to take advantage of sunshine in the primary living spaces and cooling breezes in warm weather. Detached houses were preferred, but costs sometimes required the construction of semi-detached, two-family houses, and four- to six-family apartment buildings. The Department of Commerce publication *Recommended Minimum Requirements for Small Dwelling Construction* was referenced for specifications on the thickness of masonry walls, method of framing, and chimney and fireplace construction (Bureau of Yards and Docks 1938:2T-3T).

Examples of these policies were evident throughout the inventory of Navy and Marine Corps on-shore installations. During the 1920s, the Navy and Marine Corps established several installations near San Diego, California. These installations were planned as unified installations with building designs featuring Spanish Colonial Revival architecture (USACE 1995: Vol. 2:373ff) (Figure 12). At Naval Air Station Pensacola, Florida, family officer quarters exhibited Georgian Colonial Revival architectural motifs. The Navy also constructed four-family apartment buildings at Pensacola to house student officers and their families. During the inter-war period, family housing areas on Navy and Marine Corps bases began to resemble civilian suburban neighborhoods with houses sited along curving streets (USACE 1995: vol 2:373ff; vol 1:221).

From 1936 onward, the number of Navy personnel continued to increase in response to world tensions and the beginnings of World War II in Europe. After the bombing of Pearl Harbor on 7 December 1941, the Navy quickly expanded to one million officers and enlisted men. In 1943 and 1944, Navy personnel numbered more than three million. Just prior to the United States' entry into the war, on-shore installations for the Navy and Marine Corps were expanded. New training, supply, ordnance and general storage, and air installations were established to meet the anticipated demands of war. As part of the establishment of new installations and the expansion of existing installations, the Bureau of Yards and Docks continued to build public quarters to house senior officers. Examples of officer houses constructed during this period were wood-frame, two-story buildings generally with wood siding or asbestos shingle siding, designed in response to the availability of construction materials (Figure 13).

Early during World War II, Navy regulations were changed to allow public quarters to be assigned to married enlisted men with dependents. Initially the regulations allowed quarters for married enlisted men of the top three pay grades, then later extended to all enlisted men. Although the regulations were changed, the implementation of the regulation was always limited by the availability of quarters at a particular location (Fairbanks and Lovelace 1956:20-21).



Figure 12. 1922 senior officer housing (Quarters A) at Naval Training Center, San Diego, California. (Photo taken by RCG&A)



Figure 13. 1943 senior officer quarters at NSA Mid-South, Tennessee. (Photo taken by RCG&A)

The critical need for family housing for war workers and military personnel during World War II was met through the development of low-cost family rental housing by Federal agencies and the military (Fairbanks and Lovelace 1956:20-21). The Navy and Marine Corps required this type of housing near shore bases or at the homeports where Navy fleets were assigned. The types of installations that required additional housing units were mine depots, fuel depots, ordnance plants, powder factories, ship yards, training bases, and supply bases. Four programs were undertaken to supply the Navy and Marine Corps with the required numbers of housing units: (1) the Navy low-cost defense housing program, (2) the Navy-National Housing Agency defense housing program, (3) the Navy-Federal Public Housing Authority defense housing program for the West Coast, and (4) the Navy Homojia and emergency housing program for Florida and other localities (Bureau of Yards and Docks 1947:371ff).

The Navy low-cost defense housing program was the first construction program to be implemented through funds directly allocated to the Navy under Public Law 671 passed 28 June 1940. Although the Navy built and leased or rented the housing, title to the housing remained with the U.S. Housing Authority. The Bureau of Yards and Docks was assigned the responsibility to implement this housing construction program, including design, preparing specifications, and contracting. The first project constructed using these funds was for 50 units at Naval Operating Base Norfolk, Virginia. The houses were completed in 48 days. The plan was to construct 18,895 family housing units in 43 locations ranging from Maine to Hawaii and from Alaska to the Panama Canal Zone. The cost of each unit was not to exceed \$3,500 per family, including land acquisition, installation of utilities, roads, walks, and other accessories. By the end of 1941, approximately 15,600 of the 18,895 planned family housing units were completed and occupied.

In 1942, all housing construction activities were consolidated under the National Housing Agency, which relieved the Navy's Bureau of Yards and Docks from serving as the principal construction agency for housing. The Navy-National Housing Agency defense housing program added an additional 4,315 family housing units to the Navy's inventory. The total defense family housing units constructed for the Navy in 1941 and 1942 was 24,000. The housing situation of Navy personnel assigned to the West Coast was alleviated by the Navy-Federal Public Housing Authority defense program that constructed 10,000 family housing units in California, Oregon, and Washington beginning in September 1944. Temporary emergency housing in trailers or Quonset huts was provided for transient Navy personnel and their families in between overseas assignments. Emergency housing also was constructed in Florida and other localities with a high concentration of Navy installations (Bureau of Yards and Docks 1947:371ff).

The types of housing constructed under these programs were temporary in nature. Buildings were designed for single family, duplex, and multi-family buildings. Units ranged from emergency trailers to efficiency apartments to three-bedroom units. Some large projects incorporated a community shopping center and schools. Rents were within the housing allowance of uniformed personnel (Fairbanks and Lovelace 1956:21).

In summary, the number of family housing units provided by the Navy and Marine Corps dramatically increased during the first half of the twentieth century. Prior to World War I, the Navy and Marine Corps housing policy extended housing only to senior officers residing at on-shore installations. During the inter-war period, the Navy and the Marine Corps acquired additional on-shore facilities and gradually increased the numbers of officer family housing. At the beginning of World War II, the housing policy was changed to include the provision of family housing to enlisted personnel. The results of the housing construction programs implemented during World War II were the construction of temporary buildings. With peacetime personnel levels in the Navy and Marine

Corps higher than at any time in history, providing adequate family housing became an ever-increasing concern during the postwar period.

### **3.2.12 Air Force and Navy Housing Appropriations during the Immediate Postwar Period**

Military family housing was not constructed during the immediate postwar period as military planners focused on supporting the nation's new foreign policy objectives (Office of the Secretary of Defense 1961:5). The immediate priorities of the armed forces included the reorganization of the military's administrative structure and the creation of an independent Air Force. A large number of temporary World War II buildings survived, and Federal funds were directed toward converting these buildings into family housing. Congress did not appropriate funding for permanent family units for two years after the war (USAEC 2003:3-20). The temporary-building conversion program created 12,800 housing units, but this housing was substandard and deteriorated rapidly due to its original design and materials. The program was suspended in December 1947 (USAEC 2003:3-20).

### **3.2.13 Public Law 626**

While Congress and military leaders quantified the magnitude of the military family housing shortage, Congress passed a law in June 1948 to begin to address the problem. Public Law 626 authorized construction at Air Force and Army installations for fiscal year 1949. The Navy was not included. The law was intended to spur construction of family housing through three significant policy changes (USAEC 2003:3-21; U.S. Public Law 626 1948:380-1).

First, size limits rather than cost limits were imposed on the construction of family housing. Public Law 766, which appropriated funds for construction authorized under Public Law 626, reinstated cost limits but simplified them into three ceilings: \$10,000 for commissioned officers, \$7,500 for commissioned warrant or warrant officers, and \$6,000 for enlisted men (USAEC 2003:3-21). Second, Public Law 626 extended family housing to enlisted men, who previously were ineligible for housing. Third, the law repealed a 1917 spending cap that required the approval of the Secretary of War for construction budgets exceeding \$5,000 (USAEC 2003:3-21; U.S. Public Law 626 1948:380-1). Figure 14 provides an example of housing constructed during this period.

Public Law 626 imposed limits on building type and space. Authorized family quarters comprised a "multiple type," which was eight families to a unit, or an "apartment type," which was six families to a unit (USAEC 2003:3-21; U.S. Public Law 626 1948:380-1). The following space limits were mandated:

- 1,080 square feet for enlisted men,
- 1,250 square feet for warrant officers, flight officers, and commissioned officers of or below the rank of captain,
- 1,400 square feet for majors and lieutenant colonels,
- 1,670 square feet for colonels, and
- 2,100 square feet for general officers.

### **3.2.14 Conclusion**

The postwar Air Force and Navy faced an unprecedented challenge in providing family housing to both officers and enlisted personnel in the Cold War era. Historically, the military services





Figure 14. Four-family officer housing constructed in 1948, Mountain Home, AFB, Idaho. (Photo taken by RCG&A)

had provided family housing only to officers. This housing was designed according to regional and adopted popular national architectural styles in domestic design. Occasionally, standardized plans were used. This historical precedence of reflecting popular civilian housing trends in military housing provided an approach for the design and construction of family housing during the Cold War era.

### **3.3 POSTWAR HOUSING TRENDS**

#### **3.3.1 Introduction**

New trends in civilian housing emerged during the late 1940s, the 1950s, and the 1960s. Military housing reflected these housing trends. Rising marriage rates, changing demographics in the workforce, and increasing family wealth resulted in a postwar housing boom (USAEC 2003:3-22). Innovations in housing construction focused on the expanding market for single-family houses in suburban developments.

#### **3.3.2 The Changing Economy, Demographics, and Employment**

A distinctive feature of postwar America was the overall economic prosperity resulting from high wages and high employment. Consumer demand was unleashed after years of economic depression and wartime austerity. The corresponding rise in family income led to a postwar housing boom.

Representing a dramatic increase during the two decades following World War II, the Gross National Product (GNP) rose from \$200 billion in 1940 to \$300 billion in 1950, to over \$500 billion in 1960 (Conte and Karr 2001). Low unemployment during the postwar years contrasted with high unemployment rates during the Depression. Unemployment reached double digits during the Depression and climbed to a peak of 24.9 per cent in 1933 (VanGiezen and Schwenk 2003). In contrast, unemployment fluctuated between three per cent and 4.5 per cent during the 1950s and 1960s; this figure rose above five per cent during recession years 1954, 1958, and 1961 (Schumann 2003). During the 1950s, unemployment dropped to its lowest point of the decade in 1953, when the rate was 2.9 per cent (Rich 2002).

The American economy shifted from reliance on manual labor to office work. By 1953, the number of white-collar employees surpassed the number of blue-collar employees (Manchester 1973:953).

Marriage rates increased and the marriage age dropped. The average marriage age for women during the 1950s decreased from 22 to 20 and into the teens (Manchester 1973:955). Seventy per cent of women, with an average age of twenty, were married by the end of the 1950s (Breines 1992:50). As a result, the country's birthrate rose for the first time since the early nineteenth century (Breines 1992:50). The number of college-educated women having three or more children doubled in twenty years; families with four to six children became the norm (Manchester 1973:956). White women left university at a ratio of two out of three to marry; nearly one-third of married women had their first child by age 20 (Breines 1992:50).

The "doubling-up" of households that occurred during the Depression and World War II declined as more families established independent households. Prior to World War II, many urban families occupied apartments and generally moved to larger apartments as their space needs increased (USAEC 2003:3-23). Twenty per cent of American households reported crowded conditions in 1940 (U.S. Census Bureau 2000a). After World War II, renters graduated to home ownership (Beyer 1965:70). Home ownership increased overall from 43.6 per cent in 1940 to 55 per cent in 1950 (U.S. Census Bureau 2000b). During the 1950s and 1960s, 49.7 per cent of the population under 35 had moved from apartments to owner-occupied houses (Beyer 1965:69, 85).

The demographic shift, begun in the late nineteenth century with the migration from farms to cities and suburbs, continued. In 1900, two-thirds of families lived on farms (Gutheim 1948:8). By the end of World War II, two-thirds of American families lived in cities and suburbs (Gutheim 1948:6). Farm households were much larger than postwar households. Many included a nuclear family and extended families (Gutheim 1948:8). By the end of World War II, more families lived in the suburbs, and the husband traveled to work in an office or a factory (Gutheim 1948:8). The husband frequently was the family's sole breadwinner (Gutheim 1948:8). The postwar family was smaller than its predecessor, averaging fewer than five people and consisting of a mother, father, and children (Gutheim 1948:8).

These changes in the economy and society led to a postwar housing boom. This national demand for housing helped contribute to the growth of suburbanization (USAEC 2003:3-23).

### 3.3.2.1 Disposable Income, Consumership, and Leisure

Disposable income increased with rising income levels. The development of new consumer products marketed through aggressive advertising influenced the rising middle class to dramatically

increase spending and to decrease saving. Improved working conditions, employment benefits, highway systems, and automobile ownership fostered economic confidence.

The median family income rose dramatically, from \$3,083 in the late 1940s to \$5,657 in the late 1950s (Manchester 1973:947). A factor in increased family incomes was the contribution made by women. Two incomes allowed middle-class American families to acquire such big-ticket items as houses and cars, items previously considered luxury goods. Women's contributions enabled the family to purchase "a second car, a house in the suburbs, a college education for the children" (USAEC 2003:3-24).

In contrast to the thrift of the Depression, more of consumers' incomes were spent, rather than saved. Consumer debt grew 55 per cent between 1952 and 1956. Installment credit for automobiles increased 100 per cent (Manchester 1973:947).

One commentator described this rise in spending as "consumerism," a phenomena where Americans were encouraged to acquire the "good life" (Manchester 1973:949). Among the products introduced to consumers were central vacuum systems, vinyl flooring, push-button phones, FM stereo sets, washer-dryers, and electric blankets. Consumers quickly assimilated these items into their lives (USAEC 2003:3-24, 3-25). Television advertising influenced consumerism. By the early 1960s, Americans owned 56.4 million television sets, providing manufacturers an effective way to market products and create demand. In 1957, approximately 75 million Americans watched an average 19 hours of television per week (USAEC 2003:3-24, 3-25).

Economic prosperity and low unemployment created more leisure time. The work week in 1950 was 15 hours shorter than in 1900. Many workers also received paid vacation time and paid holidays. Previously reliant on mass transportation system schedules, workers now drove personal automobiles on new highway networks reducing commuting time between home and job (USAEC 2003:3-25). Consumers used this increased leisure time for family and home-based activities such as sports and bridge parties, and for passive recreation, such as going to the movies and watching television (USAEC 2003:3-25).

### **3.3.3 Historical Overview of Suburban Development**

Suburbs have existed as a community type in the United States since the nineteenth century. While post-World War II suburban housing developments traced their roots to the nineteenth century prototype, these developments also reflected the postwar emphasis on the nuclear family, automobile, and new construction materials and methods (USAEC 2003:3-26).

#### **3.3.3.1 Nineteenth-Century Suburban Development**

The first phase of suburban development in the United States is associated with railroad suburbs, which were built between 1840 and 1890. The term "railroad suburb" referred to a residential development outside the city, but accessible by railroad lines. At first, railroad suburbs were separate settlements from cities, and provided the affluent with an escape from the city. But by the end of the nineteenth century, these outlying developments represented a middle-class ideal. The large suburban houses with lawns in semi-rural settings represented success, security, and moral stability. Nineteenth-century social reformers hailed them as symbols of domesticity (USAEC 2003:3-26).

### 3.3.3.2 Twentieth-Century Suburban Development

During the twentieth century, two urban planning movements influential in the United States incorporated many qualities of the earlier suburbs. These movements promoted ideal developments: the Garden City Movement of the early 1900s and the neighborhood unit of the interwar period. The Garden City movement incorporated open space, greenery, and the interaction with nature in new towns with limited population and size. Developments featured irregularly shaped super blocks; circulation systems that directed traffic to major streets; buildings designed to complement nature; variety in design; courts; and walkways to separate pedestrian and vehicular traffic. The Garden City idea was promoted by English social reformer Ebenezer Howard and advanced in 1902 and 1905, when Barry Parker and Howard Unwin applied its principles in their new towns of Letchworth and Hamstead Gardens, England. Several towns in the United States were developed using Garden City principles, including Homestead, Pennsylvania and Forest Hills Gardens, New York (USAEC 2003:3-26, 3-27).

The neighborhood unit evolved to accommodate the automobile. The plan for Radburn, New Jersey, developed by Henry Wright and Clarence Stein in 1928, applied the neighborhood unit concept. Only a portion of the plan was developed, but set a precedent for suburban development into the postwar period. Radburn illustrated several new planning approaches: neighborhood streets were varied in size to accommodate local traffic and prohibit through traffic; the project housed approximately 5,000 residents, the population level necessary to support an elementary school; 10 per cent of the project was devoted to green space; schools were located at the center of the neighborhood; and shopping areas were located at the periphery (USAEC 2003:3-27).

### 3.3.3.3 Post-World War II Suburban Development

Suburbanization during the post-World War II period was distinguished by its scale, uniform design, and construction technologies. Several factors contributed to the dominance of suburban development during this period. The United States experienced a baby boom as war veterans returned to their families or married and started new families. These new families exacerbated an existing civilian sector housing shortage. Public policies discouraged housing development in urban areas, while government incentives and increased consumer spending power encouraged single-family house construction in suburban developments. Construction methods and new materials developed during the World War II mobilization now were applied to private-sector housing. Assembly-line methods of construction and cheaper materials enabled mass housing construction. The automobile enabled workers to live farther away from employment (USAEC 2003:3-26).

One distinguishing feature of post-World War II suburban development was its focus on children. The suburbs were seen as places where families could take advantage of new schools and other amenities in an environment that was safer, quieter, and less congested than the city. These features complemented society's increasing focus on home, family, and children. An urban planner described the suburbs as "generally home-centered, with the primary emphasis on child-rearing, and with the public school the chief link between home and community..." Family life was organized around children's dance, music, and sports lessons, play groups, parties, and Cub Scout and Girl Scout meetings (USAEC 2003:3-27).



### 3.3.4 Housing Trends

The housing industry was transformed during the postwar period in response to pent-up consumer demand for housing; new methods of home financing; Federal tax incentives that provided income tax deductions for mortgage interest and discouraged ownership of vacant land; new construction technologies; and road construction that facilitated travel (USAEC 2003:3-27, 3-28). Construction of single-family houses took precedence over multi-family apartment buildings. New design techniques and construction materials emerged. House designs abandoned traditional styles, such as Colonial Revival, and shifted toward the modern, one-level or split-level horizontally oriented ranch style. Brick was replaced by new materials such as asbestos and aluminum (USAEC 2003:3-28).

#### 3.3.4.1 General Housing Trends

Trends in housing reflected postwar prosperity. The housing market served consumers who wanted single-family detached houses, more space, access to highways, and access to public utilities, such as plumbing, gas, electricity, and phone service. The prevalence of the single-family detached house continued to grow, while the proportion of attached dwellings and apartments declined. In 1890, the largest proportion of non-farming families, 44.3 per cent, lived in apartments. The second-highest number, 41.9 per cent, lived in single-family houses, and 13.8 per cent lived in rowhouses or semi-attached houses (USAEC 2003:3-30). In the 1940 census, 56.6 per cent of dwelling units were tenant-occupied, compared with 43.3 per cent owner-occupied, reflecting the continuing prevalence of apartments and other rental housing (Inter-University Consortium for Political and Social Research 2002). After 1950, the number of homeowners surpassed renters (Utah Governor's Office of Planning and Budget 2003:2). The proportion of detached houses increased slightly, from 63.6 per cent in 1940 to 68.8 per cent in 1960. The number of attached units (rowhouses and side-by-side houses) and buildings with two or more units remained steady or declined (U.S. Census Bureau 2000c).

Statistics on crowding levels in housing document the move to single-family detached houses and a reduction in the number of occupants per dwelling. These statistics indicate that dwellings increasingly were occupied by members of one nuclear family. Of the 1940 census respondents who reported per-person room occupancy levels, 20.2 per cent reported crowded conditions where one or more people occupied a room; nine per cent reported severely crowded conditions with more than 1.5 people per room. Crowding declined in 1950, when 15.7 per cent of those surveyed reported crowded conditions and 6.2 per cent reported severely overcrowded conditions. In 1960, 11.5 per cent of respondents were crowded, and 3.6 per cent were severely crowded (U.S. Census Bureau 2000a).

Housing during the postwar period increasingly incorporated public utilities that improved sanitary conditions and provided convenience for homeowners. In 1940, 45.3 per cent of homes lacked complete plumbing facilities, which were defined as hot and cold piped water, a bathtub or shower, and a flush toilet. States in which nearly or more than 50 per cent of dwellings lacked plumbing were concentrated in the West and South; states in which fewer than 25 per cent of residents lacked complete plumbing were concentrated in the Northeast. The national rate declined in 1950, when 35.5 per cent of Americans lacked complete plumbing, and fell more drastically in 1960, when only 16.8 per cent of Americans lacked complete plumbing. Units specifically lacking a flush toilet totaled 35.3 per cent in 1940, and dropped to 24.5 per cent in 1950 and to 10.3 per cent in 1960 (U.S. Census Bureau 2000d, 2000e).

Statistics on house heating fuel indicate that postwar homeowners increasingly relied on gas and fuel oil, and decreased dependence on less-convenient coal and wood. The number of homes

using utility gas increased from 11.3 per cent in 1940 to 26.6 per cent in 1950 to 43.1 per cent in 1960. Ten per cent of respondents used fuel oil in 1940, compared with 22.6 per cent in 1950 and 32.4 per cent in 1960. Electricity and bottled gas were negligible heat sources in 1940 and 1950, but in 1960 increased to 1.8 per cent and 5.1 per cent, respectively. Coal was the dominant house-heating source in 1940, with 54.7 per cent of homeowners using it, but its use declined to 12.2 per cent in 1960. Wood use declined from 22.8 per cent of homeowners in 1940 to 4.2 per cent in 1960 (U.S. Census Bureau 2000f).

Telephones were incorporated into a majority of American households by 1960, the first year for which statistics are available. In that year, only 78.5 per cent of dwellings included a phone. States with lowest per centages of households phones were concentrated in the West and South; in the state of Mississippi, where more than half of the households, 54.7 per cent, did not have phones. The highest concentration of residents with phones was in the Northeast; Connecticut claimed the highest rate of home phones in the country, at 91.4 per cent (U.S. Census Bureau 2000g).

#### 3.3.4.2 Increasing House Size

The housing shortage after World War II created an estimated need for 20 million houses over the next twenty years (Gutheim 1948:42). During the immediate postwar period, housing advocates called for the construction of larger houses than were being offered in the private housing market (Gutheim 1948:43). The author of a study conducted in 1948 noted that postwar houses were constructed according to minimum standards for space and “seldom have provided enough room for a normal family of five people” (Gutheim 1948:41). The children’s rooms were particularly small and did not provide sufficient space for a bed and storage. A lack of space for a desk necessitated the use of other areas of the house for studying (Gutheim 1948:42).

Advocates for better house design also called for larger kitchens. The postwar kitchen was a multi-use area accommodating child care, sewing, and laundry in addition to food storage, preparation, and dining (Gutheim 1948:22, 44). Children needed space for toys and storage. Advocates promoted including toy storage space in each room of the house (Gutheim 1948:27). Additional privacy, recreation space, and storage were identified as necessities for teenagers (Gutheim 1948:32). Many of houses constructed during the period lacked basements and attics, compounding storage problems in an era known for consumerism. Storage of household equipment used periodically posed further challenges (Gutheim 1948:44). Designs with additional storage in the family areas, kitchen, and bedrooms were endorsed (Gutheim 1948:48).

Separate parlors, butler’s pantries, and “other specialized rooms” were eliminated in the postwar house (Gutheim 1948:44). Open floor plans with single consolidated living spaces were advanced. Bedrooms generally were small. Critics contended that parents’ bedroom should be larger than the other bedrooms in the house, with additional privacy (Gutheim 1948:48).

#### 3.3.4.3 Cost of Housing

Higher incomes enabled an increased number of workers to become homeowners during the postwar period. Depression-era and postwar legislation reduced barriers to home ownership and provided access for low- and middle-income workers who previously did not possess the resources to enter the housing market (USAEC 2003:3-31).

Housing prices rose to capture buyers' increased spending power. The unadjusted national median house value totaled \$2,938 in 1940, and rose to \$7,354 in 1950 (U.S. Census Bureau 2004). Between 1946 and 1949, a majority of houses, 64 per cent, cost less than \$10,000; 29 per cent cost between \$10,000 and \$19,999 ("The House Market" 1950:120). A 1950 article in *Architectural Forum* magazine speculated that the housing industry's "prime customer" of the decade would be able to spend even more on housing. This "prime customer" was a 35-year-old married man with at least one child, and earned between \$4,000 and \$10,000 a year. The "prime customer" could afford a house valued at between \$10,000 and \$25,000 ("The House Market" 1950:120).

However, this prime customer represented only 37 per cent of urban families ("The House Market: 1950:120). As late as 1956, more than half of houses constructed were designed to sell for less than \$15,000 (USAEC 2003:3-31). The FHA's and the Veterans Administration's 1956 ranges for moderate-priced homes were approximately \$9,600 to \$14,000 (Housing and Home Financing Agency [HHFA] March 1956:2-3). In 1960, the U.S. Census identified the national unadjusted median house value as \$11,900, but that figure rose dramatically a short time later. According to the HHFA, the median price for homes sold between April and June 1962 was \$17,400. In June, 35 per cent of unsold completed homes and 40 per cent of homes under construction were listed at \$20,000 or more (HHFA September 1962:2).

### **3.3.5 The Construction Industry in the 1950s**

The postwar housing boom is reflected in statistics on housing starts. From 114,000 in 1944, housing starts rose more than tenfold by 1950, to 1.7 million (Ohio Historical Society 2000). Between 1940 and 1960, the number of total housing units in the United States grew by 56 per cent, from 37.4 million to 58.3 million (U.S. Census Bureau 1990:2). Construction was concentrated in the suburbs. In 1946, suburban construction represented 62 per cent of nationwide construction (Ohio Historical Society 2000). Limited statistical data are available on the construction industry before the Census of Construction Industries was begun in 1967. The HHFA tracked changes in general construction costs and production of building materials. The production of traditional building materials and components, such as hardwood floors, wood doors and windows, and brick fluctuated as builders reduced their use of these materials. Instead, builders experimented with new technologies and cheaper new materials. The HHFA stopped reporting these trends during the early 1960s (USAEC 2003:3-32).

### **3.3.6 Advances in the Construction Industry**

#### **3.3.6.1 Construction Techniques and Standardization**

During the early 1950s, contractors and some architects were reluctant to adopt the principle of modular measure. In response, the Producers' Council undertook a promotional initiative and spent \$100,000 over the next ten years to encourage its acceptance (Lane 1952:125). The brick industry and metal and wood window manufacturers standardized their product dimensions (Lane 1952:125). The Producers' Council endorsed modular measure for its economy of time and materials. The council asserted that cost of materials would decrease under full adoption of the system due to lower waste, and labor costs required for cutting and fitting materials also would decline (Lane 1952:125).

### 3.3.6.2 New Materials

In 1960, the HHFA made several observations about new construction materials and housing construction. These observations related to declining use of high-maintenance and expensive materials. The agency noted that lath and plaster were no longer standard interior finishes due to labor costs. Drywall typically was used in mass-produced homes priced for the middle-income market, while plaster finishes were restricted to more expensive homes. Several building elements traditionally constructed on site and in wood were being replaced by less expensive, standardized components. Wood sash was replaced by metal and aluminum window frames. Wood floors were replaced by a variety of composition materials, including asphalt, vinyl, cork, and rubber tile. The number of new dwellings sheathed entirely in wood decreased to one-fourth of all dwelling units. One-third of wood-frame houses were faced in brick or in a combination of brick and wood, or in aluminum siding. Wood shingles declined in use, and were replaced by asphalt shingles (USAEC 2003:3-33).

### 3.3.6.3 The Rising Dominance of the Merchant Builder

Merchant builders, who specialized in large, rapidly constructed, standardized development projects, dominated residential construction during the post-World War II period. Previously, the majority of houses were constructed by custom builders, who were retained by owners to erect site-specific dwellings. The custom builders frequently were responsible for full construction services, including plans and specifications, cost estimates, and construction work (USAEC 2003:3-33). Approximately half the houses constructed during the 1930s were built by custom builders (“The Builder’s House 1949” 1949:81).

Prior to the late 1930s, merchant builders produced “little more than over-styled boxes” that were not noted for their family-friendly design or innovative use of modern building materials (“The Builder’s House 1949: 1949:81). The merchant builder rose to prominence in the construction industry during the national mobilization associated with World War II. The construction techniques refined by merchant builders were suited ideally to the large-scale housing developments required for defense workers. The shift in residential construction was supported by government policies. In 1940, the FHA introduced Title VI mortgage insurance, which enabled loans for 90 per cent of project construction costs. Housing demand in the postwar years made large-scale housing projects more attractive to merchant builders. By 1949, the merchant builders were responsible for approximately 80 per cent of the nation’s annual residential construction (“The Builder’s House 1949” 1949:81).

Standardization in design and in building components made possible rapid construction of large-scale housing developments. Assembly-line construction techniques, mechanization, and standardized materials maximized efficiency. Construction crews were specialized by task, and work followed an assembly line sequence of grading, foundation work, structural framing, exterior finish, and interior finish (USAEC 2003:3-33). Merchant builders adapted to the postwar market and promoted development plans and house designs catering to middle-class families. Merchant builders retained architects, incorporated landscaping, and provided access to community facilities such as shopping centers, schools, and churches, to distinguish their products (“The Builder’s House 1949” 1949:81).

Merchant builders often were responsible for all aspects of neighborhood development, including land acquisition, subdivision, road construction, utility installation, housing construction, advertising and sales. The system offered convenience to the consumer and the appeal of safe

neighborhoods of like-minded families. The merchant builder realized profits through economies in construction and volume sales (USAEC 2003:3-33, 3-34).

### **3.3.7 Levittown**

The dramatic change in residential construction and the rise of the merchant builder are illustrated by the success of Abraham Levitt and his sons William and Alfred, who were responsible for the construction of 17,400 houses on Long Island, New York. Built between 1947 and 1950, Levittown was the first and archetypal postwar development of detached single-family houses, which were impressive in their numbers and uniformity. The houses originally were marketed to World War II veterans and their families seeking to escape crowded New York City neighborhoods. Applying the financial incentives offered in the GI Bill with FHA-guaranteed loans, veterans paid \$7,900 to \$9,500 for a 750- to 800-square-foot house in Levittown. The Levitts executed the massive housing project emphasizing, efficiency, economy, and standardization. For example, architectural designs were uniform and building materials were standardized. Construction workers used power hand tools, such as saws and nailers. Freight cars transported raw lumber into a cutting yard where standardized building elements were fabricated. The Levitts used these techniques in two subsequent developments in New Jersey and Pennsylvania (USAEC 2003:3-34).

#### 3.3.7.1 Site Planning

The Levitts selectively applied urban planning principles in practice during the 1950s that distinguished their developments as suburbs distinct from cities. Houses were sited on individual lots, which fronted 66-foot-wide curvilinear streets. Major traffic was directed to the periphery of the community, and paved sidewalks provided for pedestrian access. Trees, landscaping, and front and rear yard setbacks created “a more park-like appearance.” Open space and swimming pools provided recreation (USAEC 2003:3-35).

#### 3.3.7.2 House Design

Levittown houses featured floor plans that were more open than those found in traditional pre-World War II housing. The models initially offered were one-story, 800 square-foot “Cape Cod” designs, with unfinished attics. The exterior design was symmetrical with a center door flanked by shuttered windows. Houses were distinguished from one another by paint color. The floor plan comprised a living room, kitchen, two bedrooms and one bathroom, with minimal divisions between primary living spaces. Some models included combined living and dining areas that flowed into the kitchens. The kitchens were modern and appointed with an electric range, a refrigerator, steel kitchen cabinets, a washing machine, and a water heater. Later models included built-in television sets. By 1949, a 900-square-foot asymmetrical ranch house plan was introduced that reversed the locations of the kitchen and living room. In this plan the front entry opened into a hallway adjoining the kitchen. The living room was located at the rear of the house, and its large windows overlooked the rear terrace (USAEC 2003:3-35; “The Builder’s House 1949” 1949:84-93).

### **3.3.8 House Types**

#### **3.3.8.1 Single-Family Houses**

The single-family dwelling was the most common house type constructed during the postwar period. New features and designs were introduced. The ubiquitous style was a one-story building with a low roof and minimal ornamentation that extrapolated motifs from historical architectural styles. Inside, postwar single-family houses featured an open floor plan with minimal separations between common rooms. An open kitchen served as the control center of the house. Hallways divided the public and private space. Bedrooms contained closets. Garages or carports were included to accommodate automobiles, and storage spaces were essential since most houses lacked attics and basements. The house was integrated into the exterior environment through large windows that provided views of rear yards and created a feeling of spaciousness (USAEC 2003:3-35).

House plan books increased the popularity of architect-designed houses and provided a variety of price ranges and styles. Home buyers could review the books and purchase blueprints and specifications for specific models, or obtain design ideas. Home Planners, Inc., a Detroit, Michigan company, claimed in a 1954 edition that 1.5 million copies of their plan books and 250,000 sets of blueprints were sold over the previous eight years (USAEC 2003:3-36; Talcott 1954). Although two-story homes were featured in the Home Planner, Inc. compendium, plans for ranch and split-level houses were most numerous. Ranch designs were simple rectangular boxes, rambling ranches featured projecting wings, and split-level houses comprised a one-story wing intersecting a two-story wing at mid-level. The 1954 edition of a design book published by Home Planners, Inc. featured three price ranges: economy-budget homes or one-story homes smaller than 1,000 square feet; economy-deluxe homes or one-story homes between 1,000 and 1,300 square feet; and custom-deluxe homes or one-story homes larger than 1,300 square feet (USAEC 2003:3-36; Pollman 1954).

#### **3.3.8.2 Multi-Family Dwellings**

##### **3.3.8.2.1 Townhouse/Rowhouses**

The townhouse and rowhouse, built in the United States from the eighteenth century onward, traditionally are urban house forms built to house all economic classes. Each residence was single-family, with its own front door adjoining the street with access from the public sidewalk; the residences shared a common wall. Before the twentieth century, the house type often was built on narrow lots generally platted along gridded streets. Any green space allocated to the dwelling was located at the rear of the buildings. During the twentieth century, rowhouse design evolved to accommodate suburban sites at the edges of cities. Buildings featured rowhouses in groups of four or eight; the design frequently was united through repeating or alternating architectural ornamentation. In contrast to earlier designs, these rowhouses often were set back from the street and included both front and rear yards. During the 1950s, townhouses often included amenities and features similar to those found in suburban single-family houses, including a full bathroom and a half bath, picture windows, linoleum, basements, and kitchen appliances (USAEC 2003:3-37).

##### **3.3.8.2.2 Multi-Unit Dwellings**

Multi-unit dwellings generally are buildings with common entrances that house two or more residential units. This class of building includes high-rise and mid-rise apartment buildings as well as lower-scale garden apartments. High-rise apartments were made possible by the invention of the

elevator and advances in building service technology including HVAC and plumbing. Mid-rise apartment buildings generally did not include elevators, and their height was restricted to reasonable access by stairways. Both apartment building types typically were urban forms (USAEC 2003:3-37).

Low-scale, multi-unit buildings were built in new towns or suburbs, and known as garden apartments. The form was introduced between World War I and World War II, and was particularly popular in housing for defense workers during the World War II mobilization. Vanport City, Oregon, was built early in the war to house 40,000 industrial workers. The basic two-story building housed 14 families. Each apartment featured a living room, a kitchen, a toilet, and a bedroom, and extended from the front to the back of the building. Each first-floor apartment had its own entrance; second-floor apartments shared an entry staircase. Separate service buildings housed heating plants, hot water tanks, bathtubs, and laundry rooms (USAEC 2003:3-37; "Vanport City" 1943:53-57).

Vanport City was minimally landscaped, owing to its utilitarian architectural program designed to address a short-term need. The complex was slated for demolition after the war. Formal landscape designs typically were developed for garden apartment complexes. Circulation, formal plantings, and open space typically were included in other developments with garden apartments. Fairlington, built in northern Virginia in 1943 to house 10,000 Pentagon workers, featured U-shaped courts that created building setbacks and green space (Karaim 2000:26). Carteret Village, built in the suburb of Orange, New Jersey, during the early 1940s, featured apartments housed in six, two-story buildings. Four irregularly shaped buildings formed a square frame that surrounded two central U-shaped buildings. Each building was landscaped with lawn and trees. Site design and irregular massing of the component buildings fostered integration with the environment and prevented an institutional appearance (Architectural Record 1944:86-7). Garden apartments constructed during the postwar period were surrounded by open space reflecting the popular rejection of crowded urban housing conditions, national trends in single-family housing, emphasis on outdoor living spaces and interaction with nature. One developer recommended the buildings should occupy no more than 15 per cent of the site (Ring 1948:3).

### **3.3.9 1956 Women's Congress on Housing**

In 1956, the HHFA invited 103 homemakers from around the country to share their ideas for the best designs for the single-family house. The meeting was convened as the Women's Congress on Housing; additional views were obtained through more than 4,000 letters (Heath 1956:1). The group discussed trends that affected home design and provided ideas for interior features and exterior appearances.

One significant change noted in domestic life during the postwar period was its informality. Several reasons were cited. The increased popularity of television translated to greater time at home spent in relaxed, passive recreation. Higher incomes increased consumerism and the number of possessions. High employment made it difficult to find domestic help to maintain order (Heath 1956:1-2). Participants wanted houses designed to accommodate changes in living patterns, regional topography and climate, individual expression, and the personal needs of each occupant (Heath 1956:2-3). Overall, the women wanted a minimum of three bedrooms with closets, a den, one and a half baths, a two-car garage with storage, a basement, and an attic (Heath 1956:6-7).

Participants preferred interior designs that provided maximum convenience for the family and for cleaning. Segregation of space was desirable. Plans with quiet areas, such as bedrooms and dens, clustered together and separated by hallways from the active areas of the house were promoted. The women also discussed the desirability of a new spatial division, a family room, which could be

attached to the kitchen and which provided a place for family togetherness. Meals could be served in the family room and children could work or play within range of their mother (Heath 1956:4). The addition of a family room for daily life made possible a more formal living room, comparable to the historic parlor. The living room became a quiet room used for entertaining guests (Heath 1956:5).

Further recommendations included the addition of a “decontamination area” and bathroom near the kitchen and a front foyer to enable removal of boots and coats before entering the house. Both requests were seen as making cleaning easier, as were interior hallways to reduce foot traffic between rooms. A formal dining room was desirable and seen as necessary for teaching children table manners in a formal setting (Heath 1956:5-6).

The congress preferred exterior designs that complimented the informality and simplicity of the interior. Exterior designs were preferred that did not reflect a particular architectural style, except in general terms. Pitched roofs with overhanging eaves and harmony in the exterior elements were cited (Heath 1956:8).

### **3.3.10 Road Design during the Postwar Period**

The automobile made possible the development of suburbs, but architects, planners, and builders strove to control their impact on suburban communities. They recognized the potential for unrestricted traffic in residential neighborhoods to result in accidents, property damage, injury and death. Planners of suburbs employed a variety of design techniques to control the dangerous traffic. Curvilinear streets and cul-de-sacs were intended to curtail high-speed traffic. Off-street parking was encouraged by large lots that accommodated carports or attached garages. Planners advocated irregular plans that incorporated green space and recreational areas, and developers attempted to retain existing trees and topography to integrate natural landscapes in street plans. Subdivision design standards for the FHA incorporated these planning principles; Air Force and Navy design instructions referenced the FHA design standards. These standards encouraged cul-de-sacs, three-way intersections, and curvilinear streets (USAEC 2003:3-39).

### **3.3.11 Conclusion**

Higher wages and pent-up consumer demand fueled a housing boom during the postwar period. Housing trends in the civilian market focused on meeting the housing need quickly through standardization of materials and construction methods. Merchant builders employed standardized materials, assembly-line construction techniques, and uniform house design to construct large-scale residential developments. The construction industry met consumers’ demand for single-family dwellings with modern amenities. These developments were located outside urban areas in suburban settings that incorporated nature and restricted congestion. These trends were evident in military family housing constructed during the period.

## **3.4 GOVERNMENT HOUSING POLICIES**

### **3.4.1 Introduction**

The policies of several Federal government agencies influenced the development of private-sector civilian housing, public housing, and military family housing during the postwar period. Government policies directly and indirectly encouraged homeownership, and favored single-family



houses in suburbs. Foreclosures and bankruptcies during the Depression highlighted the need for increased Federal involvement in financing home ownership and protecting homeowners during economic upheaval. Federal programs, such as guaranteed FHA and VA loans and the development of a comprehensive national highway construction program, encouraged suburban homeownership. This increased government involvement established the precedent for Congressional support of both limited appropriations for military family housing and of the private-sector Wherry and Capehart programs.

### **3.4.2 Overview of Federal Housing Policy**

#### 3.4.2.1 Federal Housing Policy

The Federal government involvement in the U.S. housing sector dates from World War I, and has focused primarily on financing. Historically, Congress left the challenges of alleviating housing shortages and providing adequate housing for low- and middle-income citizens to the private sector, local governments, and charitable organizations. The private sector and elected officials approached government intervention in the housing market with caution, fearing conflicts with private enterprise. The effect of the economic Depression upon large segments of the population prompted the Federal government to create comprehensive housing policies (USAEC 2003:3-42).

As the Federal government formulated its housing policy, debate arose concerning the level of quality appropriate for government-owned housing. The dominant opinion held that such housing should provide the lowest acceptable quality of shelter. This opinion later influenced provisions of the Wherry and Capehart acts extending Federal mortgage insurance for the construction of military family housing. The percentage of the Federal housing budget devoted to low-cost housing historically has been modest. Critics contend that the Federal government historically has not been interested in solving the problem of inadequate housing, particularly for low-income citizens. The low funding levels for the military construction of family housing during the 1950s and 1960s tend to support this contention. Low Congressional appropriations for military family housing, including those for the Air Force and the Navy, prevented the service branches from addressing the housing shortage through traditional military construction procedures and eliminating the military housing shortage (USAEC 2003:3-43).

#### 3.4.2.2 Federal Housing Policy during World War I

The mass mobilization of defense workers for World War I prompted the first comprehensive Federal program for private housing. The surging population around production centers created a housing shortage, which was particularly acute for workers with modest incomes. Congress established the U.S. Shipping Board Emergency Fleet Corporation (EFC) and the U.S. Housing Corporation (USHC) in 1918. The two organizations used different approaches in addressing this housing shortage. The EFC took an indirect approach through which funds were loaned to limited-dividend realty companies for housing for shipyard employees. Under the EFC's supervision, 28 privately owned projects in 23 cities were built, creating 8,000 houses and 800 apartment units. The USHC adopted a direct approach. The agency built and managed housing for workers at arsenals and Navy yards, including 6,000 houses and 7,000 apartments in 16 states and the District of Columbia (Lusignan et al. 2001:10-11).

After the war, Congress dismantled both agencies and sold USHC housing and any EFC housing acquired through mortgage defaults. The Federal government returned to its prewar policy,

which relied upon the private sector and charitable organizations. Members of Congress remained uneasy with long-term involvement in the housing market. However, the programs established during the war set a precedent for two forms of government involvement in housing: Federal loans and direct construction. These precedents helped shape Federal housing policy during the 1930s (Lusignan et al. 2001:12).

#### 3.4.2.3 Impact of the Great Depression on the Housing Industry

The 1929 stock market crash affected all aspects of the private housing market and the construction industry. By 1933, housing construction had dropped to 93,000 units per year, down 90 per cent from a record high of 176,700 in 1925. Of the 14 million Americans who were unemployed, one-third had worked in the building trades (Lusignan et al. 2001:26). Nationally, only 150,000 workers were employed on construction sites (USAEC 2003:3-44).

The effect of the Depression on homeowners with mortgages was dramatic. The highest mortgage foreclosure rates in U.S. history occurred during the Depression. In 1933 alone, mortgage foreclosures displaced 273,000 Americans, at a rate of 1,000 per day. Half of all mortgages were in default. The drastic scale of mortgage defaults indicated problems with the then-current home financing system. Home ownership was a luxury, mortgage terms were stringent, and borrowers were subject to downturns in the economy. House purchases commonly occurred through full payment, or through short-term mortgages that required a 30 per cent down payment. Mortgage payments typically were spread over one to three years. A common payment structure was balloon financing, under which small payments were made for the majority of the mortgage and a large payment was made at the end of the mortgage. The loan holder could refinance the loan when the mortgage expired, subject to current market conditions and terms. This system functioned well when economic conditions were favorable, but during economic downturns such as the Depression, mortgage holders often lost their equity and their houses through default and foreclosure (USAEC 2003:3-44).

#### 3.4.2.4 Early Federal Efforts to Assist the Housing Industry

During the early years of the Depression, the Federal government attempted to alleviate its effects by targeting home defaults and foreclosures. In 1931, President Hoover convened the White House Conference on Home Building and Home Ownership to find ways to promote and encourage middle-class homeownership by identifying weaknesses within the home financing system. Participants made recommendations for increasing homeownership, strengthening the credit system, improving planning and zoning, and rehabilitating older homes (USAEC 2003:3-44).

Federal legislation enacted during the Roosevelt administration attempted to lower the foreclosure rate, stabilize the housing market, and reduce unemployment. The Home Owners Loan Act of 1933 authorized the creation of a corporation to purchase mortgages at risk of foreclosure. The National Industrial Recovery Act authorized the Public Works Administration to fund low-cost housing, slum clearance, and construction of new housing in rural communities (USAEC 2003:3-45; Lusignan et al. 2001:27-8).

#### 3.4.2.5 National Housing Act of 1934

Construction workers accounted for many of the nation's unemployed during the Depression. Harry L. Hopkins, Federal Emergency Relief Administrator, testified to Congress that workers in the

building trades represented the single largest unemployed group in the country. He emphasized that the “fundamental purpose” of the National Housing Act of 1934, which Congress was considering for passage, was employment. The National Housing Act’s three goals were to increase homeownership, protect home financing institutions, and stimulate employment in the building industry (USAEC 2003:3-45).

#### 3.4.2.6 Creation of the Federal Housing Administration

The National Housing Act also created the FHA, which directly influenced middle-class homeownership. The FHA supported several changes in the home financing system that made home ownership easier, including long-term loans, low down payments, and regular monthly payments of principal and interest over the life of a loan. Construction projects seeking to qualify for FHA loans were required to meet minimum construction and inspection standards, so the agency influenced house and subdivision design. These policies helped the home construction industry rebound. From 332,000 in 1937, housing starts rose each year and nearly doubled in 1941 to 619,000 (USAEC 2003:3-45).

#### 3.4.2.7 Lanham Act Housing

The Federal government built emergency housing for defense workers and military families during the rapid mobilization for World War II. The Lanham Act, authorized in 1940, was the result of a compromise between the government with an immediate need to house defense workers and the construction industry concerned over government competition. Housing was authorized only in communities where housing shortages impeded defense industries, and where the private sector was unable to meet the housing need. The act authorized a total of \$150 million in construction (USAEC 2003:4-2).

Under the Lanham Act, the Federal Works Administrator acquired land and developed construction plans. The average per-unit cost within the developments could not exceed \$3,000; no individual unit could cost more than \$3,950. These caps later were raised to an average per-unit cost of \$3,750 and an individual unit maximum cost of \$4,500. Proceeds from rent were used to operate and to maintain the developments. Those eligible for Lanham Act housing included families of enlisted military men, civilian employees stationed at Army and Navy installations, and workers in industries essential to national defense. Nearly one million units were built under the Lanham Act (USAEC 2003:4-2; HHFA 1953a:61).

To address the concerns over competition with the private sector, amendments were made to the Lanham Act in 1943 to prohibit construction under the Act after the war, and it required the demolition of all units within two years following the war. In the Housing Act of 1950, Congress added Title VI to the Lanham Act, which provided a comprehensive plan for disposing of remaining Lanham housing. Disposition was stopped later that year to conserve government resources potentially needed to support the Korean conflict, but resumed in 1953. By 31 December 1953, the government had disposed of 729,000 Lanham Act units and retained 214,000 units (USAEC 2003:4-2; HHFA 1953a:61-2).

### **3.4.3 Overview of Federal Agencies Affecting Postwar Civilian Housing Markets**

#### 3.4.3.1 Federal Highway Policy

The increasing popularity and importance of the automobile strained the nation's road network. The Federal government gradually improved and enhanced the national road system throughout the twentieth century. By the late 1930s, a limited system of national toll highways was proposed to shorten travel times and to provide efficient transportation for national defense. The Federal Highway Act of 1944 authorized a national highway system, but did not include Federal funding or commit the Federal government to building the system. Limited construction was completed; disputes over Federal and state cost-sharing and construction priorities prevented the development of a comprehensive long-term plan. In 1956, President Eisenhower oversaw the development of a "grand plan" for a comprehensive system of national highways funded through a Federal gas tax and state contributions. Bipartisan Congressional support and state agreements enabled passage of the Federal Aid Highway Act of 1956 (Weingroff 1996). Forty-one thousand miles of roads were constructed at a cost \$76 billion. This road construction was the biggest public works project in history (Manchester 1973:928). The new highway system further reduced commutes between city and suburb.

#### 3.4.3.2 The Veterans Administration

In addition to the FHA, the Veterans Administration (VA) also provided housing loan guarantees under the Serviceman's Readjustment Act of 1944, known popularly as the "GI Bill." These loans required a five per cent down payment and offered lower interest rates and longer amortization periods than FHA loans. Between 1944 and 1950, loans from these agencies could be combined to purchase a house without a down payment; Federal law was changed in 1950 to prevent combining the two loans (USAEC 2003:3-46).

#### 3.4.3.3 The FHA

The FHA focused efforts on increasing homeownership by the late 1930s and received support from members of the housing industry, including mortgage institutions, builders, real estate companies, and building materials manufacturers. The Federal agency encouraged the construction of suburban houses and discouraged new construction in established urban neighborhoods in large cities or the rehabilitation of older homes. The FHA assessed older and/or racially diverse neighborhoods to be an investment risk (USAEC 2003:3-46).

The FHA also influenced house and subdivision design. To qualify for FHA-guaranteed mortgages, projects were assessed for compliance with agency standards and guidelines for house design, and subdivision planning and development. The FHA issued technical bulletins on the standards and guidelines. The construction industry gradually adopted these requirements for all projects regardless of FHA involvement. The building industry soon recognized that projects adopting FHA standard formulas received quick approvals for guaranteed mortgages. Municipalities and state governments frequently adopted the FHA standards for state and local approvals. The FHA was responsible for the overall design of postwar residential developments through design standards linked to mortgage guarantees (USAEC 2003:3-46, 3-47).

The agency published its first set of minimum housing standards in 1936. These standards recognized five house types ranging from a one-story, two-bedroom bungalow measuring 534 square

feet to a compact, two-story, three-bedroom house. The bungalow, known in the house construction industry as the “FHA minimum house,” met minimum standards for light, air, and space, and was popular for its low cost and efficiency (USAEC 2003:3-46; Ames and McClelland 2002). The FHA standards for subdivisions addressed superblocs, greenspace, curvilinear streets, cul-de-sacs, and courts (USAEC 2003:3-47).

The influence of the FHA standards and guidelines upon subdivision and house design extended to military family housing. Rarely innovative in design, materials, and technology, the military relied on precedents established in the civilian construction industry (USAEC 2003:3-47).

#### 3.4.3.3.1 FHA Minimum Property Standards for Single Dwelling Units

While the FHA’s minimum standards for single-family house designs ensured a degree of uniformity, local and regional standards also were circulated to address specific housing markets. During the late 1950s, these standards were simplified and standardized on a national level as home building technology evolved, design trends changed, and builders began operating on a national level. The minimum requirement for a single-family house was two rooms with a bathroom. A 10- by 20-foot minimum was established for a single-car garages and carports; an 18-foot, four-inch by 20-foot minimum was adopted for two-car garages. At least 25 per cent of the required storage space was to be located within the house, and 50 per cent was to be located outside the dwelling. Space for laundry facilities also was required. Other changes introduced in the new nationalized standards included requirements for kitchen storage, minimum countertop area, and kitchen shelf spacing (USAEC 2003:3-48, 3-49).

#### 3.4.3.3.1 FHA Minimum Property Standards for Multi-Unit Buildings

The FHA’s standards for multi-family units in the 1950s closely reflected those developed for single-family units, with the exception of density. These standards were revised in the 1961 *Minimum Property Requirements for Properties of Three or More Living Units*.

The standards recognized high and medium density development. High-density areas permitted the development of more than 25 units per net acre, but such density was approved based on market conditions or location near established shopping, transportation, and other community services. In addition, the size of the developments was required to exceed the size occupied by housing, presumably to provide greenspace. Medium density was defined as 25 or fewer units per net acre. The standards specified that medium-density buildings must be located in “neighborhoods characterized by detached and semi-detached dwellings, medium- and low-density rowhouses, or two-story garden apartments with ‘generous open spaces’ ” (USAEC 2003:3-49).

The multi-unit standards specified room size and type to ensure adequate light, air, ventilation, privacy, and landscaping. In three- and four-unit buildings, the standards specified that each unit contain at least one bathroom and three habitable rooms including one bedroom. Buildings with more than four units were required to meet similar requirements, but were allowed kitchenettes instead of kitchens. Separate bedrooms were not mandated for efficiency units as long as the units were designed for single occupancy and approved by the Chief Underwriter. Other requirements for multi-unit buildings included: storage, linen, and coat closets; doors on kitchen cabinets; and a minimum storage volume of 150 cubic feet, excluding closets. Laundry facilities could be located within units or in common areas, but several small common laundries were preferred to a few larger ones (USAEC 2003:3-49).

#### 3.4.3.4 The Housing and Home Finance Agency

The Housing and Home Finance Agency, which President Truman established in 1947 to consolidate Federal housing activity, monitored all aspects of the housing industry (Truman 1947). The agency tracked seasonally adjusted annual rates of private non-farm housing starts; the availability of construction funds; the number of requests for FHA applications and VA appraisals; regional trends; and the supply of long-term mortgage funds. Housing starts generally increased during the 1950s. During the earlier years of the decade, housing starts were higher during the spring, summer, and fall than in the winter. During the later 1950s, overall high demand and improved technology increased housing starts during the winter months, although winter weather continued to make construction difficult in the Midwest and Northeast (USAEC 2003:3-50).

### **3.5 CONCLUSION**

The Air Force and the Navy began the postwar period with an unprecedented family housing shortage. This shortage and the condition of the existing housing inventory adversely influenced personnel retention rates. Military leaders sought to address military housing conditions through the addition of units comparable to those found in the civilian market. This housing market was dominated by single-family dwellings built in suburban housing developments and marketed to consumers in an economy characterized by low unemployment, high wages, and disposable income. Government policies and programs actively encouraged home ownership, established standards for the overall design of developments and houses, and set precedents for limited government intervention in that housing industry. These factors influenced the strategies pursued by Congress in providing family housing for the military, including the Air Force and the Navy.

## 4.0 THE LEGISLATIVE REMEDY: WHERRY AND CAPEHART ACTS

### 4.1 SUMMARY

The Air Force and the Navy experienced a severe housing shortage following World War II as both services sought to retain highly trained enlisted personnel. These personnel frequently were married and accompanied by dependents.

The Wherry and Capehart legislation provided the vehicles for the Air Force and the Navy to address their housing shortages. Wherry Act and Capehart Act projects were augmented by construction overseen in-house by the military services and funded through site-specific Congressional appropriations.

The implementation of the Wherry and Capehart programs generally was decentralized. The installations worked directly with sponsors and architects to design and construct housing that met the installation's individual requirements. Under the Wherry Act, the developer, or sponsor, constructed and managed the units and retained ownership of the housing. In contrast, the Air Force and the Navy assumed ownership and management of housing built under the Capehart program, after the units were constructed by the sponsor.

The Wherry and Capehart acts were unique in the history of military housing. The programs forged public-private partnerships between the government and private industry. This partnership was facilitated by mortgages guaranteed through the FHA for large-scale construction projects. In many cases, Wherry and Capehart projects were constructed in areas of the country where mortgages for large-scale housing developments would be difficult, if not impossible, to obtain. Installation Commanders, the Bureau of Yards and Docks, Army Corps of Engineers, the FHA, architects, and sponsors worked closely to design and build military housing that was compatible with, and, in some cases, exceeded, housing then available in the civilian housing market. Between 1949 and 1962, an estimated 62,475 Wherry units, 77,208 Capehart units, and 6,607 units of appropriated-funds housing were constructed for the Air Force, the Navy, and the Marine Corps (Table 7).

**Table 7. Wherry and Capehart Housing Constructed between 1949 and 1962**

Service	Wherry Units	Capehart Units
Air Force	38,014	62,816
Navy	17,434	10,020
Marines	7,027	4,372
<b>TOTAL</b>	<b>62,475</b>	<b>77,208</b>

Note: See Appendix D for breakdowns by installation

Source: See Page D-1

Because the Wherry and Capehart units were constructed in accordance with FHA standards, they differed little from their private-sector counterparts. The military sought to construct housing that was similar to that found in the private sector as one means of improving morale and increasing retention rates. FHA policies and standards played a large role in the design of Wherry and Capehart housing programs. Although FHA standards were not a DoD requirement for the military construction undertaken by the services using appropriated funds, FHA standards greatly influenced popular expectations for residential design on a national level, and these expectations were reflected in all military housing. The Navy, for example, adopted successful Capehart designs for the construction of housing using funds appropriated by Congress.

Wherry and Capehart family housing also reflected post-World War II policies on public-sector housing and the role of the Federal government in the housing market. The Federal government viewed its role as limited to supporting and to encouraging the private sector in meeting housing

demand, rather than as an active player directly involved in construction or financing. The government sought to eliminate the financial barriers to house construction.

The Wherry and Capehart programs met both military and Congressional objectives: constructing housing equivalent to that found in the private sector; limiting the Federal role and financial commitment; and avoiding direct competition with the housing industry. These programs, supplemented by housing constructed by the military services through Congressional appropriations, were the solution to the military family housing shortage.

Twentieth-century suburbanization influenced the design of Wherry and Capehart era neighborhoods. Design principles adopted during the early twentieth century advocated curvilinear streets and strict avoidance of long, straight blocks. Through streets were eliminated to control traffic, and the creation of green space was encouraged. FHA design standards officially promoted these principles. While neither the Navy nor the Air Force formally adopted the FHA standards for neighborhood planning as military policies, both services advocated for contemporary suburban design applying FHA principles. The Navy referenced the FHA standards in its development design guidelines (Curren 1958; Koski 1960).

Family-friendly development was one of the key features in postwar housing. As more and more Americans had increased leisure time, FHA standards evolved to encourage child-focused development. The FHA encouraged integrating playgrounds and recreation areas in new developments. Navy family housing construction manuals acknowledged that playgrounds were important. Such facilities were constructed in Navy projects as overall costs permitted. While the archival record is unclear on the number of playgrounds that originally were included in initial development, today, many Navy and Air Force Wherry and Capehart era neighborhoods include these features.

Nineteenth-century suburban ideals, improved technology, innovations in transportation, and economic prosperity influenced postwar American society (USAEC 2003:5-2). Americans held a strong preference for single-family housing. This preference also influenced the design of military family housing. Although a few garden apartments were constructed under the Wherry program and selected rowhouses were built under the Capehart program, the overwhelming majority of housing units constructed for the Navy and Air Force under the Wherry and Capehart programs were single-family or duplex units. Both services actively discouraged the construction of multi-family units, a policy for which both services were criticized. The limited number of multi-family buildings constructed for the Air Force and Navy included features generally associated with single-family units, such as front and rear yards, which provided recreational areas for children and ease of supervision for mothers.

Standardization in building materials and construction technologies were a result, in part, of World War II mobilization. The Federal government promoted standardization and modular measure through legislation and housing policies. The Capehart Act and the HHFA encouraged the adoption of standardization (USAEC 2003:5-3). Several public laws, including Public Laws 968 and 1020, mandated modular measure. Under Public Law 968, the military was authorized, “to the extent deemed practicable, use the principle of modular design in order that the facility may be built by conventional construction, on-site fabrication, or factory fabrication” (U.S. Public Law 968 1956:1018). Section 509 of Public Law 1020, required that drawings and plans developed under the Housing Act of 1956, which included Capehart housing, “follow the principles of modular measure” or a combination of prefabrication (U.S. Public Law 1020 1956:1110; USAEC 2003:5-3).



Unlike the Army, the Navy and the Air Force did not develop standardized plans for Wherry or Capehart housing. Rather, each service retained architecture and engineering (architectural and engineering) firms to develop plans specific to their projects. The Navy sought to select architectural and engineering firms with experience designing tract housing because they “know all the short cuts necessary to keep the price of the houses down to the minimum” (Curren 1958). The Bureau of Yards and Docks served as the Navy’s construction agent. Unlike the Army Corps of Engineers, the Bureau of Yards and Docks did not adopt standardized plans for Title VIII housing.

The working relationship between the Air Force and the Army Corps of Engineers dates to the transfer of property between the services. A number of transfer agreements between the Air Force and the Army were executed shortly after the Air Force was established in 1947. One such transfer agreement gave the Army Corps of Engineers authority to act as the construction contracting agent for the Air Force (McNeil 1950).

After 1955, the Army Corps of Engineers served as the contracting agent for Air Force housing constructed with appropriated funds. Archival research further suggests that the Wherry program was administered through the Army Corps of Engineers under the close supervision of the Air Force, while Capehart projects were managed directly by the Air Force (Robinson 1956b).

## **4.2 WHERRY LEGISLATION**

### **4.2.1 Origins of the Wherry Act**

Officials of all three military branches as well as the Department of Defense were conscious of the acute shortage of family housing. Military magazines and the popular media documented jarring examples of servicemen and their families living in shabby and cramped housing located far away from their stations. One factor contributing to the housing shortage was the uncertain rental market serving military personnel; lenders and contractors were reluctant to build family housing near military installations because their pool of tenants could decrease through military transfers to other installations or military deployment. In cases where installations were located in isolated areas or small towns, the permanent civilian population was not large enough to provide an alternative rental market. In addition, military installations were subject to closure with changing missions.

The National Housing Act had charged the FHA with determining the acceptable risk for issuing mortgage insurance, and did not contain special exceptions for housing that served military personnel. Therefore, the FHA could not ignore the uncertain status of military personnel and installations; housing projects intended to serve the military were deemed an unacceptable risk (U.S. House of Representatives 1949b:24-25).

Military officials believed that the urgent housing crisis required new legislation. Senator Kenneth Spicer Wherry of Nebraska became interested in the housing problem because military bases within his state were affected by the shortage. On 21 February 1949, Senator Wherry introduced Senate Bill 1184, which proposed authorizing the FHA to insure private rental housing on or near military installations (USAEC 2003:4-4, 4-5).

#### **4.2.1.1 Senator Kenneth Spicer Wherry**

The 57-year-old Wherry, who served in the Navy Flying Corps during World War I, was a small businessman and lawyer with local and state political experience. After an unsuccessful run for

the United States Senate, Wherry served as Western Director of the Republican National Committee in 1941 and 1942. He was elected to the United States Senate in 1942 and 1948. A respected Republican, Wherry was Republican Party Whip from 1944 to 1949 and Minority Leader from 1949 to 1951. During his second Senate term, Senator Wherry died in 1951 at the age of 59 (USAEC 2003:4-5, 4-6).

#### **4.2.2 Senate Bill 1184**

Senate Bill 1184 was designed to provide investment security for contractors and lenders. The following passage summarized the problem and the proposed solution:

In order to assist in relieving the acute shortage of housing which now exists at or in areas adjacent to military installations because of uncertainty as to the permanence of such installations and to increase the supply of rental housing accommodations available to military and civilian personnel at such installations, the Commission [FHA] is authorized, upon application of the mortgagee, to insure against default due to deactivation of, or substantial curtailment of activities at, any such installation in any State, any mortgage which is eligible for insurance as hereinafter provided (U.S. Senate 1949b:7-8).

Insurance would be provided by a “Military Housing Insurance Fund” administered by the insuring agency, the FHA, which was authorized to insure a total of \$500 million in coverage. By special authority of the President, that amount could increase to \$1 billion. The fund would decrease risk for lenders and financial institutions underwriting loans for military rental housing projects in locations that lacked an alternative market to the military. To protect the contractor, referred to as the “sponsor,” an appropriate military official would certify that the proposed project met a genuine need for housing, that the installation was a long-term part of the military establishment, and that there was no intention to curtail staffing levels. The FHA would not be required to determine acceptable risk for the projects (USAEC 2003:4-6; U.S. House of Representatives 1949:25).

#### **4.2.3 Revisions to Senate Bill 1184**

Several revisions were made to the proposed legislation following Congressional debates during spring and summer 1949. Revisions focused on project cost, maximum allowable insurance levels, location of a project relative to an installation, and utilities.

The maximum allowable per-unit cost was set at \$9,000. This figure included expenditures associated with the project, such as land acquisition, physical improvements, utilities, architect’s fees, taxes, and interest accrued during construction. Earlier drafts of the legislation permitted the FHA to insure the entire cost of the project, but the FHA objected, favoring a 90 per cent mortgage insurance ceiling so that sponsors would be required to invest some of their own funds. Senator Wherry supported a 95 per cent limit to make the program attractive to builders. Raymond Foley, Administrator for the Housing and Home Finance Agency, countered that the 90 per cent mortgage insurance ceiling contained in the National Housing Act for non-military housing projects was working successfully. In addition, Foley contended, lenders would find the 90 per cent ceiling more attractive and would hesitate to invest in a project in which the contractor contributed less than 10 per cent equity. Finally, because housing developments typically yielded a 10 per cent profit, insuring more than 90 per cent could profit the builder excessively. The final draft of the legislation contained

a per-unit cost specification of \$9,000, and a mortgage insurance limit of \$8,100, or 90 per cent (USAEC 2003:4-7).

Sponsors under the Wherry Act had two options for locating the projects: to build on private land or to enter into a 99-year lease for government land. Leases were renewable for at least 50 years from the execution of the mortgages. These time frames were intended to provide sponsors with the time to pay off the mortgages and to realize a profit before the land and improvements reverted to the government. The Secretaries of the Army, Navy, and Air Force were authorized to enter into leases with sponsors. Previous Federal legislation allowed the government to revoke leases in times of national emergency, but the Wherry legislation eliminated that option. The Secretaries of the military services also were authorized to sell government utility services to sponsors if such utilities could not be secured from another source (USAEC 2003:4-7).

Although Wherry housing units were not classified as government quarters, the legislation required that projects built under the Act operate under the regulation of the FHA Commissioner, and that occupancy priority be assured for military personnel, civilian employees, and government contractors. The FHA also reserved the right to comment on such aspects of the project as rent, sales, charges, and operations, to ensure rental rates were kept within the quarters allowance of military personnel (USAEC 2003:4-7, 4-8).

#### **4.2.4 Organization of the Wherry Act**

President Harry S. Truman signed Senate Bill 1184 into law on 8 August 1949. Officially known as Public Law 211, 81<sup>st</sup> Congress, the law also is known as the Wherry Act for its sponsor, or as Title VIII for the section of the National Housing Act of 1934, as amended, which established statutory authority. The Wherry Act was scheduled to expire on 1 July 1951 (USAEC 2003:4-11).

The Wherry Act outlined procedures for completing housing projects. Installation Commanders determined housing needs through an analysis of data on existing housing, and current and projected personnel requirements. Commanders used these figures to request a specific number of units. The Secretaries of the Navy and the Air Force were charged with approving, adjusting, or denying installation housing requests. Following approval, installations advertised for bids from interested sponsors. Private contractors submitted proposed designs and cost estimates. In some cases, sponsors retained architects to develop plans for the project. Installations selected contractors who met cost and design requirements. Sponsors were required to demonstrate that they had obtained the necessary funding, and proposals were subject to approval by the Secretaries of the Navy or Air Force, as well as the FHA. The lowest bidders who met the project specifications typically were selected. Following the execution of contracts, construction began (USAEC 2003:4-11).

#### **4.2.5 Wherry Implementation**

Both the Air Force and the Navy developed Wherry projects at the installation level. Base Commanders played important roles early in the process and worked closely with headquarters and the FHA to develop Wherry projects that suited their installation's unique needs. Similarities and differences were noted between the two services.

The first housing completed by the Air Force under the Wherry program was a 250-unit project located at Maxwell AFB in Montgomery, Alabama. The Maxwell AFB project was completed in 1950 ("Status of Wherry Act Projects" 1950:1). By 31 August 1951, the Air Force had completed

9,050 family housing units and an additional 17,788 units were under construction. New housing was available for occupancy at a rate of 1,000 a month (Gilpatric 1951:6-7). The first Navy project built under the Wherry program was a 390-unit development located at Severn River Naval Command in Annapolis, Maryland and completed in fall 1951 (Bureau of Yards and Docks 1951a:1; Bureau of Yards and Docks 1951b:3; Bureau of Yards and Docks 1952:1).

Some members of Congress had anticipated that the military housing construction under the Wherry program would proceed more quickly than it actually did. In July 1950, after the Wherry Act had been in place for one year, Brigadier General Colby M. Myers, Air Force Director of Installations, reported to a House of Representatives subcommittee in July 1950 that construction projects were underway at only six Air Force bases. Rep. Robert L.F. Sikes, one of the committee members, complained over the “delay” and questioned why more housing had not been built. Myers responded that technical and administrative delays were the result of the time required to determine which bases were permanent, which bases needed housing, how many units were needed, and how much housing could be absorbed by the community before affecting the private market (U.S. House of Representatives 1950:163).

The Navy’s Wherry program proceeded even more slowly. The Annapolis housing development was the only completed project by January 1952. At that time, 11 other projects were under construction, and work was slated to begin on 15 others, providing a total of 11,873 units. However, according to a Bureau of Yards and Docks press release, “The bulk of the program is expected to be completed in 1953.” The entire Wherry program was intended to provide 26,173 Navy houses through 76 projects (Bureau of Yards and Docks 1952:1). Ultimately, the Navy completed 64 Wherry projects totaling 24,503 units (Foss 1956:1, 14).

#### 4.2.5.1 The Armed Forces Housing Agency

The Armed Forces Housing Agency was created in 1951 to handle the additional administrative duties required of the Department of Defense as a result of the Wherry Act and other military housing issues. An Assistant Secretary of Defense position was created to oversee the agency; the office reported to the Secretary of Defense through the Munitions Board. Secretary of Defense Robert A. Lovett appointed Thomas P. Coogan, a Navy veteran of World War II with a national reputation in the homebuilding industry, to head the agency. A recent president of the National Association of Home Builders, Coogan provided his expertise in the execution and revision of Title VIII, and advocated building standardization (USAEC 2003:4-14).

#### 4.2.5.2 Department of Defense Instructions for Wherry Implementation

The Department of Defense issued instructions for selecting Wherry sponsors. These instructions applied to all three branches of the armed services. The procedures were developed in an effort to streamline the approval process.

A commission was established in 1950 to review then-current Department of Defense selection procedures for Wherry sponsors. Wherry projects were suspended while the commission and Department of Defense evaluated their operating procedures. In their report, the housing commission noted that the suspension order was not the cause of delay in the Wherry program. Rather, delays were related to cumbersome procedures (Department of Defense Housing Commission 1950:1). New policies developed by the commission were formalized on 2 March 1950 in “An Agreement between the Commissioner of the Federal Housing Administration and the Chairman of the Department of

Defense Housing Commission Concerning the Selection of Sponsors and the Processing of Projects under Title VIII of the National Housing Act (Wherry Act)” (Richard and Giesecke 1950).

The Department of Defense quickly revised instructions for the selection of Wherry sponsors on 27 April 1950. The instructions defined areas of responsibilities for the military services, the FHA, architecture and engineering firms, and sponsors. The Secretaries of the three services were responsible for establishing project requirements and for coordinating the implementation of the Wherry Act within the military. The Secretary of Defense coordinated with the Office of the Comptroller. The services consulted with FHA as criteria for specific projects were developed. The FHA provided data on local housing markets to ensure the “insurability of the mortgage due to market conditions” of the Wherry project (U.S. Department of Defense 1950a:1). The appropriate Washington headquarters were authorized to settle disputes between the FHA and the installations arising from disagreements on the available rental housing (U.S. Department of Defense 1950a:1).

The Secretaries of the Air Force and Navy were tasked with developing directives for the Chief of Engineers and the Chief, Bureau of Yards and Docks, respectively. Representatives of the Chief of Engineers and the Chief, Bureau of Yards and Docks collectively were known as the military field office. The directives did not specify whether the military field office would be staffed at the installation, regional, or national level (U.S. Department of Defense 1950a:1).

The Secretary of Defense approved funds drawn from public works appropriations for initial payment of architectural and engineering services, FHA Appraisal and Eligibility Statement processing fees, and the costs associated with the acquisition of land for off-base Wherry sites (U.S. Department of Defense 1950a:5). Architecture and engineering firms for Wherry projects were selected from a list of qualified firms experienced in the design of FHA rental housing projects. This list was prepared by the FHA (U.S. Department of Defense 1950a:2). The military field office negotiated contracts with successful architectural and engineering firms to develop plans and specifications for specific projects. Architectural and engineering contracts granted the government permission to reuse plans and specifications in other housing projects without additional compensation (U.S. Department of Defense 1950a:2). This last provision supported the DoD direction to apply previously developed plans and specifications to the extent practicable (U.S. Department of Defense 1950a:3). The Air Force and Navy delegated final approval of architectural and engineering contracts for Wherry housing projects to the Chief of Engineers and the Chief, Bureau of Yards and Docks.

The initial plans developed under an architectural and engineering contract specified the number of units, the number of bedrooms per unit, and the average maximum gross rent per unit. Schematic plans were developed to the degree of detail sufficient to enable FHA review and the issuance of an Appraisal and Eligibility Statement. Such statements included estimated total replacement costs, the maximum allowable insurable mortgage, and the maximum allowable rental schedule (U.S. Department of Defense 1950a:2). If submitted plans did not meet FHA requirements, architectural and engineering firms were responsible for revisions at no additional cost to the government. After the FHA approved the proposed plans, the agency billed the appropriate service at a rate of \$1.50 per \$1,000 of the amount of the insurable mortgage (U.S. Department of Defense 1950a:3).

The military field office requested proposals from sponsors after the FHA issued the Appraisal and Eligibility Statement. The sponsor, in response to the invitation to bid, was required to submit information on rental schedules and the maximum amount of insurable mortgage, to deposit funds in an escrow account, and to reimburse funds for use of the architectural and engineering plans (U.S. Department of Defense 1950a:3,4). The sponsor ultimately selected for a project negotiated the terms of applicable leases, utilities contracts, and other pertinent details with the military field office (U.S.

Department of Defense 1950a:4). The military field office selected the sponsor with the lowest responsive bid proposal.

The FHA inspected Wherry projects to insure that the sponsor complied with FHA rules and procedures. The FHA advanced funds to project sponsors for the reimbursement of architectural and engineering costs with the sponsor's first project payment (U.S. Department of Defense 1950a:5).

In 1950, Secretary of the Air Force Stuart Symington notified the Housing and Home Finance Agency that the "technical and administrative procedures were unduly burdensome to and beyond the capabilities of the Department of the Air Force" (McNeil 1950). For this reason, the Air Force sought to transfer responsibility for reviewing Wherry projects to the FHA (McNeil 1950). Instead, the Army Corps of Engineers assumed the construction agency role for the Air Force as well as maintained administrative control over the Wherry program (McNeil 1950). The Secretary of the Air Force issued a directive to the Chief of Engineers to develop a specific project. The directive identified the base housing need, the type of housing units requested (single-family, duplex, or multi-family), information on the site, utilities, and rental rates. The Air Force and the Army Corps of Engineers ultimately developed coordination procedures that were nearly identical to those developed by the Secretary of Defense in April 1950.

#### 4.2.5.3 Air Force Implementation of the Wherry Act

While Wherry legislation was debated in Congress, the Department of the Air Force developed guidelines for the anticipated program. A memorandum written by Major General McKee, Assistant Vice Chief of Staff, which was circulated to all Commanding Generals of the Major Commands, outlined the development procedures. Under the proposed procedures, the Department of the Air Force provided approved prospective sponsors with letters of introduction to Base Commanders. Bases would then compile the following data for the sponsor: numbers of personnel by income bracket requiring housing; the on-base locations available; a list of on-site utilities; and topographical maps. These data were used to develop preliminary plans for submission to Air Force headquarters by the Base Commander (Department of the Air Force 1949a:3).

Sponsors were required to provide at least one airman's unit for each officer's unit in their preliminary plans (Department of the Air Force 1949a:4). The following criteria for housing units were established: twenty per cent of the airmen units were to be one bedroom, thirty per cent of the units were to be two bedroom, and fifty per cent of the units were to be three bedroom. Twenty per cent of the officers' units were to be one bedroom, thirty per cent were to be two bedrooms, forty per cent of the units were to be three bedrooms, and ten per cent were to be four bedrooms (Department of the Air Force 1949a:4).

Construction standards and spatial requirements that met or exceeded those proscribed by the FHA were specified; sponsors were directed to apply Section 608 housing construction standards in the development of Wherry housing. Building designs generally were to be compatible with the design of the base and the area (Department of the Air Force 1949a:5). The Air Force would consider proposals for both multiple-unit dwellings and single-family houses.

Air Force headquarters approved the project proposals and negotiated leases for on-base housing projects. Base Commanders submitted comments on the proposals to headquarters along with information on the adequacy of existing utilities (electric, gas, sewer, and water). Information on the community was developed to support decisions on plans proposing off-base development (Department of the Air Force 1949a:6).

Many of the preliminary procedures developed by the Air Force prior to the passage of the Wherry legislation were formally codified in Air Force Regulation 93-7, *Installations – Control Procedures, Air Force Implementation of Title VIII of the National Housing Act* (Department of the Air Force 1949c). The regulation defined responsibilities for both the sponsor and the Base Commander. Base planning boards represented the Installation Commanders, compiled information on the base and housing need, and provided assistance to sponsors (Department of the Air Force 1949c:3). Base Commanders assessed the compliance of proposed projects with the base master plan for housing in their recommendations to headquarters (Department of the Air Force 1949c:5).

Shortly following the enactment of the Wherry Act, the Air Force explained its internal process for selecting Wherry sponsors in response to inquiries from members of Congress. Major General T. D. White, Director of Legislation and Liaison, outlined Air Force Wherry procedures in a memorandum to the Assistant Secretary of the Air Force, Eugene Zuckert. Sponsors interested in the Wherry program submitted their credentials for review and approval to the Air Force Housing Office. The Housing Office then referred qualified sponsors to the Base Commanders. The Housing Office was created within the Directorate of Installations for the purpose of monitoring the Wherry housing program. The office was responsible for qualifying sponsors, negotiating contracts, approving final plans, assisting in financial arrangements, approving rental schedules, and assisting in FHA approval (McKee 1949:2-6). A centralized office was deemed necessary to avoid duplication of effort and to expedite projects (McKee 1949:3). Major Commands were encouraged to work with the Housing Office in the development of Wherry projects (McKee 1949:3).

Sponsors submitted two copies of their project proposals to the Base Commander by an established deadline. One copy was forwarded to the Housing Office and the second copy was circulated locally to all concerned parties for review and comment. The Base Commander reviewed and ranked all proposals submitted by qualified sponsors. Ranking was based on compliance with applicable FHA rules and regulations; compliance with Department of the Air Force, Command Headquarters, and Numbered Air Force rules, directives, and procedures also was taken into consideration. The Air Force took site and utilities into consideration in their evaluation. The Air Force also scrutinized the type of units (single-family, duplex, or multi-family) proposed as well as the neighborhood design, including density, plan, sidewalks, streets, parking, landscaping, playgrounds, community facilities, and street lighting. Durability of construction and future maintenance were considered. Livability assessments were made, and considered such elements as square footage, plan, light and ventilation, general storage, furnishability, kitchen design, adequacy of laundry facilities, and mechanical equipment. Special features in the proposals also were factored. These features included fireplaces, terraces, garages, carports, extra bathrooms, air conditioning, kitchen fans, attic fans, garbage disposals, automatic washing machines, Venetian blinds, built-in furniture, electric dishwashers, sunken garbage cans, and shower/tubs (U.S. Air Force n.d.b:Part V, 2).

Proposals forwarded to the Housing Office first were reviewed by staff architects and then reviewed by the Air Force Housing Evaluation Board. The board made recommendations to the Director of Installations for the selection of projects and associated sponsors. The Secretary of the Air Force issued letters of acceptance to the sponsor. The sponsors then were notified to negotiate with the local office of the FHA (White n.d.).

Questions over proposal closing dates and Wherry sponsors selection plagued the Air Force. In a 19 October 1949 memorandum, the Air Force defended its selection policy. Major General Newman clarified that projects were selected on merit; tied proposals were awarded to local contractors (Newman 1949:1). In response to the criticism that the Air Force had not developed standardized plans, Major General Newman responded that the development of standardized plans was outside the scope of the Wherry Act. Furthermore, the Air Force did not have the expertise available

to develop plans within a reasonable time frame, and resources had not been appropriated for that purpose (Newman 1949:1).

Major General White noted the concern expressed by some members of Congress over Air Force procedures for selecting sponsors (White n.d.). Senator Long of Louisiana contended that the Air Force should have developed standardized plans for potential sponsors. Major General White reiterated Major General Newman's earlier comments: the Air Force did not have the expertise or the financial resources to develop standardized drawings. Major General White emphasized that proposals were not only evaluated for design, but also for the sponsor's ability to construct, operate, and maintain the units over an extended period of time. Major General White asserted that the Air Force role was to determine the proposals' "adequacy" under the Wherry legislation (White n.d.).

Some members of Congress attempted to influence the selection of Wherry sponsors and sought to ensure that local contractors were awarded Wherry projects. Commenting on a conversation with Senator Lister Hill of Louisiana, Assistant Secretary of the Air Force Harold C. Stuart recounted that Senator Hill was concerned about the selection process. The Senator wanted a local construction company, Roberts and Long, to be awarded the construction of Wherry units at Brookley Field instead of a regional firm, Shelby Construction. In his conversation, Stuart reviewed the five criteria for selecting sponsors. The most important criteria were the type of dwelling unit (single-family, duplex, multi-family, etc.), the number of bedrooms, and the distribution of units between airmen and officers. The Air Force also took into consideration the "space rent index," which included the size of the refrigerator and whether utilities (gas, electricity, water, heating, sewage, refuse collection, ground maintenance, garage, heat, etc.) were included in the proposal. Site planning also was evaluated. Site features, including arrangement of the buildings, the number of units per acre, sidewalks, streets, parking, playgrounds, street lighting, and landscaping, were considered. Durability of construction, equipment, and maintenance were factored into the evaluation. Finally, the Air Force considered the spatial arrangement of the units. Light, air, and ventilation were reviewed (Stuart 1950:1). The Air Force goal was to obtain the most product for the least amount of money, while insuring that projects met all the criteria (Stuart 1950:1).

In addition to Congressional inquiries, problems also arose when potential sponsors received inaccurate information on site conditions from Base Commanders. In some instances, Base Commanders suggested areas on the base for Wherry housing that were already occupied by buildings essential to the base mission, or which lacked utilities (White n.d.). Existing utilities were a major concern and a prerequisite for Wherry projects.

Major General White closed his memorandum by noting the pressure exerted on the Wherry program. The Bureau of the Budget and the Secretary of Defense demanded project competition without criticism. The subordinate commands wanted higher standards, which were sometimes beyond the scope of the Act. The local communities wanted to keep rental markets inflated. There were demands from sponsors to complete projects quickly, cut corners, and realize a profit. Congress pressured the military to solve the housing problem to stem public criticism over the lack of adequate military housing (White n.d.).

Construction of Wherry projects was restricted to permanent installations with no plans for downsizing. The Office of the Vice Chief of Staff was responsible for monitoring all dealings with sponsors and for executing all final actions and agreements. The housing projects had to be constructed in compliance with the base master plan. In addition, the units were required to be of an acceptable size and design, and the proposed project was to be sited in an economical and convenient location. The proposed sponsors were required to make site visits to the bases and discuss potential



problems with Base Commanders in order that proposals might reflect base requirements (McKee 1949:1).

Owing to the maximum rental rates imposed by program mortgage restrictions, the Air Force viewed Wherry housing as best suited to the needs of junior officers and airmen. The rents that airmen could afford limited the quality of Wherry projects (U.S. Air Force 1950:1). The average airmen could afford \$60 a month in rent plus utilities. Rents exceeding \$75 a month were deemed excessive (U.S. Air Force 1950:1). The average junior officer could afford \$80 to \$85 a month in rent including utilities (U.S. Air Force 1950:1).

Rent collected for Air Force Wherry projects was used to cover the following expenses: (1) debt service, which paid for construction costs; (2) operating expenses, including management, maintenance, and repair; (3) reserves for replacement of equipment; (4) taxes, if applicable; (5) a vacancy factor calculated at seven per cent; (6) profit; and (7) utilities (U.S. Air Force 1950:1). The Air Force recommended the calculation of rental returns before a sponsor's proposal was accepted so that the Wherry mortgage limitations were not exceeded (U.S. Air Force 1950:1).

It was Air Force policy that off-base Wherry housing projects were subject to local taxes, while those built on base were not required to pay local taxes (U.S. Air Force 1950:1). The Air Force reached the conclusion that the tax implications of off-base housing resulted in "unattractively small in living accommodations or very high in rent or both" (U.S. Air Force 1950:1). High-cost projects were those subject to local taxes (U.S. Air Force 1950:1). Off-base Air Force Wherry projects included housing at Great Falls AFB (renamed Malmstrom AFB in 1956), Maxwell AFB, Oxnard AFB, and Kelly AFB.

Major Commands were directed to undertake a number of initiatives to prepare for meeting with potential sponsors. A list of bases was developed that prioritized the most urgent housing needs; Major Commands undertook planning accordingly. Major Commands determined the number of units needed, selected proposed sites, determined whether the site had adequate utilities, and was prepared to "recommend architectural treatment of individual units and layout of the project" (McKee 1949:2). Each Major Command was to appoint a liaison officer to coordinate the housing program with the Office of the Vice Chief of Staff (McKee 1949:2).

In a memorandum issued to the Commanding Officers of Air Force bases, the Department of the Air Force directed strict confidentiality in reviewing Wherry proposals. Reviewers were asked to ensure that the proposals submitted by one sponsor were not inadvertently shared with another sponsor (Department of the Air Force 1949b:1). All review comments and recommendations were considered classified and were "handled under 'RESTRICTED' security classification" (Department of the Air Force 1949b:2).

#### 4.2.5.4 Navy Implementation of the Wherry Act

Previous Navy efforts to address the family housing shortage resulted in austere, minimal accommodations such as trailers, Quonset huts, and converted World War II temporary housing ("Title 8 Housing Program" 1949:2; Bureau of Yards and Docks 1950:2). Preliminary procedures for implementing the Wherry program first were outlined in October 1949, shortly after passage of the Wherry Act. Navy procedures for the selection of sponsors called for public notification of proposed projects; interested parties submitted expressions of interest to the Department of the Navy. These submissions were reviewed and sponsors were pre-qualified based on construction and management qualifications. Pre-qualified firms were requested to submit specific proposals. These proposals were

reviewed at the installation level and forwarded to the Title VIII Housing Board at the Bureau of Yards and Docks. Upon submission to the Bureau of Yards and Docks, the proposals were forwarded to the FHA for further evaluation and ultimate selection (Korink 1949:1).

The DPWO consulted with the appropriate FHA Field Office to ensure proposal compliance with FHA requirements and to ensure that the proposal was feasible and that the appropriate rent levels were achieved. FHA comments and concerns were forwarded to the Bureau of Yards and Docks (Korink 1949:102). The DPWO reviewed and analyzed new Wherry projects; maintained up-to-date information on the development and management of Wherry projects; provided guidance; and served as liaison to Naval Activities within the Naval District, the Commanding Officers, the Wherry sponsors, the tenants, and the FHA (Bureau of Yards and Docks 3-20 – 3-24).

It was Navy policy to contract with private sector architectural and engineering firms to design Wherry projects, except in cases where the sponsor provided drawings and specifications. Wherry projects were viewed by the Navy as the preferred method of providing family housing where possible (Bureau of Yards and Docks 1954:3-2, 3-3).

The DPWO and the Installation Commander commented on the merits of the proposals; these comments were forwarded to the Title VIII Housing Board. The Title VIII Housing Board selected the successful sponsor. Navy housing construction and size standards met those prescribed by the FHA. Other specifications for family housing, such as materials, and amenities were not identified in Navy procedures; however, four-bedroom units were prohibited. Each project proposal was to comprise one-bedroom units (20 per cent), two-bedroom units (60 per cent), and three-bedroom units (20 per cent) for occupancy by officers, enlisted personnel, and civilians (Korink 1949:3).

The Navy instructed District Commanders and DPWOs that the lowest practicable rent per dwelling unit was desired for enlisted personnel; an average rental rate for enlisted men was established at \$45 per unit per month (Korink 1949:3). Allowable monthly rental rates for officers included rent and utilities (Korink 1949:3). The average monthly rental rate, including utilities, for civilians could not exceed an established percentage of the average monthly income of the civilians occupying the units (Korink 1949:3-4).

Officer housing was anticipated to be larger and to include more amenities than housing designed for enlisted personnel. The Navy recognized distinctions between housing constructed under the Wherry program and housing constructed by Navy Public Works using appropriated funds. Primarily, the square footage for the Public Works housing for enlisted personnel and junior grade officers was greater than that allowed under the Wherry program, “with consequent increased livability” (Korink 1949:5). In addition, Public Works housing generally was constructed under “more rigid design, material and workmanship specifications, and construction proceeds under closer government inspection than maybe expected for Title VIII housing” (Korink 1949:5). Wherry sponsors were required to identify on the floor plans the location of storage and laundry facilities, as per Navy instructions. The lack of such facilities were factors in judging the merits of a proposed project (Korink 1949:5).

Proposed Wherry sites, both on or off base, were approved by the Commanding Officer of the installation and the FHA Field Office. Site selection was completed before sponsors developed project proposals. The District Commandant and the DPWO assessed the adequacy of commercial and community services including stores, recreation facilities, churches, and schools in determining the potential viability of a proposed Wherry housing neighborhood. The FHA Field Offices approved proposed Wherry sites for adequacy in topography, drainage, and other physical characteristics that

could affect project cost and maintenance before the Navy solicited proposals from sponsors (Korink 1949:8).

The Navy selected the sites and designs for the Wherry projects. The units were built to Navy specifications, with rental rates established by the Navy and the FHA (Bureau of Yards and Docks Press 1952:2). Rental rates were based on income, which was “based on the pay grades of the personnel attached to the particular installation at which the housing will be constructed” (“Title 8 Housing Program” 1949:1).

In a memorandum from G.T. Korink to Lieutenant Colonel W.J. Battison, Jr. of the Munitions Board dated 12 October 1949, Mr. Korink noted that the Navy had not developed a policy regarding utilities. Payment responsibility for the utilities was decided on a case-by-case-basis.

The Navy developed lease and utility agreements that differed from those adopted by the Air Force and the Army. The Navy determined that the Air Force and Army forms prepared under the Title VI housing program were unacceptable in “form and in substance” (Jelley 1949:1). Under the agreement negotiated with the FHA, the Navy leases afforded greater protection from direct and third party liability, and maintained a substantial measure of control over maintenance, repair, and operation of housing units during the length of the FHA utility lease (Jelley 1949:1). In addition, the Navy utility contracts extended to special services, such as police and fire service, for as long as the housing project remained in service to the local Naval Activity (Jelley 1949:1).

Navy leases with Wherry sponsors were negotiated with the following terms: leases extended for 75 years; tenancy priority was granted to Navy personnel; a one-year leases were acceptable for non-Navy personnel with the provision that the lease could be terminated during a national emergency; rental rates were determined by the FHA during the FHA mortgage guarantee period and by the Navy after the FHA guarantee period expired; maintenance, repair, and operation regulations were to be undertaken in accordance with FHA regulations and with Navy standards after the FHA guarantee period expired; the Navy was indemnified against direct and third party liability; and the lease could be terminated if the project was not started, or defaulted, after the FHA mortgage guarantee period (Jelley 1949:2). The utility contracts were similar to the land lease agreements with the added provisions for fire protection, and police services (Jelley 1949:3). The Navy recognized that the leases and utility contracts conferred a degree of control over the housing projects to the FHA during the length of the mortgage guarantee.

Navy Wherry procedures were updated with the technical publication, *Housing Administration*, which was issued in 1954. Under the revised procedures, the Commanding Officer of an installation initiated a Wherry project. The DPWO was responsible for determining the degree of need through the execution of a housing survey. The DPWO and the Commanding Officer consulted with the regional office of the FHA. Tentative site selection was made by the DPWO. The Commanding Officer and the DPWO then submitted a request to the Secretary of the Navy describing the need for housing and details on proposed sites and utilities. The Bureau of Yards and Docks and the Bureau of Naval Personnel then reviewed the project. If approved, the request was forwarded to the Secretary of the Navy for final approval. At this stage, the project became an official Wherry project (Bureau of Yards and Docks 1954:3-21).

The Bureau of Yards and Docks issued approval through a letter of instruction to the DPWO. The letters included information on the number of units by rank, and in some instances, preliminary approvals for proposed sites and utility arrangements (Bureau of Yards and Docks 1954:3-21). Concurrently, the DPWO conferred with the local office of the FHA to determine project feasibility and the necessity to retain an architectural and engineering firm. After the selection of the

architectural and engineering firm, the DPWO and the FHA worked together during the design phase. Once plans were completed, the FHA approved the drawings and issued an Appraisal and Eligibility Statement. Upon issuance of the Appraisal and Eligibility Statement, bids were solicited. Sponsor proposals were reviewed by the DPWO and the FHA; the DPWO made the final selection. After the sponsor obtained an FHA-guaranteed mortgage, construction began (Bureau of Yards and Docks 1954:3-21, 3-22).

Shortly after passage of the Wherry Act, the Navy anticipated the construction of 20,000 to 25,000 units at an estimated cost of \$170 million to \$200 million ("Title 8 Housing Program" 1949:1). In 1950, the Navy expected to construct 25,000 Wherry units representing fifty projects (Bureau of Yards and Docks 1950:2).

The majority of the units were constructed for enlisted personnel and junior officers. By 1950, twenty-two projects containing 10,091 units were authorized, including 5,792 for enlisted personnel and 1,725 for officers (Bureau of Yards and Docks 1950:2). The Navy also allowed civilians to occupy Wherry housing in cases where the stations were geographically isolated and private sector housing was not available.

By July 1951, the number of proposed Navy Wherry housing projects had increased to 61 and all but five were in the design phase or under construction (Bureau of Yards of and Docks 1951a:1). The 61 projects were expected to create 22,849 units; the sponsors for thirteen projects had been selected (Bureau of Yards and Docks 1951a:1). The earliest project completed included the 390 units located at the Severn River Naval Command, Annapolis, Maryland (Bureau of Yards and Docks 1951a:1). The Navy estimated the cost of construction per unit at \$7,500 (Bureau of Yards and Docks 1951a:1).

By October, the Navy had 14 projects under award to sponsors, another 42 under development, and 8,165 units under construction (Bureau of Yards and Docks 1951b:2). In 1951, the most ambitious Wherry project in the Navy was slated for Marine Air Corps Station, Cherry Point, North Carolina. This project called for the construction of 1,482 units (Bureau of Yards and Docks 1952:1). By the end of the Wherry program, the Navy constructed 64 Wherry projects totaling approximately 22,500 units (Meade 1956:5).

#### 4.2.5.5 Marine Corps Implementation of the Wherry Act

The Marine Corps process for approving Wherry projects was outlined in the Department of the Navy Bureau of Yards and Docks technical publication *Housing Administration*. The Commandant of the Marine Corps or the Chief of the Bureau having authority over management of family housing was responsible for several functions regarding the implementation of Wherry projects. The Commandant or the Bureau Chief certified the permanency of the installation; recommended approval or disapproval of a proposed project; and recommended the total number of Wherry units needed to meet the long-range housing needs at an activity (Bureau of Yards and Docks 1954:3-33). In addition, the Commandant or Bureau Chief commented on the average monthly gross rent recommended by an activity Commanding Officer (Bureau of Yards and Docks 1954:3-33). The rent was based on the rank and occupants: senior officers, junior officers, enlisted personnel, and civilians. The Commandant or Bureau Chief also approved or rejected the sites proposed for Wherry projects.

#### 4.2.5.6 Summary Comparison of Wherry Implementation among the Services

The services developed similar implementation policies. The Department of Defense assigned areas of responsibility to each party involved in a Wherry project. For example, the FHA was responsible for ensuring that projects met FHA standards. However, the base commander, in consultation with the Department of Defense and the FHA, was responsible for establishing base housing need. The services had similar steps for getting from Congressional approval to completion of construction, but the ways each service accomplished those steps varied. All services took steps such as consulting with the FHA and reviewing projects for compliance with base housing needs. But the services differed in accomplishing these steps, as follows: The Air Force Housing Office and the Air Force Base Commander worked together; the Navy District Public Works Officer (DPWO) had most of the responsibility while the Base Commander had limited responsibility; and the Commandant of the Marine Corps handled all aspects of a Wherry project.

Air Force Base Commanders worked directly with the Air Force Housing Office, and these two entities represented the Air Force to the sponsors. The Air Force Housing Office qualified sponsors, negotiated contracts, approved final plans, assisted with financial arrangements, approved rental schedules, and assisted with FHA approval. Air Force Base Commanders provided base-level data and assistance. They provided information on existing utilities; assessed compliance of proposed projects with the base master plan; reviewed and ranked proposals; and conducted site visits with potential sponsors to review base requirements.

The Navy's administrative structure was more complex. Therefore, much of the responsibility for developing, designing, and implementing Wherry projects rested with the DPWO and the District Commander, rather than with the Installation Commander. The DPWO consulted with the appropriate FHA Field Office; reviewed and analyzed new Wherry projects; maintained current information on the development and management of Wherry projects; and served as liaison to Naval Activities, Commanding Officers, Wherry sponsors, tenants and the FHA. Together with the Installation Commander, the DPWO commented on Wherry projects. However, as the Navy's Wherry program evolved, the Commanding Officer played a larger role. The DPWO and the Commanding Officer consulted with the regional office of the FHA and submitted a formal request to the Secretary of the Navy for a Wherry project. The DPWO's role also grew; its added responsibilities included determining the degree of housing need, making tentative site selections, and selecting the sponsor.

In the Marine Corps, responsibility for implementing Wherry projects rested with the Commandant of the Marine Corps or the Chief of the Bureau. They certified base permanency; recommended approval or disapproval of a proposed project; recommended the total number of housing units needed; commented on the average monthly gross rent; and approved or rejected proposed sites.

#### **4.2.6 The 1951 Military Construction Bill**

The 1951 Military Construction bill passed in Congress authorized appropriated funds for land acquisition, installation of outside utilities, and site preparation for the construction of Wherry housing projects (Bureau of Yards and Docks 1951b:1). Rising real estate costs, costs associated with site preparation, and the desirability of locating housing projects on sites lacking public utilities contributed to the inability of sponsors to construct units meeting the maximum rental rates (Bureau of Yards and Docks 1951b:1). To address these issues, Congress added an average of \$1,000 per unit to all Navy Wherry projects. Funds were used for site development and utilities, enabling sponsors to construct Wherry housing within the service's ability to pay (Bureau of Yards and Docks 1951b:2).

Furnishing Wherry rental units also was recognized as an issue. The Navy provided furniture for the tenants of Wherry units using appropriated funds.

#### **4.2.7 End of the Wherry Program**

Problems in implementing the Wherry Act surfaced as sponsors discovered loopholes in the law that allowed them to avoid investing equity in projects, and to manipulate the mortgage insurance ceiling to realize higher profits than Congress intended. Based on an estimated per-unit replacement cost of \$9,000, the Wherry Act authorized mortgages for 90 per cent of the construction cost, or \$8,100. It was assumed that a sponsor would obtain an \$8,100 per unit mortgage and invest their own funds to finance the remaining 10 per cent. The legislation anticipated that mortgages and private investment would be paid back and profits would be realized through monthly rental income. Rental rates set by the FHA included a six per cent profit for developers; after amortization of the mortgage and builder's investment, rent would be almost entirely profit. However, sponsors often constructed projects for less than the approved mortgage to their great financial advantage. This practice was called "mortgaging out."

Builders became substantially less interested in participating in the Wherry program when Congress enacted a law to stop mortgaging out. Public Law 94, passed on 30 June 1953, required sponsors to inform the FHA of the actual cost of their projects, including "kickbacks, rebates, and normal trade discounts received," and to repay lenders when mortgages surpassed actual costs. The Wherry program became even more unpopular when Congress enacted Public Law 560 in August 1954 to provide another safeguard. Builders were required to certify that their mortgages represented no more than 90 per cent of the cost of the project. The number of Air Force and Navy Wherry projects authorized and built after 1954 dropped dramatically, as illustrated in Table D.1 in Appendix D. The Wherry Act expired on 30 June 1956 (USAEC 2003:4-14, 4-15).

An analysis of the Wherry units constructed by the three services illustrated that the Air Force spent the most money on its Wherry housing and consequently, had the largest units. The Navy spent the least and had the smallest units. The Army's Wherry housing fell between the Air Force and the Navy in size and expenditure. At an average of approximately 768 net square feet, the Navy Wherry units were the smallest of the three services (U.S. House of Representatives 1959c:1954). The Air Force and Army units were similar in size, 835 net square feet and 831 net square feet respectively (U.S. House of Representatives 1959c:1954). The report also noted that the Navy spent the least on its Wherry housing and had the lowest FHA-estimated replacement costs. The average mortgage for Navy Wherry units was \$7,539 and the replacement costs were estimated at \$8,880 per unit by the FHA (U.S. House of Representatives 1959c:1954). The Air Force had the highest estimated replacement costs and average mortgage, \$9,622 and \$8,237 respectively (U.S. House of Representatives 1959c:1954). The Army's estimated replacement cost of \$9,454 fell between those of the Air Force and the Navy. The Army's average mortgage of \$8,314 was the highest of the three (U.S. House of Representatives 1959c:1954).

Congress had authorized the use of appropriated funds for site acquisition and on- and off-site improvements. The cost for these improvements could not exceed \$1,500 per unit. At \$289 per unit, the Navy spent the most in appropriated funds; the Army spent \$105 and the Air Force spent \$168 (U.S. House of Representatives 1959c:1954). The Navy constructed the smallest Wherry units for the least amount of money.

## **4.3 CAPEHART LEGISLATION**

### **4.3.1 The Call for New Title VIII Legislation**

Congressional leaders advocated for new Title VIII legislation during the mid-1950s. Enactment of anti-windfall legislation in 1953 and 1954 and the construction industry's waning interest in the Wherry program prompted Congress to consider modifications to Title VIII. Although Wherry Act housing greatly eased the military's family housing shortage, the need for family housing remained acute. Several factors continued to pressure existing family housing inventory. These factors included increased demand related to the Korean Conflict and intensifying Cold War tensions (USAEC 2003:4-15). Compounding the housing shortage was the rapid deterioration of World War II temporary housing. By 1955, these units had long out-lived their life expectancy, were severely deteriorated, and in many cases, unfit for habitation (USAEC 2003:4-2).

To help address the housing shortage, Congress passed a massive appropriations bill. Among the provisions was authorization for 6,429 housing units for the Air Force and 1,419 units for the Navy and Marines (U.S. Public Law 765 1954:1325-30). Not all of the units that were authorized received funding for construction. Congress, however, continued to believe that the most efficient, cost-effective method for solving the military's housing crisis was through Title VIII housing. Senator Homer Earl Capehart of Indiana introduced new Title VIII legislation in Congress. Senator Capehart had closely followed the progress of the Wherry Act. His new legislation sought to address the shortfalls of the Wherry legislation and to renew private sector interest in building housing for the nation's military families.

#### 4.3.1.1 Senator Homer Earl Capehart

Senator Capehart, a self-made millionaire, ran for United States Senate in 1944 on the Republican ticket. Elected to three terms in office, he served between 1945 to 1963. As a supporter of anti-interventionist foreign policy, Senator Capehart was opposed to "big government." Senator Capehart served on the Joint Committee on Defense Production, 83<sup>rd</sup> Congress, and the Committee on Banking and Currency, 83<sup>rd</sup> Congress. He unsuccessfully ran for a fourth term in office. He returned to Indiana where he pursued his interests in farming, manufacturing, and investments (USAEC 2003:4-16).

### **4.3.2 Terms of the Capehart Act**

Signed into law on 11 August 1955, the Capehart Act (Public Law 345) officially was titled "Title VIII – Armed Services Mortgage Insurance Act." (Like Wherry housing, Capehart housing also is popularly referred to as Title VIII housing or by its public law number). The legislation was nearly identical to the Wherry legislation, with two major differences: (1) housing was built exclusively on government-owned land, and (2) units were turned over to the government upon completion. The government managed and operated the units. Capehart housing was administered as assigned public quarters.

By acquiring the Capehart units, the government hoped to eliminate several problems associated with Wherry housing, including unforeseen rent increases, vacancies, and the failure of the sponsor to maintain the developments (USAEC 2003:4-16). Under the Capehart program, the FHA insured 25-year mortgages that covered 100 per cent of the project's construction cost. The average cost per unit was capped at \$13,500 and included the sponsor's profit. To eliminate windfall profits,

all projects were subject to the Renegotiations Act of 1951. The Act authorized the government to recover excessive profits (USAEC 2003:4-16).

The Navy and the Air Force hired private-sector architectural and engineering firms to design the housing. After the projects worked their way through the chain of command from the installation to the appropriate service Secretaries, the Secretary of Defense, and the FHA, competitive bids for the projects were solicited. Awards were issued to the lowest bidder meeting the basic project requirements. These requirements included number of units, number of bedrooms per unit, ratio of officer housing to enlisted-personnel housing, and average square footage. Added-value features, such as garages and appliances, were considered in the evaluation. Once the FHA approved the sponsor, the projects proceeded. Base Commanding Officers maintained continual oversight and review over Capehart projects.

Sponsors created stockholding corporations at the start of each project. After project completion and government turnover, the military service continued to pay interest and amortization on the project loan with funds from service members' basic allowance for quarters (BAQ). Military personnel assigned to Capehart housing forfeited their BAQ. The average BAQ payment could not exceed \$90 per unit per month (USAEC 2003:4-17). Civilian personnel entitled to live in Capehart housing paid a monthly rental fee, which was applied towards the mortgage amortization. The Capehart Act was initially scheduled to expire on 30 September 1956, thirteen months after it was enacted.

### **4.3.3 Implementation of the Capehart Act**

Personnel entitled to Capehart family housing included married officers, married warrant officers, and married enlisted personnel with E-7, E-6, or E-5 ratings, or personnel with an E-4 rating and more than seven years of service. Key civilian personnel also qualified for Capehart housing if they resided on-base through military necessity (Bryant 1957:1). The Air Force and the Navy developed separate policies and procedures for implementing the Capehart housing program.

#### 4.3.3.1 Air Force Implementation of the Capehart Act

Early in the Capehart program, the Deputy Special Assistant for Installations acknowledged that information on the new Title VIII program (the Capehart program) was not being disseminated to base officials. Although information had been provided by the Air Staff to the Major Commands, briefings were not extended to individual bases. The Deputy Special Assistant directed the development of a program to apprise installations of the new legislation (Robinson 1956a).

The Air Force was authorized to contract with architectural and engineering firms to design family housing under the provisions of Section 406 of the Housing Amendments of 1955, as amended. Consequently, the Air Force used the services of private-sector architectural and engineering firms to design the "most broadly competitive housing open to all methods of fabrication" (Robinson 1956b). The Air Force preferred local architectural and engineering firms for their familiarity with the local community and construction practices (Robinson 1956b). In addition, the Air Force coordinated closely with industry to design housing that could be adaptable to prefabrication (Robinson 1956b).

In February 1956, the Air Force planned to construct 51,226 family housing units at 84 Air Force bases under the Capehart Act (Anonymous 1956). By May 1956, the number of family housing units increased to 54,392 at 91 Air Force bases (Robinson 1956b). In a letter written to a prospective



Capehart sponsor, the Air Force referred the interested firm to several government documents on the development of military family housing. These documents included the FHA's *Rules and Regulations for Armed Services Mortgage Insurance* and a current list of Commands and bases where Capehart housing was under design (Anonymous 1956). This direction suggests that standardized designs were not developed for Air Force Capehart projects, but that precedent was considered in project development.

Congress increased the maximum allowable FHA-insured mortgage to \$16,500 per unit in 1956. The Air Force noted that the justification presented to Congress for the unit cost increase did not include arguments for increasing the size or the number of single-family units. Congress increased the mortgage amount, in part, to allow for the construction of Capehart units in high-cost areas (McDonald 1956:1). The three services were instructed to develop implementing instructions for each service field office and to forward those instructions to the Assistant Secretary of Defense (Properties and Installations) (McDonald 1956:2).

The Air Force maximized the \$16,500 mortgage limit by applying the Capehart Act solely to building construction; housing amenities were paid for through appropriated funds. For example, the Air Force used maintenance and operations funds to finance washers and dryers, which were classified as additive items in Capehart units. This policy eventually led to criticism from the Comptroller General of the United States, who was of the opinion that the \$16,500 mortgage limit for Capehart units should include ranges, refrigerators, shades, and screens. The Comptroller General drew this interpretation from language contained in House Conference Report Number 2958, 84<sup>th</sup> Congress, 2<sup>nd</sup> Session. He concluded, "[A]ny and all equipment 'in, and used by the occupants of the [Capehart] dwellings' should be paid for solely with mortgage proceeds" (Robinson 1959a:2). The Air Force objected to this conclusion citing that all Air Force projects were within the statutory cost limit (Robinson 1959a:1). Deputy Special Assistant for Installations George S. Robinson felt the Comptroller General erred in his interpretation of the legislation's intent.

In a memorandum to the Assistant Secretary of Defense (Properties and Installations), Mr. Robinson contended, "a statute which on its face simply limits the extent to which a house can be mortgaged is being read as prohibiting the purchase of laundry equipment with money not borrowed from the mortgage" (Robinson 1959a:2). Mr. Robinson further noted that the Comptroller General had no objection to the Air Force use of maintenance and operations funds to procure furniture for Capehart units. For projects that did not include unit washers and dryers in the initial construction due to cost, the Air Force installed these appliances after the housing was turned over to the agency.

Air Force policy in 1959 demonstrated a preference for duplex units; single-family units were constructed for personnel holding the rank of Major or higher. One carport per dwelling unit was provided, and garages were an option in areas where winter temperatures dropped below 10 degrees Fahrenheit or in areas subject to salt air or high winds (Julius 1959:1). With the mortgage limit for Capehart housing raised to \$16,500, the Air Force sought to raise the livability of Capehart units by incorporating washers and dryers as standard appliances (Robinson 1959a:3). Quarters constructed for Colonels and Generals were the only units constructed with dishwashers. These 1959 program policies were incorporated into the revised "General Design Criteria for Construction of Family Housing," issued on 10 December 1958 (Julius 1959:2).

By the early 1960s, the Air Force had developed regulations for the operation and management of family housing. Department of Defense Instruction 85-1, issued 12 August 1960, was encompassed in two Air Force regulations: AFR 85-5 "Civil Engineering – General, Operation and Maintenance of Installations Facilities," issued 10 June 1959, and AFR 93-3, "Civil Engineering – Control Procedures, Real Property Maintenance, Repair, Modification and Minor Construction

Projects,” issued 5 March 1959. In addition to these regulations, the Air Force issued letters that addressed specific concerns, such as grounds maintenance. Family housing operation and management was integrated into the overall management of Air Force bases; a position was not created specifically to address the operation and management of family housing (Department of the Air Force n.d.:1,2).

The Air Force continued to authorize site-specific designs as opposed to standardized plans for Capehart projects. In October 1961 the Air Force authorized the procurement of architectural and engineering services to develop plans, drawings, and specifications for family housing (Imirie 1961:1). The Secretary of the Air Force approved housing projects. The Chief, Housing Division, Deputy Directorate for Civil Engineering Operations, Directorate of Civil Engineering issued an authorization for the procurement of the architectural and engineering services in a design directive (Imirie 1961:1).

The Air Force viewed rowhouses as undesirable. Under Secretary of the Air Force Charyk argued in a memorandum to the Secretary of Defense that construction costs for duplex units in high-cost areas were competitive with rowhouses. Rowhouse design was seen as lacking “pride of ownership” and contributing to lower morale for the airmen and junior officers (Charyk 1961:2).

#### 4.3.3.1.1 AFB Master Plans

In contrast to the standards for earlier air bases, postwar planning criteria prohibited the construction of bases within 15 miles of the outskirts of large population centers, with a “lateral distance of at least 4 miles from the runway centerline extended” (Department of the Air Force 1959:28). The Air Force developed base master plans to justify military construction and real estate requirements to the Secretary of Defense, the Bureau of the Budget, and Congressional committees (Department of the Air Force 1959:32).

Installation Commanders ensured that military construction projects satisfied operational, terrain, and utility requirements. The Major Commands developed master plans. These plans became the basis and justification for the annual Military Construction Program, and provided guidance for siting authorized construction projects (Department of the Air Force 1959:33). The Major Commands prepared site plans and defined the functional requirements for military construction projects, which then were forwarded to the Air Force Installations Representatives (AFIR). The AFIR served as field representatives of the Director of Installations, Headquarters, United States Air Force and acted for the Chief of Staff, United States Air Force, on installation engineering matters (Department of the Air Force 1959:2).

The AFIR reviewed proposed projects for compliance with the master plan; provided information to the construction agency for the preparation of preliminary plans; and coordinated planning for the design of new construction between the Major Command and the construction agency (Department of the Air Force 1959:33). The AFIR also approved siting for minor projects and projects that did not use appropriated funds (Department of the Air Force 1959:33).

#### 4.3.3.2 Navy Implementation of the Capehart Act

In a speech to the Commandants’ Conference held on 3 December 1956, Admiral Meade opined that a billion dollars would not cover the cost of the Navy’s housing and military construction programs (Meade 1956:1). In some Naval Districts, the “Capehart dollar volume” approached or exceeded the total military construction program funded by Congress (Meade 1956:2). The dollar volumes illustrate the size and scope of the Navy’s Capehart program.

Appropriated funds were used for site acquisition and utilities (Anonymous 1959:3). The Navy favored the Capehart program construction over appropriated-funds construction for housing because the Capehart program limited the government's liability "by the amount of the residual value of the projects in the local economy" (Anonymous 1959:4).

The process utilized by the Navy in 1956 for identifying the need for a Capehart project and for selecting sponsors was lengthy and bureaucratic. The management bureaus of the Secretary of the Navy initiated projects. Naval Activities and Districts submitted their recommendations to the management bureaus for sponsorship. Site visits were made by members of the management bureaus and the Bureau of Yards and Docks to each Activity to confirm housing conditions. A representative from the Office of the Assistant Secretary of the Navy headed the assessment teams. Projects were approved by the Assistant Secretary of Defense (Properties and Installations) and the FHA after initial approval by the Navy and prior to submission to the Bureau of Yards and Docks for design and construction (Meade 1956:3). Site selection and acquisition accounted for a significant amount of time during the project development phase, since these issues had to be resolved prior to project design.

Two factors affected site selection. One was the location of the Naval Activity. Many of the older established Naval installations occupied urban sites with little room for expansion. Second, approximately 60 per cent of Naval Activities supported aviation efforts (Meade 1956:3). Noise associated with jet operations necessitated that many Capehart projects be located at a reasonable distance from the installation (Meade 1956:3). Both factors led to the acquisition of land for off-Activity housing developments. By late 1956, land was acquired for more than half of the 46 projects approved by the Secretary of the Navy (Meade 1956:4).

Off-Activity sites possessed inherent problems. Admiral Meade anticipated that Base Commanders would object to neighborhoods located far from Naval stations. He also acknowledged the potential for community opposition to unsegregated military housing (Meade 1956:4). The process of desegregating the military had begun under President Truman shortly following World War II. Desegregation of the armed services was complete by 1954 when the last African American unit was eliminated.

Once an Activity received preliminary approval from the Bureau of Yards and Docks, the District Public Works Officer (DPWO) immediately consulted with the installation Commanding Officer on project implementation. The DPWO selected and negotiated contracts with successful architectural and engineering firms in consultation with the FHA. A minimum of three architectural and engineering firms were interviewed for each project. Prior experience in designing housing meeting FHA standards and particular experience in designing "large tract housing" were important considerations in firm selection (Bureau of Yards and Docks 1956:2). To avoid political pressure or lobbying by the local construction industry, the Navy generally selected architects from outside the immediate area of the proposed Capehart project (Fitzgibbon 1957:1).

The DPWO worked closely with the architectural and engineering firm throughout the design process. Plans and specifications complied with the Bureau of Yards and Docks design criteria, technical publications, and special instructions issued by the Officer in Charge. This hands-on management was illustrated by the Great Lakes Capehart project. Records document that Captain Carberry, the Deputy DPWO at Great Lakes, had numerous conversations with the project architect regarding design (Carberry 1956).

The Navy sought to integrate as many amenities as possible in the Capehart projects. Such amenities, or "additive items," included clothes washers, vinyl and terrazzo flooring, master TV

antennas, garbage disposals, range hoods and fans, screened porches, and sidewalks (MacDonald 1960). The Navy furnished their housing units using appropriated funds.

Plans for Capehart projects underwent two phases of design review. Preliminary review ensured that the project met FHA requirements, while the final review secured military approval and the issuance of the Final Appraisal and Eligibility statement from the FHA (Bureau of Yards and Docks 1956: Enclosure 1:1). The housing was constructed in accordance with labor and prevailing wage standards. The Navy relied almost exclusively on the architectural and engineering firm to inspect its Capehart projects.

Admiral Meade acknowledged that developing standardized plans and limiting the number of house types was desirable to expedite projects. As a result, exterior design of the dwellings reflected local and regional architectural influences, while interiors were more standardized.

By late 1956, the Secretary of the Navy approved 46 projects totaling 25,300 quarters. The Navy still faced a housing shortage during the late 1950s despite strides made under the Wherry and Capehart programs. In 1959, there were 388,821 families living in inadequate quarters, which were defined as inadequate due to space and amenity deficiencies or because of excessive rental rates (Anonymous 1959:5).

Navy policy maximized living space to the degree possible within budgetary restrictions. The Bureau of Yards and Docks opposed multi-unit buildings of six to eight units. This opposition was illustrated by the Capehart project at Great Lakes. The Bureau approved the project density only after the DPWO, in consultation with the Commander at Great Lakes, determined that the design was acceptable and the most effective way to meet the family housing need within cost limitations (Chief, Bureau of Yards and Docks 1956:1).

The Navy discussed whether Capehart units were ill-suited for flag officers due to the cost limitations imposed under the Capehart legislation. The lack of basements, garages, storage and guest rooms, combined with consolidated kitchen and dining areas, were reasons cited for rejecting Capehart housing for senior ranking staff at NAS Whidbey Island (Towner 1961). Other Activities, however, such as Port Hueneme, California, housed flag officers in Capehart housing.

As late as 1959, problems arose in Hawaii over administrative procedures implementing the program (Ray 1959:2). The lack of clear administrative procedures for construction and project acceptance was particularly acute, because Capehart projects in Hawaii represented 42 per cent of the Navy's Capehart program in 1959 (Ray 1959:3). Rear Admiral Peltier, Chief of the Bureau of Yards and Docks, recommended the creation of a reporting process to address the administrative issues. The Bureau was uninvolved once the project proceeded to the construction phase. New reporting procedures required greater interaction between the Naval Districts and the Bureau (Peltier 1960:2). Rear Admiral Peltier also changed the inspection policy. Rear Admiral Peltier directed the Navy to inspect all construction rather than delegating that responsibility solely to architectural and engineering firms. In cases where the Naval Districts were unable to undertake construction inspections, the Bureau decided whether to assign Naval personnel for the task or to employ an architectural and engineering firm (Peltier 1960:3).

The General Accounting Office criticized the Navy for spending funds on preliminary plans for projects that never went forward. The Navy approached planning for Capehart projects in the same manner as construction using appropriated funds. Developing preliminary plans was the Navy's method of insuring that the Navy would be able to assure Congress of a project's economic feasibility, particularly in high-cost areas (White 1958:1, 2). The development of preliminary plans allowed the

Navy to proceed quickly once a Capehart project was approved. The Navy was unable to produce preliminary plans in-house due to other staffing commitments and contracted with architectural and engineering firms to complete this task (White 1958:2).

By 1961, the Navy had created a comprehensive family housing program with well-developed expertise in programming, construction, and management. In a 1961 draft report, an advisory panel appointed to appraise the Navy's family housing program recommended that the Air Force and Army emulate the Navy's program (Connally 1961:1). The advisory panel also advocated for Navy construction of row housing. The Navy strongly opposed this recommendation based on experiences with rowhouses constructed under the Wherry program. Secretary of the Navy John Connally contended that row housing reduced morale. Secretary Connally noted in a memorandum to Secretary of Defense McNamara, that "we are in the housing business mainly for the express purpose of improving morale and retaining personnel" (Connally 1961:2).

#### 4.3.3.2.1 The Use of Standardized Plans

The Navy did not develop nationwide standardized plans for Capehart housing, although Naval Districts and Commands occasionally adopted a standardized approach to housing in a specific area. Site-specific design contrasted with the standardized approach adopted by the Army through its *Folio of Accepted Designs* for Capehart and appropriated-funds housing.

The District Public Works Officer for the Sixth Naval District had advocated for the use of standardized plans as early as 1956. The DPWO expressed frustration over design development for a Capehart project at the Marine Corps Supply Center, Albany, Georgia. Marine Corps and Navy architects made several changes to the plans previously approved by the DPWO, which the DPWO viewed as an attempt to duplicate the design developed for a project under construction at New River, North Carolina, rather than an effort to add value to the Albany project (Corradi 1956:1). DPWO suggested the development of standardized plans, which would relieve "future Capehart A/Es of the basic design study for the dwelling units" (Corradi 1956:2).

In a memorandum to the Ninth Naval District DPWO, Mr. E.H. Eaton, Manager of the Capehart Development Branch within the Housing Division of the Bureau of Yards and Docks reported on the progress of the Capehart project at New River. In his memorandum, Mr. Eaton stated that everyone "is quite pleased with the design that we obtained for this project. It was not, of course, the plan originally developed by the architectural and engineering firm, but rather a composite design incorporating revisions from the Naval District, the Bureau and the Marine Corps" (Eaton 1956). The Albany and New River projects illustrated the decentralized administration of design and construction in the Capehart program. Archival research suggests that some Naval Districts, such as the Fourteenth Naval District for Naval activities in Hawaii, developed standardized plans for Capehart housing within their jurisdiction. The DPWO responsible for Hawaii retained an architectural and engineering firm to prepare one design for use at eight Navy and Marine Corps installations in the territory to expedite Navy and FHA approval (Korink 1956a:2).

By 1960, Rear Admiral Peltier advocated standardized floor plans for future Capehart projects. These standardized floor plans, which he called a "family of plans," were in design at the Bureau (Peliter 1960:2). Interior plan selection from the family of plans became Navy policy, and deviations were not approved without prior Bureau authorization. The architectural and engineering firms continued to integrate dominant regional architectural influences in exterior designs. While the Bureau did not anticipate achieving significant construction savings by mandating standardized floor plans, the Navy hoped to realize labor economies because "Commanding Officers and their representatives will not have much latitude in Capehart design." Approvals by the Bureau were limited

to site layout, and architectural and engineering firms proceeded quickly to final plans and specifications (Peltier 1960:2).

#### 4.3.3.3 Summary Comparison of Capehart Implementation among the Services

Planning and implementation of Capehart housing projects remained at the local level. Air Force Base Commanders and the Navy's DPWOs were involved in the decision-making process. The Air Force developed standardized implementation policies late in the Capehart program while the Navy standardized its Capehart procedures in 1956 after the Capehart legislation was signed into law.

Each service developed implementation procedures to suit its particular needs and administrative structure. For example, Air Force Capehart housing projects were required to comply with the base master plan. The Navy developed a more complex system for administering and implementing the Capehart program than the Air Force. Capehart projects were initiated in the offices of the Secretary of the Navy, with Naval Activities and Districts submitting their recommendations for project sponsorship to the Secretary of the Navy's management bureaus. Upon receiving preliminary approval for a project, the DPWO consulted with the installation Commanding Officer.

Air Force Capehart policy attempted to maximize limited funding. Capehart mortgage funds were used solely for the construction of the buildings. The Air Force paid for amenities, such as washers and dryers, using appropriated funds. Air Force policy to provide amenities through appropriated funds drew criticism from the Comptroller General of the United States. The Navy incorporated the cost of amenities into the project's overall construction costs; appropriated funds were used to furnish the units. Air Force policy demonstrated a preference for duplex units over single-family and multi-family units. The Navy also opposed the construction of multi-family buildings having six to eight units.

Both services developed site-specific plans for the design of Capehart neighborhoods. The Air Force authorized site-specific designs rather than relying on previously developed standardized designs. The use of site-specific drawings suggests that base officials continued to play an important role in the development of Capehart housing. The Navy focused its limited resources on developing preliminary plans rather than developing standardized drawings. The use of preliminary plans enabled the Navy to adequately assess a project's economic feasibility as well as to quickly proceed with a Capehart project after it was approved by the appropriate channels. The Navy did not advocate the development of standardized plans for Capehart housing until 1960.

#### **4.3.4 Public Law 1020**

Public Law 1020, enacted in August 1956, stimulated interest in the Capehart program. The law extended the Capehart Act until 30 September 1959. The legislation also increased the maximum unit size and raised the average cost per unit to \$16,500 following recommendations developed in Congressional committee hearings. The legislation also addressed challenges to projects in high-cost areas. The 1956 legislation made construction under the Capehart program competitive with military construction financed through appropriated funds. Up to that time, houses constructed with appropriated funds generally were larger and built with better materials than the Capehart units due to the limitations imposed by the Capehart Act (U.S. Senate 1957:6). For appropriated-funds housing, Public Laws 626 and 653, 80<sup>th</sup> Congress, mandated the maximum size of living units based on rank: 2,100 square feet for generals; 1,400 for majors and lieutenant colonels; 1,250 for warrant officers, flight officers, and commissioned officers below the rank of captain; and 1,080 for enlisted personnel.

The original Capehart ceiling of \$13,500 per unit was inadequate to build units of these sizes (USAEC 2003:4-18).

The use of prefabricated materials and components was authorized under the original Capehart legislation; however, few Capehart projects took advantage of the benefits prefabrication afforded (USAEC 2003:4-18). Congress attempted to attract interest in modular measure by the construction industry through legislation. Public Law 1020 mandated the standardization of building materials and construction technology in all new Capehart projects. The legislation directed that “plans, drawings and specifications developed for Title VIII military housing must follow the principle of modular measure so that the housing may be built by conventional construction, on-site fabrication, factory precutting, factory fabrication, or an combination of these construction methods” (U.S. Public Law 1020 1956). Subsequent design criteria developed by the Department of Defense also mandated the use of modular measure (Morris 1961:11).

#### **4.3.5 Acquisition of Wherry Housing**

During Congressional hearings prior to the Capehart Act, Wherry Act sponsors voiced concern over the ability of Wherry housing to compete with larger and better-quality Capehart housing. The government sought to address this concern. Language was inserted in the original Capehart legislation authorizing the military services to purchase Wherry housing. Public Law 968 also authorized the military acquisition of Wherry housing. The difference between the two pieces of legislation was price. Under the Capehart Act, the Secretary of Defense could acquire Wherry housing for the “fair market value of such land or housing as determined by the Secretary on the basis of an independent appraisal” (U.S. Public Law 345 1955:652). Public Law 968 directed that the purchase price of Wherry housing not exceed the FHA commissioner’s estimate of the replacement cost of the housing less depreciation (U.S. Public Law 968 1956:1198). The change in the value of the acquisition price for Wherry housing was significant for two reasons. The fair market value of the housing could be significantly more than the replacement price minus depreciation. The new calculation enabled the government to acquire Wherry housing at lower cost (USAEC 2003:4-19).

Public Law 1020 also created a revolving fund to purchase Wherry housing and required military acquisition of Wherry housing at installations proposing Capehart projects. Capehart projects could not be constructed until the military service acquired existing Wherry housing at that installation (USAEC 2003:4-19).

Wherry units were smaller, had fewer amenities, and did not meet then current military family housing standards. Congress appropriated \$70 million to bring Wherry housing up to Capehart standards. Improvements included combining units to create larger quarters and adding baths, storage, and bedrooms (USAEC 2003:4-20).

The Navy plans for renovation included modernizing and enlarging kitchens, combining one-bedroom units to create two bedroom units, enlarging master bedrooms, adding covered porches, and additional clothes storage (*Navy Times* 1958). It was expected that the Navy plan would be adopted by the Air Force and the Army (*Navy Times* 1958).

The Navy reconfigured the Wherry housing units at the Wake Village project at Parris Island. The original sixteen one-bedroom units were redesigned to create eight three-bedroom units. Dining areas were enlarged in many of the units. Enclosed porches with storage, awning windows, and washer hook-ups were provided for all units; lighting and electrical services were upgraded (“Parris Island Wherry Housing [“Wake Village”]” n.d.). Additional work included replacing heating systems,

installing soundproofing, installing air conditioning, and constructing utility rooms, additional bedrooms and half baths (“Parris Island Wherry Housing [“Wake Village”] n.d.).

#### **4.3.6 The Construction of Non-Residential Buildings under the Capehart Act**

Both the Navy and the Air Force sought to construct non-residential buildings in Capehart neighborhoods using FHA mortgage-guaranteed funds. Congress felt the use of such funds was beyond the original intent of the Capehart legislation.

The Navy proposed the construction of a general-purpose building in conjunction with the Capehart project at NAS Whidbey Island. The Capehart neighborhood was located off-station and the Navy maintained that a general purpose building for project administrative and material storage was imperative to the timely completion of the project within budget (Chief of Naval Air Basic Training 1960). The Air Force planned Youth Centers at a number of installations as part of the Capehart projects. Such centers previously were not included in Capehart housing requests to Congress. The Air Force sought approval for the youth centers from the Appropriations Committee (Garlock 1959).

Congress strenuously objected to using Capehart mortgage proceeds for the construction of non-residential buildings. Carports, garages, and storage buildings constructed to support housing were excluded from this provision. In a letter to the Comptroller of the Department of Defense, the Chairman of the Housing Sub-Committee on Military Construction stated:

None of these facilities were presented to the Appropriations Committee in connection with the housing program for Fiscal Year 1960. By no stretch of even the imagination of the Legal Department can they be regarded as having been approved by this committee. For a service in the Department of Defense to proceed with the construction of non-dwelling facilities at this time would certainly be a breach of faith this committee. You are, accordingly, directed to see that this is not done and that the construction of Capehart Housing projects be limited to the dwelling facilities as presented to the committee (Logan 1960).

In light of Congress’ position, the Deputy Comptroller for Budget in the Office of the Secretary of Defense instructed the three services to refrain from building non-residential support buildings as part of Capehart projects (Logan 1960).

#### **4.3.7 1961 Department of Defense Military Family Housing Policy**

In May 1961, the Department of Defense issued a new military family housing policy and criteria. Under the policy, family housing needs were based on projected personnel levels and the lowest sustained strength (Department of Defense Housing Commission 1961:1). Military family housing was extended to career military officers comprising married, male commissioned and warrant officers, and to some enlisted personnel. The number of married personnel was determined by “actual marital rate experience for each installation” (Department of Defense Housing Commission 1961:1). Women and enlisted men in grades E-1 through E-3 and E-4 with less than seven years of service were excluded from the calculations for family housing (Department of Defense Housing Commission 1961:1). All adequate family housing – which comprised Capehart, Wherry, and appropriated-funds housing on-base, and adequate private housing off-base – could not exceed 90 per cent of an installation’s housing requirements (Department of Defense Housing Commission 1961:3).



#### **4.3.8 Advisory Panel on Military Family Housing Policy**

In 1961, an Advisory Panel on Military Family Housing Policy named by Secretary of Defense McNamara issued recommendations for addressing the family housing problem. The panel endorsed the creation of a professional Family Housing Management Office in the Office of the Secretary of Defense. The establishment of a uniform military family housing management organization in the Air Force, Navy, and Army also was promoted. The panel recommended increasing the Basic Allowance for Quarters Schedule by an average of 18.5 per cent (Gilpatric et. al 1961:2).

In late 1961 and early 1962, the Air Force took the recommendations of the Advisory Panel under consideration and established a centralized family housing office at the Air Staff, Major Command, and base levels. Each family housing office was staffed by housing professionals. The housing office reported directly to the Head Civil Engineer at each level. In a memorandum to the chief of staff, Deputy Special Assistant for Installations George Robinson noted that the Navy was well on the way towards centralizing its housing operations, and he suggested that the Air Force examine the Navy's organization and operations (Robinson 1961a:1).

#### **4.3.9 Capehart Slowdown**

The Capehart Act attracted critics, and local communities were concerned about overbuilding. Yielding to public pressure, the Department of Defense suspended the Capehart program in 1957 pending a review. Congress limited the number of Capehart units constructed per year by each service as a result of the program review.

Public Law 86-149 capped the number of Capehart units that could be constructed between 30 June 1959 and 30 September 1960 at 20,000. Proposals for a total maximum of 10,000 units could be advertised at any one time (Bryant 1959d). The legislation directed that the Secretary of Defense determine the distribution of the units among the services (Millberry 1959). The Air Force was authorized to construct 8,800 units and the Navy received authority to construct 4,360 units (Bryant 1959b:1). Each military service certified that the number of units was "consistent with long-range military strengths and deployment based on the latest military planning" and conformed "with current programming criteria" (Bryant 1959b:2). This certification occurred twice. Capehart projects were certified with requests for appropriated funds for site acquisition and/or off-site utilities. The projects again were certified before advertisements were placed for construction bids.

Congress reviewed national housing policy and the Title VIII program in 1961. Critics of Title VIII and Congressional leaders began questioning the economic advantages of private sector construction of military family housing. It had become apparent that construction was more cost effective using appropriated funds. The Comptroller General issued a series of reports that were critical of the Title VIII program. Congress re-evaluated the Capehart program and made the determination that Title VIII had outlived its usefulness. Consequently, Congress did not authorize any new Capehart projects and the legislation was allowed to expire in October 1962 (USAEC 2003:4-21).

#### 4.3.10 Results of the Wherry and Capehart Programs

The Wherry and Capehart programs significantly reduced the military family housing shortage. The Air Force built the largest number of Capehart units, exceeding the total number constructed by the Navy and the Army combined (Robinson 1961b:1). Table 8 compares the two construction programs across the three services.

**Table 8. Wherry and Capehart Housing Inventory, 1960**

	Navy	Air Force	Army	Total
Capehart Units	19,806	59,142	36,351	115,299
Wherry Units	24,366	36,812	22,249	83,727

Numbers include subsequent year authorization and units approved by Congress but for which construction has not started.

Source: Office of Secretary of Defense, Statistical Services Center, 31 October 1960.

#### 4.4 THIRD-PARTY REVIEWS OF CAPEHART HOUSING

The results of the Capehart Act were reviewed by government and the private sector throughout the program. The architectural firm of Keyes, Lethbridge & Condon was retained by the Department of Defense to review Air Force, Navy, and Army Capehart housing. In general, the firm's review was favorable, and often cited projects where Capehart housing exceeded the quality of comparable private-sector housing. Criticisms focused on the construction materials and building techniques applied in some projects. The Comptroller General also reviewed the implementation of the Capehart program by the three services. The reports, which were presented to Congress, identified areas of financial waste and perceived abuse.

##### 4.4.1 The Keyes, Lethbridge & Condon Review of Capehart Housing

The Washington, D.C. architectural firm Keyes, Lethbridge & Condon conducted a survey of Capehart housing for the Department of Defense. The results were presented in the report *Inspection, Study & Analysis Capehart Housing Projects*, submitted in April 1959. The firm reviewed selected Capehart projects constructed by the three branches of the military. This review included five Army projects, eight Air Force projects, and three Navy projects. The goal of the review was to develop recommendations for future planning, design, and construction of Capehart housing. The report covered topics ranging from building materials, site planning, building design, and amenities.

The firm focused its investigation on NCO three-bedroom units, which comprised the majority of Capehart housing (Keyes, Lethbridge & Condon 1959:1). The study concluded that the houses constructed under the Capehart program "were equal to, or superior to, comparable commercial housing in the same general category and cost range," with a few exceptions (Keyes, Lethbridge & Condon 1959:2). Housing constructed at Lincoln AFB, Nebraska; Homestead AFB, Florida; and Myrtle Beach AFB, South Carolina were identified as among the highest quality reviewed for the study. The housing units added at Mather AFB, California, and MCAS, Cherry Point, North Carolina, were nearly equal in quality. All of these examples were planned and constructed to higher standards than similar housing in the civilian market (Keyes, Lethbridge & Condon 1959:8). The report concluded that while the overall Capehart product was good, there was room for improvement. The report cautioned that improvements would not be made by accepting contemporary, private-sector construction standards (Keyes, Lethbridge & Condon 1952:2).

In contrast to the Army, both the Navy and the Air Force developed Family Housing Offices staffed by trained housing professionals. The Keyes, Lethbridge & Condon report endorsed the adoption of standardized DoD criteria derived from the Air Force's *General Design Criteria for*

*Construction of Family Housing* (10 December 1958)<sup>1</sup>. These proposed new standards would not duplicate the FHA's *Minimum Property Standards* or the HHFA's *Design Standards for Construction of Permanent Family Housing for Federal Personnel*. While the report advocated for standardized housing criteria, it strongly opposed standardized plans and was critical of the Army Corps of Engineers' *Folio of Accepted Designs*. The authors of the report cautioned that standardized plans stifled the development of plans for specific projects "to something very little better than what has already been constructed" (Keyes, Lethbridge & Condon 1959:5). Justifying objections to strictly mandated standardized plans, the authors expressed concern that the construction of architecturally substandard plans could be repeated at different installations (Keyes, Lethbridge & Condon 1959:5). The authors concluded that the use of standardized plans for hangars, warehouses, and other non-housing buildings was appropriate but were not appropriate for the design and construction of family housing (Keyes, Lethbridge & Condon 1959:6).

The Keyes, Lethbridge & Condon report recognized the challenge of constructing family housing within the cost limitations of the Capehart program. Construction costs varied from region to region, and the report suggested adopting a system of variable mortgage ceiling dependent upon regional construction costs.

The report recommended against the construction of walk-up or high-rise apartment buildings unless warranted by unusual conditions. The Air Force and Navy were criticized for failing to construct more rowhouses. The building type provided an efficient and cost-effective alternative if designed to above minimum standards and with private yards and community facilities (Keyes, Lethbridge & Condon 1952:4).

Architectural standards were comparable among the sixteen installations surveyed, with minor regional variations in materials (such as wood shakes in New England and stucco in California) and construction techniques (additional reinforcement for units constructed in earthquake and hurricane zones). The full range of window types then available was used in the construction of Capehart units. Kitchen cabinets were considered to be good or better than average quality. Washing machines were considered desirable but not required. Washing machines were included in project specifications for Air Force projects or were provided by the Air Force through alternative funding. Such appliances were sometimes specified in Navy projects, but not standardized through alternative government funds. Washers were incorporated in Army projects (Keyes, Lethbridge & Condon 1959:14). The same variation was noted regarding clothes dryers, with the exception that the Navy never specified dryers as basic equipment (Keyes, Lethbridge & Condon 1959:14). Dishwashers were considered non-essential and were not included by any of the services (Keyes, Lethbridge & Condon 1959:15).

Only selected Capehart projects included air conditioning. The growing acceptance of air conditioning as standard in the civilian market led the report authors to recommend that projects that did not include air conditioning in the initial construction include design provisions for future modification. Two and a half baths were considered adequate for three-bedroom units; the report strongly discouraged decreasing the minimum standard to two bathrooms in three-bedroom units (Keyes, Lethbridge & Condon 1959:14).

Noting that each service employed its own policies for construction inspections, the report argued in favor of consistently delegating construction oversight to architectural and engineering firms. The Air Force retained the architect who had designed the project for site inspections. The Navy usually employed Navy personnel to conduct site inspections; however, project architectural and engineering firms were occasionally used. The Army relied upon the Army Corps of Engineers.

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<sup>1</sup> Attempts to locate this source were unsuccessful.

While architectural and engineering firms were recommended to conduct site inspections, the report strongly encouraged the military to inspect the projects prior to government turnover.

The report further recommended that the military service maintain common project areas, while private spaces should be maintained by the tenants “so that they might experience all of the advantages of home ownership” (Keyes, Lethbridge & Condon 1959:28). The report discouraged the construction of fences by tenants, labeling the resulting variation of design “unsightly.” Fencing should be designed by architectural and engineering firms, restricted to certain areas, and installed by the installation.

#### **4.4.2 The Comptroller General’s Review of Capehart Housing**

The Comptroller General presented the results of a comprehensive review of the Capehart program to Congress in July 1960. In his report, the Comptroller General criticized the Air Force and the Navy for using appropriated funds for the purchase of residential appliances, such as washers, dryers, and dishwashers (Comptroller General of the United States 1960:92). The Air Force was cited for this continuing practice despite instructions from the Assistant Secretary of Defense (Comptroller General of the United States 1960:92).

In contrast to the procedures followed by the Navy and the Army, the Air Force also used appropriated funds to finance construction inspections for Capehart projects. The Comptroller General found that inspection expenses above and beyond those completed by the architectural and engineering firm should be included under the Capehart mortgage; appropriated funds should not be used to pay for project inspection (Comptroller General of the United States 1960:92). The Air Force also was criticized for the construction of officer housing (major and above) that exceeded mortgage limitations.

The Comptroller General undertook a review of Capehart projects at Myrtle Beach AFB, South Carolina, and Chanute AFB, Illinois. The results were presented in *Unnecessary Costs Incurred because of Administrative Negligence and Poor Design in the Construction of Two Capehart Housing Projects*. The report, submitted to Congress in October 1963, criticized the Air Force for approving the wrong paint for exterior siding in the Myrtle Beach AFB project and for poor storm drainage at the project at Chanute AFB.

## 5.0 HOUSING CONSTRUCTED UNDER MILITARY CONSTRUCTION, AIR FORCE AND MILITARY CONSTRUCTION, NAVY

### 5.1 SUMMARY

Congress supplemented the stock of military family housing constructed under the Wherry and Capehart programs with additional units funded through appropriating funds under military construction, Air Force and military construction, Navy line items of the Department of Defense appropriation bills. In contrast to the housing designed and constructed by the private sector under the Wherry and Capehart programs, the military agencies were responsible for the construction of appropriated-fund housing. The Army Corps of Engineers initially oversaw construction of Air Force housing in coordination with the Air Force, while the Navy Bureau of Yards and Docks undertook construction oversight for Navy housing. Housing constructed using appropriated funds met military housing needs in situations where construction costs exceeded the limits established under the Wherry and Capehart programs, or where the numbers of housing units needed were too small to attract private-sector sponsors (U.S. Senate 1957:5). Congress appropriated substantial funds for military family housing in 1954 during the transition between the Wherry and Capehart programs. After 1962, Congress and the military services exclusively funded the construction of family housing through appropriated funds after determining that construction utilizing this funding method was more cost-effective than the private-sector programs. Table 9 summarizes appropriated-funds housing constructed by service.

**Table 9. Appropriated-Funds Housing Constructed between 1949 and 1962**

Service	Total (in units)
Air Force	5,140
Navy	916
Marines	551
<b>TOTAL</b>	<b>6,607</b>

Note: See Appendix D for breakdowns by installation  
Source: See page D-1

## 5.2 MILITARY CONSTRUCTION, AIR FORCE AND MILITARY CONSTRUCTION, NAVY

### 5.2.1 1949-1962 Appropriations

While Congress was developing the provisions of the Wherry program during the summer of 1949, it also examined the military's family housing needs for fiscal year 1950. The Air Force submitted a request for 3,550 family housing units, which included 2,694 units in the United States and 856 units outside the United States, including Alaska (U.S. House of Representatives 1949b:3282). The Navy requested 1,317 units of family housing, comprising 861 units within the United States and 456 outside the United States, including Alaska.

Most of the requested housing was intended to relieve shortages in isolated areas where private-sector housing was not available (U.S. House of Representatives 1949b:3179, 3282). Neither service received funds for family housing requested for installations within the continental United States for fiscal year 1950. Construction of family housing was authorized for installations located outside the continental United States, including Navy facilities at Adak and Kodiak, Alaska, and Eielson AFB, Alaska (U.S. Public Law 420 1949:958). These funds were included in the National Military Establishment Appropriation Act for fiscal year 1950 and specified housing construction cost ceilings by rank, including \$14,040 for generals, \$12,040 for majors, lieutenant colonels, and colonels, \$11,040 for second lieutenants, lieutenants, captains, and warrant officers, and \$10,040 for enlisted personnel (no Navy-specific ranks were listed) (U.S. Public Law 434 1949:1029).

No appropriations for military family housing within the continental United States were requested for fiscal year 1951, because officials believed the Wherry program would address the

housing shortage (U.S. House of Representatives 1950:157). Housing authorizations for Navy or Air Force family housing for that year were limited to an unspecified number of housing units at Ladd AFB, Alaska. A section of the authorization stated, "Nothing contained in this Act shall be construed to authorize the construction of family quarters or the conversion of existing structures to family quarters at any of the localities mentioned under Titles I, II, and III [the Army, Navy, and Air Force sections] of this Act under the heading 'Continental United States' (Public Law 564 1950:242-247).

Between 1951 and 1954, 800 military family housing units were built in the United States using appropriated funds. This total likely includes the unspecified number of family housing units authorized by Congress at 57 Air Force bases in fiscal year 1952. (U.S. House of Representatives 1954:5323; U.S. Public Law 155 1951:496-506; U.S. Public Law 254 1951:773). The Navy, Marine Corps, Air Force, and Army anticipated that the Wherry program would fulfill military family housing needs (U.S. House of Representatives 1954:5336). Appropriations acts continued to establish cost ceilings for family housing. The appropriation for fiscal year 1952 reiterated the cost ceilings for fiscal year 1950 (U.S. Public Law 179 1951:583).

By 1954, it became clear that construction under the Wherry program was not proceeding quickly enough to meet the entire family housing shortage. The Navy and Marine Corps estimated that they lacked a total of 63,000 units, and the Air Force estimated a shortage of 161,000 units (U.S. House of Representatives 1954:5324).

Wherry program housing was anticipated to cost more than appropriated-fund housing over the long term. During testimony before the House Committee on Real Estate and Military Construction in 1954, Franklin G. Floete, Assistant Secretary of Defense for Properties and Installations, noted that quarters allowances of \$90 per month paid to Wherry sponsors during the 50-year contract, with interest, totaled \$95,310. In contrast, appropriated-fund housing cost the United States a one-time investment of approximately \$13,500 per unit. Floete further calculated that the government would spend less on maintenance, utilities, and interest for appropriated-fund housing during the 50-year period than on Wherry quarters allowances (U.S. Senate 1954:19-20).

That year, the military presented Congress with a request for \$350 million in appropriated funds to more quickly meet the family housing need (U.S. House of Representatives 1954:5394-5). Department of Defense priorities for appropriated-fund housing for fiscal year 1955 included construction at isolated installations with special missions, such as Air Force aircraft control and warning, and fighter interceptor installations; installations without permanent status, such as Air Force Strategic Air Command bases; Navy, Air Force, and Army installations where Wherry program housing was difficult to acquire or not feasible to build; and, installations with family housing converted from temporary buildings (U.S. House of Representatives 1954:5325). These priorities totaled 25,000 family housing units (U.S. House of Representatives 1954:5426).

During Congressional testimony, military officials stressed that the housing request was intended to supplement Wherry housing, not to replace housing constructed under the program (U.S. House of Representatives 1954:5402). In addition, the request for appropriated funds for fiscal year 1955 was the first in a six-year program designed to gradually close the military family housing gap; the military intended to seek a total of \$2 billion to build 150,000 units over the six years (U.S. House of Representatives 1954:5404). It was apparent from their testimony that military officials sought to reassure lawmakers, concerned over deficit spending and government involvement in house construction, that the private-sector partnership remained the focus of the military family housing program.

Under the Department of Defense's general plan for allocating appropriated funds, multi-family dwellings, costing an average \$13,500 per unit, were proposed for enlisted personnel and company-grade officers. The size of units were set at 950 square feet for enlisted personnel, and 1,125 square feet for company-grade officers (U.S. House of Representatives 1954:5330).

After considering the Department of Defense's \$350 million housing request, the House and Senate Armed Services Committees drafted a bill that authorized up to \$175 million for the construction of 13,613 housing units across all service branches (U.S. Senate 1954:6, 11). The legislation proposed 1,525 family housing units for the Navy in the continental United States, Alaska, and Hawaii, including 466 units for Marine Corps facilities (U.S. Senate 1954:2-4, 56). For the Air Force, the legislation proposed 6,499 family housing units (U.S. Senate 1954:4-6). The remaining units were allotted to the Army.

The legislation proposed net floor areas of 2,100 square feet for up to 250 units for all the service branches; the average net floor area of the other units could not exceed 1,080 square feet (U.S. Senate 1954:6). Multi-family dwellings were proposed for enlisted personnel and company-grade officers, duplexes for field-grade officers, and single-family houses for commanding officers and generals (no Navy-specific ranks were indicated). The average cost of the units proposed in the legislation was \$14,500 (U.S. Senate 1954:11).

Congress authorized the majority of the military family-housing request. For the Navy and Marine Corps, a total of 1,419 units were authorized for the continental United States, Alaska, and Hawaii. This figure represented a reduction of 106 units from the original request. For the Air Force, 6,429 family housing units were authorized, a reduction of 70 units from the initial request. Congress also preserved the floor area limits (U.S. Public Law 765 1954:1325-1330). However, the Air Force built only 3,885 of the authorized units. One project was canceled before construction, and the number of units planned for 13 other locations was either reduced or eliminated because Wherry housing was planned for those locations (U.S. House of Representatives 1955b:75-76). In addition, funding appropriations were made for only 40 per cent of the family housing units authorized for the entire military (U.S. Senate 1957:4).

The Department of Defense's family housing request for fiscal year 1956 indicated that it no longer believed that military family housing constructed by the private sector was the primary way to meet military housing needs. Department of Defense officials told Congress that they supported proposed changes to the Wherry law to strengthen the housing program, but viewed Wherry Act housing as supplement to appropriated-funds housing (U.S. House of Representatives 1955a:5). This view represented a dramatic reversal in the solution originally structured to build the majority of family housing under the Wherry Act, and to supplement the Wherry program through the construction of additional housing units using appropriated funds.

For fiscal year 1956, the Navy and Air Force increased their family housing requests. During Congressional testimony, Department of Defense officials estimated a shortage of approximately 180,000 family housing units in the continental United States, including 37,000 for the Navy and 90,000 for the Air Force (U.S. House of Representatives 1955a:3-4). The Navy requested 3,088 units, an unspecified percentage of which were likely intended for construction overseas (U.S. House of Representatives 1955a:6). Family housing was authorized for 14 Navy and Marine Corps installations in the continental United States, Alaska, and Hawaii (U.S. Public Law 161 1955:360-366). The Air Force requested the addition of 8,058 units in the continental United States, as well as funding for 4,107 units authorized but not funded in fiscal year 1955 (U.S. House of Representatives 1955b:20). Family housing was authorized for 40 Air Force bases (U.S. Public Law 161 1955:368-379). The

fiscal year 1956 appropriation funded that year's authorization as well as the unfunded balance of the previous year's authorization for both services (U.S. Senate 1957:4).

In 1957, an emphasis on private-sector housing construction began to return. In January, some Navy and Air Force housing units authorized for fiscal years 1956 and 1957 were cancelled or deferred, in order to determine whether those housing needs could be met under the Capehart program. For fiscal year 1956, 358 Navy units and 6,816 Air Force units were deferred or canceled. For fiscal year 1957, 145 Air Force units and three Navy units were deferred or canceled (U.S. House Subcommittee of the Committee on Appropriations 1957:113-119). Nevertheless, between fiscal year 1955 and the middle of fiscal year 1957, the Navy constructed or issued contracts for the construction of 1,113 houses with appropriated funds; the Air Force built 4,421 houses with appropriated funds (U.S. House of Representatives 1957:115, 119).

In fiscal year 1957, the Air Force requested funding for the construction of 1,261 family housing units on ten installations in the continental United States and Alaska. An additional 800 units were requested for 74 unspecified air control and warning sites (U.S. House of Representatives 1956:23). Though the Air Force requested housing for ten bases, it received authorization to build at nine installations. No family housing funds were authorized for the Navy in 1957 (U.S. Public Law 968 1956:1177-1191).

The Army Corps of Engineers was assigned construction oversight for 434 housing units at Air Force aircraft warning and control sites. Due to excessive cost overruns, these projects were suspended, and later were completed by the Air Force (Douglas 1956:1). Under Secretary of the Air Force James W. Douglas recommended that the Air Force construct the 1,213 units planned for fiscal year 1957. He suggested that the Air Defense Command supervise the projects as it had done in the construction of the 434 housing units, which recently were completed. Douglas was concerned that the costs for design, inspection, overhead, and contingency charged to the Air Force by the Army Corps of Engineers would require a reduction of the overall number of units or in a reduction in the size of the units in order to execute the project within budget (Douglas 1956:2).

As was the case during the Wherry program, military family housing constructed through appropriated funds continued merely to supplement the number of housing units constructed under the Capehart program. For fiscal year 1958, the Navy received authorization to build appropriated-funds family housing at only Adak, Alaska. The Air Force was authorized to construct an unspecified number of family housing units at four bases, as well as family housing at various unspecified installations that comprised the aircraft control and warning system (U.S. Public Law 85-241 1957:583-99). For fiscal year 1959, the Navy requested funding for 81 family housing units at Naval Station Adak, Alaska; the Air Force requested 54 units at various domestic locations (U.S. House of Representatives 1958:11). The public law authorizing military construction for fiscal year 1959 authorized housing construction only at unspecified Air Force aircraft control and warning stations; no housing was authorized for the Navy (U.S. Public Law 85-685 1958:751-771).

The Military Construction Authorization Acts for 1958 and 1959 included a provision requiring that construction contracts within the United States fall under the jurisdiction and supervision of the Army Corps of Engineers for the Department of the Air Force and the Bureau of Yards and Docks for the Department of the Navy. The Assistant Secretary of Defense (Properties and Installations) determined that the Air Force had developed program management expertise and therefore should retain authority over the construction of its Capehart units (Robinson 1959b:1). The Air Force again voiced its concerns over using the Army Corps of Engineers for constructing appropriated-funds housing for the Air Force. Citing problems with projects at Lincoln and Glasgow,



Air Force Deputy Special Assistant for Installations George Robinson advised against delegating construction management at Air Force bases to the Army Corps of Engineers (Robinson 1959b:2).

The Navy did not request appropriated-funds family housing for fiscal year 1960, while the Air Force requested 108 units in the continental United States to support four radar sites (U.S. Senate 1959:16, 20, 329). The Air Force received family housing for an unspecified number of radar sites (U.S. Public Law 86-149 1959:343-51). For fiscal year 1961, the Navy was authorized to construct appropriated-funds housing at overseas locations only. The Air Force was authorized to build appropriated-funds family housing overseas, at unspecified aircraft control and warning sites, and miscellaneous facilities (U.S. Public Law 86-500 1960:193-206).

The Air Force requested 600 appropriated-funds family housing units for fiscal year 1962. This request comprised 300 units for Hill AFB, Utah, and 300 units for Minot AFB, North Dakota (U.S. House of Representatives 1961a:19, 471, 490). The Navy requested 1,000 units at seven domestic installations (U.S. House of Representatives 1961a:19, 471, 477). For the Air Force, housing was authorized only for Hill AFB, but the Navy's request was met fully (U.S. Public Law 87-57 1961:115-125). Harry R. Sheppard, Chairman of the House Subcommittee on Military Construction, voiced the opinion that the authorization indicated Congress was preparing to abandon the Capehart program in favor of appropriated-funds housing to meet military need (U.S. House of Representatives 1961a:588).

Appropriated funds became the sole funding source for military family housing after 1962, when Congress failed to reauthorize the Capehart program. The number of units requested and authorized for construction using appropriated funds immediately increased drastically, reflecting the armed forces' continued need for family housing. For fiscal year 1963, the Navy requested 3,350 family housing units and received authorization for 3,204 units. The Air Force requested authorization for 4,992 units, and was authorized to build 3,059 units (U.S. Public Law 87-554 1962:291-292; U.S. House Committee of Representatives 1962:15, 22).

### **5.2.2 Family Housing Construction in Alaska**

Most Air Force construction in Alaska was financed through the Military Construction, Air Force line item in Congressional authorizations because the cost of building materials in Alaska exceeded budget ceilings established for the Wherry and Capehart programs. Army and Air Force construction was overseen by the Alaska District Engineer, assigned to the North Pacific Division of the Army Corps of Engineers. The Air Force informed the Chief of Engineers of its construction requirements. The Chief of Engineers then briefed the District Engineer on the types of buildings needed, the design required, specific parameters for the project, and available funding. The District Engineering Division reviewed the project requirements with the Air Force and contracted with an architect-engineer firm to develop plans. Following review of the firm's plans and specifications, the Army Corps of Engineers solicited bids and selected a contractor through lump-sum award. The Corps of Engineers District Construction Division oversaw construction. Contractors hired their own labor, but the government provided food and housing. The government also provided concrete batching and mixing plants, and rented construction equipment, as requested (U.S. House of Representatives 1952a:3-5).

In 1950, Congress specified that the average cost per family unit was not to exceed \$29,500, and the maximum allowable floor space was not to exceed 1,080 square feet (U.S. Public Law 564 1950:248). Also that year, the Department of Defense Housing Commission recommended the construction of multi-unit structures. It recommended that each unit consist of a living room, dining

alcove, and kitchen on the first floor; a bath and either two bedrooms with utility room, or three bedrooms, on the second floor; and storage space in the attic. The Commission recommended against the construction of basements due to cost (U.S. House of Representatives 1952a:6).

Between fiscal years 1946 and 1953, the Air Force had 2,513 family housing units built or scheduled for construction at Eielson, Elmendorf, and Ladd Air Force bases. This total represented approximately 55 to 65 per cent of the housing needed (U.S. House of Representatives 1952a:3).

In 1951, members of Congress, the Government Accounting Office, and the Comptroller General opened an investigation into construction in Alaska after receiving reports that Army and Air Force family housing projects were “characterized by slipshod methods, inferior materials, and lax supervision on the part of the Army Corps of Engineers” (U.S. House of Representatives 1952b:2). In December 1952, the House Committee on Government Operations issued several recommendations for improving construction practices and reducing costs. These recommendations included re-examining basic housing design to eliminate costly materials; re-examining cost ceilings for possible reduction; scheduling completion dates for utilities to coincide with housing; planning housing that met family sizes and did not duplicate available private-sector housing; more thoroughly examining housing; and, auditing expenses (U.S. House of Representatives 1952a:20).

### **5.2.3 Use of Appropriated Funds for Other Housing Programs**

The Air Force and the Navy developed a variety of programs and strategies to address the family housing shortage. Some of these programs were implemented while others never received final Congressional approval.

#### 5.2.3.1 Lustron Housing

The Navy attempted to solve its family housing shortage through the construction of prefabricated houses. To achieve this goal, the Navy contracted the Lustron Corporation of Columbus, Ohio, to construct 60 houses for enlisted personnel and officers at the Marine Corps Schools, Quantico, Virginia. Bungalow-style, two-bedroom and three-bedroom units were constructed between February and August 1949.

Lustron houses were an economical housing solution that provided mass-produced housing quickly and efficiently. The Lustron Corporation had an established civilian market when the Marines contracted with the company to provide military housing units. With prices ranging from \$8,500 to \$9,500 for a two-bedroom, single-story house, Lustron houses were an affordable housing alternative marketed to low- and moderate-income families. Lustron homes cost approximately 25 per cent less than conventional housing of the same size (*Columbus Dispatch* 1949).

Lustron houses were constructed of porcelain enamel on steel and featured amenities such as radiant heating, combination dish-clothes washers, floor-to-ceiling kitchen cabinets, linen closets in the dining rooms, vanities in the master bedrooms, and bookcases between the dining rooms and kitchens (Lustron Corporation 1948:3). The houses were marketed as low-maintenance buildings requiring little or no redecorating (Lustron Corporation 1948:3). The Lustron Corporation went out of business in 1950. Archival research has not identified additional Navy installations with concentrations of Lustron houses.

During early 1949, the Air Force's Strategic Air Command (SAC) developed a preliminary proposal for a Lustron housing program to meet SAC's immediate, short-term family-housing needs while details of the Wherry program were settled, and appropriations for long-term housing solutions were authorized by Congress (Headquarters Strategic Air Command 1949:1). Under the proposed program, airmen seeking to rent family housing would establish an association to administer funds from the servicemen, the government, and private sources to buy Lustron prefabricated housing. The Federal government would lease land to the association and provide roads and utilities. At a cost not to exceed \$2,000, the 700 square-foot units – to be assembled by the airmen – would include an electric refrigerator, a kitchen stove, a water heater, a kitchen sink and cabinets, a bath or shower, a toilet, electric wiring and fixtures, plumbing connections, and a heating unit as needed for local weather conditions. Both the interior and the exterior of the units would be painted. Rent was proposed at \$40, excluding utilities and insurance. Once the housing was in place, the Air Force would maintain roads and utilities; the association would administer and maintain the housing. The Air Force anticipated that associations created under the proposed program would retire their debt in less than five years; after debt repayment, the Air Force would take over the housing (Headquarters Strategic Air Command 1949:1-3).

Air Force officials endorsed exploring the proposal further. Officials from the Air Force, the Bureau of the Budget, and the General Accounting Office spent the spring and summer of 1949 discussing whether regulations allowed airmen's rental allowance to be paid to the association to amortize its debt, and whether the housing automatically would belong to the Federal government since it would be built on leased land.

By June, the Air Force sought to begin installing the units. It requested permission from the Bureau of the Budget to spend \$3.1 million for grading, utilities, and roads to complement 2,657 Lustron units planned at 11 bases. The Air Force wanted the housing ready for occupancy within one year to provide housing as quickly as possible for airmen and junior officers. Air Force officials hoped this housing would improve morale, provide an environment conducive to family life, and boost re-enlistment rates among the lower ranks (Zuckert 1949a:1; Zuckert 1949b:1). The Reconstruction Finance Corporation was prepared to provide financing to the Lustron Corporation to purchase the units and use SAC housing association personnel to collect the monthly rent (Zuckert 1949a:2-3).

While the number of units per installation would change according to the amount of Wherry housing eventually assigned, the Air Force planned to build Lustron units at the following installations (Zuckert 1949a:1):

- Bergstrom AFB, Austin, Texas 154 Units
- Biggs AFB, El Paso, Texas 450 Units
- Castle AFB, Merced, California 150 Units
- Carswell AFB, Fort Worth, Texas 330 Units
- Chatham AFB, Savannah, Georgia 143 Units
- Davis-Monthan AFB, Tucson, Arizona 249 Units
- MacDill AFB, Tampa, Florida 100 Units
- Walker AFB, Roswell, New Mexico 250 Units
- Rapid City AFB, Rapid City, South Dakota 143 Units
- Smoky Hill AFB, Salina, Kansas 360 Units
- Spokane AFB, Spokane, Washington 328 Units

In July, legislation was drafted to permit the military to use appropriated construction funds to extend utilities and roads within Lustron housing areas (Myers 1949). However, in August, the program was delayed as the Secretary of the Air Force considered whether to issue the necessary

approval (LeMay 1949:1-3). Following a request from SAC to Air Force Headquarters to expedite approval, Colonel John C.B. Elliott, the Air Force's Director for Family Housing, responded with several concerns. These concerns included the use of airmen to construct the houses, rather than "competent contractors"; the government entering into a single source contract with the Lustron Corporation; and, the possibility that the SAC plan was not fully coordinated and was being advanced too hastily, in comparison to the yearlong negotiation among government agencies on the Wherry housing plan. In addition, the SAC plan called for Lustron housing at three bases with questionable futures: Biggs, Chatham, and Smoky Hill (Elliott 1949:2).

Elliott agreed that, pending approval from the Bureau of the Budget, SAC could install 500 units on two bases. Colonel Elliott specified that Offutt AFB serve as one of the pilot bases. As a condition of approval, SAC was required to provide Air Force Headquarters with all information on contracts, leases, and other details so that the two departments could work closely on coordinating the project. In the meantime, Elliott advised SAC to throw its efforts into the Wherry program, which had been carefully coordinated and was beginning to draw proposals from developers (Elliott 1949:3). A few days later, Eugene M. Zuckert, the Assistant Secretary of the Air Force, informed SAC officials that they would be authorized to install 750 units on two or three bases, and that the Bureau of the Budget was expected to approve \$1 million for maintenance. However, Wherry housing had priority, and SAC was required to assume responsibility for labor and contractor problems associated with the Lustron project (Zuckert 1949c:1).

The SAC plan for Lustron housing was dealt a final blow in late August 1949 when the General Accounting Office indicated that it would not support issuing airmen quarters allowances in lieu of quarters provided by the government. As a result, the comptroller of the Air Force recommended that SAC officials abandon their plan and wait for housing to be provided under the Wherry program, which had become law earlier that month (Webber 1949:1). During this time, the Bureau of the Budget also recommended giving priority to the Wherry program, but issued guidelines for structured program operation for future alternative housing programs similar to the SAC plan. For instance, the Bureau of Budget suggested collecting enough rent to pay debt incurred for housing, interest, utilities, maintenance, upkeep, and overhead costs; requiring the appropriate military officials to supervise all construction; ensuring that all construction be undertaken in accordance with the installation's master plan; and, requiring that any associations formed to build housing maintain accounting records for audit (Pace 1949:1-2).

#### 5.2.3.2 Other Prefabricated Housing

Prefabricated housing was considered one option for shrinking the military's family housing deficiency. Public Law 498, passed May 2, 1950, amended the military housing section (Title VIII) of the National Housing Act to authorize the use of prefabricated housing structures or components, or other "alternate materials or alternate types of construction." This construction had to provide "substantially equal value" compared to typical construction, and meet Federal Housing Administration standards (U.S. Public Law 498 1950:99-100).

#### 5.2.3.3 Trailers

Air Force officials considered trailers as an immediate solution to the family housing shortage. In Alaska, for instance, a 100-unit trailer park was proposed for Ladd AFB in 1948. Twenty-six trailers already were located on base, and their occupants reported that they were warm throughout even the most frigid Arctic weather (Goodyear 1948:1, 13).

In 1954, the first year that Congress appropriated substantial family housing funds after the passage of the Wherry Act, Congress and military officials considered renting trailer units to military families. A total of 5,000 trailers were proposed to house Air Force and Navy personnel (U.S. Senate 1954:12-13). By 1961, a total 4,645 house trailers were located on installations in the United States, including single units at two Air Force bases and 3,911 at 18 Navy installations. The remainder were located on Army installations (U.S. House of Representatives 1961b:438).

#### 5.2.3.4 Transportable Housing

Transportable housing, developed in 1961, was “a new concept in housing developed primarily to fill critical housing needs at locations where permanent conventional housing cannot be justified” (U.S. House of Representatives 1961a:19). For fiscal year 1962, the Air Force requested funding for 256 “transportable family housing units” at 19 aircraft control and warning sites and the Gila Bend Gunnery Range. Private housing provided by the civilian market was not available nearby because the installations were isolated, but permanent housing at these locations was impractical because the missions of the installations could not be ensured over the long term. Transportable housing was defined as “dwelling units of modular design, so constructed and arranged by floor plan, to permit ready relocation from one site to another by overland movement, either by flatcar, truck-trailer, or by over highways” (U.S. House of Representatives 1961b:374). The 1,000 square-foot dwellings contained two or three bedrooms, a bathroom, a utility room, a kitchen, and a combined living room and dining room. The approximate cost of \$14,000 per unit included utilities and other required support (U.S. House of Representatives 1961b:374). Because of its unique framing and bracing, the houses could be moved off one foundation and transported elsewhere (U.S. House of Representatives 1961b:400).

In early 1961, Air Force officials told the House Committee on Armed Services that bids had been received for 135 transportable houses at five aircraft control and warning sites, as a test of the idea. However, Rep. Carl Vinson, the committee chairman, declined to support the program because funding for the 256 units was not available, and a leasing program was planned to meet housing needs at aircraft control and warning sites. Vinson did pledge to form a subcommittee to examine the issue (U.S. House of Representatives 1961b:398-401). Transportable housing was not built during the period covered in the current study.

### **5.3 CONCLUSION**

To further alleviate the massive housing shortage facing all branches of the military in the post-World War II period, Congress supplemented Wherry and Capehart construction programs with housing constructed by the services using appropriated funds. Overall, these funds were intended to finance military housing only in situations where the Wherry and Capehart programs could not be implemented. Wherry and Capehart programs were not designed to meet housing shortages in areas with high construction costs, such as Alaska, or in isolated locations with modest housing requirements that were unattractive to private-sector sponsors. During an era when the Wherry and Capehart programs were utilized most extensively to build military housing, Congressionally appropriated funding for housing was low. Appropriated funds also were used for other types of housing besides permanent single-family and multi-family units, including Lustron houses and trailers. Additional supplemental housing programs were proposed but were unsuccessful. These programs included the SAC proposal for Lustron housing associations and transportable housing. Overall, appropriated funds were not intended to close the gap between the housing provided by the Wherry and Capehart programs and the actual need, and did not do so.



## **6.0 THE SOLUTION: WHERRY, CAPEHART, AND APPROPRIATED-FUNDS HOUSING**

### **6.1 PUBLIC HOUSING<sup>2</sup>**

#### **6.1.1 Authorization Levels for Low-Cost Housing**

Low-cost housing policy during the postwar period provides a context for understanding Wherry and Capehart housing. In the immediate postwar period, government housing generally was known as low-cost housing. Today, such housing frequently is referred to as low-income housing. This change in terminology reflects a shift from characterizing economical “bricks and mortar” housing programs to characterizing the income levels of program participants.

Low-cost housing was defined as housing affordable to those below a certain income level. These levels varied by region. Low-cost housing nearly always was constructed by the local, state, or Federal government. Low-cost or public housing had a number of similarities with postwar military housing. The purpose of this summary is to analyze the differences and similarities among low-cost, military, and market-rate housing.

Wherry Act housing projects technically were not public housing because they were constructed and managed by the private sector. Projects constructed with appropriated funds and under the Capehart Act, in contrast, were government public housing. The Federal government owned and managed the housing units, which were assigned as military quarters. In some respects, the military faced challenges in addressing the postwar housing shortage similar to those faced by other public housing programs. These challenges stemmed from the Federal government’s reluctance to expend limited financial resources to address housing problems.

President Truman supported public housing programs and proposed the construction of relatively large numbers of units. President Eisenhower, however, consistently recommended low funding levels for public housing (Hays 1985:94). Congress was unwilling to support public housing efforts. The Independent Offices Subcommittee of the House Appropriations Committee was responsible for housing appropriations during the 1950s and 1960s. A “greater proportion of southern Democrats and conservative Republicans, many of whom were hostile to the whole concept of public housing,” served on this committee (Hays 1985:94). Federal leaders were opposed to active involvement in the low-income housing market because they believed the private sector would meet the demand (USAEC 2003:5-14). Similar arguments were made during the Congressional hearings on the Wherry Act (U.S. Senate 1949b:24).

Funding appropriated for public housing frequently did not correlate with Congressional authorizations. A similar issue arose with military housing. Although the private sector provided the upfront costs associated with Wherry and Capehart housing, Congress approved the number of units authorized for each installation, and later for each service.

Similar to public housing projects, Congress also approved the construction of many more units through military appropriated funds than ultimately were funded. The Housing Act passed in 1949 authorized the construction of 810,000 units of public housing over a six-year period (USAEC 2003:5-20). A total of 135,000 units were to be constructed each year. The authorization represented ten per cent of public housing need based on the decennial Census of Housing (Meehan 1975:19). Funds appropriated for public housing fell well below the authorization levels. Congress appropriated

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<sup>2</sup> Public housing is defined as housing owned by the local, state, or Federal governments.

funds in 1953 and 1955; no funds were appropriated in 1954. The Korean Conflict further hampered the construction of public housing, as Federal resources went to supporting the war effort (Meehan 1975:19). Less than one-quarter of the authorized units were constructed by 1960 (Hays 1985:93).

The Housing and Home Finance Agency (HHFA) tracked the number of public housing starts. The number of public housing starts dramatically rose during the late 1950s and was attributed to the Capehart program. Public housing construction starts numbered 24,200 units in 1956 and 49,500 units in 1957 (HHFA December 1957:4). Capehart units represented almost half of the public housing starts in 1957. A total of 50,700 public housing units were started during the first eight months of 1958 and included Capehart units (HHFA August 1958:3). By August 1958, HHFA did not distinguish between Capehart Act housing and public housing constructed under other programs.

### **6.1.2 The Federal Public Housing Authority**

In 1946, the Federal Public Housing Authority (FPHA) issued guidance for the development of low-cost housing. Recognizing the need to efficiently manage public funds, the FPHA encouraged controlling expenditures but cautioned against “skimping in the wrong places” (FPHA 1946:1). The FPHA recommended that public housing be designed to minimize maintenance, repair, and replacement costs to control overall costs (FPHA 1946:1). The FPHA also encouraged good project management. The agency noted that it had become standard practice, in many cases, to eliminate features and amenities to the detriment of projects in order to reconcile project bids with government estimates (FPHA 1946:1).

The FPHA further encouraged that the residential character of a project area be safeguarded through appropriate land zoning (FPHA 1946:8). Sites proposed for low-cost housing developments were to be accessible to utilities, police and fire services, waste collection, and street cleaning. In addition, project sites needed to be accessible to community amenities, such as transportation to employment centers, neighborhood shopping, schools, playgrounds, churches, libraries, theaters, and health-care facilities (FPHA 1946:8, 9).

Public housing authorities were established to create and operate low-cost housing projects. These authorities oversaw construction of public housing and its management. Effective management and efficient use of public funds were primary concerns of the housing authorities (FPHA 1946:1). In a survey of public housing authorities conducted by FPHA, agencies expressed their views on public housing. One agency noted that the private sector rarely supported public housing projects through the construction of commercial centers, and recommended projects locate near existing commercial centers or that such centers should be built as part of the public-funded project (FPHA 1946:9-10).

The FPHA also provided guidance on the design and location of public housing projects. The “Minimum Physical Standards” identified a setback of twenty or thirty feet from property lines for buildings located on heavily trafficked boundary streets and ten to fifteen feet for minor streets (FPHA 1946:29). Circulation within the housing project was a key design element. The “Minimum Physical Standards” also provided guidance on the type (parking lots or on-street) of parking and its location. Street width was determined in part by the incorporation of on-street parking. Centralized, off-street “parking courts” were preferred to on-street parking. Pedestrian access was of equal concern. According to the FPHA, sidewalks needed to be functional with primary, secondary, and tertiary circulation systems (FPHA 1946:40).



### **6.1.3 Financing Public Housing**

The Federal government financed the construction of low-cost housing. From the 1930s until 1961, public housing was financed through debt service, i.e., interest and principal payments due on public debts. Land, utilities, operating reserves, and contingency funds were financed by the local housing authority (USAEC 2003:5-14). The rent charged to tenants covered all expenses related to the construction of public housing.

Congress was concerned that “no one with sufficient income to afford private housing would enter public housing or remain there...” (Meehan 1975:69). For this reason, eligibility for low-cost housing units was keyed to tenant income levels (USAEC 2003:5-14). Local housing authorities established rent and income levels. Tenants could be evicted once they achieved an income level enabling them to acquire housing in the private sector.

### **6.1.4 Cost Limitations and Design Standards for Low-Cost Housing**

#### 6.1.4.1 Cost Limits

Public housing provided safe, clean, and adequate housing that was not elaborate in design or more costly than private-sector housing. The housing was within the economic reach of low-income citizens (FPHA 1946:95).

Politicians were concerned that low-income housing recipients would take unfair advantage of government housing. Political leaders voiced concern that “luxurious” low-income housing units eliminated incentives for the poor to improve their economic condition (Hays 1985:96). Funds authorized for public housing were strictly limited in an effort to prohibit the construction of “luxurious” housing (USAEC 2003:5-15). As a result, many units were constructed using inferior materials and substandard construction techniques (Hays 1985:96-97).

Congressional efforts to limit expenditures for low-cost housing were echoed in military family housing initiatives. The Comptroller General of the United States criticized the services for including “luxury” items such as air conditioning, dishwashers, and high quality materials, such as plaster walls, in Capehart Act housing. These features were incorporated to improve the livability of the units (Comptroller General of the United States 1960).

#### 6.1.4.2 Design Standards

Minimum design standards for the construction of low-cost housing were issued by the Federal government. The Federal Housing Administration (FHA) issued standards in 1959, which were revised in 1961 as *Minimum Property Standards for Low Cost Housing*. The 1961 standards were based on the FHA’s *Minimum Property Standards for One and Two Living Units* developed for market-rate housing. The standards developed for low-cost housing were “somewhat below” those for private-sector housing (FHA 1961:1). The low-cost housing standards allowed the use of inferior interior and exterior materials and finishes.

The FHA standards established the bare minimums for housing quality and amenities. General guidance was provided for site planning, lot coverage, and building planning. Public housing units were not required to include kitchen and wall cabinet doors, finished flooring, closets, towel racks, soap holders, and toilet seats. Walls could be left unpainted and pipes exposed; elevators

stopped at every other floor in high-rise buildings (USAEC 2003:5-15-5-18; Friedman 1948:5-6). The minimum health and safety standards were employed in the construction of low-cost housing (Friedman 1948:6).

#### 6.1.4.3 The Design of Low-Cost Housing

Low-cost projects initiated shortly before the enactment of the Wherry legislation provide insights into the prevailing Congressional concern over cost, as well as a basis for comparison on public housing design. In a survey conducted in 1948 by the Women's City Club of New York, Inc., residents of low-cost housing projects in New York City were questioned on their experiences on living in low-income housing. Residents lived in a variety of housing projects ranging from multi-story buildings in large complexes to modest rowhouses in garden-type complexes. These housing complexes were constructed during the early 1940s, and construction costs had been limited to \$5,000 per unit (Friedman 1948:5).

Kitchen storage space was limited to six linear feet of shelving for food and general storage, and 12 linear feet for dish and utensil storage. Three-foot by two-foot wood counters, and a porcelain drain board over a laundry tub were supplied (Friedman 1948:24). Generally, residents of the housing projects found the food and dish storage space and work space inadequate (Friedman 1948:25). Some residents stored food on window sills and canned food in clothes closets (Friedman 1948:26). Other concerns were raised over the small size of the kitchen and the lack of an interior kitchen door (Friedman 1948:26).

General storage also was an issue. The bedrooms of the units were equipped with clothes closets and each unit had a closet for linens, but not all the closets had doors (Friedman 1948:27). Storage rooms for large items such as baby carriages, bicycles, and suitcases were located in building basements; however, a large percentage of families did not use these spaces because of poor security (Friedman 1948:27).

The rowhouse buildings included a "laundry compartment in the kitchen" for washing clothes and clotheslines in the rear yards (Friedman 1948:30). The other buildings surveyed incorporated laundry tubs in the kitchen with drying racks in units. In addition, "mechanical washing machines and drying bins" were housed in the basements of multi-unit buildings (Friedman 1948:30). With the exception of those residents who lived in the rowhouse buildings, the majority of tenants complained about the laundry conditions. Some buildings had only one washing machine and ten dryers for use by 118 families (Friedman 1948:33). Security was another concern raised by residents; fights and theft were major issues (Friedman 1948:33).

Tenants preferred wood floors, double-hung windows with safety devices, paint colors other than neutral paint schemes, well-lighted staircases, and protective covers over porches (Friedman 1948:34). Many residents wanted doors on the kitchens and better soundproofing. Residents complained about the open floor plan and preferred some type of separation between living rooms, kitchens, and foyers to eliminate odors and foot traffic, and to increase privacy (Friedman 1948:35, 36).

All projects included in the survey had a playground adjacent to the housing project. Selected projects had nursery schools, a baby health center, maternity care, and nursing service. Although the tenants appreciated nearby supervised playgrounds, they preferred on-site playgrounds sited at the fronts of the buildings to better supervise small children (Friedman 1948:39, 42). Residents also wanted community space for elderly tenants and indoor recreation space (Friedman 1948:40, 41).

Some projects lacked reasonably accessible neighborhood services. Tenants polled complained about the distance to shopping and grocery stores. The housing projects were accessible by bus, but not by subway. Only one project had on-site medical facilities. None of the projects provided public telephones (Friedman 1948: 44).

The authors concluded that tenants preferred small-scale projects such as rowhouses to the large-scale, multi-story buildings. Also desired were larger units, a dinette rather than eating in the kitchen, closets doors, better and secure storage, adequate laundry facilities, toilets with seat covers, double-hung windows, recreational facilities, and better soundproofing (Friedman 1948:52).

#### 6.1.4.4 The Construction of Low-Cost Housing

The FPHA encouraged modular design in the development of plans for low-cost housing. Public housing projects were constructed with a variety of materials, including brick, concrete, tile or “other back-up material” veneered with brick, and frame buildings “with various coverings” (FPHA 1946:187). A major complaint of public housing officials was leaking exterior walls, which the FPHA attributed to poor workmanship, rather than to poor materials (FPHA 1946:187). Concrete block walls were used throughout the country for economy. Numerous building technologies were employed, including slab on grade, solid framed concrete slabs, and wood.

Roof design was dependent upon building type, comparable construction and maintenance costs, need for attic space, and aesthetics (FPHA 1946:195). Different roofing materials were used to clad gable roofs and included cement asbestos shingles, Grade-A slate, and roofing tile. Wood shingles were discouraged because they posed a fire hazard.

The FPHA encouraged the construction of basements for a number of reasons. They provided space for storage, a location for heating equipment, an indoor recreation space for tenants during inclement weather, and termite prevention. In contrast, the FPHA discouraged slab on grade construction or buildings with crawl spaces because the structures were susceptible to water penetration and created an environment conducive to the deterioration of structural members and to termite infestation. Slabs and crawl spaces also were seen as related to the accumulation of dangerous gases. Both constructions made repairs difficult (FPHA 1946:115).

Interior walls were constructed with wood wall studs and floor joists covered in tile or plaster. Glazed tile or brick was used in public spaces. Plaster substitutes, such as gypsum board, were used in temporary war housing, but were considered too new and unproven for low-cost housing projects (FPHA 1946:209).

Interior finishes and trims were modest. According to the FPHA, windows, doors, stairways, kitchen cabinets, and other decorative trim “must be exceedingly simple, sturdy and functional to serve in public housing. Materials and accessories were selected for minimum maintenance” (FPHA 1946:203). Trim around windows and doors was characterized by thinness of line, simplicity of form, ease of cleaning, and durability” (FPHA 1946:206). Metal door jambs were common. Interior woodwork generally comprised bullnose and cove moldings (FPHA 1946:206). Concrete floors were found in many public housing projects. Increasingly, asphalt tile, wood, or “other applied surfaces” were applied over poured concrete. The FPHA recommended exposed poured concrete floors for economy; however, floor coverings were permitted where budgets allowed (FPHA 1946:212).

The FPHA encouraged formal landscaping for public-housing projects. Landscaping made public spaces more inviting as well as defined and established a hierarchy for activity areas. Developers of public-housing projects were required to retain existing trees.

## 6.2 MANUALS FOR THE CONSTRUCTION OF AIR FORCE AND NAVY HOUSING

The FHA developed *Minimum Property Standards* for housing constructed with FHA-guaranteed mortgages. Wherry and Capehart Act sponsors with FHA-guaranteed mortgage insurance complied with the *Minimum Property Standards* in the design and construction of their projects. The *Standards* are discussed in detail in Chapter 3 of this study.

The Department of Defense issued its own instructions for the construction of military family housing in March 1961. The Navy developed several additional instructions and regulations on the development of Wherry and Capehart housing and the implementation of the two programs. The Air Force developed regulations for construction under the Capehart Act; however, the archival record is unclear as to whether such standards and criteria were developed for Air Force Wherry housing.

The design manuals in use between 1949 and 1962 included:

- *Design Standards for Construction of Permanent Family Housing for Federal Personnel* (22 June 1953, revised May 1957) issued by the Bureau of the Budget under Budget Circular A-18 for the HHFA;
- *Minimum Property Standards* issued by the FHA;
- “Instruction on the Policy, Standards and Criteria for the Construction, and Maintenance and Operation of Family Housing” issued by the Department of Defense;
- *Housing Administration* (1954) issued by the Bureau of Yards and Docks;
- *Air Force General Design Criteria for Construction of Family Housing*, revised 18 January 1956 and 30 March 1956; and,
- Bureau of Yards and Docks Instruction 11101.38 issued 20 April 1956 and revised 23 June 1959.

### 6.2.1 The Design of Wherry Housing

Manuals for the design and construction of Wherry housing for the Air Force and the Navy, including the Marine Corps, were not available. The archival record is unclear as to whether either service developed such manuals or relied solely on guidance provided by the FHA and its *Minimum Property Standards*. Navy instructions mandated compliance with the HHFA’s *Design Standards for Construction of Permanent Family Housing for Federal Personnel*.

#### 6.2.1.1 Design Standards for Construction of Permanent Family Housing for Federal Personnel

The HHFA developed the *Design Standards for Construction of Permanent Family Housing for Federal Personnel* in 1953. The document set the bar “below which permanent housing should not be constructed, and above which Federal funds need not to be invested to provide adequate housing” (HHFA 1953b:v).

The standards were comprehensive directives on building design and covered such topics as space and unit arrangement, structural design principles, floors, interior and exterior wall coverings, foundations, and footings. The standards did not address site planning.

#### 6.2.1.2 Revisions to 1953 Design Standards

The HHFA updated the Design Standards in 1957. The revised standards incorporated recommendations from numerous Federal agencies as well as the FHA’s *Minimum Property Requirements* (HHFA 1957:v). The new document standardized the size of closets and the number of shelves for kitchen and linen storage, as well as requiring the design of kitchen cabinets and drawers as closed units. Garages and carports also were addressed in the revised standards. Garages were preferred while carports were appropriate based on local weather conditions (HHFA 1957:7).

#### 6.2.1.3 Navy Design Guidance

The Navy issued the technical publication *Housing Administration* (1954), which outlined the policy for the construction of all housing, including Title VIII Wherry housing. The technical publication applied to the procurement, administration, maintenance, and operation of family housing at shore activities (Bureau of Yards and Docks 1954:1-1). The document excluded housing constructed with appropriated funds for the Marine Corps (Bureau of Yards and Docks 1954:1-1).

The publication presented general guidance for the design of Wherry units. Units that afforded the greatest space, comfort, and service within the rent parameters were desirable. Buildings were to reflect regional design and construction techniques. “Unusual effects by means of over-ornamentation or a bizarre use of materials” were to be avoided (Bureau of Yards and Docks 1954:3-44). No room, hall, or other dimensions were recommended because “these depend largely on cost areas and the level of income of the tenants for whom the housing is planned” (Bureau of Yards and Docks 1954:3-44). Multi-family buildings and rowhouses were unsuitable for higher-ranking officers; however, these house types were permissible for lower-ranking enlisted personnel. The Navy stressed that housing was to reflect the rank of the occupant; it was undesirable to provide “unusual value in enlisted housing at the expense of officer housing” (Bureau of Yards and Docks 1954:3-44). Housing constructed for officers typically included higher quality finishes and greater amenities in keeping with this protocol.

The Commanding Officer and the District Public Works Officer (DPWO) made the decision on the appropriateness of including commercial facilities in the housing project and related mortgage. Commercial construction was approved on a very limited basis, and decisions were based on existing commercial development or the potential for such development (Bureau of Yards and Docks 1954:3-42).

Grid street plans were discouraged in the design of Navy Wherry neighborhoods in favor of curvilinear streets. Grid plans were more expensive to construct due to the number of cross streets and

street intersections, and were seen as monotonous and more restrictive than curvilinear streets (Bureau of Yards and Docks 1954:3-44).

## **6.2.2 Design Manuals for Capehart Housing Projects and Appropriated-funds Housing**

While the Navy updated the Capehart design criteria almost yearly, few substantive changes were made to the overall standards. The Air Force also developed design standards for its Capehart housing. Attempts to locate *General Design Criteria for Construction of Family Housing* (10 December 1958) were unsuccessful.

### 6.2.2.1 Department of Defense Instructions for Family Housing

The Department of Defense “Instruction on the Policy, Standards and Criteria for the Construction, and Maintenance and Operation of Family Housing” applied to all military family housing constructed after 1961, regardless of the funding source. The instruction provided general construction parameters for family housing, and did not provide specific designs for units or neighborhood layout (Morris 1961). The criteria and guidelines for design, car shelters, outdoor living, kitchen and laundry equipment, and landscaping were previously identified in a “Department of Defense Policy Statement Concerning Design and Construction of Family Housing” issued 16 July 1959 (U.S. Department of Defense 1959).

The 1961 Instruction listed all legislation applicable to net area and cost ceilings for family housing. Numerous laws were cited. Sections 4774, 7574, and 9774 of U.S. Code Title 10 specified the net area for family housing constructed with appropriated funds. Section 503 of Public Law 85-104 established the net area for family housing constructed under the Capehart Act. The cost limitations, by grade, for family housing constructed with appropriated funds were established under Public Law 86-630, Section 109. Section 803(b)(3)(B) of the National Housing Act, as amended, established the cost limitations on the average cost per living unit for housing constructed under the Capehart Act. Public Law 86-500, Section 507(c) created the cost limitation for individual units constructed under the Capehart program. The limitations on the use of appropriated funds for land acquisition, site preparation, and utilities for Capehart housing were stipulated in Public Law 155, Section 505. Procurement of architecture and engineering services was governed by Public Law 345, Section 406. Architecture and engineering fees were not to exceed those permitted under the schedule of fees allowed by the Public Housing Administration (Morris 1961:4). Appropriated funds could be applied on a reimbursable basis for the administration, supervision, and inspection of Capehart units under construction under Public Law 814, Section 306. The amount of the appropriated funds for administration, supervision, and inspection was not to exceed three and a half per cent of the cost of each project (Morris 1961:4).

The policy and standards outlined in the HHFA’s *Housing Standards* and the Department of Defense folio “Criteria for Family Housing under Public Law 465/83<sup>rd</sup> Congress” issued in January 1955 were applied to housing design (Morris 1961:4). Family housing projects were to be adapted to the climatic conditions, construction materials, and building techniques used in the region (Morris 1961:4).

Recognizing the military’s preferences, the Instruction stated that semi-detached units “normally shall be provided” (Morris 1961:5). Single-family units were reserved for majors, lieutenant commanders, and higher-ranking officers. “Row living units may be provided” to conform

to site conditions or to comply with cost limitations (Morris 1961:5). The number of bathrooms in each unit corresponded to unit size and varied from one to three (Morris 1961:5).

The Instruction contained specifications on kitchen appliances and laundry equipment. A range, refrigerator, and exhaust fan were provided for each dwelling unit. Garbage disposals were optional. Housing for Colonels, Navy Captains, Generals, and Admirals included dishwashers. At a minimum, connections for washers and dryers were required; clothes washers and dryers were preferred (Morris 1961:5).

The construction of basements depended on site conditions and costs. Full basements were considered for two-story units and units constructed in cold climates. One carport was designed per living unit. Although HHFA encouraged construction of garages, military guidelines encouraged carports. Garages were constructed only in locations with winter temperatures of 10 degrees Fahrenheit or colder, and in locations with constant exposure to salt air or high winds (Morris 1961:5). Terraces or porches were options for each living unit.

Construction materials reflected economy and durability. In multi-unit buildings, structural components, walls, and floors were masonry, concrete, and/or steel whenever permitted within cost limitations. New materials and construction techniques were used “wherever economic or functional advantage is to be gained” (Morris 1961:6). American Society for Testing Materials (ASTM) and/or commercial construction specifications were referenced in overall project specifications to ensure uniform quality in materials and products (Morris 1961:6). Descriptive specifications could replace requirements for specific products. Proprietary names were avoided in developing project specifications; three options had to be provided in cases where proprietary product names were cited (Morris 1961:6).

Air conditioning and evaporative cooling systems were provided in locales identified in Department of Defense Instruction 4270.7 “Air Conditioning, Evaporative Cooling, Dehumidification and Mechanical Ventilation.” Heating systems outside these authorized areas were designed to easily and economically accommodate an air conditioning system (Morris 1961:7). Project design within areas authorized for air conditioning was subject to additional design considerations. These considerations included reduced window sizes; preference for fixed windows; higher window sill heights to increase passive cooling from roof overhangs; reduced glazing on west and southwest elevations; the avoidance of window walls, picture windows, and fully glazed doors on west, southwest, and east elevations (double-pane insulating glass was used in such circumstances); preference for light-colored, reflective roofing surfaces; siting of car shelters on the west and southwest sides of living units; and landscapes designed to reduce sun load (Morris 1961:8). The housing designs also adopted modular measure to permit “construction by conventional methods, on-site precutting and assembly, factory precutting, factory prefabrication, or any combination of these methods” (Morris 1961:11).

Project standards and criteria were applied uniformly to ensure military housing that was comparable in terms of equipment, quality, unit size, and livability, regardless of location or funding mechanism (Morris 1961:11). When possible, “meritorious housing designs previously used” in the same region were considered (Morris 1961:11).

The following features were necessary for a “complete” house: range; refrigerator; adequate kitchen cabinet and counter space; kitchen exhaust fan; washer and dryer connections; air conditioning, evaporative cooling, or mechanical ventilation; screens; Venetian blinds, window shades, or drapes; and adequate bulk storage. Required site improvements included utility and

telephone service; roads, driveways, parking, walks, and streetlights; basic landscaping; drainage systems; pads for refuse cans; and, safety fencing.

Dwelling units were to be sited informally with consideration given to topography and other natural features, weather conditions, view, and occupant’s privacy (Morris 1961:13). Landscaping was to retain existing trees and ground cover to the maximum extent possible. The stabilization of finished grades was to be achieved through the “economical selection” of lawn seed and sod (Morris 1961:13). Simple, low-maintenance shrubs and trees were to be planted.

#### 6.2.2.2 Air Force Design Guidelines for Capehart Housing

The Air Force codified its design criteria for family housing in *Air Force General Design Criteria for Construction of Family Housing*, revised 30 March 1956. All housing was to comply with the FHA *Minimum Property Standards* and the HHFA’s *Design Standards for Construction of Permanent Family Housing for Federal Personnel*. The Air Force criteria for Title VIII housing were revised 30 March 1956, after the Capehart legislation was enacted. The criteria discussed all aspects of design including site design, exterior design, interior layout, construction standards, and utilities. Architecture & Engineering responsibilities also are detailed in the document. Table 10 summarizes housing sizes based on rank, contained in the criteria.

**Table 10. Size of Air Force Capehart Housing Units**

Rank	Square Footage	Number of Bedrooms	Housing Type
General	2,100	4 (with 2 baths)	Detached
Commander	1,837	4 (with 2 baths)	Detached
Colonel	1,670	4 (with 2 baths)	Detached
Major, Lt. Colonel	1,400	4	Detached or duplex
Major, Lt. Colonel	1,400	3	Detached or duplex
Lieutenant, Captain	1,250	4	Duplex or row
Lieutenant, Captain	1,250	3	Duplex or row
Lieutenant, Captain	1,100	2	Duplex or row

Source: *Air Force General Design Criteria for Construction of Family Housing* (U.S. Air Force 1956:11)

The sites for family housing had to comply with the base master plan. Airmen and officer housing were to be separate; a street separation was deemed sufficient. Play areas were to be provided, and the services of professional landscape architects or planners were desirable (U.S. Air Force 1956:1). Gently winding streets that followed natural contours or looped streets were preferred; long, straight streets and cul-de-sacs were to be avoided. One street that provided access to the neighborhood without going through the base was preferred. The design and layout of the neighborhoods were to provide street outlets for future expansion areas (U.S. Air Force 1956:1).

Officer single-family and duplex units were to be constructed at a density of four units per acre. Airmen single-family and duplex units were to have a density of five units per acre. Rowhouses in “garden apartments” could be constructed for officers and airmen with a density of eight units per acre (U.S. Air Force 1956:1). Single-family units were preferred for all grades when economies in site design, utilities, and construction costs were achieved (U.S. Air Force 1956:1). One- or two-story rowhouses were to be constructed only in those circumstances where “site space limitations and/or building costs prohibit the obtaining of single or duplex housing” (U.S. Air Force 1956:3).



The design of the neighborhoods was to consider local climate, customs, and methods of construction to ensure favorable comparisons with housing in the civilian market (U.S. Air Force 1956:2). The criteria recognized that repetition in floor plan was necessary; however, variation in exterior materials and fenestration, variety in color, reversed and re-oriented plans, and staggered setbacks were encouraged to “eliminate a stereotyped and military type of appearance” (U.S. Air Force 1956:3). The Air Force encouraged the use of some masonry on building exteriors.

Units could include basements, site conditions and cost permitting. A number of roofing materials, such as built-up roofing, wood, asphalt, and asbestos shingles, and slate, clay, or cement tile were approved.

Open floor plans were encouraged for their feeling of spaciousness (U.S. Air Force 1956:3). Large expanses of windows were not recommended due to heat loss and costs associated with providing draperies (U.S. Air Force 1956:3). Furniture placement was considered in the height and placement of windows. Wood, steel, or aluminum, double-hung, sliding, casement, or awning windows were acceptable. Preferred flooring materials included hardwood, resilient, and tile flooring. Three brands and model numbers for all equipment were required in specifications. All specifications were to include a disclaimer stating that the Air Force was not endorsing one brand over another (U.S. Air Force 1956:9). Materials and equipment were to meet Federal specifications, ASTM Standards, or other acceptable trade or craft standards (U.S. Air Force 1956:9).

The plans for the housing units were characterized in detail. All units were to include an entrance hall, with coat closets located adjacent to the entrance. Two- and three-bedroom units had one bathroom; costs permitting, an additional half-bath or full bath was provided in three- and four-bedroom units. Two baths were provided in four-bedroom units constructed for Colonels and Generals. The additional half or full bath was to be located off the master bedroom. Closets and storage space were to be as large as possible to accommodate “the many changes of clothing and other articles required by the military” (U.S. Air Force 1956:4). Units included both linen and towel closets.

Kitchens were to provide direct access to the dining area; dining areas separated from the living rooms by folding partitions, walls, or decorative screens were preferred for quarters for Generals and Commanders. Kitchen layout was to take into consideration the minimum number of steps between equipment (U.S. Air Force 1956:6). Garbage disposals and dishwashers for officer housing were additive items and were to be provided, cost permitting. All units were provided with hook-ups for washers and dryers. Heating systems that allowed for the future installation of air conditioning were encouraged when possible (U.S. Air Force 1956:8).

Carports or garages were to be provided for all units, including rowhouses. In the case of rowhouse construction, garages or carports were to be arranged in compounds. Garages were considered a basic item for single-family units regardless of rank; carports were additive items for all other building types.

Landscaping was to include lawn seed and sod. Existing specimen trees and shrubs were to be retained and incorporated into landscape plans (U.S. Air Force 1956:2). Plans also were to include streetlights at intersections.

#### 6.2.2.3 Navy Guidance on the Design of Capehart Housing

The Navy formalized its Capehart procedures in April 1956 when the Bureau of Yards and Docks issued BUDOCKS 11101.38 for *Capehart Housing Development Program and Procedures for*

*Site Selection and Architect-Engineer Contracts.* The overwhelming number of the criteria outlined in the 1956 document were unchanged in the 1959 revisions. The 1956 procedures explored in detail the process for soliciting and contracting with architecture and engineering firms (Bureau of Yards and Docks 1956).

Capehart projects were to be developed to the satisfaction of the Commanding Officer, the FHA, and the DPWO. The architecture and engineering firm was to consult with each party to ensure compliance with their requirements (Bureau of Yards and Docks 1956:4).

At activities slated for both Capehart and appropriated-funds housing, the Navy expected houses constructed under both programs to be identical in design and quality. Where Capehart housing already had been constructed, the Navy encouraged the reuse of Capehart plans to the maximum extent possible for appropriated-funds housing (Peltier 1961:2). As a result, Navy housing constructed through funds appropriated by Congress had many of the same features and similar designs to those built under the Capehart program.

#### 6.2.2.3.1 Navy Design Guidelines

The Navy's Capehart housing design criteria established general parameters for the program. Construction standards met or exceeded those established in the FHA's Minimum Property Standards or the *Design Standards for Construction of Permanent Family Housing for Federal Personnel* prepared by the HHFA. The location of Capehart housing projects was required to conform to the installation master plan. Projects were not required to meet local zoning ordinances or building codes if they were located on-station. Officer and enlisted housing was separated, with a road separation deemed sufficient.

Gently winding roads that followed natural contours or looped streets were preferred and increased "the charm of the community" (Bureau of Yards and Docks 1956:1). Rectangular grids and long straight streets were not recommended because they were considered monotonous (Bureau of Yards and Docks 1956:1). Sidewalks were required only on one side of the street except in those cases where the street separated enlisted from officer housing, in which case sidewalks were provided on both sides of the street.

Off-street parking was to be provided in the ratio of one parking space per dwelling unit. Garages and carports were treated as deductive bid items. When rowhouses were constructed, garages and carports were arranged in compounds. Garages were allowed where climate prohibited open carports. In 1956, the square footage of Capehart units for enlisted personnel was fixed at:

- 880 square feet for a two-bedroom unit
- 1,000 square feet for a three-bedroom unit
- 1,080 square feet for a four-bedroom unit ("Briefing Memorandum for the Chief" 1956).

Building density was not to exceed the following parameters: four units per net acre for single family units, five units per net acre for semi-detached units, and eight units per net acre for rowhouse units.

Basements were eliminated from the design of Capehart housing, except where climatic conditions precluded the use of carports. Slab-on-grade foundations or wood frame over crawl space were preferred.

For the interior design of the units, halls were to be kept to a minimum and were to provide access between bedrooms and baths (Bureau of Yards and Docks 1956:4). Direct access between the kitchen, dining room, carport, and service areas was preferred. Dining space was to have direct access to the kitchen and could be achieved through an ell in the kitchen; however, preferred house designs for Flag Officers included a separate dining room divided from the living room by a folding or solid partition (Bureau of Yards and Docks 1956:4). Plaster or drywall was recommended for interior finishes.

The use of some masonry on the exterior of buildings was desirable when possible. One- or two-story units were preferred, as were single-family and duplex units. Rowhouses were permissible when site space limitations dictated their construction or due to high construction costs. All units were to include two, three, or four bedrooms. When bedrooms were located on the second floor of two-story buildings, a half-bath was to be provided on the first floor, cost permitting.

#### 6.2.2.3.2 The Informal Board to Evaluate Capehart Housing

In April 1959, the Chief of the Bureau of Yards and Docks created an “Informal Board to Evaluate Capehart Housing.” The board comprised members from the Housing, Maintenance, and Engineering Divisions of the Bureau of Yards and Docks. The board was created to evaluate existing Capehart housing and to rewrite the Capehart housing criteria for future projects. The Washington, D.C. architecture firm Keyes, Lethbridge & Condon surveyed Capehart projects constructed by the Army, Air Force, and Navy. Their results were presented in an April 1959 report, titled *Inspection, Study and Analysis, Capehart Housing Projects*. In addition, G. Korink with the Housing Division, Bureau of Yards and Docks, inspected Capehart housing at some Navy, Air Force, and Army installations. The results of these evaluations were incorporated into the board’s recommendations.

The consensus of the board was that the Capehart program provided “excellent housing of high quality,” although discrepancies and areas of improvement were noted (Bureau of Yards and Docks 1959b:2). The report summarized site visits made to seven installations, summarized deficiencies, suggested improvements to Capehart housing, and developed preliminary site planning and design criteria for Capehart housing.

The purpose of the review board was to rewrite the Capehart planning and design criteria, which was achieved through a number of directives and instructions. The Bureau of Yards and Docks issued design and construction criteria on 29 January 1957 for Capehart housing that included general criteria and referenced the FHA’s *Minimum Property Standards*. In addition, higher authority issued directives and policy statements on Capehart housing. These directives and policy statements were issued in Instructions 11101.43S and 11101.45, and covered construction and design standards, floor areas, density, and incorporated Department of Defense and Bureau of the Budget requirements and guidance (Bureau of Yards and Docks 1959b:6). The design criteria prepared by the board were developed specifically for Capehart housing, but they were intended also to be used for appropriated-funds housing (Bureau of Yards and Docks 1959b:12).

During the site visits, the board reviewed plans, looked at the housing, and talked to residents, specifically the wives, and DPWO and station personnel. The seven visits included NSGA Winter Harbor, Maine; MCAS Cherry Point, North Carolina; MCAAS New River, North Carolina; MCAAS Beaufort, South Carolina; MCSC Albany, Georgia; NAAS Chase Field, Texas; and NMC Point Mugu, California. The board also made inspections of other housing areas at other installations for comparison purposes. These site visits included Wherry housing at Camp Lejeune, North Carolina; Wherry housing at Cherry Point, North Carolina; married officer quarters at Beaufort, South Carolina;

Capehart housing at Turner AFB, Georgia; married enlisted men's quarters at Albany, Georgia; and Capehart housing at Oxnard AFB, California.

The board concluded that the "Capehart Program is producing a very livable house of excellent appearance and good quality" (Bureau of Yards and Docks 1959b:11). The Capehart housing was considered the "best in many years" (Bureau of Yards and Docks 1959b:13). Although the housing had few "gross problems," a considerable number of "minor deficiencies" were noted (Bureau of Yards and Docks May 1959b:11). The board noted that the \$16,500 limit was more than adequate, even with the inclusion of many additives. The project at Winter Harbor, Maine, was the only exception (Bureau of Yards and Docks 1959b:11).

The report prepared by the board drew a number of conclusions. The board determined that there was no economic advantage to using factory-prefabricated houses. The board noted that extensive site improvements were planned for several projects; however, the board felt that resources would have been better used on higher quality materials and equipment. Some projects were completed well below the \$16,500 limit, and again, the board determined that higher-quality materials could have been used. The board concluded that the highest-quality housing was the ultimate desire, even at the expense of site improvements. The board urged the provision of more additives in the bidding document to ensure the best-quality housing within the \$16,500 limit (Department of the Navy Bureau of Yards of Docks 1959b:14).

Other conclusions focused on the design criteria for Capehart housing. The board felt the Capehart criteria should be reviewed and updated annually. Additionally, the criteria should be kept to a minimum to allow freedom in the field. Standardization of details and materials should be implemented to the greatest extent possible (Bureau of Yards and Docks 1959b:16).

The board summarized the deficiencies and made suggestions for improvements. These suggestions were divided into broad categories including: site planning, dwelling unit planning, and construction, among other topics.

The board prepared "Criteria and General Requirements for Site Planning and Design of Capehart Housing (Criteria and General Requirements)" dated 20 May 1959, and recommended its adoption. These recommendations were substantially adopted by the Bureau of Yards and Docks on 23 June 1959 as instruction BUDOCKS 11101.57. There were very minor differences between the May 1959 draft and the final document in June 1959. The final document was similar to the earlier 1956 criteria.

The "Criteria and General Requirements" provided guidance on site planning, drawings and specifications, unit design, construction (such as fire protection, insect and fungus damage prevention, foundations and footings, interior finish, and floors), mechanical equipment systems and equipment, utilities, and roads and streets. Guidance also was provided on miscellaneous items, such as recreation areas and equipment, mail boxes, house numbers, clothes poles, and planter boxes.

As in earlier Navy criteria, Capehart projects had to meet the *Minimum Property Standards* developed by the FHA or the *Design Standards for Construction of Permanent Family Housing for Federal Personnel* issued by the HHFA. Architecture and engineering firms needed to consult with the local office of the FHA to coordinate and comply with its standards and policies (Bureau of Yards and Docks 1959a:2-3).

The location of Capehart neighborhoods had to comply with the base master plan. Capehart housing planned at air stations was subject to a separate instruction (Bureau of Yards and Docks

1959a:5). Officer and enlisted housing were to be separate from one another. Children's play areas were to be located at the rears of the housing units, with a neighborhood play area centrally located (Bureau of Yards and Docks 1959a:5). Existing trees and shrubs were to be preserved where possible (Bureau of Yards and Docks 1959a:5).

The Navy encouraged the construction of single-story or two-story, single-family or duplex units, although single-family units were preferred. Because multi-family units generally were discouraged, only the absolute minimum was constructed. When they were essential to "meet economic limitations," the units were to be grouped in such a way as to create "small neighborhoods" of 12 to 20 families (Bureau of Yards and Docks 1959a:5). The siting of rowhouse units in parallel rows was strongly discouraged (Bureau of Yards and Docks 1959a:5, 10). Multi-family units were to include backyard screening, privacy, and the separation of pedestrian and vehicular traffic. Semi-detached units were to be joined at the carports or garages (Bureau of Yards and Docks 1959a:5). Carports or garages were to be included in the design of all single-family units; they were considered to be additive items for all other unit types. When designed with multi-family units, carports or garages were to be sited in a compound. Garages were to be designed for use in climates of 10 degrees Fahrenheit or colder, or when salt air, extreme winds, or sandstorms were a factor.

Buildings were to be set back from the street at such a distance as to allow for a parked car in the driveway without blocking the sidewalk. Flag officer and commanding officer quarters were to include service yards for the location of clothes poles, gardening equipment, and trash cans.

Straight roads and rectangular grids were strongly discouraged. Instead, looped and gently curving streets that followed the contours of the land were preferred. Rear access roads were not permitted. Although concrete curbs and gutters were required, sidewalks could be eliminated altogether for financial reasons or included as an additive bid item. Parking was provided in a variety of ways. For off-street parking, one space per dwelling was to be provided. Parking included driveway space for single-family and semi-detached units. Parking compounds were recommended for multi-family units.

Landscaping requirements consisted of some "growing plant life [that] should be visible from all dwellings" (Bureau of Yards and Docks 1959a:7). In addition, plantings should be designed to screen "objectional [sic] structures" (Bureau of Yards and Docks 1959a:7). Some construction bids called for the contractor to bid on the cost of providing top soil and planting grass. At least one streetlight was to be provided at each street intersection; adequate lighting was required for parking compounds (Bureau of Yards and Docks 1959a:35). Recreation areas and equipment were to be considered, land and funds permitting.

The design of units was to reflect local climatic conditions, materials, customs, and methods of construction (Bureau of Yards and Docks 1959a:10). Variation in materials, orientation, and fenestration were strongly encouraged to eliminate monotony. The use of some masonry on all units was encouraged (Bureau of Yards and Docks 1959a:10). Acceptable alternatives included frame, frame and masonry, solid masonry, or brick veneer (Bureau of Yards and Docks 1959a:19). Foundations were to be concrete or masonry units.

The amount of living space was prescribed in Public Law 626, 80<sup>th</sup> Congress. Unit size was dependent on rank. All two-bedroom Capehart units were to be designed to allow for future expansion to three-bedroom units where feasible (Bureau of Yards and Docks 1959a:11). For flag officers and captains who also were commanding officers, the four-bedroom, three-bath unit included one bedroom and one bath for a servant (Table 11).

**Table 11. Size of Navy Capehart Housing Units**

<b>Rank</b>	<b>Square Footage</b>	<b>Number of Bedrooms</b>	<b>Number of Baths</b>
Flag Officers	2,100	4 (100% of units)	3
Captain (if Commanding Officer)	1,670	4 (100% of units)	3
Captain, Commander, Lt. Commander	1,400	3 (80% of units) 4 (20% of units)	2 (80% of units) 2 (20% of units)
Ensign and Warrant Officers	1,250	3 (75% of units) 4 (15% of units) 2 (10% of units)	2 (75% of units) 2 (15% of units) 1 ½ (10% of units)
Enlisted personnel	1,080	3 (75% of units) 4 (15% of units) 2 (10% of units)	2 (75% of units) 2 (15% of units) 1 ½ (10% of units)

Source: Bureau of Yards and Docks 1959a:12.

A door was to separate the kitchen from the main living area, with the dining room directly accessible from the kitchen. If the plan could accommodate a design in which the kitchen was not in full view of the living room, then it was not necessary for the kitchen to have a door. Kitchen design should “minimize a housewife’s steps” and incorporate an eating space in addition to the dining room (Bureau of Yards and Docks 1959a:15). The guidelines described the amount of counter space, type of countertop, and the amount of cabinets and cabinet space. L-shaped or U-shaped kitchens were preferred.

Bulk storage was recommended for each unit in the following amounts: 40 square feet for two-bedroom units, 50 square feet for three-bedroom units, and 60 square feet for four-bedroom units. Shelving was to be provided in a portion of the bulk storage area. Closets were to be provided in each bedroom in addition to a coat closet in the entry.

Baths were provided in the master bedroom. In recognition of resident complaints, the new guidelines stated that a showerhead was to be provided for every tub. Either a half-bath or a full bath was to be provided when practical to minimize the need for guests to enter the bedroom area to use the bathroom.

Basements were only to be provided “where site or extreme climatic conditions made them advisable or economical” (Bureau of Yards and Docks 1959a:15). Slab-on-grade foundations were preferred, but wood-frame floors with crawl spaces were acceptable. Split-level units were permissible when terrain made them economically feasible. Utility rooms were to be provided in projects that did not include basements.

Interior walls were to be finished in drywall or plaster. Windows could be wood, steel, or aluminum sash, double-hung, sliding, or awning type. Hardwood flooring was preferred in the main living spaces and bedrooms. Vinyl asbestos or vinyl tile were to be used on kitchen floors. Bathroom floors could be ceramic mosaic tile or terrazzo. The guidelines described the types of accessories that should be included in bathrooms. Chimneys were permitted and were required to meet FHA requirements. The use of screened porches was encouraged in warm climates. Stoops, porch decks, and steps were not to be constructed of wood. Sponsors of projects where air conditioning was proposed had to obtain prior approval from the Bureau of Yards and Docks.

### **6.3 DESIGN OF WHERRY, CAPEHART, AND APPROPRIATED-FUNDS HOUSING**

The guidance provided by the Air Force and Navy for the design and construction of Wherry and Capehart era family housing allowed great flexibility in the implementation of the three programs.

A lack of standardized plans and a reliance on local architects resulted in a variety of floor plans, construction techniques, and materials. Locally-hired architects also imparted regional variation in the designs. Regional architectural vocabularies included stucco in the Southwest, brick in the central and southern states, and shingle wall coverings in New England. This policy contrasted with the Army's policy of relying on standardized plans and the construction of virtually identical family housing units nationwide.

The standards used for Wherry housing were similar to those developed for low-cost housing. During the 1940s, many deficiencies in the design of public housing were noted. Although some of these flaws were eliminated in Wherry housing, many of the design issues recurred in Wherry projects. Design issues included unit size, lack of storage, an open floor plan, and inadequate soundproofing.

Collectively, Air Force and Navy Wherry and Capehart era neighborhoods shared many similarities; however, comparison of individual neighborhoods illustrated differences in neighborhood and building design. Two major differences were identified between the two programs. The first was in the construction of multi-family buildings. Wherry neighborhoods for both services contained single-family, duplex, and multi-family buildings. With the construction of Capehart neighborhoods, the majority of the buildings constructed by the Air Force and the Navy were single-family and duplex units. A second difference was the incorporation of amenities, called additives, in Capehart neighborhoods. Designers of Capehart neighborhoods made every effort to upgrade family housing through the incorporation of amenities. These included garages or carports, terraces, washers and dryers, and dishwashers. The number of additives within a single Capehart neighborhood also varied. Some large Capehart neighborhoods were built as several projects with different amenities and features for each project. For example, a 700-unit project could encompass two phases, the first phase installing garages, terraces, dishwashers, or washers and dryers, and the second phase building carports and basements. The inclusion of amenities varied widely, with some family housing units receiving numerous upgrades while others had none.

The numbers of Wherry and appropriated-funds units constructed by the Navy and the Air Force were less than the numbers built under the Capehart program. The smallest number of units was constructed using appropriated funds. Many Wherry units have undergone substantial modification or were demolished. The scarcity of unaltered Wherry and appropriated-funds housing and the lack of original construction drawings make it difficult to draw conclusions about the original design or finish of these two categories of family-housing units. The conclusions presented in this section were based on the analysis of the archival record and observations made during the site visits.

### **6.3.1 Project Planning**

Generally, the planning and implementation process for Wherry housing projects was similar for both the Air Force and the Navy. Base Commanders determined housing needs at the installation level. Major Commands then identified the installations with acute housing needs and initiated project planning that included the identification of potential sites, the adequacy of utilities, guidance on architectural treatments, and the total number of units needed. Ultimately, the law required the final plan approval of the secretary of the appropriate service.

The Air Force established a preliminary review procedure for Wherry proposals at the installation level. The Air Force base commander worked closely with an installation-level planning board. The planning board provided information on housing need and background data on the base to prospective sponsors. The Base Commander ranked proposals, offered comments, and worked closely with the successful sponsor on design issues.

After review and comment at the installation, the Base Commander forwarded the Wherry proposals to Air Force Headquarters. The Air Force Housing Evaluation Board reviewed and evaluated the proposals before making a recommendation to the Director of Installations. After all reviews, the Secretary of the Air Force issued final authorization to begin the project. Further Air Force involvement in construction of the Wherry project was limited. The Air Force relied on the construction management expertise of the U.S. Army Corps of Engineers for implementation of the plan.

Navy implementation policies paralleled the Air Force with minor variations. Wherry sponsor proposals were reviewed at the local installation. The DPWO played an influential role in the development of Wherry projects. Both the Installation Commander and DPWO reviewed and commented on proposals. The DPWO also acted as liaison between the FHA, the sponsor, and the installation. After installation review, proposals were forwarded to the Title VIII Housing Board of the Bureau of Yards and Docks and the FHA, which made final recommendations. The Housing Board selected the sponsor. The activity Commanding Officer, in consultation with the FHA, selected the site.

Procedures for developing Air Force and Navy Capehart projects were similar to those implemented under the Wherry program. Both services relied on private-sector architecture and engineering firms to design Capehart housing. Neither service relied on standardized plans. While the Air Force relied on local architecture and engineering firms to develop drawings, the Navy relied on architecture and engineering firms from outside the local region.

Both services sought to provide as many amenities, such as carports, washers and dryers, and higher-quality materials as possible, within the cost limitations imposed by Congress. In addition, the Air Force and Navy preferred single-family and duplex units to multi-family rowhouses. Multi-family units were to be constructed only in those circumstances that precluded their construction due to high costs or site constraints.

The identification of Wherry contractors and architects was challenging, as the archival record generally documented the company created to construct, manage, and operate the Wherry units rather than the contractor and architect. The Wherry architect might or might not have been associated with, and hired by, the Wherry sponsor. For the Capehart project, the contractor who built the units generally was identified as the sponsor. Large regional construction companies, including Del E. Webb and D & L Construction Company, bid on multiple Capehart projects, as did smaller local and regional companies. Similarly, one architecture and engineering firm might have designed a number of projects in a state or region for both the Air Force and the Navy.

Considerably less is documented about the contracting procedures for the construction of appropriated-funds housing. This lack of information could be the result of the Navy and Air Force focus on constructing Capehart housing during this period, or the low number of appropriated-funds housing units constructed. Although detailed information on administrative procedures was not documented, both the Air Force and the Navy encouraged the use of previously developed plans and construction specifications for appropriated-funds housing. At Mountain Home AFB, Idaho, for example, the same architect designed both Capehart and appropriated-funds housing. In general, appropriated-funds housing was constructed for personnel of higher ranks, and was similar in size and detailing to comparable Capehart housing (Figure 14).

In some cases, such as the Coral Sea Cove and Bard Estates neighborhoods at NBVC, California, Navy projects initiated as Capehart projects ultimately were constructed with appropriated funds. This appropriated-funds housing originally began as a Capehart project. Designs for Capehart



housing were completed in 1961 and noted that the drawings covered both Point Mugu and Port Hueneme under a single project number (Public Works Department, Point Mugu, NBVC 1961). Units at both installations rigidly followed the plans; however, it was apparent that the Capehart project at Port Hueneme did not materialize, as the real property records and housing directories clearly identified the housing as constructed with appropriated funds. The designs of the neighborhoods and the buildings were nearly identical, with minor differences in materials and landscaping (Figure 15 and Figure 16).

### **6.3.2 Building Types**

Single-family, duplex, and multi-family units were constructed in both Wherry and Capehart era neighborhoods. The variety of building types also included one- and two-story buildings. Some buildings included basements and attics. Dwelling units constructed during the Wherry era ranged in size between one and three bedrooms. Capehart era family housing units included more four-bedroom units and eliminated one-bedroom units. Although multi-family units were constructed under the Capehart program for both the Navy and the Air Force, the Navy discouraged the construction of such units because of problems encountered with multi-family units constructed under the Wherry program. Of the approximately 128 Air Force bases with Capehart housing, at least 23 installations constructed multi-family buildings, representing 18 per cent of the total number of Air Force bases with Capehart units (Progress Reports, Capehart Housing).

### **6.3.3 Site Plan, Neighborhood Design, and Landscaping**

#### 6.3.3.1 Site Plan and Neighborhood Design

The suburban neighborhood provided the model for the design of Wherry and Capehart era neighborhoods. Design features found in civilian neighborhoods, such as wide curvilinear streets, large front lawns, long blocks, and three-way intersections, were incorporated into the design of Air Force and Navy Wherry and Capehart era family housing neighborhoods. Sidewalks were found on one or both sides of the street. Most prevalent in Wherry neighborhoods, sidewalks led from the street to the dwelling entrance and connected the rears of the units to buildings in the interior of blocks. While Capehart neighborhoods continued to feature sidewalks connecting the entry of the building with the street, the inclusion in many designs of driveways leading to garages or carports allowed for the elimination of this feature. Short sidewalks connected the driveway and the front door.

The neighborhoods were located away from the administrative and industrial areas of the base. Some neighborhoods were located off-base because of on-base spatial constraints, which could be acute in urban areas. Neighborhoods generally were uniform, with differences expressed through the use of a variety of building materials and differing footprints. Regular setbacks were common; however, building orientation could vary.

All construction at Air Force bases complied with the base master plan, which segregated construction by use. On-base family housing was restricted to one area of an installation, generally as far away from the flightline as possible. Yet, the housing needed to be located near existing utilities, and key personnel still needed quick access to the flightline in order to fulfill mission responsibilities. Even though the neighborhoods adjoined or abutted one another, vehicular access generally was not possible between the neighborhoods (Figure 17). This design feature was present regardless of the rank of the occupants of the adjoining neighborhoods.



Figure 15: Building 1067, Guam Drive, Bard Estates Neighborhood (appropriated-funds housing), Port Hueneme, NBVC, California, 2005. (Photo taken by RCG&A)



Figure 16: Building 1843, Tartar Drive, San Miguel Neighborhood (Capehart housing), Point Mugu, NBVC, California, 2005. (Photo taken by RCG&A)

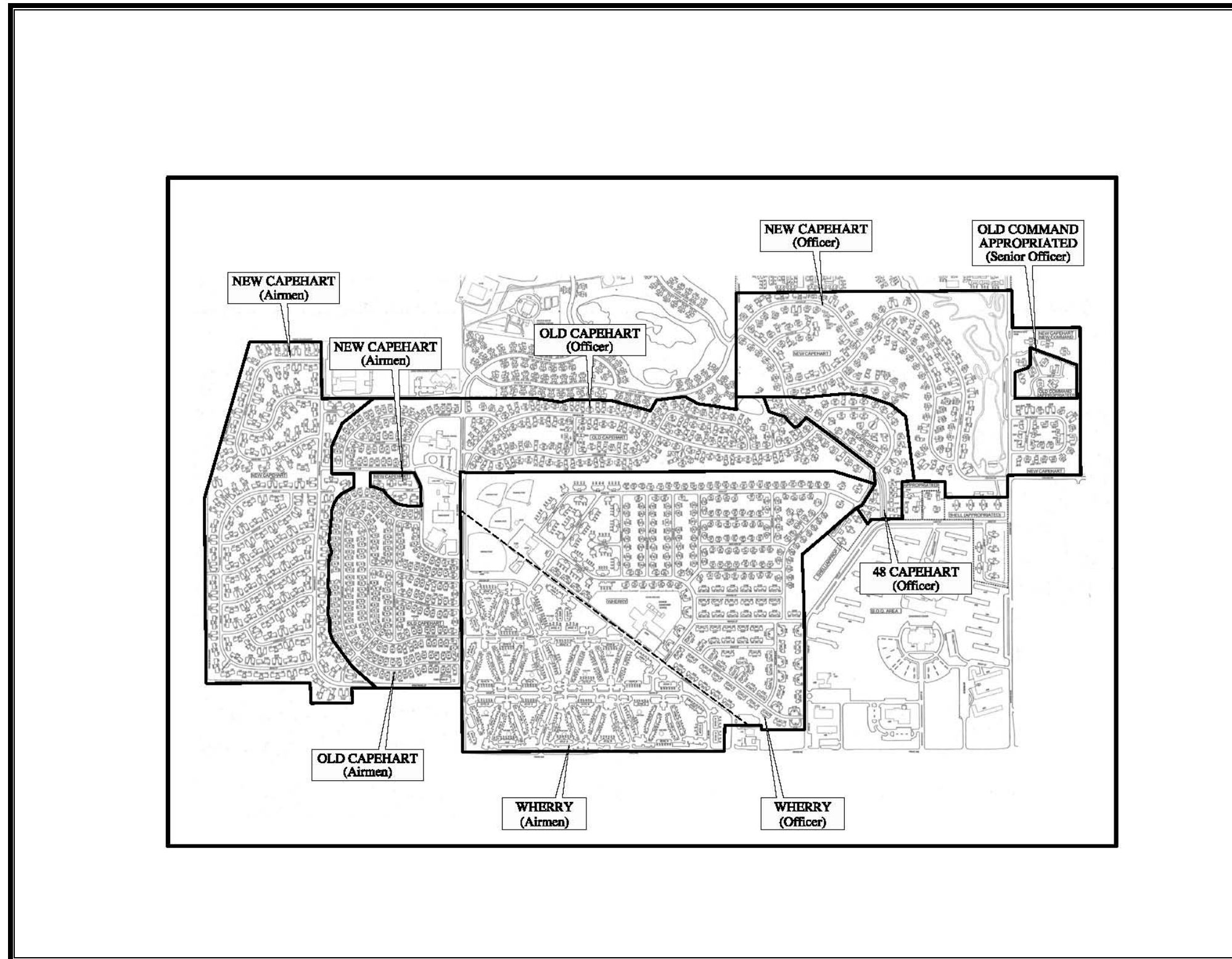


Figure 17. Overall plan of housing areas, Travis AFB, California, ca. 1998. (Courtesy of Travis AFB, 60<sup>th</sup> Civil Engineer Squadron)



The design of Navy activities was more complex because of factors affecting Navy bases that were not applicable to Air Force installations. These factors included the location and type of Navy activity. Older Navy installations, such as shipyards, were built in established urban areas, including Philadelphia, Pennsylvania; Brooklyn, New York; Boston, Massachusetts; Washington, D.C.; and, San Diego, California. These locations had less land available for expansion when it became necessary, particularly during World War II and the postwar period. The housing areas were located generally on the periphery of the industrial areas or off-base. Naval air stations had more land, but many of the same types of locational factors affecting the Air Force were shared by the air station, namely, the location of the flightline. As with Air Force installations, housing areas at Naval air stations were located at the periphery of the base.

Air Force Wherry and Capehart neighborhoods incorporated few cross-streets and moderately curving roads. Cul-de-sacs were more common in Capehart neighborhoods than in neighborhoods constructed during the Wherry era. Air Force Wherry and Capehart neighborhoods were more regimented and regular, such as those found at Mountain Home AFB and the Catalina Heights neighborhood at NBVC, which originally was constructed for the Air Force. The buildings tended to be sited parallel to the street with little variety in building orientation or setback.

The provision of parking shelters varied between the Capehart and Wherry programs and among individual Air Force installations. In some cases, the rank of the occupant determined whether parking shelters were provided. At some installations, all housing units were provided parking shelters, regardless of the occupant's rank or building type (i.e., single-family, duplex, or multi-family). Wherry neighborhoods with multi-family units at Mountain Home AFB had multi-car garages grouped together (Figure 18). Variety in the provision of parking shelters was illustrated by the design of single-family Wherry officer housing with attached garages at Travis AFB, California. Air Force Capehart neighborhoods displayed the same variety in the provisions for parking shelters. Non-commissioned officer and officer housing had carports at some installations, such as the former Oxnard AFB Capehart housing area at NBVC. Parking for enlisted personnel multi-family units at this installation was provided through an off-street parking pad (Figure 19).

The Navy expressed a preference for curvilinear streets in both Wherry and Capehart neighborhoods. The Bruns Park Wherry neighborhood had a circular median (Figure 20). Sidewalks typically were located on both sides of the street in Wherry neighborhoods, but on one side of the street in Capehart neighborhoods. Parking varied, from on-street parking and interior parking areas to carports and garages. Some multi-family Wherry neighborhoods had multi-unit carports clustered together that served a particular dwelling unit in a particular area. Wherry neighborhoods for senior officers had free-standing parking shelters centered between pairs of single-family detached units. The parking shelters shared a driveway. The archival record was unclear as to whether the parking shelters originally were carports that were enclosed to create garages or originally were constructed as enclosed garages.

### 6.3.3.2 Landscaping

Landscaping was considered an additive item. In general, the Air Force and the Navy preferred to forgo landscaping in exchange for larger units and more building amenities, which the services felt would improve the livability of the units (Lovlace 1960:2). As a result, few Wherry or Capehart era neighborhoods were extensively landscaped. Although the 1959 Navy design manual recommended the retention of existing plant material to the maximum extent possible, there was no guidance on the installation of new plantings. Some installations, however, hired professional





Figure 18: Multi-car parking garages (Wherry neighborhood), Mountain Home AFB, Idaho, ca. 1956. (Courtesy of Cultural Resources Manager, Mountain Home AFB)



Figure 19: Parking area at Catalina Heights (Capehart housing), NBVC, California, 2005. (Photo taken by RCG&A)

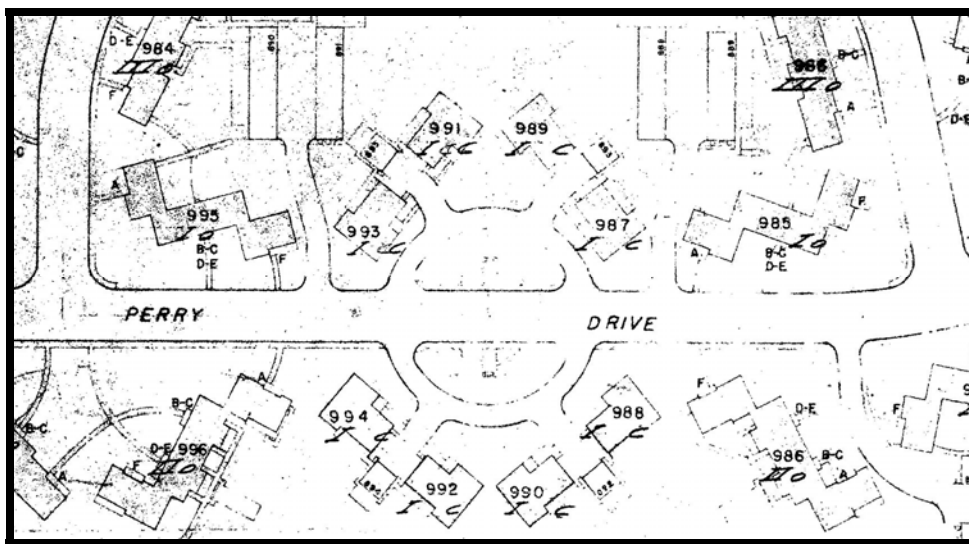


Figure 20: Detail of Site Plan of Bruns Park (Wherry housing), NBVC, California. (Courtesy of Public Works Department, Port Hueneme)

landscape architects. The decision to hire a landscape architect for a project was likely dependent on the overall project cost. If the bids were low enough to incorporate professional landscaping, then trees, bushes, and foundation plantings were provided. Otherwise, grass composed the only landscape element. Landscaping was minimal, such as at Kaneohe Bay, Hawaii. Yards were seeded but other plantings were omitted. Residents later installed trees and shrubs, with mixed results.

Landscape architects were hired as part of the design team for some projects. Both the Wherry and Capehart neighborhoods at Mountain Home AFB and Travis AFB had professionally designed landscape plans (Figure 21). The landscape plans included perimeter and foundation plantings, yard trees, and accent shrubbery. Street trees also could be incorporated into the overall scheme. Landscape designers sometimes introduced plant materials that were aesthetically pleasing but unsuitable for local climates, such as trees and expansive lawns in the high desert climate at Mountain Home AFB. Even though landscape plans were developed, they were not always implemented. The landscape plan for the Travis AFB new Capehart neighborhoods, for example, never was implemented. In some cases, the archival record was unclear as to whether what was planned actually was planted, or if the current plant materials were replacements.

At some Air Force installations, landscaping was not a part of the Capehart project, and the responsibility for developing a landscape plan fell to the base. The base engineering personnel at Dover AFB, for example, prepared a master landscaping plan for the Capehart neighborhood (Dover AFB 1960). The plan highlighted areas where residents could plant their own flowers and vegetables. Exceptions to the master plan were permitted, which enabled tenants to plant small trees and shrubs in locations of their own choosing (Dover AFB 1960). All exceptions to the master plan needed prior approval from the Base Engineering Office (Dover AFB 1960). Capehart residents at Dover AFB needed to request grass seed, fertilizer, and peat moss to “develop the grounds,” suggesting that the neighborhoods did not have grass when completed (Dover AFB 1960).

The Navy also prepared landscape plans for some of its installations. The landscaping at the Wherry neighborhood at NSA Mid-South, Tennessee, was professionally designed. Landscaping

included foundation shrubs and trees. The neighborhood activity retained many mature trees that represented early landscaping efforts.

Fencing at Wherry and Capehart neighborhoods generally were limited to chain-link perimeter fencing. Individual enclosure of yards was rare, and if completed, also was chain-link. Privacy screens were more common, and were installed between duplex units or to partially shield a patio or the façade windows. At some installations, residents were permitted to install additional fencing. Dover AFB allowed the installation of privacy fences. Residents had to pay for the installation, and only a single type of fence was permitted. Prior approval of the housing office was required for the installation. When the resident left the Capehart housing, the fence became government property. In some cases, fences were installed without authorization. Non-compliant fences remained in place until the occupant responsible for the installation left the Capehart housing, and then was removed (Dover AFB 1960).

At the time of the site visits in fall 2005, playgrounds were located within some Air Force and Navy Wherry and Capehart era neighborhoods; however, the archival record was unclear as to whether the playgrounds were constructed when the neighborhoods were built or if they were constructed at later dates. Conclusions about the provision of playgrounds were difficult to draw. Based on observations made during the site visits, each installation decided whether to include playgrounds. Tot lots, defined as a play area with minimal equipment, sometimes were originally planned for Wherry neighborhoods, such as those neighborhoods located at Mountain Home AFB and NSA Mid-South. No original tot lots appeared to survive. Some neighborhoods, such as the Wherry neighborhood at Mountain Home AFB, also had playgrounds in addition to tot lots. These playgrounds included more extensive recreational facilities such as baseball diamonds. It appeared that playgrounds and/or tot lots also were designed for Capehart neighborhoods. Currently, some neighborhoods had play facilities, but they all appeared to be later constructions, as did the athletic fields and recreational facilities, such as community centers and swimming pools, found adjacent to the housing areas.

#### **6.3.4 Exterior Design**

Although design differences existed between Wherry and Capehart era housing, the buildings reflected common principles and use of materials. Designers drew from an extensive palette of materials in the construction of both types of housing. The exteriors of housing incorporated a variety of materials. Material choices ranged from traditional materials such as brick, wood, and stucco, to new materials including flexboard (an asbestos material), plastic-coated plywood, T1-11, and asbestos shingles. A number of different roof types also were found on Wherry and Capehart era housing. Flat, gable, and hipped roofs were common. Roofing materials included composition shingles and built-up gravel. Every window type then available was used on Wherry and Capehart era housing. Aluminum-frame sliding and casement windows, double-hung wood windows, jalousie, and hopper and awning windows were installed. Although a number of different window types were used, the Air Force and Navy appeared to prefer aluminum sliding and casement windows.

To create visual interest along the street, the Air Force and particularly the Navy Capehart neighborhoods combined a variety of materials on building exteriors. Sections of building exteriors were completed in stone or brick veneer, vertical board siding, weatherboard, and textured plywood panels. These materials were used in a variety of proportions and combinations. The Air Force did not offer as broad a combination of exterior materials per building as the Navy. There was less variety in proportional use of materials; in general, a stucco building, for example, would not incorporate other building materials. The Air Force rarely incorporated more than three exterior materials on the same building, and those building materials were repeated throughout the neighborhood.



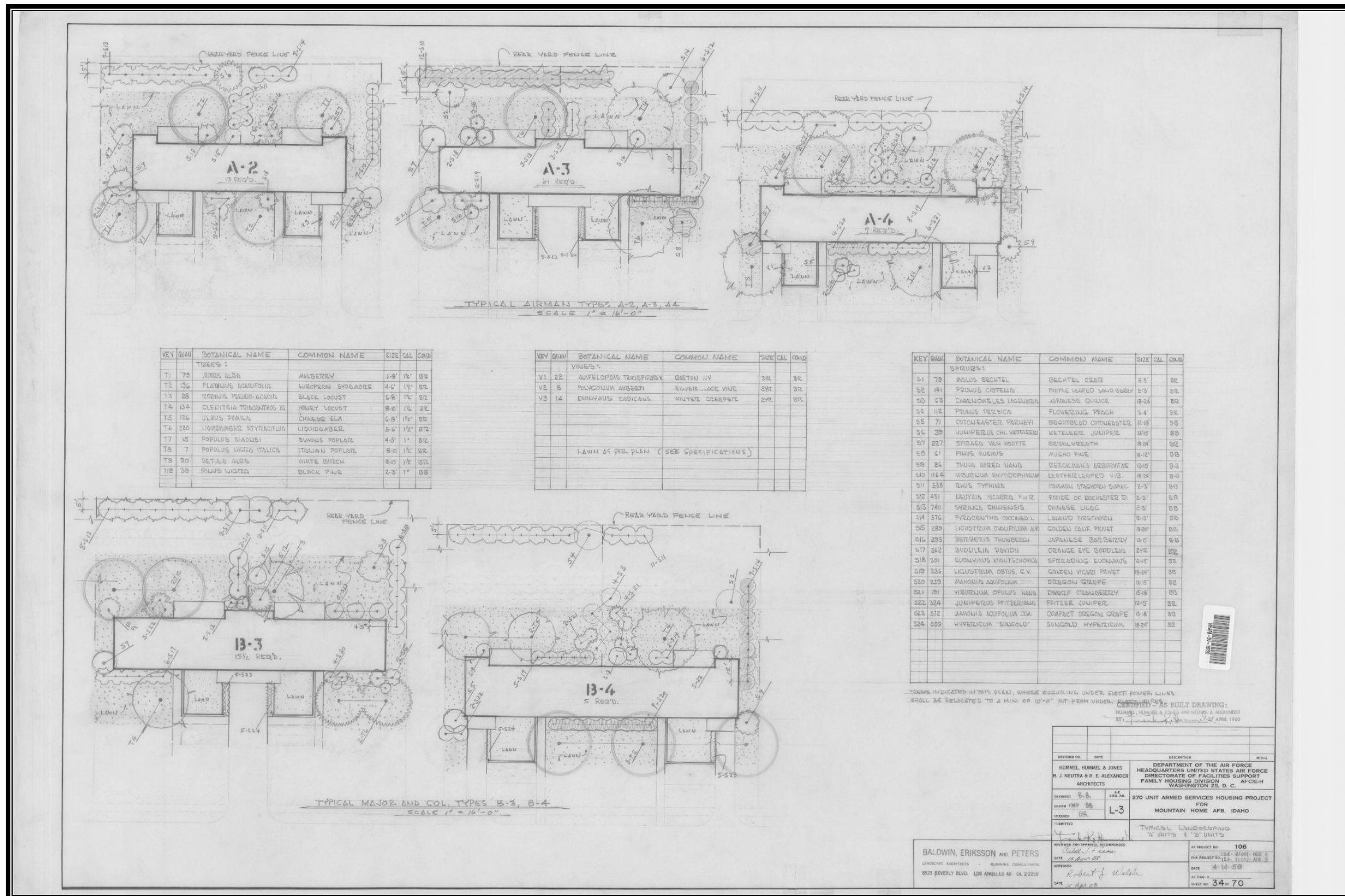


Figure 21. Landscape plan of Old Capehart officer neighborhood, Mountain Home AFB, Idaho. (Courtesy of Mountain Home AFB, 366<sup>th</sup> Civil Engineer Squadron)



Carports and garages were included with some of the buildings. Attached carports or garages often separated the two-single family units of a duplex. In fact, Navy design guidelines encouraged centering parking shelters between semi-detached dwelling units (Bureau of Yards and Docks 1959:5). In many cases, the garage roofs are integrated into the buildings' overall roof form (Figure 22). In other cases, carport roofs were flat and the roof of the living unit was pitched. At Naval activities, parking shelters could be attached to the buildings in a variety of configurations (Figure 23).

Extensive exterior ornamentation was not present on the majority of Wherry or Capehart era housing. Stylistic attributes were lent through scale, form, and mass rather than applied detailing such as cornices with dentils, Classical columns, and scrollwork. Although the buildings, in many cases, were similar in design, they used regional materials. Stucco was used in Florida and the Southwest, cedar shakes in New England, brick in the central and southern states, and wood siding in the Northwest.

The design of Wherry housing made a nod towards more traditional architectural styles. However, by the time the Capehart legislation was enacted, the architectural vocabulary had changed. The ranch style became popular for a number of reasons. Architects and builders promoted the ranch style because the style was seen as promoting healthy, outdoor living centered around the private backyard (USAEC 2003:5-28). The low-cost of construction associated with the ranch style and their easy adaptability to the duplex form made the style popular among architects designing Capehart housing. In addition, the style was popular in the civilian market, where it was seen as "contemporary." The minimalist design was easy and inexpensive, and lent itself to modern building materials and construction techniques employed in the construction of Capehart housing (USAEC 2003:5-28).



Figure 22: Building 1901, East Sparrow Drive, San Miguel (Capehart housing), Point Mugu, NBVC, California, 2005. (Photo taken by RCG&A)

Although the ranch style was popular in the design of Capehart housing, some neighborhoods were completed in more traditional architectural styles. Some Wherry and Capehart neighborhoods in New England were designed in the Cape Cod style (Keyes, Lethbridge & Condon 1959) (Figure 24). A Capehart project constructed at McGuire AFB, New Jersey, was completed in a “semi-colonial design” with brick veneer and wood with porticos and shutters (Goddard 1959:1, 3). The International Style was used at Mountain Home AFB for houses designed by the noted architecture firm of Neutra and Alexander (Figure 25 and Figure 26).

Some of the Air Force’s and Navy’s Capehart projects were recognized for their design. The Capehart project at Naval Station San Diego, California, was recognized by the Navy as “one of the most outstanding of any Military [sic] housing project” because the project contained all single-family units, the maximum amount of space and livability, and “many delux [sic] features, individual fenced yards, etc.” (Koski 1961:1). The Capehart project at Naval Training Center, Great Lakes, Illinois, received a merit award from the FHA in 1964. In a letter to the Secretary of the Air Force Eugene Zuckert, the National Association of Home Builders praised the Air Force for the design of its Capehart housing and its use of new materials and construction methods (Buchanan 1961:1).

### **6.3.5 Interior Design**

Generally, the Wherry units were smaller than their Capehart counterparts. The units lacked sufficient living and storage space, problems that were later corrected under the Capehart program. Installations requesting Capehart housing were required to acquire their Wherry units. Congress appropriated funds so that the Wherry units could be upgraded to current military standards for family housing. Funds were used to construct additional bedrooms, combine units, and add storage.

The floor plan for Wherry units generally consisted of a combined living/dining area, with the main entrance opening directly onto the living room. Kitchens generally were located in the rears of the units. Open floor plans in some Wherry units extended into the kitchen and dining area. A short hall provided access to the bedrooms and the bathroom. Many of the units were constructed as either one-, two-, or three-bedroom units; four-bedroom units were rare. No Wherry units originally were constructed with more than one bathroom. Storage was limited, although there were exceptions, such as the Wherry projects at NSA Mid-South and at Mountain Home AFB. Small bedroom closets, linen closets, and coat closets were provided, but additional storage space was not included.

Capehart projects attempted to address the shortcomings of the Wherry design, namely the lack of storage and the limited number of bedrooms. Small entry halls were included in the units. In the Capehart units, the kitchen was enclosed from the dining area and connected through the use of pocket doors. The Air Force considered combination dining and kitchen areas undesirable features (U.S. Air Force n.d.b.:2). Capehart housing generally had increases in the number and size of bedrooms, the number and size of closets, and the number of bathrooms. A main bathroom was located in the hall, and a second bathroom sometimes was located in the master bedroom. In two-story units, a half bath was located on the first floor and the full bath was located on the second floor (Figure 27). The second bathroom could be a half-bath or a bath with shower. In addition to coat, linen, and bedroom closets, storage rooms and closets were included with the units (Figure 28).

Additional storage often was provided in garages, within the carport, or in free-standing buildings in the rear yards. Many installations had multiple Capehart projects over the term of the program. As time progressed, the amount of storage provided increased. Early Capehart projects, while having more storage than Wherry units, had limited space. Later Capehart projects increased storage space with both interior and exterior areas, such as at Travis AFB.



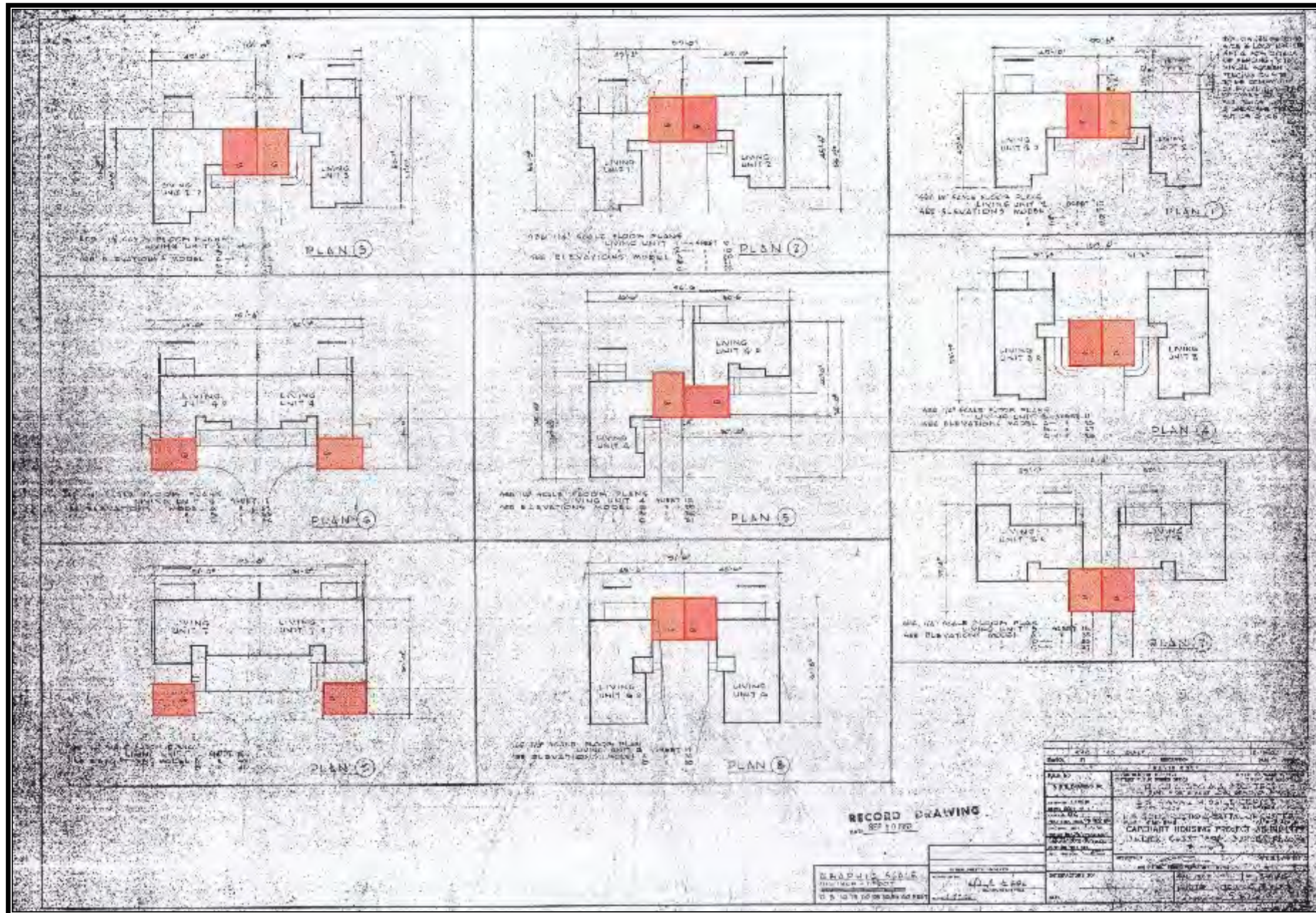


Figure 23. Duplex plans showing variety in garage locations, San Miguel (Capehart housing), Point Mugu, and Coral Seas and Bard Estates (appropriated- funds housing), Port Hueneme, NBVC, California. (Courtesy of Department of Public Works, Point Mugu)







Figure 24: 13D Young Street, (Wherry housing), Westover AFB, Massachusetts, 1956. (Courtesy of the Thompson family)



Figure 25: Senior Officer quarters (Wherry housing), Mountain Home AFB, Idaho, ca. 1956. (Courtesy of Cultural Resources Manager, Mountain Home AFB)



Figure 26: 4478 Tuck Street front elevation, (Colonel, Old Capehart housing), Mountain Home AFB, Idaho, 2005. (Courtesy of Mountain Home AFB, 366<sup>th</sup> Civil Engineer Squadron)

Various materials were used for the interiors. Plaster, more commonly used in Wherry housing, and drywall were common interior wall surfaces. Flooring materials consisted of hardwood, wood block, asphalt tiles, vinyl sheet flooring, and terrazzo. Bathrooms typically had ceramic tile. In general, interior ornamentation was austere. Trim was limited to wood baseboards and window and door casings. Some housing units included upgraded finishes such as the mahogany paneling found in the Capehart enlisted and officer housing at NBVC.

The Air Force and the Navy included amenities, or additives, to the units to increase livability. Additives included not only upgrades in materials but the inclusion of appliances and luxuries that were beyond the base unit. The decision to include amenities was based on the overall project cost, the location of the project, and the service constructing the housing. Some Capehart senior officer housing included fireplaces, while other units had glass tub and shower enclosures. These features were found in the Capehart housing constructed for the Navy at NBVC. Kitchen additives included disposals. The archival record suggests that some Wherry projects originally included washing machines and outdoor clotheslines. Capehart projects included either washers and dryers or hook-ups for washers and dryers. The location of the laundry equipment was either in the kitchen or in a small utility area off of the kitchen.

Some Navy projects, such as the one for the Naval Radio Station, Winter Harbor, Maine, included basements. Navy staff recognized the project, the units of which were described as “modified Cape Cods,” as blending well into the community, and providing ample space in the bedrooms and plenty of storage (Capehart Housing, NRS Winter Harbor 1958:1; Musband 1959:1). High quality materials and construction were noted by the Navy and the FHA field office (Capehart Housing, NRS Winter Harbor 1958:1).



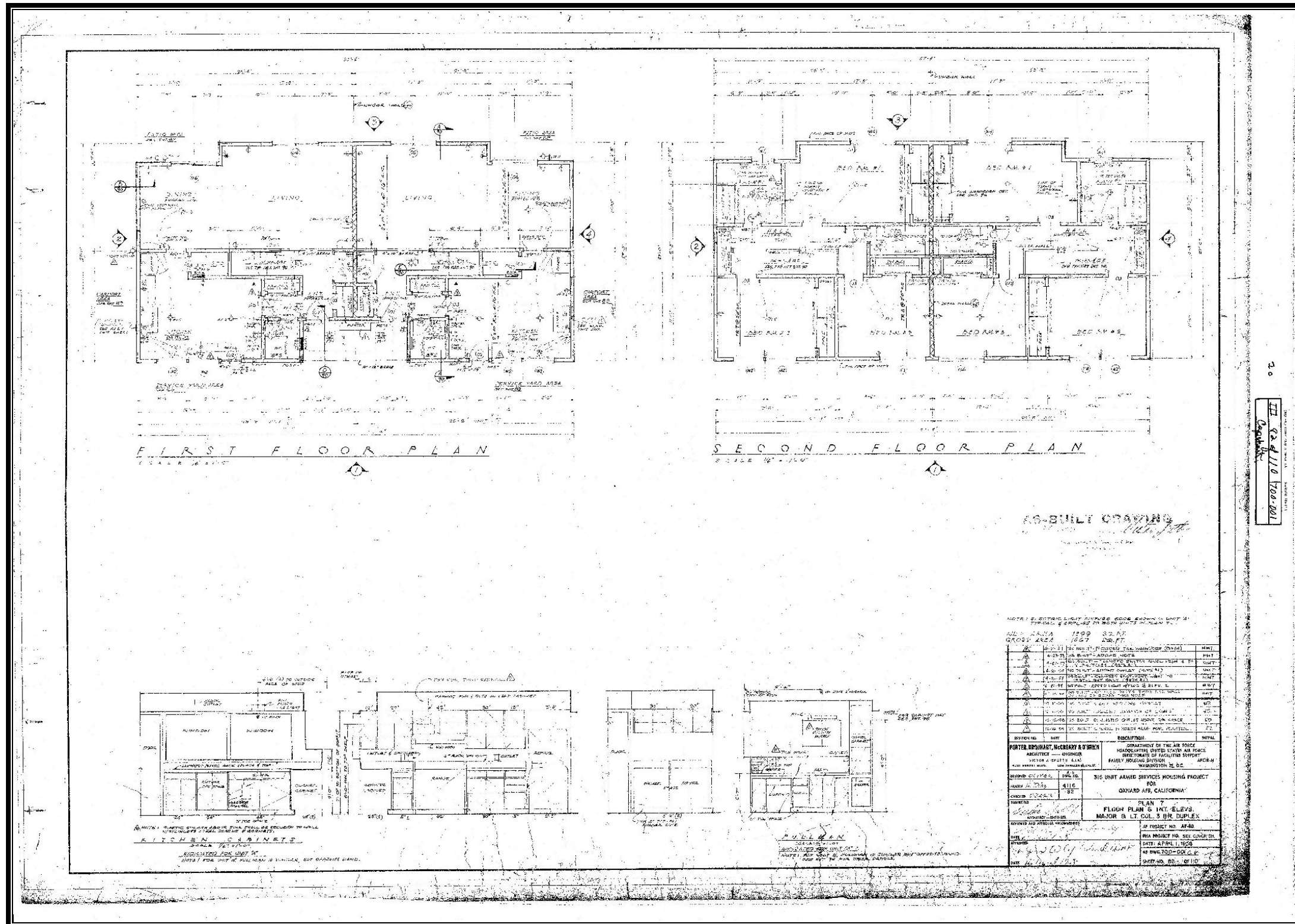


Figure 27. Floor plan 7, two-story multi-family units, Catalina Heights (Capehart housing), Camarillo, NBVC, California. (Courtesy of Department of Public Works, Point Mugu)





Figure 28: Storage closet at 103 Armstrong (new Capehart housing), Travis AFB, California, 2005. (Photo taken by RCG&A)

### 6.3.6 Site Variables

The case studies and the archival record suggested that the Air Force and Navy Wherry and Capehart era housing reflected regional stylistic differences, although the majority of the housing was constructed in the vernacular ranch style that was popular during the period. The relative diversity in regional styles could be attributed to the fact that the Air Force and Navy did not develop standardized drawings for its Wherry and Capehart era family housing. The lack of standardized drawings enabled architects to take advantage of regional design and construction practices and afforded architects a certain degree of flexibility when designing the housing.

Both the Navy and the Air Force built units to the maximum allowable mortgage limit. In areas with lower construction costs, this allowed for the incorporation of more amenities. Areas with higher costs produced units with basic necessities. Although the Navy constructed smaller Wherry units costing well under the mortgage limit, the Navy appeared to take full advantage of mortgage limits when implementing the Capehart program. The Navy generally included high-quality materials, such as the use of mahogany paneling at NBVC, included washers and dryers when economically feasible and hook-ups when the actual appliances could not be installed due to cost, and severely limited the number of multi-family units constructed. The quality of Navy projects was recognized by builders organizations involved in the civilian housing market.

The archival record suggested that the Air Force family housing program implemented a generally high quality of family housing and offered a number of amenities. The Air Force Wherry units were the largest of those constructed for the three services, and cost the most to construct. Like

the Navy, the Air Force restricted the number of multi-family units and included a number of amenities in its Capehart projects. Generally, the Air Force attempted to provide washers and dryers in as many units as possible, provided disposals and in some cases dishwashers, constructed garages and carports, and included attics, basements, and screened porches based on regional customs.

### **6.3.7 New Materials**

The postwar housing boom introduced a number of new products to the civilian housing market. Changing construction techniques, such as the use of assembly-line construction and modular measure, enabled the rapid construction of large numbers of housing units. These factors enabled the Air Force and the Navy to construct housing under severe cost constraints that was compatible with civilian market housing.

The postwar period saw a decrease in the use of traditional exterior building materials. Brick and wood were replaced by brick veneer, various forms of plywood, and asbestos. Wood windows decreased in popularity as lower-maintenance aluminum sliding and casement windows were increasingly used. Built-up gravel and asphalt, composition, and asbestos shingles were used for roofing materials rather than the traditional wood shingles, metal, or slate.

An increase in the use of non-traditional interior building materials also occurred during the time period. Although plaster was used in Wherry projects and some Capehart projects, drywall increasingly was installed. The Air Force, however, considered gypsum board an undesirable material because it was damaged easily. The appropriated-funds project at Naval Station, Key West, Florida, called for plaster and Keene's cement (a hard white finishing cement with a fast setting time and a high polish capability that consists of anhydrous gypsum plaster and an accelerant) in the kitchens and bathrooms (NAVDOCKS SPECIFICATION NO. 4917/56:1-1). Hardwood and wood-block flooring was used in both Wherry and Capehart housing units. Asphalt and vinyl flooring also were used.

### **6.3.8 Hierarchy in Design**

Both services segregated housing by rank. The separation of officer housing from enlisted housing was accomplished by locating housing areas away from each other within the base's overall family housing areas, and using streets and green space as barriers. Differences in rank also were expressed through the size of the dwelling units and the use of materials. Hierarchy in design also was based on seniority. Senior ranking enlisted personnel and senior ranking officers were entitled to more bedrooms and bathrooms. Senior ranking officers also received disposals and dishwashers in the kitchens in some cases. Rank did not preclude the construction of carports or garages. The Wherry enlisted housing at Mountain Home AFB and the Capehart enlisted housing constructed at Point Mugu and Port Hueneme (both at NBVC), for example, included carports and garages.

### **6.3.9 Alterations**

The case studies included in this report revealed that a significant number of Wherry and Capehart family housing have undergone a high degree of alteration. These alterations were the result of maintenance issues as well as changing lifestyles. The changes that occurred can be characterized broadly as changes in unit sizes, changes to allow technology upgrades, changes to allow for the inclusion of amenities; and changes in materials for ease in maintenance. In places that experienced widespread demolition of housing, the units were demolished (1) because there was an excess of

family housing; (2) because they were to be replaced with new construction; or, (3) because the units did not meet current standards. The Air Force and Navy Wherry and Capehart era units experienced a few changes in use, with such changes noted at Mountain Home AFB and Travis AFB.

Wherry housing units typically exhibited two phases of alterations. The first phase occurred during the Wherry and Capehart era and was completed in conjunction with the Wherry acquisition process. Alterations included the combining of units to create larger quarters and the installation of additional amenities. The second phase of alterations occurred after the Wherry and Capehart era. Generally, these alterations were completed during the last quarter of the twentieth century and consisted of the complete interior and exterior renovation of the units. These renovations often comprised bedroom additions, replacement of all interior materials and windows, and upgrades to bathrooms and kitchens. In some extreme cases, all interior and exterior materials were removed, leaving only the foundations and original framing intact. This latter approach occurred at Port Hueneme NBVC, MCAS Cherry Point, Mountain Home AFB and Travis AFB (Figure 29). At Mountain Home AFB, the rear exterior walls were extended to accommodate expanded kitchens and new dining areas.

Capehart units also underwent a high degree of alteration, although exceptions exist. During the late twentieth century, alterations included the installation of new roof structuring or materials, new energy-efficient windows, new doors, new floor coverings, new kitchen cabinets and appliances, and new bathroom fixtures. Some units were razed to the structural framing, as occurred at Point Mugu (NBVC). At NSA Mid-South and MCAS Cherry Point, some units retain only their exterior brick walls; all other interior and exterior materials were replaced. The removal of most or all interior and exterior materials occurred more frequently at Naval Activities than Air Force bases.

A number of Wherry neighborhoods experienced wholesale demolition; fewer Capehart neighborhoods have been razed. Some isolated demolition of individual buildings occurred due to fire in some Capehart neighborhoods. Wholesale demolition of entire neighborhoods occurred at some neighborhoods, including the Wherry neighborhood at NSA Mid-South, the Wherry neighborhood at Mountain Home AFB, the Slocum Village Wherry neighborhood and half of the Hancock Village Wherry neighborhood at MCAS Cherry Point, and a Capehart neighborhood at Mountain Home AFB. The last remaining Wherry officer house at Travis AFB currently houses the Boy Scouts.



Figure 29: Multi-family airmen neighborhood (Wherry housing), Travis AFB, California, 1994. (Courtesy of Travis AFB, 60th Civil Engineer Squadron)

#### **6.4 COMPARISON OF WHERRY AND CAPEHART ERA HOUSING CONSTRUCTED BY THE DEPARTMENT OF DEFENSE**

The DoD-wide housing shortage in the post-World War II era affected the retention rates and morale of the entire military establishment. The flexibility in implementing the Wherry and Capehart programs allowed each service to address the family-housing shortage in a manner that best suited its particular needs. Each branch of the armed forces developed policies and procedures for implementing both housing programs in addition to housing funded through Congressional appropriations.

In general structure, the Air Force, Navy, and Army Wherry and Capehart programs were similar. Installation Commanders were closely involved with the development of projects. The Commanders quantified the housing need, provided statistics on the neighboring community and the installation, met with potential sponsors, and commented on proposals. Installation Commanders also worked closely with the Army Corps of Engineers or the Bureau of Yards of Docks in the construction management aspects of the family-housing projects. The FHA provided design and financial guidance to the services to ensure that proposals met FHA requirements. The Secretaries of the respective services ultimately determined the number of units constructed by each service and approved the sponsor.

Minor administrative differences in implementation of the Wherry and Capehart programs existed among the services. These differences were expressed in the review process along the chain of command, and in personnel authorized to approve projects during various phases of project development.

The most significant difference among the Army, Air Force, and Navy implementations of the Wherry and Capehart programs was standardization in architectural plans. The Army's adoption of standardized plans resulted in a greater degree of similarity in Army housing from region to region than is evident in the housing built by the Air Force and the Navy. Air Force and Navy Wherry and Capehart era family housing demonstrated greater variety in design and materials than did housing constructed for the Army. A secondary difference among the services was the type of housing constructed. Each service constructed a significant number of single-family and duplex units; however, the Army constructed many more multi-family units than did the Air Force and the Navy. This was particularly true under the Capehart program. Air Force and Navy policy stressed the construction of single-family and duplex units over the construction of multi-family units.

#### **6.5 CONCLUSION**

During the immediate postwar years, the Air Force and the Navy experienced a severe shortage of family housing. The shortage of housing and the poor quality of existing family housing affected morale and retention rates. In order to address these issues, the Air Force and the Navy constructed family housing that was comparable with that found in the civilian market. Wherry and Capehart housing was subject to FHA regulations because the FHA insured the mortgages. Consequently, the two services were able to address the family housing need by relying on the private sector to design and build housing units. The Air Force and Navy did not use standardized plans in the design of their Wherry and Capehart era family housing. This resulted in a certain degree of variety in terms of style, materials, and amenities. In this manner, the Air Force and the Navy were able to address the unique needs of particular installations.

## **7.0 SUMMARY AND RECOMMENDATIONS FOR PROPERTIES OF PARTICULAR IMPORTANCE**

### **7.1 PROJECT OVERVIEW**

#### **7.1.1 Objectives of Study**

This historic context was prepared to support the Departments of the Air Force and the Navy in the execution of the *Program Comment for Capehart and Wherry Era Housing at Air Force and Navy Bases*, published by the Advisory Council on Historic Preservation (Advisory Council) on 18 November 2004. The current study supplements an earlier investigation, *Housing an Army: the Wherry and Capehart Era Solutions to the Postwar Family Housing Shortage (1949-1962)*, prepared for the United States Army Environmental Center (USAEC) and expands upon this earlier Army work to present data on the Air Force and the Navy housing programs.

Similar in scope to the earlier Army study, the current investigation develops an historic context for Air Force and Navy housing of the era. The report includes discussions on the broad social history of housing in the post-World War II United States, post-World War II Air Force and Navy policies and demographics, the legislative history of the Wherry and Capehart Acts, and the associated military housing programs.

The historic context provides a theoretical framework for understanding Air Force and Navy housing of the period, which is organized by theme, geographic area, and chronological period. The historic context documents the Air Force's and the Navy's post-World War II family housing construction program in the United States, including the 48 contiguous states, Hawaii, and Alaska. Three major historic sub-themes were developed:

- (1) Military history focusing on the influence of Cold War policies upon Air Force and Navy organizational structures and demographics;
- (2) Social history and the relationship of the broad trends of post-World War II U.S. housing upon Wherry and Capehart era housing; and,
- (3) Architecture and the construction of large-scale military housing projects during the Wherry and Capehart era, including the role of prominent architects and builders.

##### 7.1.1.1 Program Comment

The Air Force and the Navy utilized the provisions for Program Comments contained in 36 CFR 800.14(e) of the Advisory Council regulations to take into account the effects of management activities upon Wherry and Capehart era housing that might be historic. The resulting Program Comment clarifies this objective: "As with the Army, the Air Force and the Navy consider their inventory of Wherry and Capehart properties, including any associated structures and landscape features, to be eligible for the National Register of Historic Places for the purpose of Section 106 compliance" (Advisory Council on Historic Preservation 2004). Through the Program Comment, the Air Force, the Navy, and the Advisory Council developed a programmatic treatment of this class of military housing. This treatment includes the current historic context, development of neighborhood design guidelines, preparation of a brochure for potential developers highlighting the Federal

Rehabilitation Tax Credit program, and interviews with past Air Force and Navy residents of Wherry and Capehart era housing.

### **7.1.2 Summary of Methodology**

The historic context was developed applying an integrated program of archival research, selective field investigation, data analysis, and report preparation.

#### 7.1.2.1 Archival Research

Primary and secondary source research was undertaken. Initial work focused on a comprehensive literature review of secondary sources, including previous studies on Wherry and Capehart era housing. These studies included *“For Want of a Home...” A Historic Context for Wherry and Capehart Military Family Housing* (U.S. Army Environmental Center 1996) and *Housing an Army: The Wherry and Capehart Era Solutions to the Postwar Family Housing Shortage (1949-1962)* (U.S. Army Environmental Center 2003). Cultural resources surveys completed for the Naval Facilities Engineering Command Engineering Field Division South also were reviewed. Additional research was undertaken into the topics of postwar suburbanization, Federal housing policy, civilian and military demographics, and postwar house design and construction.

Congressional reports, hearings, government documents, and statistical data from the United States Census Bureau were compiled. Additional primary sources included the operational files of key agencies, which encompassed program memos, data for Congressional reports and hearings, drawings, photographs, and housing statistics.

#### 7.1.2.2 Field Investigations

Field investigations were completed at five installations (two Air Force, two Navy, and one Marine Corps) with inventories of Wherry, Capehart, and appropriated-funds housing. In consultation with the Departments of the Air Force and the Navy, installations were selected following the identification of active bases with Wherry and Capehart era housing as documented in the Air Force’s Real Property Inventory Database and the Navy’s and Marine Corps’ Internet Navy Facility Assets Data Store Management System database. Installations were selected for their geographic diversity, active status, range of housing types, range of architectural style, association with important architects or designers, and ability to demonstrate post-World War II planning principles and suburbanization themes.

Field investigations included on-site reviews of installation historical records and previous architectural surveys; architectural survey and documentation of buildings; surveys of neighborhood plans and landscape elements; and, interviews with installation personnel knowledgeable about the housing.

#### 7.1.2.3 Data Analysis and Report Preparation

Archival and architectural survey data then were analyzed to develop a companion historic context to the previously completed Army investigation. The current study was organized to enable comparisons on the housing programs implemented by the military services during the period. The



two studies present a comprehensive picture of Wherry and Capehart era military housing across the Department of Defense.

## **7.2 SIGNIFICANCE OF WHERRY, CAPEHART, AND APPROPRIATED-FUNDS HOUSING FOR THE PURPOSES OF PROGRAM COMMENT**

Prior to World War II, military family housing was extended to officers and their families. As the nation entered World War II, the military possessed a small inventory of family housing limited to approximately 15,000 units maintained by the Army and 1,183 family public quarters under the stewardship of the Navy (U.S. Navy 1956). “Supplemented by the plentiful supply of private housing, these quarters were adequate to accommodate the small percentage of married men who served in the Armed Forces of the 1930s” (U.S. Senate 1957:4).

International policy influenced the demographics of the U.S. military in the postwar years. Following World War II, military force strength was authorized at a level higher than any other peace time period in U.S. history. The services sought to maintain their force strength through the retention of highly trained career professionals. The higher number of active-duty officers and enlisted personnel in the postwar years resulted in a severe housing shortage. This shortage became acute after military family housing was extended to enlisted personnel. In addition, housing and personnel support during the period ranked lower in military funding priority than funding for mission critical areas, such as technology and operational facilities (Gilpatric 1951:2-3).

The Wherry and Capehart acts were designed to address the military housing shortage. The legislation led to the construction of much-needed family housing through public-private partnerships, which effectively supplemented military housing construction funded through appropriated funds. As a class of properties, the houses constructed for military families under the Wherry and Capehart programs embodied the characteristics of suburban design principles that evolved during the 1950s and 1960s as applied to military housing. The need to construct family housing was associated directly with the size of the standing military during the Cold War era and the desire by the services to retain highly trained personnel as part of a technologically complex and sophisticated military. In general, the significance of housing constructed under the Wherry and Capehart era programs lay not in the individual buildings, but in the scale of the construction programs. These large-scale programs resulted in planned neighborhoods embodying the community and housing design principles of the period to accommodate the expansion of the armed forces to meet the national challenges the U.S. faced during the Cold War.

### **7.2.1 Military Architecture**

#### **7.2.1.1 Scale of Housing Shortage and Construction Program**

The Air Force and the Navy entered the postwar period with family housing inventories that were too small to meet demand and that contained unacceptable substandard units. In 1949, the Air Force determined that a total of 121,000 family housing units were required by the service. The Air Force 1949 inventory contained 17,954 units, of which, 36 per cent were substandard (U.S. House of Representatives 1949a:8). In 1951, the Navy identified the need for family housing to support 44,000 shore-based personnel. In that year, the Navy controlled 39,842 temporary low-cost rental units comprising defense housing, Quonset huts, and trailers. Of these rental units, 14,000 were considered substandard. Additional housing also was needed at home ports for families of personnel serving at sea (U.S. House of Representatives 1949:13).

During the Wherry and Capehart era, approximately 200,000 housing units were constructed for Department of Defense military families nationwide. Of this total, approximately 146,290 units were added to the housing inventories of the Air Force, Navy, and Marine Corps. The Wherry Act resulted in the construction of an estimated 62,475 units, while approximately 77,208 housing units were constructed under the Capehart Act. Housing units built using appropriated funds numbered 6,607. This dramatic increase in the military family housing inventory occurred in the impressively short time frame of thirteen years – the duration of the Wherry and Capehart Acts.

#### 7.2.1.1.1 Public-Private Partnership

One notable aspect of the Wherry and Capehart Acts was the public-private partnership forged to construct military housing. Congress had traditionally funded military construction through the Federal appropriations process. In the first years of the postwar military housing shortage, Congress authorized the construction of family housing but limited appropriations. Low funding levels translated to slow progress in meeting military family housing demand. The Wherry Act and later Capehart Act were the legislative vehicles for addressing the military family housing shortage. Under these acts, private-sector contractors were afforded financial incentives to build military family housing through mortgages guaranteed by the FHA. These partnerships allowed for the construction of large-scale housing projects in areas of the country where mortgages were difficult to obtain. These partnerships resulted in the construction of housing that was compatible with units available in the civilian housing market.

#### 7.2.1.1.2 Reflection of Dominant Domestic Architecture of Period

One objective in the implementation of the Wherry and Capehart programs was to create military housing that compared favorably to new civilian housing of the period. During the 1950s, the civilian housing market shifted dramatically. Single-family detached houses set in suburban residential developments became favored over multi-family apartment buildings and urban row houses. Individual house designs abandoned traditional styles in favor of the contemporary ranch house style. The housing projects built for the Air Force, Navy, and Marine Corps under the Wherry and Capehart programs reflected the evolution of these civilian housing trends and suburban development within constraints imposed by program requirements, military housing standards, and budgets.

#### 7.2.1.1.2.1 Community Design and Building Placement & Orientation

New civilian suburban developments provided the model for the design of Wherry and Capehart neighborhoods. Popular design features incorporated into military neighborhoods included wide curvilinear streets, front lawns, long blocks, and three-way intersections. Buildings generally were placed along the streets with uniform setbacks that provided overall neighborhood cohesiveness.

The development patterns for residential communities shifted dramatically in the postwar period as traditional high-density urban patterns declined in popularity. Although master plans often were developed for early suburbs, these suburbs frequently were located in close proximity to metropolitan areas served by public transportation, and these suburbs evolved over time. Prior to World War II, single-family houses constructed in suburban areas frequently were built by independent building contractors who erected individual houses for clients on privately owned lots.

The postwar housing boom saw wholesale development of more geographically isolated residential communities under the auspices of a single developer. Street plans, house design, building setbacks, driveways, accessory buildings, open space, play areas, neighborhood amenities, and

landscaping often were planned and constructed for the housing community as a whole. House size, scale, materials, construction, and price were standardized, creating homogeneity of building stock and attracting occupants of similar socio-economic levels. Many of the standardized design and construction technologies employed by large-scale private developers were influenced by those developed for the rapid military mobilization during World War II. These approaches were well-suited to the construction of military family housing in the postwar years.

#### 7.2.1.1.2.2 House Design

The design and construction of the military housing units of the Wherry and Capehart era were influenced strongly by contemporary trends in civilian housing design and development. Large-scale private sector developments emphasized standardized design, standardized materials, and rapid construction. Architectural variation and traditional construction practices all but vanished. Identical designs, mass-produced standardized building materials, and prefabricated architectural components resulted in holistic residential communities with little architectural variety. The adoption of standard-measure materials – based on 4- by 8-foot sheets of plywood and drywall – by the construction industry simplified house construction greatly. The size of studs, windows, doors, shingles, siding, and virtually every other building material were standardized. Construction crews, specialized by task, worked with assembly-line efficiency through residential developments. Traditional structural materials, such as brick and stucco, were interpreted as veneers applied over plywood-clad frames. New materials were introduced; aluminum siding and asbestos board were inexpensive, easy to install, and required little maintenance. Interior plans reflected changing domestic attitudes and orientation towards the nuclear family. Formal separation of family spaces was eliminated in favor of open plans. Kitchens often were separated from living/dining rooms by breakfast counters or pass-through cabinets rather than solid walls.

##### *7.2.1.1.2.2.1 Size, Scale, Proportion, Materials, Ornamentation, Amenities*

The evolution of the civilian housing market and military housing during the 1950s and early 1960s are illustrated in the differences between the housing built under the Wherry Act and the housing built under the Capehart Act. In general, the multi-unit buildings built under the Wherry program were phased out in favor of single-family detached housing or duplex family housing under the Capehart program. The house designs under the later Capehart program reflected rising housing expectations in size and amenities generally through additional bedrooms, bathrooms per unit, increased storage and closets, and accommodation for individual automobiles.

## **7.2.2 Military History**

Family housing during the Wherry and Capehart era reflected a significant change in the peacetime military. Prior to World War II, military family housing was financed with government-appropriated funds and extended to officers. The Cold War and accompanying policy of peace through deterrence prompted the need for both a large peacetime military and new weapons systems. In addition, family housing benefits were an important factor in retaining highly trained enlisted personnel. The need for housing competed with military missions to develop and deploy weapons with global capabilities, often resulting in reduced funding for housing construction.

In the immediate postwar years, military families competed for limited rental housing on the civilian market; many of these units were substandard. The Wherry and Capehart acts created programs that addressed the critical military housing shortage at minimal cost to the government, thus

enabling Congress to focus defense appropriations on the development of new military technologies to counter the communist threat.

Military housing areas constructed during the Wherry and Capehart eras transformed military life and military bases. For the first time in the history, enlisted personnel were provided housing that allowed their families to accompany them. At many Navy and Air Force installations, Wherry and Capehart housing areas was constructed on base. The increased numbers of on-base dependents led to expanded family services and the eventual construction of family support facilities such as commissaries, post exchanges, and medical facilities.

#### 7.2.2.1 Shift to Large, Technologically Advanced Peacetime Military Force

Following World War II, world political conditions mandated that the United States maintain a large active-duty military comprising highly trained personnel. The adversarial relationship between the Soviet Union and Western allies evolved into the prolonged tensions of the Cold War period. Previously isolationist, U.S. foreign policy shifted focus to deterring worldwide Communist expansion.

The military services developed new technologies, including nuclear weapons, to counter this threat. The Air Force, with its air delivery power, was essential to this strategy. The Navy expanded its worldwide presence and developed new conventional and nuclear capabilities. Trained, skilled professionals were required to develop and operate military weapons and technology of increased complexity and sophistication. The military competed with private-sector industry to retain highly trained personnel.

While the size of the armed forces was reduced during the immediate postwar period, personnel numbers were consistently high during the Cold War. The size of the military was reduced from more than 10.7 million personnel in 1945 to approximately 1.3 million in 1947, but the personnel level of more than 2 million during the 1950s and 1960s was higher than any peacetime military in U.S. history.

#### 7.2.2.2 Role of Enlisted Personnel Accompanied by Families

In order to attract and retain the skilled military professionals necessary to support the expanded foreign policy, the Department of Defense recognized the need to revise its restrictive policies on married personnel and to provide additional family housing. Historically, the armed forces did not accommodate married enlisted personnel or provide services to their families. Married personnel accompanied by families usually were officers; enlisted men did not serve accompanied by wives or children. In the nineteenth-century Navy, both officers and enlisted men primarily lived aboard ships. Formal family support services for enlisted personnel were not available on Army installations in the early twentieth century during the period when the Army developed its first aviation divisions. Married people enlisted or were drafted during World War II, but military families received minimal support.

During the 1950s, the Air Force and the Navy shifted from services staffed predominantly by single men to services staffed predominantly by married personnel accompanied by dependents. The number of married Air Force enlisted men doubled during the late 1950s, from 20 per cent in 1955 to 40 per cent in 1961. Twenty per cent of enlisted Navy men were married in 1955, while 32 per cent were married in 1961. Surveys completed by departing personnel indicated that the lack of adequate

family housing was a primary reason for separating from the service. Departure rates were highest among the most highly skilled personnel.

### **7.3 WHERRY AND CAPEHART ERA MILITARY FAMILY HOUSING: CHARACTER-DEFINING FEATURES**

As discussed in the preceding chapters, Wherry and Capehart era military neighborhoods adopted site-specific plans developed by private sector developers working for the installation level clients. These neighborhoods varied in scale, architectural style, and dwelling type. Despite the unique character of individual family housing areas, Wherry and Capehart era housing shared general characteristics with civilian housing developments of the period due to the intent of the military housing program, the use of FHA-guaranteed mortgages, and the similarities in construction materials and technologies.

Wherry and Capehart era programs were intended to provide military families with housing that was comparable with that found in the civilian sector within the constraint of Federal enabling legislation. Each service developed military housing requirements to support this architectural objective. For example, housing designs met minimum spatial requirements and included bedroom-to-bathroom ratios. Unit size, as measured in total square footage; and the number of amenities, including the number of bathrooms; were defined and graduated by military rank. The Air Force and the Navy established a preference for single-family and duplex units, as opposed to multi-family buildings. Neither service promoted the construction of linear nor grid neighborhoods, but rather encouraged development plans incorporating gently winding streets. The Air Force discouraged the incorporation of cul-de-sacs. A detailed discussion of military housing standards is contained in the preceding chapter.

FHA guaranteed mortgages were used to finance both private developments and Wherry and Capehart era military housing areas. All applicants for FHA guarantees were required to comply with FHA standards. These standards addressed the overall development as well as individual houses.

The FHA generated subdivision standards for streets, green space, and building placement. Superblocks, curvilinear streets, cul-de-sacs, and courts were encouraged. The FHA influence on neighborhood design was far reaching. FHA-guaranteed communities constructed during the 1930s served as the model for postwar suburban development (Ames and McClelland 2002).

The FHA also established minimum standards for the design and construction of housing financed through mortgages secured through the agency's mortgage insurance. As a result, the agency regulated the general architectural program and neighborhood design of both military and private sector developments. These regulations extended to house size; the amount, location, and type of storage; the minimum kitchen countertop area; and the spacing of kitchen (USAEC 2003:3-48, 3-49). Federal standards specified room size, type, light, ventilation, and privacy. The ratio of bathrooms-to-bedrooms was regulated for buildings of three and four units (USAEC 2003:3-49).

While the military and FHA established overall criteria for subdivision and house design, neither dictated standardized designs to meet these criteria. Infinite variation was possible for both neighborhoods and housing within budgetary limits; no architectural styles, forms, or materials were mandated. Indeed, military guidelines promoted housing areas reflecting regional design idioms and methods of construction. A variety of housing types were constructed in a wide range of materials, footprints, orientations, roof forms, and window types. Housing areas also differed in design within an installation.

The qualities that render Wherry and Capehart era housing recognizable as a product of the postwar period are closely associated with the dominant construction materials and technologies. Postwar materials, such as asbestos, aluminum, concrete block, and plywood, frequently were used. The regional use of brick and stone veneers was common in Wherry and Capehart era neighborhoods. Legislation enacted during the period mandated the use of modular measure, a method of construction whereby standardized building components were used, enabled the quick and efficient construction of large numbers housing. Postwar large-scale merchant builders constructed over 2,500 new units per year (USAEC 2003:3-33). Merchant builders applied assembly-line approaches to new house construction. The single-story, ranch style, popularized by architects such as Richard Neutra, was almost universally used because it met the FHA minimum standards and could be constructed quickly.

Wherry and Capehart era military housing and neighborhoods frequently differed from their private-sector counterparts in their pattern of evolution over time. Unlike suburban communities comprising privately owned houses whose improvements frequently departed from the neighborhood's original uniform design, military family housing areas were maintained and modified to a single consistent standard. Military housing also was subject to high turnover as personnel were reassigned within the service. Consolidated management to military housing standards and frequent turnover necessitating intensive cosmetic maintenance resulted in little variability in how component housing units evolved over time.

## **7.4 INTEGRITY AND CHANGES OVER TIME**

As a class of resources, the housing constructed under the Wherry and Capehart era is turning 50 years of age. Since their construction, these housing units have been occupied by numerous military families. Examination of the historical records for housing at five installations documented continual maintenance and repair interspersed with periodic renovations and upgrades to modernize the dwelling units and to improve amenities. These improvements have been necessitated by military housing standards to maintain the quality of military family life.

Historic properties are cultural resources that possess significance and integrity. Intensive maintenance, repair, and renovation have the potential to affect a building's ability to convey its important associations. Changes in design, replacement of original materials, and the addition of new building components may alter a building to the degree that it no longer reflects its original design and construction. The comparative analysis of the original and current appearance of housing constructed during the Wherry and Capehart era determines its historical integrity and is measured by the aspects of location, design, setting, materials, workmanship, feeling, and association. The cumulative results of ongoing programs of maintenance and renovations generally have diminished the overall individual building integrity of design, materials, and workmanship. The following discussion enumerates the many changes over time that have affected the integrity of Wherry and Capehart housing.

### **7.4.1 Maintenance**

Wherry and Capehart era housing was changed through routine maintenance activities required by the continual turnover of the units through a succession of military families. Between occupants, units generally undergo routine maintenance, repairs, kitchen and bathroom upgrades, and repainting. In addition, the military has made concerted efforts over the last two decades to decrease general maintenance costs. For example, formerly wood exterior materials have been covered or replaced with synthetic siding to decrease general maintenance costs and to eliminate continual

repainting. Wood eaves have been encased in metal. Original interior plaster walls were replaced with drywall.

#### **7.4.2 Ongoing Upgrades to Meet Housing Standards**

The Air Force's and the Navy's inventories of Wherry and Capehart era housing have been upgraded periodically to meet continually evolving housing standards. These upgrades typically included expansions of net floor area, addition of interior and exterior storage space, elimination of one-bedroom units, addition of bathrooms, installation of air conditioning, and upgrading of amenities. Other improvements were intended to increase the energy efficiency of the buildings while enhancing the exterior appearance. The installation of exterior insulation and finish systems, such as Dryvit, lowered heating and cooling costs and created an attractive low-maintenance finish. Insulated glass windows in synthetic frames and sash further improved efficiency and appearance with the added benefit of low maintenance.

The earliest upgrading of Wherry housing generally occurred within the first decade of their existence as the Wherry units were purchased by the Federal government prior to the construction of housing under the Capehart program. Wherry housing was built to meet a \$9,000 per-unit cost ceiling. Air Force units ranged from one to four bedrooms and averaged 835 square feet; Navy units ranged from one to three bedrooms and averaged 768 square feet. By the late 1950s, Wherry units were remodeled to modernize and enlarge kitchens, combine one-bedroom units to create two-bedroom units, enlarge master bedrooms, add covered porches, and create additional storage. When Capehart housing was built, its size represented a change in standards toward larger housing. In 1956, the square footage of Air Force Capehart units ranged from 950 to 2,100 square feet, depending on rank. In 1959, the square footage of Navy Capehart units ranged from 1,080 to 2,100 square feet, also depending on rank.

Current standards demonstrate that allowable floor areas have increased slightly since the Capehart housing was built. Policies issued by the Office of Management and Budget (OMB) in 1993 outline minimum, normal, and maximum net floor areas. Current net floor-area standards relevant to this study range from a normal 1,000 square feet for a two-bedroom dwelling to a maximum 2,100 square feet for a four-bedroom dwelling (Table 12).

Based on these newer living standards, Wherry and Capehart housing projects have been renovated and upgraded since the 1990s. In the most extreme cases, buildings were stripped to the studs and foundations and essentially rebuilt using new materials. In some cases, exterior walls were extended to incorporate larger floor areas. New bathrooms and kitchens were periodically installed and upgraded.

Another type of upgrade to Wherry and Capehart housing involved installation of air conditioning. Air conditioning was provided in some locations, whereas at other locations, only the enabling equipment was installed so that air conditioning could be added in the future. According to the 1993 OMB policy, "Air conditioning may be installed in living quarters only in locations where during the six warmest months of the year the dry bulb temperature is 80 F or higher for over 650 hours or the wet bulb temperature is 67 F or higher for over 800 hours" (Office of Management and Budget 1993). In locations that meet this standard, evaporative cooling is required where it is feasible and more economical than refrigeration systems (Office of Management and Budget 1993). Examples from the case studies in Appendix A where evaporative cooling units were installed include Wherry housing at Mountain Home AFB, where they were installed in 1961, and Wherry housing at Travis AFB, installed in 1969.

**Table 12. Square Footages for Wherry, Capehart, and Current Government Housing**

Wherry Units	Capehart Units	1993 OMB Standards**
<ul style="list-style-type: none"> <li>• Did not link square footage to unit size, specified \$9,000 per-unit cost ceiling</li> <li>• Air Force: 1-4 bedrooms, average 835 s.f.</li> <li>• Navy: 1-3 bedrooms, average 768 s.f.</li> </ul>	<p><b>1956 Air Force Design Guidelines</b> (2-4 bedrooms)</p> <ul style="list-style-type: none"> <li>• Enlisted: 950-1,080 s.f.</li> <li>• Lt/Capt: 1,100-1,250 s.f.</li> <li>• Major/Lt. Col: 1,400 s.f.</li> <li>• Colonel: 1,670 s.f.</li> <li>• Commander: 1,837 s.f.</li> <li>• General: 2,100 s.f.</li> </ul> <p><b>1959 “Criteria and General Requirements” – Navy</b> (2-4 bedrooms)</p> <ul style="list-style-type: none"> <li>• Enlisted: 1,080 s.f.</li> <li>• Ensign/Warrant: 1,250 s.f.</li> <li>• Captain, Commander, Lt. Commander: 1,400 s.f.</li> <li>• Captain (if commanding officer): 1,670 s.f.</li> <li>• Flag Officer: 2,100 s.f.</li> </ul>	<p><b>1 bedroom</b> (for multi-family or apt. construction only)</p> <p>550 s.f. (minimum) 730 s.f. (normal) 810 s.f. (maximum)</p> <p><b>2 bedrooms</b> 750 s.f. (minimum)* 1,000 s.f. (normal) 1,250 s.f. (maximum)</p> <p><b>3 bedrooms</b> 960 s.f. (minimum)* 1,415 s.f. (normal) 1,670 s.f. (maximum)</p> <p><b>4 bedrooms</b> 1,190 s.f. (minimum)* 1,670 s.f. (normal) 2,100 s.f. (maximum)</p>

\*Applies to flats or multi-family construction. Not recommended for single-family or duplex houses.

\*\*Larger houses permitted for military commanders of large stations and military officers of general or flag rank.

Source: “Briefing Memorandum for the Chief” 1956; Office of Management and Budget 1993; USAEC 2003:4-7; Department of the Air Force 1949a:4; Korink 1949:3; U.S. House of Representatives 1959c:1954; U.S. Air Force 1956:11.

### 7.4.3 Removal

The ongoing evolution of military priorities to meet ever-changing strategic goals has resulted in shifts in personnel levels and numbers of military families requiring housing. In addition, the competitive civilian housing market near many military installations has resulted in a decrease in the need for military family housing in some areas. One result of these trends is the consolidation of housing on military installations. Older housing that was no longer needed and had outlived its usefulness was removed. Prior programs for the removal of Wherry and Capehart era housing neighborhoods occurred before the buildings reached 50 years of age. The programs complied with Section 106 process of the NHPA through project-specific consultation.

### 7.4.4 Congressional Directive

As part of the Conference Committee Report to the Defense Appropriations Act for Fiscal Year 1997, Congress directed the armed services to develop strategies to reduce costs associated with the management of historic properties. The large inventory of family housing constructed under the Wherry and Capehart era programs that was about to turn fifty years of age presented an opportunity to develop an innovative and cost-effective programmatic approach to compliance with Section 106 of the National Historic Preservation Act (NHPA) of 1966, as amended. This approach consists of documenting Wherry and Capehart housing as a class through this current study, neighborhood guidelines, a brochure for developers highlighting the Federal Rehabilitation Tax Credit program, and



oral interviews with former residents of Air Force and Navy Wherry and Capehart era family housing. According to the ACHP Program Comment, “By following this comment and the outlined six-step approach, the Air Force and the Navy will have met their responsibilities for compliance under Section 106 regarding management of their Wherry and Capehart era housing” (Advisory Council on Historic Preservation 2004). Therefore, the Air Force and the Navy could proceed with planned undertakings described in the Program Comment, including maintenance, repair, layaway, mothballing, privatization and transfer out of federal agency ownership, substantial alteration through renovation, demolition, and demolition and replacement. These undertakings have the potential to remove character-defining features of this housing, diminishing their integrity.

#### 7.4.5 Privatization

The Air Force and the Navy are in the process of privatizing their stocks of housing, including family housing constructed during the Wherry and Capehart era. The Air Force Housing Privatization (HP) and the Navy Public-Private Venture (PPV) programs were initiated under the Military Housing Privatization Initiative (MHPI), contained in the National Defense Authorization Act for Fiscal Year 1996. The purpose of the MHPI is to work with the private sector to renovate or replace insufficiently maintained or modernized housing more quickly than possible through the traditional Federal appropriations process. It was estimated that the Federal appropriations process would cost taxpayers approximately \$16 billion, take 20 years to accomplish, and require contractors to adhere to military construction specifications that make projects more costly than in the private market (Office of the Deputy Undersecretary of Defense 2006).

#### 7.4.6 Conclusion

The ability of a historic resource to convey its significance lies in its integrity. When constructed, the buildings and neighborhoods reflected their era of construction through such character-defining features as windows and doors, exterior materials, roof form and sheathing, landscaping, and amenities including carports or garages. Many Wherry and Capehart neighborhoods have experienced considerable change since constructed in the 1950s and 1960s. Renovations undertaken as part of the Wherry acquisition program of the Capehart era, modernization of kitchens and baths, upgrades in finishes to reflect personal expectations of the occupants, energy efficiency programs, privatization, and demolition affect the individual and collective integrity of Wherry and Capehart housing and neighborhoods. Table 13 (reproduction of Table 1) illustrates the effect of some of these changes on the as-built inventory.

**Table 13. Wherry and Capehart Housing Constructed between 1949 and 1962 and Current Inventory\***

Service	Wherry Units		Capehart Units	
	1949-1962 Inventory	Current Inventory	1949-1962 Inventory	Current Inventory
Air Force	38,014	5,388	62,816	19,933
Navy	17,434	3,196	10,020	7,049
Marines	7,027	496	4,372	2,786

\*Reproduction of Table 1

Note: See Appendices D and E for breakdowns by installation

Source, 1949-1962 inventory: See Page D-1 for description of sources.

Source, current inventory: Air Force Real Property Inventory (RPI) and Internet Navy Facility Assets Data Store Management System Database (iNFADS)

The National Register Bulletin *Historic Residential Suburbs* recognizes that integrity depends on the context of an area's pattern of suburbanization and comparable neighborhoods (Ames and McClelland 2002). The integrity of a Wherry and Capehart era neighborhood "relies in part on the cohesion of the historic plan and aspects of spatial organization" (Ames and McClelland 2002). Spatial organization includes massing, scale, setback, historic plantings, circulation patterns, boundary demarcations, and other landscape features (Ames and McClelland 2002).

Neighborhood character-defining features include plan, streetscape, landscaping, density, setback, and amenities. In addition, modifications to buildings within a neighborhood also must be taken into consideration; "cumulative alterations and additions to large numbers of dwellings...threaten the integrity of the historic plan and the neighborhood's overall historic character" (Ames and McClelland 2002). These factors were considered when selecting the properties of particular importance.

## **7.5 IDENTIFYING WHERRY AND CAPEHART ERA HOUSING OF PARTICULAR IMPORTANCE**

### **7.5.1 Program Comment**

In accordance with the Program Comment published by the ACHP, the Navy and Air Force reviewed the historic context study to identify potential properties of particular importance. These properties were defined through a process of field investigation and further analysis within the historic context.

Historic context data first were analyzed to identify candidates for site investigation within the active housing inventory with the greatest potential to contain associated housing property types. Selected installations were documented in greater detail to identify properties that possessed both significance and integrity.

### **7.5.2 Criteria for Field Investigation**

Archival data and real property databases provided by the Air Force (Air Force RPI), and the Navy and the Marine Corps (INFADS) were analyzed to select five case study installations for the current investigation. These installations were selected in consultation with the Air Force and the Navy for their potential:

- to convey the broad social history of housing during the 1950s and early 1960s;
- to provide information on changing Air Force and Navy demographics and the relationship between Wherry and Capehart housing and the Air Force and Navy structures;
- to represent the work of important architects, designers, developers, and contractors; and,
- to illustrate the range of contemporary housing types and styles represented in Wherry and Capehart era military housing.

In addition, installations also were selected from the active military housing inventory which:

- represented a range of installation types;

- represented geographic diversity;
- contained the largest sample of housing units represented by housing areas developed over the period and
- represented changes over time.

The following installations were selected for on-site investigation applying the above criteria:

**Naval Base Ventura County, California**

Western United States

739 buildings

Single-family, duplex, multi-family

Wherry, Capehart, Appropriated Funds

**NSA Mid-South Memphis, Tennessee**

Southern United States

161 buildings

Single-family, duplex, multi-family

Wherry, Capehart

**MCAS, Cherry Point, North Carolina**

Southeastern United States

856 buildings

Single-family, duplex, multi-family

Wherry, Capehart

**Mountain Home AFB, Idaho**

Northwestern United States

214 buildings

Single-family, duplex, multi-family

Wherry, Capehart, Appropriated Funds

**Travis AFB, California**

Western United States

875 buildings

Single-family, duplex, multi-family

Wherry, Capehart, Appropriated Funds

A summary of the field findings for these five installations is contained in Appendix F.

**7.5.3 Field Verification and Analysis**

Field investigations of the five selected installations consisting of site-specific archival research and architectural survey data documented housing examples from each program located at each installation. Data included the respective construction programs, building types and dates of construction, features of note, architects, associated neighborhoods and landscape features, and changes over time. These data were analyzed further to identify properties that possessed important associations with the historic context and integrity from the Wherry and Capehart era. Based on this analysis, the following properties were identified as properties of particular importance within the Wherry and Capehart era due to their historical association and resource integrity:

- Three senior officer houses designed in the International Style by Richard J. Neutra located at Mountain Home AFB, which represent the work of an important architect for the military under the Capehart Act, and
- The Catalina Heights neighborhood at NBVC as a collection of Capehart program dwellings that collectively convey the principles of postwar suburbanization adapted to a military context.

A summary of these Properties of Particular Importance is included below. A detailed discussion is located in Appendix G.

## **7.6 RECOMMENDATIONS FOR PROPERTIES OF PARTICULAR IMPORTANCE**

### **7.6.1 Mountain Home AFB**

#### 7.6.1.1 Summary Description

Mountain Home AFB is located approximately 40 miles southeast of Boise, Idaho, on a high desert plateau. The installation was established in 1942 as a temporary base to train bomber crews. In 1948, the base was transferred to the USAF and was assigned in 1953 to the Strategic Air Command (SAC). The base served as a SAC alert facility, ready to deploy bombers at a moment's notice until 1966. In the 1950s, the base offered few permanent quarters for personnel and few housing options were available in the neighboring civilian market. Permanent family housing at Mountain Home AFB was constructed under both the Wherry and Capehart housing program.

The Wherry neighborhood at Mountain Home AFB was constructed in 1956. Hummel, Hummel, & Jones of Boise, Idaho, and R.J. Neutra and R.E. Alexander of Los Angeles, California, were listed on the 1954 drawings as architects. The drawings were submitted by Robert E. Alexander and read "Designed R.J.N. and R.E.A." (Mountain Home AFB drawings files). The neighborhood contained 500 units in 92 buildings. Forty-nine buildings with 253 units were constructed for officers, while 43 buildings containing 247 units were constructed for airmen. Apart from the six senior single-family officer quarters, all buildings in the Wherry neighborhood were two-stories and housed five and six families. The buildings exhibited elements of the International Style associated with architects Neutra and Alexander. Such elements included the overall streamlined design and the flat roofs with project overhangs. The Wherry housing built at Mountain Home AFB was renovated extensively and was demolished by December 2005; only three buildings of the former Wherry neighborhood managed by the Sagebrush Hotel were standing as of December 2005.

Mountain Home AFB had two projects constructed under the Capehart program. In 1959, a 270-unit project designed by Hummel, Hummel, & Jones of Boise, Idaho, and R.J. Neutra & R.E. Alexander of Los Angeles, California was completed. The 270-unit project comprised two physically separated parcels. The airmen's neighborhood contained 81 buildings with 162 units (no longer standing), while the officer neighborhood contained 56 buildings with 108 units. The original drawings indicated that airmen and officer housing were designed according to Air Force housing specifications. In contrast, the architects for the distinctly-different three senior officer houses located in the middle of the officer neighborhood were identified on the drawings as the noted architectural firm Neutra and Alexander (Mountain Home AFB drawings files). These three buildings exhibited many elements of the International Style.

In 1962, a second 300-unit project was constructed at Mountain Home AFB. This project was designed by Hummel, Hummel & Jones of Boise, Idaho (Mountain Home AFB drawings files). This neighborhood contained 86 buildings with 172 units constructed for airmen and 65 buildings containing 65 units for officers.

#### 7.6.1.2 Significance within program

The three senior officer quarters constructed in 1959 in the Old Capehart neighborhood are associated with the designs of the nationally known architectural firm Neutra and Alexander and exemplify the application of the International Style to military housing. Neutra and Alexander was a prominent architectural firm, and both principals were noted designers. The association of the three senior officer quarters with the prominent architectural firm and their expression of International Style make these three buildings unusual when compared to the surrounding Capehart neighborhoods at the installation and nationwide. Documented examples of the work of Neutra and Alexander for the U.S. military include both Wherry and Capehart projects at Mountain Home AFB, Idaho; housing at Naval Air Station Lemoore, California; and appropriated-funds housing at Yuma Proving Ground, Arizona.

#### 7.6.1.3 Integrity

The three senior officer quarters constructed in 1959 exhibit the highest degree of integrity of location, design, setting, materials, and workmanship in the neighborhood.

### **7.6.2 Catalina Heights**

#### 7.6.2.1 Summary Description

Completed in 1958, the Catalina Heights neighborhood was an Air Force project that supplied family housing to nearby Oxnard AFB. The housing area is located off-installation, approximately five miles from the base. In its current use as a Navy family housing area, Catalina Heights is approximately twelve miles from NBVC. The Capehart project provided single-family, duplex, and multi-family units for enlisted men, non-commissioned officers, and officers. The neighborhood was designed by the architectural firm of Porter, Urquhart, McCreary & O'Brien in partnership with Victor J. Spotts. Seventy-two buildings containing 315 units were constructed. In general, the neighborhood lacked formal landscaping; sidewalks lined one side of the street. Housing Area 27 embodies the typical characteristics of Wherry and Capehart era design and methods of construction as applied between 1949 and 1962. The housing area exhibits civilian suburban design ideals applied to a military context and retains its integrity from its original period of construction.

The buildings constructed in Catalina Heights consist of stucco-covered concrete-masonry-unit construction accented with vertical-board trim. The buildings are supported by concrete slab foundations. The one- and two-story buildings have shallow-pitched gable roofs. Windows are horizontal-sliding aluminum sash units. Original designs for Catalina Heights included attached carports for officers and non-commissioned officers. Detached, concrete-masonry-unit walls were constructed on the front of some units creating a small patio area. Retractable clotheslines were attached to privacy walls.

The interiors of the units are similar in design and finish to other Capehart housing units. The primary doorways open onto small entry areas. Additional entrances are located off the kitchens to

provide access to the patio area, and in the living rooms to provide access to the backyards. The kitchens are located at the front of the units, with living and dining rooms looking out on the backyards. The two-story units contain a half bath on the first floor with a full bath on the upper level. The second stories contain the bedrooms. The single-story units, both single-family and duplex were reserved for officer housing. The interiors of the one-story buildings are similar to the other Capehart housing units with an entry hall, front-facing kitchen, and living and dining rooms overlooking the back yards. Narrow halls lead to the bedrooms. Each unit contains two bathrooms, one of which is attached to the master bedroom.

#### 7.6.2.2 Significance within program

Catalina Heights displays the distinctive characteristics of neighborhoods constructed under the Capehart program. The community is designed around a curvilinear street pattern with uniform setbacks of the buildings. Building types include both one- and two-story; single-family, duplex, and multi-family; and, enlisted and officer housing. The use of concrete block with wood accents is indicative of the cost-efficiency and speed of construction typical during the Capehart program. Catalina Heights Capehart housing incorporated screened service yards with retractable clotheslines, fenced rear yards, and carports for non-commissioned and commissioned officers. This community also included a small retail, or “convenience” store in its original plan; a feature not common in Capehart neighborhoods.

#### 7.6.2.3 Integrity

Catalina Heights exhibits among the highest levels of integrity of the Capehart era housing still in active use by either the Navy or the Air Force. Some roofing material and trim have been replaced, but many buildings retained original windows, flooring, kitchen cabinets, hardwood floors, and bathroom tile wainscots. The neighborhood also retains its retail store and master TV antenna system. The neighborhood retains integrity of design, materials, workmanship, location, setting, feeling, and association in both its individual buildings and as a significant concentration of resources united historically by plan and physical development.

### **7.7 SUMMARY**

Wherry and Capehart era military housing represents a nationwide construction campaign that reflected significant changes in the peacetime military. Recommendations for properties of particular importance to the Air Force and Navy historic context for Wherry and Capehart era military housing were identified from the active military housing inventory that possessed both important historical associations and resource integrity from the period. The properties of particular important are summarized in Appendices F and G.

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## 9.0 ACKNOWLEDGEMENTS

Many people assisted in this study. Ms. Julia Cantrell, Project Manager, HQ AFCEE/ISM; Dr. James Wilde, Cultural Resources Program Manager, HQ AFCEE; Major Monte S. Harner, Environmental Program Manager, HQ USAF/A7CVQ; Mr. Brian Lusher, Architectural Conservator, NAVFACENGCOM; and Mr. Anthony Greene, Natural Resources Program Analyst with the United States Marine Corps provided valuable insight and project management, and facilitated the selection of installations for case studies. We gratefully acknowledge the assistance of James Watkins of the U.S. Army Medical Research Acquisition Activity, Fort Detrick, Maryland. We thank the U.S. Army Environmental Center, Aberdeen Proving Ground, Maryland, for permission to apply research developed for the 2003 study *Housing an Army: The Wherry and Capehart Era Solutions to the Postwar Family Housing Shortage (1949-1962)* in the current study.

We are appreciative of the time and assistance provided by various staff members at Air Force, Navy, and Marine Corps installations. We particularly would like thank the following people: Dorita A. P. Flemister, Peter Faulk, and Howard Stephen at the Military Family Housing Office and Albert Mansi, Marlene Bradshaw, P.E., Thomas D. Carr, P.E., Diane Bentley, and Joseph Contreras in the Department of Public Works at NBVC, California; Rodger Aitken, Facility Planning Officer; Diane Baum, Housing Director; Kay Rose, Community Manager; and Mike Cusack, Engineering Tech. at NSA Mid-South Memphis, Tennessee; Sonja Hopkins, Director, Housing Office, Donna Brown, Area Housing Manager, William Rogers, Natural Resources Manager, Robert Lawrence, Chief Design Engineer, Phil Fisher, Chief, Civil Division, David Kinsell, Civil Division, and Audrey Stokes, GIS Technician at MCAS, Cherry Point; Carol Villa, Executive Housekeeper, Sagebrush Hotel; Sheri Bowden, Base Archeologist, Cultural Resources Manager; Pat Larrabee, Real Property; Michael Poulin, Drafting Section, Civil Engineer Squadron; and Mary Dunn, Housing Office at Mountain Home Air Force Base, Idaho; and, Robert Holmes, Natural Resources/Cultural Resources Manager, Bob Vunesky, Privatization Project Manager, Mark DuPree, Housing Manager, Mike McComas, NCOIC, Joe Merkling, Construction Inspector, Alice Wilder, Real Property Chief, and Chris Griffin, Realty Specialist, at Travis Air Force Base, California. We are grateful for their cooperation and help in arranging site access.

We are especially grateful to Gina Nichols, Archivist, Naval Facilities Engineering Command Historical Program, Port Hueneme, California, who opened her archives for our researchers and answered many of our questions. Ben Mieke of SO Environmental Services, North Charleston, South Carolina, provided housing studies conducted in the Naval Engineering Field Division South. We also thank the Thompson family for supplying images of Wherry housing at Westover Air Force Base, Massachusetts.

A variety of repositories were visited during the course of research. We would like to thank the staffs at the Library of Congress and the University of Maryland. After extensive searching, Ashley Ecklund, librarian with the Government Documents & Maps Department of McKeldin Library at University of Maryland, located a 1956 edition of the Air Force *General Design Criteria for Construction of Family Housing*, and provided leads for locating other editions of this publication. We particularly would like to thank the archivists at the National Archives and Records Administration, College Park, Maryland, for their assistance in locating files, reports, and unpublished documents related to the Air Force and Navy's Wherry, Capehart, and appropriated-funds family housing programs.

Several individuals facilitated contact with former residents of Wherry and Capehart housing for the oral history interviews by agreeing to circulate or post notices. These individuals include

Sheila R. Abarr, public affairs specialist with the Armed Forces Retirement Home in Washington, D.C.; officials with the Army & Air Force Exchange Service; and managers of Air Force and Navy exchanges in the Washington, D.C. vicinity.

Kathryn M. Kuranda, M. Arch. Hist., was the Principal Investigator and oversaw all aspects of this project. Kirsten Peeler, M.S., served as Project Manager and compiled and synthesized the report. Ms. Peeler, Christine Heidenrich, M.A., and Dean Doerrfeld, M.A. conducted archival research. Ms. Heidenrich wrote sections of the report and oversaw the oral history interviews. Mr. Doerrfeld and Katherine Grandine, M.A. undertook the site investigations and wrote the case studies in Appendix A. Ms. Grandine provided insight into the history of Air Force and Navy housing. Mr. Barry Warthen prepared the graphics. Ms. Sharon Little produced the report.

The work is supported by the U.S. Army Medical Research and Materiel Command under Agreement No. W81XWH-05-2-0050. The views, opinions, and/or findings contained in this report are those of the author(s) and should not be construed as an official Department of the Army position, policy, or decision unless so designated by other documentation.



**APPENDIX A**

**SITE VISITS/CASE STUDIES**



## Methodology

Appendix A presents the summary results of information gathered during site visits to five Air Force and Navy installations. The extensive inventory of Air Force and Navy Wherry and Capehart era family housing stock represented an opportunity to study a broad range of building types and styles. Initial data on Air Force and Navy housing was obtained through the 2005 Air Force Real Property Inventory (RPI) database and the Navy and Marine Corps 2005 Internet Navy Facility Assets Data Store Management System (iNFADS) database. The databases indicated that single-family buildings, duplexes, and multi-family buildings were in the housing inventories. A total of 19,965 buildings are in the Air Force inventory, 5,976 buildings are in the Navy family housing inventory, and 2,665 buildings are in the Marine Corps inventory. An analysis of the Air Force and Navy databases was instrumental in selecting the bases for site surveys.

Site visits were conducted to augment archival data as well as to identify properties of particular importance. The Air Force and Navy real property databases, preliminary archival research, and questionnaire responses from the Air Force were used to select the case studies. The number of potential candidates for site visits was dramatically limited due to the ongoing housing privatization initiative. Installations with housing stock already privatized or privatizing during the course of this investigation were excluded from consideration. Housing that already was privatized is not subject to the Program Comment negotiated among the Air Force, the Navy, the Advisory Council on Historic Preservation, the National Trust for Historic Preservation, and the National Conference of State Historic Preservation Officers. The selection for site visits was based on the following criteria:

- Ability to represent geographic diversity;
- Ability to represent the greatest number of units;
- Ability to represent the spectrum of building programs (Wherry, Capehart, and appropriated funds housing)
- Ability to demonstrate post-World War II planning principles and suburbanization themes; and,
- Ability to represent changes over time.

The following installations were visited:

- Naval Base Ventura County, California,
- Naval Support Activity Mid-South Memphis, Tennessee,
- Marine Air Corps Station, Cherry Point, North Carolina,
- Mountain Home Air Force Base, Idaho, and
- Travis Air Force Base, California

Data gathered during the site visits are presented in this Appendix. The site visits provided an opportunity to examine a representative sample of the total number of Wherry, Capehart, and appropriated-funds housing constructed by the Air Force and the Navy and to confirm information uncovered during archival research. Data obtained during the site visits included available original drawings and plans, and the number of buildings and units constructed at each of the five installations. Challenges encountered included a lack of complete sets of drawings for some installations, unfamiliarity of installation staff with the various housing programs, limited availability of unoccupied units, and the degree of demolition and alteration of buildings.

Architectural analysis was based on on-site inspection of data obtained during the site visits, examination of surviving original drawings, and archival research. Building types examined

included, one- and two-story dwellings; one-, two-, three-, and four-bedroom units; and single-family, duplex, and multi-family buildings. Neighborhood plans and amenities were documented, as well as the relationship between the Wherry and Capehart era neighborhoods and the surrounding installation. The data was analyzed using a matrix summarizing significance. This analysis identified two concentrations of Wherry and Capehart era family housing of particular importance: the Capehart senior officer housing at Mountain Home Air Force Base, Idaho, designed by Neutra & Alexander in 1958, and the Catalina Heights neighborhood at Naval Base Ventura County, California, completed in 1958. The matrix was refined to include the seven aspects of integrity as defined in National Register Bulletin 15, *How to Apply the National Register Criteria for Evaluation*. Specifics on Properties of Particular Importance can be found in Appendices F and G.

## **Summary of Findings**

A result of the site visits was to verify archival data presented in the Congressional record, the records of the Navy and the Air Force, and contemporary published government and private-sector reports on Wherry and Capehart family housing. Buildings constructed under the three construction programs generally exhibited modest interior and exterior ornamentation. Flat roofs or shallow-sloped gable roofs were common. Some buildings had projecting eaves. Wood-frame construction with wood siding and masonry were common building materials. A variety of window types were used, including horizontal sliding and casement sash. Interior materials ranged from plaster over lath and drywall, to mahogany paneling and asphalt sheet flooring. Buildings were one and two stories. Generally, two-story buildings were found in the multi-family Wherry buildings. Entrances were recessed, with orientation dependent on how the building was sited on the street.

Interior features were similar in Air Force and Navy Wherry and Capehart era family housing. Differences among buildings were based on whether the buildings were constructed in the Wherry or Capehart program and whether they were built for officers or enlisted personnel. Differences did not depend on whether the buildings were built for the Navy or the Air Force. House and neighborhood amenities were documented. Such amenities included interior and exterior storage, attached or detached carports or garages, kitchen disposals, and washing machines and dryers rather than just the hook-ups for them. Although some installations had documented landscape plans, the plans were never fully implemented or were dramatically altered beyond their original design. Archival data provided little information on the inclusion of neighborhood amenities such as playgrounds. Site visits, in many cases, were unable to verify if existing playgrounds, plantings, and other landscape were part of the original neighborhood design or if they were added later.

## **Case Study A.1: Naval Base Ventura County, California**

Naval Base Ventura County (NBVC) is located in Ventura County, California and is composed of two primary facilities: Naval Air Station (NAS) Point Mugu and Construction Battalion Center (CBC) Port Hueneme. The facilities are located about 55 miles northwest of Los Angeles along the central California coast. The two facilities encompass approximately 6,100 acres (Global Security 2005). The land lies within the California coastal plain and is generally flat with minor tidal lagoons. The surrounding areas are agricultural with year-round production of produce such as tomatoes, lemons, peppers, and artichokes. Ornamental flower cultivation, for both cut flowers and flower seeds, is also an important agricultural activity.

In October 2000, NAS Point Mugu and CBC Port Hueneme were consolidated into a new organization established as NBVC (NBVC 2005a). NBVC supports the Pacific Fleet with a deep-water harbor, mobilization site, and airfields and is one of the major naval installations of the West Coast. As of 2005, NBVC supports more than 70 military commands with diverse missions. The 36,000-mile Sea Range off Point Mugu supports combat and weapons systems testing, while Port Hueneme serves as homeport to four Seabee battalions, “Underwater Construction Team TWO [sic]” of the Third Naval Construction Brigade, and Naval Construction Training Center (Seabee College) (NBVC 2005a).

### **Base History Summary**

In fall 1941, the Navy realized the need for an advance base depot along the West Coast of the United States. Advance base depots supplied materials and equipment to the expansive advance base construction program of World War II. Advance bases were composed of temporary facilities, often including airfields, to house troops from all three branches of the military in forward operating locations. Existing naval facilities in the San Francisco and San Diego areas were already reaching capacity and space leased at the Ninth Avenue Pier in Oakland left little room for expansion (Naval Air Weapons Station [NAWS], Point Mugu 1996:10). The recently completed deep-water port in Ventura County was recommended by the Commandant of the 11<sup>th</sup> Naval District to the Chief of the Bureau of Yards and Docks, Admiral Ben Moreell, as an acceptable location for an advance base depot.

This site proved ideal for a deep-water harbor. Located a few hundred feet from a submarine topographic feature known as Hueneme Canyon and sheltered on the west by the Channel Islands, the harbor afforded excellent navigation, minimal wave action, and protection from severe storms (NBVC 2005a). The earliest effort to capitalize on the location took place in 1871 when future U.S. Senator Thomas Bard constructed a wharf to import lumber and export produce (NAWS, Point Mugu 1996:11). During the late 1930s, Bard’s son Richard partnered with local businessmen and farmers to construct modern seaport facilities. In January 1939 dredging work began, and in July of 1940 the harbor was officially completed (NBVC 2005a).

Prior to World War II, the Navy relied on civilian contractors to construct permanent naval facilities and during 1940 and 1941, it extended that mission to include the use of civilian contractors to construct bases in the British Isles, Caribbean, and the Pacific (NAWS, Point Mugu 1996:8). Lack of military training and the need to construct advance facilities in combat zones led Chief Moreell to recommend that the Navy create specialized battalions to facilitate naval construction worldwide and in any environment. In January 1942, the Bureau of Navigation established the Naval Construction Battalions, and in March of that year, Chief Moreell suggested that the Construction Battalions be officially designated “Seabees”

(NAWS, Point Mugu 1996:8). Chief Moreell viewed the harbor as well-suited for both an advance base depot and as training and embarking point for the newly created Construction Battalions.

Acquisition of the port from the Port Hueneme Harbor District began during February 1942. In March, Chief Moreell instructed the 11<sup>th</sup> Naval District to purchase an additional 1,273 acres of adjacent, privately owned land (NAWS, Point Mugu 1996:11). The Advance Base Depot (ABD) at Port Hueneme officially was established in May 1942 as a temporary depot serving the Pacific theater (Naval Construction Battalion Center 2002:3). During World War II, 20 million tons of supplies and over 200,000 men were staged and transported from Port Hueneme. The amount of construction supplies and equipment shipped from Port Hueneme was more than any other port in the United States (NBVC 2005a). The depot included 719,000 square feet in 35 warehouses and an additional 19 million square feet of open storage. Nine Liberty ships could be loaded simultaneously, and two LST loading ramps complemented the capacity of the facility (NAWS, Point Mugu 1996:11).

Point Mugu developed as an auxiliary camp to Port Hueneme. In March 1943, the 11<sup>th</sup> Naval District began negotiations to lease more than 4,000 acres of land about eight miles south of the advance base depot. The site that would become Point Mugu was marshy, low-lying land used as a fishing camp and resort (NAWS, Point Mugu 1996:14). Although the land seemed ill-suited for a military reservation, the conditions were similar to those encountered in the Pacific island campaigns and perfectly suited for the newly created Acorn Training Detachment (ATD). The ATD was established in February 1943 as a training command at Port Hueneme (NAWS, Point Mugu 1996:13). The Acorn Unit was composed of several elements, including fleet personnel to operate an advance air base, a Seabee battalion for construction, and a Construction Battalion Maintenance Unit to maintain the facility when completed. Other units trained under the ATD included Combat Aircraft Service Units, and units that provided harbor patrol and defenses for the Acorn and other advance units called GroPacs. All elements of the Acorn Unit received amphibious training as well as specialized training in communications, heavy equipment operation, and base layout (NAWS, Point Mugu 1996:14).

In August 1943, Acorn Seven began reclaiming the marshy land of Point Mugu. The construction of the facility provided the practical experience that the Acorn and Seabee units would encounter in the Pacific theater. Activities at Point Mugu included the construction of warehouses, temporary airfields, classrooms, gunnery training stations, quarters, bridges, and other infrastructure (NAWS, Point Mugu 1996:27-28). By 1944, Point Mugu included ammunition bunkers, small arms magazines, and a permanent advance base airfield.

The Port Hueneme and Point Mugu facilities operated under the command of the 11<sup>th</sup> Naval District, Naval Operating Base, Terminal Island when created in 1942. This command structure served during the initial construction and staffing of the ABD, but by late 1943 Port Hueneme employed 6,000 civilian personnel and was assigned 13,000 Navy personnel, with an additional 10,000 to 12,000 more people expected (NAWS, Point Mugu 1996:28). The size of the facility prompted the Bureau of Personnel to request that the Commandant of the 11<sup>th</sup> Naval District reorganize Port Hueneme. In early 1944, the Chief of Naval Operations established U.S. Naval Base, Port Hueneme.

The end of World War II brought mission changes to the naval base. Many of the ATD activities at Point Mugu were disestablished, and in 1945 the name Naval Construction Battalion Center (CBC) replaced the ABD (NBVC 2005a). While Port Hueneme continued to command Point Mugu, the Bureau of Aeronautics requested the airfield for special testing of pilotless aircraft. The location had many advantages, including the runway and the ability to test-fire missiles at an over-water range. By late 1945, the Bureau of Aeronautics requested that the test program be removed from the ATD command structure and created the Naval Air Facility Point Mugu (Newland and Wormer 1996:54-55).

Congressional appropriations in 1947 funded a permanent Navy presence at Point Mugu as a missile test facility (Global Security 2005).

Port Hueneme continued to serve the Seabees during the post-World War II period. During the Korean and Vietnam conflicts, the CBC supported the movement of virtually all construction equipment and supplies to southeast Asia (Global Security 2005). A continuing process of improvement led to the replacement of wooden piers with concrete and the construction of new housing and support facilities. In peacetime, Port Hueneme supported the training and readiness programs of the Seabees.

The end of the Cold War Era brought additional changes to Port Hueneme and Point Mugu. Regionalization began with another command reorganization and the assignment of both facilities to Commander in Chief, U.S. Pacific Fleet in 1998. Also that year, base operating support services, such as public works and housing, were consolidated with CBC named providers for Point Mugu and Port Hueneme. In October 2000, Naval Air Station Point Mugu and Construction Battalion Center Port Hueneme were merged into NBVC. Point Mugu continues as a combat and weapons systems test center and supports the E2-C “Hawkeye” squadrons of the Airborne Early Warning Wing of the U.S. Pacific Fleet. Port Hueneme continues to provide “integral supplies, equipment, camps and roads, to support not only the Seabees, but the Army, Air Force and Marines,” a service it has provided for 59 years (NBVC 2005a).

### **Wherry Housing at Point Mugu and Port Hueneme**

A single Wherry complex served both Port Hueneme and Point Mugu. Constructed in 1954 by Oxnard Homes, Inc., Bruns Park contained 68 buildings originally incorporating 326 family housing units (NAVFAC 1956). The allocation of units called for 203 units of family housing for Point Mugu with the balance (123 units) reserved for Port Hueneme personnel (Korink 1956b). As constructed originally, Bruns Park comprised single-family, six-plex units, eight-plex units, and a single ten-unit building (Figure A.1.1). The single-family units served senior officers, while the multi-family units housed junior officers, warrant officers, and enlisted personnel. The allocation between the two facilities was for 59 officers and 65 enlisted quarters for Port Hueneme, and 100 officer and 103 enlisted quarters for Point Mugu (Peltier 1956). This total exceeded by one the 326 units originally available at Port Hueneme, but is the figure quoted by Captain Peltier. One additional building, Building 900, originally served as the housing office, but was later converted into a housing unit. A breakdown of Wherry neighborhoods at NVBC is provided at the end of this chapter.

The detached single-family homes reserved for officers each contained three bedrooms (Figure A.1.2). The multi-family units were constructed in two basic forms. The first appeared as rectangular blocks containing eight units (Figure A.1.3). Each floor of the building had a two-bedroom unit at each end and two one-bedroom units in the center of the building. First-floor units had exterior doors, while the upper-level apartments were accessed from a shared stairwell. All units had a living and dining area. The second basic form was an irregularly massed, Z-shaped building with a two-story central portion and attached one-story wings (Figure A.1.4). These buildings contained either six or ten units. In the six-unit configuration, the two-story portion of the building had four two-story units with a living and dining area on the first floor, and two bedrooms and a bath on the second. The one-story wings were three-bedroom units. The ten-unit configuration had both two-level two-bedroom units, and single-level one-bedroom units in the two-story section. The ten-unit buildings also had one-story wings that contained either two- or three-bedroom dwelling units. While one-, two-, and three-bedroom units were constructed at Port Hueneme, the majority of the Wherry housing contained only two bedrooms when constructed (Public Works Department, Port Hueneme).

Bruns Park occupied a rectangular parcel of land on the south side of 32<sup>nd</sup> Avenue. The neighborhood was constructed with a curvilinear street network accented with landscaped median areas. Public sidewalks paralleled both sides of the streets, and paved walks connected the public areas with the entries to each unit (Figure A.1.5). Carports or garages were incorporated into the original design. Large carports sheltering six, eight, or ten automobiles were located near the multi-family units (Figure A.1.6). Attached garages were placed between each pair of single-family homes.

The Wherry family housing units were acquired in 1961 as a requirement of the construction of 360 Capehart units at Point Mugu. Original plans for the Wherry housing at Port Hueneme do not survive, but renovations to the units undertaken in the early 1960s indicate the original plans (Public Works Department, Port Hueneme).

Renovations undertaken during 1961 and 1962 radically modified the Wherry housing. The two-story rectangular blocks were converted from eight-unit buildings to six-unit buildings. The exterior apartments were either extended to the rear on each level with a third bedroom and expanded dining area, or to both the front and rear with a dining room in back and an additional bedroom in front (Figure A.1.7). Reconfiguration of the kitchen provided more storage space, and original closets were modified to include hook-ups for clothes washers and dryers. The four central units were combined and reconfigured into two three-bedroom apartments. These newly designed units were considerably larger, and contained a living room, dining room, kitchen, and half bath on the first floor with three bedrooms and a full bath on the second floor. These modifications also allowed for the installation of additional storage closets and washer/dryer hook-ups. The Z-shaped six-plexes were converted into five-plexes. The four, two-story interior apartments were reconfigured into three units with a two-bedroom unit in the center of the first floor flanked by two, two-story four-bedroom apartments (Figure A.1.8). The first floor of the two-story units contained a living room, dining room, and kitchen. New staircases were added and four bedrooms and a full bath occupied the upper level. Many of the one-story sections of these buildings were enlarged with additions housing a third bedroom. Some of the eight-unit buildings retained the original number of family apartments, and were enlarged with additions to the kitchen and dining rooms, increased storage closets, washer and dryer hook-ups, and new fixtures (Public Works Department, Port Hueneme). Most of the one-bedroom units were combined and remodeled into larger apartments. The extensive renovations of the Wherry housing at Port Hueneme reduced the total number of units to 284 (Department of the Navy 1962).

A second period of renovation occurred during the 1990s. While retaining the configuration, number of units, and bedroom arrangements established during the 1960s, the 1990s renovation completely reconstructed the buildings with the removal of all exterior sheathing, interior wall surfaces, cabinetry, appliances, and floor covering. The buildings were stripped to the studs and rebuilt with new materials (Stephen, personal communication 2005). The 2005 appearance of the buildings reflects this episode of renovation.

Surveyed during November 2005, the Wherry housing at Port Hueneme followed a similar pattern of design and ornamentation regardless of the number of units a building contained. Exterior wall surfaces were clad with an exterior insulation and finishing system (a popular brand of exterior insulation and finish system [EIFS] is Dryvit). Windows were either one-over-one light, double-hung, vinyl sash arranged as single units or in groups, or two-light, horizontal-sliding vinyl sash. The window type was consistent in a particular building. All doors were single-leaf synthetic replacements. The buildings were detailed with window surrounds of stucco-covered foam board, and a belt course of similar composition encircled the buildings at the first-floor sill level. Roof form was a shallow-pitched hip. The single-family homes retained the original built-up roof covering while the multi-family units had composition-shingle sheathing (Figure A.1.9). The roofs of the multi-family units had a steeper pitch, and reflected the modifications that occurred during the 1990s. The multi-family units had a projecting bay to shelter the



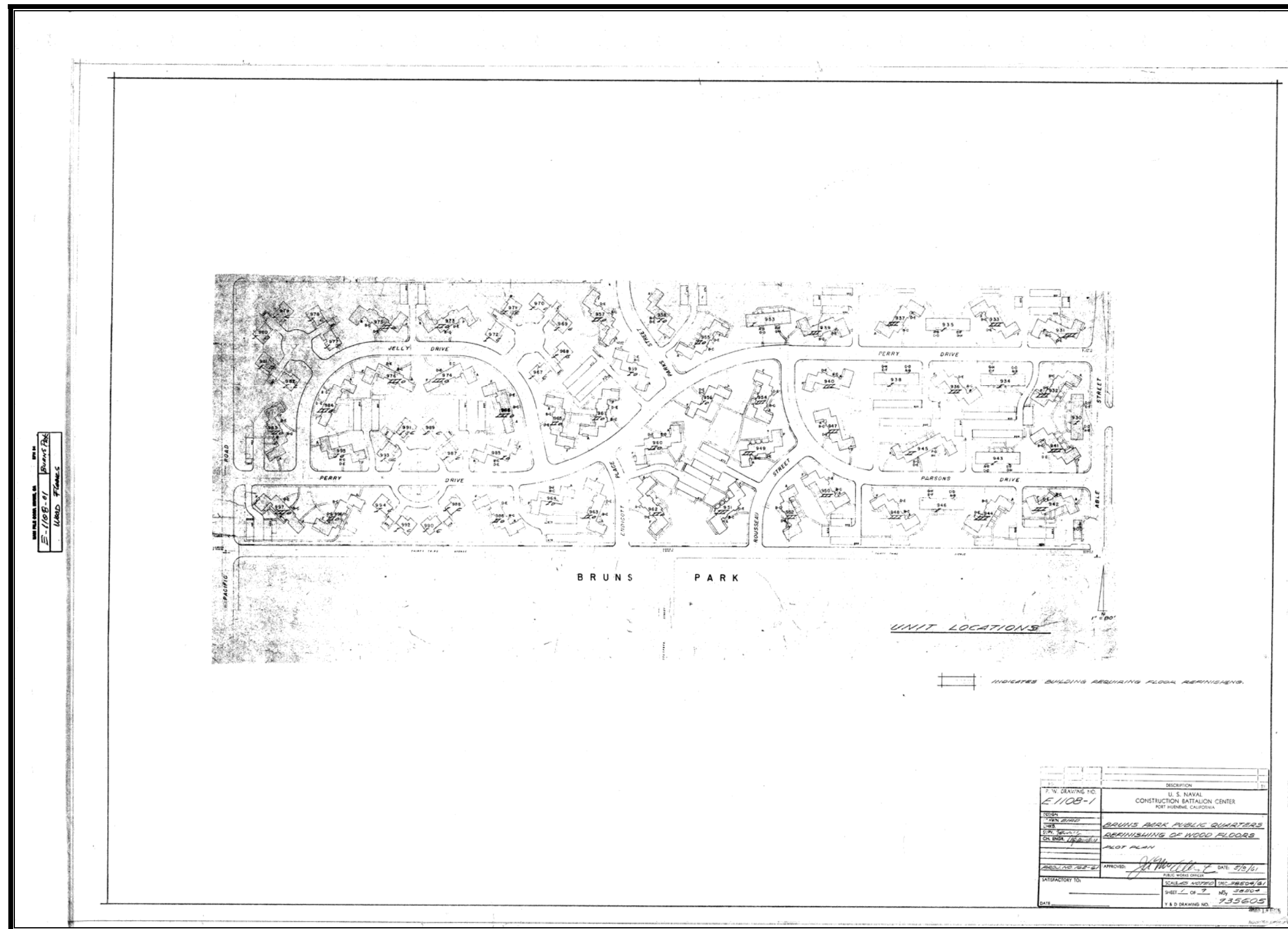


Figure A.1.1. Site Plan of Bruns Park (Wherry housing), NBVC, California. (Courtesy of Public Works Department, Port Hueneme)



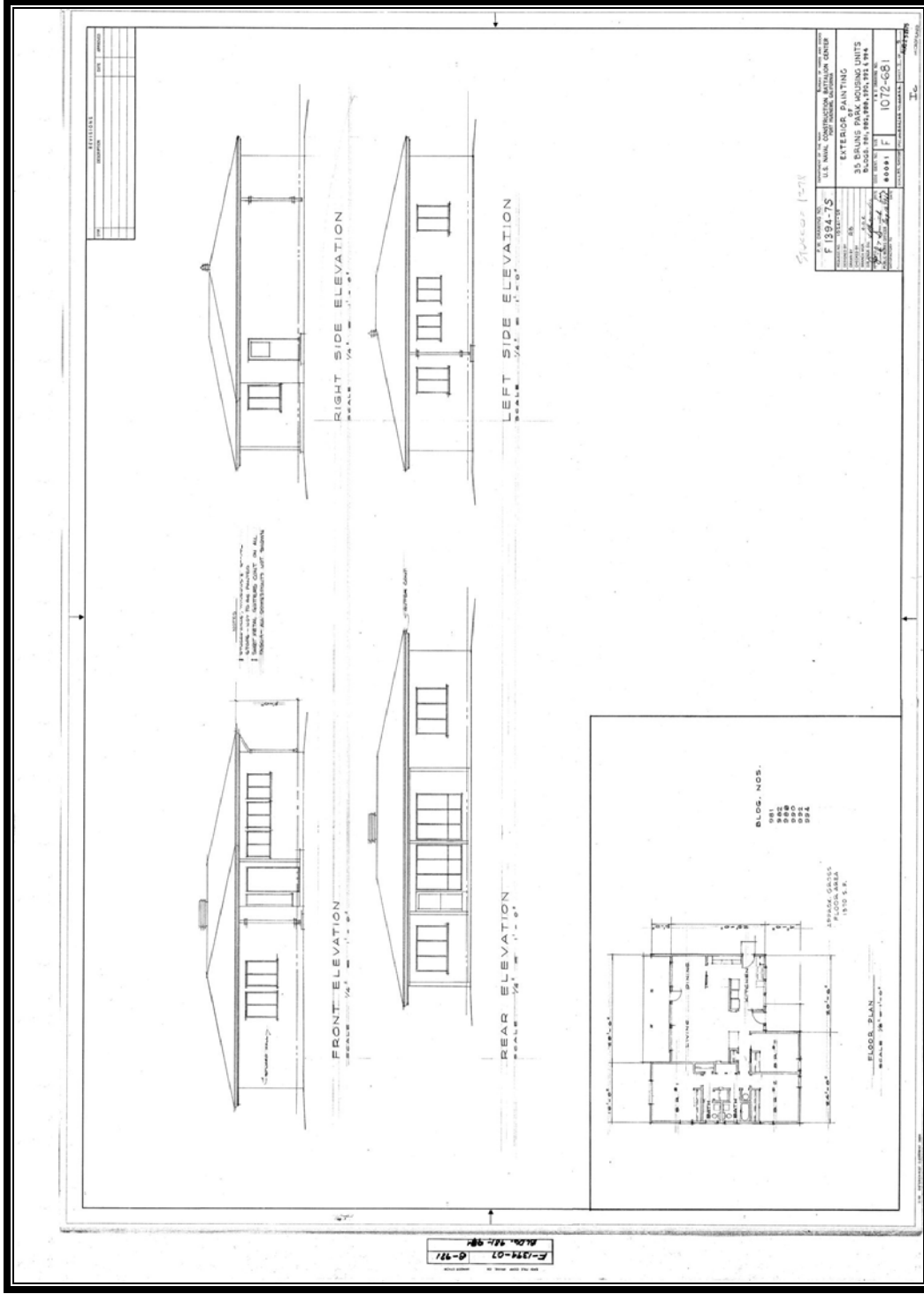


Figure A.1.2. Floor plan and elevations of single-family Wherry housing unit, NBVC, California. (Courtesy of Public Works Department, Port Hueneme)

entries (Figure A.1.10). The bay was sheathed in an exterior insulation and finish system. Cased openings provided access to the doorways on the first level. Garages had pyramidal roofs, and carports terminated in a hip roof.

The interiors of all the Wherry housing at Port Hueneme contained modern materials installed during the 1990s renovations. Drywall covered all interior surfaces, and floors were covered with carpeting in the bedrooms and the living room. The floors of the kitchen, bath and dining area were covered in vinyl tile (Figure A.1.11). Interior detailing was minimal with simple moldings around the doors and windows. A narrow baseboard trimmed the lower wall. Closets were provided in each of the bedrooms, a coat closet was located near the entry, and washer and dryer hook-ups shared a broom closet. Additional storage was provided during the 1990s renovation with the construction of free-standing, frame sheds in the rear yards. These sheds were covered with vertical-board siding.

Interior circulation was essentially the same for all units. Exterior doors opened directly into the living room. Minimal buffering of public and private space was provided by the projecting entry bay of the multi-family units, or the porch of the single-family apartments. The dining areas were located near the rear of the apartment, and rear doors opened into a yard enclosed by a board fence. The kitchen was also located near the rear of the unit adjacent to the dining area. In bi-level units, stairs led to an upstairs hallway that accessed the bedrooms and bath. A linen closet opened off the hallway. In single-level units, access to the bedrooms was off the living room. A square hall accessed the bath and bedrooms in a two-bedroom unit, and a narrow hall paralleled the living room in three-bedroom apartments.

Bruns Park is constructed around a curvilinear street pattern. Entry to the neighborhood from the west was off Pacific Road onto Perry Drive. Jelley Drive formed a semi-circular loop north of Perry Drive. A circular median was located about 350 feet along Perry Drive from the entrance. The median was landscaped with shrubs and concrete walks (Figure A.1.12). The north half of the median was ornamented with a recently installed bench and commemorative bronze plaque. The south half contained a cluster of modern mailboxes. Single-family officer housing was clustered in the western portion of the neighborhood. Eight units were located around the median of Perry Drive. Two unnamed cul-de-sacs opened off Jelley Drive and contained six units each. A second major street, Parsons Drive, intersected Perry Drive about midway into the neighborhood. Both major streets were broad, allowing on-street parking along both curbs. The density of the neighborhood was higher in the eastern third with all the eight- and ten-unit buildings lying east of the Parsons/Perry intersection. Eastern access to the neighborhood was provided by intersections with Ardor Street. Landscaping of individual units consisted of foundation plantings and native tree species. Archival research did not locate a master landscaping plan for Bruns Park. Small playgrounds or tot lots occupied some of the open spaces depicted on the 1961 plat of the neighborhood, and the location and spacing of trees did not imply a regimented planting scheme. Streetlights were widely spaced along neighborhood; however, archival research did not locate an original street lighting plan.

### **Capehart Housing at Point Mugu and Port Hueneme**

NBVC contained three phases of Capehart housing. In the first Capehart phase, 360 units were constructed at Point Mugu. Sixteen units were allocated for senior officers, junior officers were slated to occupy 45 units, and the remaining 299 units were designed for enlisted personnel (Public Works Department, Point Mugu). All 360 units were single-family with garages. These units were completed and ready for occupancy in 1959. A second Capehart project was split between Point Mugu and Port Hueneme. Under construction in 1962, this second phase called for an additional 52 units of

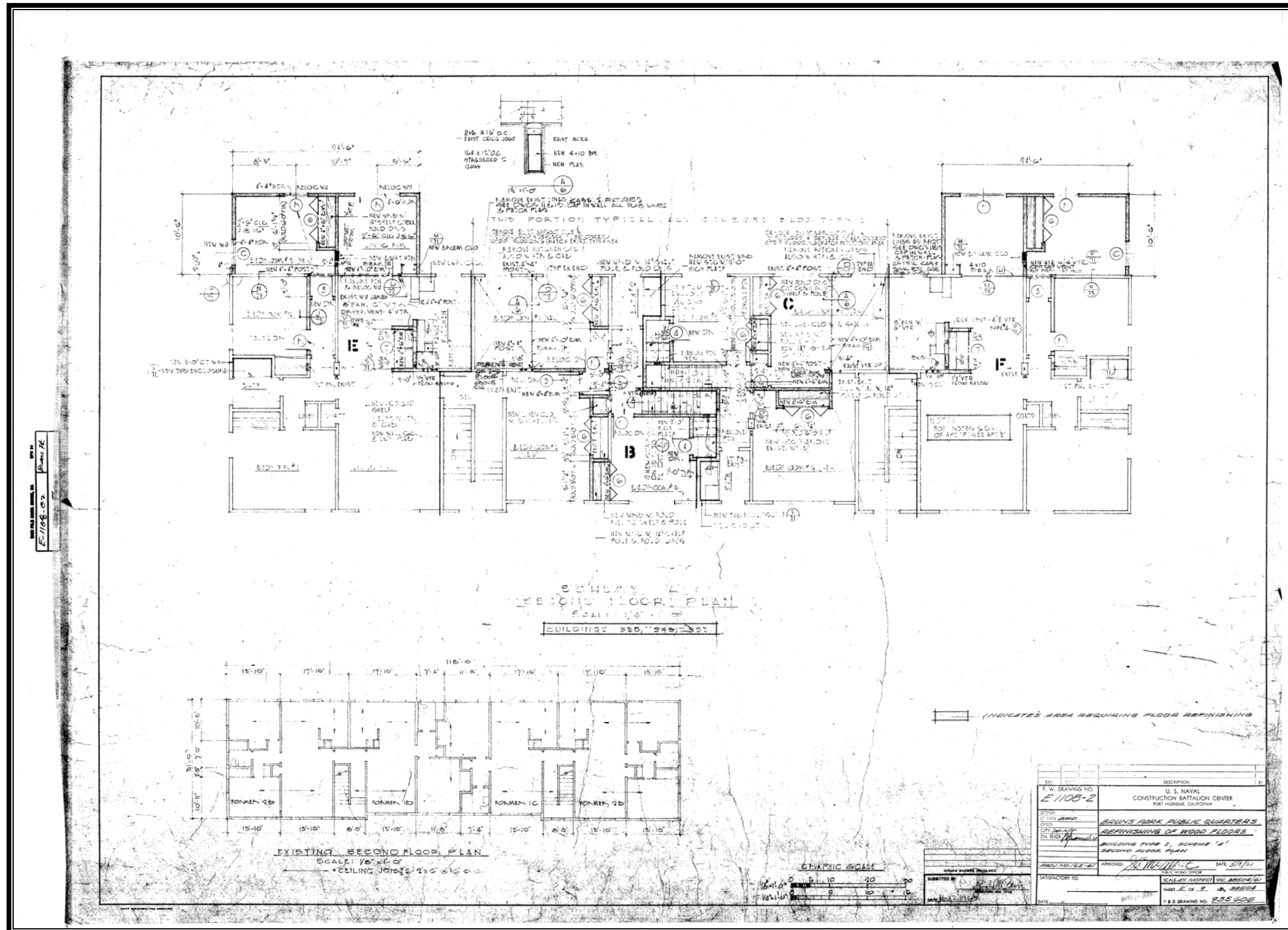


Figure A.1.3. Floor plan of eight-plex Wherry housing unit showing original configuration (lower left) and ca. 1965 conversion to a six-plex, NBVC, California. (Courtesy of Public Works Department, Port Hueneme)











Figure A.1.5. Perry Drive, Bruns Park (Wherry housing), NBVC, California, 2005. (Photo taken by RCG&A)



Figure A.1.6. Carport (Building 885), Bruns Park (Wherry housing), NBVC, California, 2005. (Photo taken by RCG&A)

1  
2  
3  
4  
5

6  
7  
8  
9

officer housing and 140 units of enlisted housing at Point Mugu, and eight units of senior officer housing at Port Hueneme (Department of the Navy 1962). The third phase was the construction of 350 units of Capehart housing west of Oxnard AFB. These units were completed in 1959 (NBVC 2005c). This was an Air Force project acquired by the Navy after the deactivation of the air base in 1969 (Ventura County 2006). The Capehart phases were originally called Capehart I, II, and III. After the consolidation of Point Mugu and Port Hueneme in 2001, the neighborhoods were given regional names. Capehart I, the first phase of 360 units, was given two names as it was almost evenly divided, both spatially and by rank. The section lying to the north of North Mugu Road and containing the enlisted housing was called “Santa Rosa.” The section between Main and North Mugu roads contained housing for officers and warrant officers, and was called “Santa Cruz.” The second phase of Capehart housing at Point Mugu was called “San Miguel.” The acquired Air Force housing was named “Catalina Heights.” The eight officer units at Port Hueneme were incorporated into the Bard Estates neighborhood (NBVC 2005b).

### **Santa Cruz and Santa Rosa Capehart Housing at Point Mugu**

The Santa Cruz and Santa Rosa Capehart housing at Point Mugu was designed by Hugh Gibbs, Architect of Long Beach, California (Federal Housing Administration 1957). Gibbs also was involved in the design of Capehart housing in the San Diego area and may have used similar plans at both installations (Chief of Naval Operations 1958). Construction was completed by Murray-Sanders Construction Company of Santa Anna, California (District Public Works Office 1957). The northern portion of the neighborhood, now known as Santa Rosa, contained 217 units of enlisted-personnel family housing (Figure A.1.13). Santa Cruz contained 61 units for officers and 82 units designed as enlisted-personnel family housing, but occupied by warrant officers (Public Works Department, Point Mugu; Stephen, personal communication 2005) (Figure A.1.14). A breakdown of Capehart neighborhoods at NBVC is provided at the end of this chapter.

Gibbs used 17 basic plans for the 360 Capehart units. Plans one and two were two-bedroom enlisted personnel units, and had two variations for the exterior detailing. These smallest units contained one full bath and one half bath. Plans three through seven also were designed as enlisted-personnel units, but were three-bedroom units and had three possible exterior treatments. Plan eight was the only four-bedroom unit available to enlisted personnel. Like the two-bedroom layouts, only two exterior treatments were available. Plans nine through seventeen were for officer housing. Lieutenants, lieutenants junior grade, and ensigns could expect housing with plans nine through twelve: plan twelve had four bedrooms, and nine through eleven only three. The four-bedroom plans thirteen and fourteen were reserved for commanders and lieutenant commanders. Plan fifteen housed captains and contained four bedrooms. Plans three through fifteen all had one full bath and a bath with shower off the largest bedroom. Plans sixteen and seventeen were dedicated to flag-grade officers. The plans were four bedrooms with one full bath and two baths with showers. In each of the plans designed for flag-grade officers, a bedroom and bath with shower was located adjacent to the kitchen and utility areas and likely served for domestic help. Only two exterior options existed for plans nine through fourteen, three exteriors for plan fifteen, and only a single option for plans sixteen and seventeen. In addition to the variety of floor plans and elevations, plans could be reversed, creating a mirror image of the room arrangement. This modification is shown on the plans by the letter “R” following the plan and elevation designation. The number of possible building configurations with Gibbs’ system is 71. This variety of design created a neighborhood that offered considerable interest and eliminated the monotony often seen in mass-produced housing (Public Works Department, Point Mugu). Table A.1.1 provides a breakdown of the housing types in the neighborhood.

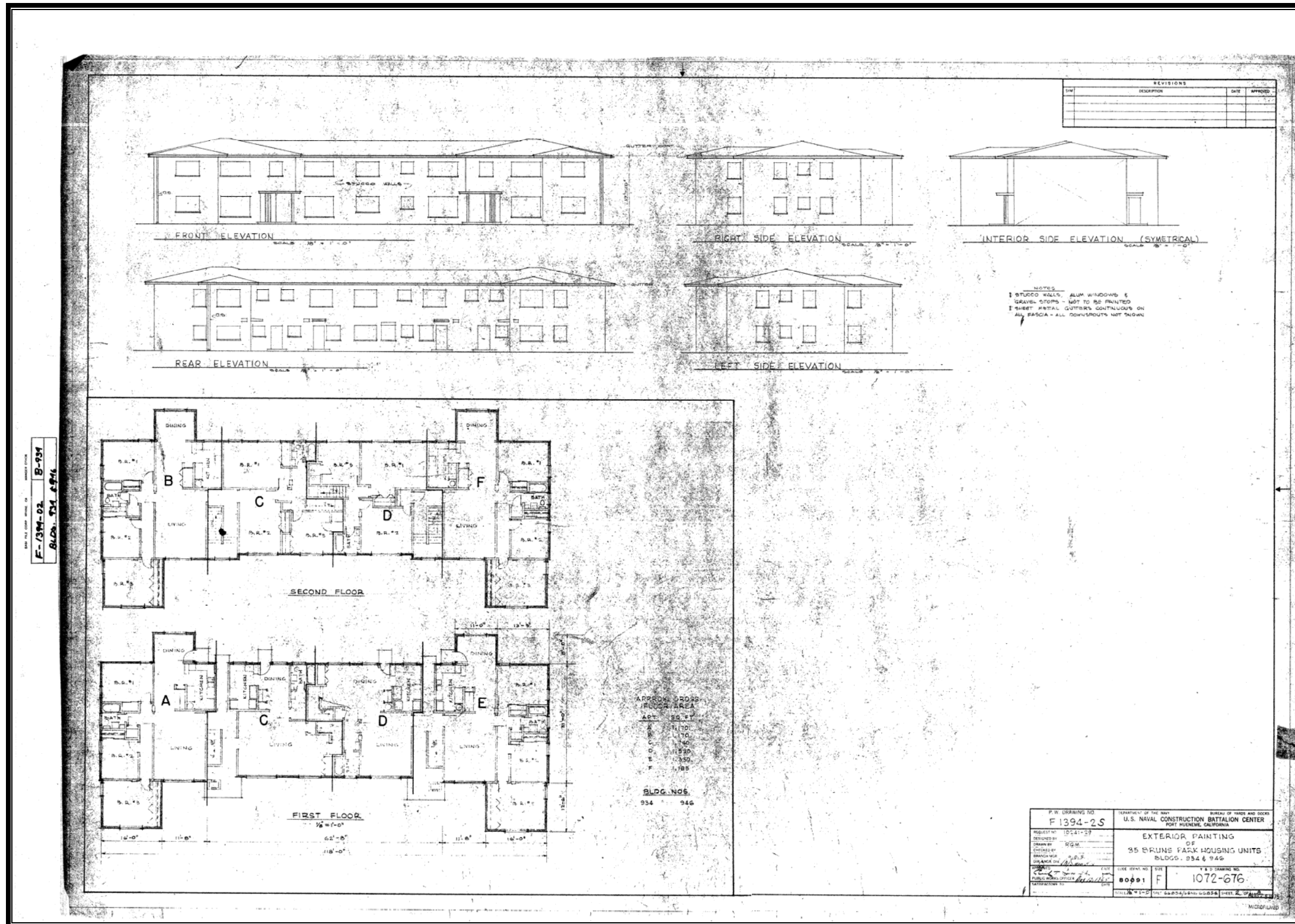


Figure A.1.7. Floor plans and elevations showing conversion of eight-unit Wherry housing to a six-plex, NBVC, California. (Courtesy of Public Works Department, Port Hueneme)



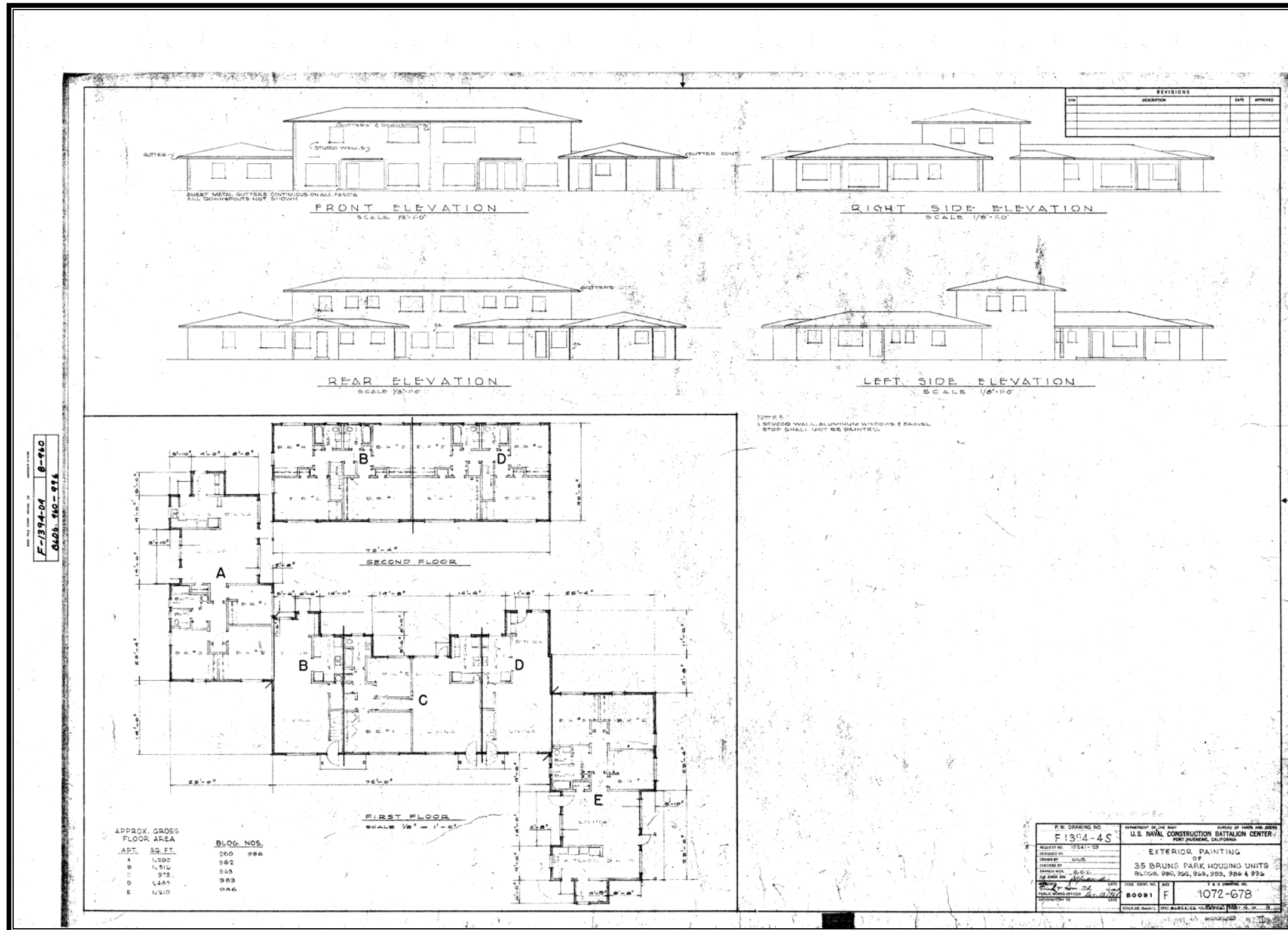


Figure A.1.8. Floor plan and elevations showing conversion of a six-unit Wherry housing to a five-plex, NBVC, California. (Courtesy of Public Works Department, Port Hueneme)







Figure A.1.9. Single-family unit (Building 977), Bruns Park (Wherry housing), NBVC, California, 2005. (Photo taken by RCG&A)



Figure A.1.10. Multi-family unit (Building 953), Bruns Park (Wherry housing), NBVC, California, 2005. (Photo taken by RCG&A)



Figure A.1.11. Interior of Building 975, Bruns Park (Wherry housing), NBVC, California, 2005. (Photo taken by RCG&A)



Figure A.1.12. Perry Drive, Bruns Park (Wherry housing), NBVC, California, 2005. (Photo taken by RCG&A)



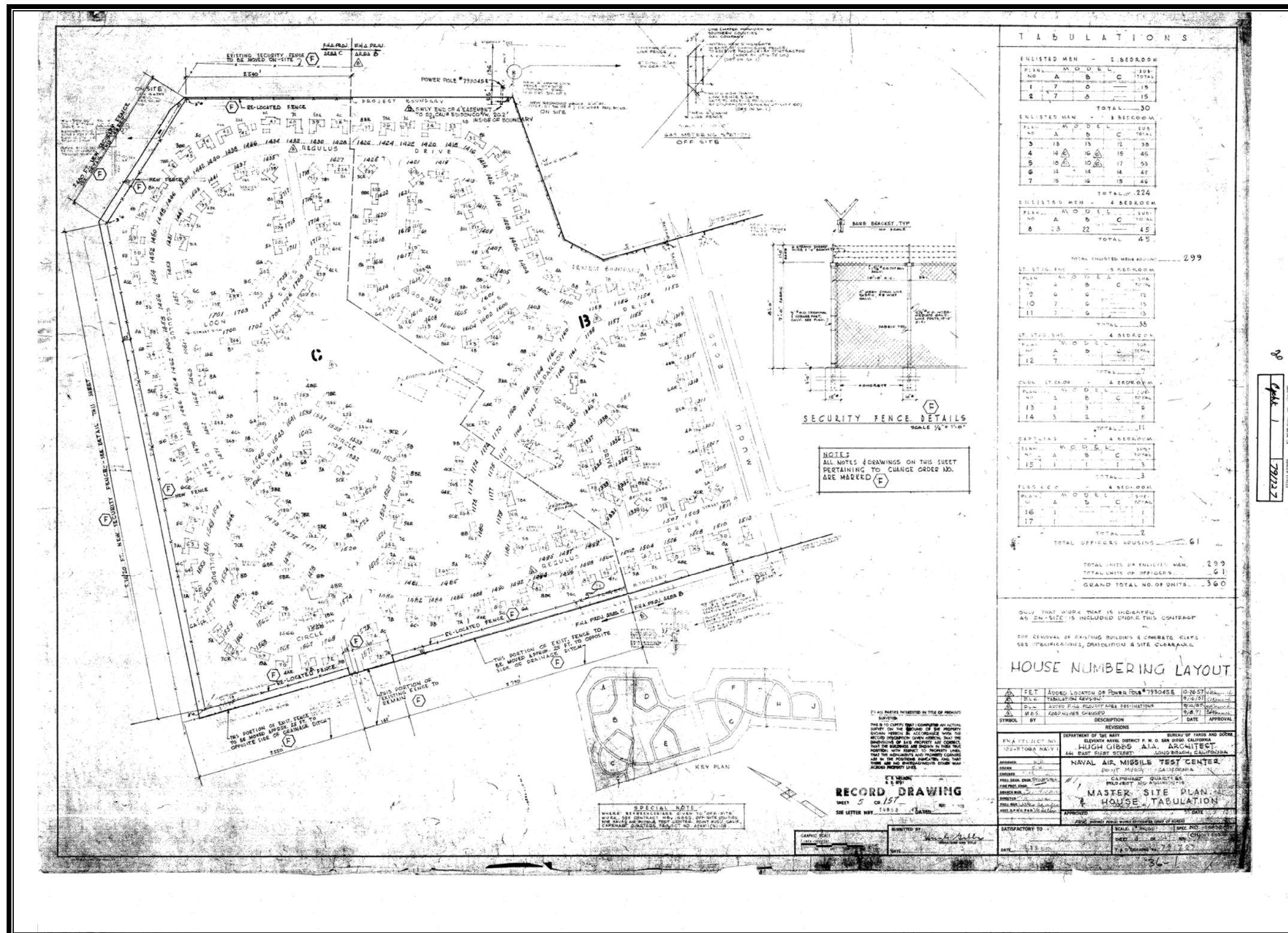


Figure A.1.13. Site Plan of Santa Rosa (Capehart housing), NBVC, California. (Courtesy of Public Works Department, Point Mugu)



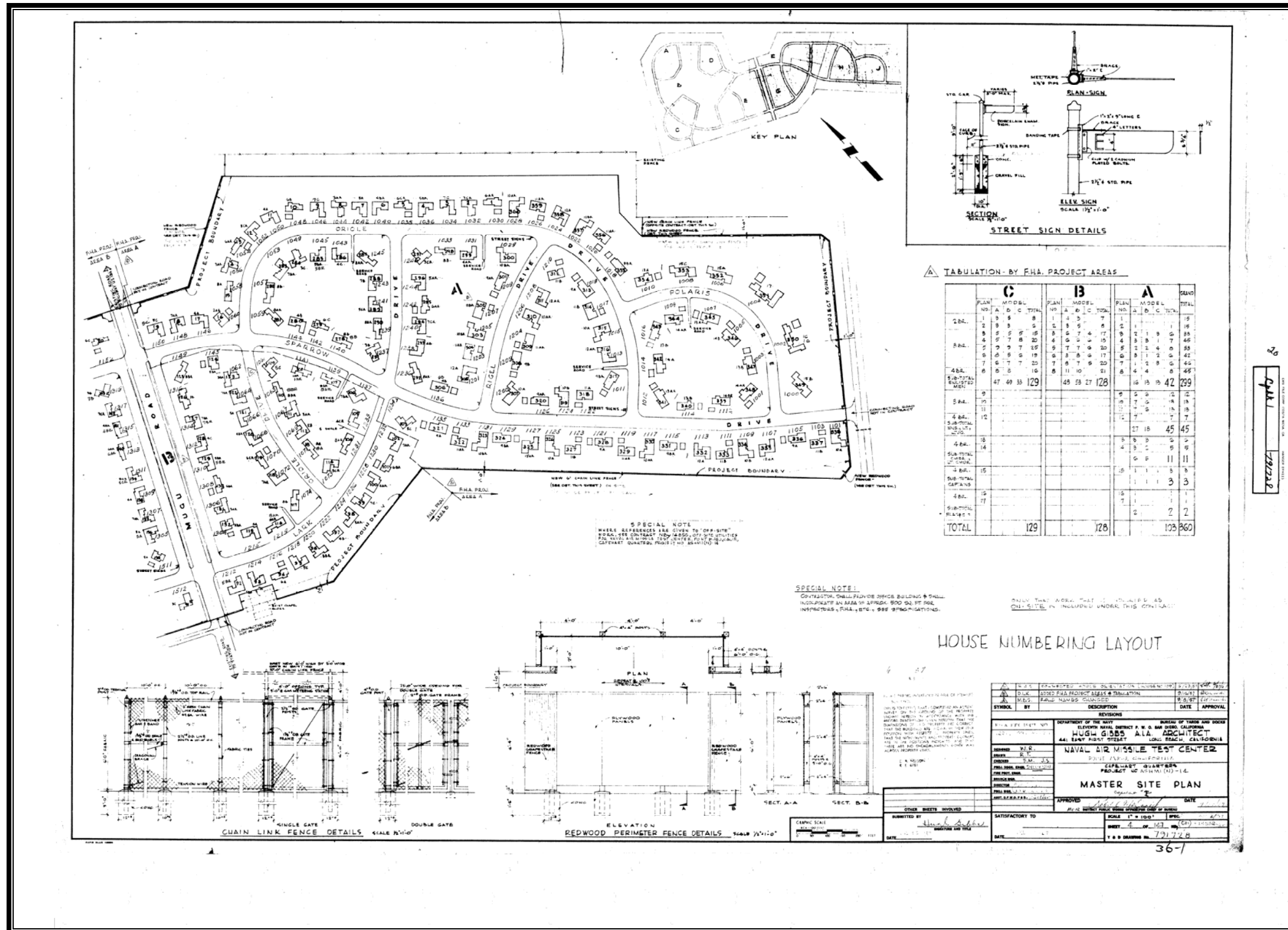


Figure A.1.14. Site plan of Santa Cruz (Capehart housing) NBVC, California. (Courtesy of Public Works Department, Point Mugu)



**Table A.1.1. Santa Rosa and Santa Cruz, Housing Breakdown by Plan and Size  
(Public Works Department, Point Mugu)**

<b>Rank</b>	<b># Bedrooms</b>	<b>Plan</b>	<b>Elevation A</b>	<b>Elevation B</b>	<b>Elevation C</b>	<b>Total Constructed</b>
Enlisted	2	1	7	8		15
	2	2	7	8		15
	3	3	13	13	12	38
	3	4	14	16	15	45
	3	5	18	18	17	53
	3	6	14	14	14	42
	3	7	15	16	15	46
	4	8	23	22		45
En, Lt. JG, Lt.	3	9	6	6		12
	3	10	7	6		13
	3	11	7	6		13
	4	12	7			7
Lt. Cmdr, Cmdr	4	13	3	3		6
	4	14	3	2		5
Capt.	4	15	1	1	1	3
C/O, Flag	4	16	1			1
	4	17	1			1
<b>TOTAL</b>						<b>360</b>

The housing units in Santa Rosa and Santa Cruz were constructed as single-family units with garages. Each garage had a storage area near the door and overhead storage at the rear. Garage placement was not uniform with attached, detached, and semi-detached buildings. The family housing units contained numerous amenities. Kitchens included built-in cook tops and ovens, ample cabinet space, garbage disposals, and a utility room with washer and dryer hook-ups. Every unit featured at least one and one-half baths, and tubs and showers were installed with sliding-glass enclosures. Covered porches sheltered the entry, rear patio, and utility room doors, and one wall of the living room was finished with quarter-inch mahogany plywood. An entry with coat closet was typical for the Capehart housing in these neighborhoods. The living room, dining room, and kitchen opened off one side of the entry, and a hall led in the opposite direction to the bedrooms. The utility room lay adjacent to the kitchen and provided communication with the garage. A linen closet was located in the hall to the bedrooms, and each bedroom contained a closet. Additional storage was provided in the utility areas, and most Capehart units had a storage closet in the hall leading to the bedrooms. Closets in the largest bedrooms were often more than nine feet wide.

The buildings were constructed on a slab foundation with much of the plumbing installed under the slab, a construction technique that required extensive repairs should the plumbing fail. Windows were casement sash installed as single units or in groups of two or three. Wood accents separated window units when grouped. Exterior finish was predominantly stucco, but individual buildings could be accented with brick, stone, or vertical cedar siding. Rear porches often were screened with lattice panels.

The buildings were renovated extensively during the late twentieth century. Dwellings in the Santa Rosa Capehart neighborhood were similar in exterior features. The buildings were supported by slab foundations. Exterior wall surfaces were sheathed with an exterior insulation and finish system. Many homes were detailed with a stucco-covered foam “belt course” at the sill line. Facades were pierced by large windows in the living rooms and smaller windows in kitchen and bedroom areas. Bedroom

windows on the street elevations were set higher in the walls. Windows were vinyl replacements with two-light horizontal-sliding sash. Half-light metal doors provided entry on the façade of the building, and sliding-glass patio doors opened the rear elevation. Stucco-covered, stone, or brick seat walls detailed the entry of many buildings. Planters were added frequently to the seat walls during renovations (Stephen, personal communication 2005). Roof forms were both side gable, and gable-on-hip with wood sheathed gables. Garages were either attached, or semi-detached and connected to the house through a breezeway. Exposed rafters provided light and ventilation in the breezeway. Plywood panels originally provided access to the garage, but these were replaced with metal and vinyl overhead doors during the late twentieth century. Several examples of Capehart housing were examined as part of this study. The individual units represent a variety of floor plans and size.

The building at 1152 Regulus Drive was constructed with plan 6C and surveyed in November 2005 (Figures A.1.15-A.1.17). The residence contained three bedrooms, a full bath, and a bath with shower. The plan followed the generic layout seen in the Point Mugu Capehart projects. An entry hall with clothes closet opened to the left into the kitchen. The dining room and living room were at the rear of the dwelling, with the bedrooms to the right of the hall (Figure A.1.18). A full bath lay off the hall and a bath with shower was adjacent to the master bedroom. A second home at 1419 Regulus Drive followed plan 1A (Figures A.1.19-A.1.21). This two-bedroom unit contained one full bath and half bath between the larger bedroom and the utility room. The kitchen and utility room were at the rear of the building. A four-bedroom house built to plan 8A is located at 1416 Regulus Drive (A.1.22-A.1.24). A section of stone veneer accented the space between the entry and the garage door, and a stone planter wall followed the sidewalk. The entry led into the living room with a clothes closet to the left. The dining room, kitchen, and utility room were at the rear of the building. The hall to the left of the entry led to the bedroom area. This house originally was classified as a four-bedroom; however, the fourth bedroom was created by an accordion door that divided a large room at the front of the house. This feature was removed in later renovations, and the building is now a three-bedroom unit.



Figure A.1.15. Plan 6C single-family unit (1152 Regulus Drive), Santa Rosa (Capehart housing), NBVC, California, 2005. (Photo taken by RCG&A)

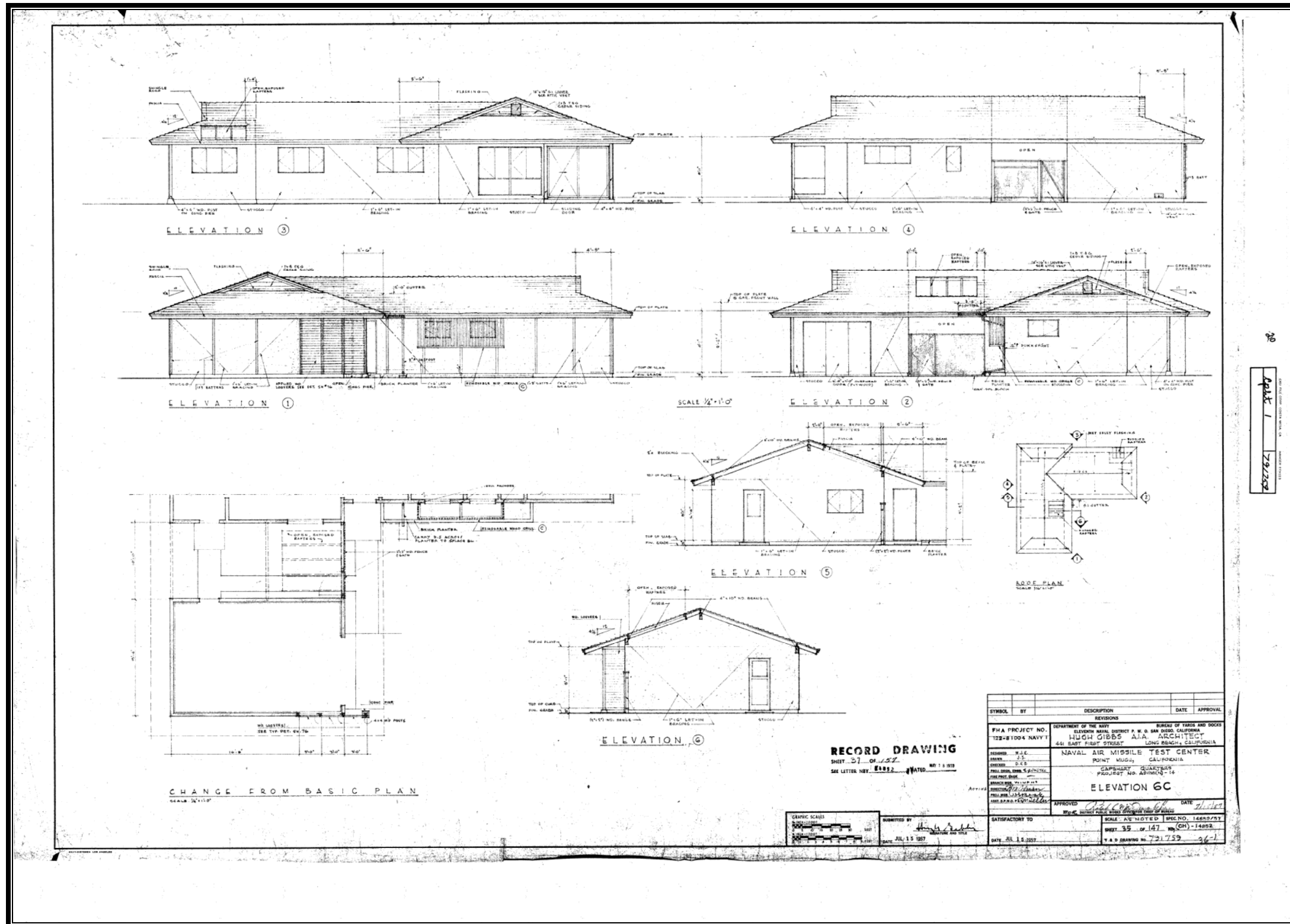


Figure A.1.16. Elevation C for Plan 6, Santa Rosa (Capehart housing), NBVC, California. (Courtesy of Public Works Department, Point Mugu)





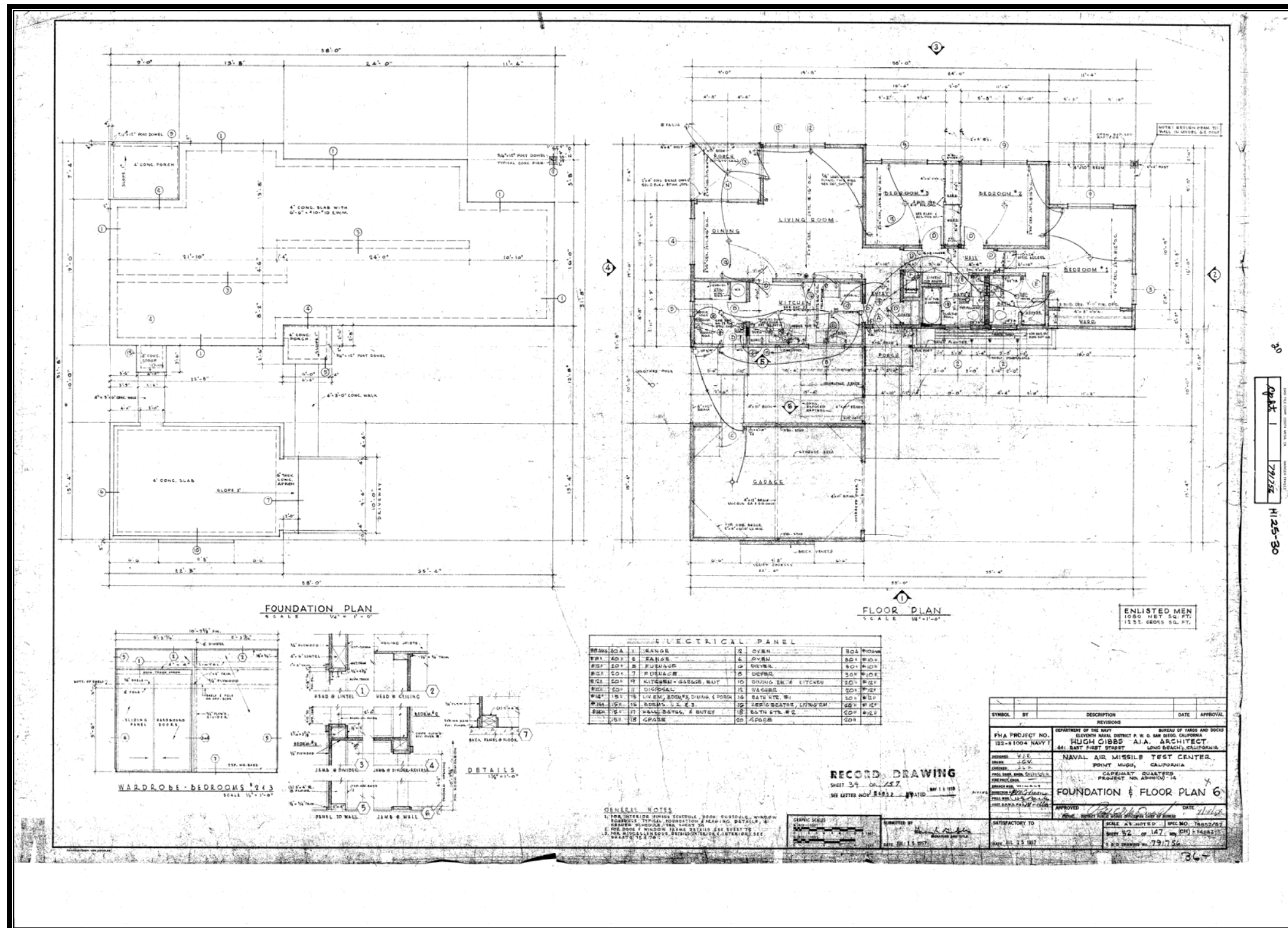


Figure A.1.17. Plan 6, Santa Rosa (Capehart housing), NBVC, California. (Courtesy of Public Works Department, Point Mugu)





Figure A.1.18. Interior of enlisted-personnel single-family unit, Santa Rosa (Capehart housing), NBVC, California, 2005. (Photo taken by RCG&A)



Figure A.1.19. Plan 1A single-family unit (1419 Regulus Drive), Santa Rosa (Capehart housing), NBVC, California, 2005. (Photo taken by RCG&A)

Two officers housing units in the Santa Cruz neighborhood at Point Mugu were examined during 2005. Located at 1001 Polaris Drive and 1011 Oriole Drive, the buildings followed plans 9BR (1011 Oriole) and 14AR (1001 Polaris). These units were larger than those constructed for enlisted personnel. The Oriole Drive unit was a three-bedroom dwelling with a full bath and a bath with shower (Figures A.1.25, A.1.27, A.1.28). The entry hall led to the living and dining rooms to the rear of the house. The kitchen and utility room lay to the left. The bedroom wing was at the right of the house. This plan reflects the reverse of the plan shown in Figure A.1.28. Building 1001 followed plan 14AR and was constructed for lieutenant commanders and commanders (Figures A.1.26, A.1.29, A.1.30). Building 1001 was a four-bedroom unit with full bath and a bath with shower. The rank of the occupants was reflected in the size and detail. Approximately 1,800 square feet in size, the unit was almost twice as big as the smallest enlisted personnel's unit. This plan also included a fireplace as an original feature (Figure A.1.31). Building 1001 exhibited more modifications than most buildings at Point Mugu. The breezeway between the utility room and garage was enclosed to provide a family room, and the rear porch was also enclosed to provide a den.

The Santa Rosa and Santa Cruz neighborhoods followed a curvilinear layout. The streets were named for Navy missile systems and reflected the mission of Point Mugu as a weapons test center. The principal street in Santa Cruz was Sparrow Drive which runs north and south through the neighborhood. Regulus Drive was the major street in the Santa Rosa neighborhood and formed a loop throughout the subdivision. Sidewalks lined only one side of the street. All units had a large fenced-in rear yard as part of the original plan, although the fencing material was replaced in the late twentieth century (Stephen, personal communication 2005). Storage buildings were not provided in either neighborhood. Landscaping of the individual units consisted of foundation plantings and native tree species. Archival research did not locate a master landscaping plan for either Santa Rosa or Santa Cruz. Playgrounds occupied some of the open spaces depicted on the original plats of the neighborhoods, and the location and spacing of trees did not imply a regimented planting scheme. Streetlights were located at intersections only and were a shoebox-type typical of the 1960s and 1970s.

### **San Miguel and Bard Estates Capehart Housing at Point Mugu and Port Hueneme**

The second phase of Capehart housing construction at NBVC included the construction of 192 units at Point Mugu, referred to as the San Miguel neighborhood, and eight senior-officer housing units at Port Hueneme (Figures A.1.32, A.1.33). Hugh Gibbs served as architect for both areas and used plans very similar to those seen in Santa Rosa and Santa Cruz. The housing units were constructed by Alcan Pacific, Incorporated and Fifth Point Mugu Quarters, Inc. (United States of America 1962a; 1962b). The principal difference between San Miguel and the first phase of Capehart construction is the use of duplexes for both enlisted personnel and junior officers. The neighborhood contained 140 units of enlisted personnel housing and 18 units of junior officer housing in 79 duplex buildings. San Miguel also included 30 single-family homes for senior officers and four, single-family homes for captains. As he had done in the first phase of Capehart housing, Gibbs used 13 basic floor plans and a variety of elevations to avoid uniformity in the neighborhood (Public Works Department, Point Mugu). The various floor plans could be combined in several ways to provide different footprints of the various buildings (Figure A.1.34). Table A.1.2 provides a breakdown of the housing types in the neighborhood.

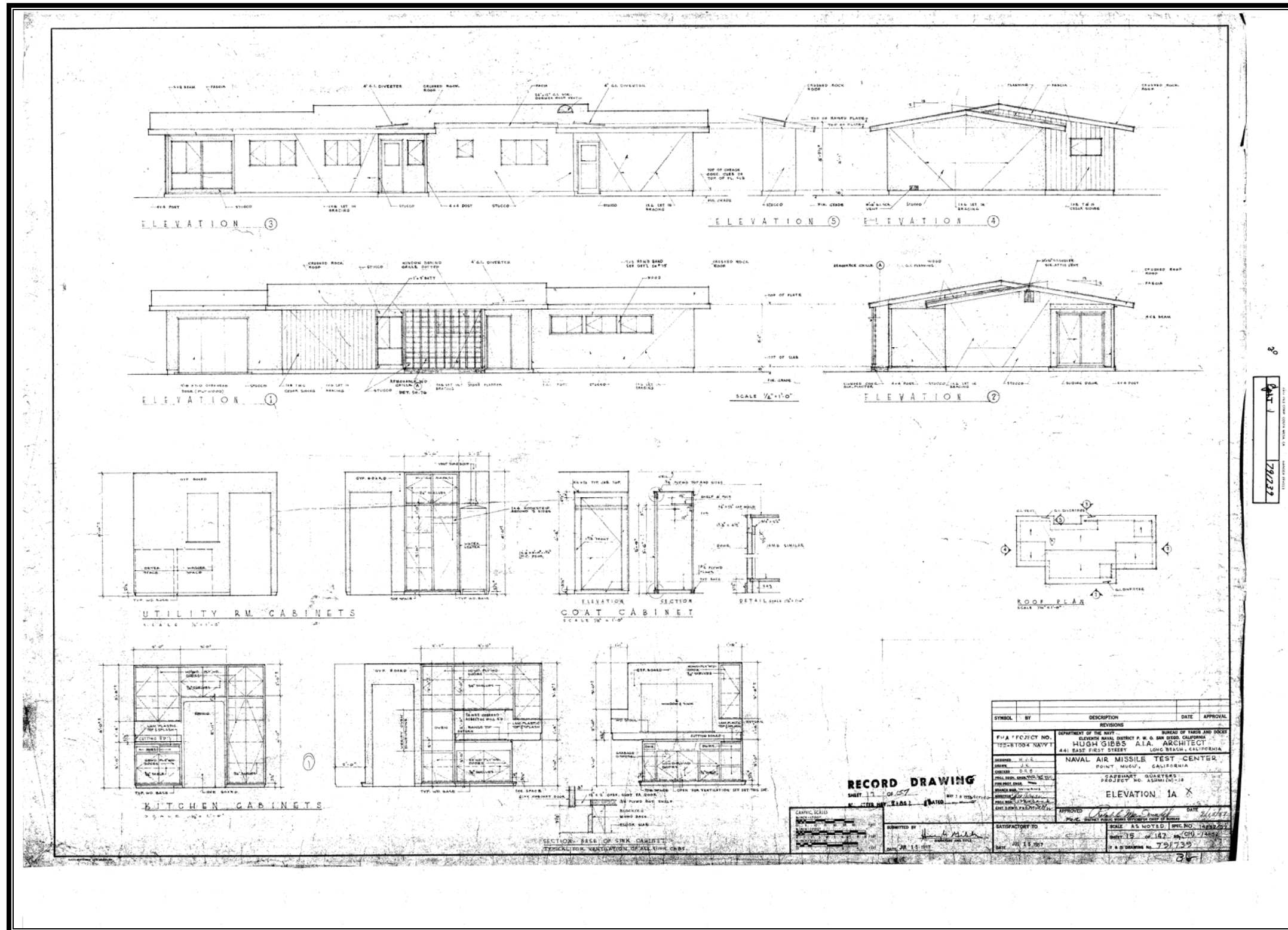


Figure A.1.20. Elevation A for Plan 1, Santa Rosa (Capehart housing), NBVC, California. (Courtesy of Public Works Department, Point Mugu)



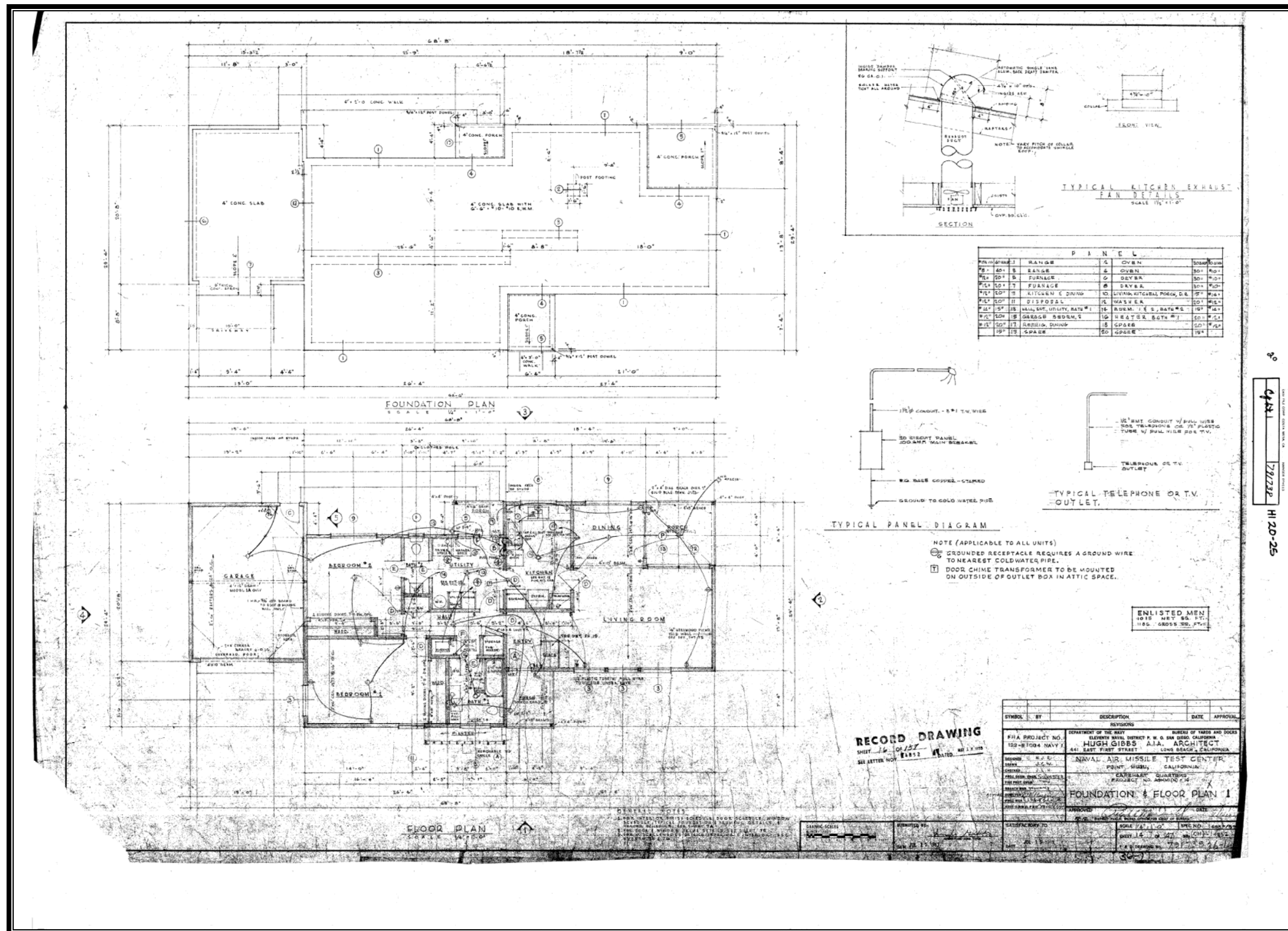


Figure A.1.21 Plan 1, Santa Rosa (Capehart housing), NBVC, California. (Courtesy of Public Works Department, Point Mugu)







Figure A.1.22. Plan 8A single-family unit (1416 Regulus Drive), Santa Rosa, (Capehart housing) NBVC, California, 2005. (Photo taken by RCG&A)

**Table A.1.2. San Miguel, Housing Breakdown by Plan and Size  
(Public Works Department, Point Mugu)**

Rank	# Bedrooms	Plan	Elevation A	Elevation B	Elevation C	Buildings Constructed	# Units
Enlisted	3	1	3	5	2	10	20
	3	2	5	3	2	10	20
	3	3	3	3	4	10	20
	3	4	3	3	4	10	20
	3	5	4	3	4	11	22
	3	6	3	3	3	9	18
	4	7	5	2	3	10	20
En, Lt.JG, Lt.	3	8	1	2		3	6
	3	9	1	2		3	6
	4	7	1	1	1	3	6
Lt. Cmdr, Cmdr	3	10	3	4	3	10	10
	3	11	4	3	3	10	10
	4	12	3	4	3	10	10
Capt.	4	13	1	2	1	4	4
<b>TOTAL</b>						<b>113</b>	<b>192</b>

Officer housing was located in the eastern portion of the neighborhood, with the junior officer housing buffering the enlisted area from the higher ranks. Four homes reserved for captains were arranged around a cul-de-sac in the extreme southeastern portion of San Miguel. The road appropriately was called Eagle Circle. The duplex units were arranged in one of two ways: the unit presented its longitudinal wall to the public way, or displayed a side elevation. With the side elevation variant, the buildings were arranged in pairs, with a single drive providing access to the four units housed in the two buildings. Garages were integral to every building plan. Sidewalks lined only one side of the street. All units had a large fenced-in rear yard as part of the original plan although the fencing material was replaced in the late-twentieth century (Stephen, personal communication 2005). Storage buildings were not provided in the neighborhood. Landscaping of the individual units consisted of foundation plantings and native tree species. Archival research did not locate a master landscaping plan for San Miguel. The location and spacing of trees did not imply a regimented planting scheme. Streetlights were not located in the neighborhood, and archival evidence does not suggest a previous plan to install lighting.

The cohesiveness of exterior detailing of San Miguel was repeated for the interior. Room arrangement within the housing units was similar for both single-family and duplex units. The entry leads into a small hall that separated the kitchen and living areas from the bedrooms. The kitchen was at the front of the unit, with the living and dining areas to the rear. Patio doors provided access from the living room to the back yard. A corridor off the entry hall led to the bedroom area. Linen closets and a full bath opened off the corridor, and the master bedroom lay at the end of the hall. The duplexes were generally three bedrooms, and the single-family dwellings had both three- and four-bedroom plans. A bath with shower was typical for master bedrooms. A utility room was adjacent to the kitchen and led toward the garage. Garages of duplexes were attached to the living unit; garages of single-family homes were attached or semi-detached and joined to the house by a breezeway. Overhead storage was provided in the rafter areas of the garage.

The buildings were originally wood frame set on concrete slabs and covered with stucco. Architectural detailing included a veneer of brick, stone, or wood on the street-facing gable and the corners of the building (Figure A.1.35). Windows were originally metal-sash, horizontal-sliding units with asymmetrical fenestration. Groupings of windows frequently were accented with grooved plywood panels or vertical planking separating the sashes. The entries to the buildings were reached by a concrete walk leading from the paved driveway. Each was covered by an open-rafter section of roof and contained a concrete stoop. Patios on the rear of the buildings were accessed from sliding doors flanked by window units with an operable, two-light, horizontal-sliding sash above and two fixed lights below. Doors leading into the utility areas were half-light with an upper jalousie window. Windows of the utility rooms were also jalousie sash. Roof forms included gable, hip, and gable-on-hip configurations with projecting eaves and exposed rafter tails. The sheathing was deleted in certain areas around windows and entrances creating an open eave with exposed rafters. Roofs were covered with a built-up covering of crushed stone applied over roofing tar. No gutters were provided and roof diverters directed rainwater away from openings.

Interior finishes were originally wood floors, and the walls were covered with gypsum board. Each unit had a coat closet near the entry, a linen closet in the hall, and wardrobes in each bedroom. Additional storage was provided in the utility room that featured a built-in cupboard for use as either general storage or pantry. The kitchens contained a range top with hood, oven, double sink with disposal, and a refrigerator. Water heaters were installed in the utility rooms, which also contained wiring and plumbing for washers and dryers although these were not included. A clothes pole was installed in the rear yard of all units just outside the utility room

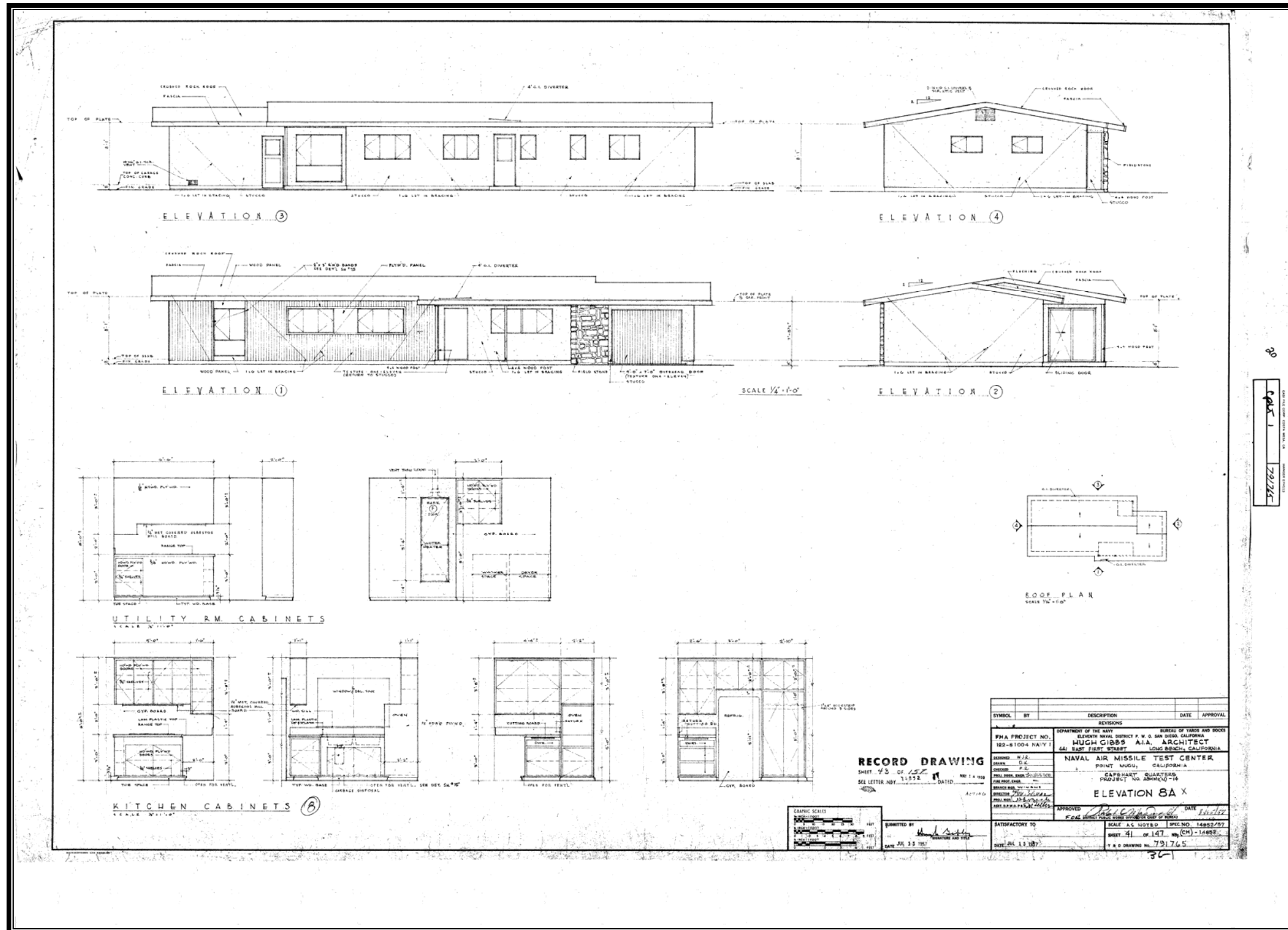


Figure A.1.23. Elevation A for Plan 8, Santa Rosa (Capehart housing), NBVC, California. (Courtesy of Public Works Department, Point Mugu)



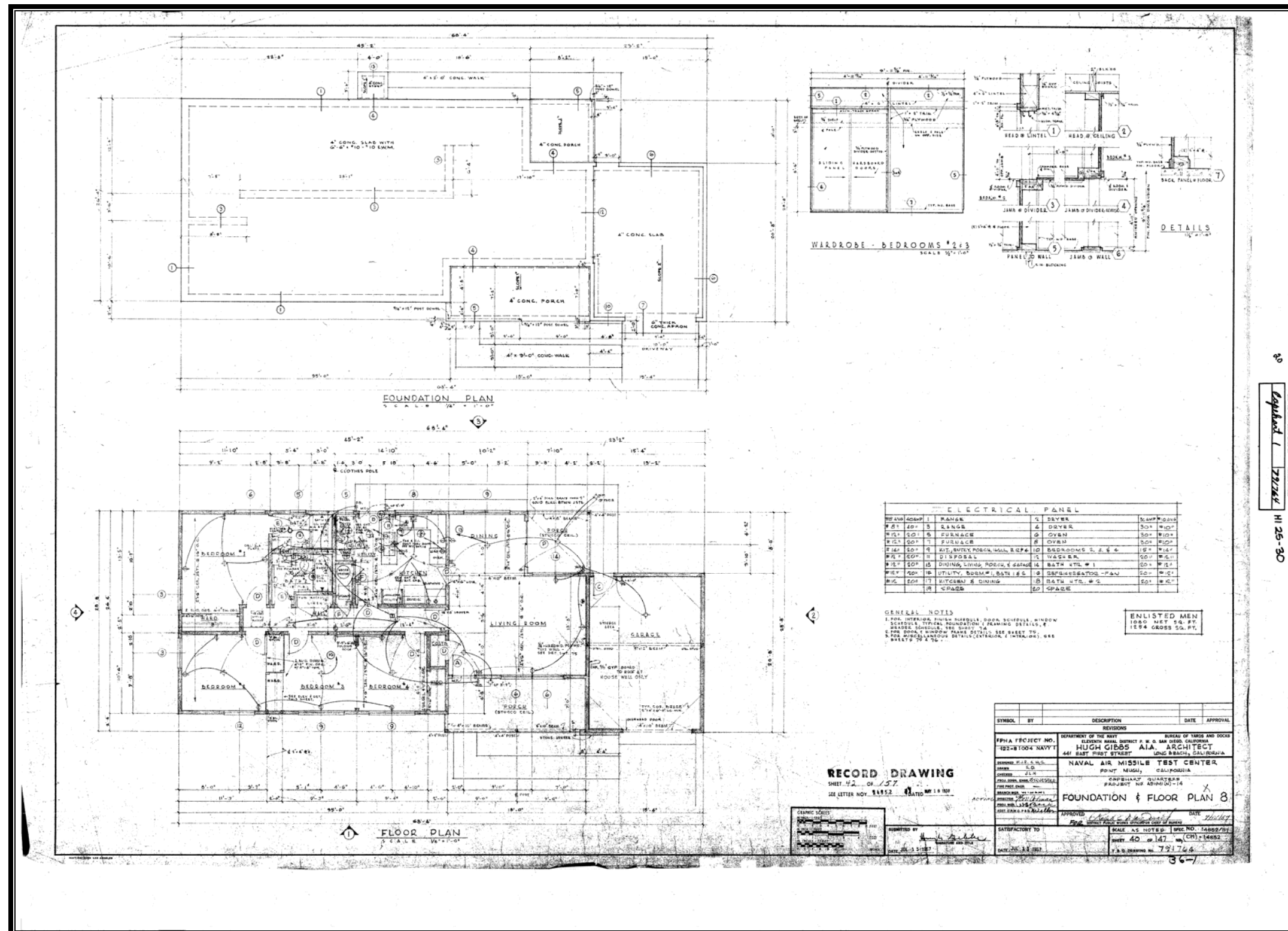


Figure A.1.24. Plan 8, Santa Rosa (Capehart housing), NBVC, California. (Courtesy of Public Works Department, Point Mugu)





Figure A.1.25. Plan 9BR single-family unit (1011 Oriole), Santa Rosa (Capehart housing), NBVC, California, 2005. (Photo taken by RCG&A)



Figure A.1.26. Plan 14AR single-family unit (1001 Polaris Drive), Santa Rosa (Capehart housing), NBVC, California, 2005. (Photo taken by RCG&A)



door. The furnace for the forced-air heating system was located in a separate room off the entry hall. The single-car garages were 22 feet by 15 feet, and included space for additional storage adjacent to the overhead door and in an overhead area at the rear.

The family housing at San Miguel underwent extensive renovation during the late 1980s and early 1990s. The renovations were similar to the work performed in Santa Cruz and Santa Rosa. These included the replacement of windows with vinyl-sash, two-light, horizontal-sliding units; replacement patio doors; removal of the windows flanking the patio door and the installation of fixed-panes; enclosure of the open eave with perforated aluminum soffit material; and replacement roofs with a steeper pitch to accommodate new composition shingles. Wall-to-wall carpeting, new appliances, new counter and cabinetry, and upgraded bathrooms were among the interior modifications (Stephen, personal communication 2005).

One unit, Building 1987, was not renovated extensively and retains most of its original materials (Figures A.1.36-A.1.37). The building was constructed with Plan 2A, and featured three bedrooms, a full bath, and a bath with shower (Figures A.1.38, A.1.39). Windows throughout the building were two-light, horizontal-sliding, metal sash. Wall sheathing was original, with the majority of the building covered in stucco and the projection for the master bedroom covered in vertical boards. Vertical-board siding also accented groupings of windows. The building terminated in a shallow-pitched gable roof covered with a built-up roofing system.

The interior was accessed from a recessed porch on the façade. A small entry hall with coat closet divided the interior circulation of the house. The kitchen and utility room lay to the left, with the kitchen at the front of the building. Many of the amenities installed in homes at Santa Rosa and Santa Cruz also were also included at San Miguel. These amenities included a utility room with washer and dryer hook-ups, built-in range tops and ovens, garbage disposals, and built-in storage. The living and dining rooms lay at the rear of the building. To the right of the entry hall were three bedrooms, a full bath, and a bath with shower for the master bedroom. Unlike the units constructed in the first phase of Capehart housing, San Miguel's units did not repeat the mahogany paneling or the sliding-glass tub enclosure. The bathrooms of Building 1987 retained original tile shower and tub walls as well as the tile floors.

The other location of construction during the second phase of Capehart housing took place adjacent to Bard Estates at Port Hueneme. This effort saw the construction of eight senior-officer quarters in an area adjacent to the Bard Mansion and Quarters "A," the post commander's residence. Again, Hugh Gibbs served as architect, and used three plans for the eight buildings. In this case, however, to avoid any repetition, Gibbs developed as many as five elevation options for the plans. The buildings reflected similar details and construction techniques seen elsewhere at Port Hueneme and Point Mugu. The significant difference was the setting of these buildings (Figure A.1.40). This portion of Bard Estates assumed a rural appearance with expansive lawn and landscape areas. The houses were not set parallel or perpendicular to the street, but at an angle, avoiding any sense of a building wall.

The officer housing at Bard Estates underwent extensive renovation during the late 1980s and early 1990s. The work performed was similar to that seen in Santa Cruz, Santa Rosa, and San Miguel during the same time period. These renovations included the replacement of windows with vinyl-sash, two-light, horizontal-sliding units; replacement patio doors; removal of the windows flanking the patio door and the installation of fixed-panes; enclosure of the open eave with perforated aluminum soffit material; and replacement roofs with a steeper pitch to accommodate new composition shingles. Wall-to-wall carpeting, new appliances, new counters



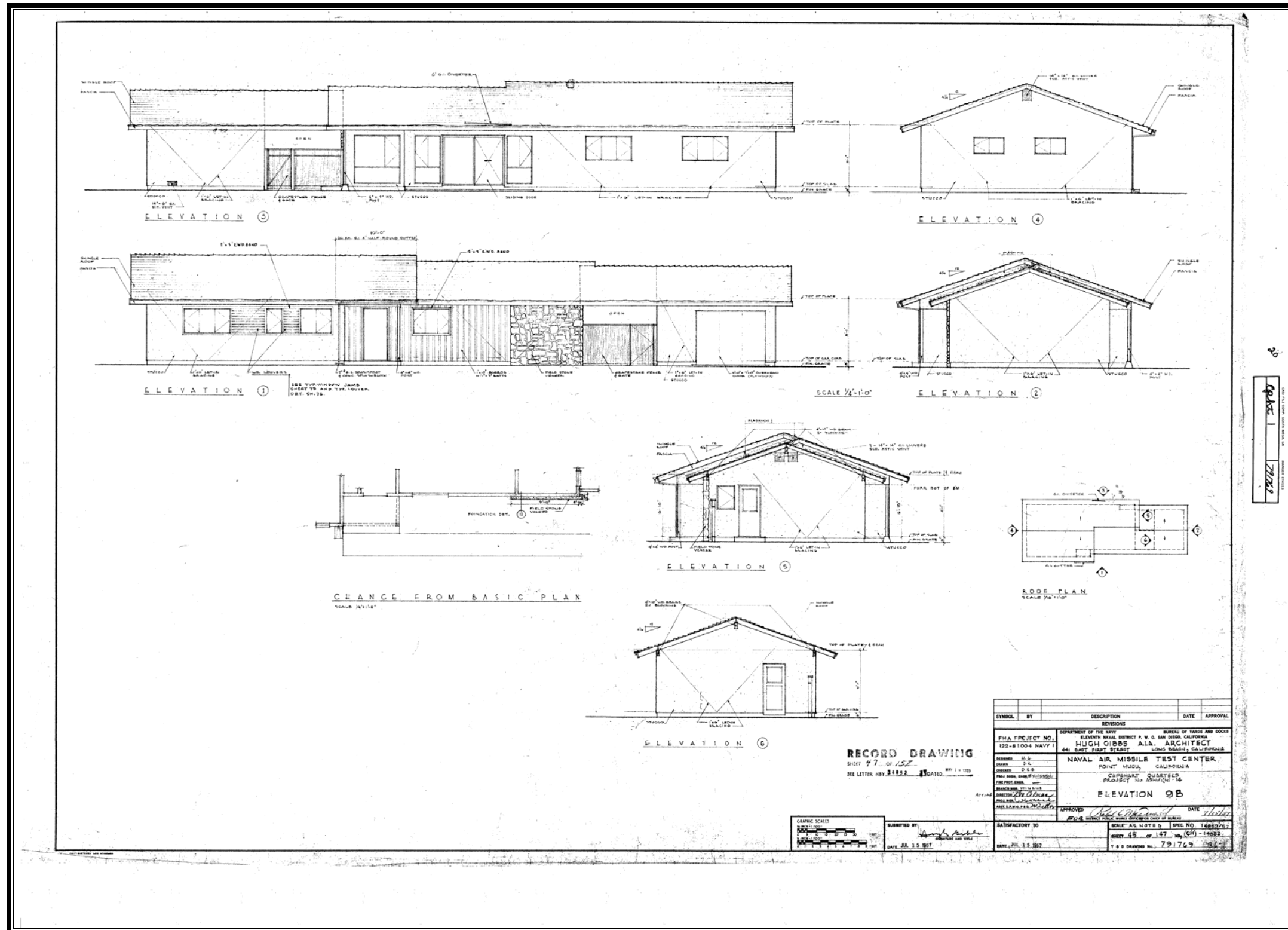


Figure A.1.27. Elevation B for Plan 9, Santa Cruz (Capehart housing), NBVC, California. (Courtesy of Public Works Department, Point Mugu)



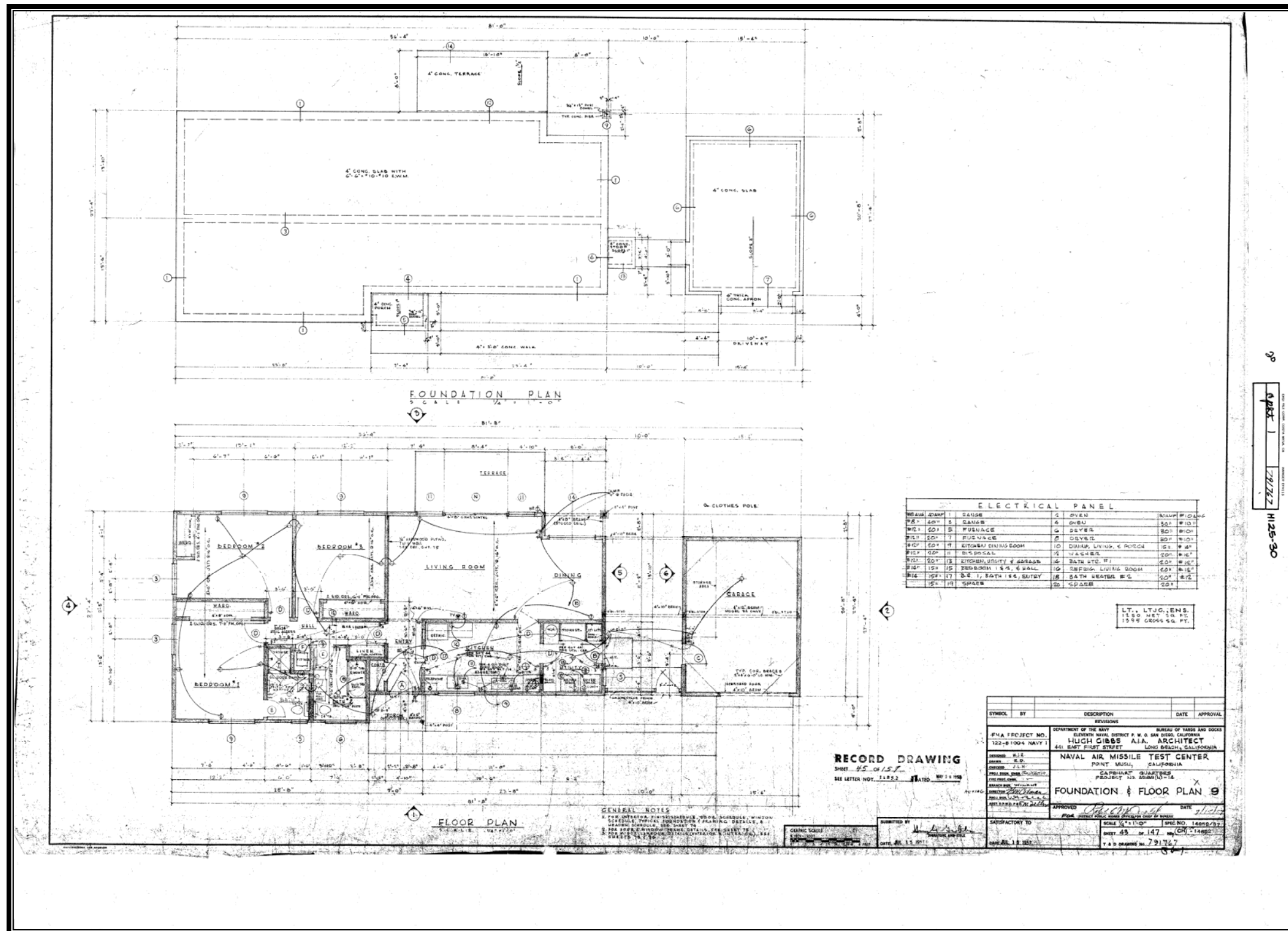


Figure A.1.28. Plan 9, Santa Cruz (Capehart housing), NBVC, California. (Courtesy of Public Works Department, Point Mugu)



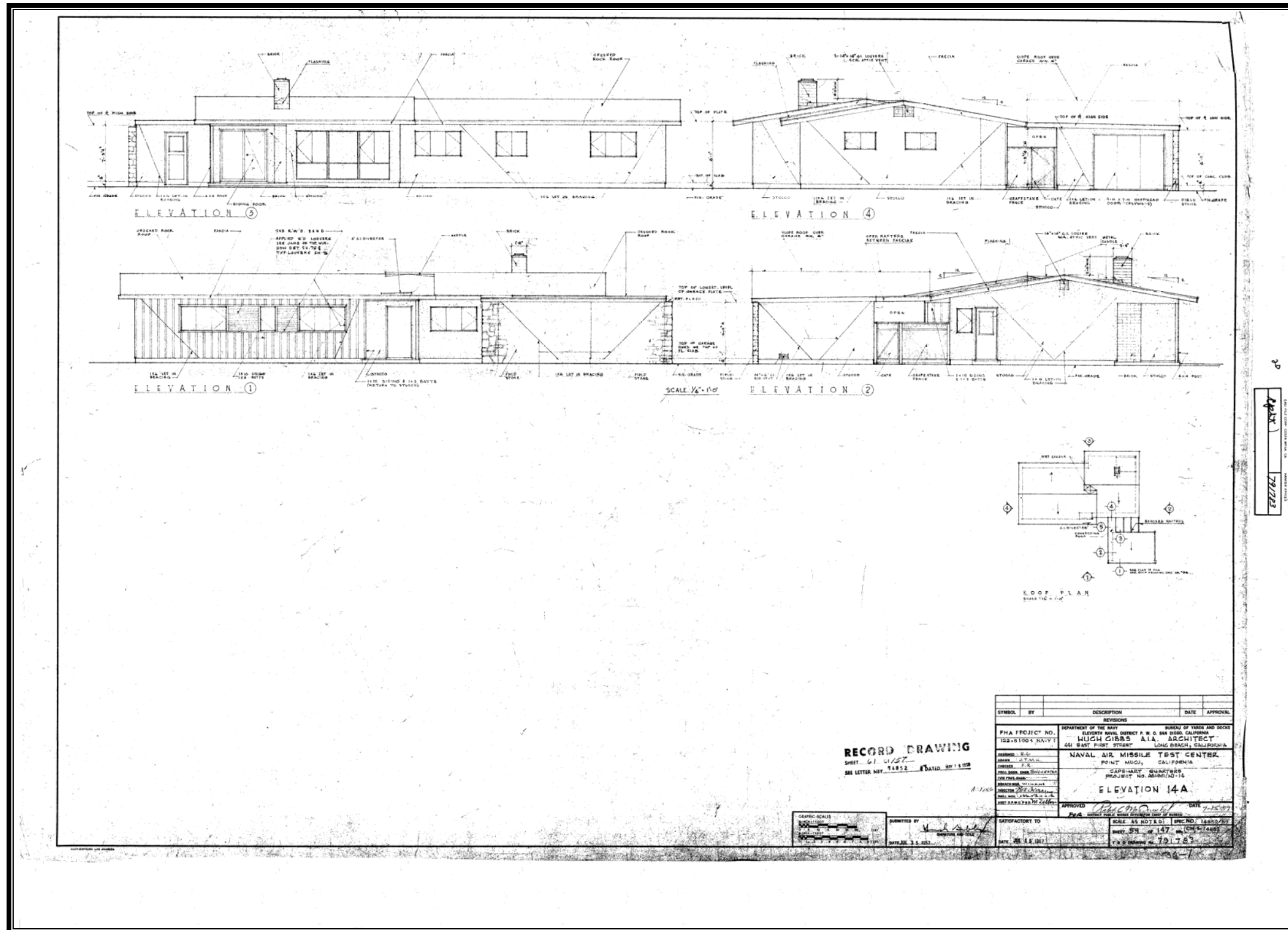


Figure A.1.29. Elevation A for Plan 14, Santa Cruz (Capehart housing), NBVC, California. (Courtesy of Public Works Department, Point Mugu)



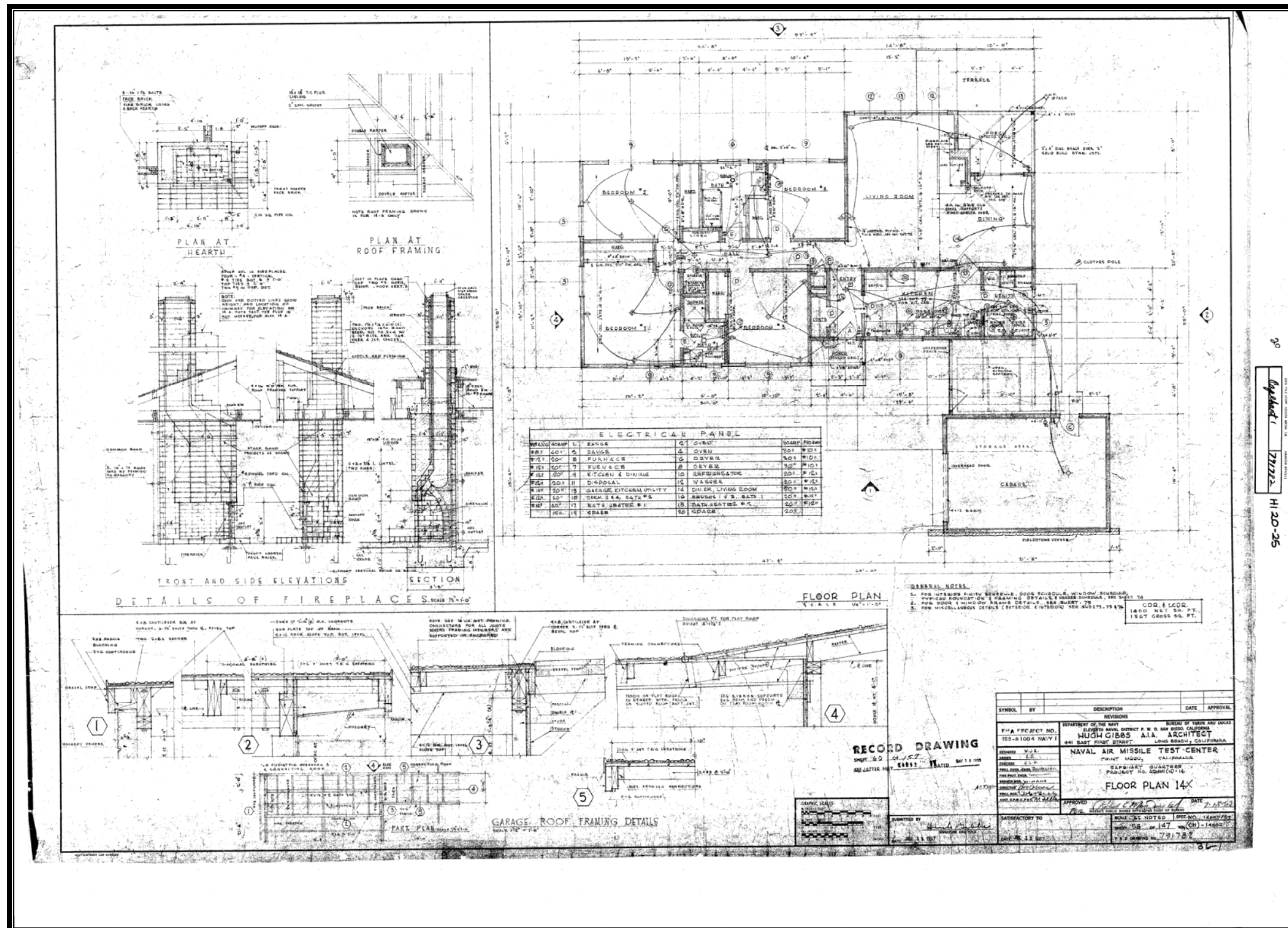


Figure A.1.30. Plan 14, Santa Cruz (Caphart housing), NBVC, California. (Courtesy of Public Works Department, Point Mugu)







Figure A.1.31. Interior of senior-officer single-family unit, Santa Cruz (Capehart housing), NBVC, California, 2005. (Photo taken by RCG&A)

and cabinetry, and upgraded bathrooms were among the interior modifications (Stephen, personal communication 2005).

### **Catalina Heights Capehart Housing at Camarillo**

The final Capehart area at NBVC was located approximately twelve miles south and east of the base. The Catalina Heights Capehart housing was a project of the U.S. Air Force to supply family housing for Oxnard Air Force Base (Figure A.1.41). The firm of Porter, Urquhart, McCreary & O'Brien partnered with Victor J. Spotts, AIA in the design of the buildings. Construction was completed by Murray-Sanders & Associates and the George A. Fuller Company of Santa Ana, California. Building types included 3 single-family detached, 7 one-story duplexes, 14 two-story duplexes, 9 four-plexes, and 38 six-plexes.

The differences in the housing constructed for the Navy and Air Force was apparent. The buildings were starkly utilitarian in nature (Figure A.1.42). Massing was uniformly rectangular. Multi-family units were two stories in height. Officers were housed in one-story duplexes, with only three single-family units reserved for senior officers (Figures A.1.43-A.1.46). Most of the amenities seen in the Navy Capehart housing were absent. Garages were not included in the original plans, and the current garages of the single-family units are enclosed carports. Carports were available for all the officer duplexes, and about half the remaining multi-family and duplex units. The remaining buildings offered only parking pads. The interiors also were plain. Kitchens had combination range/oven units rather than the built-in appliances seen at Port Hueneme and Point Mugu. Garbage disposals were originally installed and the Catalina Heights Capehart housing was equipped with washers and dryers. No unit was trimmed with a wall of mahogany paneling.

The buildings at Catalina Heights have been renovated since being completed in 1959. These renovations included, new bathroom fixtures, kitchen appliances, and carpeting (Stephen, personal communication 2005). Progress reports completed by the Air Force for its Capehart housing show possible discrepancies in the level of modification. The progress report, completed in December 1959, notes that the roofs were flat and that the original windows installed were metal casements. This conflicts with “As Built” drawings approved by the Air Force during August 1959 that showed horizontal-sliding sash windows and gable roofs.

Construction techniques included slab-on-grade foundations. Exterior walls were constructed of concrete masonry units. Detailing was provided by covering some sections of the wall with stucco and accenting other areas with vertical board siding (Figure A.1.47). The windows included metal-framed, two-light, horizontal-sliding sash, and larger windows with a fixed central pane flanked by horizontal-sliding sash. Roofs were shallow-pitched gables covered with composition shingles. A concrete-block wall provided a small patio area in the front of the enlisted personnel housing. Additional storage space was located along one side of the carports, but no additional exterior storage was provided. Vertical-board fences enclosed the rear yards. The fencing was installed in the mid-1980s (Stephen, personal communication 2005).

The interior of the family housing units was accessed through a door within a recessed porch (Figure A.1.48). A small entry hall led to the kitchen at the front and the living and dining rooms to the rear. A coat closet, broom closet, and half bath were also clustered around the hall. The kitchen contained a small storage closet and the washer and dryer hook-ups occupied one wall. A staircase led to the second level. The upper level contained three bedrooms, a full bath, a linen closet, and a storage closet. Each bedroom had a clothes closet.

The duplex units reserved for officers followed a similar floor plan (Figure A.1.49). These buildings contained an attached carport with storage area, utility room with washer and dryer, and typically contained three bedrooms. A fourth bedroom could be created by closing a folding screen at the end of the living room. If the screen were left open, the end of the living room could serve as a den. The exterior of the officer quarters were also stucco and vertical board. The shallow-pitched gable roof was covered with asphalt shingles, and rafter tails were visible in the open soffit.

The neighborhood design was more linear in nature than the Navy Capehart developments. The buildings were arranged parallel to the streets, with the large, multi-family units located near the rear of the neighborhood, and the officers and non-commissioned officers near the entry to the neighborhood. Landscaping of the individual units consisted of foundation plantings and native tree species. Archival research did not locate a master landscaping plan for Catalina Heights. Playgrounds occupied some of the open spaces depicted on the original plats of the neighborhoods, and the location and spacing of trees did not imply a regimented planting scheme. A youth center located near the center of the development was constructed in 1965. Streetlights were located on utility poles; however, archival evidence did not indicate an original plan to install lighting.

Catalina Heights was the only Capehart neighborhood at NBVC that contained a store. Now called the “Mini Mart,” the store was denoted on the 1958 plat of the subdivision and within the project boundary (Figure A.1.50). Another feature not present in the other Capehart neighborhoods was the mast TV antenna (Figure A.1.51). These were often referenced in correspondence from the late 1950s and early 1960s, but were largely supplanted by cable and satellite dishes.

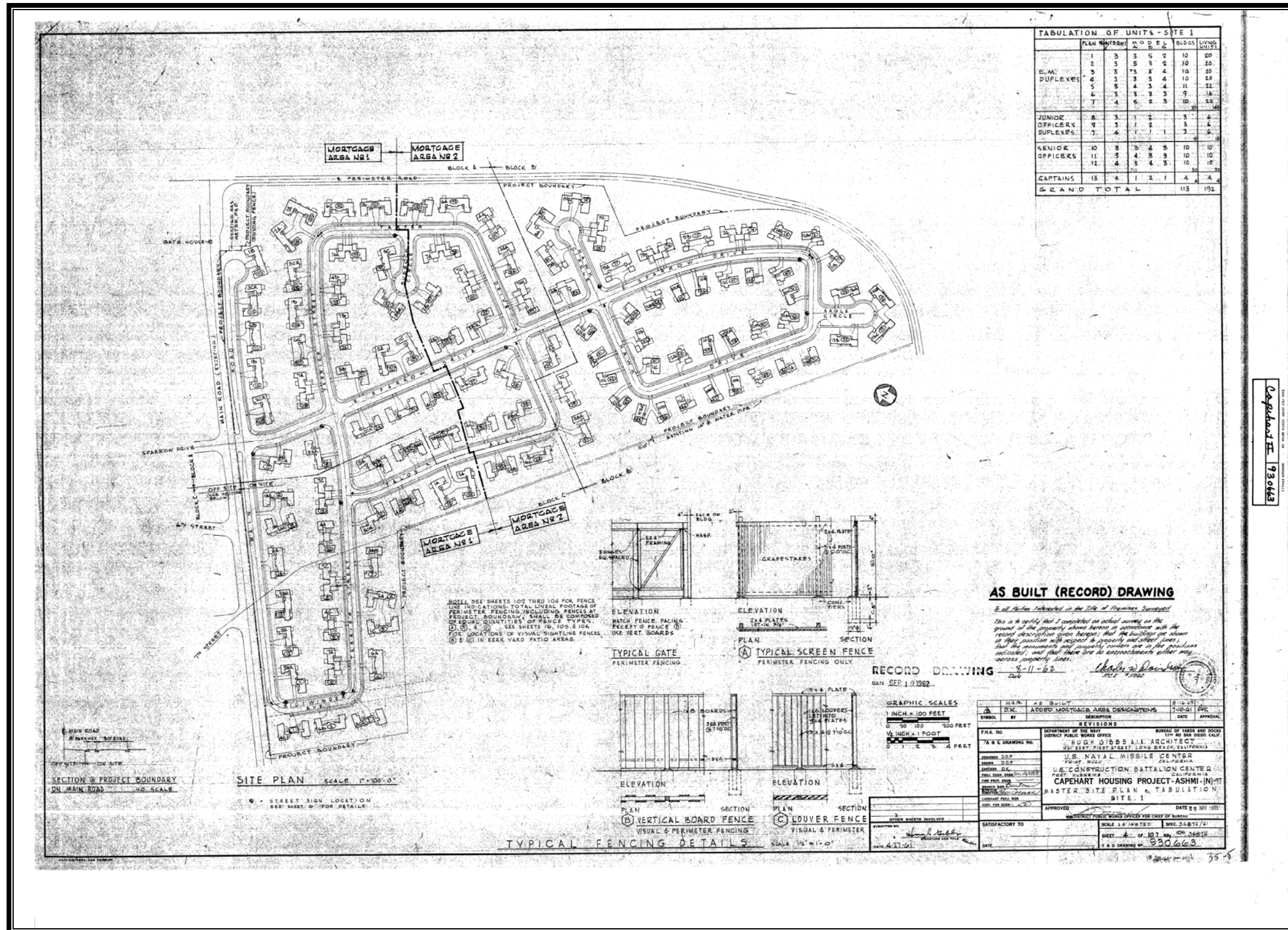


Figure A.1.32. Site plan of San Miguel (Capehart housing) NBVC, California. (Courtesy of Public Works Department, Point Mugu)





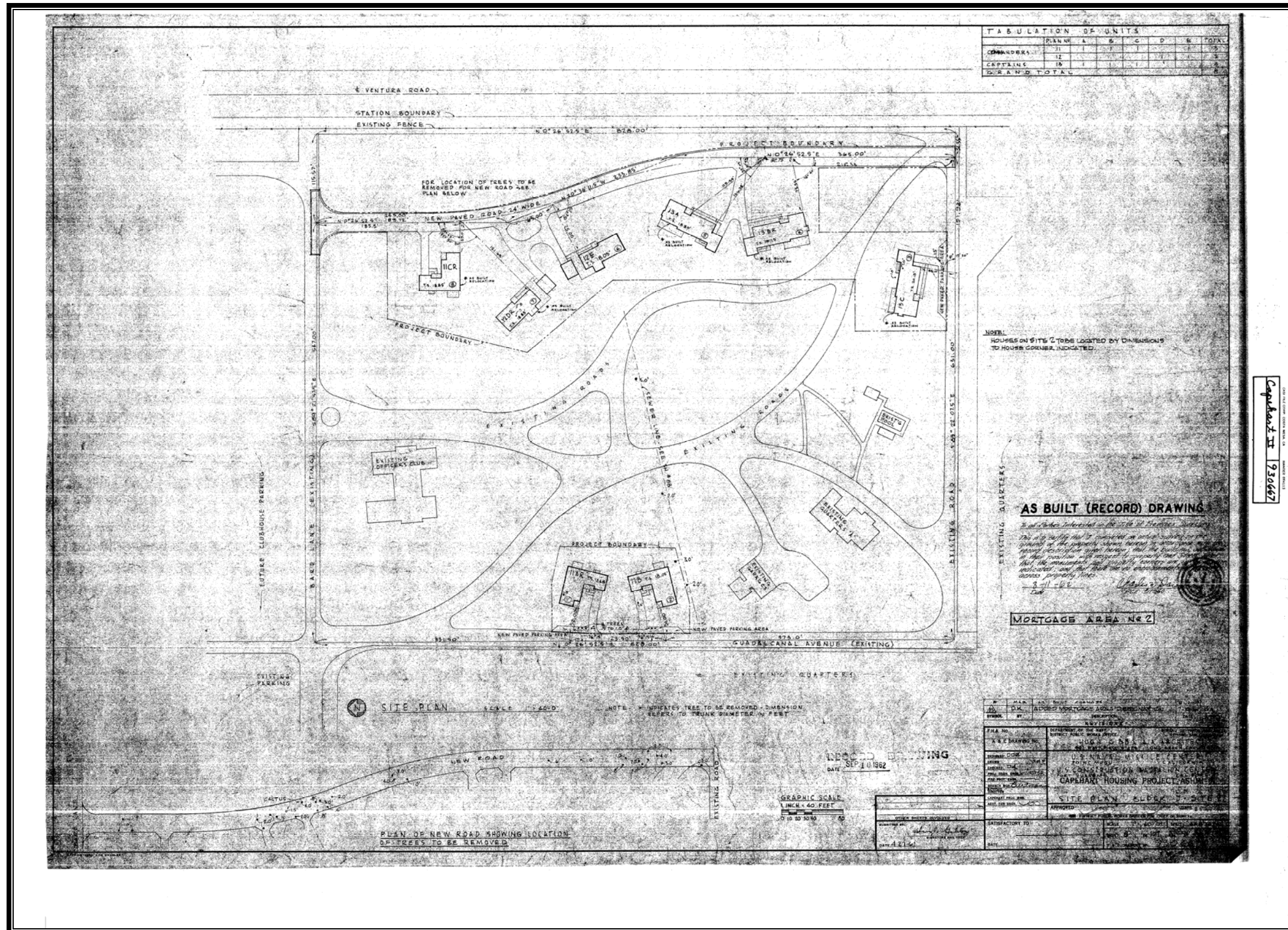


Figure A.1.33. Site plan of senior-officer housing at Bard Estates (Capehart housing) NBVC, California. (Courtesy of Public Works Department, Point Mugu)



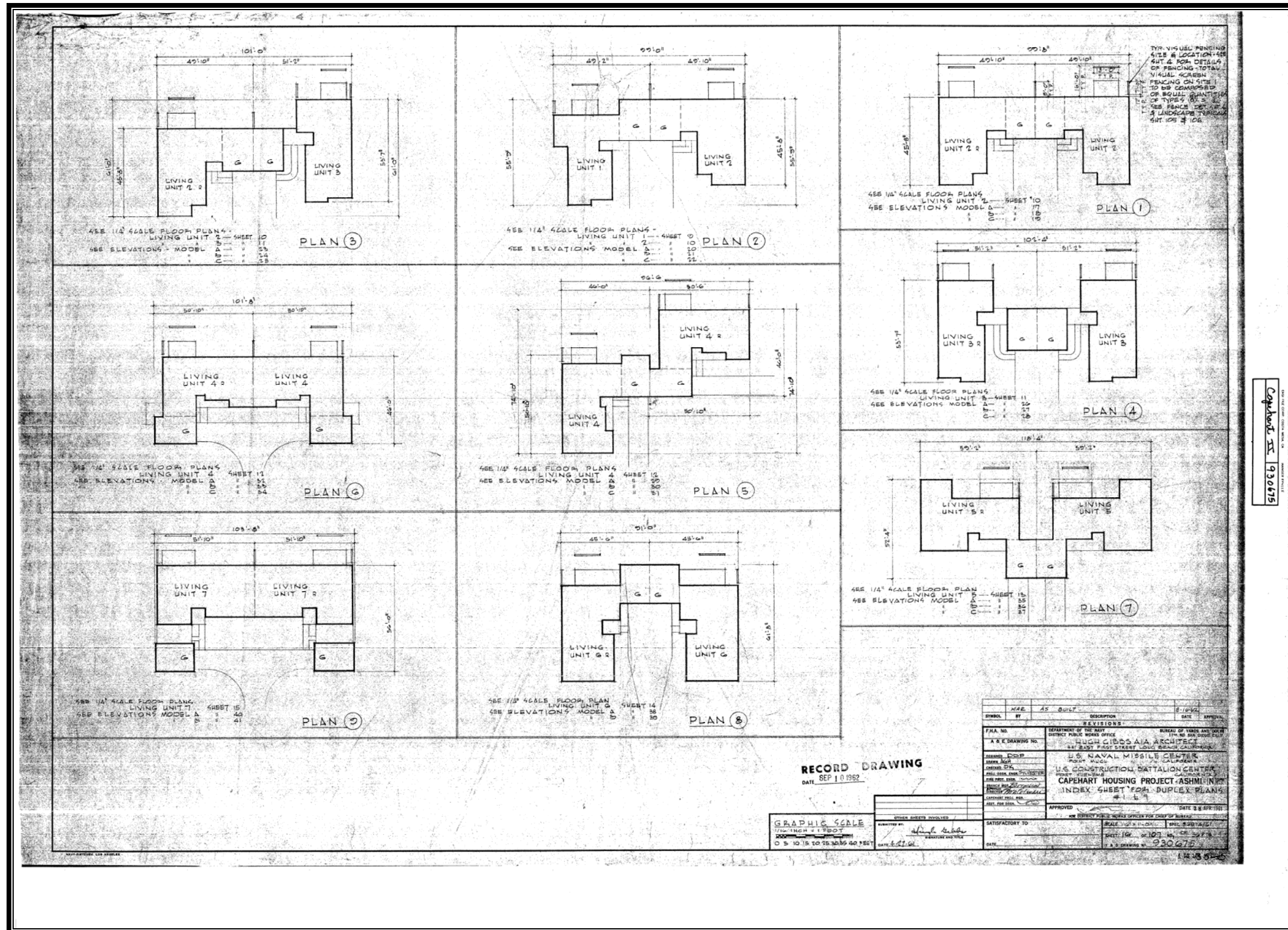


Figure A.1.34. Variety of duplex forms possible at San Miguel (Capehart housing). (Courtesy of Public Works Department, Point Mugu)







Figure A.1.35. Duplex unit (Building 1902), San Miguel (Capehart housing), NBVC, California, 2005. (Photo taken by RCG&A)



Figure A.1.36. Duplex unit (Building 1987, Unit B), San Miguel (Capehart housing), NBVC, California, 2005. (Photo taken by RCG&A)



Figure A.1.37. Bathroom of duplex unit (Building 1987), San Miguel (Capehart housing), NBVC, California, 2005. (Photo taken by RCG&A).

### **Appropriated-Funds Housing at Point Mugu and Port Hueneme**

Family housing became a critical need at both facilities as the demographics of Navy personnel shifted from unaccompanied or single to married individuals with families. The close proximity of the two facilities allowed for housing to be concentrated at Port Hueneme and shared by personnel from both installations. The majority of the family housing in use from the close of World War II through the 1950s was Homoja units. The term “Homoja” applied only to 20- by 48-foot, duplex Quonset huts. Port Hueneme constructed a 370-unit Homoja area south of 33<sup>rd</sup> Avenue and east of Pacific Road (Figure A.1.52). The Homoja housing remained in service as late as 1962 and housed approximately 1,250 enlisted personnel and their families (Commanding Officer, U.S. Naval Construction Battalion 1960; Department of the Navy 1958; 1962).

Other housing options were extremely limited. Port Hueneme contained only seven other housing units during the early 1950s. All of these single-family units were reserved for senior and junior officers. Four of these buildings pre-dated the creation of the facility. The remaining three buildings, originally known as Quarters F, G, and H, were completed in 1951 from plans developed by the Construction Battalion Center of Port Hueneme (Figure A.1.53) (Public Works Department, Port Hueneme). Sherer, Moore & Company of San Bernardino, California, was contractor for all three buildings (NAVFAC 1956). The buildings faced south towards 32<sup>nd</sup> Avenue (Figure A.1.54). These irregularly massed, one-story buildings contained four bedrooms, one full bath and a bath with shower, a brick fireplace, and lanai

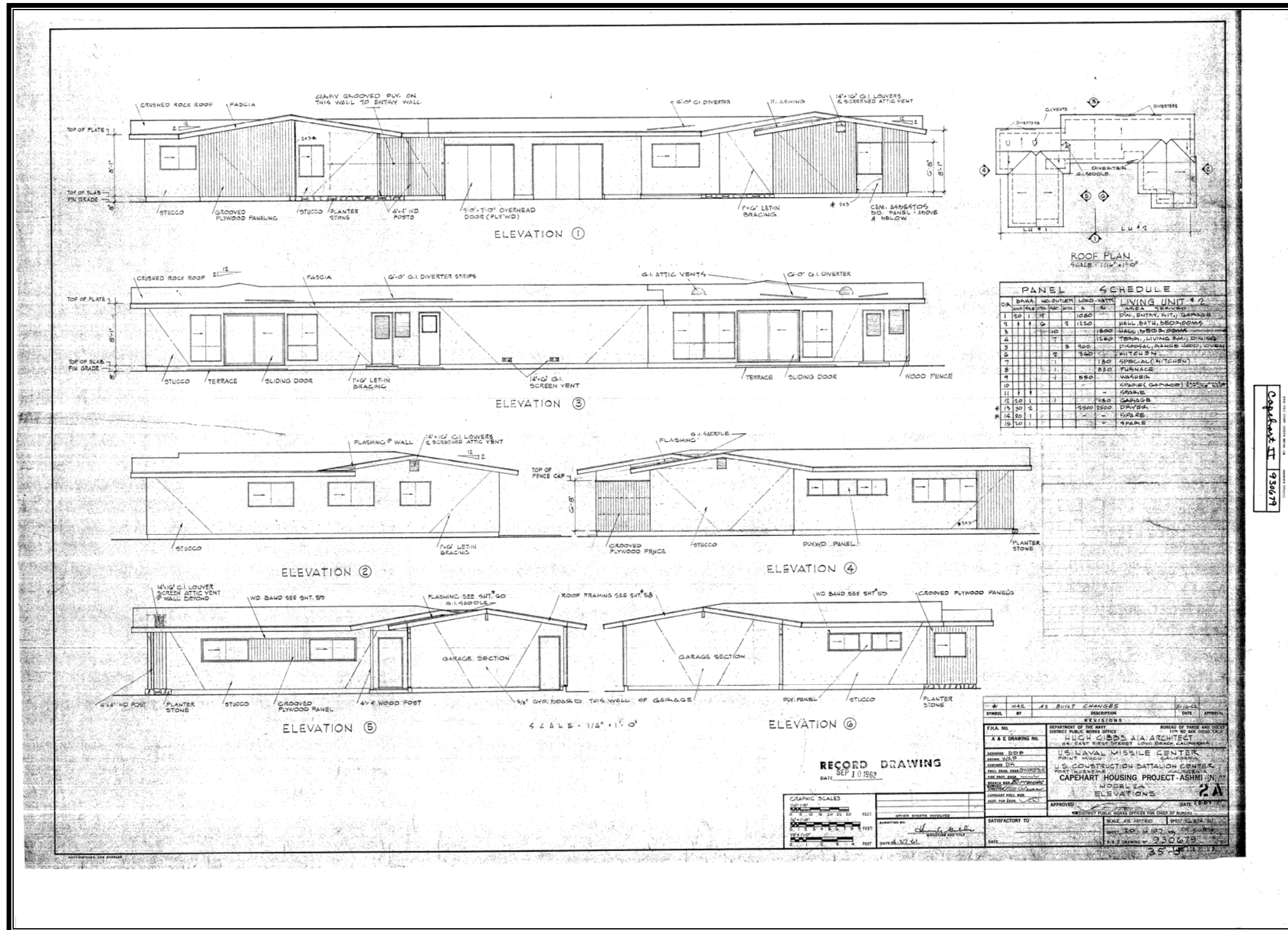


Figure A.1.38. Elevation A for Plan 2, San Miguel (Capehart housing), NBVC, California. (Courtesy of Public Works Department, Point Mugu)





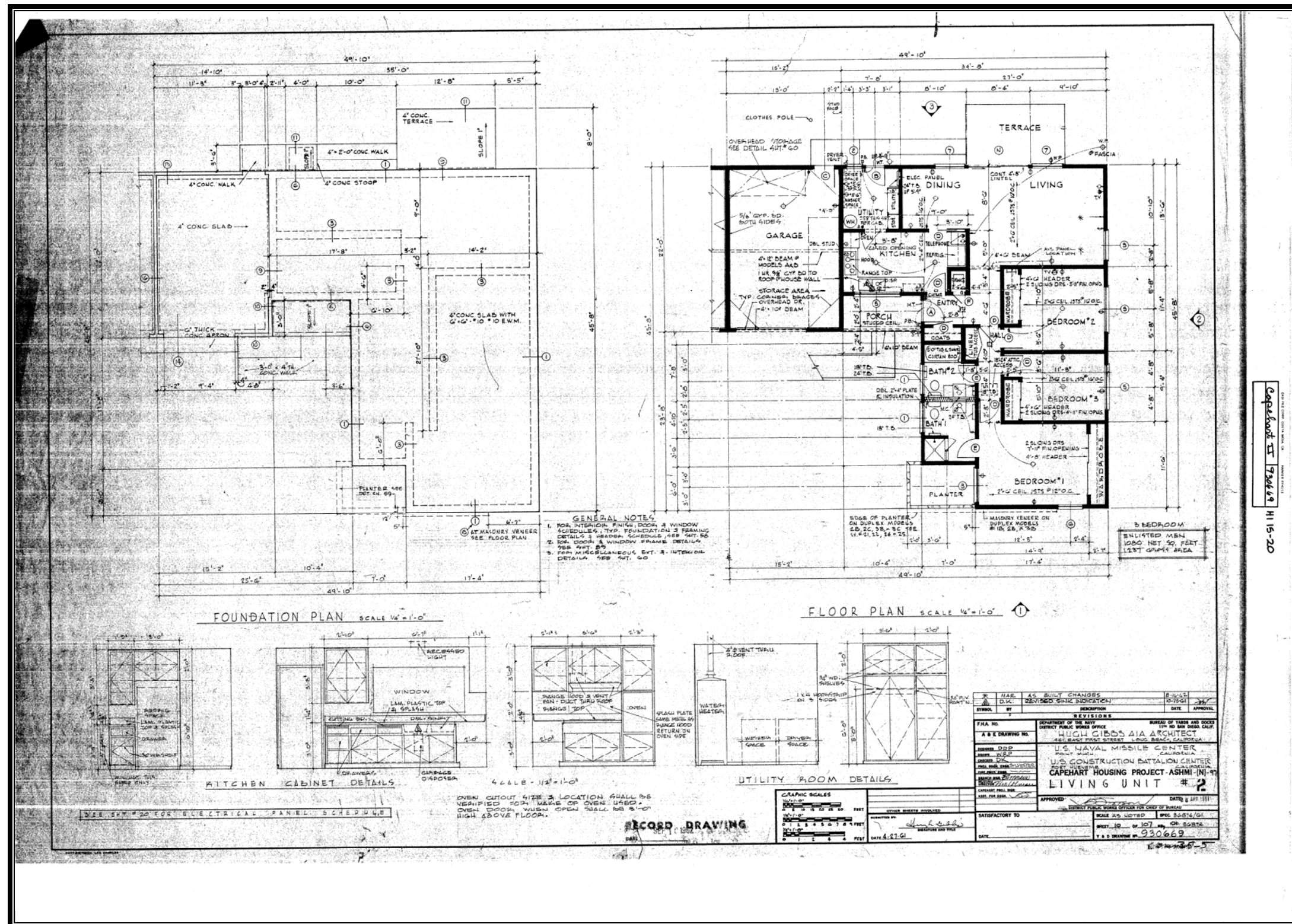


Figure A.1.39. Plan 2, San Miguel (Capehart housing), NBVC, California. (Courtesy of Public Works Department, Point Mugu)





Figure A.1.40. Addor Street, Bard Estates (Capehart housing), NBVC, California, 2005. (Photo taken by RCG&A)

(Figure A.1.55). The buildings were constructed entirely of cast concrete with brick veneer at the entry and brick posts supporting the roof of the lanai. Each building terminated in a flat, concrete roof. The plan provided an entry into the living room area with the fireplace to the right. The service portion of the house was to the rear with the dining room lying in the northeast corner next to the kitchen. The bedrooms were accessed by a corridor following the east/west axis of the building. Two bedrooms lay on the south side of the corridor, with the master bedroom located at the west end of the building. The final bedroom, a bathroom, and a utility area were on the north side of the corridor between the kitchen and master bedroom.

The façade of each building originally contained seven bays. The left-bay, set in a slightly recessed portion of the building, contained a window composed of a fixed, multi-light central element flanked by two-light, horizontal-sliding sashes. This opening corresponded with the master bedroom. Two other bedrooms were on the south side of the house. These two rooms contained two, two-over-two light, double-hung, wood-sash windows each. Access to the building was through a four-light, wood door. The entry was accented by a projecting wall section pierced by eight, square openings. A three-part window pierced the south wall of the living room. This opening contained a three-part window with a large, two-over-two light, double-hung central sash flanked by smaller sashes with a two-over-two light configuration. The rear of the building contained numerous windows of similar sash configuration (Figure A.1.56). A single-flue brick chimney rose above the roof for the fireplace. The lanai was enclosed with single-light, wood-sash casement windows on the south and east side and a jalousie window on the north elevation. A frame garage with plywood siding was associated with each dwelling unit (Figure A.1.57).

A second period of appropriated-funds housing construction took place at Point Mugu in 1949 (Figure A.1.58). The exact date of construction in 1949 is unknown. The archival record was unclear if additional housing, such as Homoja, was in use at Point Mugu, or if personnel from Point Mugu and Port

Hueneme used the Homoja area at the Construction Battalion Center. Construction in 1949 completed sixteen family housing units, and the 1958 directory of family housing notes these as the only units at Point Mugu, although its 360-unit Capehart development was under construction (Department of the Navy 1958). These housing units were referred to as “Santa Barbara” (Figure A.1.59). In 1958 the units were evenly distributed between senior officers and enlisted personnel, and in 1962 thirteen of the units were occupied by married enlisted personnel with the balance housing married officers (Department of the Navy 1958; 1962). The units were designed by Parsons-Aerojet Company of Los Angeles (Figure A.1.60) (Public Works Department, Point Mugu). Research has failed to conclusively associate Jack Parsons, co-founder of the Jet Propulsion Laboratory and Aerojet Corporation, with the firm that designed the Santa Barbara family housing at Point Mugu.

The Santa Barbara family housing complex was composed of two buildings, each containing eight units. The buildings, designated A and B, varied slightly in that unit B contained a single four-bedroom, two-bath unit. The remaining fifteen units were all three-bedroom with a single bath. In 1958, the B unit housed senior officers. The Commanding Officer (captain) of the Naval Air Station occupied unit B-1 and the Commander of the Naval Air Missile Test Center (rear admiral) lived at the opposite end of the building in the four-bedroom unit designated B-8 (Bureau of Yards and Docks 1958a). The one-story buildings were constructed of frame with a stucco finish, and the shallow-pitched shed roof was covered with a bituminous coating (Figure A.1.61).

The irregularly massed buildings contained eight family housing units. Each unit was four bays with a recessed entry porch. Windows of the façade, as depicted in the design drawings, were composed of four lights, with the central elements fixed and the outer elements operable casement windows. These were replaced later with a three-part window with a fixed central sash flanked by horizontal-sliding, single-light sash. Bedroom windows were horizontally accented awning units set high in the walls. All doors were metal, flush-panel units. The rear elevation featured a covered porch supported by 2.5-inch diameter posts (Figure A.1.62). A flush-panel door and five, one-over-one light, double-hung, metal-sash windows were sheltered by the porch. A three-part window of similar configuration to those of the façade were to the side of the porch. The opposite side of the porch contained a door and one-over-one light, double-hung, metal-sash window leading into the utility room. A fenced service yard with clothes line once occupied the area adjacent to the utility rooms, but these were removed and the rear yard of each unit enclosed with a privacy fence. Four, four-bay, frame garages were associated with the Santa Barbara units. The rear of each garage building contained vertical-batten doors leading into storage units.

The interior of the units followed a similar orientation of rooms (Figure A.1.63). Access was afforded through a recessed doorway into a small hallway. The kitchen was immediately to the left of the entry hall, with the living room filling the rear or south portion of the plan (Figure A.1.64). A small utility room was situated directly behind the kitchen, and a dinette area connected the kitchen and living room. A small, L-shaped corridor off the living room connected to the bedrooms. A linen closet and bath were also accessed from the corridor. The only variation was in the four-bedroom unit, where the hall assumes a Z shape to accommodate the fourth bedroom. This unit was also the only one to have two full baths.

The appropriated funds-housing constructed at Point Mugu and Port Hueneme in the late 1940s and early 1950s were not large-scale housing projects, consisting of only two or three buildings at each facility. The buildings were oriented to major streets, and concrete-paved walks connected the front doors with the sidewalk along the street. Parking areas were provided for the Santa Barbara housing, and alleys serviced the garages in the rear lots of Quarters F, G, and H. Landscaping and site amenities were minimal. Grass yards and foundation plantings comprised the only aesthetic improvements to the family housing units. Cohesive neighborhood planning did not occur at Point Mugu or Port Hueneme until the mid-1950s and the 1960s with the construction of Wherry and Capehart neighborhoods. Quarters F was demolished



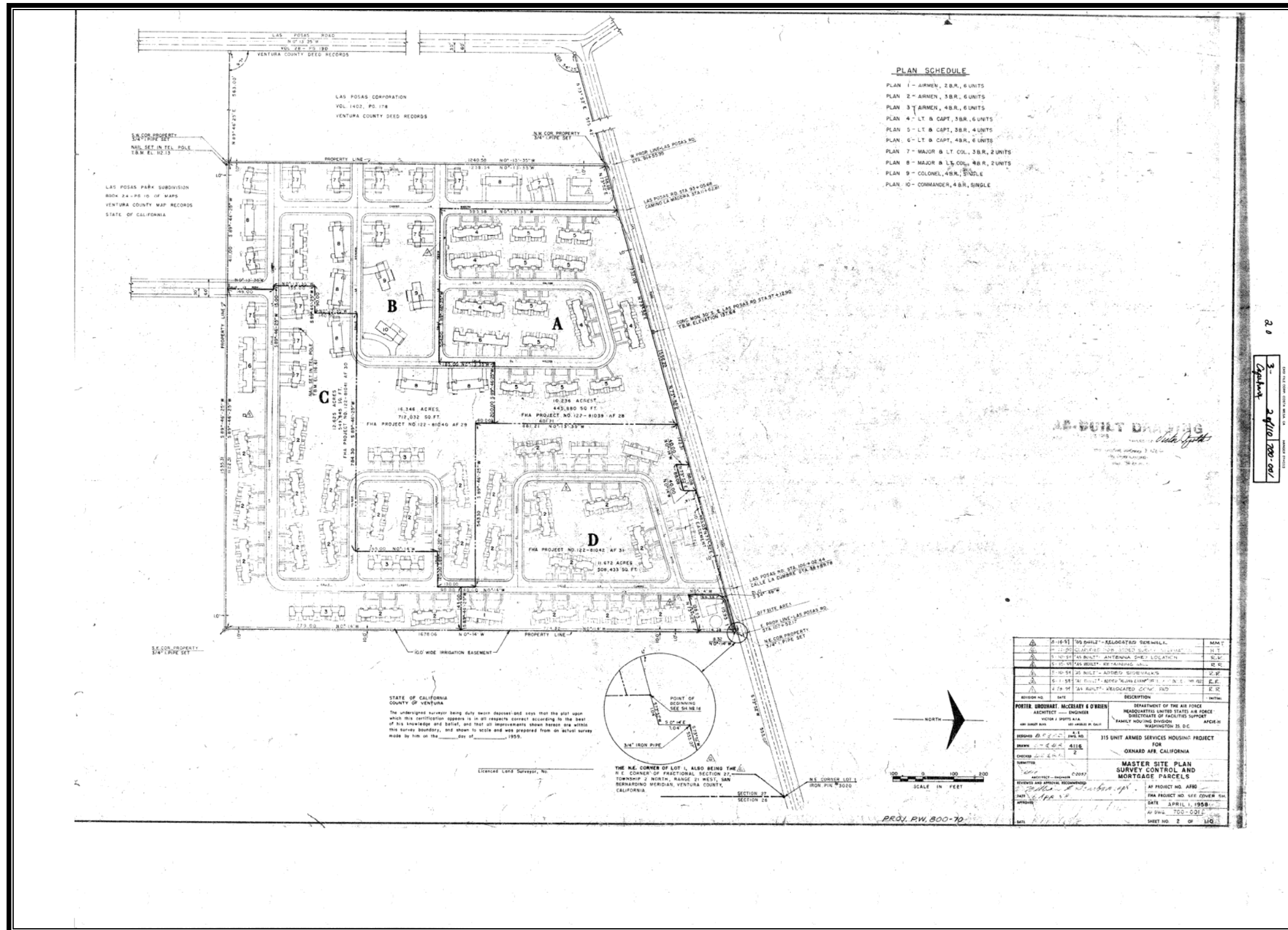


Figure A.1.41. Site Plan of Catalina Heights (Capehart housing), NBVC, California. (Courtesy of Public Works Department, Point Mugu)





Figure A.1.42. Multi-family unit (Building 1007), Catalina Heights (Capehart housing), NBVC, California, 2005. (Photo taken by RCG&A)



Figure A.1.43. Duplex unit (Building 1012), Catalina Heights (Capehart housing), NBVC, California, 2005. (Photo taken by RCG&A)



Figure A.1.44. Single-family unit, (Building 1018), Catalina Heights (Capehart housing), NBVC, California, 2005. (Photo taken by RCG&A)

during the late twentieth century, and although this appropriated-funds housing is still in the family housing inventory, it is unoccupied and is not scheduled for future use as housing (Stephen, personal communication 2005).

During the early 1960s, the housing shortage at military installations remained critical. Congressional authorizations for Capehart housing units failed to meet the demand at many Navy facilities. To compensate for reduced Congressional Capehart authorizations, Navy commands turned to appropriated-funds housing to supplement Capehart projects. At Port Hueneme, the 11<sup>th</sup> Naval District received authorization for 200 public quarters in the FY '62 appropriations. This appropriated-funds housing comprised 102 officer and 98 enlisted personnel's quarters (Department of the Navy 1962). These were segregated into two neighborhoods: Coral Sea Cove and Bard Estates. The enlisted housing at Coral Sea Cove was 49 duplexes. Bard Estates contained 24 single-family homes and 49 duplexes for officers (NBVC 2005b).

The appropriated-funds housing at Port Hueneme was originally conceived as a Capehart project. Designs for Capehart housing were completed in 1961 by Hugh Gibbs, and note that the drawings covered both Point Mugu and Port Hueneme under a single project number (Public Works Department, Point Mugu). Homes at both installations rigidly followed the plans; however, it is apparent that the Capehart project at Port Hueneme did not materialize, as the real property records and housing directories clearly identify the housing being constructed with appropriated funds. It is clear that the Navy chose to utilize existing plans and possibly even neighborhood designs to complete the housing at Port Hueneme. Archival research did not identify the contractor for this appropriated-funds housing.

Bard Estates was family housing for junior and senior officers (Figure A.1.65). The duplex units housed warrant officers through lieutenants; the detached single-family homes were reserved for lieutenant commanders and commanders. The neighborhood was designed around a curvilinear street system. At



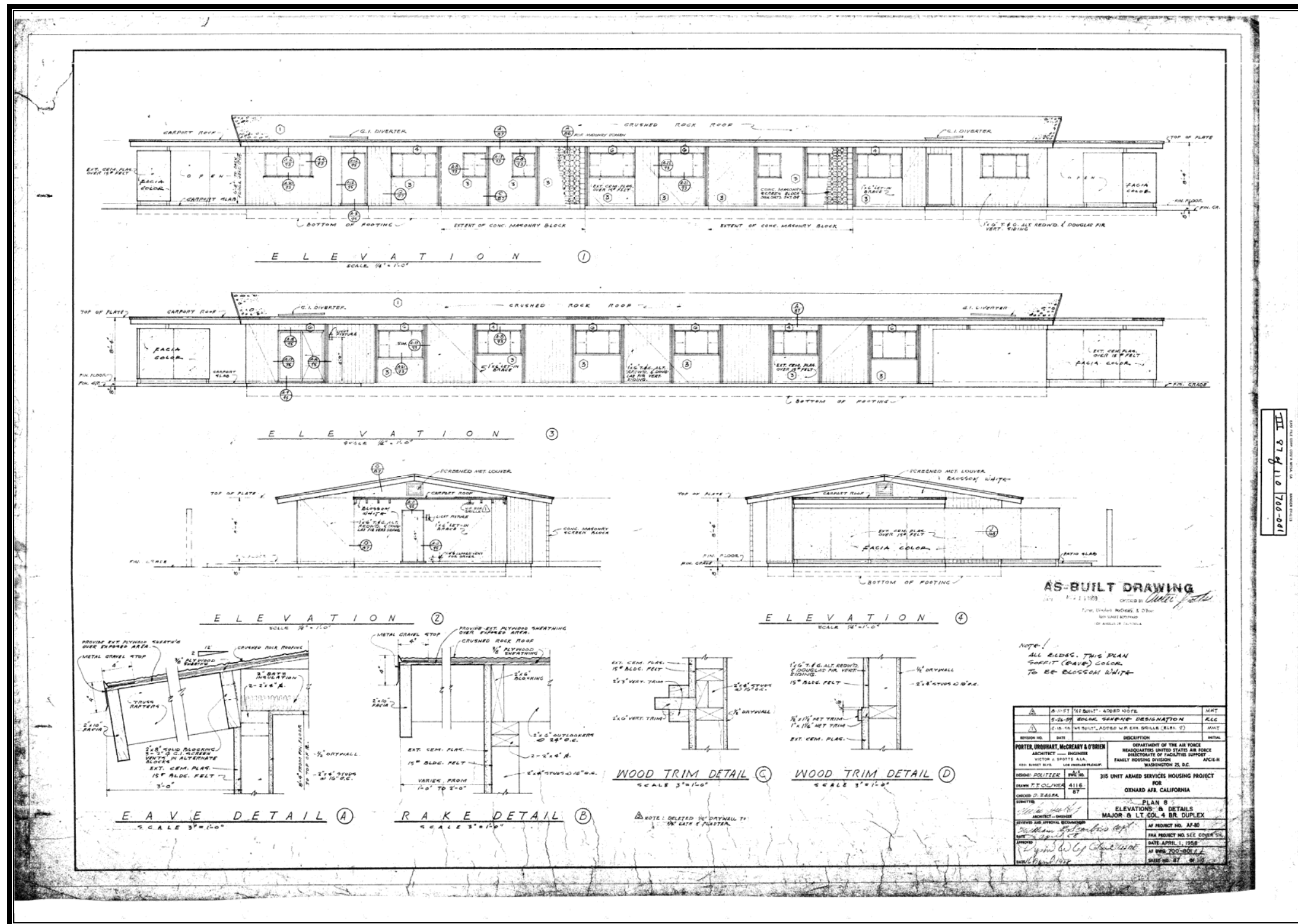


Figure A.1.45. Plan 8 elevation, duplex unit, Catalina Heights (Capehart housing), NBVC, California. (Courtesy of Public Works Department, Point Mugu)



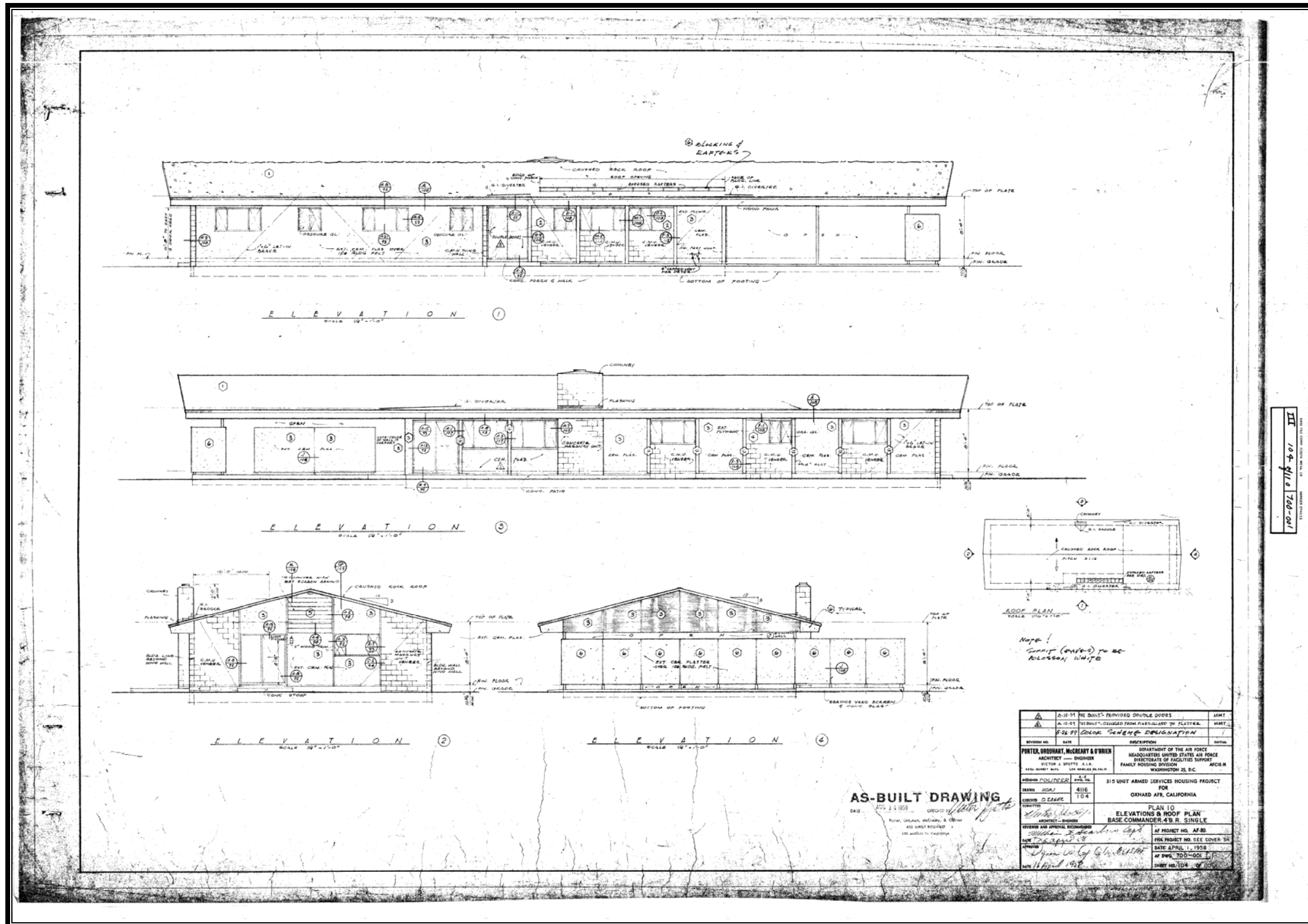


Figure A.1.46. Plan 10 elevation, single-family unit, Catalina Heights (Capehart housing), NBVC, California. (Courtesy of Public Works Department, Point Mugu).





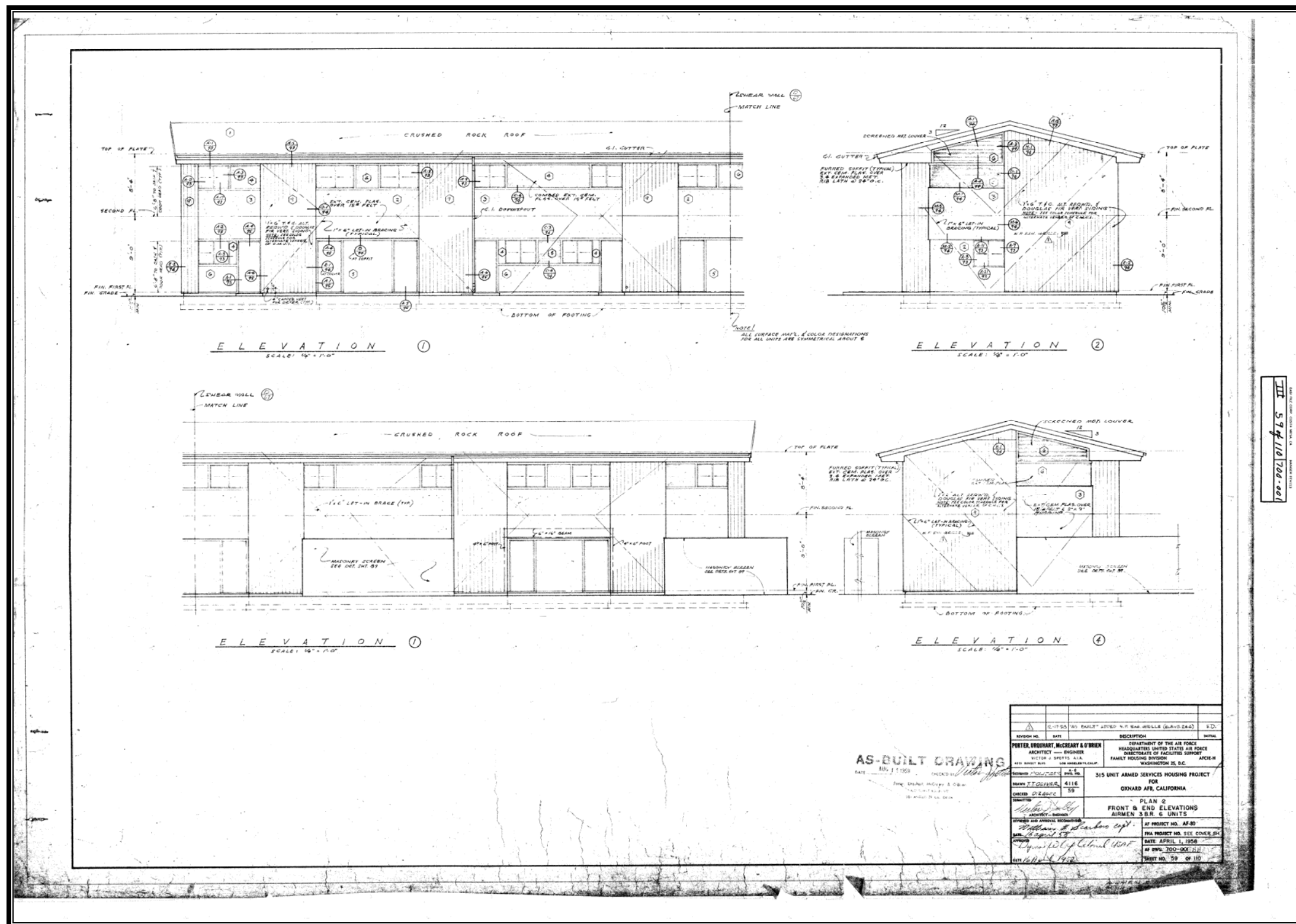


Figure A.1.47. Plan 2, elevations, multi-family unit, Catalina Heights (Capehart housing), NBVC, California. (Courtesy of Public Works Department, Point Mugu)



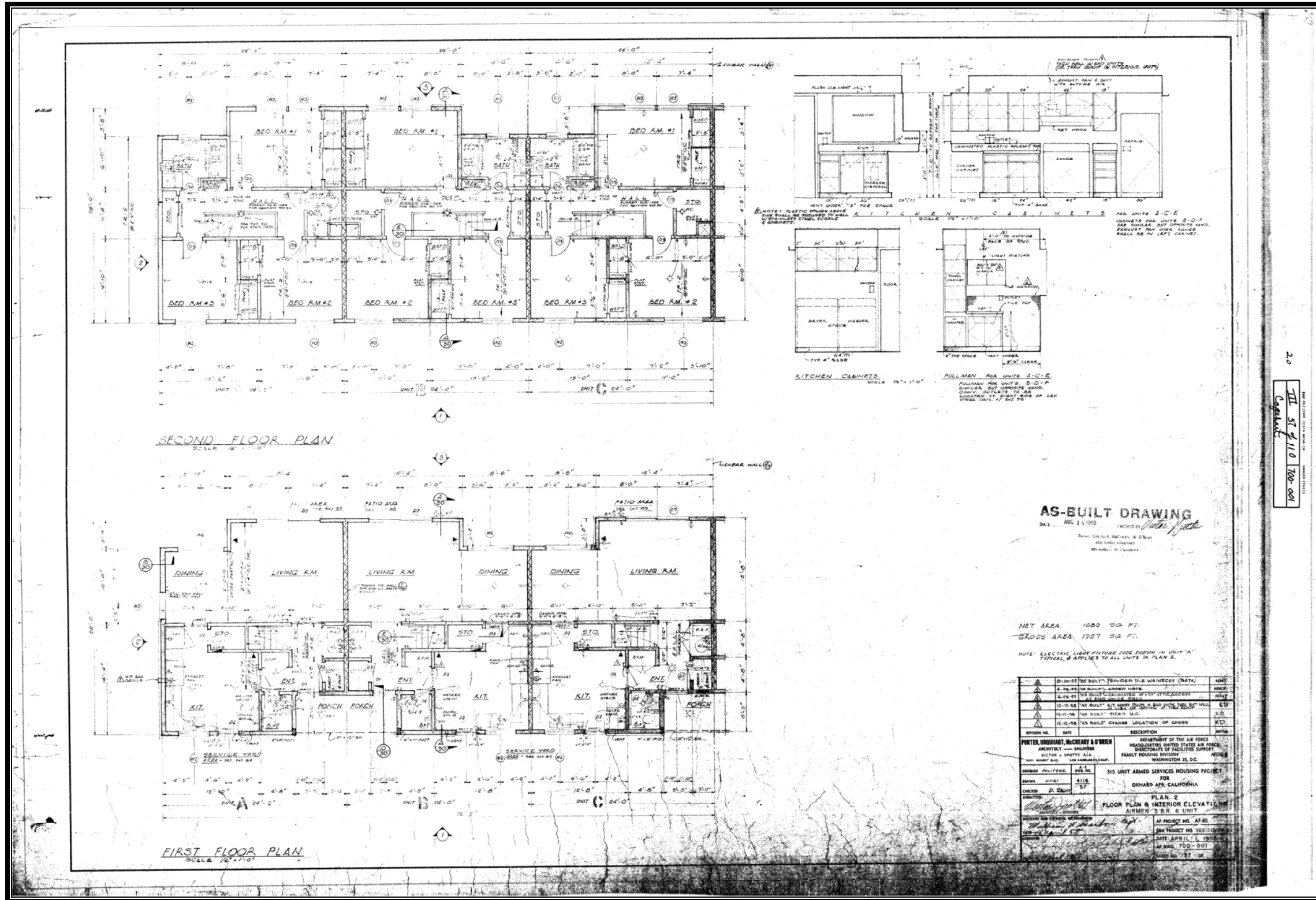


Figure A.1.48. Plan 10, floor plans, multi-family unit, Catalina Heights (Capehart housing), NBVC, California. (Courtesy of Public Works Department, Point Mugu)



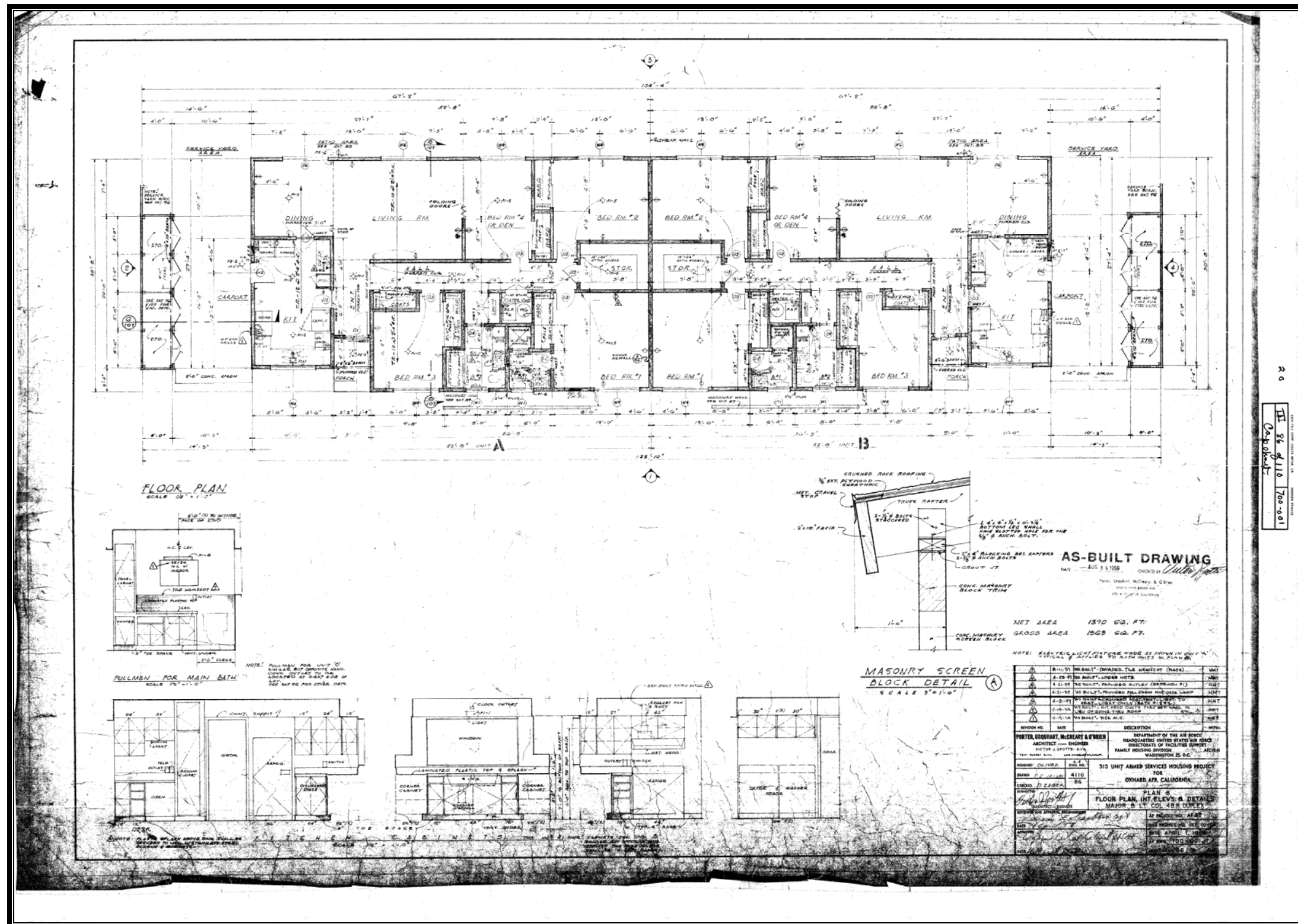


Figure A.1.49. Plan 8, floor plan, duplex unit, Catalina Heights (Capehart housing), NBVC, California. (Courtesy of Public Works Department, Point Mugu)





Figure A.1.50. “Mini Mart,” Catalina Heights (Capehart housing), NBVC, California, 2005. (Photo taken by RCG&A)



Figure A.1.51. Master TV antenna, Catalina Heights (Capehart housing), NBVC, California, 2005. (Photo taken by RCG&A)

least three single-family and five multi-family plans were used. The plans were frequently reversed; roof forms included hip, gable, and gable-on-hip; duplexes were combined in different ways, or materials mixed to create variety in the neighborhood. Otherwise, the homes were similar in materials and construction with slab-on-grade foundations and exterior insulation and finish systems (Figure A.1.66). Landscaping of the individual units consisted of foundation plantings and native tree species. Archival research did not locate a master landscaping plan for either Bard Estates or Coral Sea Cove. A variety of palms and other native trees were planted in the front yards although the placement and spacing does not imply a regimented planting scheme. Sidewalks were provided along both sides of the streets, but the influence of the automobile was evident in the lack of walks leading from the public street to the entry and the inclusion of a garage in the design of every home (Figure A.1.67). Garages were located at the end of the building for single-family homes, but the location varied in the duplex units. Duplex garages were located in the center of the plan, between the two units or at the ends of the buildings.

Coral Sea Cove contained 49 duplexes for married enlisted personnel (Figure A.1.68). The plans and spatial arrangement of the buildings paralleled those used at Bard Estates with a curvilinear street system and multiple configurations of duplexes to provide visual interest while maximizing the available developable land (Figure A.1.69). Construction at Coral Sea Cove employed at least six different plans for the duplex units. All the buildings included a garage. The housing units were either three or four bedrooms and could be combined in a variety of ways (Figure A.1.70). Plans could be reversed, and a three-bedroom unit could be paired with a four-bedroom unit. Options also included variations in the elevation of units with similar floor plans. Changes in exterior details and roof forms created visually different units (Figure A.1.71). As in Bard Estates, Coral Sea Cove was landscaped with native trees, planters, and foundation plantings although archival research did not locate a master landscape plan.

The cohesiveness of exterior detailing of both neighborhoods was repeated in the interior. Room arrangement within the housing units was similar for both single-family and duplex units. The entry led into a small hall that separated the kitchen and living areas from the bedrooms. The kitchen was at the front of the unit with the living and dining areas to the rear (Figure A.1.72). Patio doors provided access from the living room to the back yard (Figure A.1.73). A corridor off the entry hall led to the bedroom area. Linen closets and a full bath opened off the corridor, and the master bedroom lay at the end of the hall. The duplexes were generally three bedrooms, and the single-family dwellings had both three- and four-bedroom plans. A bath with shower was typical for master bedrooms. A utility room was adjacent to the kitchen and led toward the garage. A storage closet was located in the utility room. Garages of duplexes were attached to the living unit; garages of single-family homes were attached or semi-detached and joined to the house by a breezeway. Overhead storage was provided in the rafter areas of the garage.

Construction techniques for both neighborhoods were similar. The buildings were originally wood frame set on concrete slabs and covered with stucco. Architectural detailing included a veneer of brick, stone, or wood on the street-facing gable and the corners of the building. Windows were originally metal-sash, horizontal-sliding units with asymmetrical fenestration. Groupings of windows were frequently accented with grooved plywood panels or vertical planking separating the sash. The entries to the buildings were reached by a concrete walk leading from the paved driveway. Each was covered by an open-rafter section of roof and contained a concrete stoop. Patios on the rear of the buildings were accessed from sliding doors flanked by window units with an operable, two-light, horizontal-sliding sash above and two fixed lights below. Doors leading into the utility areas were half-light with an upper jalousie window. Windows of the utility rooms were also jalousie sash. Roof forms included gable, hip, and gable-on-hip configurations with projecting eaves and exposed rafter tails. The roof sheathing was deleted in certain areas around windows and entrances, creating an open eave with exposed rafters. Roofs were covered with a built-up covering of crushed stone applied over roofing tar. No gutters were provided, and roof diverters directed rainwater away from openings.



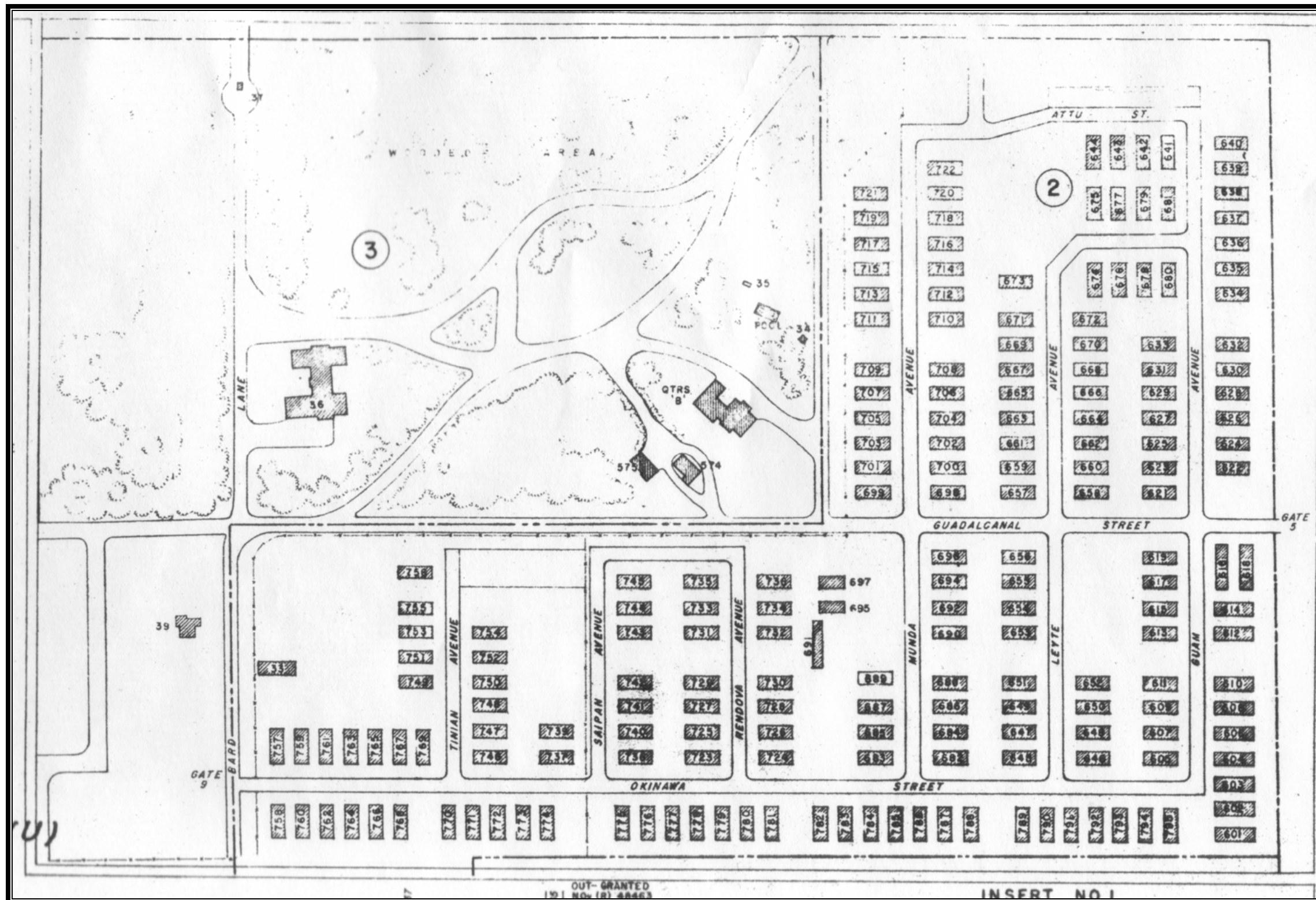


Figure A.1.52. Homoja housing area at Port Hueneme, NBVC, California. (Courtesy of Naval Facilities Engineering Command Archives, Port Hueneme)



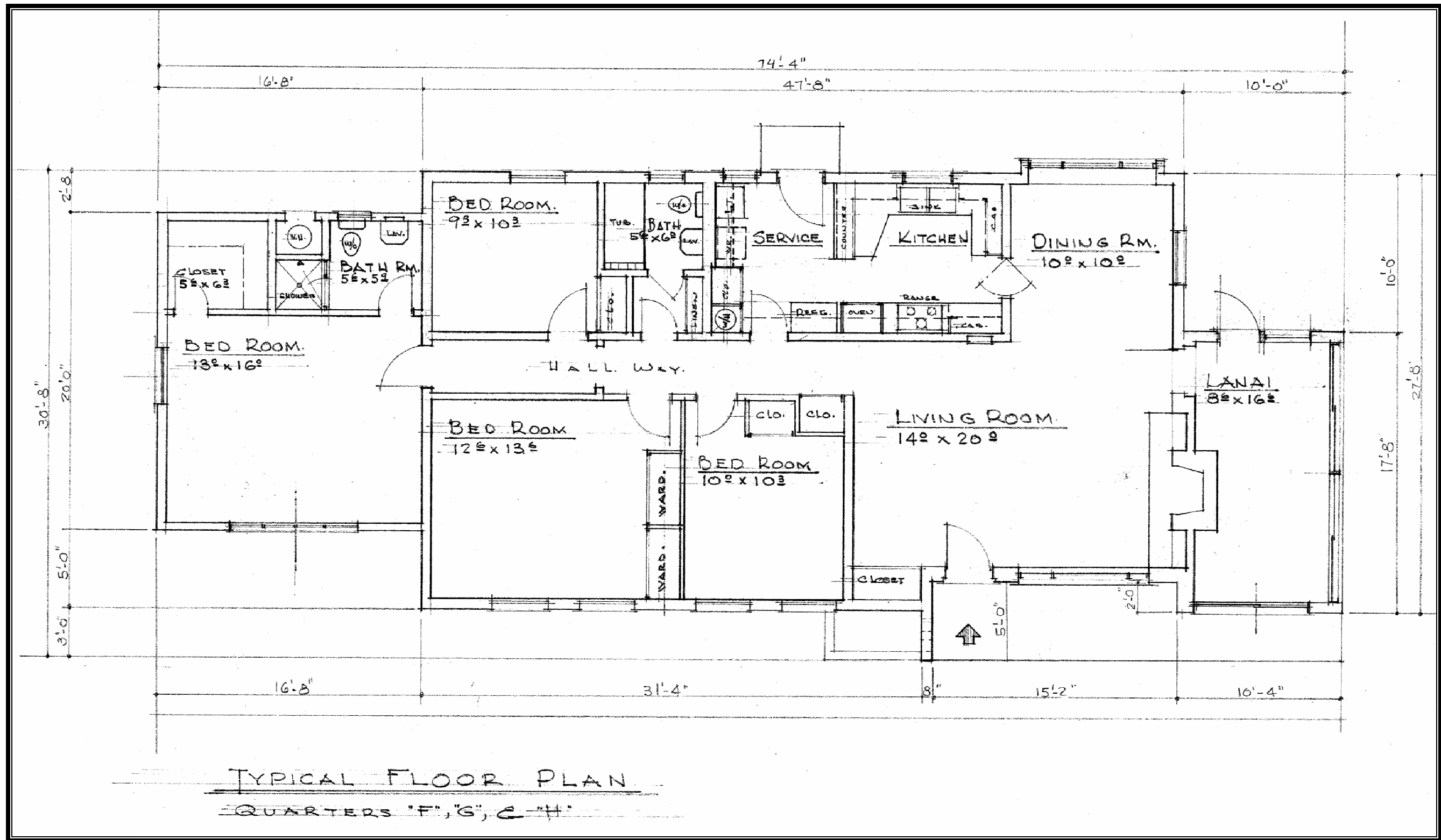


Figure A.1.53. Quarters F, G, and H, floor plan, Port Hueneme (appropriated-funds housing), NBVC, California. (Courtesy of Public Works Department, Port Hueneme)





Figure A.1.54. Single-family units (Buildings 1132 and 1133), Port Hueneme (appropriated-funds housing), NBVC, California, 2005. (Photo taken by RCG&A)



Figure A.1.55. Single-family unit (Building 1132), Port Hueneme (appropriated-funds housing), NBVC, California, 2005. (Photo taken by RCG&A)





Figure A.1.56. Single-family unit rear elevation (Building 1132), Port Hueneme (appropriated-funds housing), NBVC, California, 2005. (Photo taken by RCG&A)



Figure A.1.57. Garage of Building 1132, Port Hueneme (appropriated-funds housing), NBVC, California, 2005. (Photo taken by RCG&A)

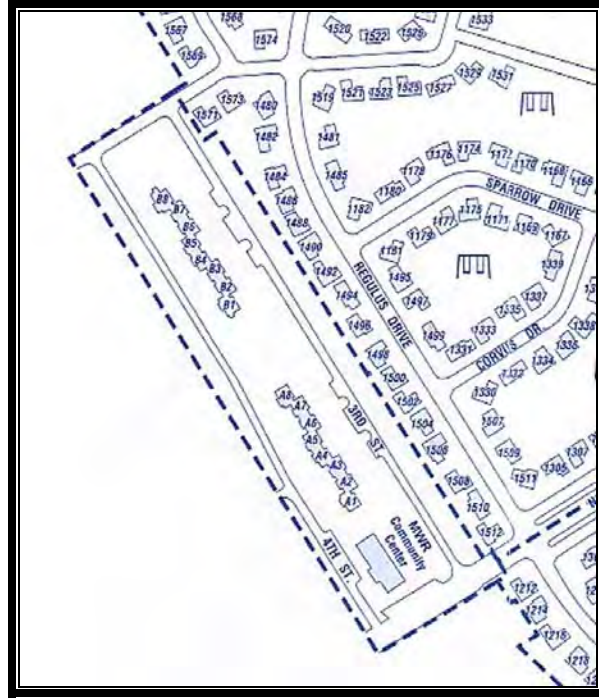


Figure A.1.58. Site plan of Santa Barbara (appropriated-funds housing), NBVC, California. (Courtesy of NBVC)



Figure A.1.59. Multi-family unit, Santa Barbara (appropriated-funds housing), NBVC, California, 2005. (Photo taken by RCG&A)

Interior finishes were originally wood floors and an interior wall covering of gypsum board. Each unit had a coat closet near the entry, a linen closet in the hall, and wardrobes in each bedroom. Additional storage was provided in a utility room that featured a built-in cupboard for use as either general storage or a pantry. The kitchens contained a range top with hood, oven, double sink with disposal, and a refrigerator. Water heaters were installed in the utility rooms, which also contained wiring and plumbing for washers and dryers, although these were not included. A clothes pole was installed in the rear yard of all units just outside the utility room door. The furnace for the forced-air heating system was located in a separate room off the entry hall. The single-car garages were 22 feet by 15 feet and included space for additional storage adjacent to the overhead door and in an overhead area at the rear.

Both neighborhoods underwent extensive renovation during the late 1980s and early 1990s. These included the replacement of windows with vinyl sash, two-light, horizontal-sliding units; replacement patio doors; removal of windows flanking the patio door and installation of fixed panes; enclosure of the open eave with perforated aluminum soffit material; and replacement roofs with a steeper pitch to accommodate new composition shingles. Wall-to-wall carpeting, new appliances, new counters and cabinetry, and upgraded bathrooms were among the interior modifications (Stephen, personal communication 2005).

A breakdown of Wherry and Capehart era neighborhoods is provided in Table A.1.3.



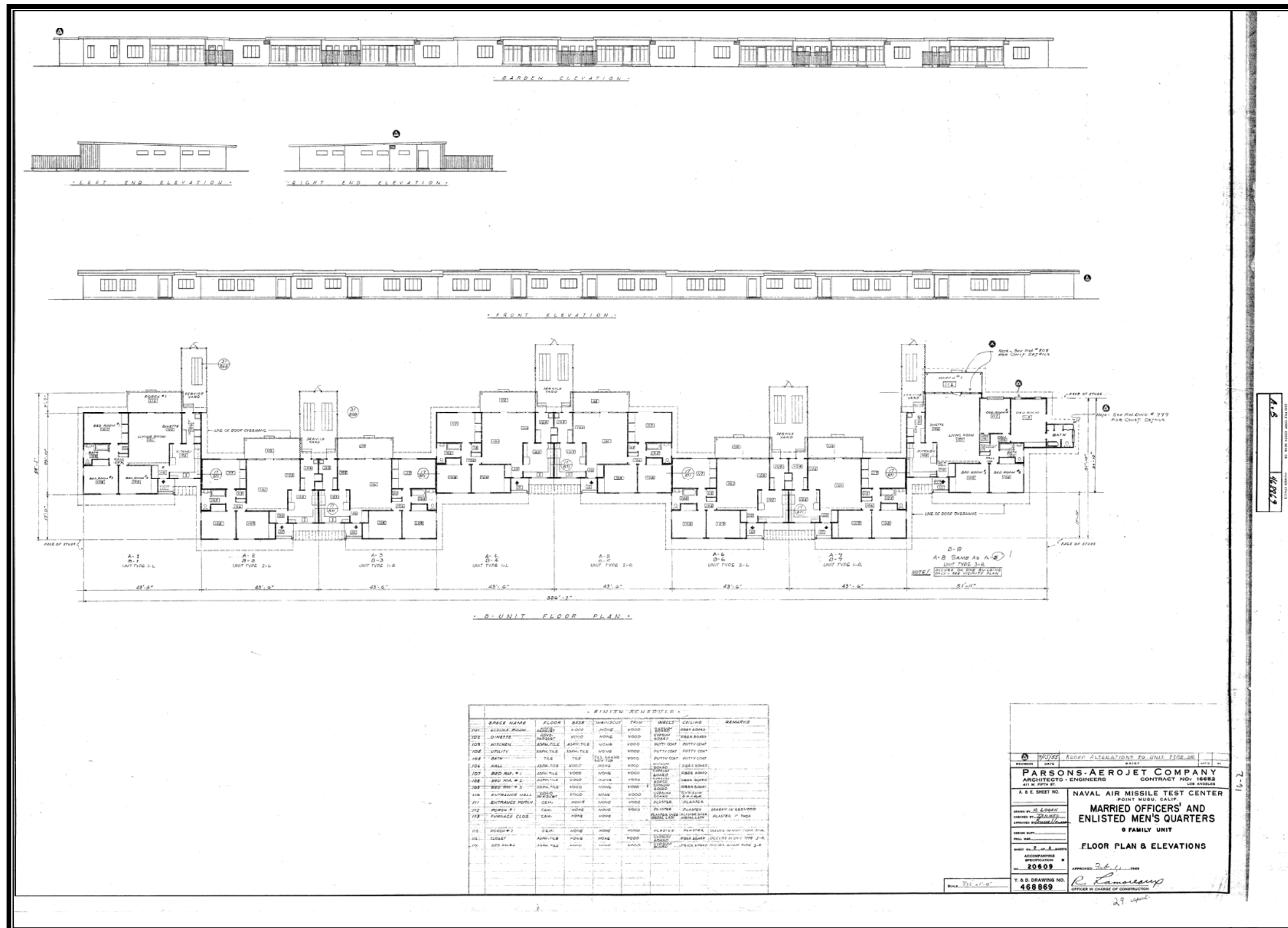


Figure A.1.60. Plan and elevation of multi-family unit, Santa Barbara (appropriated-funds housing), NBVC, California. (Courtesy of Public Works Department, Point Mugu)





Figure A.1.61. Multi-family unit, façade, Santa Barbara (appropriated-funds housing), NBVC, California, 2005. (Photo taken by RCG&A)



Figure A.1.62. Multi-family unit, rear elevation, Santa Barbara (appropriated-funds housing), NBVC, California, 2005. (Photo taken by RCG&A)



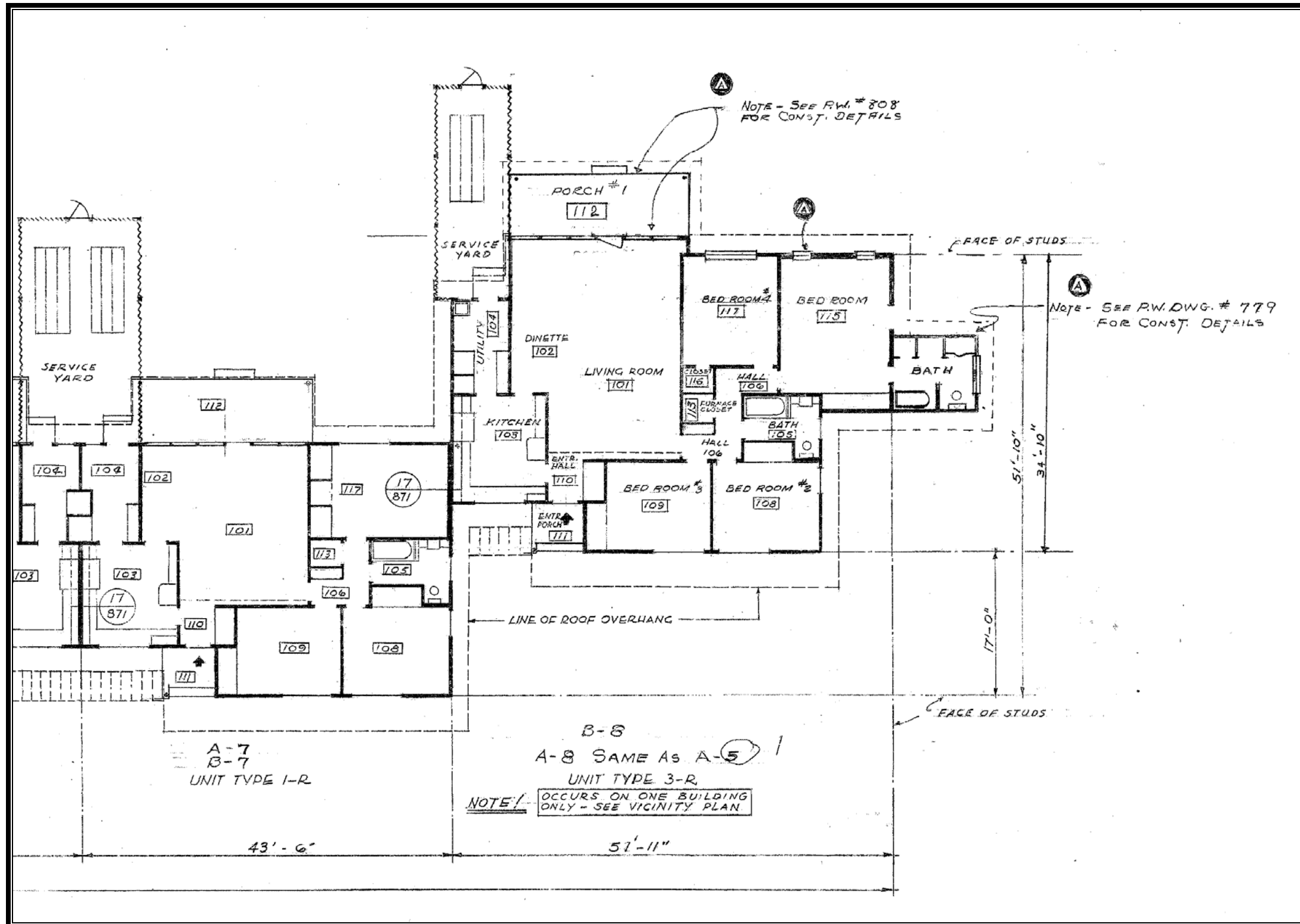


Figure A.1.63. Detail of plan for Santa Barbara (appropriated-funds housing), NBVC, California, 2005. (Photo taken by RCG&A)





Figure A.1.64. Interior of multi-family unit, Santa Barbara (appropriated-funds housing), NBVC, California, 2005. (Photo taken by RCG&A)



Figure A.1.66. Single-family unit (Building 1040), Bard Estates (appropriated-funds housing), NBVC, California, 2005. (Photo taken by RCG&A)





Figure A.1.67. Guam Avenue, Bard Estates (appropriated-funds housing), NBVC, California, 2005. (Photo taken by RCG&A)



Figure A.1.68. Duplex unit (Building 1109), Coral Sea Cove (appropriated-funds housing), NBVC, California, 2005. (Photo taken by RCG&A)



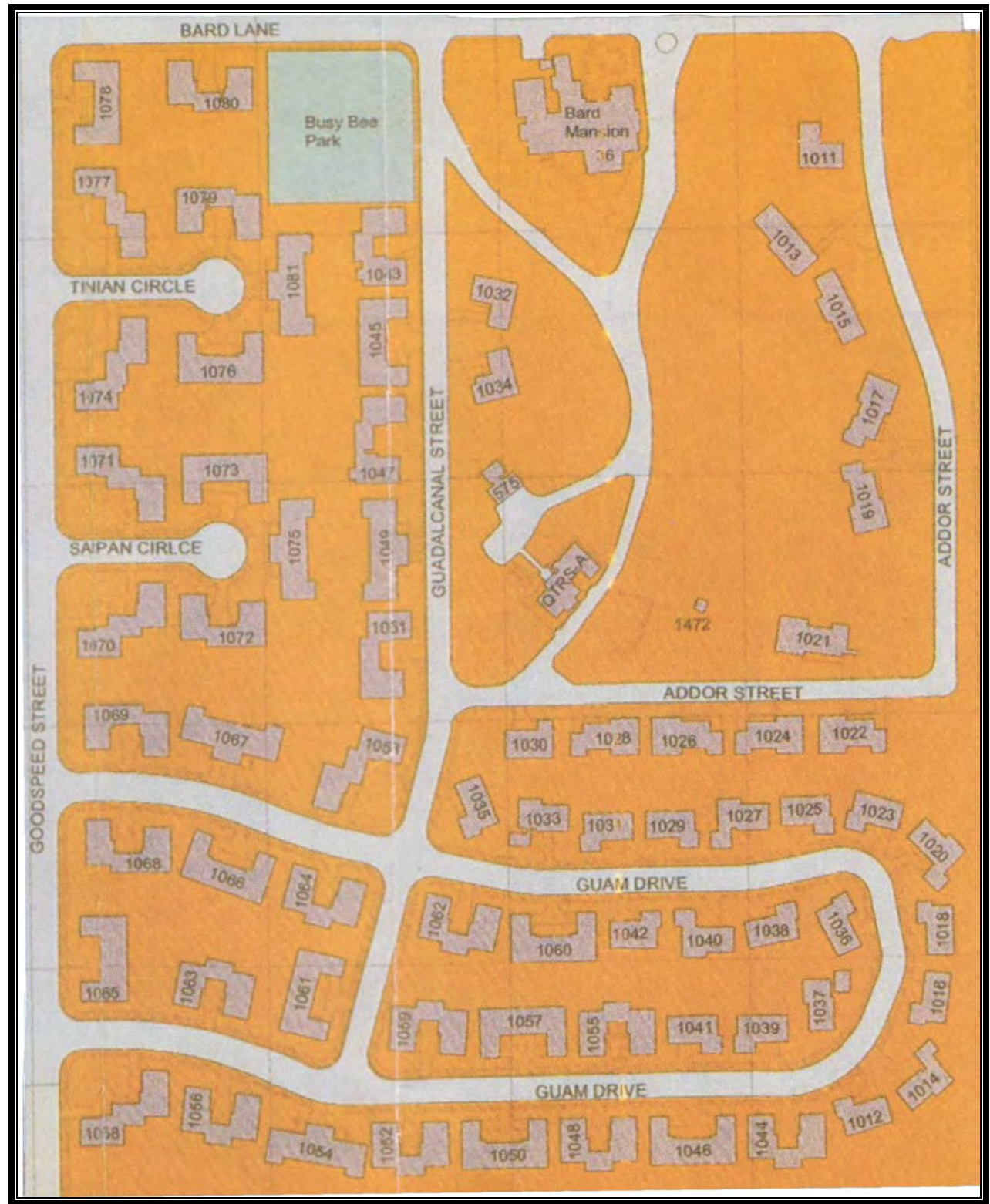


Figure A.1.65. Plan of Bard Estates, Port Hueneme, California. (Courtesy of NBVC)





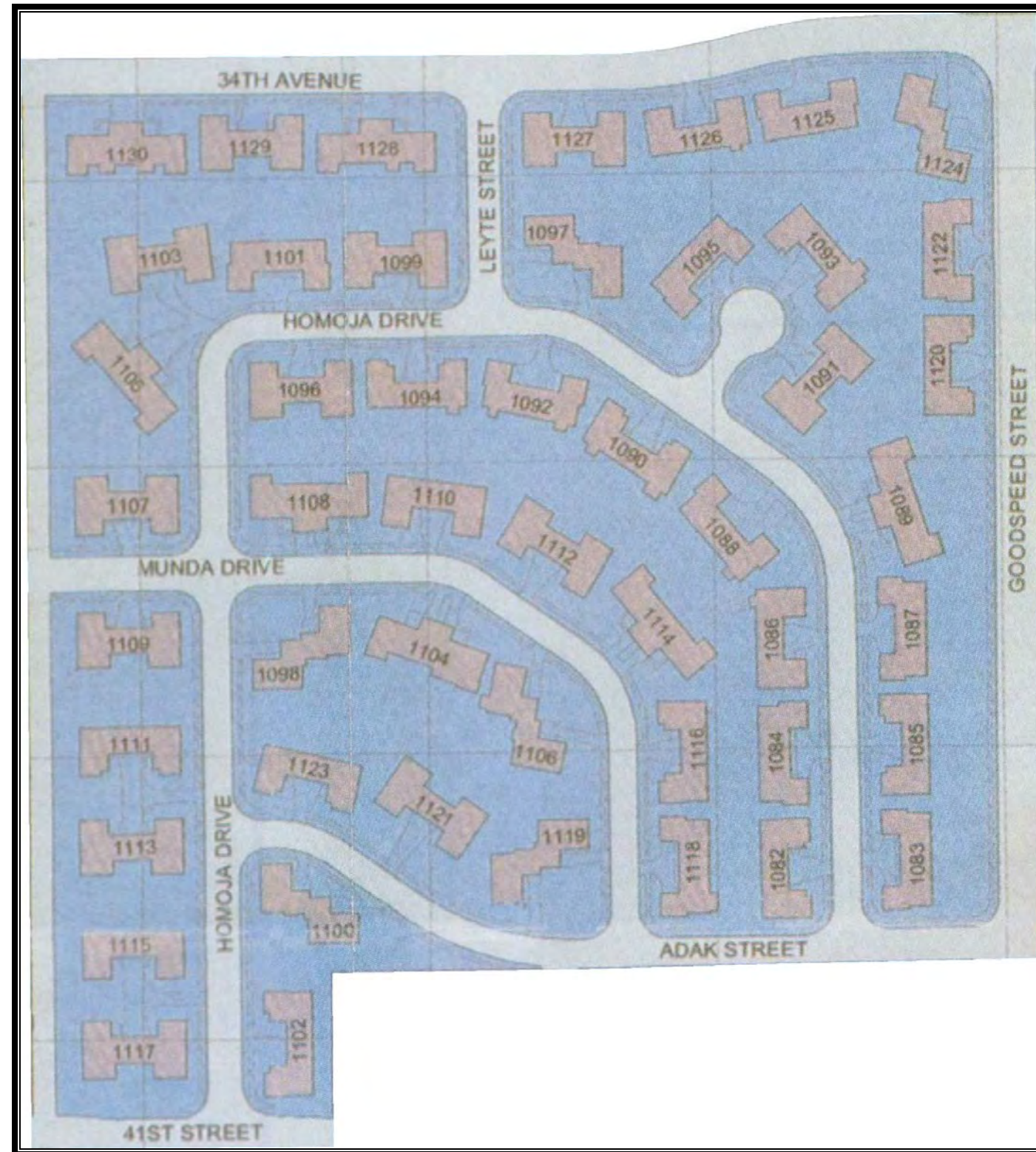


Figure A.1.69. Site Plan of Coral Sea Cove (appropriated-funds housing), NBVC, California. (Courtesy of NBVC)



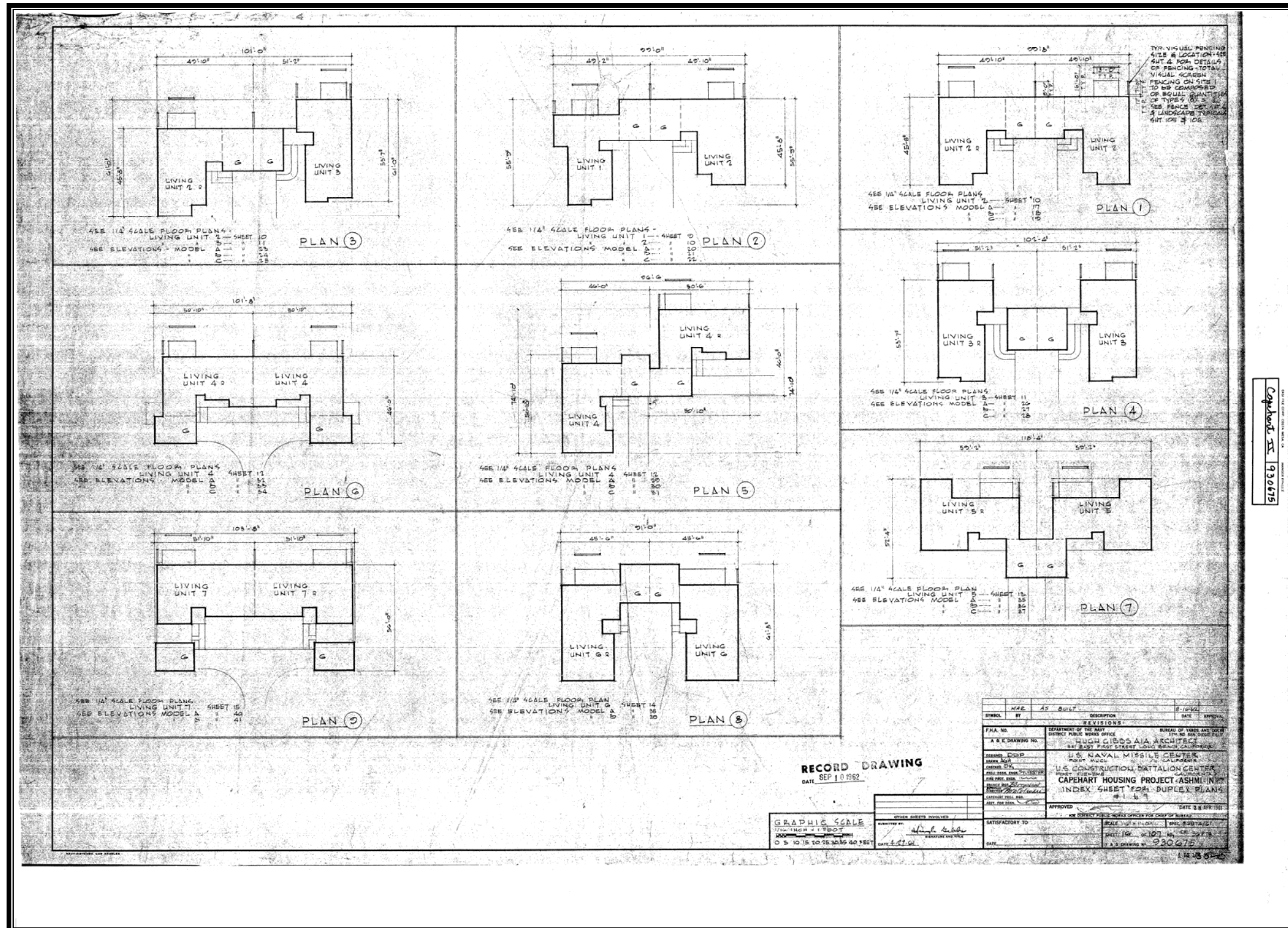


Figure A.1.70. Variety of duplex forms possible at Coral Sea Cove (appropriated-funds housing). (Courtesy of Public Works Department, Point Mugu)







Figure A.1.71. Duplex unit (Building 1119), Coral Sea Cove (appropriated-funds housing), NBVC, California, 2005. (Photo taken by RCG&A)



Figure A.1.72. Duplex unit (Building 1052), interior, Bard Estates (appropriated-funds housing), NBVC, California, 2005. (Photo taken by RCG&A)



Figure A.1.73. Single-family unit (Building 1040), interior of living and dining areas with new carpeting, Bard Estates (appropriated-funds housing), NBVC, 2005. (Photo taken by RCG&A)



## **Case Study A.2: Naval Support Activity Mid-South, Millington, Tennessee**

### Physical Description

Naval Support Activity Mid-South (NSA Mid-South) is located near Millington, Shelby County, in the southwest corner of Tennessee approximately 10 miles north of Memphis and 7 miles east of the Mississippi River. In the mid-1980s, the base contained 3,264 acres and was reported as the largest interior naval base in the United States (Coletta 1985:313). The base currently encompasses approximately 1,479 acres. The land is relatively flat and once supported agricultural land and forests.

Since 1995, the mission of NSA Mid-South is to provide the highest quality of command and community support services, public safety, and facility management services to tenant commands and personnel located on the base (NAVFAC Engineering Field Division South 2005j:4-1).

### Base History Summary

NSA Mid-South was established in November 1917 as an Army aviation field to train pilots. After the U.S. declared war on the Central Powers in April 1917, the U.S. military began a massive mobilization program. One critical area for additional manpower was airplane pilots and technicians. The Allies requested 5,000 pilots and a large number of mechanics and technical support personnel for the war effort. In November 1917, the War Department leased 904 acres near Millington, Tennessee, to establish an aviation training field; the field was named Park Field. This site was chosen, along with several new aviation fields dispersed throughout the south, because favorable weather conditions allowed flight training to be conducted for ten months out of the year. The new airfield was constructed with temporary, wood-frame, mobilization buildings. Pilots were trained on the *Jenny*, a fabric-covered biplane with a wooden propeller. After the end of World War I, military aviation training at Park Field ceased and the field was used to store aviation parts (Coletta 1985:308-313; Naval Support Activity [NSA] Mid-South 2005).

In 1920, the Army officially acquired the Park Field. Part of the field was leased to a civilian flying school, while other areas were used by several government agencies. One portion of the property was used by the Resettlement Administration beginning in 1937 to demonstrate model farming practices (Coletta 1985:308-313; NSA Mid-South 2005).

During the mobilization for World War II, a critical need for airplane pilots again was recognized, this time for both Navy and Army pilots. In February 1942, the Navy Shore Station Development Board recommended Park Field as the site of a Naval reserve aviation base. On 15 September 1942, the Naval Reserve Aviation Base officially was commissioned at the station. Additional land totaling over 2,100 acres was acquired through condemnation proceedings (NAVFAC Engineering Field Division South 2005g:11-2). On 1 January 1943, the name was changed to Naval Air Station (NAS) Memphis.

Activities at the new installation soon increased after the establishment of a separate hospital and a new school for aircraft maintenance training. The Naval Air Technical Training Center soon eclipsed pilot training. Pilots trained at the base numbered 3,600, while 9,661 students attended technical training classes (Coletta 1985:310).

The new installation was constructed by four Memphis architectural and engineering firms: Furbringer and Ehrman, Architects; Everett Woods, Architects; Gardner and Howe, Structural Engineers; and, Thomas J. O'Brien, Mechanical Engineer. The Polk-Smart Construction Company of Birmingham,

Alabama, oversaw construction (Coletta 1985:309-310). The overall installation had three independent areas. The airfield and pilot training area occupied the north side of the installation. The school for aircraft maintenance training occupied the southern half of the installation, and the hospital occupied acreage on the east side of the installation. Each area contained separate housing for officers, barracks, administration and training buildings, and utilities (NAVFAC Engineering Field Division South 2005j:B-25).

Family housing during World War II comprised three former houses that transferred with the property and seven single-family senior officer houses constructed in 1943 and designed by Memphis firm Hanker and Heyer (NAVFAC Engineering Field Division South 2005j:8-46, 9-6). Two houses were constructed for the airfield, two houses were built for the technical training school, and three were constructed to house medical officers. The houses were two-story, wood-frame buildings clad in asbestos shingle siding and vertical wood siding. The officer quarters had attached garages and guest/servants quarters.

In 1946, the base was designated a permanent Navy installation. The airfield was redesignated a Naval Aviation Reserve base to support Navy reserve pilots. In September 1946, the headquarters of the Naval Air Technical Training Center was relocated from NAS Pensacola to NAS Memphis, and all technical training was consolidated at the base. The number of technical training schools located at NAS Memphis rose from eight to twenty-four. By the late 1940s, the installation was known as the "Enlisted personnel's Annapolis of the Air" (NAVFAC Engineering Field Division South 2005j:B26-27). Personnel on the base numbered 11,500, close to the highest numbers of personnel stationed at the base during World War II.

A critical need at the base was for increased numbers of family housing. In 1947, the Navy constructed family housing for married junior officers and enlisted personnel. Junior officer housing comprised 58, one-story, wood-frame bungalows, known as Conway housing. These houses were designed and built by the Memphis, Tennessee, architectural firm Furbringer and Ehrman. The Conway houses contained a living room and dinette, kitchen, one bathroom, three bedrooms and a utility area in approximately 1,286 square feet. The exterior walls were clad in horizontal wood siding (now clad in either asbestos shingles or vinyl siding). The interior had plaster walls, hardwood floors, interior wood trim (baseboards, crown molding, and door and window surrounds), and a fireplace. Housing for married enlisted personnel was provided through 74 trailers and the construction of 80 duplexes and one triplex containing a total of 163 units, known as Johnson housing (no longer standing). The largest number of the Conway and Johnson housing units were constructed on the training section of the base, but smaller numbers of units were constructed for the naval airfield and the hospital (NAVFAC Engineering Field Division South 2005g:11-7-11-9; Naval Support Activity Mid-South Housing Office, Floor plans).

In 1949, the command structure at the base was reorganized so that the airfield and the technical training schools reported to a single commanding officer assigned to the base. The hospital continued as an independent tenant command (NAVFAC Engineering Field Division South 2005j:B28).

During the conflict in Korea (1950-1953), aviation technical training reached higher levels than was needed for World War II. More enlisted personnel required training to support Naval aircraft. The number of instructors increased to handle the increased numbers of students. Training schools located at NAS Memphis during the early 1950s included aviation mechanics mate, aviation structural mechanics, electronics, training devices, industrial training, aircraft maintenance, and aviation electronics schools for both officers and enlisted personnel. The expansion of training activities necessitated the expansion of facilities. The runway was lengthened to accommodate jet aircraft. New barracks, training buildings, and support facilities were constructed. In all, approximately \$17.9 million

was expended for new facilities between 1951 and 1969 (NAVFAC Engineering Field Division South 2005j: 8-29-33).

NAS Memphis continued as a center of technical training from 1970 through 1993. The implementation of recommendations of the Base Realignment and Closure Commissions of 1993 and 1995 greatly impacted the subsequent development of NAS Memphis. Technical training activities were transferred to NAS Pensacola, Florida; some air reserve units were relocated to Fort Worth, Texas; and, the naval hospital at NAS Memphis closed. Instead of training activities for enlisted personnel, the base became a center of Naval personnel support, and the numbers of mid-level career officers stationed at the base increased. In 1995, the base was renamed Naval Support Activity Memphis, then renamed NSA Mid-South in 1998 (NAVFAC Engineering Field Division South 2005j:B-34; Naval Support Activity Mid-South 2005). The acreage of the base decreased. The former airfield was transferred to Millington for a municipal airport. The former hospital site, with the exception of the housing, was transferred to a Federal prison.

### Wherry Housing Program at NSA Mid-South

NSA Mid-South has one Wherry neighborhood named Fairway Hills built in 1951 and 1952 for married enlisted personnel. Fairway Hills is located east of the former airfield on Bethuel Road on a portion of the original Naval golf course (Figure A.2.1). William C. Lester designed the project; he specialized in residences, apartment buildings, and schools throughout the Memphis region. The sponsor was Shelby County Construction and the contractor was Margolin Brothers Company. The cost was approximately \$4 million (NAVFAC Engineering Field Division South 2005g:11-10; NAVFAC Engineering Field Division South 2005j:8-91; 8-37).

As constructed, Fairway Hills contained 111 buildings with 540 units. The buildings were one- and two-story brick buildings that were linked to form various building footprints. All one-story sections contained two-family units (Figure A.2.2), while two-story sections housed four or six families (Figure A.2.3).

For example, two, one-story sections were linked to form one, L-shaped building containing four families. Three, one-story sections housed six families. Several one-story or two-story sections were linked to form a U-shaped building around a courtyard that could house fourteen families. The building combinations added visual interest to the neighborhood while maximizing building footprints and design efficiencies in terms of utilities (NSA Mid-South drawings file and Wherry contract).

The buildings were wood-frame construction set on stuccoed concrete-block foundations and clad in all stretcher bond, red-brick veneer (Figures A.2.4 and A.2.5).

Minimal ornamentation on the two-story sections included brick soldier course along the eave and under the first- and second-story windows. A brick soldier course outlined the eave of the one-story sections. The buildings terminated with composition-shingled hipped roofs. Plain wood soffits enclosed the overhanging eaves. Brick chimney flues, one per unit, projected from the rear elevations of the roofs to accommodate the forced-air heating system. No fireplaces were located in the units. The rear elevations of the roofs were designed with shed-roofed dormers that contained wood louvered vents, which have been removed. Each front doorway contained a six-panel wood door that accessed a concrete porch stoop sheltered under a one-story, one-bay projecting hood supported by metal supports. The rear doors were multi-light over wood paneled units that opened onto a small square concrete stoop sheltered by a small flat roof. All elevations exhibited symmetrical fenestration; the windows were placed singly and in pairs. The 1951 architect's rendering depicted two-over-two-light windows with

rowlock sills; the drawings stipulated wood-frame windows with steel casements in bathrooms. Sound-proofing walls separated units within buildings (NSA Mid-South drawings file and Wherry contract).

The neighborhood provided 108 one-bedroom units, 324 two-bedroom units, and 108 three-bedroom units. One-story buildings contained examples of one- to three-bedroom layouts, while two-story buildings contained two-bedroom units. The unit layouts in all one-story buildings were similar (Figure A.2.6).

The front door opened into a living room. The kitchen was located at the rear of the unit with a door to the rear yard. The unit had one bathroom, which was located near the bedrooms. A one-bedroom unit originally had approximately 670 gross square feet of living space; two-bedroom units had approximately 870 gross square feet of living space, while three bedrooms contained approximately gross 1,140 square feet of living space.

The two-story buildings originally contained identically configured two-bedroom units with a living room, a dining room, a kitchen overlooking the rear yard, and a storage area under the stairs on the first floor and two bedrooms with one bathroom on the second floor, totaling approximately 970 square feet of living space. Each unit had a coat closet near the entry, a closet in the hall and in each bedroom, and in interior storage room with approximately 40 square feet. Two-bedroom and above units had built-in shelving in the linen closets (Figure A.2.7). The kitchen contained a refrigerator, a stove, a sink, a water heater, and cabinets. The bathroom contained a built-in tub, a toilet, a sink, and a built-in metal medicine cabinet (Figure A.2.8) below the ceiling (NSA Mid-South drawings file and Wherry contract).

The interiors of Wherry housing were finished simply. The walls and ceilings were finished in plaster (Figure A.2.9). Interior trim included molded wood surrounds around doorways and window openings and four-inch wood baseboards. Hall closet doors were two-panel wood units, while bedroom closets often had solid sliding doors. The windows were fitted with Venetian blinds. The local Navy newspaper, *Bluejacket*, contained the following description of the interior of Wherry housing:

All of the homes have spacious interiors and are finished in soft colors of yellow, blue, pink, and gray. Forced air heating systems are utilized and ample closet space is available in each room. Floors are finished in block hardwood in the living rooms, bedrooms, and hallways. Kitchens have asphalt tile while bathrooms are finished in marble tile (*Bluejacket* 1952 quoted in NAVFAC Engineering Field Division South 2005j:8-91).

By 2005, the units were primarily carpeted. Hardwood flooring remained under the carpeting on the second floors. The first floors had vinyl composite tiles over the concrete slab underneath carpeting (NSA Mid-South drawings file and Wherry contract).

The neighborhood was laid out on an essentially triangular-shaped parcel. Three interior roads accessed the neighborhood from Bethuel Road, a two-lane county road. The neighborhood had no direct cross streets, but a slightly curving street pattern that ended in parking areas. Only one road provided access to Navy property on the west side of the neighborhood. The buildings were set back from the roads. The roads were constructed with wide areas that allowed front-end automobile parking and curbs. Each unit had one assigned parking spot, but over time, additional parking areas were added when it became popular for families to own more than one vehicle.

Sidewalks lined both sides of the streets and provided short walks to each individual front door. Sidewalks also were placed behind each dwelling, linking the buildings on the interior of the blocks. Streetlights were included in the original design. Fire call boxes and fire hydrants also were provided.

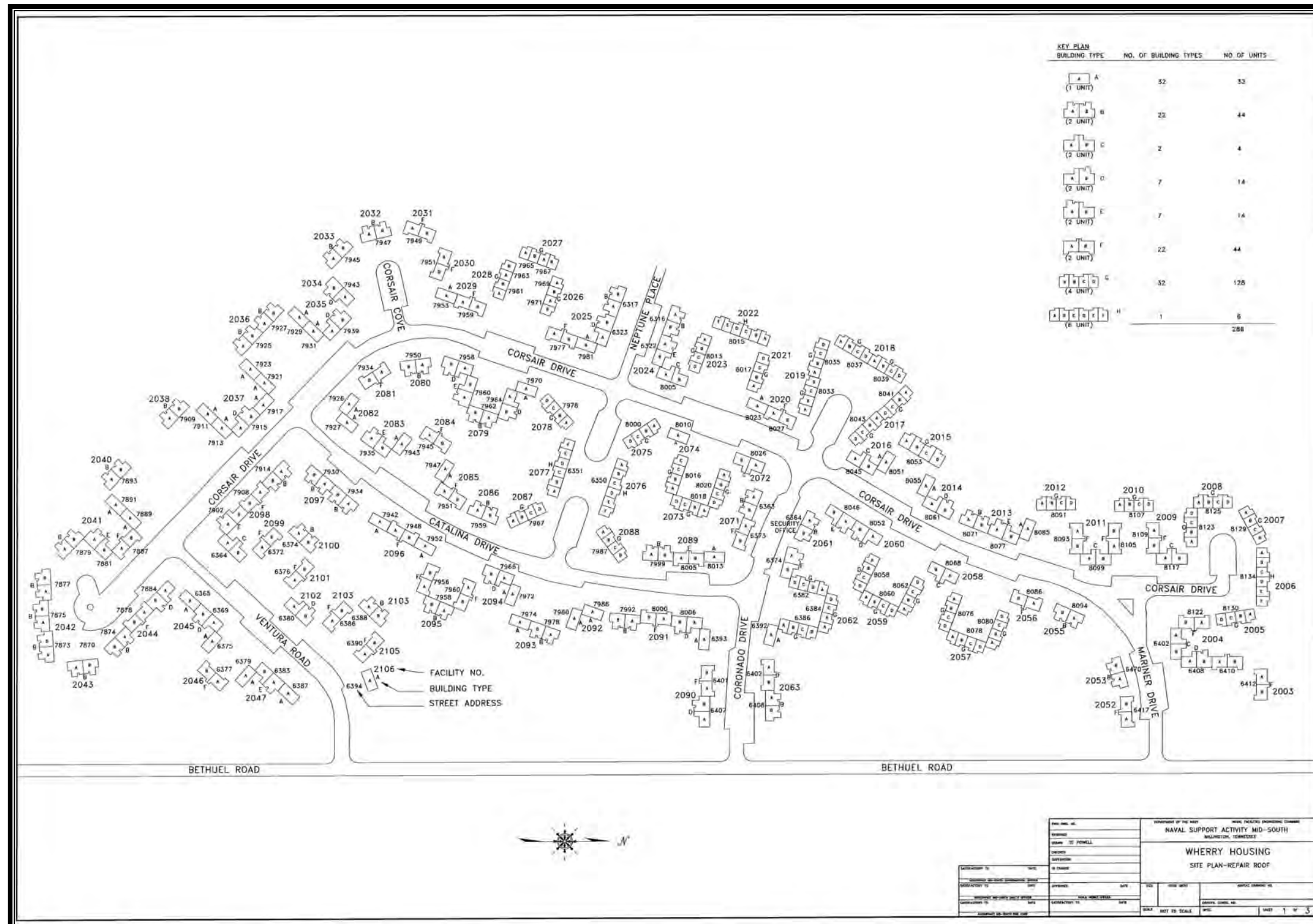


Figure A.2.1. Ca. 2004 Map of Fairway Hills Wherry neighborhood, NSA Mid-South, Tennessee. Buildings along Bethuel Road were demolished in 1998. (Courtesy of NSA Mid-South)



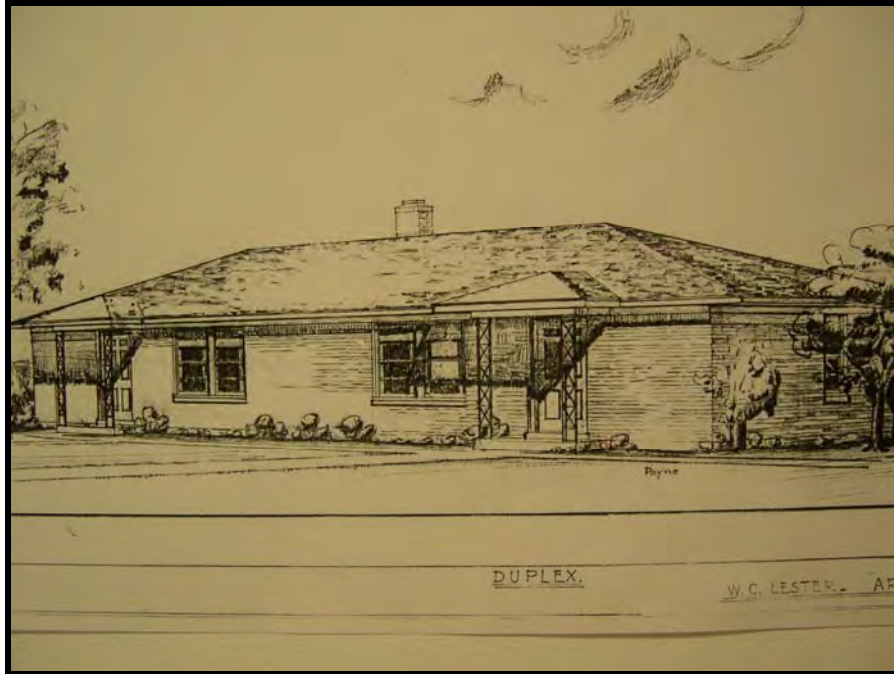


Figure A.2.2. Architect's 1951 rendering of one-story section containing two families (Types 1, 2, 3, Wherry housing), NSA Mid-South, Tennessee. (Courtesy of NSA Mid-South)



Figure A.2.3. Architect's 1951 rendering of two-story section containing four families (Types 4 and 6, Wherry housing), NSA Mid-South, Tennessee. (Courtesy of NSA Mid-South)





Figure A.2.4 8010 Corsair Drive front elevation (Wherry housing), NSA Mid-South, Tennessee, 2005. (Photo taken by RCG&A)



Figure A.2.5. 8078-8080 Corsair Drive front elevation (Wherry housing), NSA Mid-South, Tennessee, 2005. (Photo taken by RCG&A)



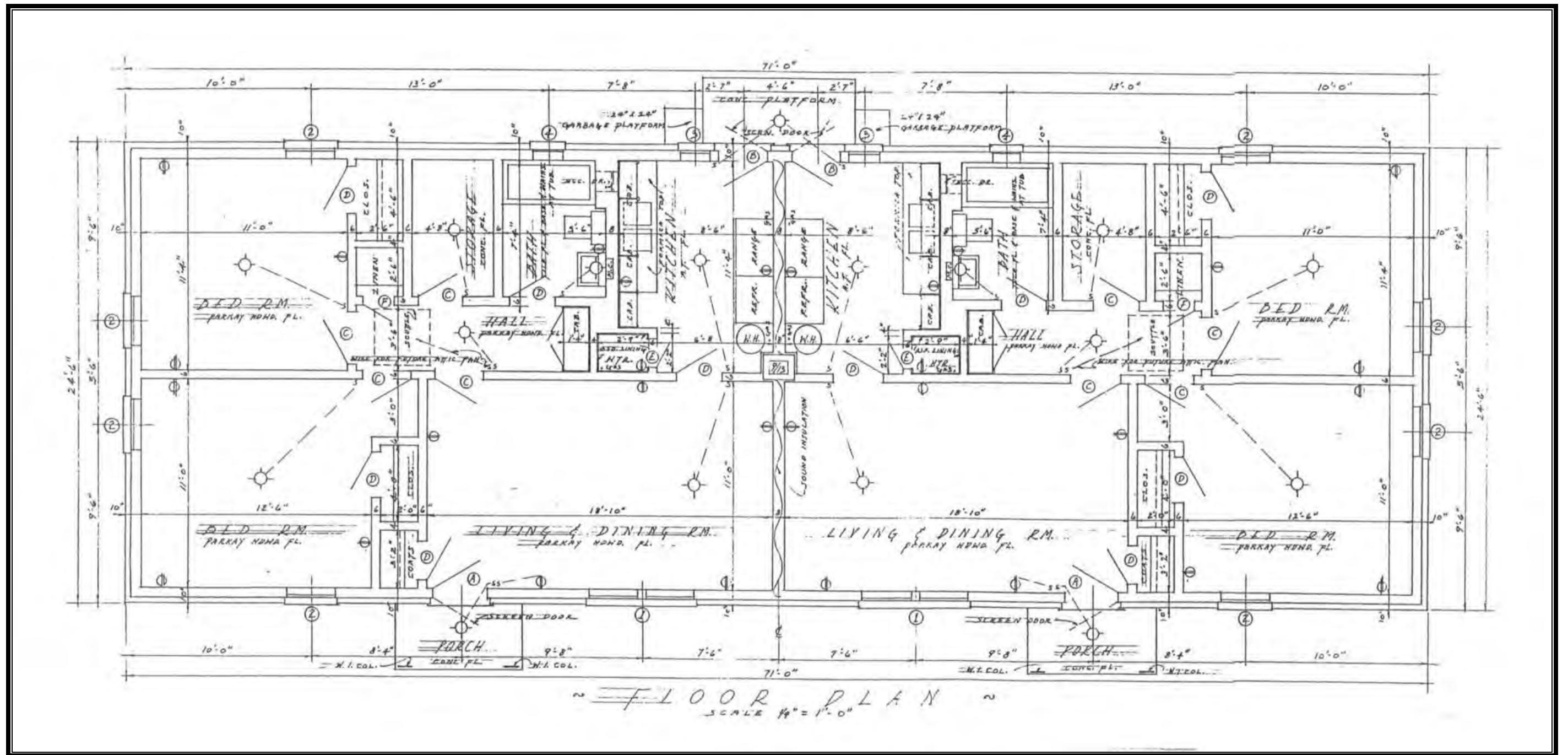


Figure A.2.6. 1952 floor plan of two-bedroom units (Wherry housing), NSA Mid-South, Tennessee. (Courtesy of NSA Mid-South)





Figure A.2.7. 8010 Corsair Drive built-in closet (Wherry housing), NSA Mid-South, Tennessee, 2005. (Photo taken by RCG&A)



Figure A.2.8. 8010 Corsair Drive bathroom medicine cabinet (Wherry housing), NSA Mid-South, Tennessee, 2005. (Photo taken by RCG&A)



Figure A.2.9. 8077B Corsair Drive typical interior showing walls and trim in living room (Wherry housing), NSA Mid-South, Tennessee, 2005. (Photo taken by RCG&A)

Laundry poles and lines for clothes drying were located behind each duplex in the one-story building and every two living units in the two-story buildings.

The original landscaping included 154 water oaks (*Quercus nigra*), 108 willow oaks (*Quercus phellos*), and 20 Siberian Elms (*Ulmus Pumila*), many of which remained. The trees were sited in the front and rear yards of the buildings. Five types of shrubs were planted along the fronts of the buildings. Playgrounds were noted on the original drawings, but may have been added to the drawings at a later date, since the lettering identifying the playgrounds was different from all other lettering on the drawings. The contract for constructing the Wherry housing specified one playground for 50 housing units. The playground contained a combination play unit including a swing, slide, and teeter-totter that was to be heavy-duty and non-corrosive (NSA Mid-South drawings file and Wherry contract).

The Navy acquired the Wherry neighborhood in 1961. In 1962, a rehabilitation and improvement project in the Wherry neighborhood was completed. The project architect was Wiseman, Bland & Associates, Inc., from Memphis through the Bureau of Yards and Docks Southeast Division in Charleston, South Carolina. Overall, while the number of buildings remained the same, the number of housing units decreased from 540 to 486 units. Fifty-four, one-story duplexes were converted into single-family, four-bedroom units. To achieve this configuration, the original two kitchen areas were combined, the two bathrooms were retained, and the original living room of one unit was converted into two bedrooms. The overall living space of the dwelling was increased to approximately 1,240 square feet. In addition, a third bedroom was added to 114 formerly two-bedroom units to increase the available number of three-bedroom units to 222, while the number of two-bedroom units decreased to 210 units (Figure A.2.10). An additional breakfast room was added off the kitchens of selected three-bedroom units. One-story storage areas were added to the rear elevation of the two-story buildings to

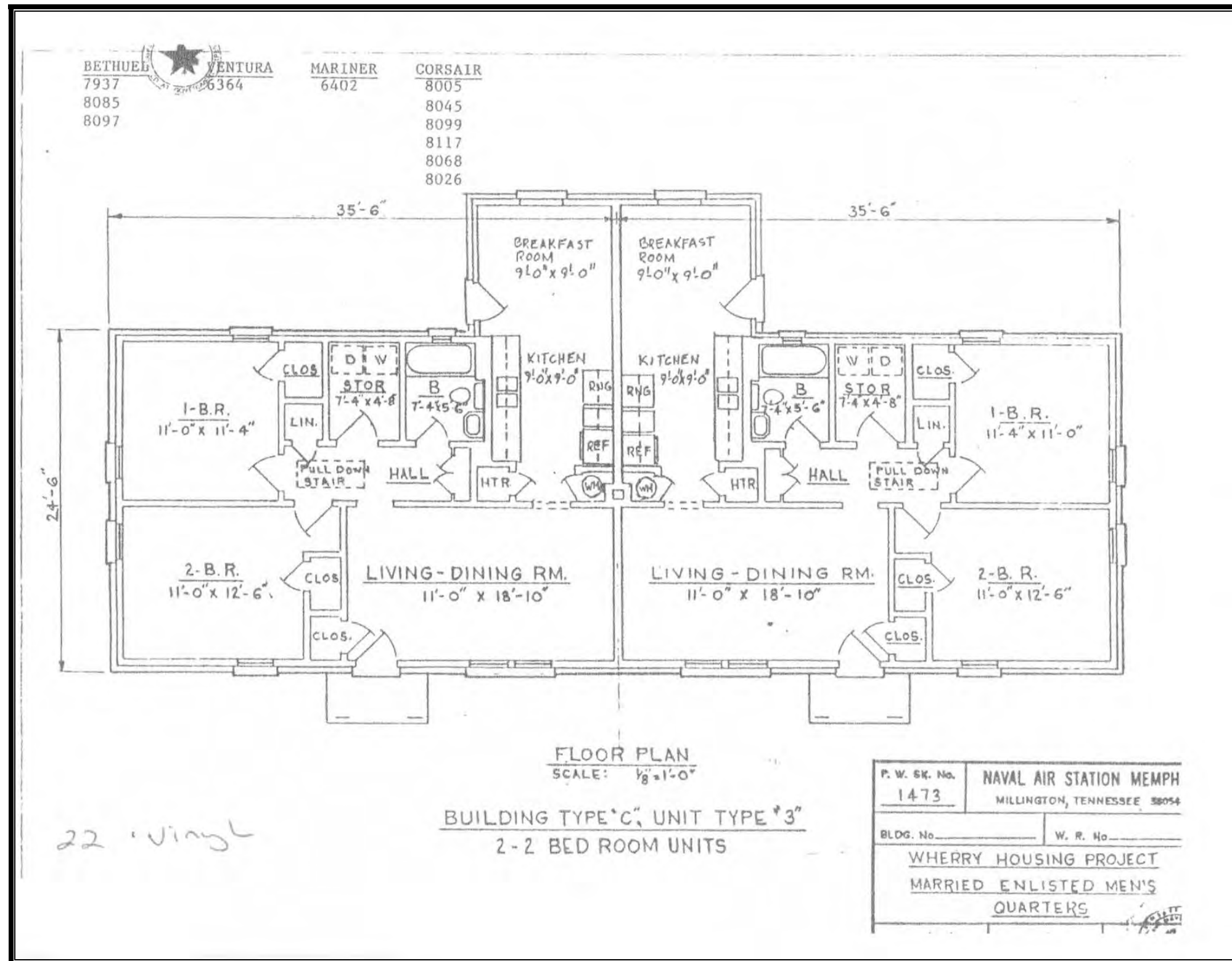


Figure A.2.10. Floor plan of two-bedroom duplex in one-story section (Wherry housing), NSA Mid-South, Tennessee. (Courtesy of NSA Mid-South, Housing Office)



accommodate washers and dryers. Other changes to the buildings during this revitalization included providing washer and dryer connections in each unit, replacing hardwood flooring with asbestos tile, and adding pull-down stairways to access new attic storage areas (NSA Mid-South drawings file). In 1965, dining rooms and additional storage areas were added to 22 units in the Wherry neighborhood. Concrete patios, externally-accessed storage units constructed of plywood, and privacy fencing between the units were added in 1969. Additional parking pull-outs also were added throughout the neighborhood during the late 1960s to accommodate multiple cars per family (NSA Mid-South drawings file).

Between 1981 and 1985, the Wherry neighborhood underwent a whole site improvement project. This project included the construction of breakfast-room additions to the remaining one-story, two- and three-bedroom units; the addition of a second bathroom to three-bedroom units; installation of new kitchen cabinets and appliances including dishwashers and garbage disposals in all units; installation of new tiling and finishes in bathrooms in all units; and, installation of wood-frame, one-over-one-light, double-hung sash windows in all buildings (NSA Mid-South drawings file).

Other projects that occurred during the 1980s included renovation of all bathrooms, reproofing of all roofs with new asphalt shingles and removal of rear roof dormers, and replacement of all lighting fixtures. In 1985, new trees and bushes were added to the neighborhood. The playgrounds were relocated, enlarged, and provided with new play equipment (NSA Mid-South drawings file).

In 1998 and 1999, 50 two-bedroom units located in the two-story buildings were reconfigured to form 25 four-bedroom units. This was accomplished by removing the partition wall between two units, removing one of the staircases, removing one of the kitchens, and leaving two upstairs bathrooms intact. Changes that occurred since 1990 included replacement of exterior doors (1998); addition of shutters (1998); replacement of porch supports with turned wood columns (1998); construction of new patios, patio storage sheds and roof coverings for all front stoops (1990); coverage of soffits and fascia with vinyl siding (2002); upgrades to playground equipment; and, removal of sidewalks along the rear elevations of the buildings.

In 1998, the Navy began to reduce the number of housing units at NSA Mid-South through demolition of the Wherry neighborhood. In the 2005 *Integrated Cultural Resources Management Plan*, the Wherry neighborhood was evaluated as possessing the qualities of significance for listing in the National Register of Historic Places. In 2002, a Memorandum of Agreement between NSA Mid-South and the Tennessee State Historic Preservation Office was signed that allowed for the demolition of Wherry housing following the completion of photographic documentation and the fabrication of a plaque (NAVFAC Engineering Field Division South 2005j:Appendix C). As of November 2005, the NSA Mid-South's Wherry neighborhood contained 113 units in 31 buildings.

### Capehart Housing Program at NSA Mid-South

In 1961, 250 units of housing were constructed under the Capehart program. Two hundred twenty units were designed for enlisted personnel and thirty units were provided to officers. The U.S. Congress appropriated approximately \$1,482 per unit for site improvements. The architect was Thomas F. Faires & Associates of Memphis. The firm of Smith and Turley served as the construction contractors (NAVFAC Engineering Field Division South 2005g:11-11; NSA Mid-South drawings file). The enlisted personnel neighborhood was designed as a separate neighborhood, while the officer houses were added to the already existing officer housing area established during the late 1940s. NSA Mid-

South counted each unit as a separate building with an individual building number in the real property inventory. As counted by NSA Mid-South, the current building totals were 219 houses for enlisted personnel and 30 houses for officers; one house in the enlisted neighborhood was demolished following extensive damage from a gas leak (NSA Mid-South real property records 2005b).

The enlisted personnel neighborhood was laid out on a rectangular parcel on Navy property. The neighborhood has a perimeter road with curved cross streets and two access roads to the installation (Figure A.2.11). The buildings were set back from the streets and were sited either directly facing or angled to the streets to accommodate the variable-sized blocks.

Houses for enlisted personnel were one-story buildings with connecting carports. The buildings were built on concrete slabs with wood frames clad in all stretcher bond brick veneer and vertical wood siding. The houses had different colored brick, including red, red with blue glazed stretchers, and yellow. Each house had a gable roof sheathed with composition shingles. The overhanging eaves were finished with wood soffits and sheltered a narrow porch. The roof extension over the porch was supported by square wood posts. Plywood was installed in the upper gable ends. All wood elements were subsequently covered in vinyl. Each unit was provided with a flat-roofed carport to accommodate one vehicle. The windows were metal-frame units, generally sliding windows with rowlock sills. Living room windows had large fixed panes above small sliding units, while the bedrooms contained short windows located close to the ceilings. The original front doors depicted on the 1962 drawings were solid wood units; the current metal front doors were replacement units (NSA Mid-South drawings file).

The buildings were oriented in two ways: side-by-side lengthwise so that the front doors faced the streets or side-by-side with gable ends facing the street and front doors off the carports (Figures A.2.12 and A.2.13). The buildings oriented with gable ends towards the streets had brick privacy walls to separate the yards. Each unit was provided with external detached storage units. In some cases, the storage units were constructed between the carports (Figure A.2.14). In other cases, detached storage units were constructed at the far end of the carports (Figure A.2.15), and the houses were provided with a wood screen that separated the individual carports (NSA Mid-South drawings file).

The original drawings depicted two-, three-, and four-bedroom units for enlisted personnel. However, the two-bedroom units were eliminated from the construction drawings, and only three and four-bedroom houses were constructed (NSA Mid South drawings file). Each unit was designed with two bathrooms. Married enlisted housing had two floor plan variations for three-bedroom units and two variations for four-bedroom units. The basic floor plan for all units generally was similar. A combined living room and dining room occupied one end of the house, while bedrooms accessed by a short hallway occupied the other end of the house. Variations occurred in the placement of the kitchen and location of the front door. The three-bedroom floor plans contained 1,301 and 1,314 gross square feet (Figures A.2.16). Enlisted personnel four-bedroom units had 1,469 and 1,534 gross square feet (NSA Mid-South real property records 2005b; drawings file). Houses oriented with gable ends fronting the streets were slightly larger than the houses placed in a linear orientation.

The interiors of the enlisted personnel units were finished simply. The walls and ceilings were smooth plasterboard (Figure A.2.17). Ornamentation included plain two-inch wood baseboards and plain wood molding around window and door openings. Molded window sills were noted in the living room. Interior doors were solid units. Sliding doors were installed for large bedroom closets. A wood pocket door with a metal latch on the side separated the kitchen and the dining room. The floors in the living-dining rooms and bedrooms were finished in vinyl composite tile; currently all these areas have wall-to-wall carpeting. Kitchens in Capehart units typically were finished with cabinets and outfitted with a refrigerator, stove, dishwasher, and space for a washer and clothes dryer. Bathrooms had tiled floors



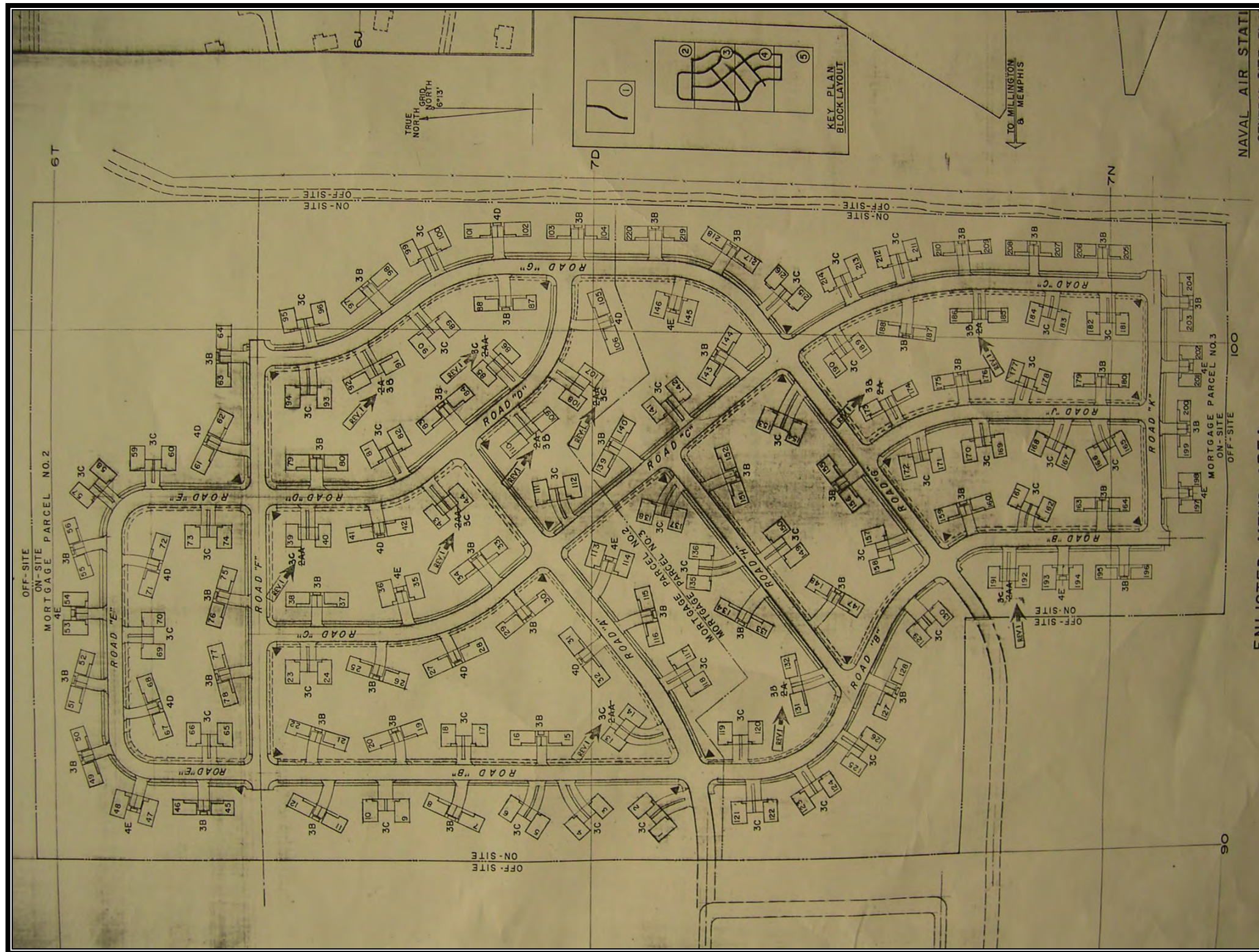


Figure A.2.11. Married enlisted personnel Capehart neighborhood plan, 1961, NSA Mid-South, Tennessee. (Courtesy of NSA Mid-South)











Figure A.2.13. 6081 Polaris Drive front elevation (Capehart housing), NSA Mid-South, Tennessee, 2005. (Photo taken by RCG&A)



Figure A.2.14. 6081 Polaris Drive storage unit (Capehart housing), NSA Mid-South, Tennessee, 2005. (Photo taken by RCG&A)





Figure A.2.15. 7541 Talos Drive storage unit (Capehart housing), NSA Mid-South, Tennessee, 2005. (Photo taken by RCG&A)

and walls in the tub area. Each bathroom had a tub, toilet, sink, and a wall-mounted medicine cabinet with mirror.

Landscaping was planted in the enlisted Capehart neighborhood. Trees were planted at regular intervals along the streets. The general site plan depicted sidewalks on one side of each street abutting the curbs. Streetlights also were installed. Vehicle parking was provided through the construction of a carport for each unit accessed by paved driveways. The interior spaces of the irregularly-shaped blocks were kept open. No playgrounds were depicted on the 1962 general site plan, but probably were installed by 1970 (NSA Mid-South drawings file). Mature trees that probably date from the early 1960s are dispersed throughout the neighborhood.

Capehart housing for officers was sited in an already established officer housing area. The Capehart officer housing was accommodated by extending two streets and adding a third slightly curved street (Figure A.2.18). Thirty officer units were constructed, including ten duplexes and ten single-family houses. Five duplexes were oriented parallel to the streets, and five were oriented with gable ends to the streets (Figure A.2.19). All officer duplexes were joined at the carports. Brick was the exterior material for all officer housing. The brick colors were red, red with blue glazed stretchers, and yellow (Figure A.2.20). The houses had gable roofs with overhanging eaves. Each house had a carport and an external storage unit.

Duplexes were assigned to junior officers and ranged in size from 1,480 to 1,485 gross square feet. The floor plans were similar to the layouts for enlisted duplexes, except that the room sizes were larger (Figure A.2.21). In addition, officer houses contained a dining room and a breakfast nook. The largest units were the single-family houses designed for captains and senior officers. The single-family houses

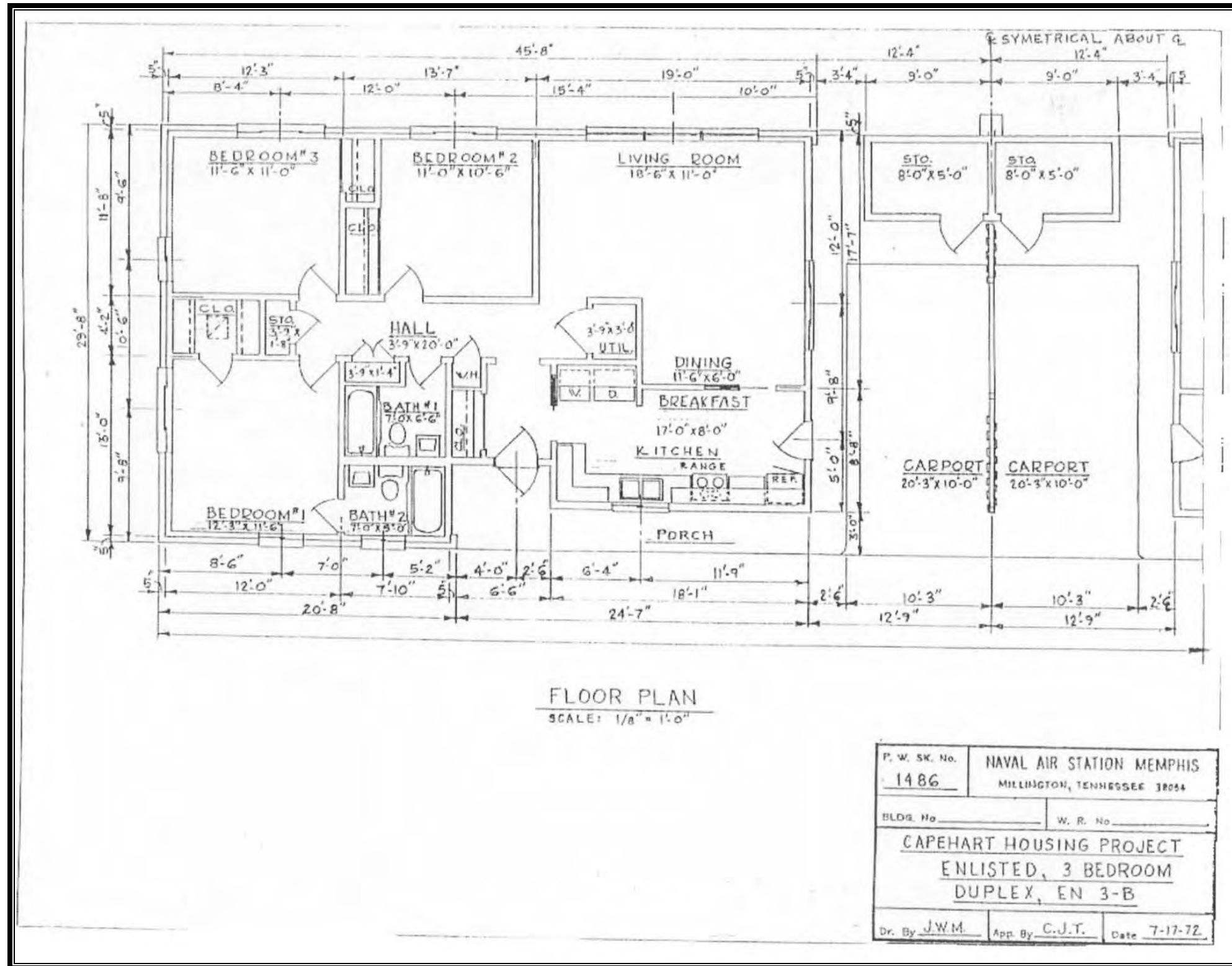


Figure A.2.16. Type EN-3-B floor plan (Capehart housing), NSA Mid-South, Tennessee. (Courtesy of NSA Mid-South, Housing Office)







Figure A.2.17. 7541 Talos Drive detail of living room finishes (Capehart housing), NSA Mid-South, Tennessee, 2005. (Photo taken by RCG&A)

incorporated 1,718, 1,757, and 1,977 gross square feet (Figure A.2.22). Each single-family house contained four bedrooms. The original interiors of the houses had simple finishes. The walls and ceilings were finished with plasterboard. The flooring originally was wood (now carpeted) with two-inch wood baseboards (Figure A.2.23). The metal-frame sliding windows had interior wood sills with molding. In general, the interiors of the officer housing have been continually renewed to maintain up-to-date finishes, such as carpeting, new flooring in kitchens and bathrooms, and installation of window shades.

The officer housing area had lawns and mature trees planted in the front and rear yards of each house (Figure A.2.24). Some houses also had foundation plantings. Sidewalks lined the streets and were separated from the curbs by grass. The duplex officer housing had uniform setbacks from the streets, while the single-family officer houses were angled to the streets. No playgrounds were noted in the officer housing area during the November 2005 site visit.

During the 1980s and 1990s, several projects were completed to upgrade the Capehart houses in both the enlisted and officer neighborhoods. In 1982, all kitchens were fitted with new cabinets. In 1986, all bathrooms were renovated, and furnaces were replaced. In 1987, chain link fences and wood board privacy screens were constructed around the rear yards of the enlisted housing. In 1989, all lighting fixtures in all units were replaced. In 1990, all kitchen cabinets and counters were replaced. In 1996, the original flat roofs over all carports were replaced with gable roofs and all roof sheathing was replaced. In 1998, vinyl was applied to all wood surfaces, and metal eaves and gutters were installed.

From 2003 to 2005, 189 enlisted Capehart units were upgraded. The basic layout of the enlisted units was retained, but new interior finishes, utilities, and up-to-date wiring to accommodate computer networking capabilities were installed. Plasterboard was applied to all walls and ceilings, and all new

trim along baseboards and around windows and doors was installed. Ceiling fans, new kitchen cabinets, and bathroom fixtures were installed. New aluminum frame windows were installed, as well as new interior blinds and exterior shutters. Patios were improved, new walkways to the front doors were installed, and new landscaping was planted. In 2003, new globe streetlights were installed in the enlisted Capehart neighborhood (NSA Mid-South drawings file).

### Appropriated-Funds Housing

NSA Mid-South had no housing constructed between 1949 and 1962 that used Congressionally appropriated funds.

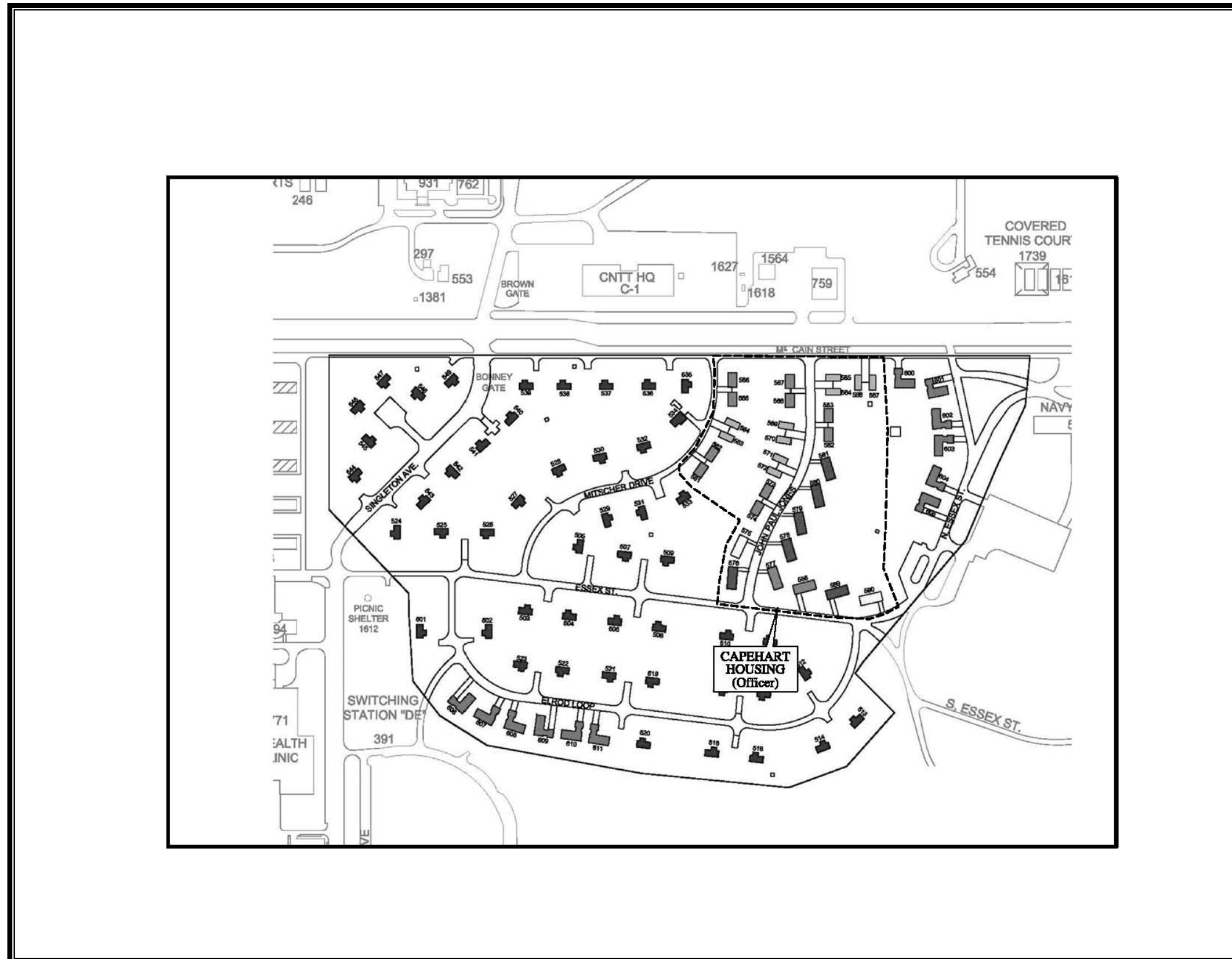


Figure A.2.18. Officer housing area showing location of Capehart units, NSA Mid-South, Tennessee. (Courtesy of HHM, Inc. 2005)





Figure A.2.19. 6037 McCain Street front elevation (Capehart housing), NSA Mid-South, Tennessee, 2005. (Photo taken by RCG&A)



Figure A.2.20. 7715 John Paul Jones (Capehart housing), NSA Mid-South, Tennessee. (Photo taken by RCG&A)



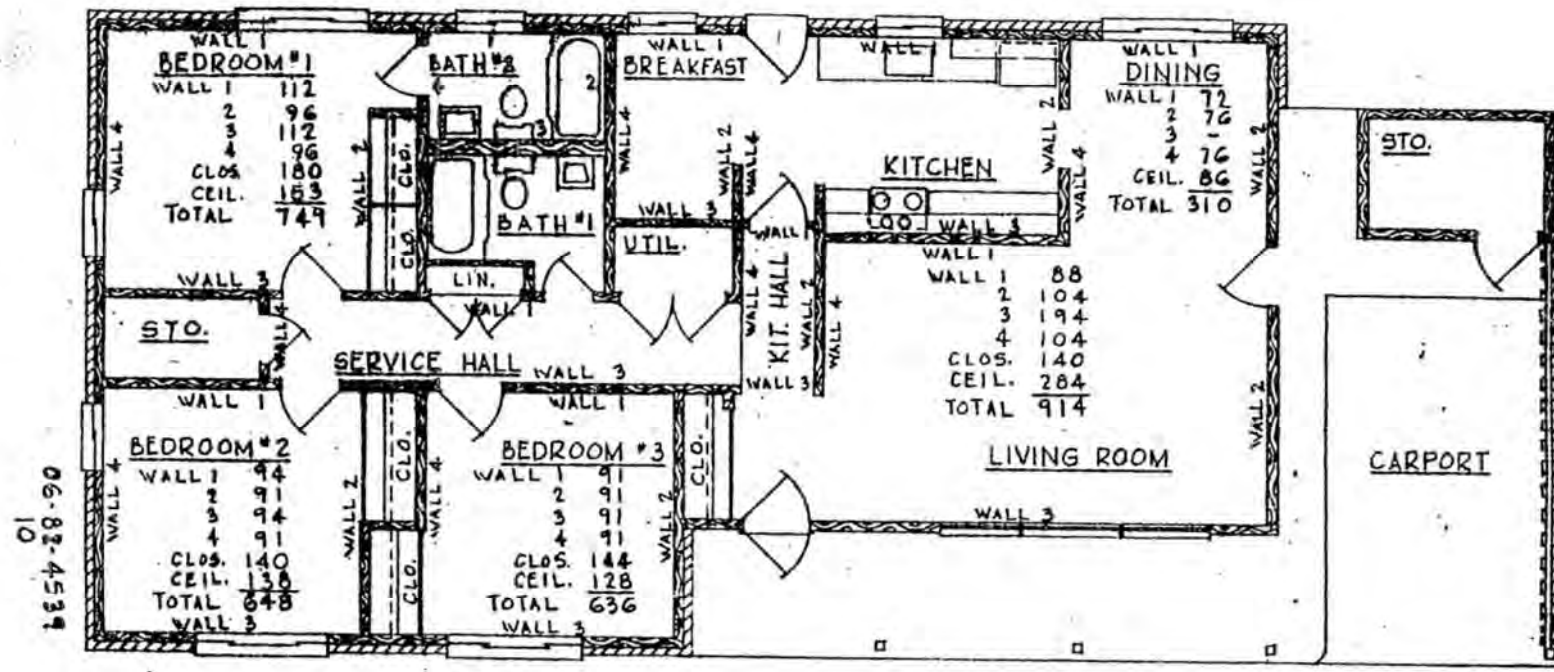


Figure A.2.23. 6037 McCain Street living room (Capehart housing), NSA Mid-South, Tennessee, 2005. (Photo taken by RCG&A)



Figure A.2.24. Streetscape along John Paul Jones (Capehart housing), NSA Mid-South, Tennessee, 2005. (Photo taken by RCG&A)

# NAS-MEMPHIS



## FLOOR PLAN

SCALE: 1/8" = 1'-0"

TOTAL 10 UNITS

CAPEHART JR 3-G

5THUS - 5 OPP. HAND

### KITCHEN HALL

WALL 1	26
2	64
3	26
4	64
CEIL.	24
TOTAL	204

### STORAGE

WALL 1	176
CEIL.	28
TOTAL	204

### BKFS. AREA

WALL 1	44
2	20
3	44
4	68
CEIL.	48
TOTAL	224

### BATH #1

WALLS	80
CEIL.	45
TOTAL	125

INTERIOR 5974# = 60 SQ. EA. UNIT

EXTERIOR 20 SQ. EA. UNIT - 40 SQ. 2 UNITS

### SERVICE HALL

WALL 1	172
2	-
3	172
4	32
CEIL.	86
TOTAL	462

### LINEN CLOS.

WALLS	96
SHELVES	54
CEIL.	7
TOTAL	157

### KITCHEN

WALL 1	64
2	73
3	64
4	20
CABNT.	816
CEIL.	21
TOTAL	1058

### BATH #2

WALLS	90
CEIL.	40
TOTAL	130

INTERIOR 10 X 60 SQ = 600 SQ.

EXTERIOR 10 X 20 SQ. = 200 SQ.

### UTIL. AREA

WALLS	136
CEIL.	17
TOTAL	153

Figure A.2.21. Type JR3-G floor plan (Capehart housing), NSA Mid-South, Tennessee. (Courtesy of NSA Mid-South, Housing Office)





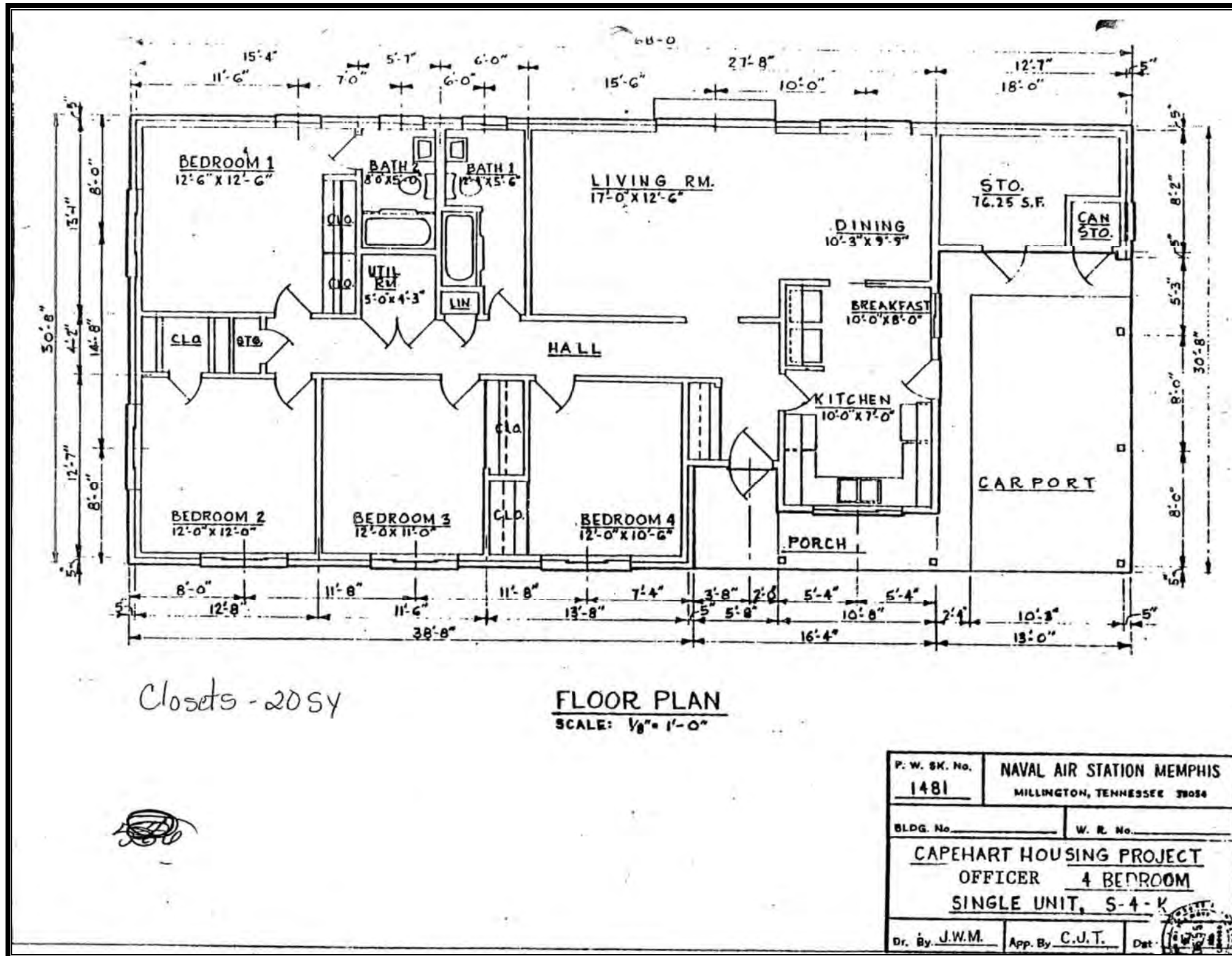


Figure A.2.22. Type S-4-K floor plan (Capehart housing), NSA Mid-South, Tennessee. (Courtesy of NSA Mid-South, Housing Office)



## **Case Study A.3: Marine Corps Air Station (MCAS) Cherry Point, North Carolina**

### Physical Description

Marine Corps Air Station (MCAS) Cherry Point is situated in north central Craven County approximately 17 miles southeast of New Bern, North Carolina. The main station encompasses approximately 13,164 acres of relatively flat land. The installation is bounded by the Neuse River and has two major creeks that traverse the property. The town of Havelock is located just outside the base gates, and the base and the town are surrounded by Croatan National Forest.

MCAS Cherry Point provides services and material to support the headquarters and operations of the Second Marine Aircraft Wing (MAW), and units thereof, and other activities and units as designated by the Commandant of the Marine Corps (CMC), in conjunction with the Chief of Naval Operations (CNO). Units assigned to the Second MAW include Marine Aircraft Group 14, Marine Wing Support Group 27, and Marine Wing Air Control Group 28. MCAS Cherry Point serves as a primary aviation supply point and hosts the Naval Aviation Depot (NADEP). NADEP performs a complete range of depot-level repair and maintenance operations on designated weapon systems, accessories, and equipment.

### Base History Summary

MCAS Cherry Point was established in 1941 and was one of eight new Marine Corps aviation bases built during World War II in the United States. MCAS Cherry Point was the largest of the Marine Corps air stations, and served as the principal training center for Marine Corps aviators on the East Coast throughout the war (Bureau of Yards and Docks 1947:258-259).

On 18 February 1941, the Federal government approved the construction of the MCAS Cherry Point. Congress authorized \$25 million for the construction of a main base, six airfields, and four auxiliary airfields. The new air station supplemented existing Marine Corps aviation facilities at Quantico, Virginia, and Parris Island, South Carolina, on the East Coast. MCAS Cherry Point was chosen for its access to a deep-water port, rail and highway connections, and established water and power systems. It also was selected as an ideal site due to its relatively remote location. Located near the town of Havelock, which had a population of approximately 100 in 1940, the site was close enough to populated areas to facilitate construction, yet isolated enough to allow artillery, anti-aircraft, bombing, and strafing training (Coletta 1985:105-106).

Preparation of the site for construction of the new base began in August 1941. Early construction projects included the completion of aircraft runways and the erection of temporary facilities to house recruits. The field was operational by December 1941, at which time it officially was dedicated as U.S. Marine Corps Air Station (MCAS) Cherry Point.

The base population and facilities at MCAS Cherry Point expanded exponentially throughout the war. In December 1941, 86 personnel were assigned to MCAS Cherry Point; this number increased to 4,670 within a year. By June 1942, four runways were completed, two of which were operational. Hangar and control facilities also were operational, and permanent quarters were available for 500 men. Permanent buildings were supplemented by the construction of temporary mobilization barracks to house 3,000 additional personnel, in addition to the construction of a large assembly/repair shop. By the end of 1942, additional support facilities were constructed, including mess halls, ordnance storage, railroad lines, water and sewage systems, fuel storage, a fire protection system, a central heating plant, a steam

distribution system, shops, garages, warehouses, a radio transmitter building, a hospital, and a recreation building (Carraway 1945). By 1943, the installation accommodated 21,667 personnel and was the largest Marine Corps base in the United States (Coletta 1985:108-109).

During World War II, family housing was constructed for officers and enlisted personnel. Appropriated-funds officer housing was sited in an area of the installation overlooking the Neuse River. The officer housing area included five single-family senior officer quarters and 44 single-family officer quarters. The houses were two-story, wood-frame buildings with minimal ornamentation. Two hundred eight (208) duplexes for enlisted personnel were constructed near the operational core of the base. The one-story, wood-frame duplexes were constructed using Lanham Act funding. Additional housing for civilians and Marine Corps personnel was constructed in nearby Havelock using World War II emergency housing funds (Atlantic Division, Naval Facilities Engineering Command [NAVFAC] 1998:20-23, 50-55).

Throughout World War II, MCAS Cherry Point hosted over 100 aircraft squadrons, including Army Air Forces bombers, Navy fighters, air warning, and bomber units, and Marine support, observation, and bomber units. The Third and Ninth Marine Air Wings (MAW) were organized and trained at MCAS Cherry Point (Coletta 1985:107-109). The Third MAW was activated to conduct photographic reconnaissance missions; ferry aircraft from eastern manufacturing facilities to the maintenance facilities at MCAS Cherry Point for modification; train paratroopers; transport personnel and materials; and, establish a ground school. Following training, the Third MAW was assigned to combat duty in the Pacific in September 1943. The command post for the Third MAW remained at MCAS Cherry Point until 6 April 1944 (McVarish 1994:7). The Ninth MAW's mission was to organize, equip, and train Marine Air units for combat operations. The wing also undertook paratroop and ferrying missions that formerly were assigned to the Third MAW.

With the demobilization at the end of World War II, MCAS Cherry Point was downsized. The base population dropped from its wartime high of 23,520 to approximately 12,039 in 1946. Five squadrons with 40 aircraft were assigned permanently to the installation.

With the outbreak of the Korean Conflict in 1950, activity and personnel were increased again to respond to the crisis. MCAS Cherry Point received \$9 million to expand runways, to increase fuel storage, and to build additional hangar and warehouse facilities. By the end of 1952, the base contained 912 buildings, excluding 767 on-station housing units and 870 off-station family housing units (Atlantic Division NAVFAC 1998:24; Coletta 1985:112-113; McVarish 1994:8). Of these, 1,421 units were built as part of the Wherry housing program. In 1959, MCAS Cherry Point received an additional 849 housing units built under the Capehart program.

MCAS Cherry Point continued its active training mission to support Marine Corps air elements during the Vietnam Conflict. Throughout the 1970s, MCAS Cherry Point continued to support tenant activity at the air station, and assisted squadrons returning from extended combat duty in Southeast Asia. The most notable events during the 1970s and 1980s were the introduction of new fighter aircraft and the expansion of the runways. In 1973, MCAS Cherry Point became the third Marine Corps base to be assigned AV-8A Harrier jet fighters. Harriers have the ability to take off on short runways and land vertically. Today, Harrier jets are the backbone of the Second Marine Air Wing at MCAS Cherry Point. The station also houses C-130 transports and a few Sea Rescue helicopters (Atlantic Division NAVFAC 1998:25-6).

Wherry Housing at MCAS Cherry Point

MCAS Cherry Point had three Wherry housing areas constructed in 1952: Slocum Village with 815 units in 168 buildings built originally for civilians, then occupied by enlisted personnel; Fort Macon with 249 units in 52 buildings for enlisted personnel; and, Hancock Village with 357 units in 223 buildings for officers (Atlantic Division NAVFAC 1998:24-25; Marine Corps Air Station [MCAS] Cherry Point drawings file).

All three Wherry neighborhoods were designed by Eugene R. Martini, A.S.L.A., landscape architect and planning consultant, and F. Carl Martini, Registered Civil Engineer, and Edwards, Pugh & McKimmon-Leif Valand-Architects. The original drawings were dated 1951 and were approved by the District Public Works Officer, Bureau of Yards and Docks (MCAS Cherry Point drawings file) (Figure A.3.1).

ARCHTS. JOB NO.	DEPARTMENT OF THE NAVY BUREAU OF YARDS AND DOCKS	
ARCHTS. D'WG. NO.	EDWARDS, PUGH & MCKIMMON - LEIF VALAND, ARCHTS.	
L - 1	EUGENE R. MARTINI, LANDSCAPE ARCHITECT & PLANNING CONSULTANT	
	RALEIGH	NORTH CAROLINA
DRAWN BY	TITLE VIII HOUSING PROJECT	
W. F. M.	F. H. A.	053 - 80005
CHECKED BY	SLOCUM VILLAGE	
A. D. K.	CHERRY POINT	NORTH CAROLINA
DATE	APPROVED:	DATE
MAR. 51	<i>W. T. Ekberg</i>	3/5/51
	DISTRICT PUBLIC WORKS OFFICER	
APPROVED FOR	SCALE 1" = 50	SPEC.
DATE	SHEET 1 OF 26	NOV 22 1955
APPROVED FOR	Y & D DRAWING NO.	
DATE	<i>P.W. Drawing No. 2095</i>	

Figure A.3.1. Title Block of Slocum Village (Wherry housing) drawing, MCAS Cherry Point, North Carolina, 1951. (Courtesy of MCAS Cherry Point, Facilities Engineering Department)

The three neighborhoods were designed as independent housing areas and were physically separated from each other. All three neighborhoods were accessed from public roadways and were not internally connected to the main base. Slocum Village on 186.9 acres and Fort Macon on 31.19 acres were constructed on private property outside the boundaries of the base. Hancock Village was constructed on Federally-owned land originally acquired in 1941 for MCAS Cherry Point. Slocum Village was owned by the Slocum Village Corporation. The Federal government acquired both Slocum Village and Fort Macon housing areas through condemnation in 1958 (MCAS Cherry Point drawings file).

In this site visit report, Slocum Village and Fort Macon housing areas were described together since the two neighborhoods were designed with essentially identical multi-family buildings and have been

treated similarly over time. Fort Hancock was discussed separately since it contained distinctly different buildings originally designed for officers. At the time of the site visit in November 2005, the units that remained occupied in all three housing areas were assigned to enlisted personnel.

Slocum Village and Fort Macon. Slocum Village and Fort Macon housing areas were designed with similar one- and two-story, multi-family buildings and contained similarly-sized units. The houses were wood-frame buildings set on concrete slabs. The exterior walls originally were sheathed in asbestos shingle siding, striated plywood, and tongue-and-groove wood boards. In the two-story multi-family buildings, the first story was finished in asbestos shingle siding and the second story was finished in vertical tongue-and-groove boards (Figure A.3.2). The one-story multi-family buildings were clad in the same exterior materials (Figure A.3.3). The exteriors of buildings in Fort Macon originally had random-width wood board siding with one-to-two-inch battens. All buildings had gable roofs sheathed with asphalt shingles with overhanging eaves that were finished in plywood (MCAS Cherry Point drawings file). Current exterior materials on all buildings were vinyl siding installed during the 1980s (Figures A.3.4 and A.3.5). The original windows were aluminum-frame, multi-light units containing fixed lights and casements. The doors were flush wood doors. In general, the entries were sheltered by the overhanging roofs. The two-story units were fitted with flat metal porch roofs over the front doors, and asphalt-shingled shed roofs over the rear doors. Each door had a concrete stoop. The buildings had irregular footprints that were composed of one-story and/or two-story rectangular sections that were linked together. For example, two-story buildings generally contained four families in four, two-bedroom units; with the addition of one-story wings, the two-story buildings accommodated six families. One-story sections generally contained two units; when several one-story sections were linked, the building accommodated four, five, or six families.

The buildings were constructed with one-, two-, and three-bedroom units. The one-bedroom units contained approximately 620 square feet of living space; two-bedroom units had approximately 744 square feet of living space; and, three-bedroom units offered approximately 899 square feet of living space (Figure A.3.6). The original configurations of the units were all similar and differed only in the numbers of bedrooms. The front door typically opened onto the living room. The kitchen was located in the rear of the unit with a window overlooking the rear yard. Each unit was provided with an enclosed storage area, a coat closet and a linen closet located outside the bathroom door, and a closet in each bedroom. In the two-story multi-family buildings, the living room, dining room, and kitchen occupied the first floor, while the two bedrooms and bathroom were upstairs (Figure A.3.7). All units contained one bathroom with a tiled bathtub. Kitchens were planned with standard appliances, including refrigerators, washing machines, hot water heaters, ranges, and cabinets. The interiors walls were finished simply with sheetrock ceilings and walls. Asphalt tile flooring was installed over the concrete slabs. Wood baseboards and wood crown molding completed the room finishes (MCAS Cherry Point drawings file).

Slocum Village was designed with 168 buildings containing 815 units and included 122 one-bedroom units, 489 two-bedroom units, and 204 three-bedroom units (Figure A.3.8) (MCAS Cherry Point drawings file). The neighborhood was laid out with curving streets. Concrete curbs and sidewalks lined both sides of the streets. Parking was provided on the street or in paved courts. The original drawings showed that the courts were planned with landscaped circles, but no evidence suggested that the circles were constructed. The buildings were uniformly set back from the streets in a regular pattern. Concrete walks led from the sidewalks to each entry. The rear areas behind the units were open; no fencing was depicted on the drawings. Concrete supports were provided for the clotheslines. The drawing of the neighborhood plan did not depict streetlights. Current streetlights were mounted on wood electrical poles dispersed throughout the neighborhood. An administration/fire station was constructed as part of the Slocum Village. The building later was adapted as a civil employment office and fire station, but was demolished by the early 1990s (Brown, personal communication 2005).



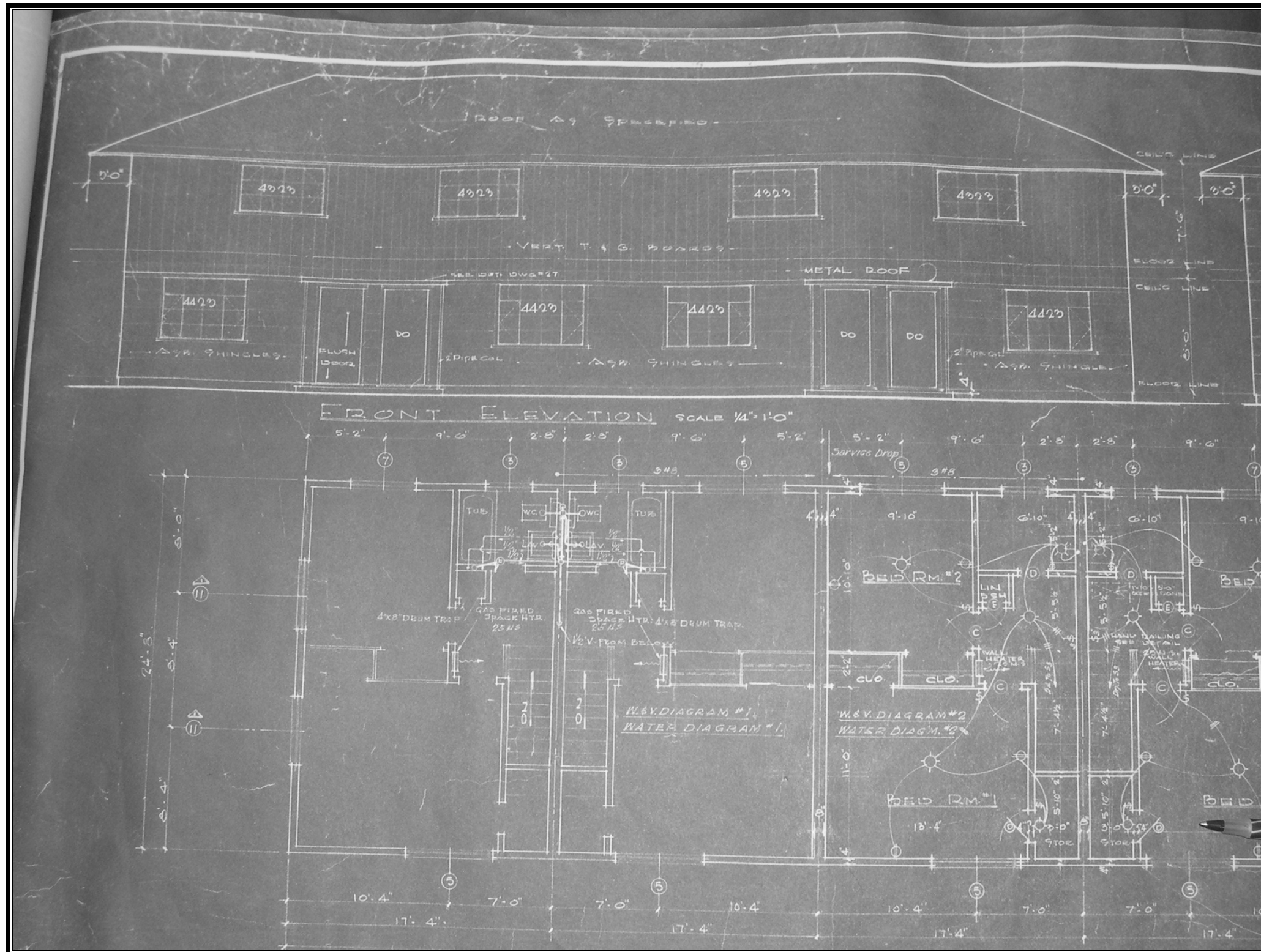


Figure A.3.2. Two-story multi-family elevation and second floor plan, Slocum Village (Wherry housing), MCAS Cherry Point, North Carolina, 1951. (Courtesy of MCAS Cherry Point, Facilities Engineering Department)





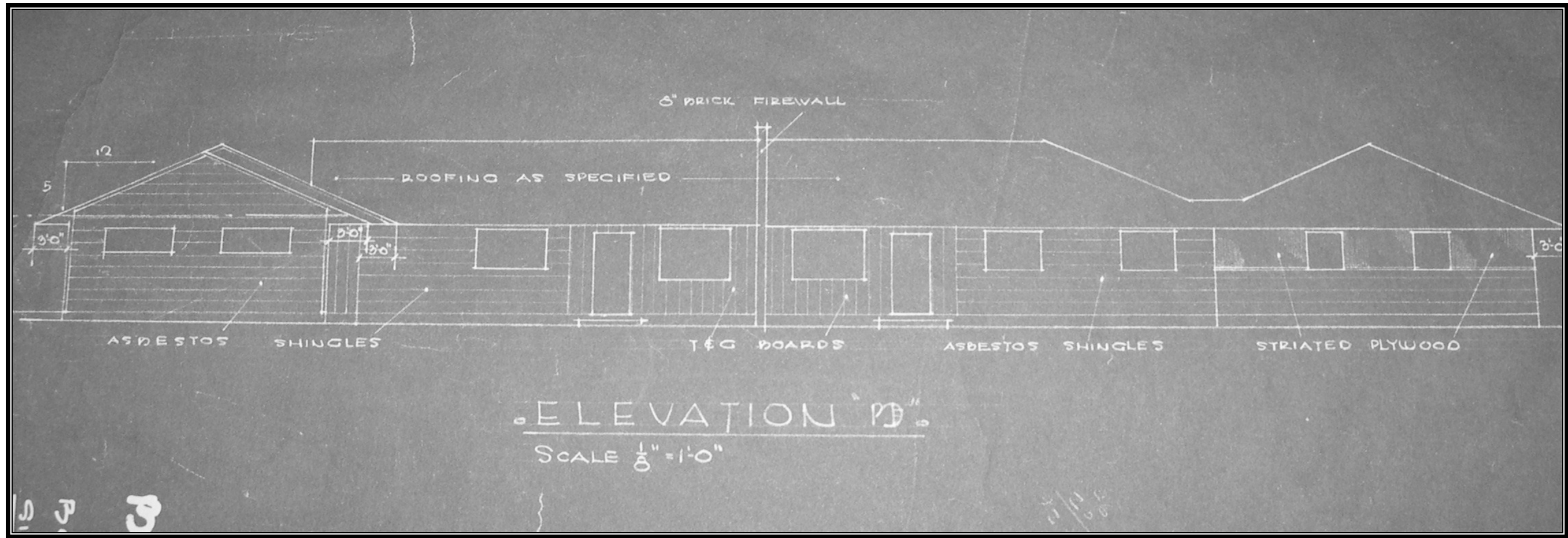


Figure A.3.3. One-story multi-family elevation, Slocum Village (Wherry housing), MCAS Cherry Point, North Carolina, 1951. (Courtesy of MCAS Cherry Point, Facilities Engineering Department)





Figure A.3.4. 10-12-14 Hibiscus Court, Slocum Village (Wherry housing), MCAS Cherry Point, North Carolina, 2005. (Photo taken by RCG&A)



Figure A.3.5. 65-63 Fort Macon Street, Fort Macon (Wherry housing), MCAS Cherry Point, North Carolina, 2005. (Photo taken by RCG&A)

Fort Macon had 52 residential buildings, including 1 triplex, 29 four-plexes, 5 five-plexes, and 17 six-plexes (Figure A.3.9). The 249-unit neighborhood comprised 38 one-bedroom units, 149 two-bedroom units, and 62 three-bedroom units. A one-story storage building also was planned for the neighborhood. The building was essentially square and contained a toilet (MCAS Cherry Point drawings file). The building at 13 Hatteras might have been the storage building. It was too small for a residence and was used as a chaplain's office or small group meeting space since the early 1980s (Brown, personal communication 2005).

Fort Macon was platted with a central street (Fort Macon Drive) that terminated in a court. Side streets branched from either side of Fort Macon Drive. Fort Macon was constructed along the eastern edge of an already existing government housing area, which was demolished. The side streets on the west side of Fort Macon Drive were linked with streets in the older housing area. Currently, all side streets ended in dead ends. The streets had concrete curbs and sidewalks lined both sides of the streets (Figure A.3.10). Parking was provided on the street or in paved courts. The buildings were uniformly set back from the streets. Concrete walks led from the sidewalks to each entry. The rear areas behind the units were open; no fencing was present. Concrete supports were provided for the clotheslines (Figure A.3.11). Metal streetlights attached to telephone poles were noted in the neighborhood, but it was undocumented if these were original to the neighborhood or installed at a later date.

Landscape plans for Slocum Village and Fort Macon detailed extensive landscaping and included trees regularly spaced along the street in front yards. Front and rear grass lawns were provided. Foundation plantings were proposed along the front and rear elevations. Trees and shrubs were planned for the rear yards. The types of trees specified in the drawings included: live oak, pin oak, willow oak, water oak, southern magnolia, sweet gum, tulip trees, crepe myrtle, sweetbay magnolia, red bud, flowering dogwood, Japanese crabapple, and Eleyi crabapple. Screen plantings included cherry laurel, loropetalum, pittosporum, cleyera, glossy abelia, and spreading euonymus. Many examples of these types of mature trees were located throughout the neighborhoods, but it was not documented how much of the original planting plans remained in the neighborhoods. Many older trees and overgrown shrubs have been removed (Brown, personal communication 2005). Minimal foundation plantings were noted in the neighborhoods during the site visit in November 2005.

Playgrounds originally were designed for the neighborhoods, and tot lots dispersed throughout the neighborhoods were depicted on original drawings. Playground equipment originally comprised a swingset and bench in some locations and a seesaw and bench in other locations (MCAS Cherry Point drawings file). No original playgrounds with playground equipment were noted in the neighborhood during the site visit in November 2005.

Numerous changes occurred to the Wherry housing in Slocum Village and Fort Macon. In 1958 and 1959, Slocum Village and Fort Macon were acquired by the Federal government and underwent a major renovation. About this time, the units in Slocum began to be reassigned to married enlisted personnel. All one-bedroom units were eliminated, and some four-bedroom units were created. The overall number of units decreased from 1,064 in 220 buildings to 904 in 220 buildings. When smaller units were recombined, the new larger unit configurations retained two bathrooms. During this renovation, screened porches on concrete slabs were added to the buildings. New storage units fitted with dryer connections were constructed in the porch areas. Each unit received a new front stoop (MCAS Cherry Point drawings file).

Between 1980 and 1984, the Wherry units in Slocum Village and Fort Macon underwent a total renovation that resulted in the current appearance of the buildings. The buildings were stripped to the structural framing and rebuilt. The buildings received insulation and were clad in vinyl siding. The roofs were sheathed with new materials and the soffits were replaced in metal. The original fixed and



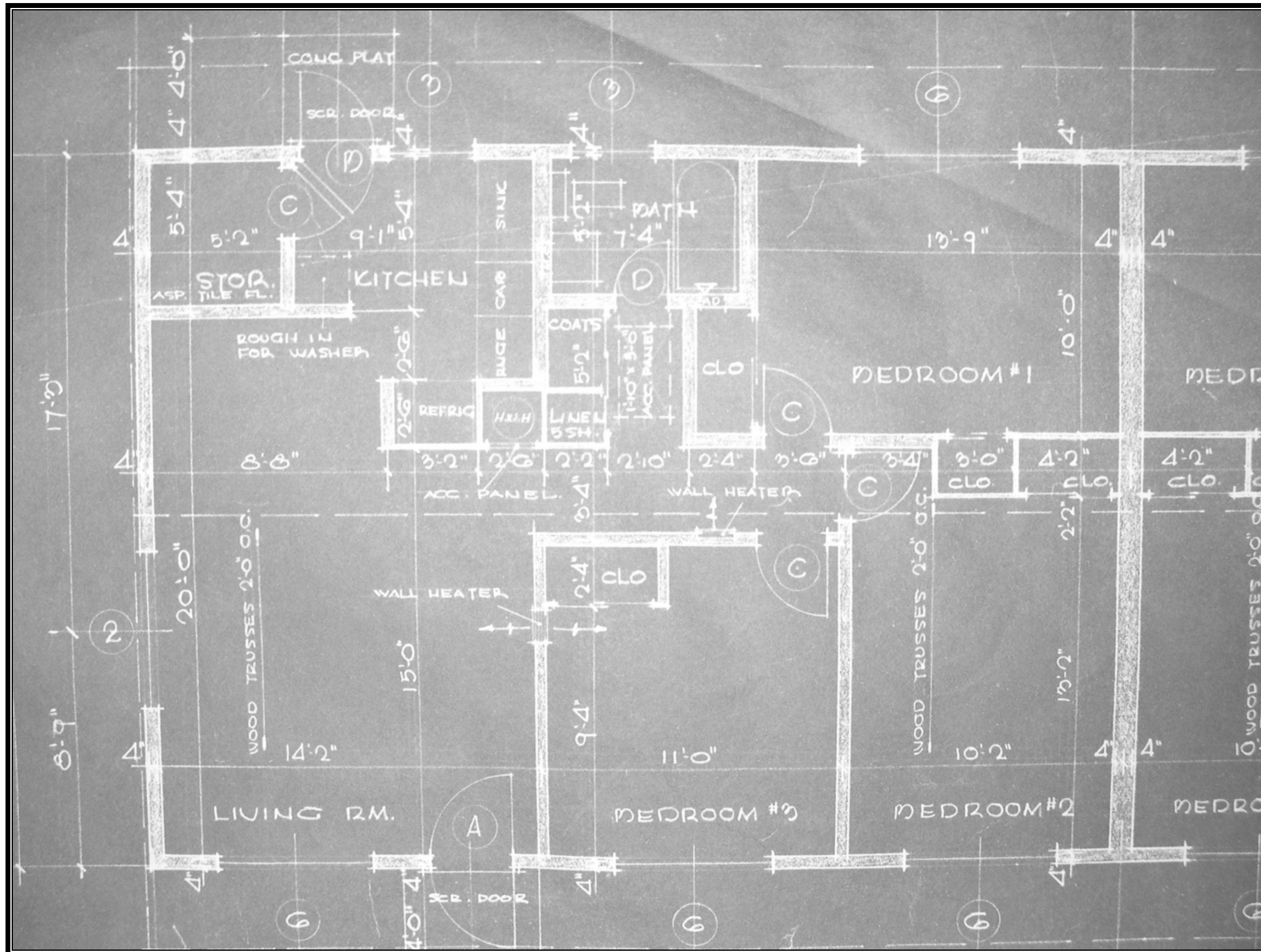


Figure A.3.6. One-story, multi-family, three-bedroom floor plan, Slocum Village (Wherry housing), MCAS Cherry Point, North Carolina, 1951. (Courtesy of MCAS Cherry Point, Facilities Engineering Department)



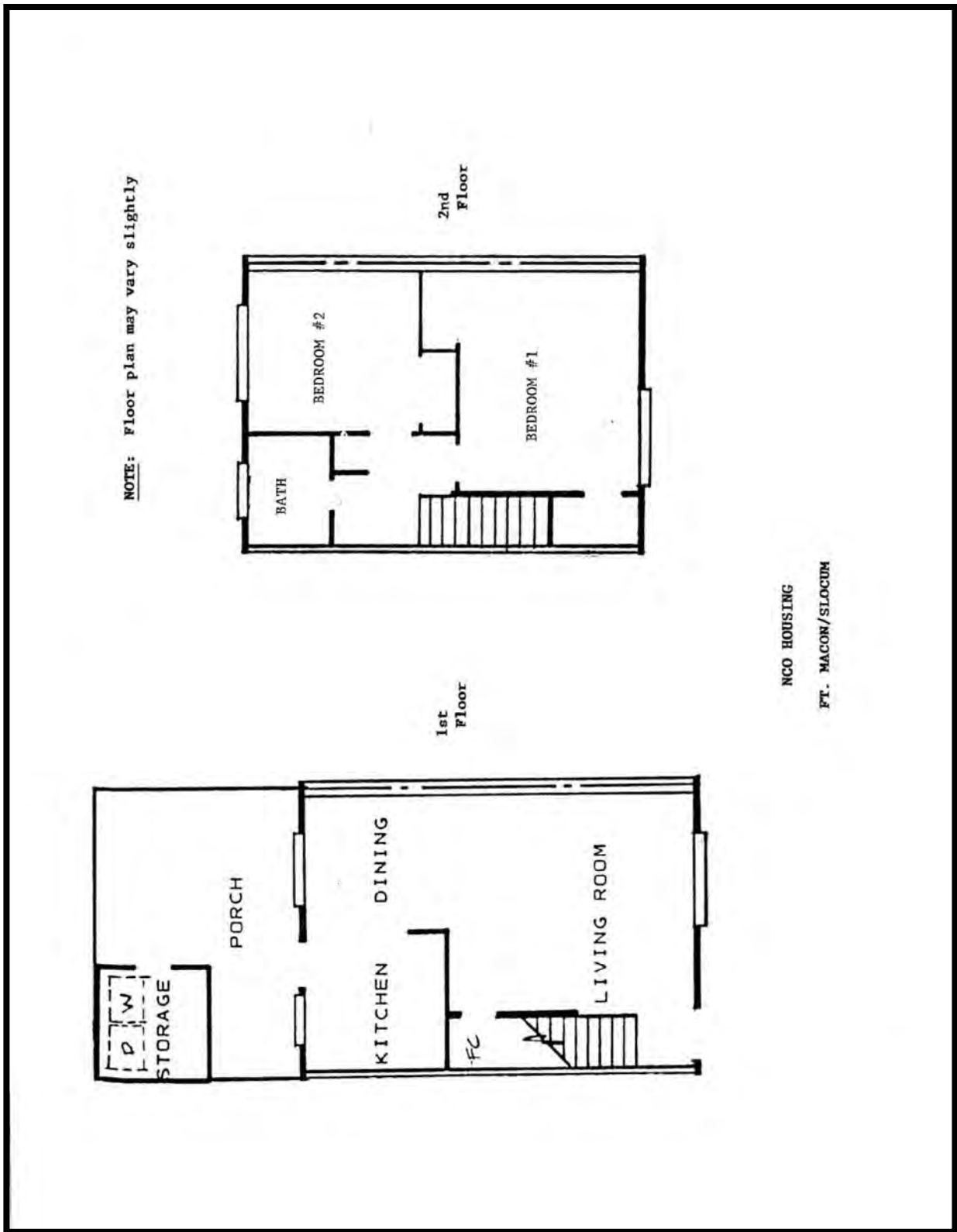


Figure A.3.7. Two-story, multi-family, two-bedroom floor plan, Slocum Village and Fort Macon (Wherry housing), MCAS Cherry Point, North Carolina. (Courtesy of MCAS Cherry Point, Housing Office)

casement windows were replaced with metal-frame one-over-one-light, double-hung sash units. The doors were replaced with hollow core wood units.

All interior finishes were replaced with textured plasterboard though the floor plans dating from the 1958-1959 renovations were retained. The crown molding was removed, and new stock wood baseboards and door trim were installed. The wall between the kitchen and living room was opened up through the construction of cabinets over additional counter space. Garbage disposals were installed in half of the units in Slocum Village (Brown, personal communication 2005). All the bathrooms were fitted with fiberglass tubs and new flooring. Wiring for telephone outlets and cable were provided in the master bedroom and in the living rooms (Brown, personal communication 2005).

In 2002, demolition of housing in Slocum Village began and phased construction of new housing in this area was begun. As of December 2005, 19 buildings built under the Wherry program remained in the east end of Slocum Village. These buildings included 78 units in 7 duplexes, 2 four-plexes, 4 five-plexes, and 6 six-plexes. Fifty-three buildings remained in Fort Macon as of December 2005.

Hancock Village. Hancock Village was constructed for officers and had duplexes and single-family houses totaling 223 buildings (Figure A.3.12). The buildings contained 357 total units, comprising 54 one-bedroom units with approximately 660 square feet of living space, 214 two-bedroom units with 801 square feet of living space, and 89 three-bedroom units with approximately 951 square feet of living space (MCAS Cherry Point drawings file). The overall sizes of units in the officer housing area were larger than for civilian housing in Slocum Village or enlisted housing in Fort Macon.

The officer houses in Hancock Village were all one-story, wood-frame buildings that rested on concrete slabs. The original building materials were vertical and horizontal wood siding, striated plywood, stained cedar shakes, and asbestos shingle siding on the rear and end elevations (Figure A.3.13). The windows were aluminum-frame units with fixed panes and casements and fixed and awning combinations. The front doors were flush wood units. The rear doors were wood units with lights (MCAS Cherry Point drawings file). The current appearance of the housing in Hancock Village was the result of substantial alterations that occurred during the early 1980s (Figure A.3.14). A one-story storage building also was constructed in the neighborhood. The building was essentially square and contained a toilet, but has been demolished (MCAS Cherry Point drawings file; Brown, personal communication 2005).

The original floor plan configurations of the officer units were similar, differing only in the number of bedrooms. In the one- and two-bedroom units, the front entry opened into the living room (Figure A.3.15). In the three-bedroom floor plan, the front door opened onto the hall leading to the bedrooms (Figure A.3.16). Typically, the kitchen was located at the rear of the house with a doorway that opened to the rear yard, but currently opened onto the rear screened porch. Each unit was provided with an enclosed storage area accessed from the kitchen, a linen closet in the hall, and a closet in each bedroom. All units originally contained one bathroom. Interior finishes included sheetrock walls and ceilings with wood baseboards and simple wood trim around windows and doors.

Hancock Village was laid out on a rectangular parcel and was entirely self-contained. The interior neighborhood streets were platted in loops forming irregularly shaped blocks. The neighborhood was connected to the public road at two intersections. The buildings were placed parallel to the streets with slightly staggered setbacks (Figure A.3.17). A few buildings sited in the middle of the street were sited at an angle. Each street had curbs and sidewalks on both sides of the streets; a concrete walkway led to each unit.



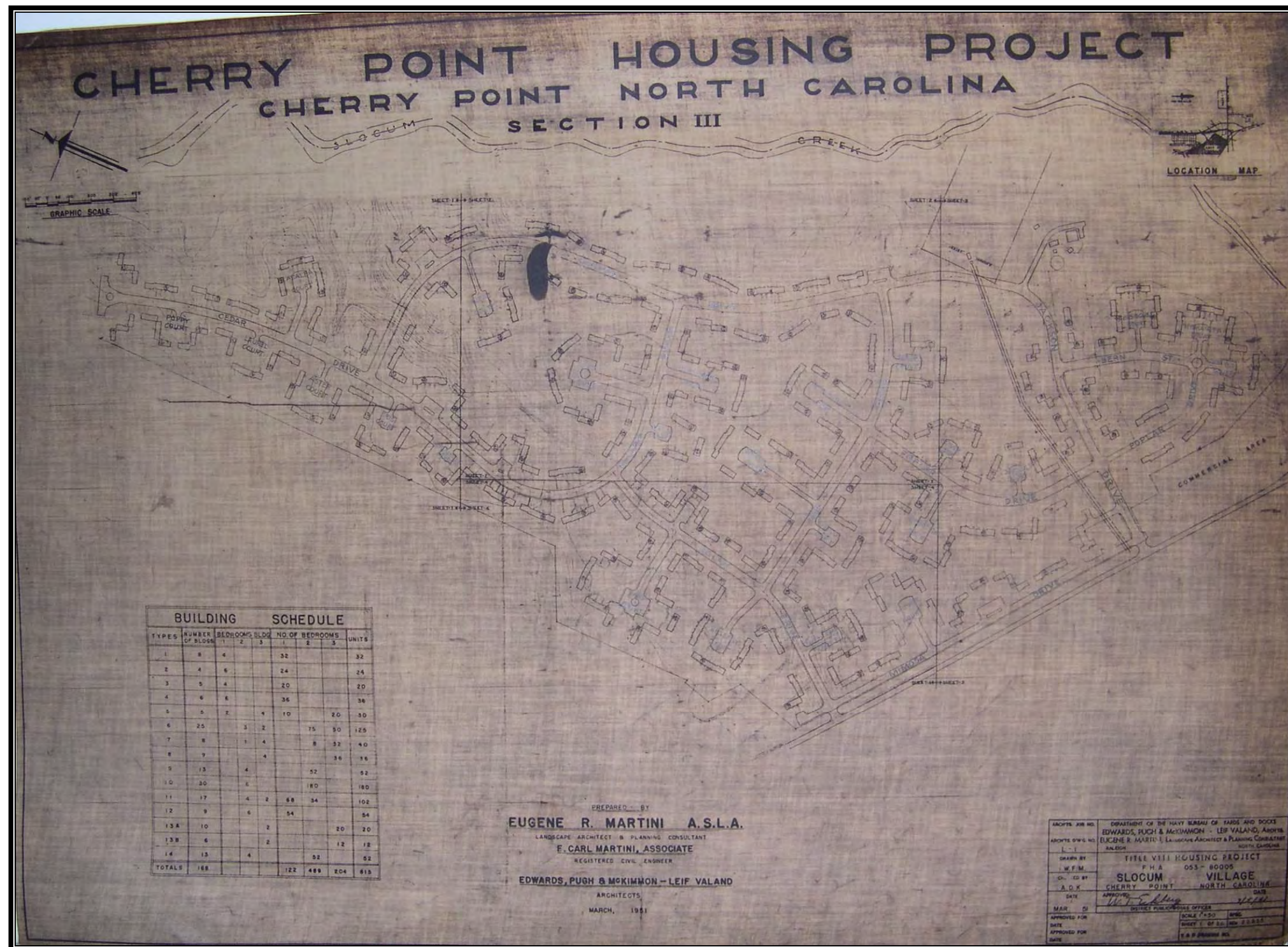


Figure A.3.8. Slocum Village (Wherry housing) neighborhood plan, MCAS Cherry Point, North Carolina, 1951. (Courtesy of MCAS Cherry Point, Facilities Engineering Department)









Figure A.3.11. Fort Macon (Wherry housing) rear yards, MCAS Cherry Point, North Carolina, 2005. (Photo taken by RCG&A)

The landscaping noted in Hancock Village was similar to the landscaping in Slocum Village and Fort Macon. Trees were spaced regularly along the street in the front yards between the concrete sidewalks and the houses. Front and rear yards were grass lawns. Plantings were placed along the foundations of the front and rear elevations. Trees and shrubs were planted in the rear yards. The types of trees specified for planting in the drawings were the same as those planned for Slocum Village and Fort Macon. Currently the neighborhood had many examples of mature trees, but no comparison between the planting plans and the locations of the current plants were made during the site visit. A variety of shrubs and foundation plantings were noted in the housing area. Underground garbage containers were located at the rears of the houses.

The neighborhood originally had designated playgrounds with either a swing set and bench or a see-saw and bench. No comparison was made between the locations of current playgrounds versus the playgrounds sited on the original drawings. No original playground equipment was located in the neighborhoods; the current playground was installed during the late 1990s (Brown, personal communication 2005).

The Wherry housing in Hancock Village was renovated several times since 1952. In 1958, ten houses that formerly contained two, one-bedroom units were renovated to each contain one, four-bedroom unit, resulting in a decrease to 330 total units in the neighborhood. During this renovation, screened porches on concrete slabs were added to the buildings. New external storage units, which were used as laundry areas in December 2005, were constructed in the porch areas. During the late 1970s, Hancock Village became married enlisted personnel housing (Hopkins, personal communication 2005).

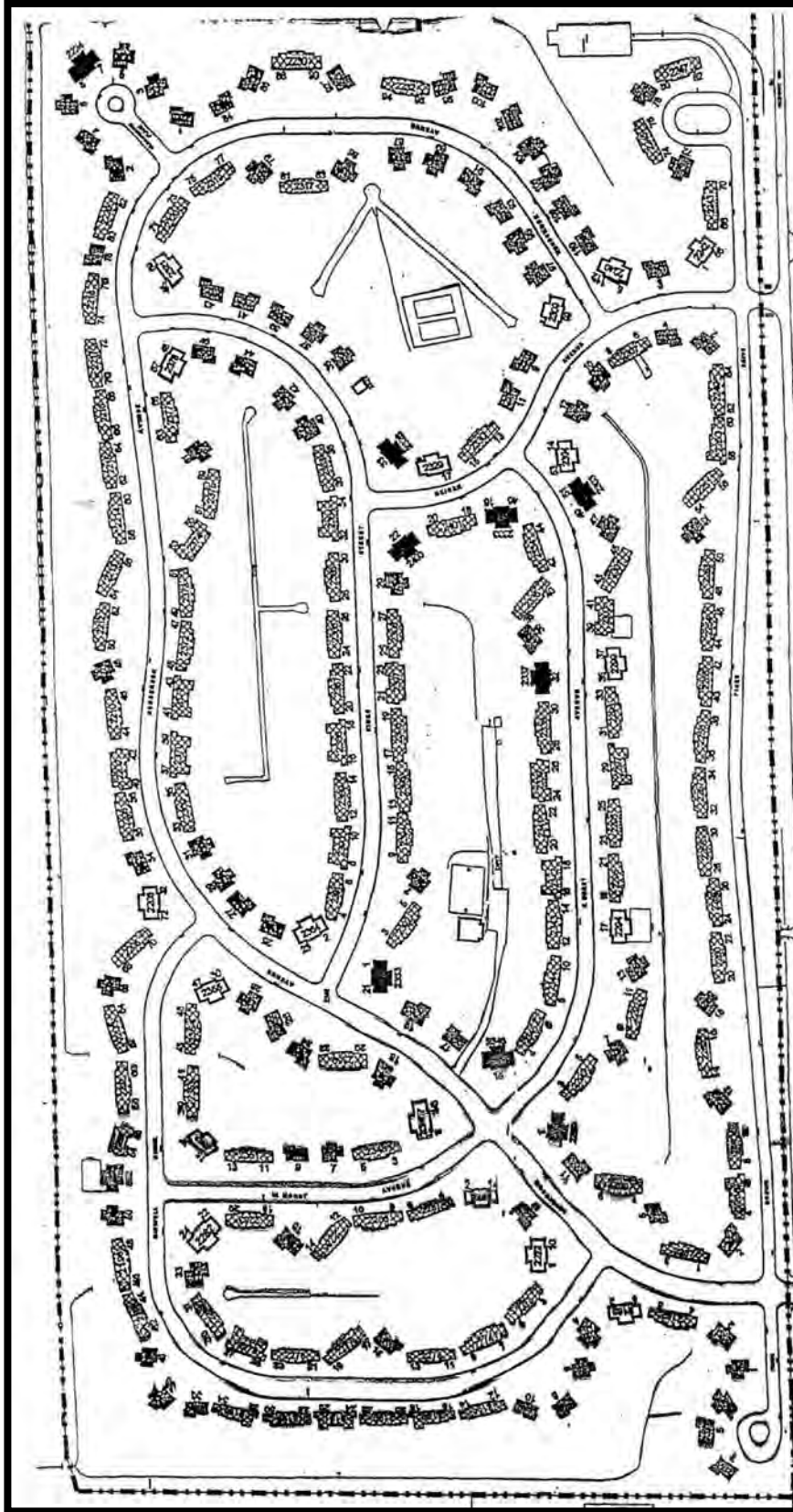


Figure A.3.12. Hancock Village (Wherry housing) neighborhood plan, MCAS Cherry Point, North Carolina, ca. 2003. (Courtesy of MCAS Cherry Point, Housing Office)

Between 1980 and 1984, the buildings in Hancock Village were totally renovated. The current appearance of the buildings resulted from this renovation. The houses were stripped to the structural framing and rebuilt. Insulation was installed, and the buildings were clad in vinyl siding. The roofs were sheathed with new materials and soffits were enclosed in metal. The windows were replaced with metal-frame one-over-one-light, double-hung sash units with molded wood surrounds. The exterior doors were replaced with hollow core wood units.

All interior wall and ceiling finishes were replaced with textured plasterboard, though the general floor plan configurations were retained (Figure A.3.18). Wood baseboards were replaced, but the simple original wood window casings might have been retained. Garbage disposals were installed in Hancock Village (Brown, personal communication 2005). All bathrooms were fitted with fiberglass tubs and new flooring. Wiring for telephone outlets and cable was provided in the master bedroom and in the living rooms (Brown, personal communication 2005).

In 2002, demolition of buildings in Hancock Village began. As of December 2005, one half of Hancock Village was demolished, leaving 105 buildings standing. Of the remaining buildings, 39 were single-family houses and 66 were duplexes.

### Capehart Housing Program at MCAS Cherry Point

The Capehart housing at MCAS Cherry Point was one project originally for 849 units, comprising 680 units for enlisted personnel and 169 units for officers. The drawings dated December 1957 were drawn by Edwards, McKimmon & Etheredge, Architects, from Raleigh, North Carolina. The drawings were signed by Arthur McKimmon and approved by the Bureau of Yards and Docks, Norfolk Public Works District (MCAS Cherry Point drawings file). Both the enlisted personnel and officer housing areas were located on Federal land. The project was completed in 1958.

The married enlisted personnel housing area was located along the western edge of the installation. The neighborhood was laid out along a series of slightly curved streets, resulting in oddly-shaped blocks (Figure A.3.19). The streets had curbs. Sidewalks lined one side of the streets. The houses were oriented either parallel to the streets or perpendicularly with the ends towards the streets. The buildings had uniform setbacks from the streets.

The buildings were all one-story, single-family houses with either three bedrooms with approximately 1,080 square feet of living space or four bedrooms the same amount of living space, approximately 1,080 square feet. The wood-frame buildings rested on concrete slabs. The exteriors originally were clad in brick veneer with brick rowlocks and vertical board-and-batten wood siding, horizontal 9-inch beveled siding, and T1-11 siding (Figures A.3.20 and A.3.21). The building materials were varied from building to building to add visual interest in the neighborhood. A few buildings were clad entirely in brick, while a few buildings were clad entirely in T1-11 siding. Most of the buildings, however, featured combinations of the two materials. The current exterior materials were brick and vinyl siding added in 1988 (Figures A.3.22 and A.3.23). The shallow gable roofs originally were finished with built-up gravel roofing; the original soffits were wood. The overhanging eave on the front elevation provided shelter for the front entry. The original windows were aluminum-frame sliding and fixed units. The front doors were solid-core wood doors. Each building had a carport with a detached storage structure and a screened porch. The locations of these elements varied from building to building depending on the orientation of the building to the street. The building orientation also dictated the placement of the front door and window placement, which also resulted in visual variation to the basically similar house type (MCAS Cherry Point drawings file).



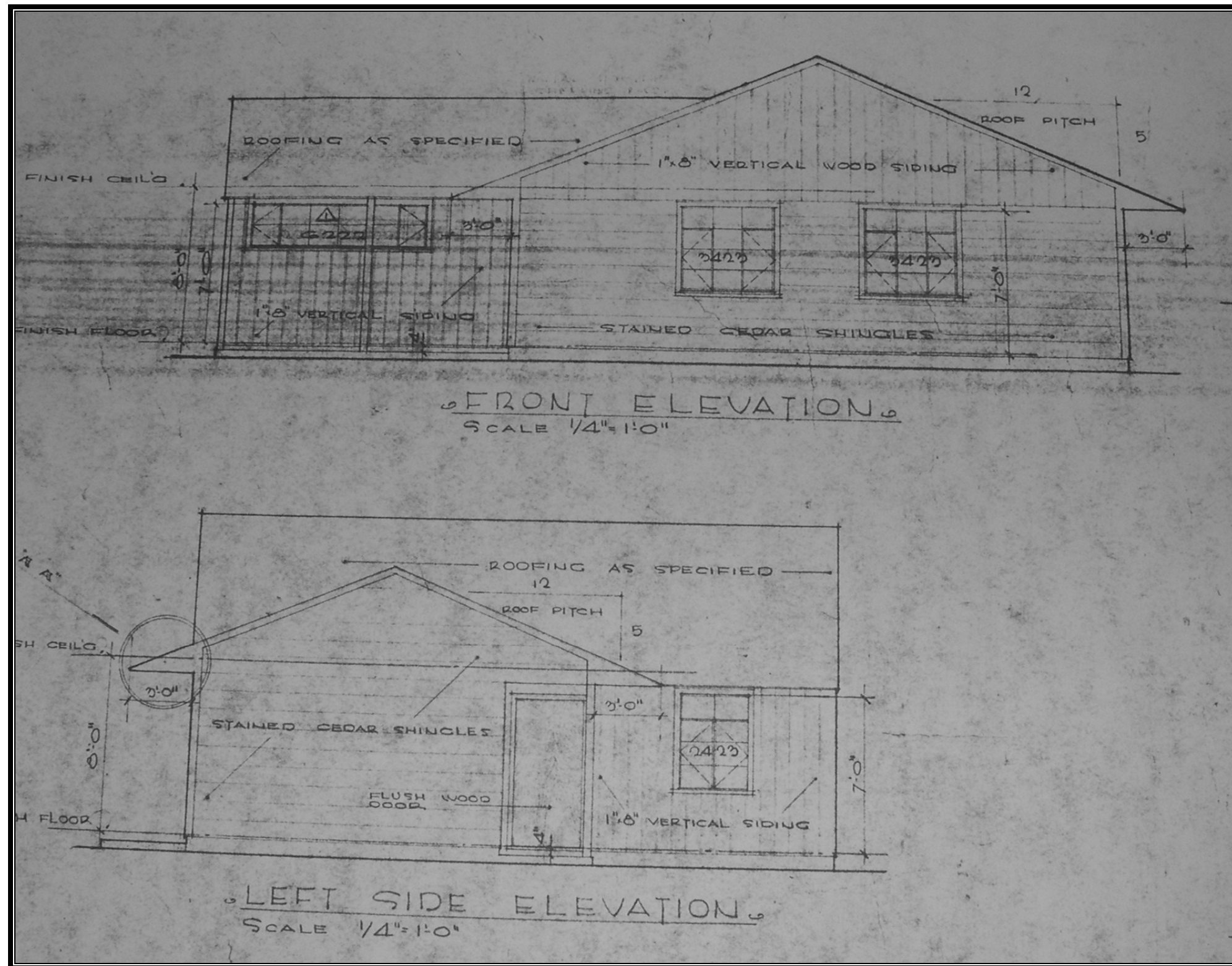


Figure A.3.13. Three-bedroom officer house exterior drawing, Hancock Village (Wherry housing), MCAS Cherry Point, North Carolina, 1951. (Courtesy of MCAS Cherry Point, Facilities Engineering Department)







Figure A.3.14. 17 E Moret Drive, Hancock Village (Wherry housing), MCAS Cherry Point, North Carolina, 2005. (Photo taken by RCG&A)

The variations in floor plans between units resulted from the orientations of the houses in relation to the street. The front door led into the living room, which flowed into the dining room (Figure A.3.24). The kitchen was typically placed next to the dining room and generally overlooked the rear yard or the carport. In some building orientations, the kitchen was along the rear wall, but in other orientations, such as gable end to the street, the kitchen overlooked the front yard and the carport. The kitchen had space for a washer and dryer. A hallway led to the bedroom area. Each house had two bathrooms, one full bath that was accessed from the hall, and one with a shower stall accessed from the master bedroom. A linen closet was located in the hall. Each bedroom had a closet. The interiors were finished with plasterboard walls and ceilings. The floors in the living areas and bedrooms were parquet with wood baseboards (Figure A.3.25). The kitchens had asphalt tiling, and the bathrooms had ceramic tiling. The window and door openings had simple wood surrounds. The houses had hot-water heaters and oil furnaces with floor vents for heat.

The landscape drawings for the enlisted Capehart neighborhood included front and rear grass lawns around the buildings, and regularly spaced hardwood and ornamental trees along the streets in the front yards. During the site visit in November 2005, both mature trees and newly planted trees were noted in the neighborhoods. Some streetscapes had regularly spaced trees, while other streets did not (Figures A.3.26 and A.3.27). It appeared that trees, often pines, located in the block interiors were irregularly grouped where they occurred. Some houses had foundation plantings, but others did not. Over time, regular maintenance of the landscape has resulted in the continuous removal of mature trees and overgrown shrubs, so without further study, the extent of original plant materials currently in the neighborhood was unclear (Brown, personal communication 2005). The rear yards did not have

privacy fences and were open. Mailboxes were sited in clusters throughout the neighborhood. No playgrounds were noted in the neighborhood during the site visit.

Alterations that occurred to the Capehart housing included installation of vinyl siding by 1988. During the 1990s, a four-phase whole house renovation occurred. The buildings in the first phase of renovations on the west end of the neighborhood retained some original elements, including original sliding windows, wall and ceiling finishes, wood baseboards and window and door surrounds, and wood flooring. Each building received new kitchen cabinets, new kitchen appliances, new kitchen flooring, new bathroom vanities, new bathroom fixtures, and new interior closet doors. In general, where the original floor plan had three outside doors, the renovations reduced the number of exterior doors to two. The houses also received mechanical upgrades; heating system was converted to geo-thermal heating.

During the second and third phases, more exterior and interior building elements were replaced with modern materials. By the fourth phase of renovations during the late 1990s, the buildings on the east end of the neighborhood were stripped to the structural framing and brick veneer walls and rebuilt. The interiors, windows, and doors were replaced with modern materials, and all new appliances and fixtures were installed. The interiors were rewired to meet current standards for computers (Brown, personal communication 2005). Currently, the enlisted personnel Capehart neighborhood retained 679 buildings.

The officer housing was constructed in the officer housing area established during World War II. The housing was located on the north side of the installation overlooking the Neuse River. The Capehart officer housing added to this area was sited along curved streets and cul-de-sacs (Figure A.3.28). Sidewalks were provided along one side of the streets. The buildings were all one-story, single-family houses with three or four bedrooms containing approximately 1,250 square feet of living space for junior officers. Senior officer housing contained approximately 1,400 square feet of living space. The buildings were sited either parallel to or perpendicular to the streets. In general, the officer housing area had large front, side, and rear yards. The houses generally had brick exteriors; both tan and red brick exteriors were noted (Figures A.3.29 and A.3.30). The front entries were ornamented with single sidelights of varying widths along the front doors.

On 1 October 2005, the 169 officer houses were privatized and were no longer under Navy control. No interiors of officer housing were available for inspection during the site visit in December 2005. A review of drawings revealed that the officer houses had fireplaces in the living rooms and pocket doors to close off the kitchens and pantries in the kitchens (Figure A.3.31). The highest-ranking officer housing was provided with a maid's room and bathroom.

The officer neighborhood featured grass lawns surrounding the houses and many mature trees along the streets and in the rear yards. Some buildings had foundation plantings. No separate landscaping plan for the officer housing area was located in the MCAS Cherry Point drawings file.

### Appropriated-Funds Housing

MCAS Cherry Point had no appropriated-funds housing constructed between 1949 and 1962.

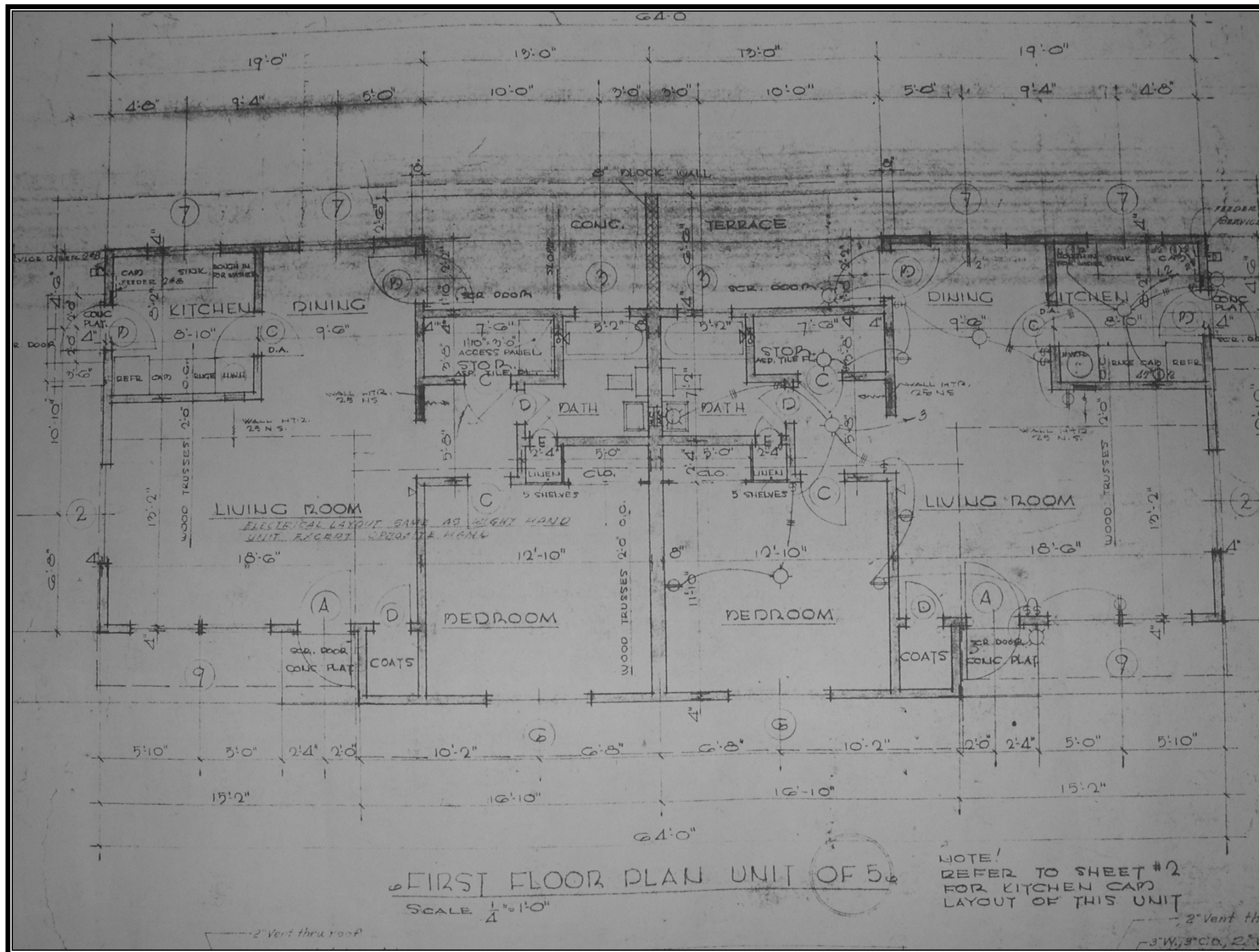


Figure A.3.15. One-bedroom officer house floor plan, Hancock Village (Wherry housing), MCAS Cherry Point, North Carolina, 1951. (Courtesy of MCAS Cherry Point, Facilities Engineering Department)





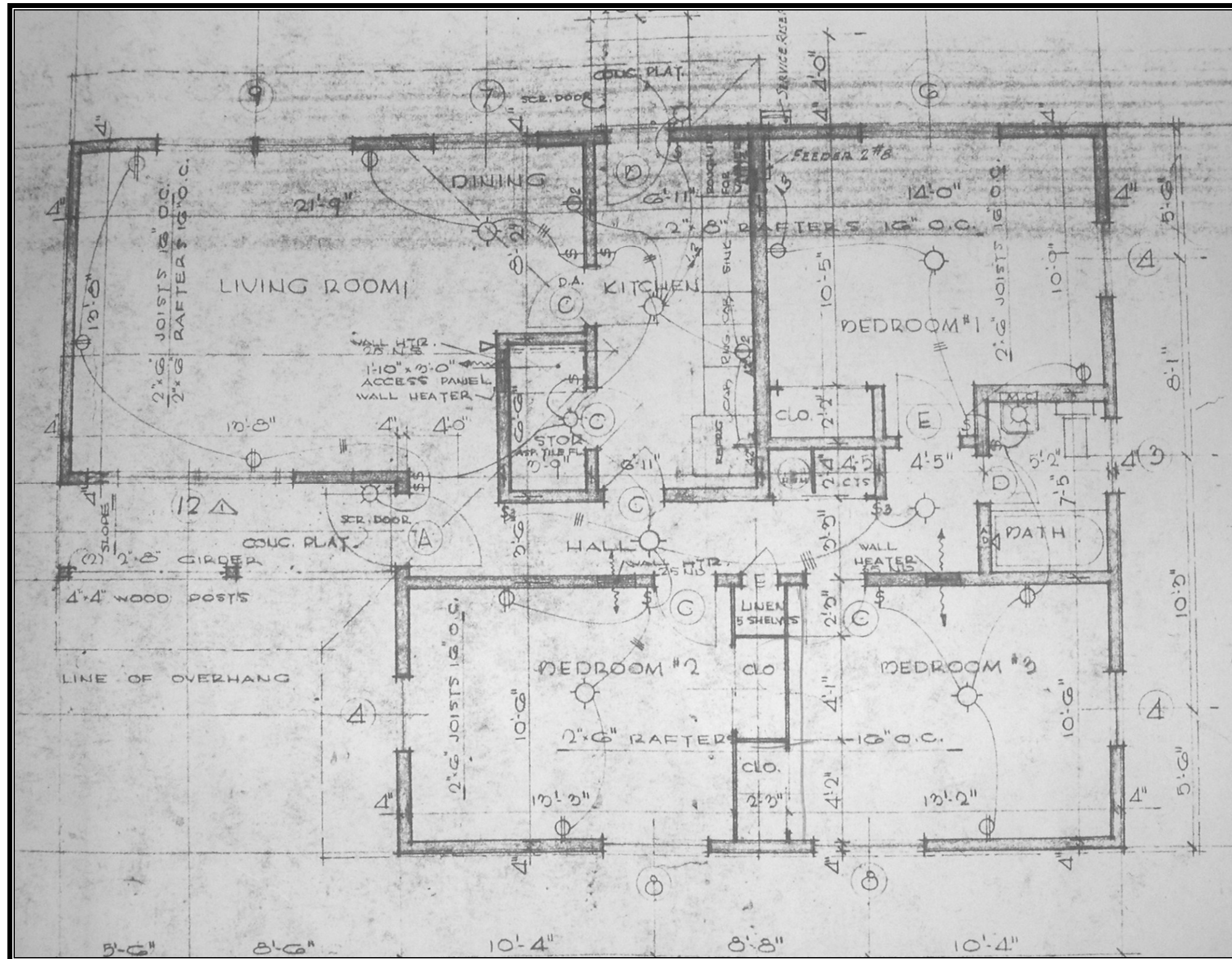


Figure A.3.16. Three-bedroom officer house floor plan, Hancock Village (Wherry housing), MCAS Cherry Point, North Carolina, 1951. (Courtesy of MCAS Cherry Point, Facilities Engineering Department)





Figure A.3.17. East Moret Drive streetscape, Hancock Village (Wherry housing), MCAS Cherry Point, North Carolina, 2005. (Photo taken by RCG&A)



Figure A.3.18. 7 Kines Drive living room, Hancock Village (Wherry housing), MCAS Cherry Point, North Carolina, 2005. (Photo taken by RCG&A)





Figure A.3.22. Capehart enlisted housing along Gates Road, MCAS Cherry Point, North Carolina, 2005. (Photo taken by RCG&A)



Figure A.3.23. 3 Gates Road (Capehart housing), MCAS Cherry Point, North Carolina, 2005. (Photo taken by RCG&A)



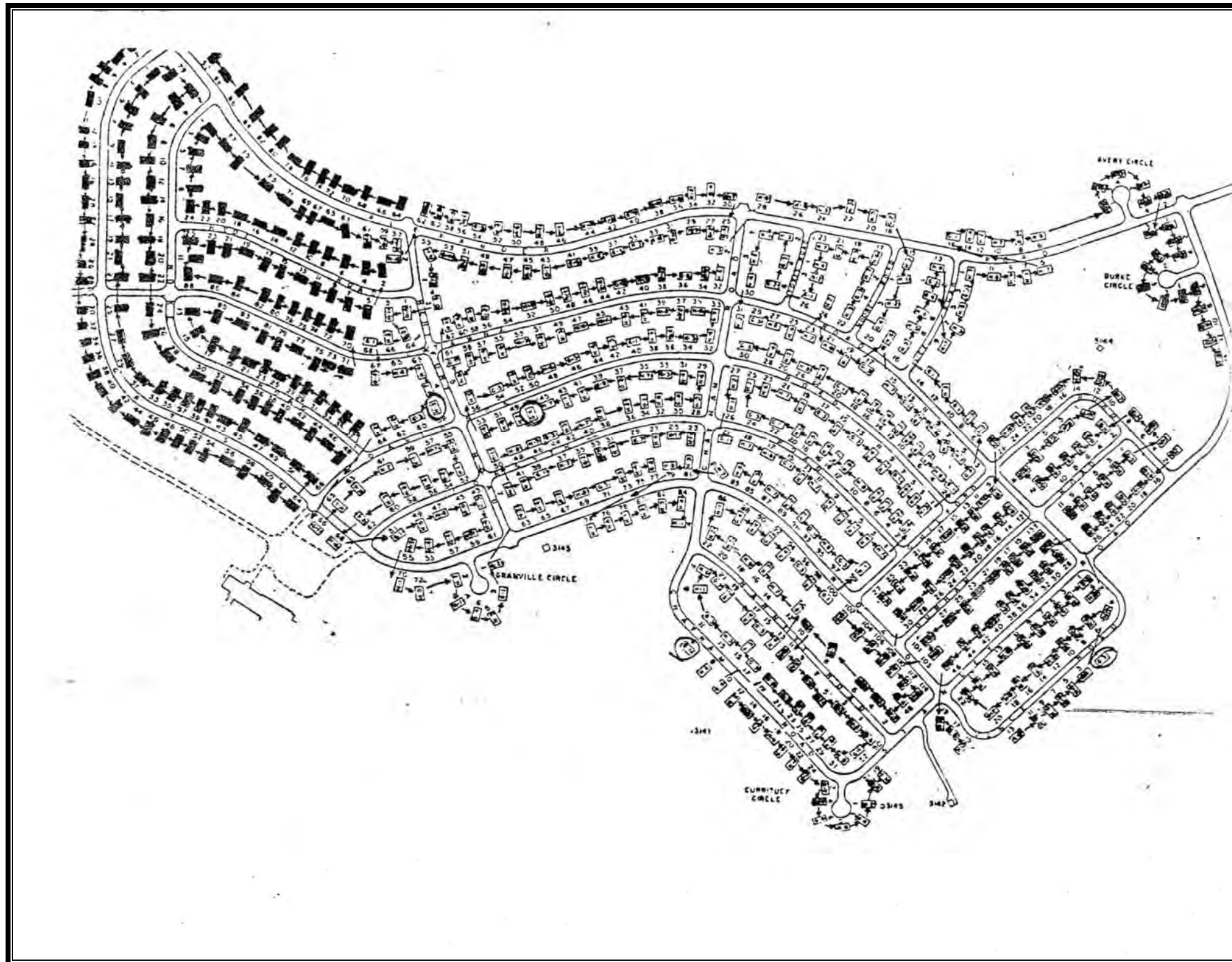


Figure A.3.19. Enlisted personnel Caphart neighborhood plan, MCAS Cherry Point, North Carolina, ca. 2003. (Courtesy of MCAS Cherry Point, Housing Office)



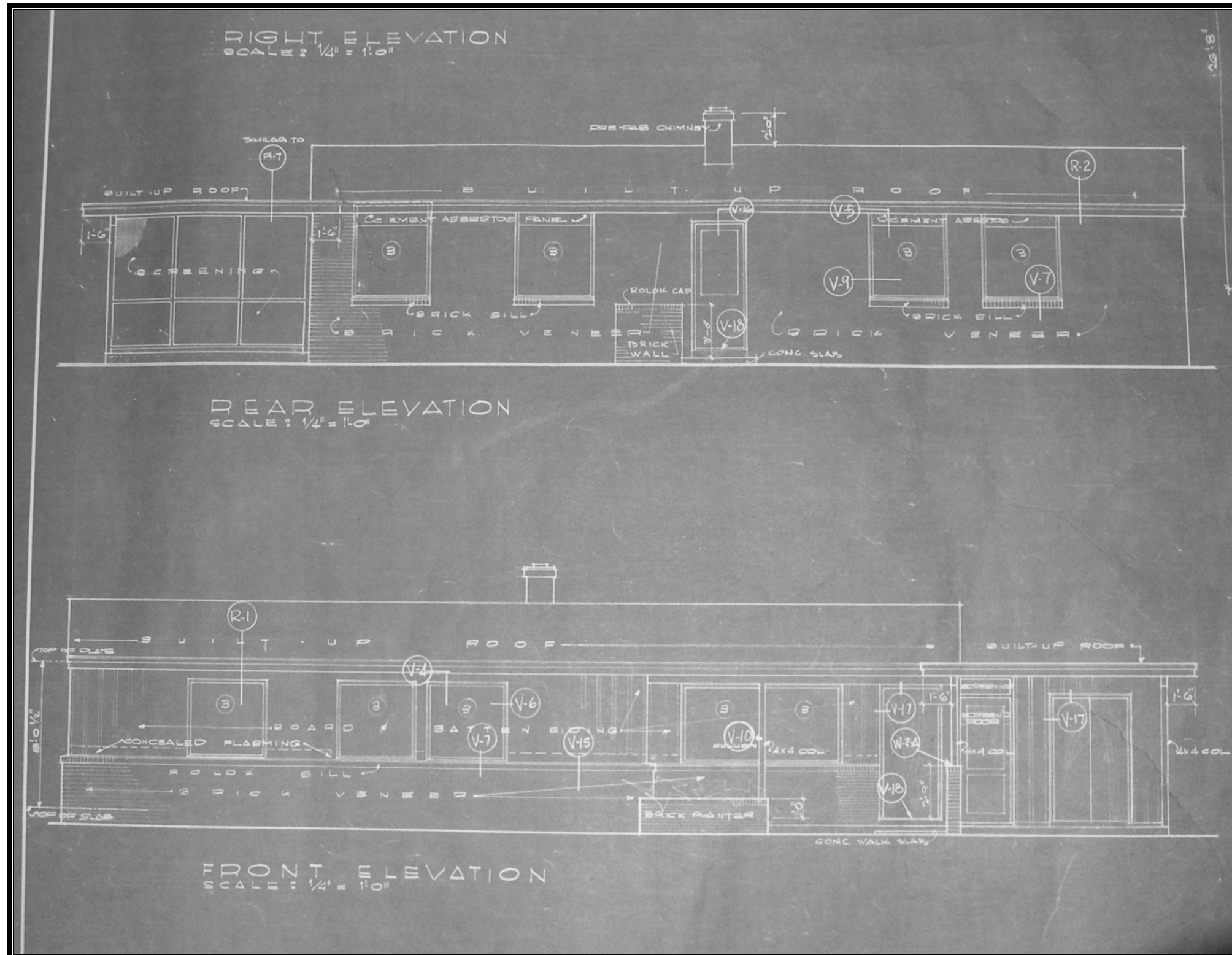


Figure A.3.20. Capehart enlisted housing (Type G) front and rear elevations, MCAS Cherry Point, North Carolina, 1957. (Courtesy of MCAS Cherry Point, Facilities Engineering Department)





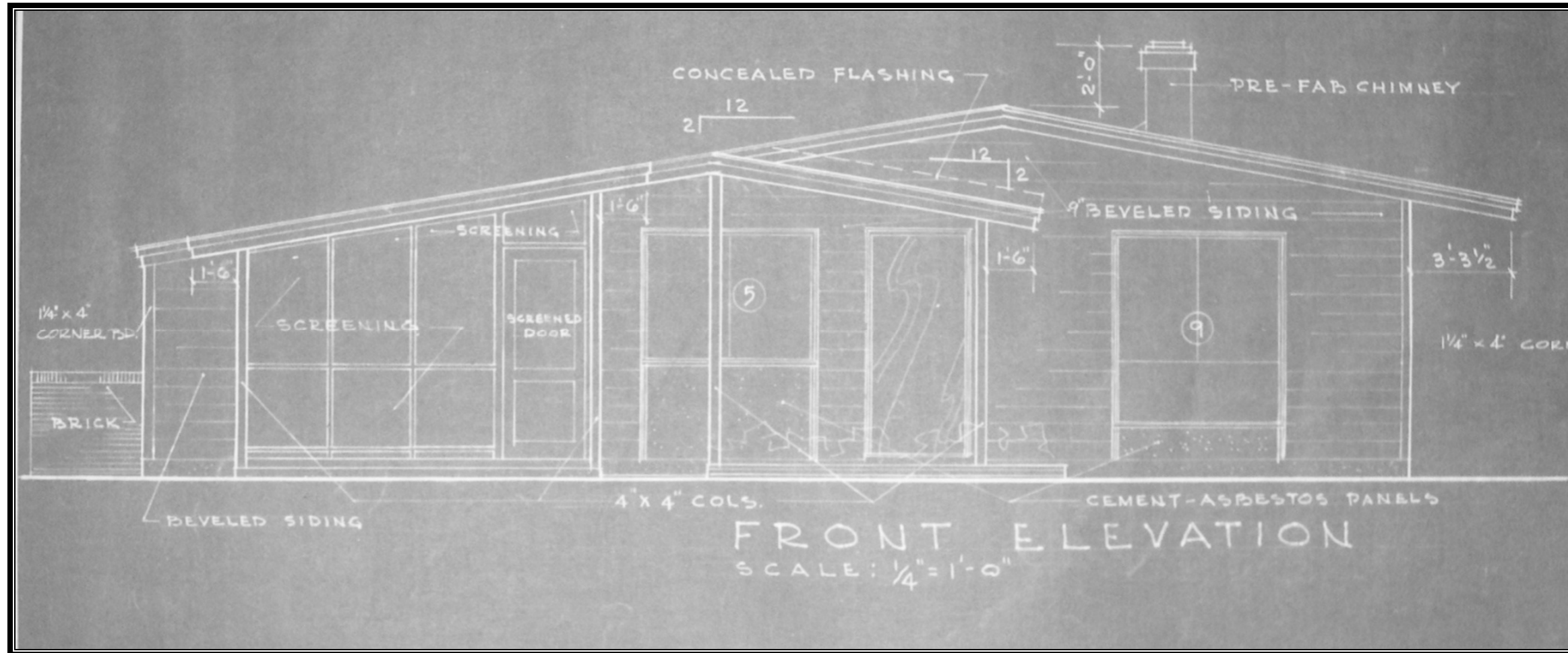


Figure A.3.21. Capehart enlisted housing (Type H) front elevation, MCAS Cherry Point, North Carolina, 1957. (Courtesy of MCAS Cherry Point, Facilities Engineering Department)



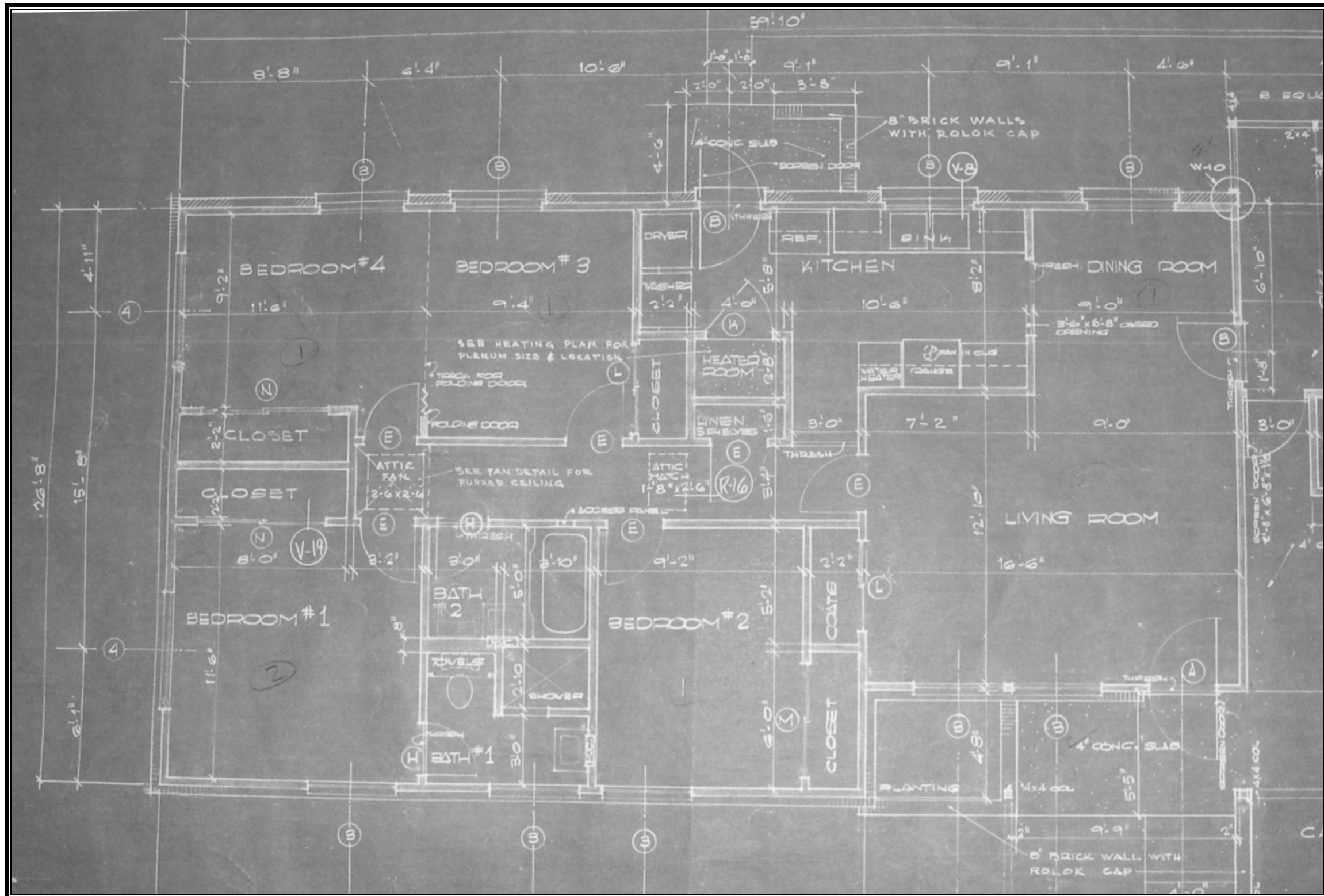


Figure A.3.24. Capehart enlisted housing (Type H) floor plan, MCAS Cherry Point, North Carolina, 1957. (Courtesy of MCAS Cherry Point, Facilities Engineering Department)







Figure A.3.25. 6 Gates Road (Capehart housing) living room with original window and flooring, MCAS Cherry Point, North Carolina, 2005. (Photo taken by RCG&A)



Figure A.3.26. East side of Gates Road (Capehart housing) streetscape, MCAS Cherry Point, North Carolina, 2005. (Photo taken by RCG&A)



Figure A.3.27. West side Gates Road (Capehart housing) streetscape, MCAS Cherry Point, North Carolina, 2005. (Photo taken by RCG&A)



Figure A.3.29. Junior officer Capehart houses along Van Buren Drive, MCAS Cherry Point, North Carolina, 2005. (Photo taken by RCG&A)



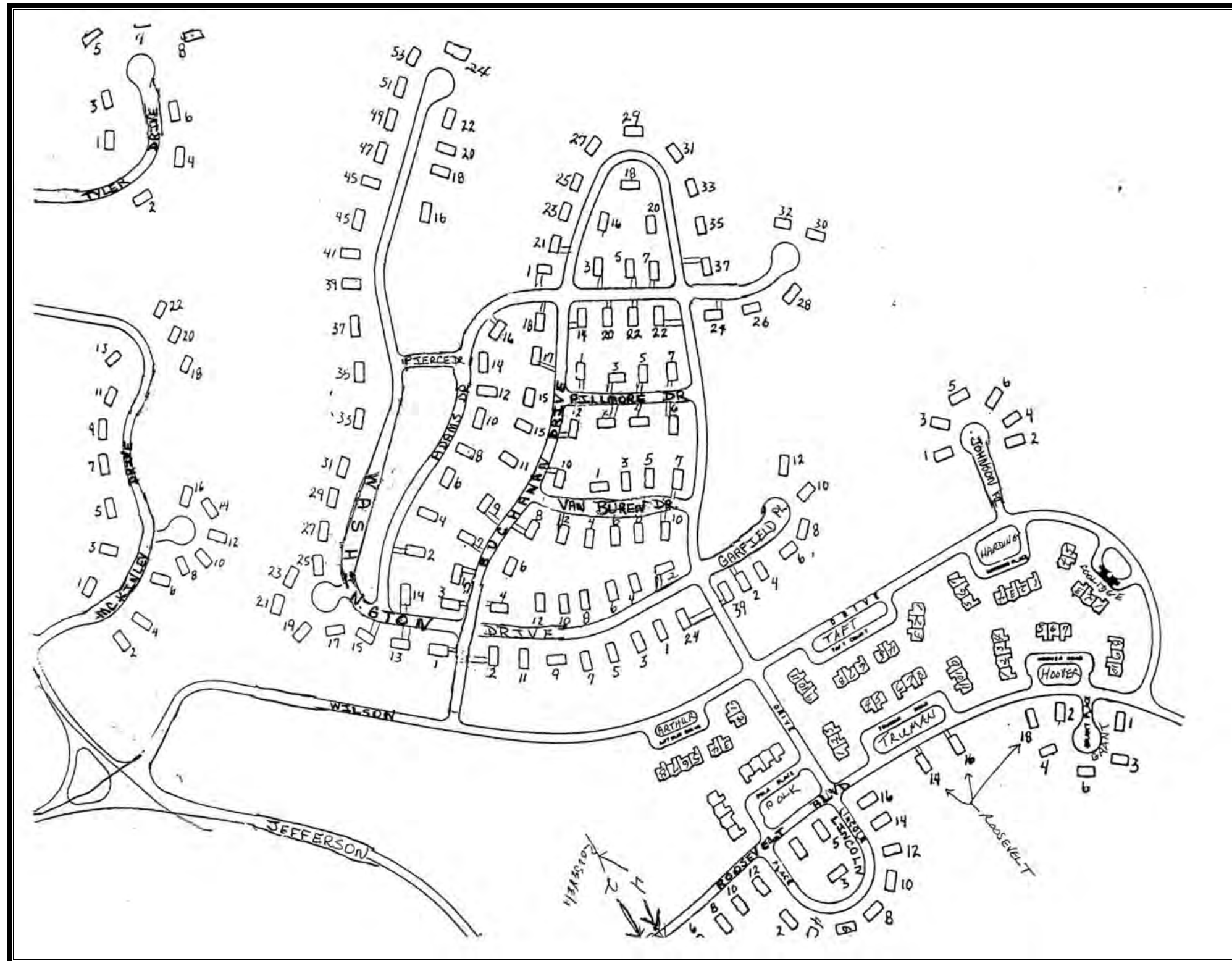


Figure A.3.28. Officer Capehart neighborhood plan, MCAS Cherry Point, North Carolina, ca. 2003. (Courtesy of MCAS Cherry Point, Housing Office)





Figure A.3.30. Senior officer Capehart house on Tyler Drive, MCAS Cherry Point, North Carolina, 2005. (Photo taken by RCG&A)





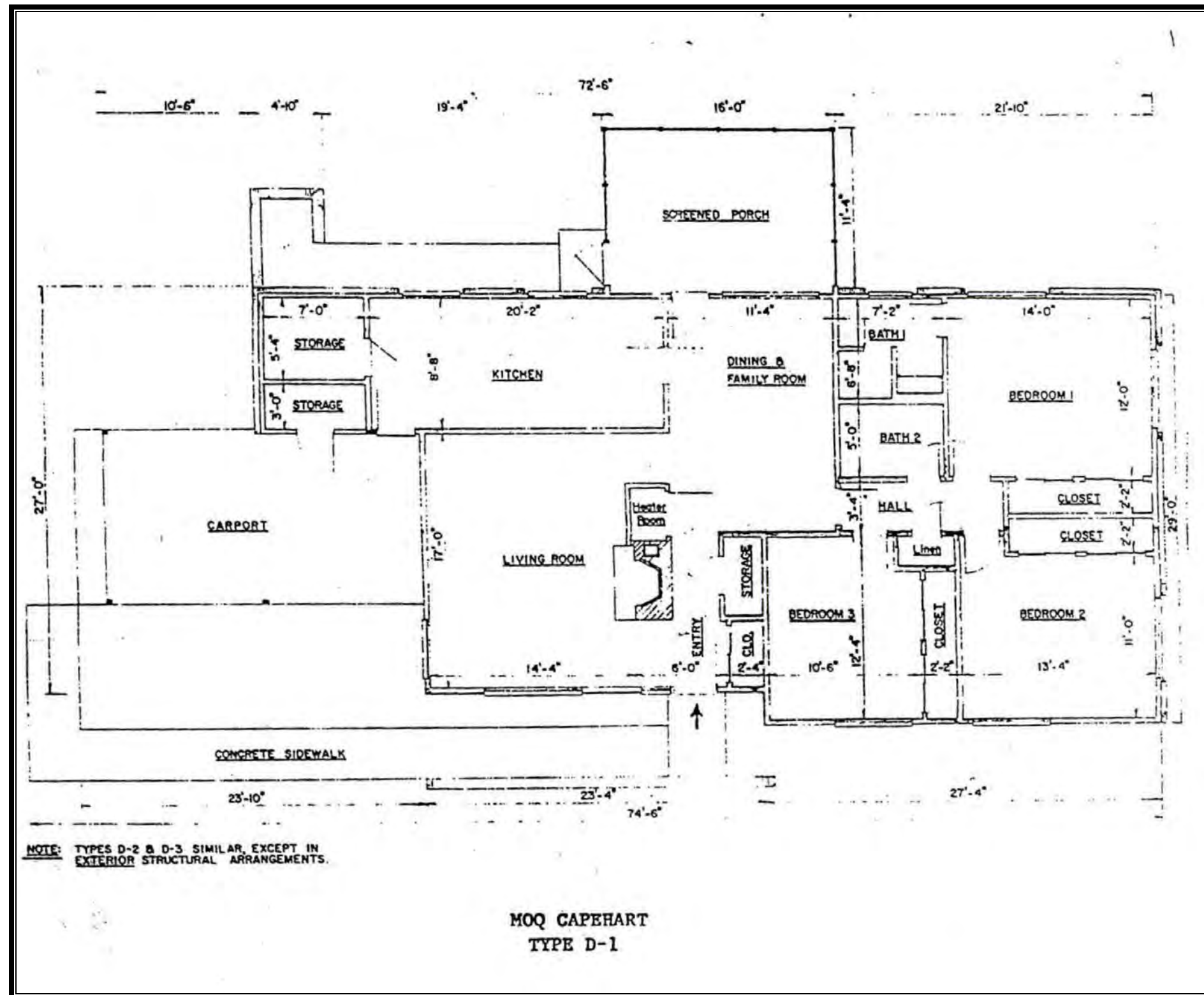


Figure A.3.31. Junior officer Capehart house three-bedroom floor plan (Type D-1), MCAS Cherry Point, North Carolina, 2005. (Courtesy of MCAS Cherry Point, Housing Office)



## Case Study A.4: Mountain Home Air Force Base, Mountain Home, Idaho

### Physical Description

Mountain Home AFB is located near Mountain Home, Idaho, approximately 40 miles southeast of Boise. The base comprises approximately 6,844 acres in Elmore County. The land is a relatively flat, high desert plateau located between two mountain ranges. The native vegetation is tall sagebrush prairie.

Mountain Home AFB hosts the 366<sup>th</sup> Wing, the Air Force's first Air Expeditionary Wing. The 366<sup>th</sup> Wing has developed into a mobile force that commands all types of aircraft to defeat an enemy through cohesive tactical planning (Mountain Home AFB ca. 2002, 2005).

### Base History Summary

Mountain Home AFB was established initially in 1942 as a temporary base to train bomber crews; it was named Mountain Home Army Airfield. Construction of the base began in November 1942, and the new field opened in August 1943. The first personnel trained at the new base were crews for the B-24 *Liberator*. Training at the base continued for the duration of World War II. The base was inactivated in October 1945.

In 1948, the base was transferred to the newly independent U.S. Air Force and renamed Mountain Home Air Force Base. Between 1948 and 1950, the base hosted the 5<sup>th</sup> Reconnaissance Group and then the 5<sup>th</sup> Strategic Reconnaissance Wing. Between 1950 and 1953, the base hosted units of the Air Resupply and Communications Wing. These units worked with the Central Intelligence Agency to support covert and special operations.

In 1953, Mountain Home AFB was assigned to the Strategic Air Command (SAC). The 9<sup>th</sup> Bombardment Wing was stationed at the base. The Wing arrived flying B-29 bombers and KB-29H refueling aircraft, but received new B-47 *Stratojet* bombers and KC-97 tankers in September 1954. From the late 1950s to the mid-1960s, the base served as a SAC alert facility, ready to deploy bombers at a moment's notice. In 1959, three *Titan* missile silos were constructed near the base.

The SAC mission continued at Mountain Home AFB until 1966, when the missile sites closed and the bombers were transferred. Mountain Home AFB was then assigned to the Tactical Air Command (TAC) and hosted the 67<sup>th</sup> Tactical Reconnaissance Wing. In 1972, the 366<sup>th</sup> Tactical Fighter Wing arrived at Mountain Home AFB. The mission of the 366<sup>th</sup> during the 1970s and 1980s was to train, to fly, and to maintain F-111A and EF-111A aircraft for combat readiness.

In 1991, the Air Force chose the 366<sup>th</sup> Tactical Fighter Wing to become an air intervention composite wing. The idea of a composite wing was to build a centralized organization with the ability of rapid deployment to deliver integrated combat airpower. This meant that one commander would control all types of aircraft to deploy under field conditions to defeat an enemy. This experimental concept was implemented at Mountain Home AFB during the 1990s. The 366<sup>th</sup> fighter aircraft were upgraded with several types of modern fighters. Bombers and air refueling tankers also were transferred to the base and joined the organization. In October 1996, the 366<sup>th</sup> Wing was named Air Expeditionary Wing and became the first such wing in the Air Force. The organization has supported numerous deployments in the United States and around the world. Most recently, the wing has supported operations in Iraq (Mountain Home AFB ca. 2002).

## Housing at Mountain Home AFB

Mountain Home AFB had eight housing areas that were concentrated several blocks northeast of the flightline. Five neighborhoods were constructed between 1949 and 1962: the Wherry neighborhood (1956), the Old Capehart airmen area (1959), the Old Capehart officer area (1959), the New Capehart area (1962) for officers and airmen, and four appropriated-funds officer houses (1957) placed east of the permanent officer quarters constructed in 1948 (Figure A.4.1). Though the neighborhoods are adjacent to one another, the neighborhoods are not linked by cross streets. Each housing area is accessed from major streets that often define the boundaries of the neighborhoods, and each housing area contains a distinct internal street pattern independent of any other housing area.

Wherry Housing. Mountain Home AFB had one Wherry neighborhood named Oasis constructed in 1956. Hummel, Hummel, & Jones of Boise, Idaho, and R.J. Neutra and R.E. Alexander of Los Angeles, California, were listed on the 1954 drawings as architects. The drawings were submitted by Robert E. Alexander and read “Designed R.J.N. and R.E.A.” (Mountain Home AFB drawings file). The neighborhood contained 500 units in 92 buildings. Forty-nine buildings with 253 units were constructed for officers, while 43 buildings containing 247 units were constructed for airmen. As of December 2005, only three residential buildings stood in the former Wherry neighborhood.

The Air Force leased the land for 75 years to Mountain Village, Inc., a firm incorporated in Delaware, to construct, maintain, and operate the 500-unit project in accordance with detailed plans and specifications submitted “by the Department of the Air Force and approved by FHA.” Mountain Village, Inc., received a mortgage from the National Bank of Dallas, Texas. Correspondence dated 9 June 1954 identified the construction contractors as Centex Construction Co., Inc., & Murchison Brothers of Dallas, Texas. Correspondence also indicated that the Air Force appropriated \$481,238 for site improvements and utilities, including removal of existing sagebrush vegetation, rough grading and grubbing; installation of on-site sanitary sewer lines to within five feet of the buildings; installation of on-site water distribution lines to within five feet of the buildings; installation of all streets, curbs, and gutters; and, installation of all sidewalks (Mountain Home AFB real property records).

The Wherry housing area was laid out in a basic rectangle with two large blocks (Figure A.4.2). Two east-west oriented streets (North Mellon Drive on the north and South Mellon Drive on the south) defined the neighborhood boundaries, while East Mellon Drive, a major north-south oriented street, defined the east boundary. Central Road, an east-west oriented street, bisected the neighborhood, forming the blocks. This street divided airmen and officer housing. Airmen were assigned quarters (no longer standing) in the northern half of the neighborhood, while officer housing (only three buildings standing) occupied the south half of the neighborhood. Senior officers (no longer standing) were quartered in six, one-story single-family houses located south of South Mellon Drive.

The Wherry neighborhood contained two-story buildings with one-story wings on the building ends that housed five and six families, with the exception of the six single-family senior officer quarters. The buildings were oriented east-west and sited two and three buildings deep on the perimeters of the blocks. The units were accessed from “garage courts” that were groups of multiple-car garages. The garage courts were oriented north-south, with driveways that intersected the perimeter and center streets. Concrete sidewalks led to the front and rear elevations of each unit. The rear yard of each unit was fenced and contained a clothesline, a concrete patio, and a detached external storage building at the corner of the yard. The interior of each block was reserved as open space designed with softball diamonds and tot lots (Figure A.4.3).

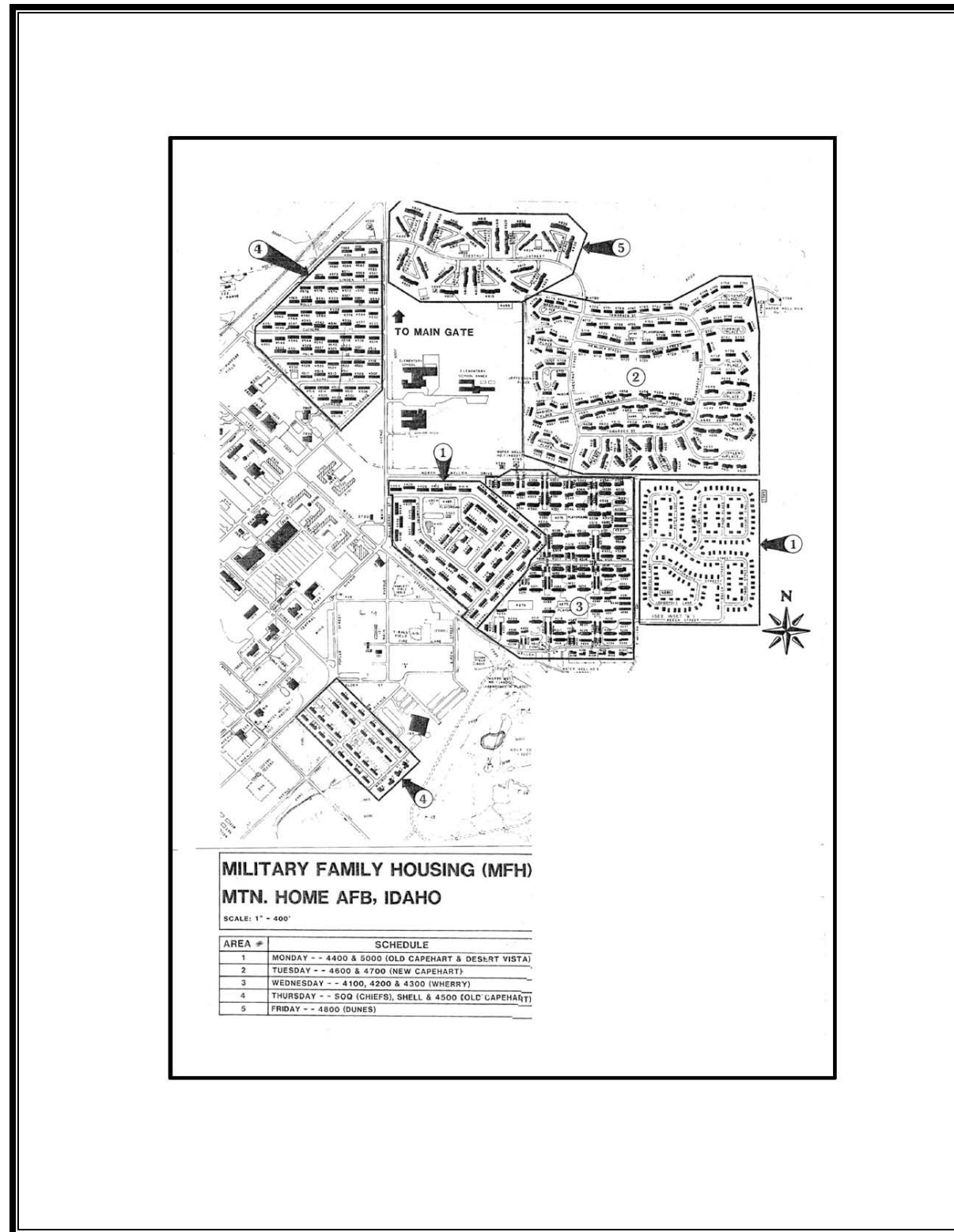


Figure A.4.1. Map of housing neighborhoods at Mountain Home AFB, Idaho, ca. 2000. (Courtesy of Mountain Home AFB, 366<sup>th</sup> Civil Engineer Squadron)







Figure A.4.2. Map of Wherry neighborhood, Mountain Home AFB, Idaho, ca. 2000. (Courtesy of Mountain Home AFB, 366<sup>th</sup> Civil Engineer Squadron)





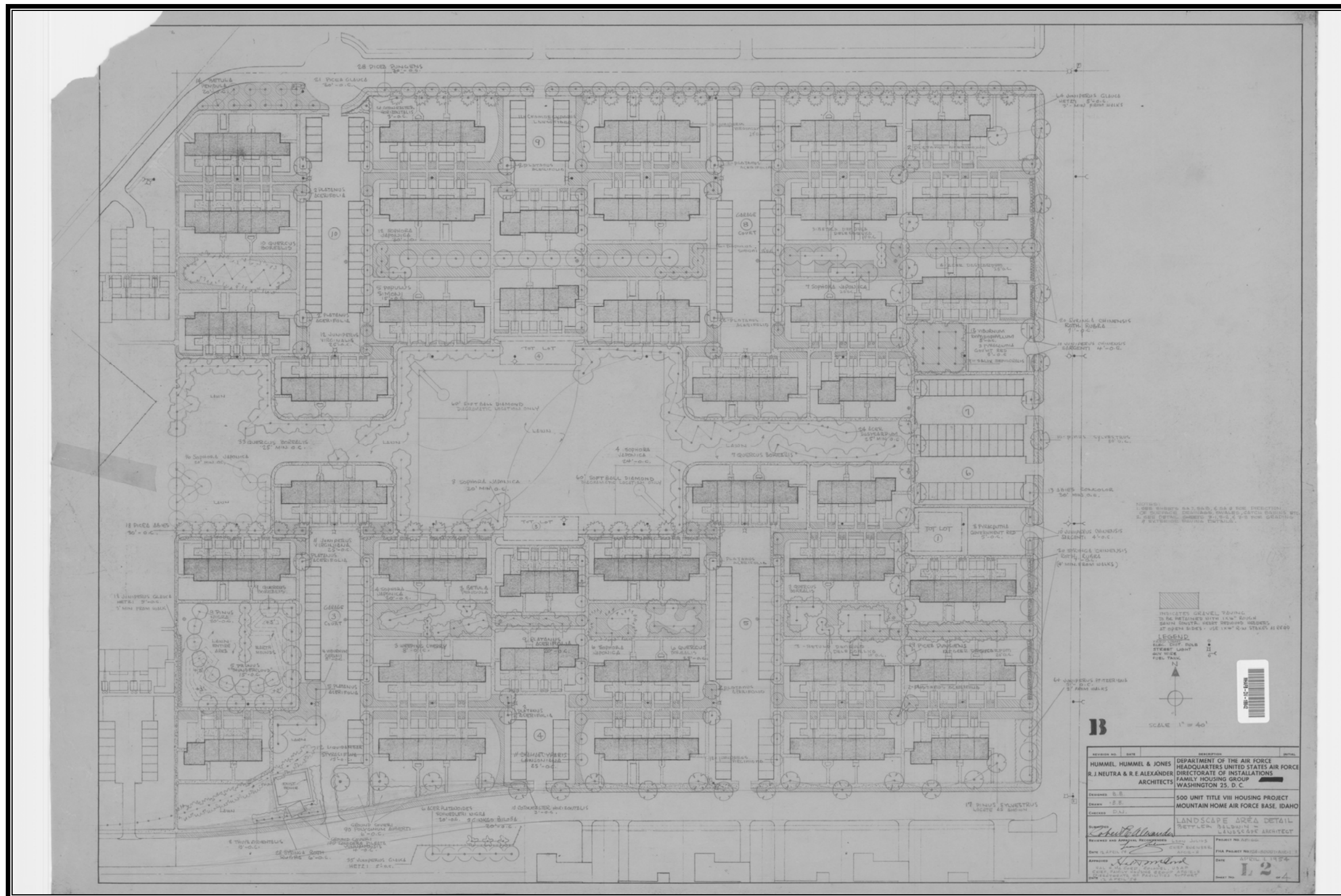


Figure A.4.3. Partial 1956 plot plan of Wherry officer neighborhood, Mountain Home AFB, Idaho. (Courtesy of Mountain Home AFB, 366<sup>th</sup> Civil Engineer Squadron)



The original building materials were wood frame finished with horizontal lap siding. The roofs were flat with four-foot projecting overhangs (Figures A.4.4 and A.4.5). The number of units constructed for airmen and officers was the same: 11 one-bedroom units, 172 two-bedroom units, and 64 three-bedroom units. The total number of officer units was six higher than airmen because six single-family, three- and four-bedroom houses were constructed for senior officers.

In the two-story section of the buildings, each unit was configured with the living room, dining room, and kitchen on the first floor and bedrooms and a bathroom on the second floor (Figure A.4.6). The one-story wings either contained a one-bedroom unit or the third bedroom of the three-bedroom units. Original drawings indicated that the interiors were finished simply. Airmen units had asphalt tile floors with rubber baseboards in living rooms, dining rooms, kitchens and bedrooms; plaster walls; and, drywall ceilings. The officer units had wood-block floors with wood baseboards in the living rooms, dining rooms, and bedrooms; asphalt tile floors in the kitchens; ceramic tiling in the bathrooms; plaster walls; and, drywall ceilings. The original windows were casements and fixed units (Mountain Home AFB drawings file). Amenities included washing machines, bathtubs with showers, fabric draw shades, and garbage disposals (Mountain Home AFB real property records).

A landscape plan of non-native plants was developed for the neighborhood. Landscaping included lawns and trees placed in front of the buildings (Mountain Home AFB drawings file). No grass lawns, shrubs, or trees were native to the tall sagebrush prairie habitat. Correspondence dated 23 May 1957 indicated that, while all the planned landscaping was installed initially, inspectors judged the landscape to be in an unacceptable condition within a year of installation due to lack of proper maintenance (Mountain Home AFB real property records).

In December 1957, the Air Force acquired the Wherry project containing 500 units in 92 buildings from Centex Construction Company, Inc., and TECON Construction Company, Inc., both located in Dallas, Texas, who owned the assets of Mountain Village, Inc. The Federal government paid \$725,712 for the project (Mountain Home AFB real property records).

Changes to the buildings in the Wherry neighborhood over time were numerous. In 1958, the overall numbers of units were decreased to 478 when two smaller units in the five-plexes were combined into larger units, thus creating four-plexes. The rear elevations of all buildings were extended four feet to expand the kitchens and provide dining rooms. Hardwood flooring was added in the downstairs rooms. On the exteriors, tongue-and-groove vertical siding was installed on the building ends (Mountain Home AFB drawings file). In 1961, evaporative cooling systems were installed in the buildings (Mountain Home AFB real property records).

In 1985, over \$5.9 million was spent to improve 462 units of Wherry housing. Units were completely rebuilt except for the foundation, structural framing, and some interior walls. Contractors removed the exterior siding, roofing membrane and insulation, kitchen cabinets and counters, hot-water heaters, fuel tanks, oil furnaces, partial electrical wiring, and windows. The buildings received new baseboard electrical heaters, insulation, roofing, windows, kitchen appliances and counters, plywood, water heaters, interior flooring, and plumbing. The building exteriors were re clad with cement panels with exposed aggregate, described in the drawings as “epoxy aggregate panels.” The garages were modified at the same time. The originally flat roofs on the garages were raised to shed roofs, and the garage exteriors were finished with the same aggregate panels as the dwellings (Mountain Home AFB real property records).

During the early 1980s, three buildings containing 16 units were reassigned as temporary living quarters managed by the Sagebrush Hotel; these buildings are no longer part of the housing inventory. In 1989, these 16 units also were renovated. Additions were constructed on the rear elevations to

expand kitchen/dining areas, and new metal soffits were installed. On the interiors, closets were reconfigured, a half bathroom was added on the first floor, and kitchen appliances were upgraded (Mountain Home AFB real property records; Villa, personal communication 2005). The exterior appearance of these three buildings also was altered through the addition of cement panels with exposed aggregate (Figure A.4.7).

As of December 2005, all but the three buildings of the former Wherry neighborhood were demolished. The three buildings were managed by the Sagebrush Hotel. The area was leveled and prepared for new construction (Mountain Home AFB real property records).

Old Capehart Housing. The Old Capehart neighborhood was designed by Hummel, Hummel, & Jones of Boise, Idaho and R.J. Neutra & R.E. Alexander of Los Angeles, California (Mountain Home AFB drawings file). The builder was Sheridan Incorporated of Pasadena, California (Progress Reports, Capehart Housing Projects). The original drawings indicated that airmen and officer housing were designed according to Air Force housing specifications; the drawings stated, "Designed USAF." In contrast, the three senior single-family officer houses located in the middle of the officer housing area were designed by Neutra and Alexander, and their initials appeared on the original drawings (Mountain Home AFB drawings file).

The 270-unit project comprised two physically separated parcels. Eighty-one buildings containing 162 units for airmen were constructed on one parcel, and 56 buildings containing 108 units for officers were constructed on another parcel. The Mountain Home AFB Housing, Inc., a company incorporated in Delaware, leased the two parcels for 55 years. The Federal government provided fire protection, police protection, water service, sewer service, electric service, gas service, and refuse and trash collection (Mountain Home AFB real property records).

The airmen housing area was formerly known as Woodland Grove; all airmen housing in the Old Capehart area was demolished and new housing was under construction in December 2005. The former Capehart airmen neighborhood was laid out on an irregularly shaped parcel (Figures A.4.8 and A.4.9). The buildings were oriented along east-west oriented streets. The buildings were sited parallel to the streets, but with staggered setbacks ranging from 43 to 76 feet from the street. Sidewalks were located along one side of each street. No rear yards of the units were fenced but fencing was placed at the ends of the blocks. The neighborhood had streetlights and a television tower.

The buildings were one-story duplexes constructed of wood frame set on concrete slab foundations (Figure A.4.10). The exterior walls were clad in vertical wood siding with plastic coated plywood siding along the upper wall under the eaves. The shallow gable roofs were sheathed with built-up gravel and had overhangs along the front elevations with wood fascias. The main entries had solid flush wood doors with transoms. The windows were aluminum frame sliding units. Each duplex had an attached garage. In some duplexes, garages with shared driveways were located in the middle of the duplex, separating one unit from another. A variation of this basic design placed garages on the building ends. The garages also incorporated an external storage area that projected beyond the rear wall of the garage. Each unit had a wood fenced service yard located on the front elevation and a concrete patio in the rear yard (Mountain Home AFB drawings file).

Units occupied by airmen totaled 27 two-bedroom units containing 930 net square feet of living space; 121 three-bedroom units containing 1,075 net square feet of living space; and, 14 four-bedroom units containing 1,079 net square feet of living space. Each unit was configured the same with the kitchen overlooking the front yard and the living room overlooking the rear yard. Bedrooms were located in the opposite end of the building from the kitchen and living room. Two-bedroom units contained one

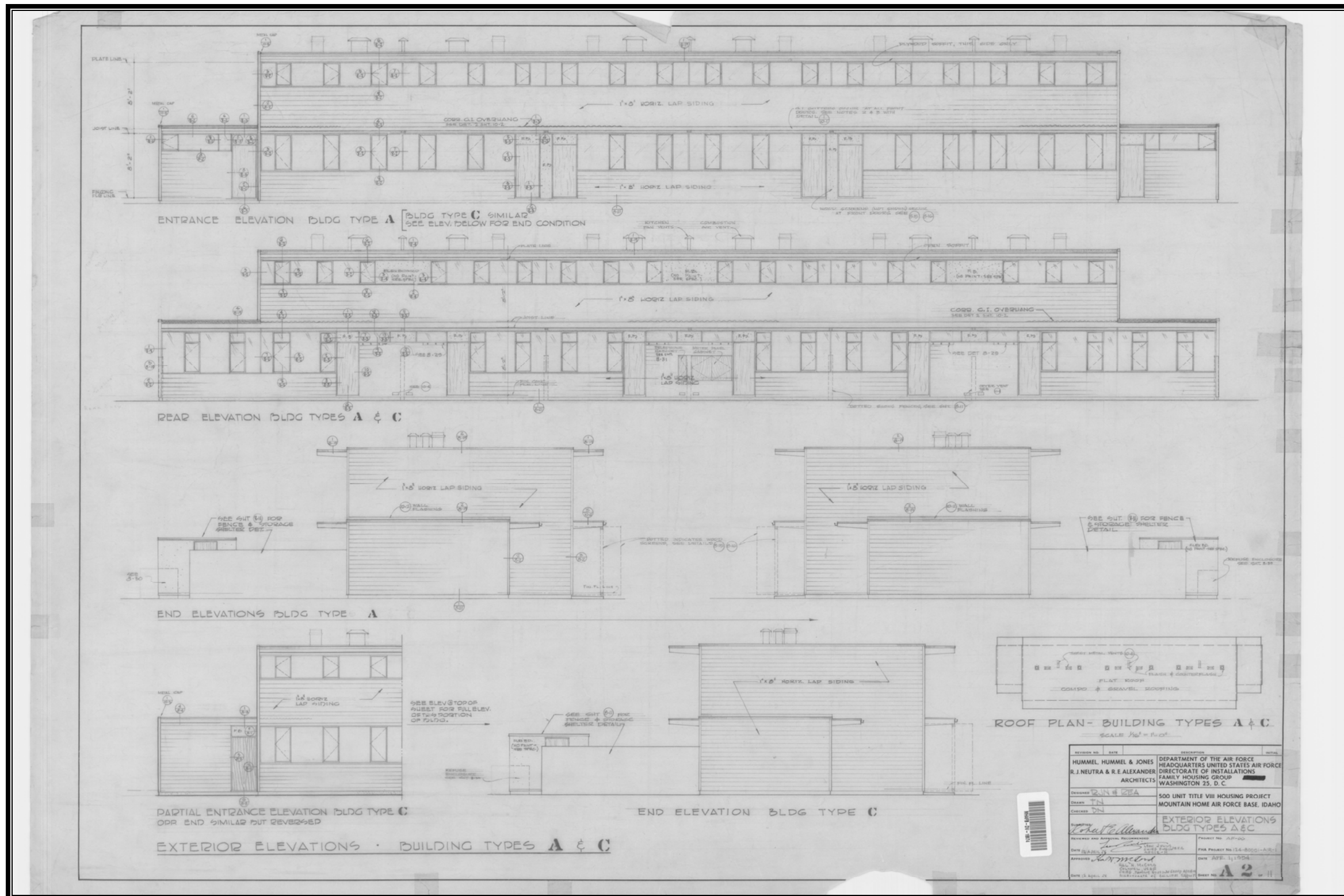


Figure A.4.4. Elevation of Wherry housing, Mountain Home AFB, Idaho, 1956. (Courtesy of Mountain Home AFB, 366<sup>th</sup> Civil Engineer Squadron)







Figure A.4.5. Historic photo of Wherry family housing, Mountain Home AFB, Idaho. (Courtesy of Cultural Resources Manager, Mountain Home AFB)

bathroom, while three- and four-bedroom units contained two bathrooms (Mountain Home AFB drawings file).

The officer housing area was known since 1972 as Gunfighter Manor, the nickname of the 366<sup>th</sup> Tactical Fighter Wing (Figure A.4.11). This housing area was built on an oddly-shaped parcel that was the former location of public housing constructed during World War II. The center of the parcel was not developed as part of the Capehart project and contained older buildings from World War II that were adapted to community service buildings. The general street pattern of the World War II housing area was retained; the streets generally were oriented northwest to southeast following the same general orientation of the flightline, but also angled to fit the parcel. The 52 duplexes and four single-family officer houses were sited parallel to the streets and had staggered setbacks of between 48 and 90 feet from the streets (Figure A.4.12). Concrete sidewalks were placed along one side of the streets on which buildings fronted.

The officer duplexes were wood-frame buildings clad in tongue-and-groove vertical wood siding with plastic coated plywood siding along the upper walls. The line on the exterior wall where the materials changed formed a simple beltcourse; the beltcourse was particularly ornamental when painted a color different from the siding. The building ends were constructed of concrete block (Figure A.4.13). The buildings rested on concrete slab foundations and had shallow gable roofs with projecting roof overhangs on the front and rear elevations. The roofs were sheathed with built-up gravel.

The main entries had solid flush wood doors. The original drawings for the officer housing depicted transoms over the doorways and metal-frame fixed and sliding windows. The entries in December 2005 had single sidelights, and all windows were metal-frame sliding units (Figure A.4.14). Each

duplex had an attached garage. In some duplexes, garages were placed in the middle of the buildings with shared driveways; in other duplexes, garages were attached to the building ends and each garage had a separate driveway. Concrete sidewalks led from each driveway to the front door. Garages incorporated an external storage area that pushed the rear wall of the garage beyond the rear wall of the dwelling. Each unit had a wood fenced service yard located on the front elevation. Each rear yard had a concrete patio and a fenced rear yard (Mountain Home AFB drawings file).

The officer housing area had 81 three-bedroom units containing 1,180 net square feet of living space and 24 four-bedroom units containing between 1,245 and 1,395 net square feet of living space. The typical interior configuration of a three-bedroom unit had an off-center doorway that opened into a small entry hall that contained a coat closet and a utility closet. The kitchen overlooked the front yard; the combined living and dining room overlooked the rear yard (Mountain Home AFB drawings file). The kitchen was equipped with connections for a washer and dryer, a garbage disposal, and a dishwasher. Progress Reports indicated that 228 units were equipped with garbage disposals, washers and dryers; only 71 units were equipped with dishwashers (Progress Reports, Capehart Projects). The kitchen could be closed off from the entry hall by an accordion door. A short hall led to the bedrooms and the hall bathroom. Closets were located in the hallway, and a linen closet with built-in shelving was located just outside the hall bathroom (Figure A.4.15). A second bathroom with a shower stall was accessed from the master bedroom. Each bedroom contained a closet.

The interiors walls and ceilings were finished in drywall. Hardwood flooring originally was installed in the living areas and bedrooms. Eight-inch parquet flooring was noted in the entry hall in December 2005; the remaining floor area was carpeted. The walls had wood baseboards throughout each unit. The metal-frame windows had four-inch wide wood sills. The interior doors were flush hollow core wood doors set in simply molded door jambs. The interiors had no other ornamental trim. Unusual design elements in the unit included the partial wall that separated the entry hall and kitchen from the living room and the upward sloping ceiling in the living room that followed the gable roof pitch (Figure A.4.16).

The units originally were equipped with evaporative cooling systems, which were replaced with central heating and air conditioning systems. The rear yards had privacy fencing constructed of vertical board wood fences. The original fenced service yards on the fronts of the dwellings were removed.

Three large houses designed by Richard J. Neutra for senior officers (colonel, commander, and general) occupied one block in the middle of Gunfighter Manor (Figure A.4.17). The original drawings stated, "Designed RJN," although Charles Hummel, senior principal of Hummel Architects, identified Robert Evans Alexander as the actual designer (Mountain Home AFB 2006; Bowden and Kennedy 2005). The houses designed for the colonel and commander occupied one half of the block, while the house designed for the general sat on the other half of the block.

The unoccupied colonel's house was viewed during the site visit conducted at Mountain Home AFB in December 2005 (Figures A.4.18 and A.4.19). Access to the other two occupied senior officer houses was not available. All three houses shared a similar exterior appearance. The houses were wood-frame buildings clad with brick veneer and vertical tongue-and-groove wood siding. The colonel's house had a flat roof with a raised section over the living room. The windows were metal-frame fixed and sliding units. A brick-walled service yard was located in the front yard. The interior contained approximately 1,715 square feet of living space. The main entry opened into a hallway that led to the living room. The living room spanned the rear of the unit. The living room ceiling was higher than the kitchen ceiling (Figure A.4.20). The dining room was partially partitioned from the living area. The living room could be partitioned by an accordion partition. The kitchen overlooked the front

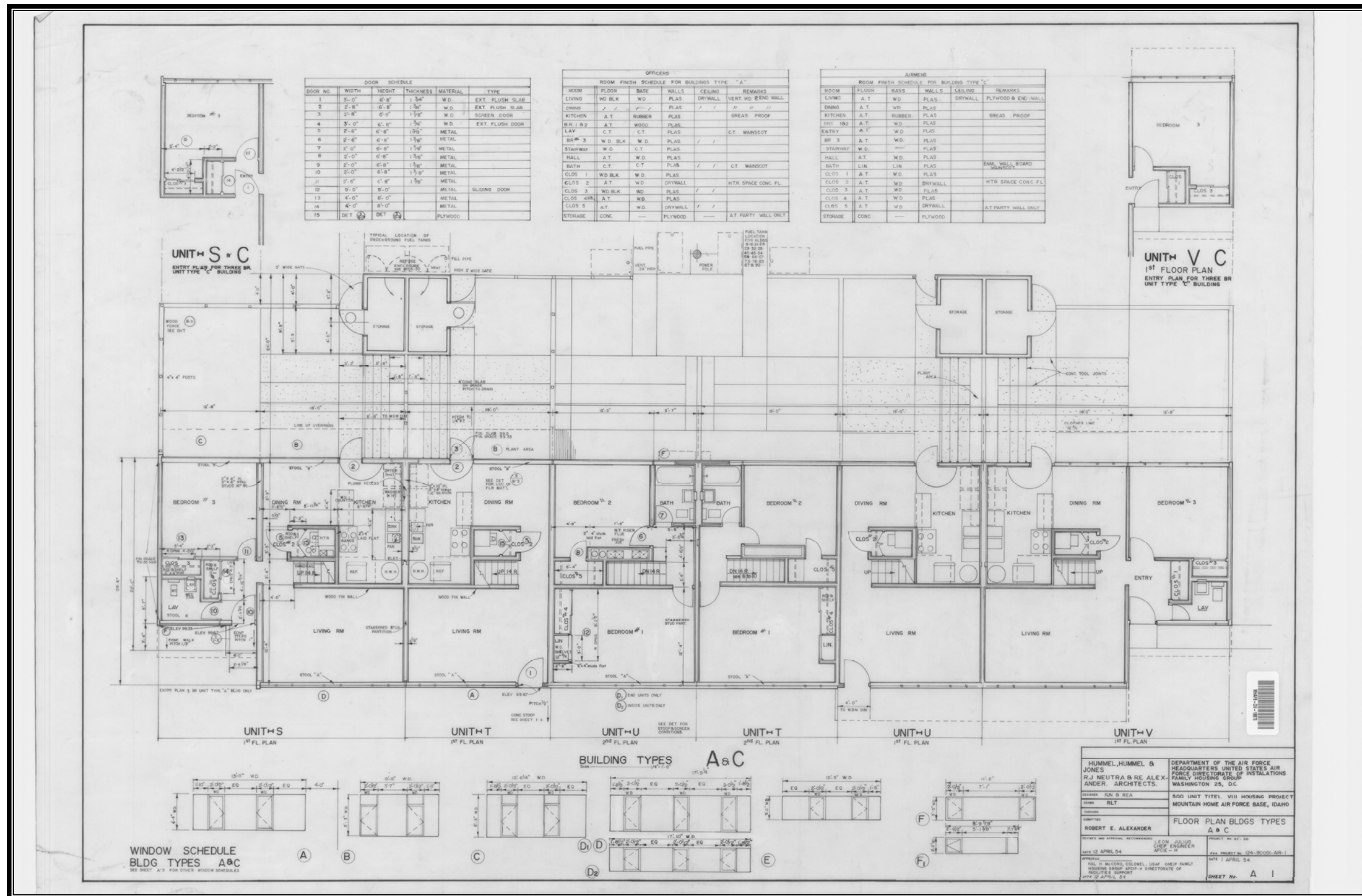


Figure A.4.6. Floor plan of multi-family Wherry housing, Mountain Home AFB, Idaho, 1956. (Courtesy of Mountain Home AFB, 366<sup>th</sup> Civil Engineer Squadron)





Figure A.4.7. Building 4206, Mountain Home AFB, Idaho, 2005. (Photo taken by RCG&A)

service yard. A long hallway led to the bedrooms and a bathroom. The master bedroom suite spanned the width of building end and featured a large master bathroom with shower and a dressing room. A half bathroom was located near the kitchen. The colonel's house also had a double garage with built-in storage shelves along the rear wall. The other two senior officer quarters shared a similar floor plan.

The landscape plan (Figure A.4.21) for the buildings in the Old Capehart neighborhood depicted grass lawns, trees in the front and rear yards near the buildings, and shrubs along the foundation walls and along the rear fence lines. Baldwin, Eriksson and Peters of Los Angeles, California, were the landscape architects. The drawing stamped "as built" indicated that the planting plans were implemented (Mountain Home AFB drawings file). In December 2005, the officer Capehart neighborhood appeared to be lushly vegetated. The houses were surrounded by non-native grass lawns, mature trees in the front and rear yards, and shrubs along the foundation walls. No documentation was found during the site visit to indicate changes to the landscape plan. In one example of a Capehart officer unit (Figure A.4.14), a mature tree and mature shrubs in the front yard appeared to match the landscape plan for unit B-3. However, the rear yard lacked foundation plantings and plantings along the rear fence line. The trees in the rear yard were not located near the building.

Typical changes to the Old Capehart units included utility upgrades, such as new wiring, new electrical lighting fixtures, and new utilities. The roofs were replaced in 1975, and new metal fascias

were installed in 1980. The concrete-block end walls of the officer houses were insulated in 1981 and covered with vinyl siding. The oil heating system was removed from the units in 1985 and gas heat installed. From 1987 to 1989, air conditioning was installed in the units. Other changes to the interiors included new oak cabinets, new flooring, and new kitchen appliances, such as dishwashers and garbage disposals. Bathrooms also were upgraded. Kitchen and bathroom upgrades occurred during the early 1990s.

New Capehart Housing. In 1962, 300 units were constructed in the New Capehart neighborhood known as “Presidential Acres.” This project was designed by Hummel, Hummel & Jones of Boise, Idaho. By the time the project was completed, the name of the architectural firm had changed to Hummel, Hummel, Jones & Shawver (Mountain Home AFB drawings file). Mountain Home AFB No. Three, Inc., negotiated three 55-year ground leases from the Federal government to build the project (Mountain Home AFB real property records).

The New Capehart neighborhood was laid out with an internal circular road surrounded by fourteen cul-de-sacs (Figure A.4.22). Two cross streets linked the east and west sides of circular road. The center of the housing area was open space that divided airmen housing on the north side of the neighborhood from officer housing on the south side of the neighborhood. The buildings were sited parallel to the streets with uniform setbacks of 50 feet. Concrete walkways were constructed along one side of each major interior street, but not along the cul-de-sacs (Mountain Home AFB drawings file).

Eighty-six buildings containing 172 units were constructed for airmen. Of these, 58 buildings were one-story, three-bedroom duplexes and 28 buildings were two-story, four-bedroom duplexes (Figures A.4.23 and A.4.24). The buildings were wood-frame clad with lapped horizontal and vertical siding and vertical tongue-and-groove wood siding. The main entries were recessed and contained flush wood doors with single sidelights set in wood surrounds. Each unit had a garage accessed by a short paved driveway. Where garages were located in the middle of the duplexes, the driveways were shared. The rear garage wall was provided with shelving for external storage. A concrete walk led from the driveway to the front door of each unit.

One-story airmen units with three bedrooms ranged in size from 1,060 to 1,303 net square feet of living space. The airmen housing had several types of interior configurations. One plan type with 1,060 net square feet of living space was viewed during December 2005 (Figure A.4.25). This unit had a recessed entry. An external furnace room was accessed from the recessed entry. The front door opened onto a short hallway. A freestanding storage island had a coat closet with sliding wood doors on one side and a pantry with hinged doors on the end closest to the kitchen (Figure A.4.26). This storage unit visually obscured the hall from the combined living and dining area. The kitchen overlooked the street and had a door into the garage. The kitchen could be closed off from the rest of the house by a pocket door with a metal pull. A hallway led to three bedrooms and a bathroom. The hall linen closet with built-in shelves was located in hallway (Figure A.4.27). A second bathroom accessed from the master bedroom contained a toilet and sink. Each bedroom had a closet along one wall. The closet doors were wood sliding units with circular indented metal pulls.

Another version of the three-bedroom unit with 1,303 net square feet was configured with the living room along the front elevation and the kitchen and dining overlooking the rear yard. The kitchen contained a pantry. The master bathroom in this unit layout contained a shower.

The two-story, four-bedroom airmen units contained 1,263 net square feet of living space. The first-floor configuration of these units had a living room that spanned the width of one side of the unit; the



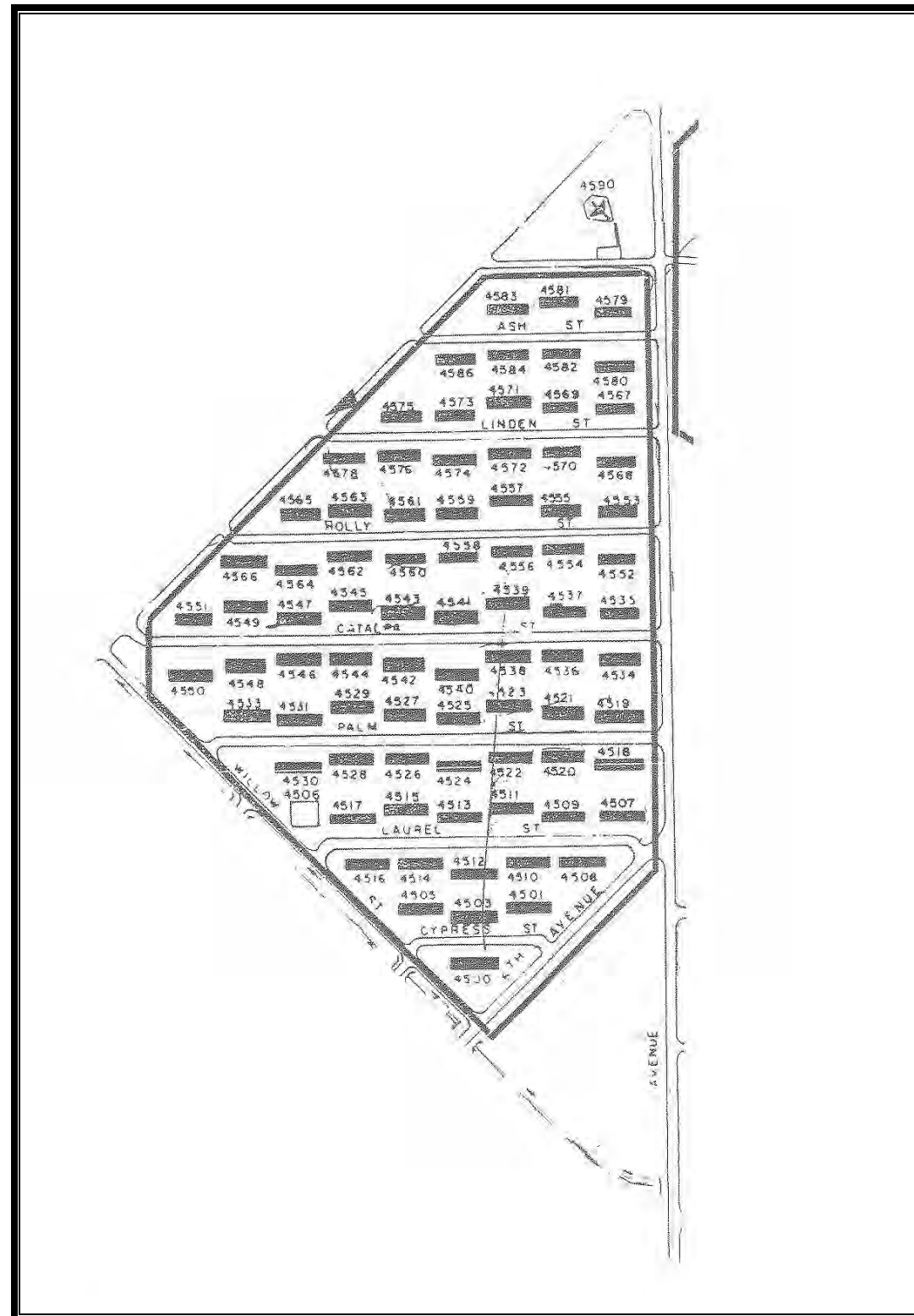


Figure A.4.8. Map of Old Capehart airmen neighborhood, Mountain Home AFB, Idaho, ca. 2000. (Courtesy of Mountain Home AFB, 366<sup>th</sup> Civil Engineer Squadron)





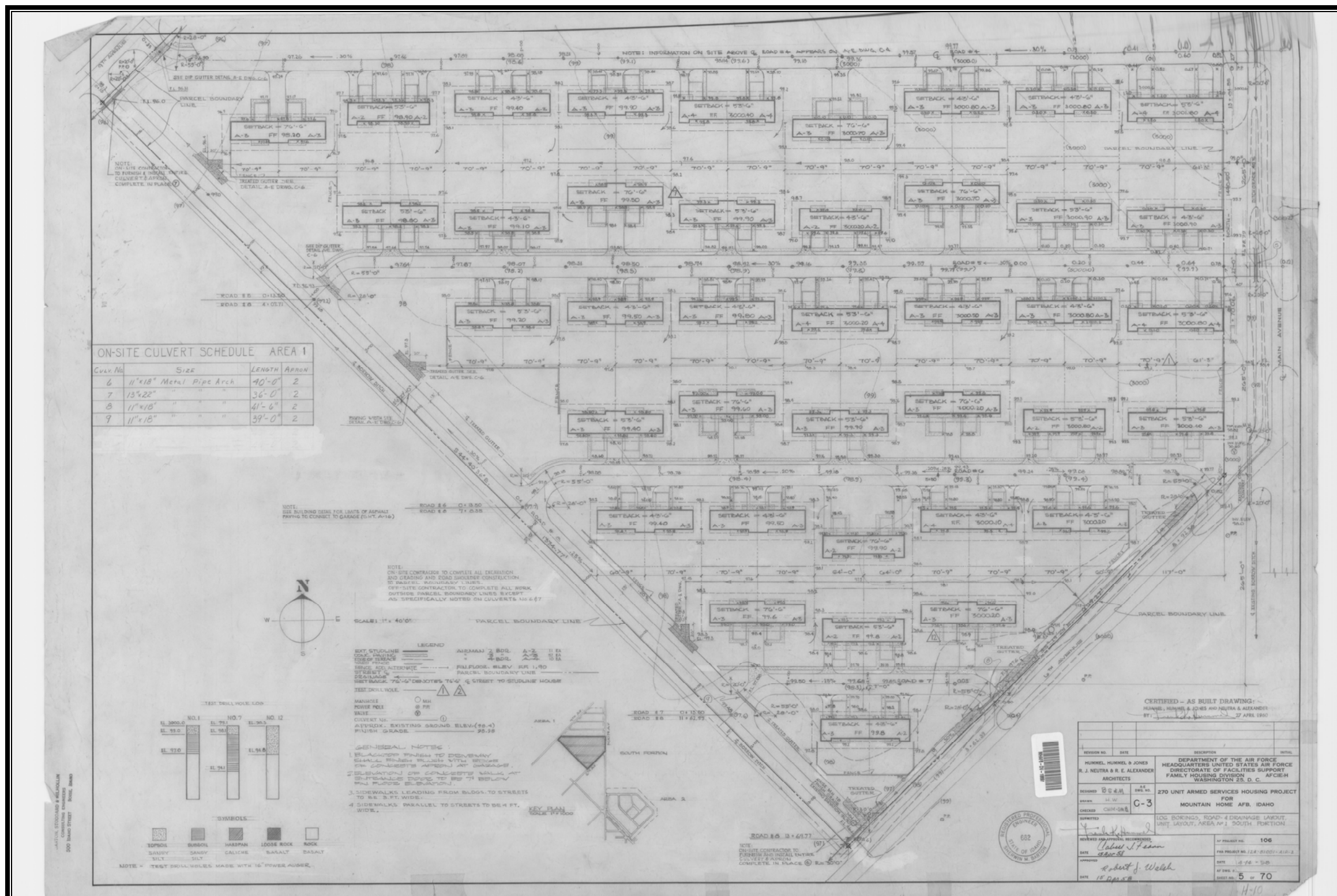


Figure A.4.9. Partial 1958 plot plan of Old Capehart airmen neighborhood, Mountain Home AFB, Idaho. (Courtesy of Mountain Home AFB, 366<sup>th</sup> Civil Engineer Squadron)



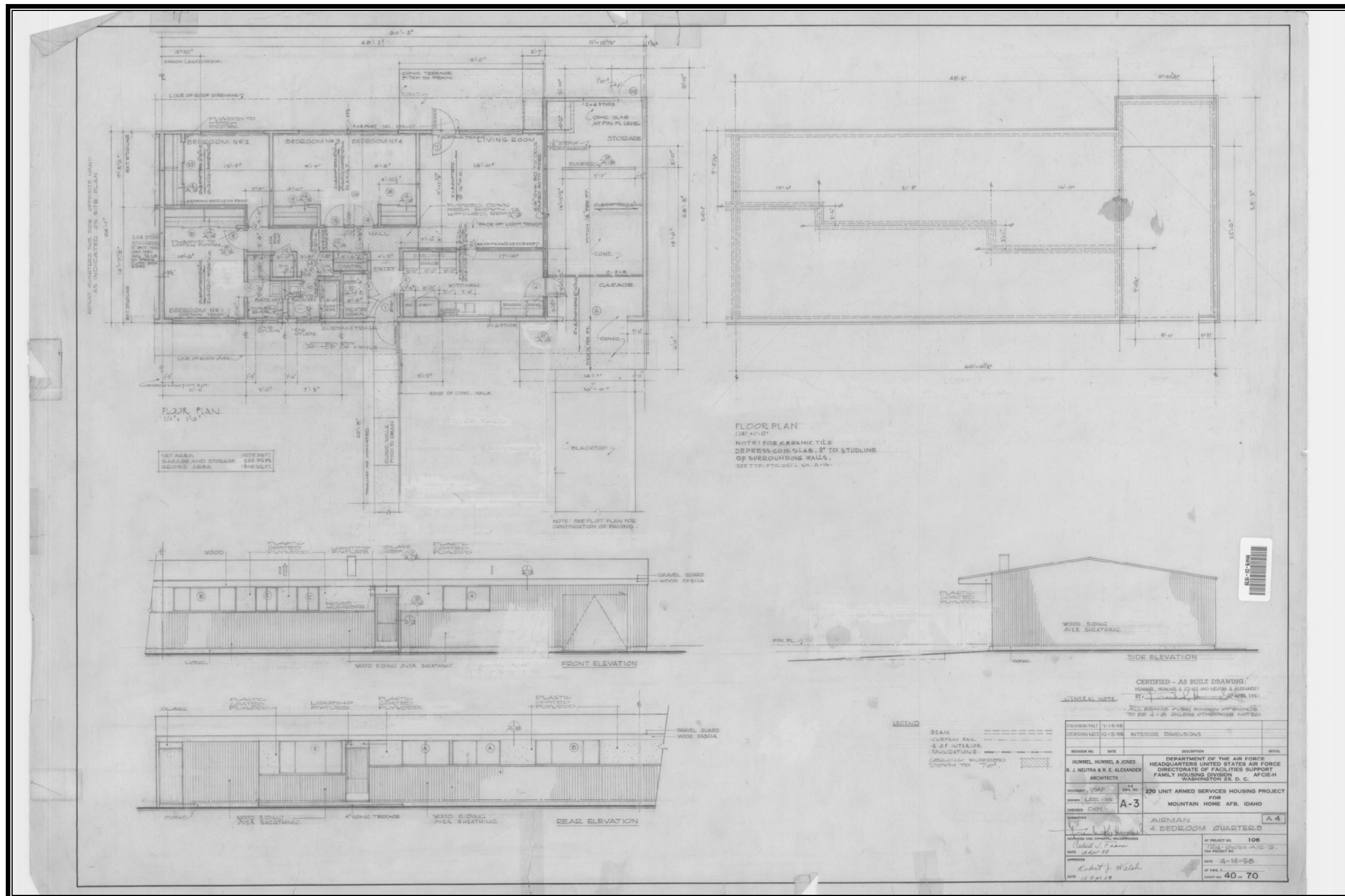


Figure A.4.10. Elevation and floor plan of four-bedroom airmen housing (Type A-4, Old Capehart), Mountain Home AFB, Idaho, 1958. (Courtesy of Mountain Home AFB, 366<sup>th</sup> Civil Engineer Squadron)



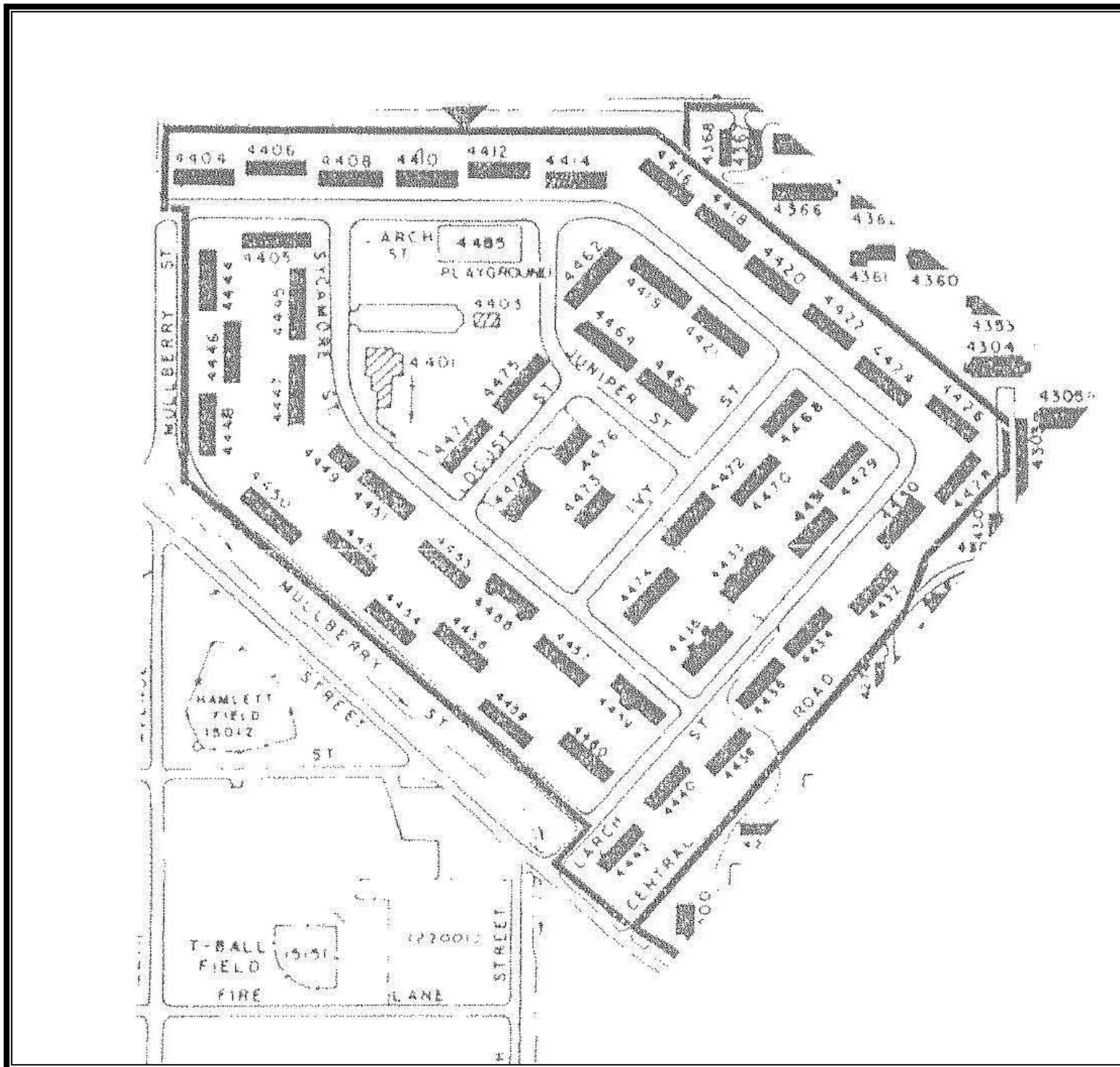


Figure A.4.11. Map of Old Capehart officer neighborhood, Mountain Home AFB, Idaho, ca. 2000. (Courtesy of Mountain Home AFB, 366<sup>th</sup> Civil Engineer Squadron)





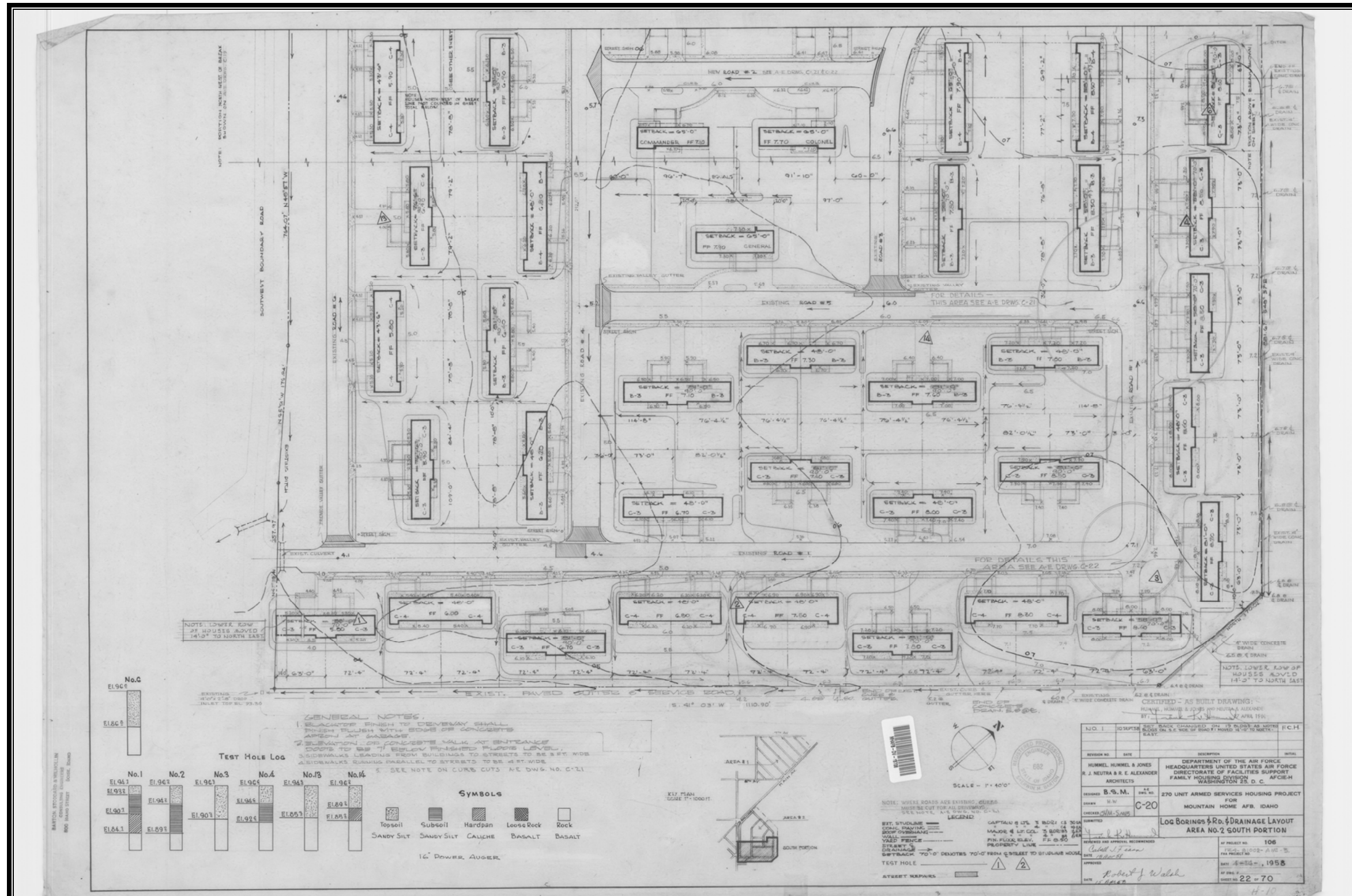


Figure A.4.12. Partial 1958 plot plan of Old Capehart officer neighborhood, Mountain Home AFB, Idaho. (Courtesy of Mountain Home AFB, 366<sup>th</sup> Civil Engineer Squadron)



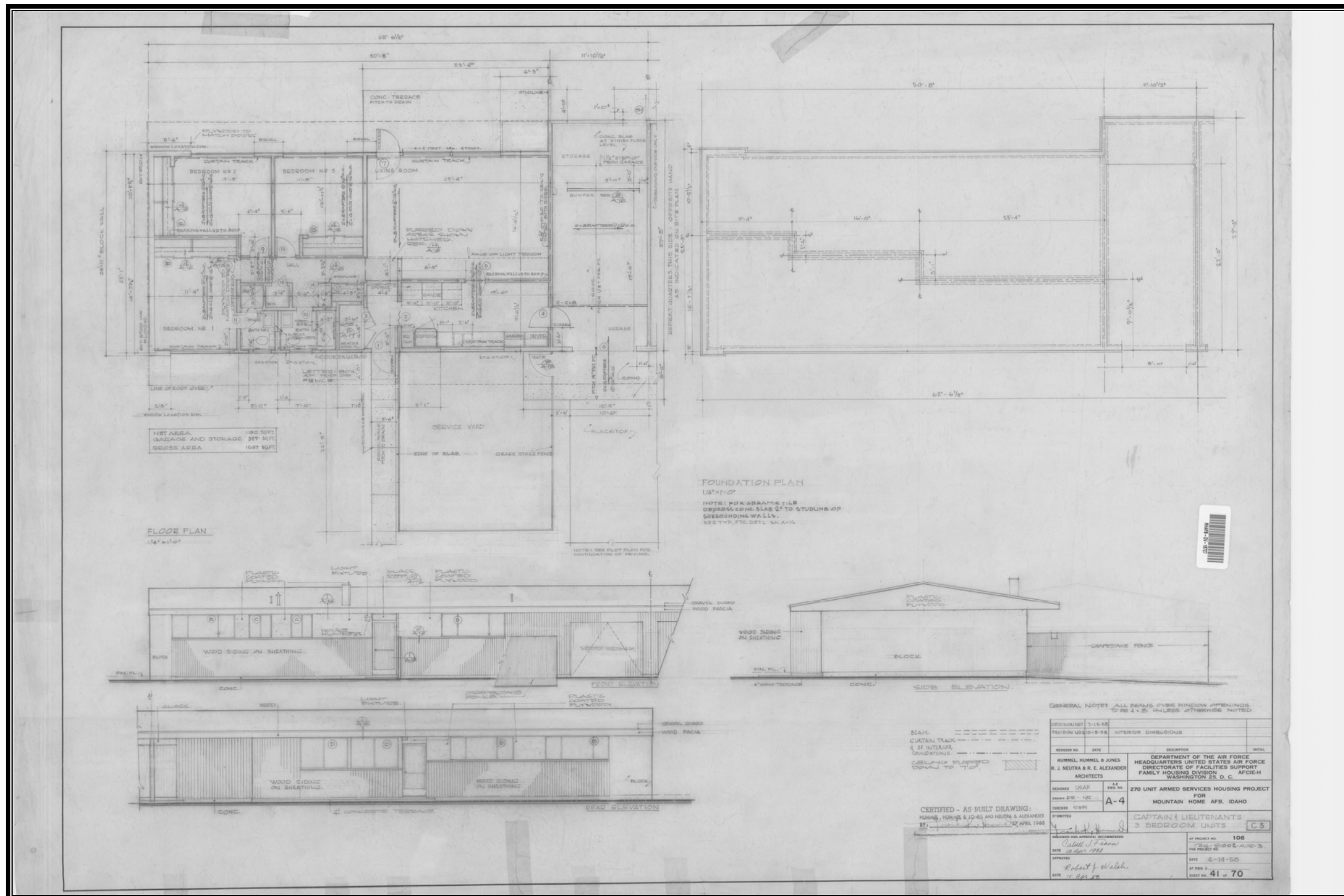


Figure A.4.13. Elevation and floor plan of three-bedroom Captain and Lieutenant housing (Type C-3, Old Capehart housing), Mountain Home AFB, Idaho, 1958. (Courtesy of Mountain Home AFB, 366<sup>th</sup> Civil Engineer Squadron)





Figure A.4.14. 4475B Tuck Street, Mountain Home AFB, Idaho, 2005. (Photo taken by RCG&A)



Figure A.4.15. 4475B Tuck Street hall linen closet, Mountain Home AFB, Idaho, 2005. (Photo taken by RCG&A)





Figure A.4.16. 4475B Tuck Street combined living and dining room, Mountain Home AFB, Idaho, 2005. (Photo taken by RCG&A)

dining room and the L-shaped kitchen overlooked the rear yard (Figures A.4.28 and A.4.29). The kitchen could be closed off from the dining room by an accordion door. The open, wood stairway to the second floor had a landing and was located near the entry. The second floor contained four bedrooms and two bathrooms. The main bathroom contained a bathtub, while the master bathroom contained a shower stall.

The interior of each unit was simply finished. The walls and ceilings were finished with smooth drywall. The floors were finished with narrow hardwood flooring. However, some units only had parquet flooring in the front hallways and at the rear doors, with carpeting installed throughout over the rest of the flooring. Two-inch wood baseboards were located throughout the unit. The metal-frame windows had four-inch wide wood sills with a simple molding under the sill. The units had no other ornamental trim.

The southern half of the New Capehart neighborhood housed officers. The officer housing comprised 65 buildings containing 54 one-story, three-bedroom duplexes; 9 two-story, four-bedroom duplexes; and, 2 one-story, single-family four-bedroom houses constructed for colonels. The officer housing was similar to housing constructed for airmen. Officer houses were wood frame clad with horizontal lapped siding and vertical tongue-and-groove siding (Figure A.3.30). Officer houses were ornamented with sections of light green and tan brick veneer across the front elevations. A typical three-bedroom officer unit contained 1,383 net square feet of living space and was configured similarly to the airmen three-bedroom units (Figure A.4.31). The front door opened onto an entry hall that had an interior utility closet. The kitchen overlooked the front yard, while the living room opened onto the rear yard. The kitchen contained space for an eating nook. The attached garage was accessed from the kitchen. A hallway led to the bedrooms. The unit had two bathrooms. A typical two-story, four-bedroom unit

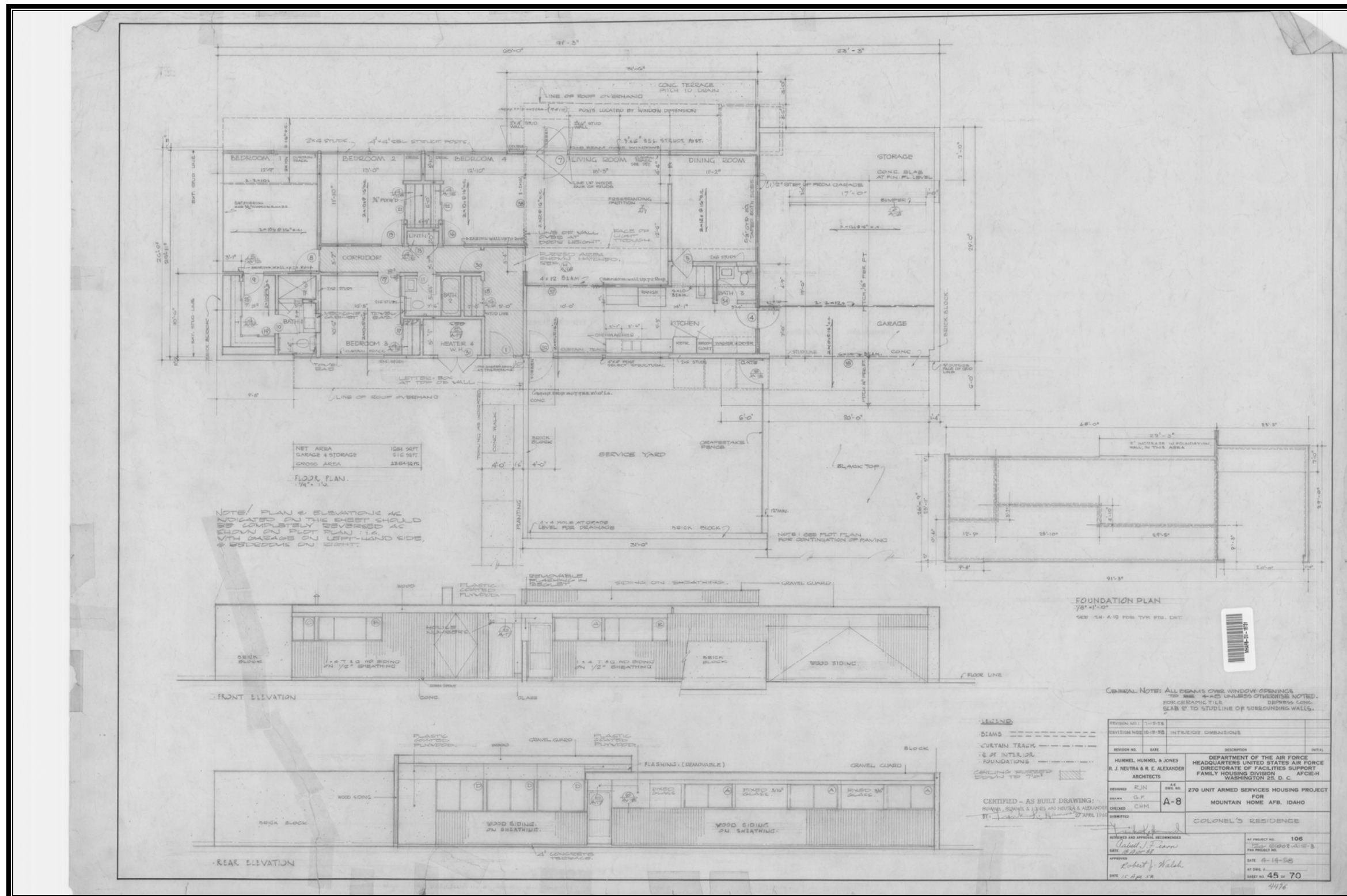


Figure A.4.17. Elevation and floor plan of Colonel's residence (Colonel, Old Capehart housing), Mountain Home AFB, Idaho, 1958. (Courtesy of Mountain Home AFB, 366<sup>th</sup> Civil Engineer Squadron)







Figure A.4.18. 4478 Tuck Street front elevation, (Colonel, Old Capehart housing), Mountain Home AFB, Idaho, 2005. (Courtesy of Mountain Home AFB, 366<sup>th</sup> Civil Engineer Squadron)



Figure A.4.19. 4478 Tuck Street front elevation (Colonel, Old Capehart housing), Mountain Home AFB, Idaho, 2005. (Photo taken by RCG&A)



Figure A.4.20. 4478 Tuck Street living room (Colonel, Old Capehart housing), Mountain Home AFB, Idaho, 2005. (Photo taken by RCG&A)

for officers contained 1,263 net square feet of living space. The kitchen, dining room, and living room were located on the first floor; four bedrooms and two bathrooms were located on the second floor. No interiors of New Capehart officer units were available for inspection during the site visit in December 2005.

The landscaping in the New Capehart area was grass lawns surrounding the houses, trees planted in yards along the streets, trees grouped in rear yards, and bushes around foundation walls. The original landscape plans listed Lloyd M. Bond was the landscape architect (Mountain Home AFB drawings file). These non-native landscape elements were noted in the neighborhood during the site visit in December 2005. Some mature trees may date from the construction of the neighborhood. The interior of the neighborhood was a grassy open space. Tot lots were depicted on the landscape plan, but no tot lots were noted in the neighborhood during the site visit (Mountain Home AFB drawings file).

Typical changes to the New Capehart units included utility upgrades, such as new wiring, new electrical lighting fixtures, and new utilities. Aluminum doors were replaced in the New Capehart units in 1977. The buildings were reroofed in 1975 and new metal fascias on the roofs were installed in 1980. The oil heating system was removed from the units in 1985 and the units were converted to gas heat. Between 1987 and 1989, air conditioning was installed in the units. Other changes to the interiors included new kitchen appliances, new oak cabinets, and new flooring and carpeting. Bathrooms also were upgraded with new cabinets, bathtubs, and shower stalls. Kitchen and bathroom upgrades occurred during the early 1990s. Garage doors were been replaced with paneled units.

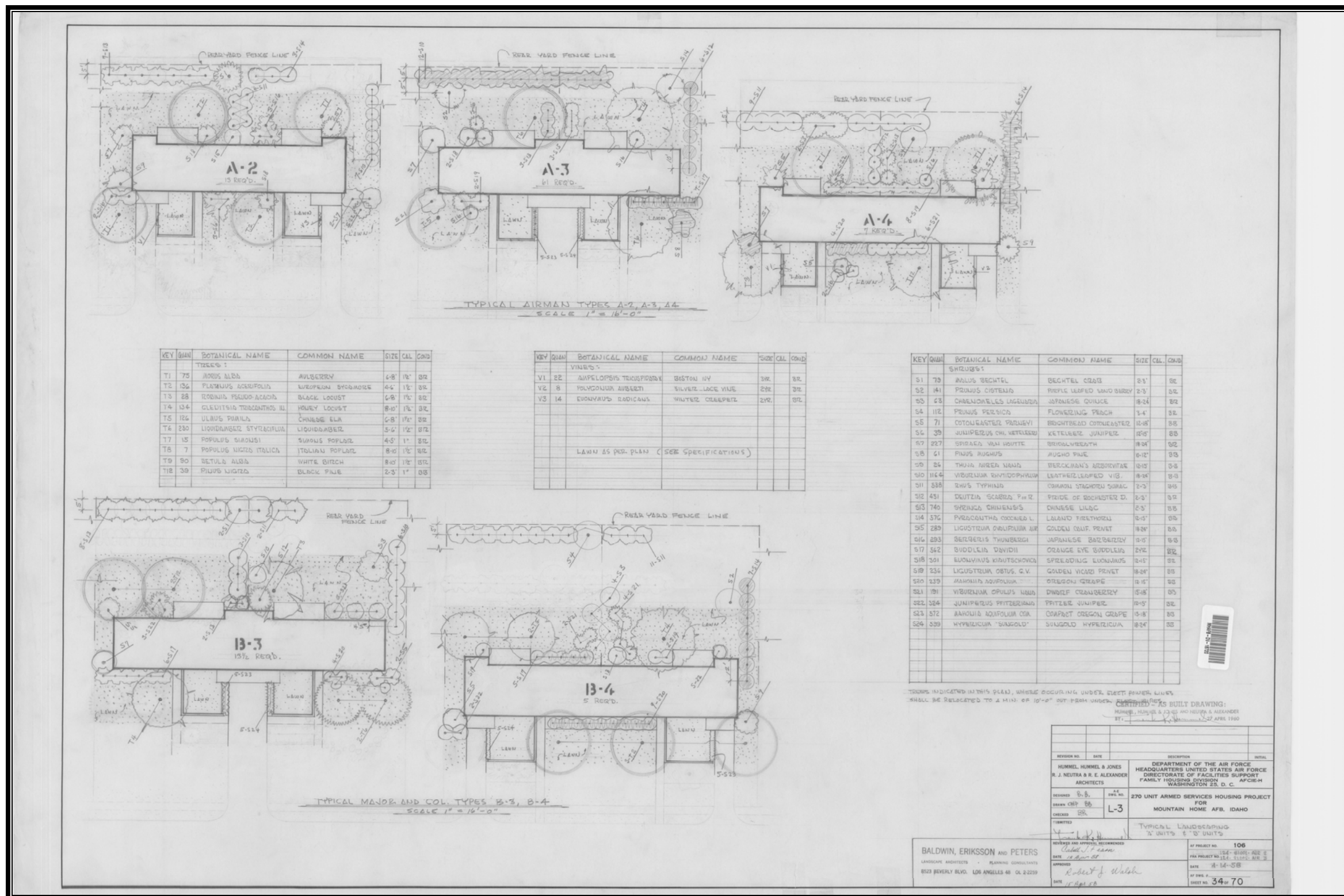


Figure A.4.21. Landscape plan of Old Capehart officer neighborhood, Mountain Home AFB, Idaho. (Courtesy of Mountain Home AFB, 366<sup>th</sup> Civil Engineer Squadron)





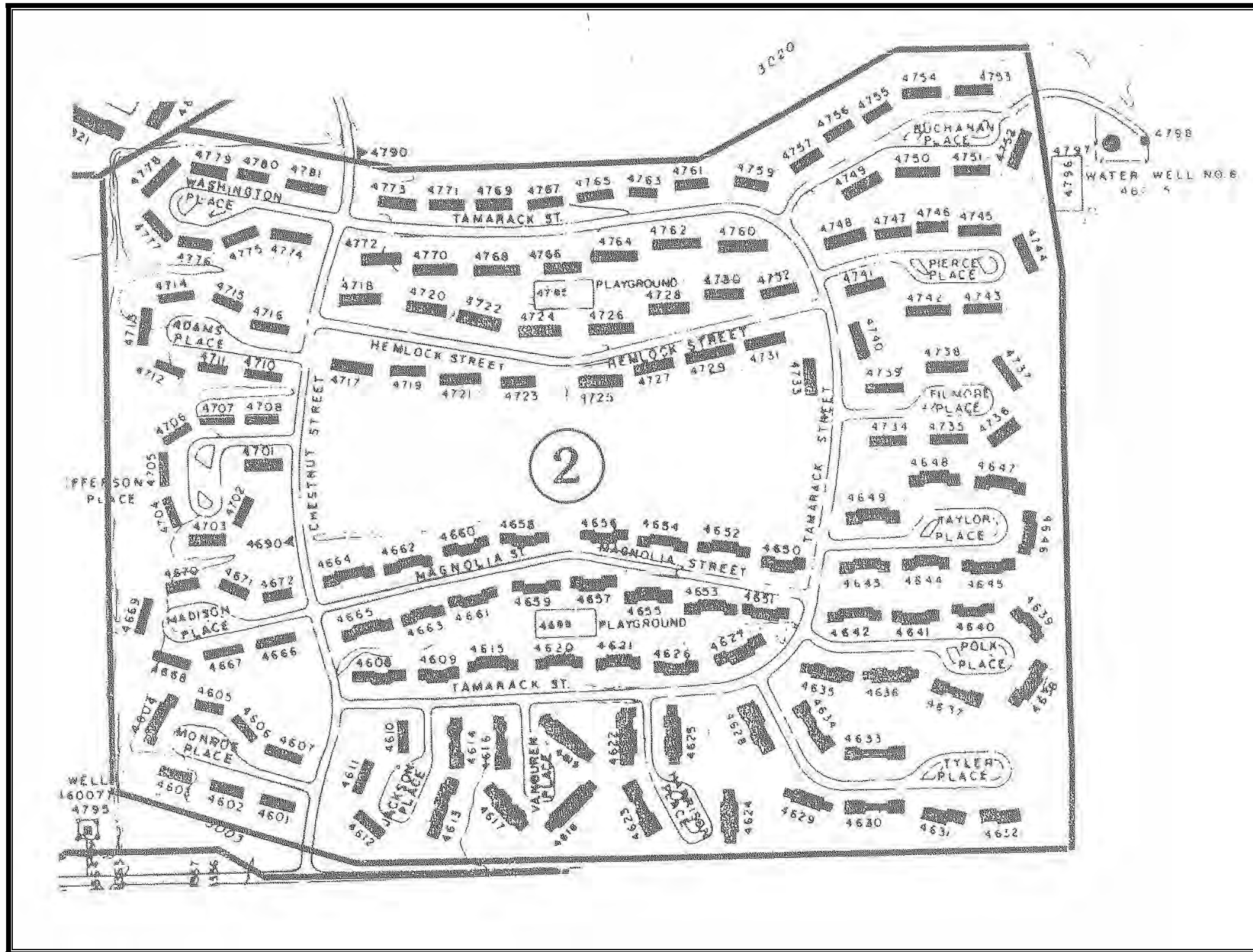


Figure A.4.22. Map of New Capehart neighborhood, Mountain Home AFB, Idaho, ca. 2000. (Courtesy of Mountain Home AFB, 366<sup>th</sup> Civil Engineer Squadron)







Figure A.4.23. 4759A Tamarack Street front elevation (Type 1-A-2, New Capehart housing), Mountain Home AFB, Idaho, 2005. (Photo taken by RCG&A)



Figure A.4.24. 4757A Buchanan Street front elevation (Type 2-A-2, New Capehart housing), Mountain Home AFB, Idaho, 2005. (Photo taken by RCG&A)

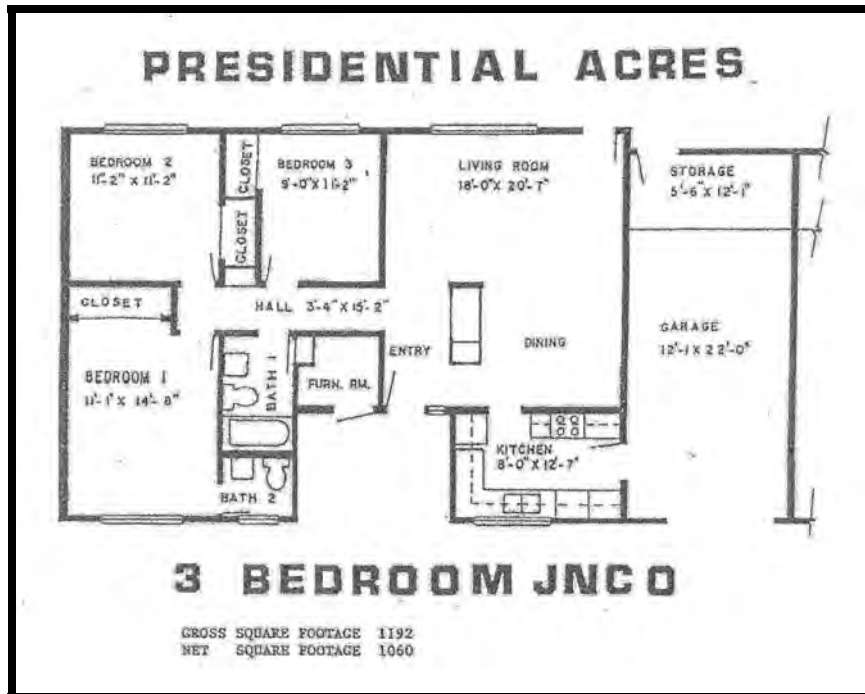


Figure A.4.25. Floor plan of 4759A Tamarack Street (Type 1-A-2, New Capehart housing), Mountain Home AFB, Idaho, 2005. (Courtesy of Mountain Home AFB Housing Office)



Figure A.4.26. 4759A Tamarack Street storage island (Type 1-A-2, New Capehart housing), Mountain Home AFB, Idaho, 2005. (Photo taken by RCG&A)



Figure A.4.27. 4759A Tamarack Street hall linen closet (Type 1-A-2, New Capehart housing), Mountain Home AFB, Idaho, 2005. (Photo taken by RCG&A)

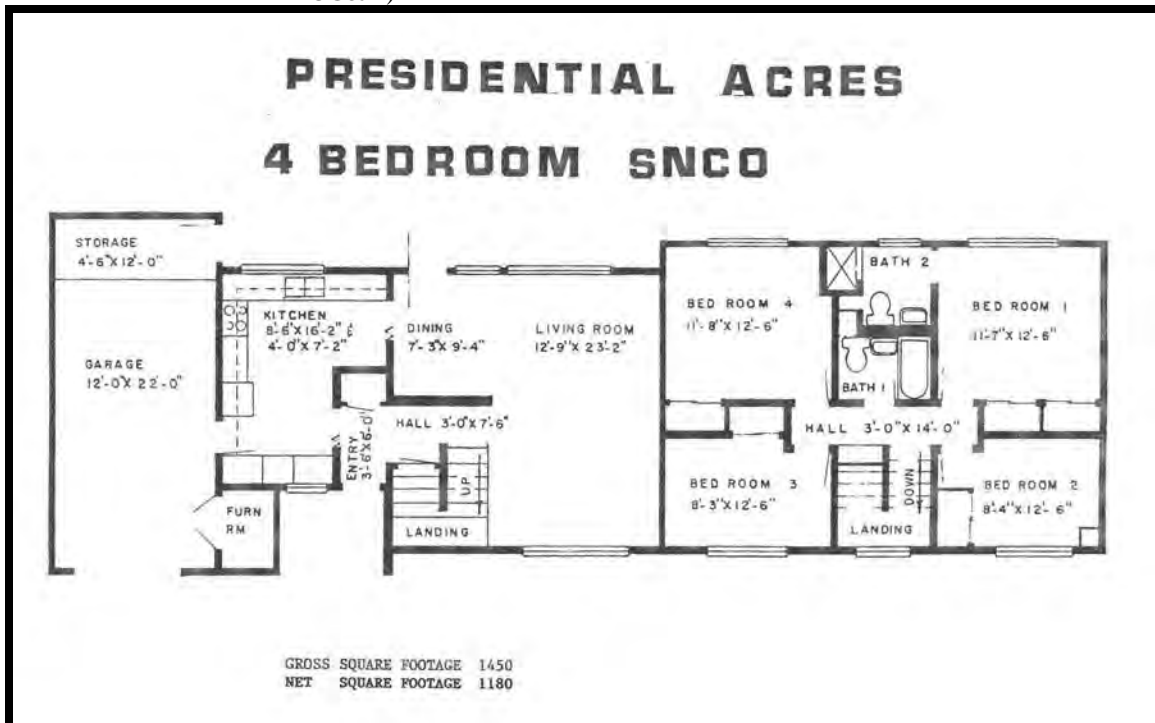


Figure A.4.28. Floor plan of 4759A Tamarack Street (Type 1-A-2, New Capehart housing), Mountain Home AFB, Idaho, 2005. (Courtesy of Mountain Home AFB Housing Office)





Figure A.4.29. 4757A Buchanan Street living room and stair (Type 2-A-2, New Capehart housing), Mountain Home AFB, Idaho, 2005. (Courtesy of Mountain Home AFB Housing Office)



Figure A.4.30. 4647AB Taylor Street front elevation (Type 3-A-2, New Capehart housing), Mountain Home AFB, Idaho, 2005. (Photo taken by RCG&A)

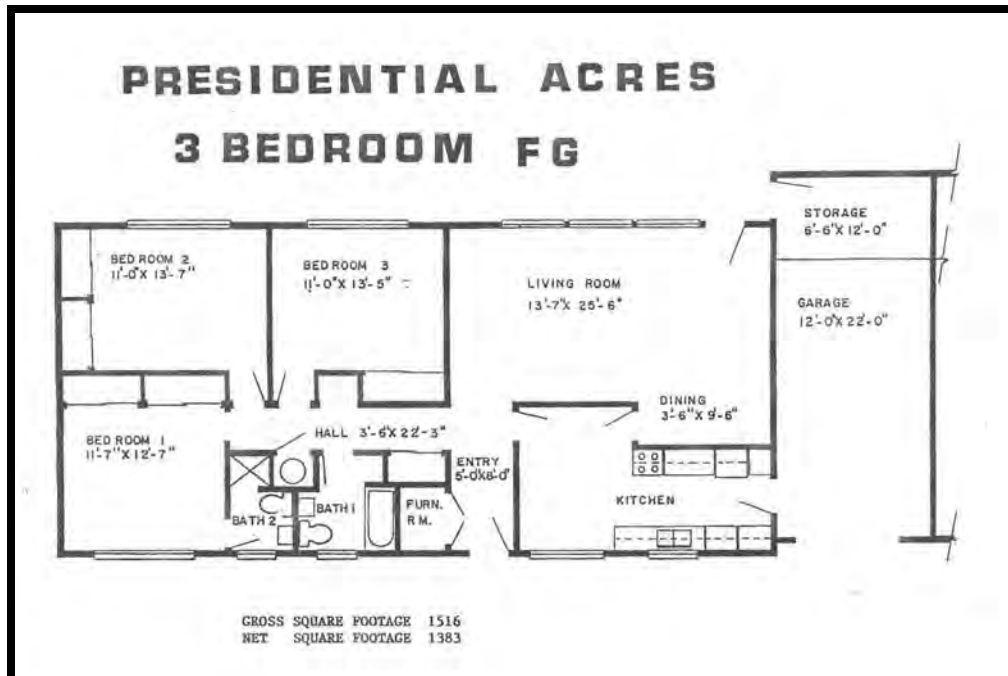


Figure A.4.31. Floor plan of three-bedroom field grade officer unit (Courtesy of Mountain Home AFB Housing Office)

Appropriated-Funds Housing. Four appropriated-funds houses for officers were completed in 1957. The four units were sited along Walnut Road on the east side of an already existing officer housing area of two-story brick fourplexes constructed in 1948. The drawings were prepared in 1956 by Hummel, Hummel & Jones, Architects, in Boise, Idaho. The drawings read, “Designed by F.K.H.” for Frank K. Hummel (Mountain Home AFB drawings file) (Figure A.4.32). The buildings were sited in a line along the road and were accessed by long driveways.

The four houses were one-story, wood-frame, buildings with L-shaped footprints set on concrete slabs. The exterior walls originally were finished with vertical wood siding, but subsequently were clad with wide horizontal vinyl siding (Figure A.4.33). The roofs were flat with projecting wood eaves and finished with built-up asphalt. The windows were metal-frame casement and fixed units located below the eave line. The rear elevation drawing depicted a glass wall along a portion of the rear living room wall overlooking the concrete patio in the rear yard (Mountain Home AFB drawings file).

The net square footage of each unit was 1,479 square feet with an attached garage and storage area. The interior was configured with the three bedrooms located nearest the street (Figure A.4.34). The main entry was located near the garage at the end of the paved driveway. The front door led to an entry hall with a closet and furnace closet and the living and dining rooms. The kitchen and utility areas were located between the dining room and the garage. A guest bedroom/study was located off the living room; a folding door closed this area off from the rest of the living space. A central hallway provided access to the bedrooms and the main bathroom. A second bathroom was accessed from the master bedroom (Mountain Home AFB drawings file). No survey of these units was available due to full occupancy during a site visit conducted in December 2005. The landscape around the four units was grassy lawn, large mature trees in the yards, and shrubs along the foundations. No separate landscape plan was located in the drawing files for these four buildings.

Changes that have occurred to these buildings since their construction include installation of horizontal aluminum siding to the building exteriors in 1975 and replacement of the windows with metal-frame sliding units.



Figure A.4.33. 42 Walnut Street, Mountain Home AFB, Idaho, 2005. (Photo taken by RCG&A)



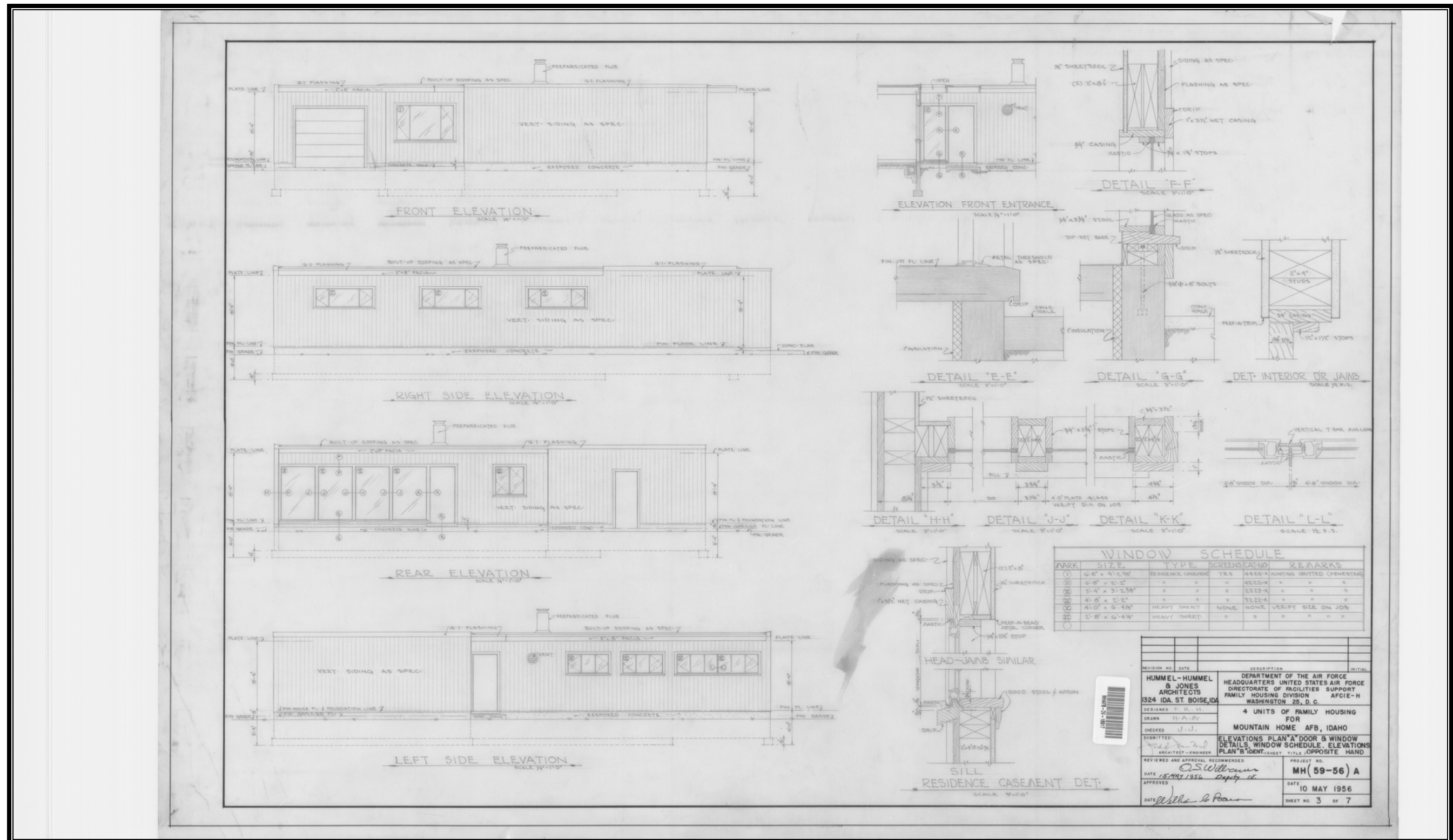


Figure A.4.32. Elevation of appropriated-funds housing, Mountain Home AFB, Idaho, 1957. (Courtesy of Mountain Home AFB, 366<sup>th</sup> Civil Engineer Squadron)





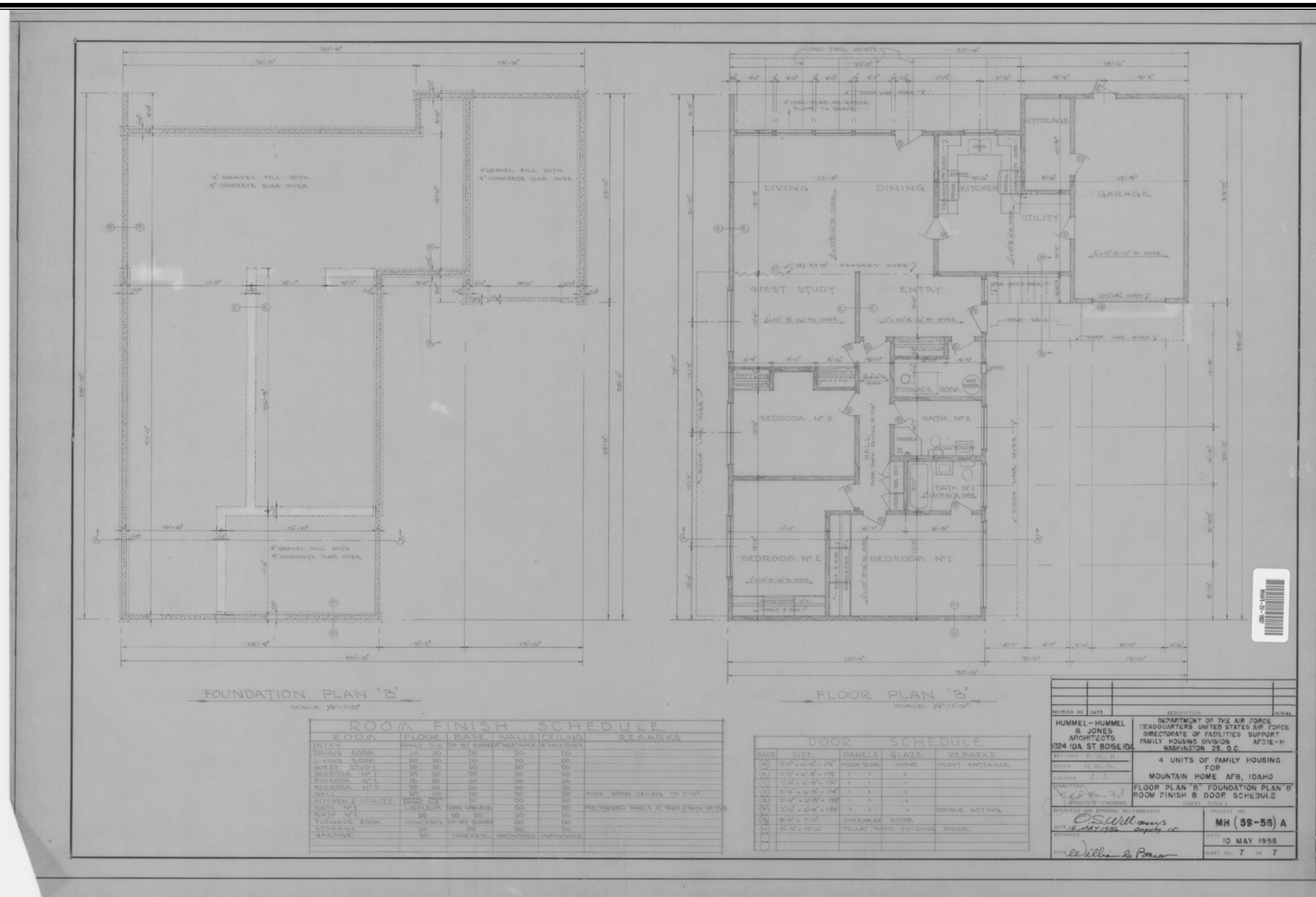


Figure A.4.34. Floor plan of appropriated-funds housing, Mountain Home AFB, Idaho, 1957. (Courtesy of Mountain Home AFB, 366<sup>th</sup> Civil Engineer Squadron)



## **Case Study A.5: Travis Air Force Base, Fairfield, California**

### Physical Description

Travis Air Force Base (AFB) is located near Fairfield, California, approximately 50 miles northeast of San Francisco. The base comprises approximately 5,020 acres in Solano County. The land is relatively flat. The native vegetation was perennial bunch grass prairie and sparse oak savannah until the mid-1800s. The land subsequently was used for ranching and agriculture.

Travis AFB is among the largest and busiest military air terminals in the United States. The 60<sup>th</sup> Air Mobility Wing (AMW), the host unit at the base, is responsible for strategic mobility by providing rapid, responsive, and reliable airlift of combat forces anywhere in the world. A secondary task is to fulfill air logistic needs of the Department of Defense, including aerial refueling, and passenger, patient, and cargo airlifts. The 60<sup>th</sup> AMW operates, maintains, and flies C-5 Galaxy and KC-10 Extender aircraft (Travis Air Force Base [AFB] 2003:2-1).

### Base History Summary

Travis AFB initially was established as a temporary bomber base in 1942. The base officially was activated in May 1943, and was named the Fairfield-Suisun Army Air Base. The primary mission was to service and ferry aircraft from California to the Pacific Theater during World War II as part of the Air Transport Command. The base also was a staging area from which to airlift troops and supplies to the Pacific Theater. All construction that occurred at the base during World War II was temporary construction. The first permanent buildings constructed in 1946 included dormitories and family housing for officers. Officer housing included single-family buildings for senior officers and multi-family housing, identified as “Shell” housing, for junior officers. The officer quarters were constructed of poured concrete.

In 1949, Travis AFB was assigned to the Strategic Air Command (SAC) as a long-range reconnaissance and intercontinental bomber installation. Travis AFB acquired its current name in 1950 to honor Brigadier General Robert Falligant Travis, who died while co-piloting a B-29 that crashed on takeoff. The base remained a SAC installation until 1958. During this period, permanent construction at the base began. The primary building materials were wood frame, steel, concrete, and concrete block (Travis 2003:3-13).

In 1955, the 1501<sup>st</sup> Air Transport Wing (ATW) of the Military Air Transport Service (MATS) was stationed at Travis AFB. The mission of the 1501<sup>st</sup> ATW was air transport of cargo and equipment to support international Department of Defense activities. By the mid-1960s, Travis AFB was designated as the West Coast terminus for aero-medical transports returning from southeast Asia and the principal West Coast receiving station for war fatalities returned to the United States for burial. Daily flights to Saigon, Vietnam, began in 1965. In 1966, MATS was renamed the Military Air Command (MAC), and the equipment and personnel of the former 1501<sup>st</sup> ATW became the 60<sup>th</sup> Military Airlift Wing (MAW). Between 1966 and 1970, more than one million personnel moved through the Travis AFB passenger terminal. The 60<sup>th</sup> MAW played an active role in major military operations since its establishment. In 1990 and 1991, the 60<sup>th</sup> MAW flew approximately 3,000 C-5 and 2,000 C-141 missions. In 1992 and 1993, the 60<sup>th</sup> MAW served in humanitarian operations, including missions to the former Soviet Union through Operation Provide Hope and missions to Somalia through Operation Restore Hope. In 1992, MAC was renamed Air Mobility Command (AMC) and the 60<sup>th</sup> MAW was renamed 60<sup>th</sup> AMW (Travis AFB 2003:2-4, 3-10-3-12).

## Housing at Travis AFB

The housing areas at Travis AFB were concentrated near the northwest corner of the installation away from the flightline. Between 1949 and 1962, housing constructed at the base included one Wherry neighborhood (1951) with housing for airmen and officers, an Old Capehart project for 500 units (1958) with a separate housing area for airmen and officers, a 48-unit Capehart project for officer housing (1958), a 600-unit New Capehart project (1962) with separate housing areas for airmen and officers, and six senior officer houses (1957) constructed with appropriated funds (Figure A.5.1). Though the neighborhoods were adjacent to one another, the neighborhoods were not linked by cross streets. Each housing area was accessed from major streets that often defined neighborhood or project boundaries. Each housing area contained a distinct internal street pattern independent of any other housing area. Currently, all Travis AFB military family housing is scheduled to be privatized in September 2007.

### Wherry Housing Program at Travis AFB

The Fairfield Gardens Wherry neighborhood at Travis AFB was constructed in 1951. W.D. Peugh, Architect, and W.B. Glenn and A.J. Loubet, Associates, from San Francisco, were the architects. When built, the Wherry neighborhood contained 980 units for officers and airmen. Airmen were housed in multi-family, one- and two-story buildings, while single-family and duplex houses were constructed for officers.

The Wherry housing area was located near the northwest boundary of the installation west of the appropriated-funds officer housing constructed in 1946. The neighborhood was laid out as a rectangle (Figure A.5.2). A diagonal street bisected the neighborhood from the northwest to the southeast and separated officer housing from airmen housing. Housing for airmen was sited in the southwest corner of the housing area, while officer housing occupied the northeast corner of the rectangle. The streets generally were laid out in a grid with east-west and north-south orientations; all streets had curbs and sidewalks. All units had concrete walks leading from parking places to the front entries. The neighborhood was provided with sanitary sewers and fire hydrants. Tan bark playgrounds were sited throughout the neighborhood, but no original playgrounds were noted during the site visit. A maintenance compound and project office complex, which were no longer standing, were referenced on the original drawings available at Travis AFB. No drawings of the proposed original landscape planting plan were available.

Airmen were housed in multi-family, one- and two-story buildings. Long, two-story multi-family buildings were sited on diagonals in the interiors of the blocks. One-story, multi-family houses occupied the periphery of the blocks facing the primary streets. The two-story buildings were clad in vertical wood siding and stucco (Figure A.5.3). The flat roofs of the buildings projected over the eaves. The windows were metal-frame, sliding units. Airmen housing contained a combined living and dining room, a kitchen, and one bathroom; the number of bedrooms varied among one, two, and three bedrooms. The interior walls and ceilings were finished with plasterboard. Parking for airmen housing was accommodated in multiple-car garages, which are no longer standing.

The officer area was laid out with straight streets that were oriented north-south and east-west. Officer houses were one-story, wood-frame buildings set on reinforced-concrete foundations with stucco and wood exterior walls. The shallow-pitched gable roofs were surfaced with built-up gravel. Each officer quarters had an attached garage. The houses were sited at regular intervals parallel to the streets. Duplex officer houses occupied the southeast corner of the officer neighborhood, while single-

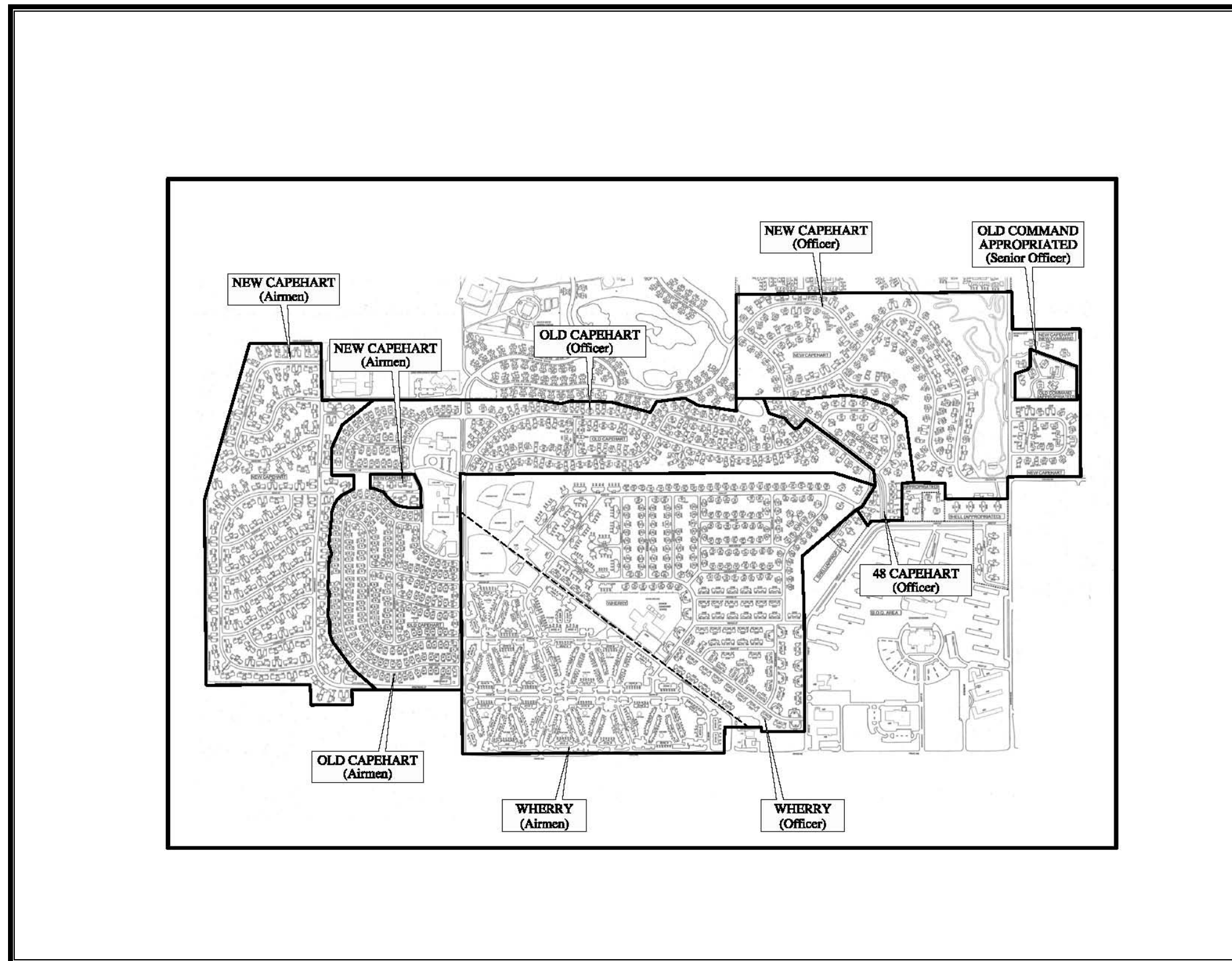


Figure A.5.1. Overall plan of housing areas, Travis AFB, California, ca. 1998. (Courtesy of Travis AFB, 60<sup>th</sup> Civil Engineer Squadron)





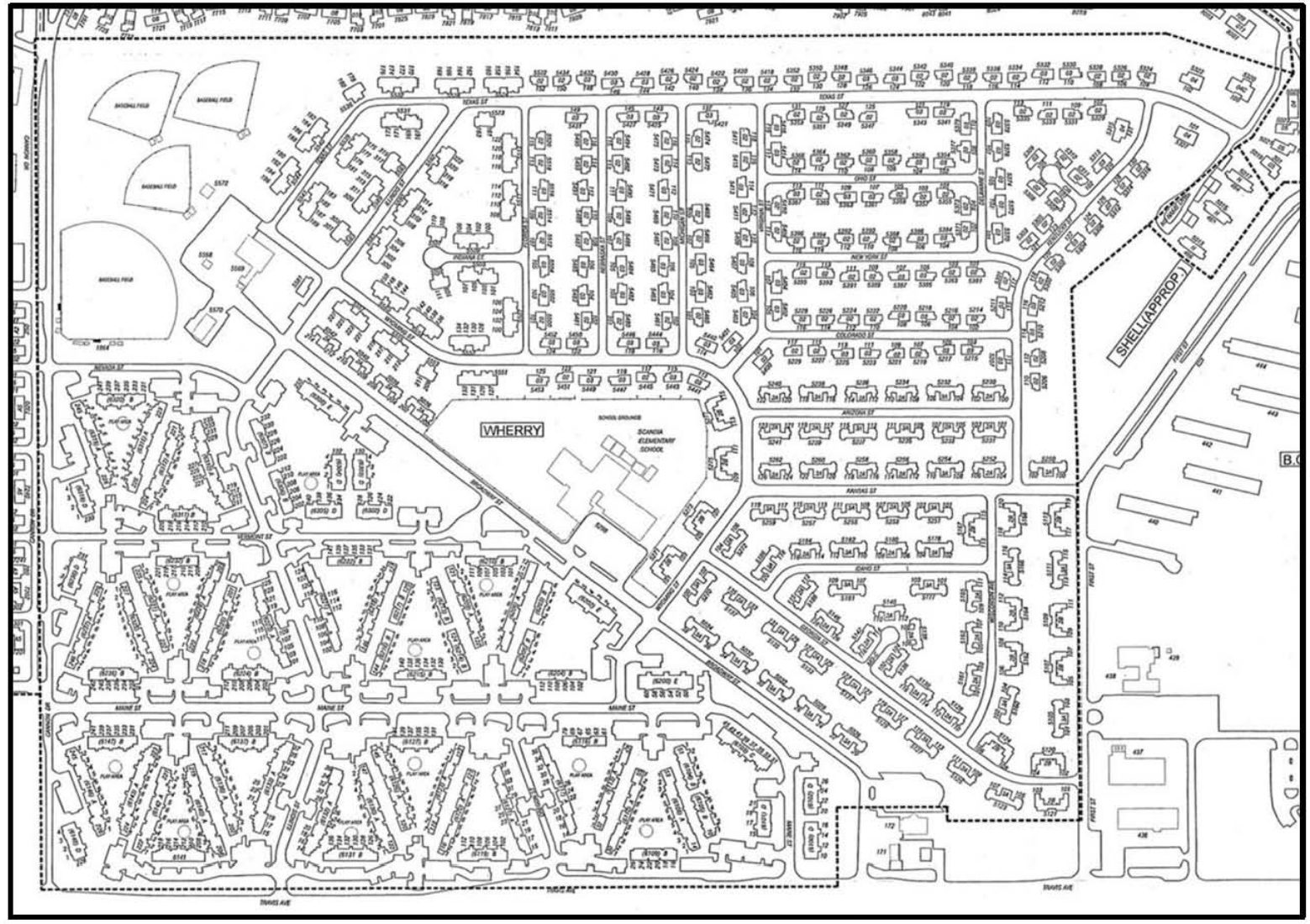


Figure A.5.2. Wherry neighborhood plan detail, Travis AFB, California, ca. 1998. (Courtesy of Travis AFB, 60<sup>th</sup> Civil Engineer Squadron)





Figure A.5.3. Airmen multi-family Wherry housing partial elevation, Travis AFB, California. (Courtesy of Travis AFB, 60<sup>th</sup> Civil Engineer Squadron)



family officer quarters were located in the northern area of the neighborhood. The duplexes and single-family buildings contained one, two, and three bedrooms. Four senior officer houses had four bedrooms and were sited in the northeast corner of the neighborhood. These units featured attached two-car garages and fireplaces. The officer houses were reassigned to airmen ca. 1967 (Travis AFB drawings file, real property cards).

The house at 5581 Illinois Street (Figure A.5.4) was the only Wherry officer quarters remaining at the base. The one-story, single-family house had stuccoed exterior walls and a slightly pitched gable roof with projecting overhangs. The rear elevation was clad in vertical board siding. The windows were single-pane, metal sliding units. The front door was a three-panel wood unit that accessed an entry hall. The kitchen was located at the front of the dwelling overlooking the front yard, with the living and dining rooms situated behind the kitchen overlooking the rear yard. The door to the rear yard was located in the dining area; the rear door was a wood-panel unit with five lights. Bedrooms were placed along the rear wall in line with the living room. The one bathroom was located on the front wall (Figure A.5.5). Interior finishes comprised plasterboard walls and ceilings with a simple crown molding, plain baseboard, and concrete floors covered with asphalt tile (Travis AFB drawings file). A garage was attached at one end of the building. An evaporator cooling system installed during the late 1960s projected from the roof. The rear yard had a square concrete patio and was surrounded by wood board privacy fencing, which was added after the building was constructed. In December 2005, the former dwelling was used as a Boy Scout hut and no interior access was available to the building. All other Wherry officer houses were replaced by new housing constructed since ca. 1995.

Changes to the buildings in the Wherry neighborhood were numerous. In 1962 and 1963, renovations to the buildings included kitchen additions, new heating controls, new washer and dryer hook-ups in the kitchens, installation of ventilation fans, bedroom additions, and bathroom upgrades. Second bedrooms were added to all one-bedroom units through additions constructed on the rear elevations. In 1969, evaporator cooling units were installed in the buildings (Travis AFB real property cards).

Between 1991 and 1994, 582 remaining multi-family units in the Wherry airmen neighborhood were renovated. The buildings were stripped to the structural framework and rebuilt. The footprints of the buildings were extended on the rear elevations to increase overall net square footage by the addition of bedroom and living space. The buildings were reconstructed to meet hurricane and earthquake construction standards. New exterior and interior wall materials were installed, the original flat roofs were replaced with pitched roofs, and new soffits were installed. New double-pane windows and doors also were installed (Figure A.5.6). Mechanical upgrades included new wiring, forced-air heating and cooling, lighting fixtures, and appliances (Merkling, personal communication 2005). At this time, new landscaping was planted. The buildings in the airmen neighborhood currently comprise ten four-plexes, twenty-nine six-plexes, one eight-plex, and thirty twelve-plexes that appear on the October 2005 Travis AFB real property records as constructed in 1994 (U.S. Air Force 2004).

### Capehart Housing Program at Travis AFB

Old Capehart Housing. The Old Capehart neighborhood was completed in 1958. The 500-unit project was designed by Abrams and Dickstein, Architects, AIA, of Sunnyvale, California. The builders were Sun Gold, Incorporated, and Inland Empire Builders, Incorporated, of Riverside, California. The 500 units were contained in one-story, single-family buildings with three and four bedrooms. Three hundred units were provided for airmen and 200 units for officers (Progress Reports, Capehart Housing Projects). The locations of the officer and airmen housing wrapped around the Wherry housing neighborhood. Old Capehart officer housing was located along the north side of the officer area of the Wherry neighborhood, while the airmen housing bordered the airmen Wherry housing on west.



Figure A.5.4. 5581 Illinois Street (Wherry officer quarters), Travis AFB, California, 2005.  
(Photo taken by RCG&A)

The airmen housing area was separated from the airmen Wherry housing area by a major north-south oriented street. A curved perimeter road defined the north, west, and south sides of the neighborhood, while interior neighborhood streets were oriented east and west and north and south (Figure A.5.7). Access to the neighborhood was from the major street on the east. The buildings were sited either parallel facing the streets or with gables toward the streets. All buildings had uniform setbacks with front and rear yards.

The houses were all one-story, wood-frame buildings set on concrete slabs. The shallow gable roofs had overhanging eaves with wood soffits; the roofs were sheathed with composition roofing material (Travis AFB real property cards). The building exteriors were clad either with an asbestos material referred to as “flexboard” on the original drawings and wood battens or in stucco (Figures A.5.8, A.5.9, and A.5.10). The windows were metal-frame, sliding units located under the eaves. Each front door was a solid-core flush wood unit. A doorway also was provided to the carport and a rear door from the kitchen that opened onto a concrete patio in the rear yard. Metal-frame sliding doors located in the dining room also opened onto the concrete patio. Each building had an attached, flat-roofed carport accessed by a short paved driveway. An external combined storage area and laundry room was located at the end of the carport. This storage area had built-in shelves and a laundry/utility room with a sink, connections for a washer and dryer, and a hot-water heater. The storage area had one door that opened onto the carport and one door that led into the back yard. When originally constructed, each unit was equipped with a washer and dryer (Progress Reports, Capehart Housing Projects). Each house was wired with electricity and telephone and television connections. Heating was provided by a forced-air, gas furnace; no cooling system was provided. A retractable clothesline was attached to the rear elevation of the external storage area.

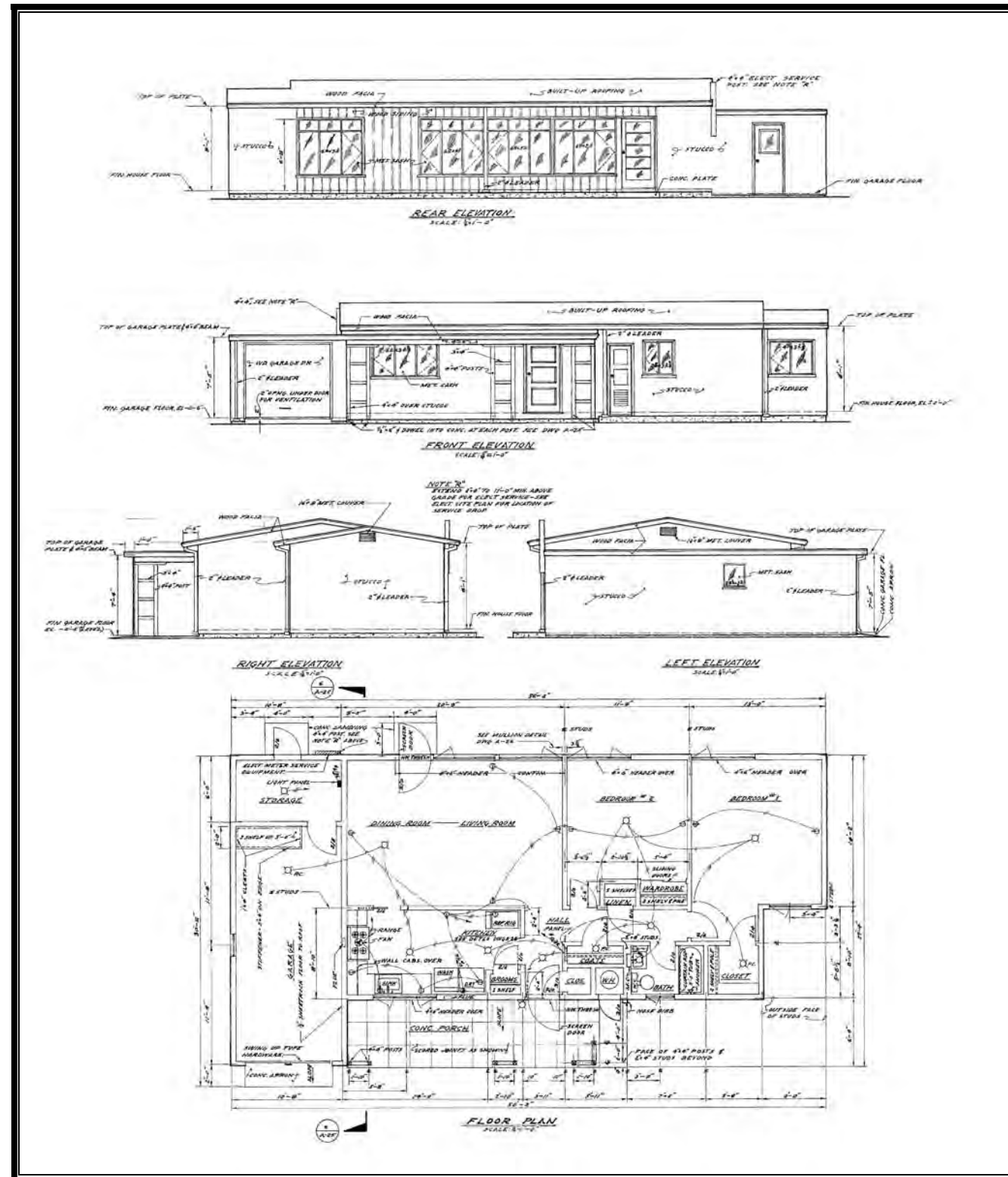


Figure A.5.5. Two-bedroom officer house elevation and floor plan (Type O-2, Wherry housing), Travis AFB, California. (Courtesy of Travis AFB, 60<sup>th</sup> Civil Engineer Squadron)







Figure A.5.6. 146-144 Maine Street (former Wherry airmen housing) modified ca. 1994, Travis AFB, California, 2005. (Photo taken by RCG&A)

The Old Capehart airmen houses essentially had identical configurations. The front door opened onto an entry hall with coat closet that was separated by a low wall from the combined living/dining room along one end of the building (Figure A.5.11). The galley-type kitchen was located opposite the hall near the rear of the house and adjoining the dining room. Pocket doors closed off the kitchen from the hallway and the dining room. A hallway led to the bedrooms that occupied the other end of the building opposite from the living/dining room. Each bedroom had one closet, while the master bedroom had two closets. The one bathroom was accessed from the hall. The bathroom had a linen closet and sink with a medicine cabinet separated by a pocket door from the bathtub and toilet. The walls throughout the unit were finished in plasterboard. The floors were hardwood with a wood baseboard. The flooring in the kitchen was sheet vinyl installed over vinyl-asbestos tile. Ceramic tiling was installed in the bathroom. The metal-frame, sliding windows had six-inch wood sills.

The airmen housing offered four plans for three-bedroom units with 961.5 square feet of net floor area and one four-bedroom floor plan that offered 1,476 square feet net floor area. The four-bedroom unit was configured with a larger kitchen that contained a pantry, separate storage room, and laundry area. The differences in the three-bedroom floor plans resulted from the street orientation. Often the buildings located on the corners of the blocks were oriented parallel to the street, while most of the buildings were oriented with gable ends facing the streets. In some building orientations, kitchens were located close to the streets, while in other houses with reversed floor plans, the bedrooms were located closest to the streets.

The officer housing area was sited north of the Wherry housing area and separated from the Wherry area by a grassy open space that recently was landscaped as a linear park. No through streets linked the two neighborhoods. The Old Capehart officer housing area was oriented along two east-west

oriented curving streets that formed an elongated figure-8 from which branched shorter streets and cul-de-sacs (Figure A.5.12). The houses were sited with uniform setbacks from the streets with front and rear yards. The officer houses had more space between the buildings than in the airmen neighborhood. The officer houses were oriented either parallel to the streets or with gable ends towards the streets. The officer houses exhibited more variety in exterior buildings materials and roof configurations. The building exteriors were clad in flexboard with wood battens, stucco, and small amounts of brick veneer (Figures A.5.13 and A.5.14). The roofs generally were shallow gables or shallow hips with overhanging eaves and open soffits. The entry doorways in the front elevations were slightly recessed.

Officer quarters contained three or four bedrooms. Three-bedroom units contained 1,310 square feet of net floor area, while the four-bedroom unit had 1,705 square feet of net floor area (Figure A.5.15). The front entry opened onto a hall with a coat closet. A short hall led to the combined living and dining area on the wall opposite the front door. The large kitchen contained an eating nook, a pantry, a storage closet, a dishwasher, and a washer and dryer. A door leading to the carport was located at the end of the kitchen. The kitchen was located on the same side of the building as the front entry door. A hallway led to the bedrooms. Each bedroom had a closet. All officer houses had two bathrooms, one located off the hall that had a bathtub and one accessed from the master bedroom that contained a tiled shower stall. Both bathrooms had linen closets. Each dwelling had external storage areas. In the three-bedroom houses, the external storage area was a detached structure located at the end of the carport. In the four-bedroom units, the external storage areas were attached to the building and accessible from the kitchens through enclosed laundry areas. The interior finishes in officer houses included plasterboard walls and ceilings, hardwood flooring throughout the living and bedrooms, ceramic tiling in the bathrooms, and asbestos vinyl tiling in the kitchens. Metal-frame sliding doors led from the dining rooms onto the concrete patios in the rear yards. Each building had an attached carport with a flat roof accessed by a short paved driveway. A concrete walk led to the front doorway.

The landscape plan as depicted on the drawings included lawns with sprinkler systems, trees located in front yards to shade the sidewalks, and thickly planted beds sited along building foundations and near privacy fences. The streets had curbs and were lined with sidewalks (Figure A.5.16). The privacy fences as depicted on the original drawings did not enclose individual rear yards, but were short sections of fencing placed to interrupt sight lines between dwellings. No fencing remained in the rear yards of the units surveyed in December 2005 (Figure A.5.17). A landscape plan was prepared by Abrams & Dickstein Architects in 1956. Original plans depicted the following trees along the streets: modesto ash (57), sawleaf zelkova (87), Chinese elm (33), white mulberry (65), and Chinese pistache (25). Flowering plum trees and white mulberry were planned for the front yards (Travis AFB drawings file). Robert Holmes, Travis AFB Natural Resources/Cultural Resources Manager, reported that perhaps 30 to 50 percent of the mulberry, elm, and zelkova street trees remained in the Old Capehart neighborhood. Fewer original shrubs remained in the neighborhood, since it was the responsibility of residents to maintain the plants, and the arid climate took its toll on shrubs requiring water (Holmes, personal communication 2005).

Typical changes to the Old Capehart units included mechanical upgrades, such as new wiring, new electrical lighting fixtures, new utilities, and installation of evaporator cooling systems and ceiling fans. Kitchens were upgraded with new appliances, dishwashers, garbage disposals, new oak cabinets, new flooring, and the removal of the pocket doors. Often, interior doors were replaced with modern units. The windows were upgraded to metal-frame, double-pane thermal sliding units. Substantial demolition has occurred in the Old Capehart officer housing area. Of the original 200 officer units, 94 officer houses remained standing as of December 2005, but future demolition of those units was planned. Three hundred units of Old Capehart airmen housing remained standing as of December 2005, but the houses were vacant and beginning to be prepared for demolition.

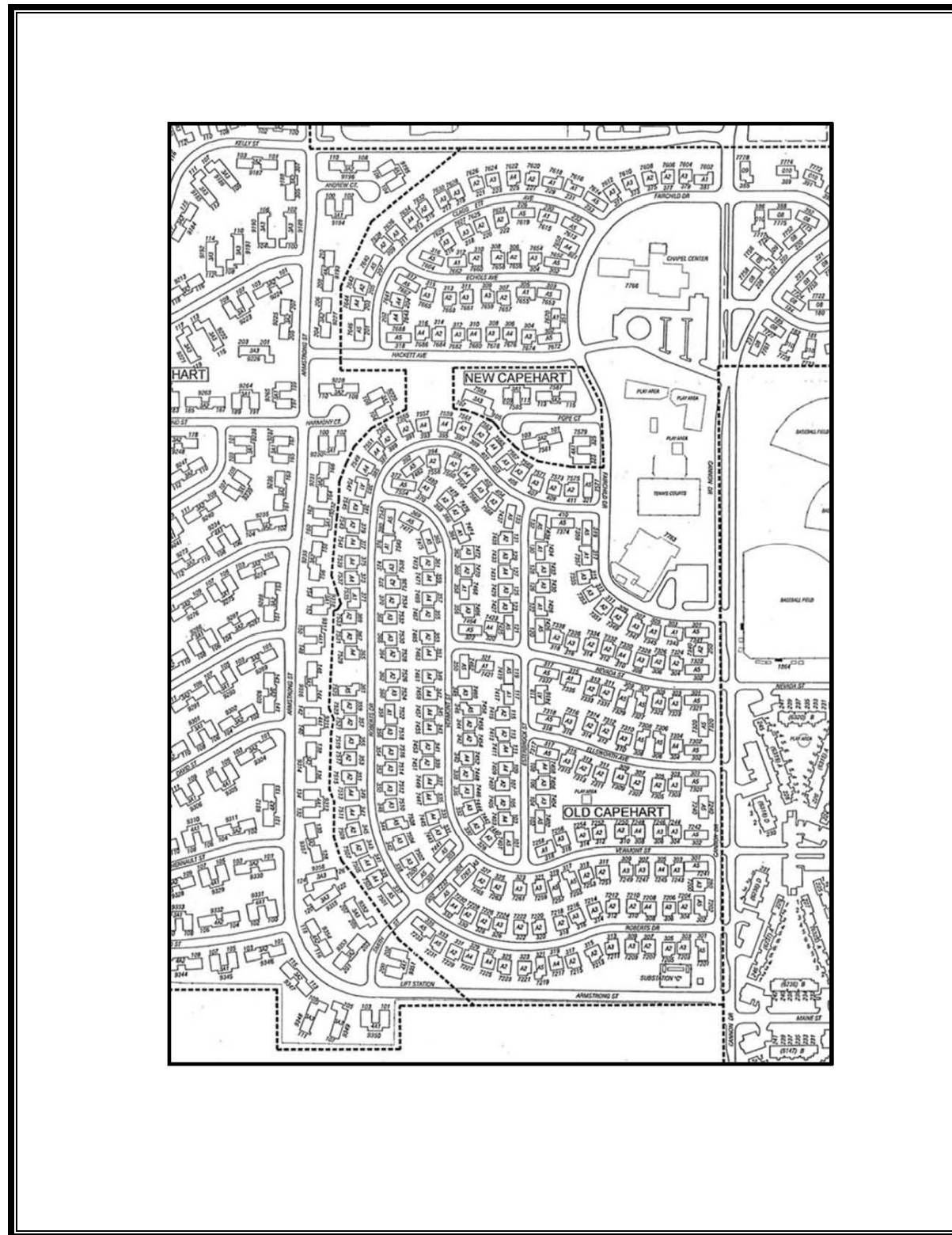


Figure A.5.7. Old Capehart airmen housing plan detail, Travis AFB, California, ca. 1998. (Courtesy of Travis AFB, 60<sup>th</sup> Civil Engineer Squadron)



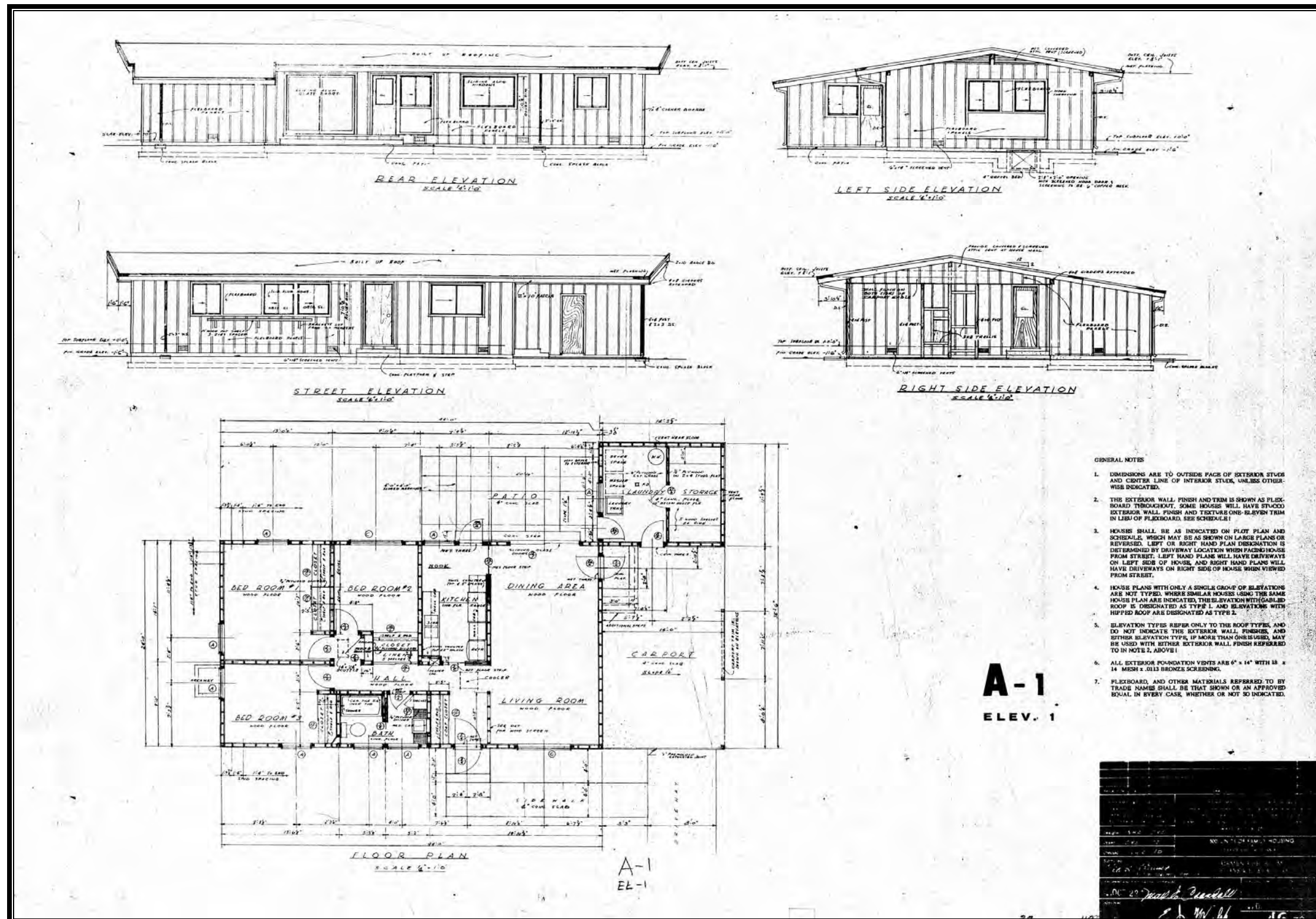


Figure A.5.8. Three-bedroom airmen house elevation and floor plan (Type A-1, Old Capehart housing), Travis AFB, California, 1956. (Courtesy of Travis AFB, 60<sup>th</sup> Civil Engineer Squadron)







Figure A.5.9. 381 Fairchild Drive front elevation (Type A-1, Old Capehart housing), Travis AFB, California, 2005. (Photo taken by RCG&A)



Figure A.5.10. 381 Fairchild Drive rear elevation (Type A-1, Old Capehart housing), Travis AFB, California, 2005. (Photo taken by RCG&A)



Figure A.5.11. 381 Fairchild Drive living room and entry hall (Type A-1, Old Capehart housing), Travis AFB, California, 2005. (Photo taken by RCG&A)

48 Capehart Houses. Forty-eight units of officer family housing were designed in 1958 by Ned H. Abrams & Associates, Architects and Planning Consultants, Sunnyvale, California. The builders were Gresham Construction Company of Santa Clara, California (Progress Reports, Capehart Housing Projects). The Progress Reports contained a handwritten note that these 48 units were Army-financed. These units might have been associated with the 11 U.S. Army anti-aircraft units that were emplaced around Travis AFB beginning in 1955 (Travis AFB 2003:3-11).

The 48 houses were sited along one semi-circular loop road plotted east of a major road that formed the eastern boundary of the Old Capehart officer housing area (Figure A.5.18). The 48 houses lined both sides of the two streets. Each house had a uniform setback from the street and was oriented either parallel to the street or with the end facing the street. No separate landscape plans for this project were located in the drawings files at Travis AFB.

The exteriors of all the buildings were similar. All buildings were clad in a variety of exterior materials, including flexboard panels with wood battens, wood shingle siding, stucco, and small sections of brick veneer (Travis AFB drawings file) (Figure A.5.19). The roofs were shallow gables or shallow hips with wide wood eaves and open soffits (Figure A.5.20). The front doorways were slightly recessed. The 48 Capehart houses were all three-bedroom units with 1,310 square feet of net floor area.

The interior configurations of the 48 Capeharts were identical with the three-bedroom Old Capehart officer houses. Each unit had a combined living/dining area; a kitchen area that contained an eating nook, a pantry, a storage room, and washer and dryer connections; two bathrooms; and, three

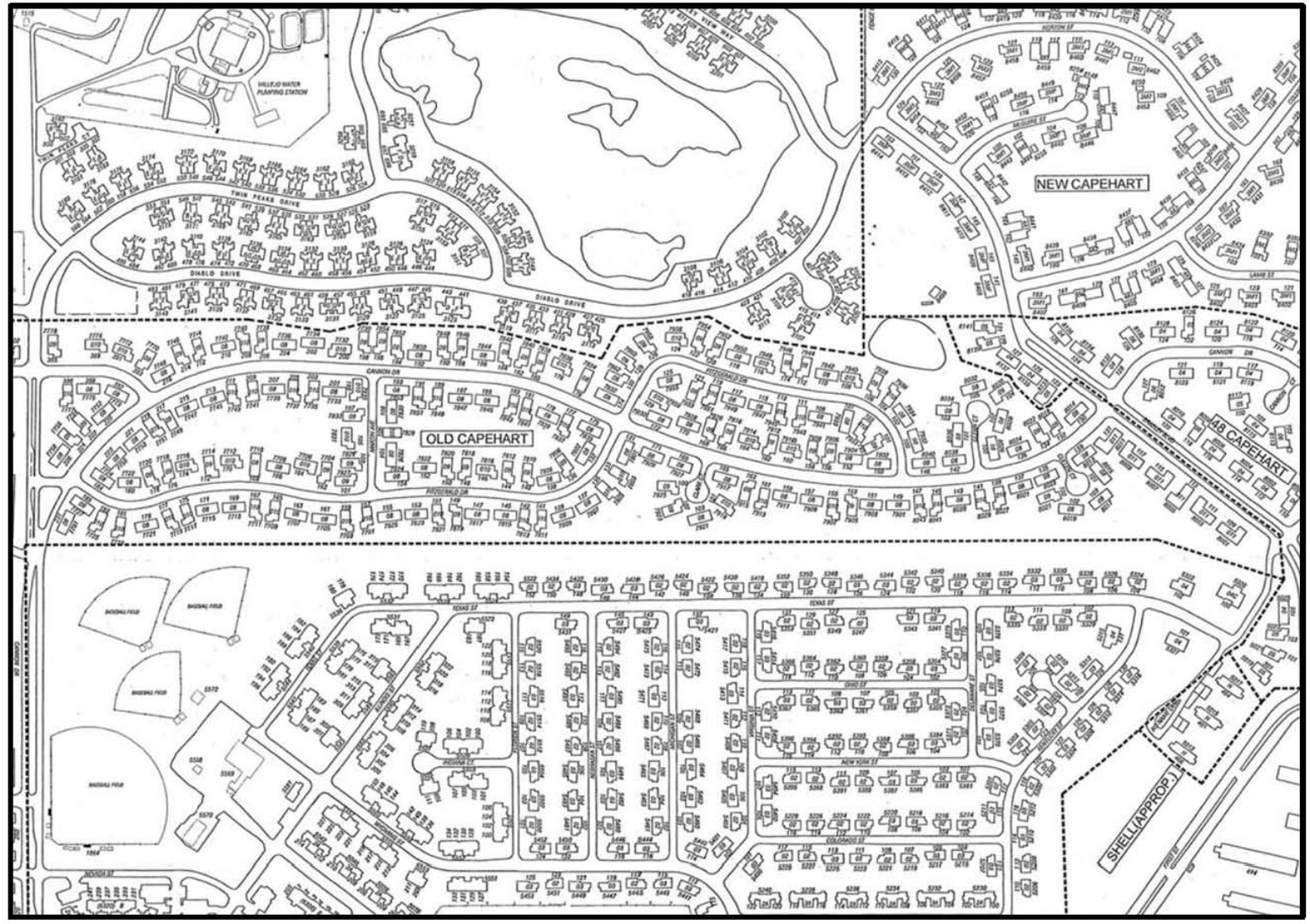


Figure A.5.12. Old Capehart officer housing plan detail, Travis AFB, California, ca. 1998. (Courtesy of Travis AFB, 60<sup>th</sup> Civil Engineer Squadron)





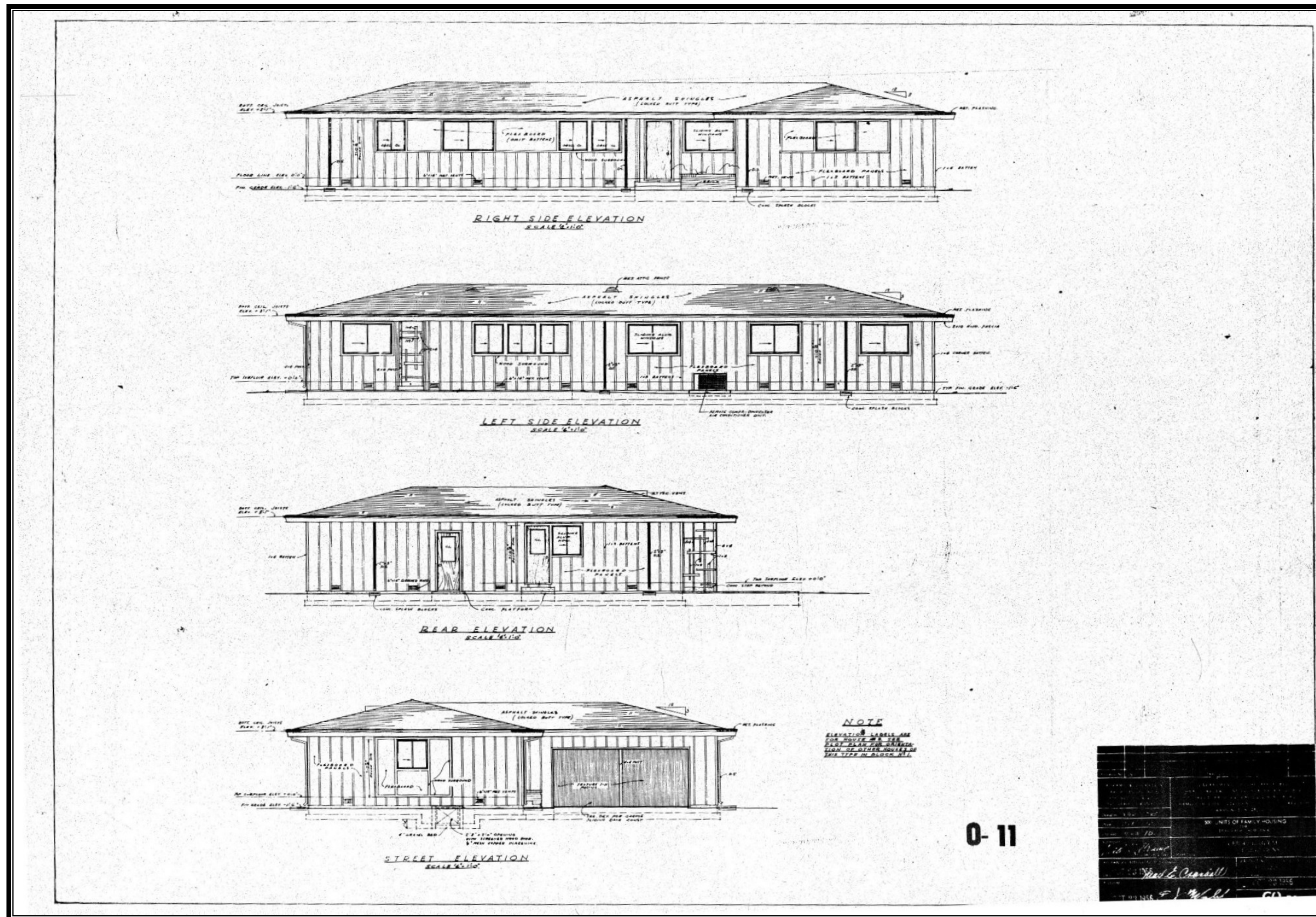


Figure A.5.13. Four-bedroom officer unit elevation (Type O-11, Old Capehart housing), Travis AFB, California, 1956. (Courtesy of Travis AFB, 60<sup>th</sup> Civil Engineer Squadron)





Figure A.5.14. 389 Fairchild Drive front elevation (Type O-10, Old Capehart housing), Travis AFB, California, 2005. (Photo taken by RCG&A)

bedrooms. The 1958 Progress Reports recorded that the units were equipped with dishwashers, washers, and dryers (Progress Reports, Capehart Housing Projects). Each house had an additional external storage area on the carport. No access to the interiors of the 48 Capehart houses was available. Of the original 48 buildings, 43 buildings remained standing as of December 2005.

New Capehart Housing. In 1962, a New Capehart project comprising 600 units of housing was constructed and occupied. The New Capehart project was designed by Angus McSweeney of San Francisco, California; the builder was Albert Gersten Building Company in Beverly Hills, California. The project comprised 124 single-family houses for officers, 42 duplexes for officers, and 196 duplexes for enlisted personnel (Progress Reports, Capehart Housing Projects). As constructed, the total number of units was 599 with only 41 duplex officer houses constructed (Travis AFB drawings file). The project was constructed in two physically separate areas. The New Capehart enlisted personnel area was located west of the Old Capehart airmen housing near the western boundary of the base. The officer houses were located north and east of the Old Capehart officer housing area and the 48 Capehart officer houses.

The New Capehart airmen neighborhood was laid out with a major north-south oriented street that defined the eastern boundary of the neighborhood (Figure A.5.21). Two loop roads defined the western periphery of the neighborhood. Slightly curving secondary roads linked the major north-south road and the periphery loop roads. No cross streets linked the New Capehart neighborhood with the Old Capehart neighborhood.

All airmen houses in the New Capehart neighborhood were one-story, wood-frame duplexes set on concrete foundation walls with crawl spaces. The roofs were shallow gables sheathed with built-up



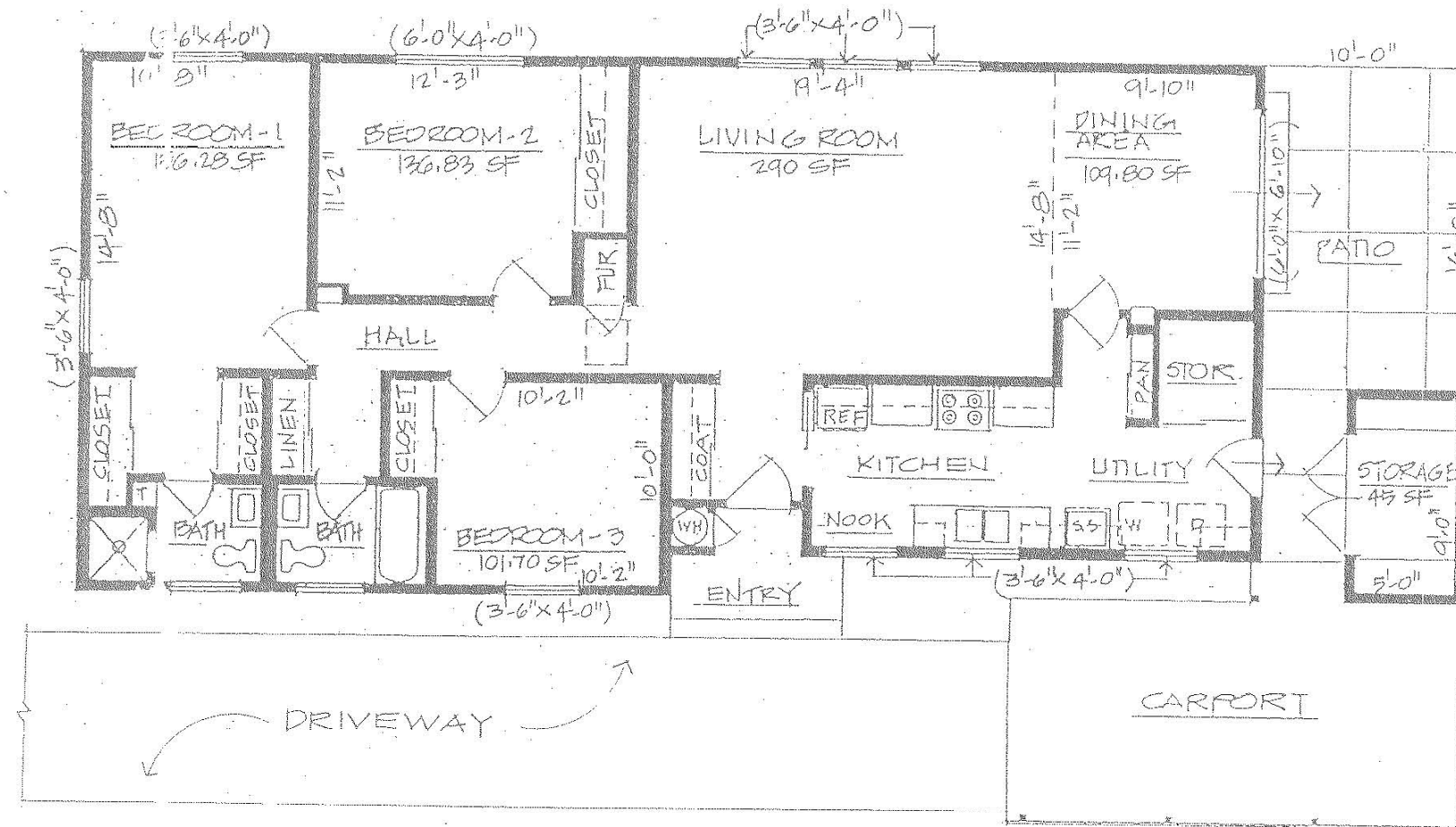
gravel roofing. The roofs had overhanging eaves and open soffits. Building orientations were either linear or U-shaped. Most of the linear orientations were parallel to the streets and shared adjoining carports (Figure A.5.22). A variation of the linear orientation had the two units in a line, but with the building end and both carports facing the street. In the U-shaped orientation, the gable ends of both units faced the street and were joined at the carports (Figure A.5.23). The units shared single driveways. The exteriors of the houses were finished primarily in stucco with some sections of wood siding. The windows were metal-frame sliding and fixed units. The front entry was slightly recessed and contained a flush solid-core wood door (Figure A.5.24). An external storage unit was located at the rear of the carport (Figure A.5.25). The rear elevations had a concrete patio and a service yard fenced with vertical wood boards. The service yard was designed to hold a clothesline and provide additional storage for such items as bicycles or lawn mowers.

The units contained three or four bedrooms. The three-bedroom units contained 1,221 or 1,252 square feet of net floor area, while the four-bedroom units contained 1,371 square feet of net floor area. The typical dwelling configuration had a short entry hall with utility closet and a coat closet (Figure A.5.26). The kitchen was located along the front outer wall beside the front entry and had painted pine units (Figure A.5.27). The kitchen area contained an eating nook, a large storage closet with one shelf and an overhead light on a pull string, and connections for a washer and dryer. A secondary door provided access to the carport. Sliding pocket doors with metal hand pulls shut off the kitchen and utility area from the main living space. The combination living/dining room spanned the rear of the house and had a metal-frame sliding door that accessed the concrete patio in the rear yard (Figure A.5.28). The bedrooms were located on the opposite end of the house and accessed by a hallway that held a linen closet and a small broom closet. The main bathroom was accessed from the hall and contained a narrow, deep, linen cabinet. A second half-bathroom was located off the master bedroom. In the four-bedroom units, the second bathroom had a tiled shower stall. Each bedroom had a closet, and the master bedroom had two closets (Figure A.5.29). The bedroom closets had sliding doors with metal circular pulls. The closets had built-in wood rods with two sets of shelves above.

The building interiors were finished with plasterboard walls and ceilings, and hardwood floors with simple three-inch wood baseboards. The windows had a three-inch wide wood sill with curved molding underneath. The bathrooms had been finished with ceramic tile floors and partially tiled walls in the bathtub. The kitchens had vinyl tile flooring that replaced the original vinyl asbestos tiles. The buildings were equipped with gas heating, hot-water heaters, and evaporative cooling systems (Progress Reports, Capehart Housing Projects).

The New Capehart officer housing area was located north and east of the Old Capehart officer housing area. Most of the officer units constructed for this project were for junior officers. Four single-family units for senior officers also were constructed as part of this project. The officer housing area was laid out with curving streets and cul-de-sacs (Figure A.5.30). In general, the buildings exhibited uniform setbacks from the streets. The buildings had large front, side, and rear yards.

The officer houses were finished in stucco with sections of vertical tongue-and-groove siding (Figures A.5.31 and A.5.32). The roofs were shallow gables with overhanging eaves, open soffits, sheathed with built-up gravel roofing. The windows were metal-frame sliding and fixed units. The front entries were slightly recessed and contained flush solid-core wood doors. The unit had attached carports accessed by short paved driveways. External storage units were located at the rears of the carports. Each dwelling unit also had a service yard fenced with vertical wood boards. The service yard was designed to hold a clothesline and to provide additional storage for outdoors equipment. Each unit had a concrete patio in the rear yard.



**OLD CAPEHART**  
**TYPE: 010 (3 BEDROOM)**  
**NET FLOOR AREA: 1,310 SQ. FT.**

Figure A.5.15. Three-bedroom officer unit floor plan (Type O-10, Old Capehart housing), Travis AFB, California. (Courtesy of Travis AFB, 60<sup>th</sup> Housing Office)





Figure A.5.16. Streetscape along Vermont Street, Old Capehart airmen neighborhood, Travis AFB, California, 2005. (Photo taken by RCG&A)



Figure A.5.17. Rear yards behind 250 Cannon Drive in Old Capehart airmen neighborhood, Travis AFB, California, 2005. (Photo taken by RCG&A)

The units contained three or four bedrooms. Three-bedroom units had 1,320 square feet of net floor space; four-bedroom units had 1,413 square feet of net floor area. The interior configuration of junior officer houses had a short entry hall with a coat closet, a broom closet, and a heater closet (Figure A.5.33). The kitchen was located on the same wall as the entry and occupied the space between the hall and the carport. The kitchen contained an eating space, a storage room accessed by a louvered wood door, and space for a washer and a dryer. The kitchen doors had pocket doors with metal pull handles. The living and dining area was located opposite the kitchen (Figure A.5.34). A hallway accessed the three bedrooms. The main bathroom was located off the hallway. The full bathroom contained a small linen closet. A second bathroom was accessed off the master bedroom and contained a small linen closet and a tiled shower stall. Each bedroom contained a closet; the master bedroom contained two closets (Figure A.5.35).

The four senior officer houses constructed as part of the New Capehart project were the largest quarters. These quarters contained four bedrooms with 1,698 square feet of net floor area assigned to colonels; the units assigned to generals were larger. The exteriors of these four houses were stuccoed. The roofs were shallow gables (Figures A.5.36 and A.5.37). Interior access to these units was unavailable due to full occupancy when site survey was conducted in December 2005. Available floor plans indicated that the senior officer quarters had separate dining rooms, a large living room with a fireplace, large bedrooms, two bathrooms, and dressing rooms accessed off the master bedroom (A.5.38). Senior officers also were provided double garages.

The landscape plan for the New Capehart airmen and officer housing areas was designed by Osmundson and Staley Landscape Architects of San Francisco, California (Travis AFB drawings file). The drawings depicted lawns, trees lining the streets, and trees grouped in areas behind the houses. However, the drawings stated, "Trees and shrubs omitted as built 9/21/62," suggesting that the original plans were not implemented (Travis AFB drawings file). It was estimated that less than 10 per cent of the trees depicted on the original landscape plans were currently located in the housing areas (Holmes, personal communication 2005). The landscaping noted in the neighborhoods during the December 2005 site visit was varied. The houses had grass lawns with some shrubs. Some small ornamental trees lined major streets, but other areas were devoid of trees. Play areas in the airmen housing area were depicted on the original landscape plans as grass lawns with no play equipment; no play equipment was noted during the site visits. The original landscape drawings depicted no privacy fencing in the rear yards.

Changes to New Capehart housing include window replacements with double-pane, sliding units; upgrades to kitchen cabinets and appliances; and, new roofs. Resident complaints about the units commonly included lack of air conditioning and absence of grounded electrical power to supply contemporary electronic equipment, such as computers. In addition, the New Capehart houses in the airmen neighborhood exhibited structural failure along the foundation walls because the buildings were constructed on expansive soils. The damage to the foundation walls allowed moisture penetration into the walls that resulted in mold (DuPree, personal communication 2005). As of December 2005, 124 single-family houses and 237 duplexes totaling 598 units remained in the New Capehart housing areas (U.S. Air Force 2004). The units in the New Capehart airmen neighborhood were vacant and being prepared for demolition.

#### Appropriated-Funds Housing at Travis AFB

Six appropriated-funds houses were completed in 1957 at Travis AFB. The six houses were designed by Abrams and Dickstein, Architects, in 1955 to house senior officers (i.e., colonels and generals). The six senior officer houses were located in a park-like setting on gently rising ground near the

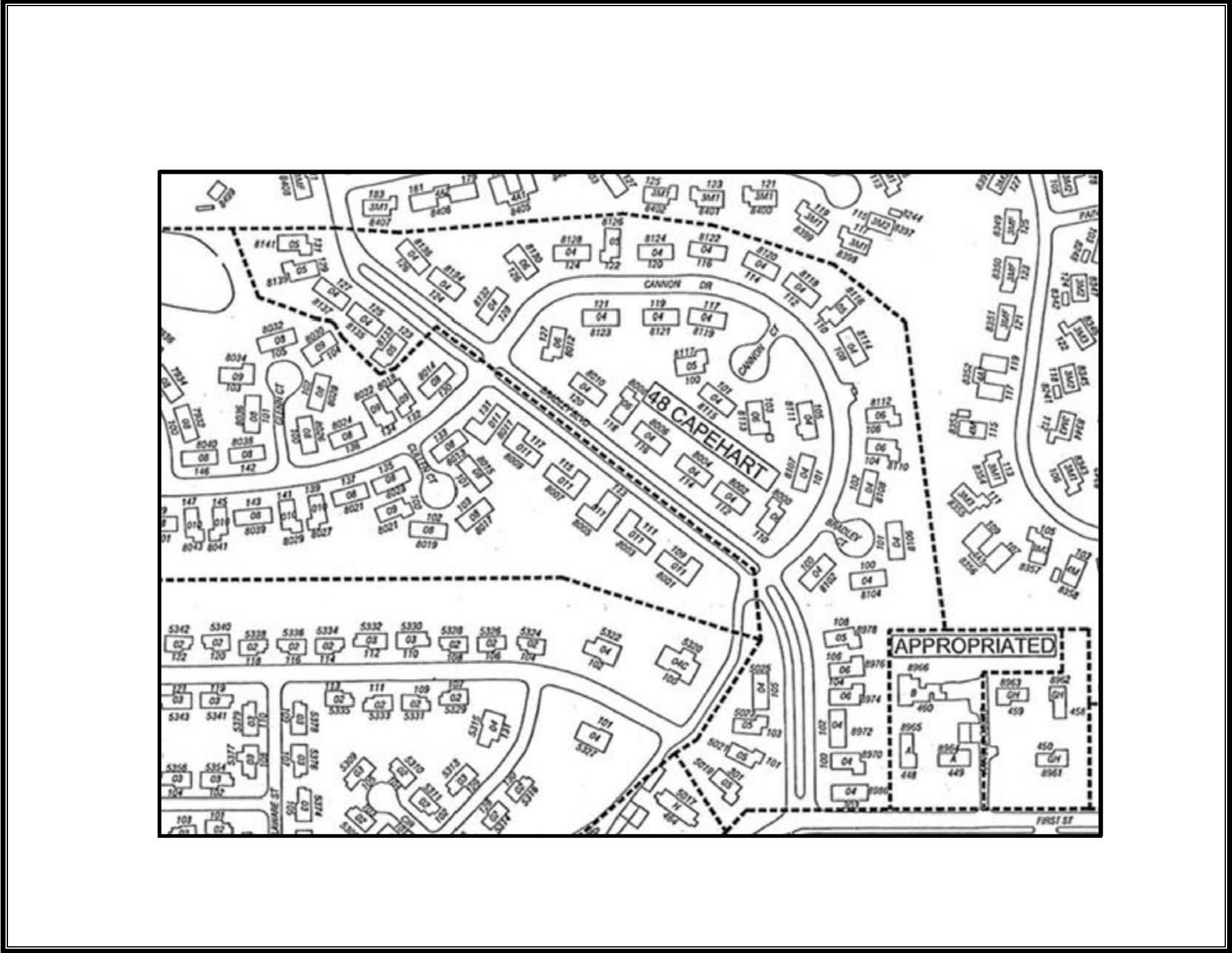


Figure A.5.18. 48 Capehart housing plan detail, Travis AFB, California, ca. 1998. (Courtesy of Travis AFB, 60<sup>th</sup> Civil Engineer Squadron)





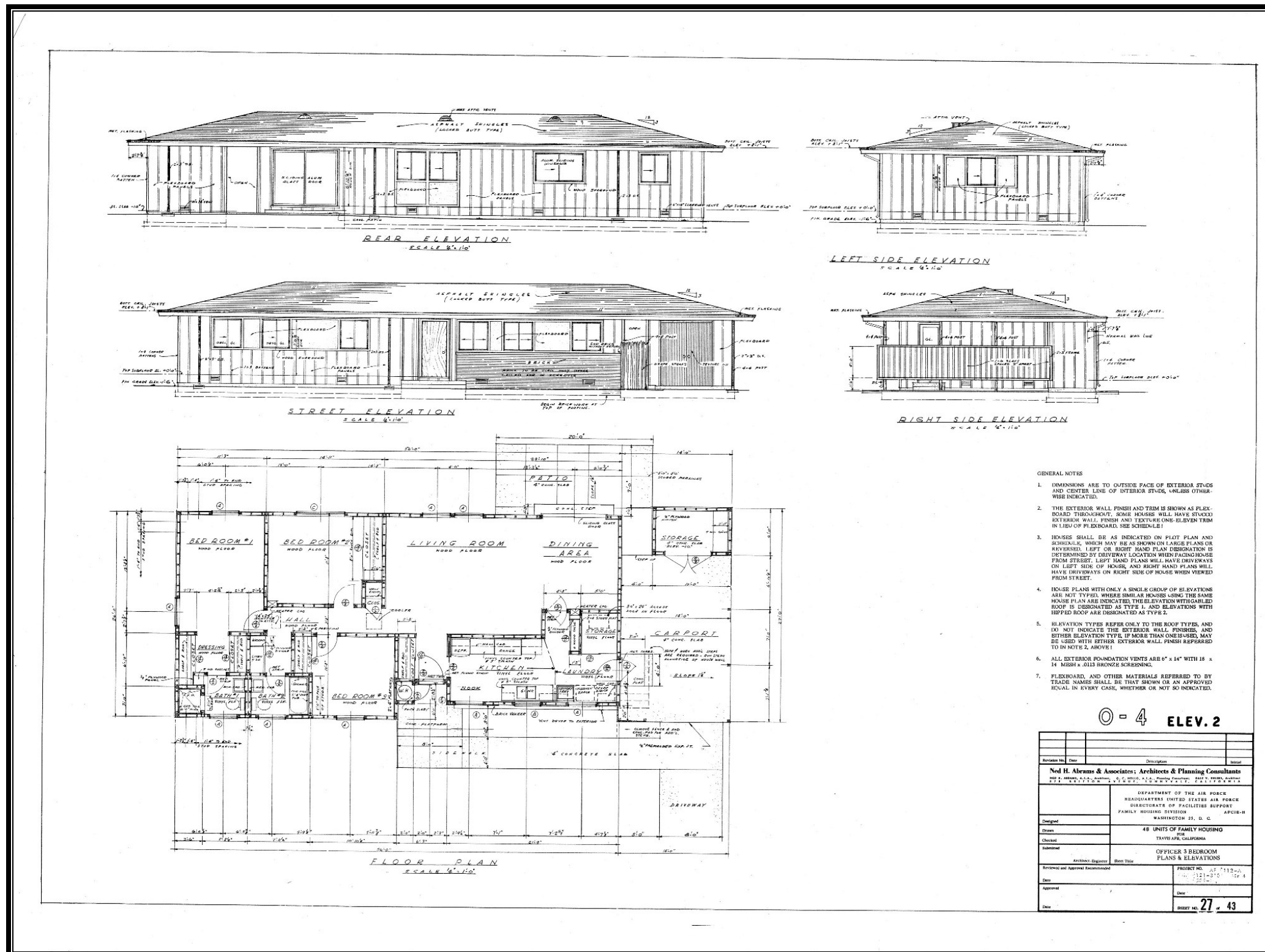


Figure A.5.19. Three-bedroom officer house elevation and floor plan (Type O-4, 48 Capehart housing), Travis AFB, California. (Courtesy of Travis AFB, 60<sup>th</sup> Civil Engineer Squadron)





Figure A.5.20. 124 Cannon Drive (Type O-4, 48 Capehart housing), Travis AFB, California, 2005. (Photo taken by RCG&A)

northeast boundary of the base. The six one-story houses were sited on curved streets with variable setbacks and orientations. No building was sited to view the front doorways of any other house. The original drawings depicted three options for exterior finishes of the building, including prefinished wood shakes, stucco, and T1-11 plywood (Figure A.5.39). The six houses were finished in stucco and appeared identical on the exterior (Figures A.5.40 and A.5.41). All six buildings had shallow intersecting hipped roofs finished in built-up roofing. The main entry contained a flush wood door. The windows depicted on the drawing were metal-frame casements and fixed units. Each dwelling had an attached garage.

Interior access was not available during the December 2005 site visit due to full occupancy. A review of an original floor plan depicted a U-shaped configuration. The main entry led to the living room with a fireplace and a separate dining room. The living room featured a fireplace. An L-shaped hallway led to the bedroom wing. Four bedrooms were located along the outer wall of the rear wing. Two bathrooms were located in the bedroom wing. The kitchen, utility, and double garage were located in the wing opposite to the bedroom wing. A large patio spanned the area between the two wings (Travis AFB drawings file).



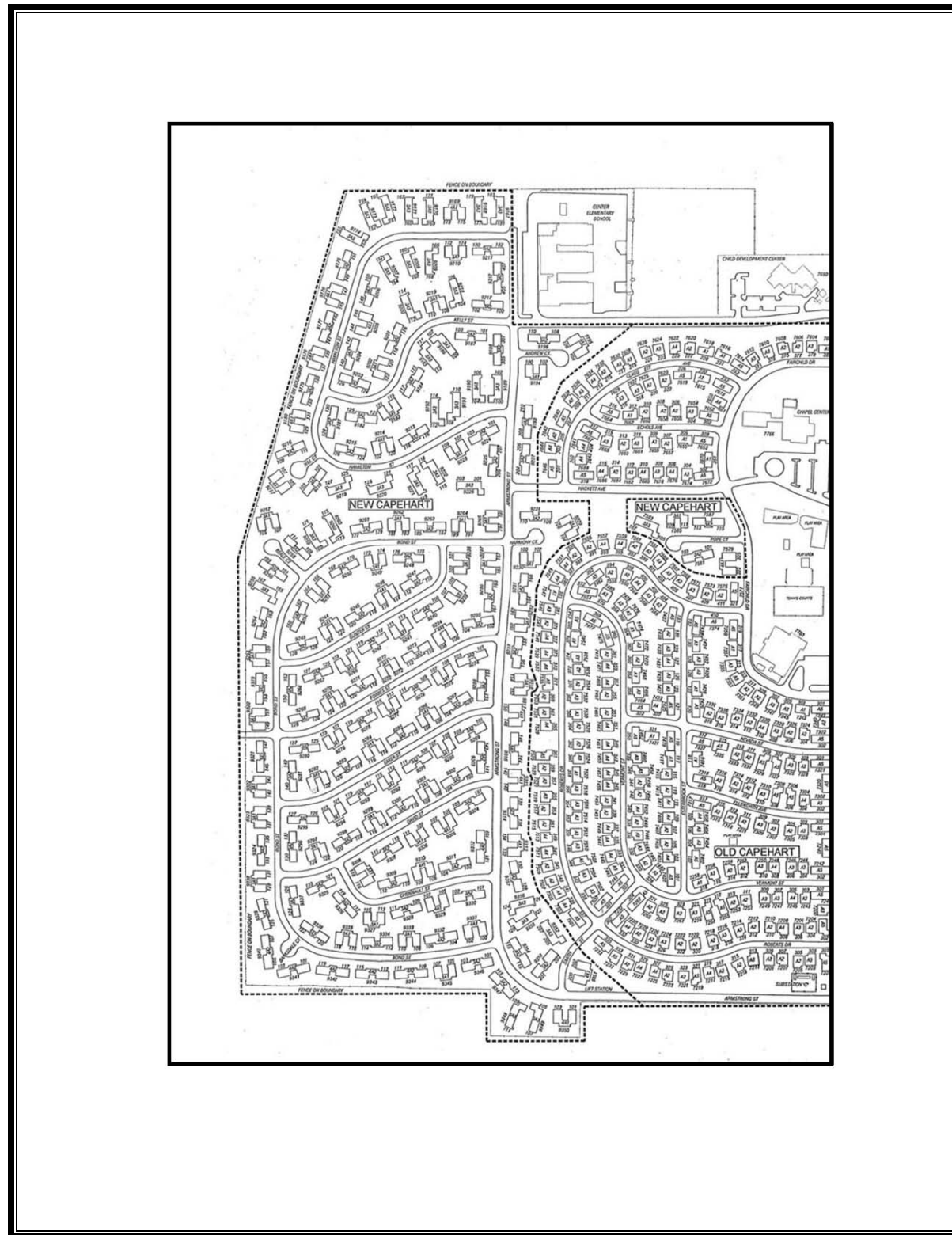


Figure A.5.21. New Capehart airmen neighborhood plan detail, Travis AFB, California, ca. 1998.  
(Courtesy of Travis AFB, 60<sup>th</sup> Civil Engineer Squadron)



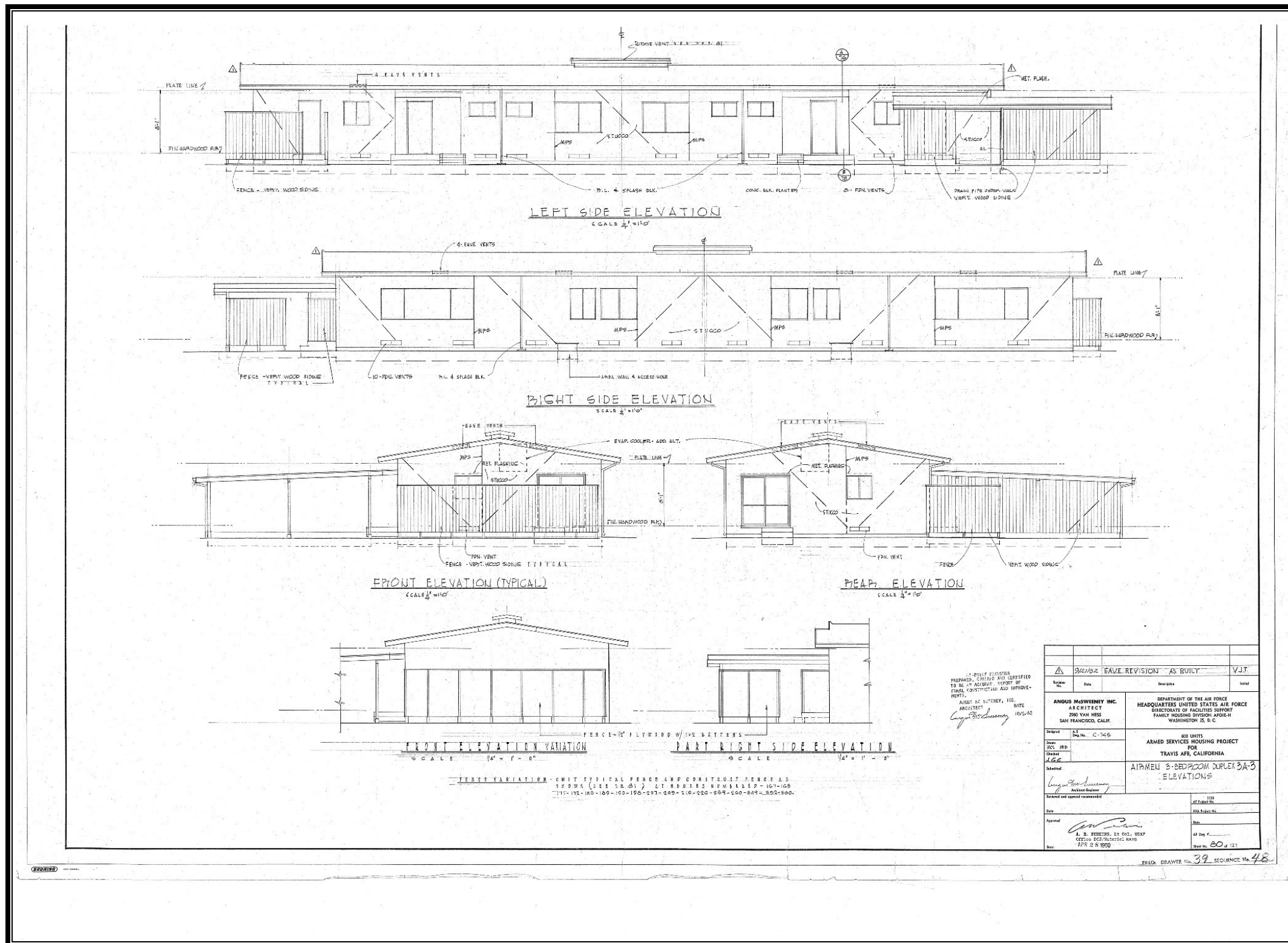


Figure A.5.22. Three-bedroom airmen duplex elevation (Type 3A3, New Capehart housing), Travis AFB, California, 1962. (Courtesy of Travis AFB, 60<sup>th</sup> Civil Engineer Squadron)







Figure A.5.23. 109-111 Pope Court front elevation (Type 3A1, New Capehart housing), Travis AFB, California, 2005. (Photo taken by RCG&A)



Figure A.5.24. 103 Armstrong Street front elevation (Type 4A1, New Capehart housing), Travis AFB, California, 2005. (Photo taken by RCG&A)



Figure A.5.25. 103 Armstrong Street showing external storage unit with service yard in rear (Type 4A1, New Capehart housing), Travis AFB, California, 2005. (Photo taken by RCG&A)



Figure A.5.27. 103 Armstrong Street kitchen (Type 4A1, New Capehart housing), Travis AFB, California, 2005. (Photo taken by RCG&A)

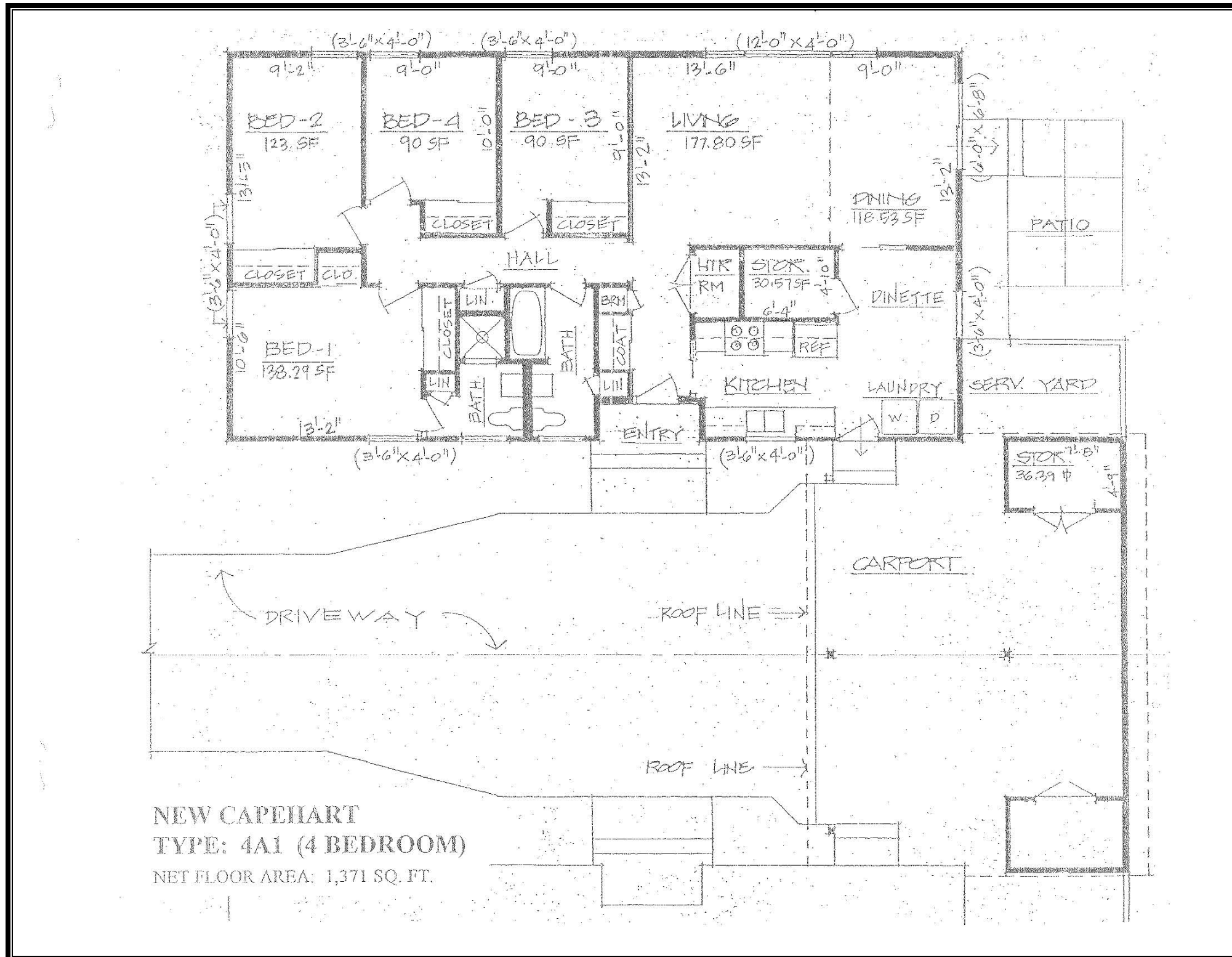


Figure A.5.26. Airmen housing floor plan (Type 4A1, New Capehart housing), Travis AFB, California. (Courtesy of Travis AFB, 60<sup>th</sup> Housing Office)





Figure A.5.28. 107 Armstrong Street living room (Type 3A3, New Capehart housing), Travis AFB, California, 2005. (Photo taken by RCG&A)



Figure A.5.29. 103 Armstrong Street master bedroom closets (Type 4A1, New Capehart housing), Travis AFB, California, 2005. (Photo taken by RCG&A)





Figure A.5.32. 183 Collins Street front elevation (Type 3M1, New Capehart housing), Travis AFB, California, 2005. (Photo taken by RCG&A)



Figure A.5.34. 183 Collins Street living and dining room (Type 3M1, New Capehart housing), Travis AFB, California, 2005. (Photo taken by RCG&A)



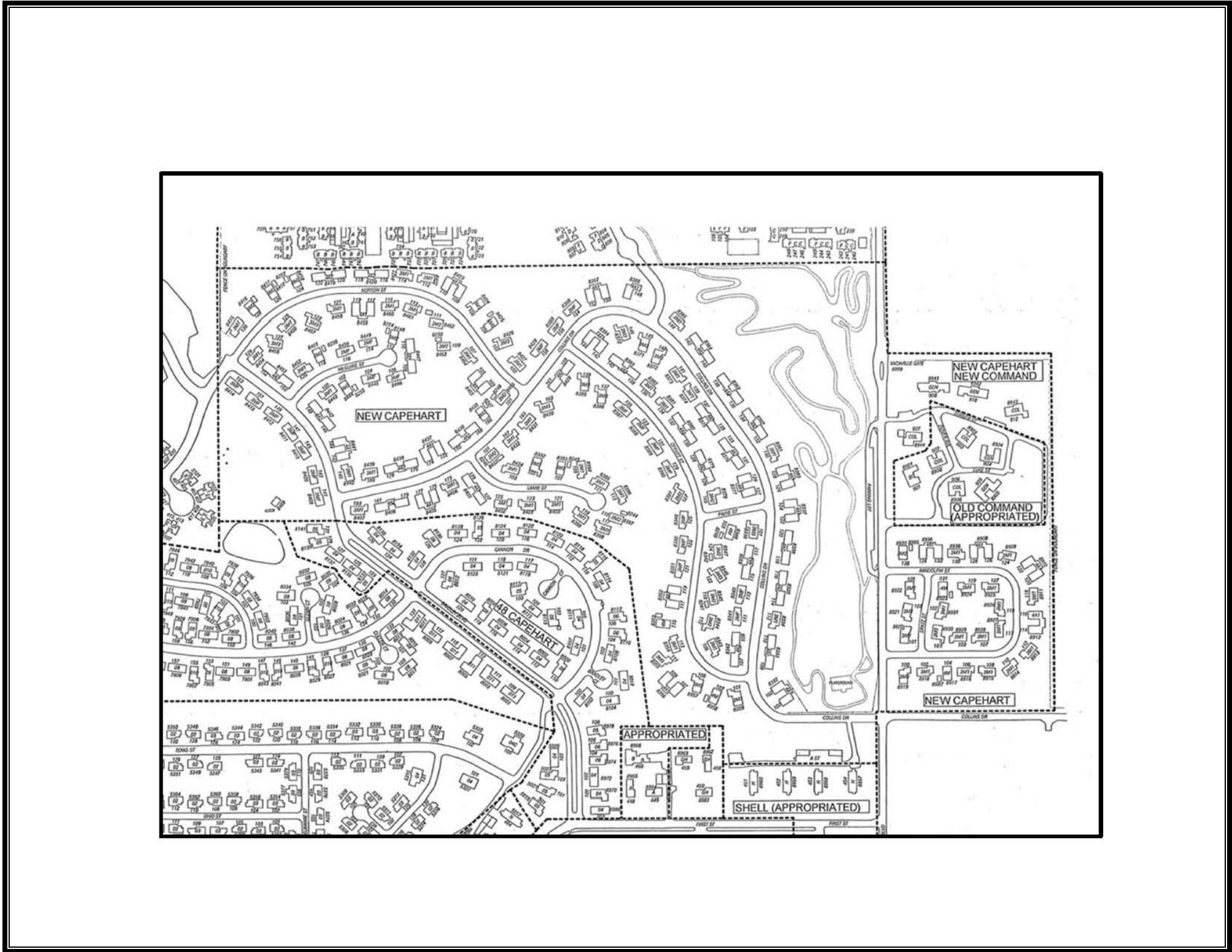


Figure A.5.30. New Capehart officer neighborhood plan detail, Travis AFB, California, ca. 1998. (Courtesy of Travis AFB, 60<sup>th</sup> Civil Engineer Squadron)



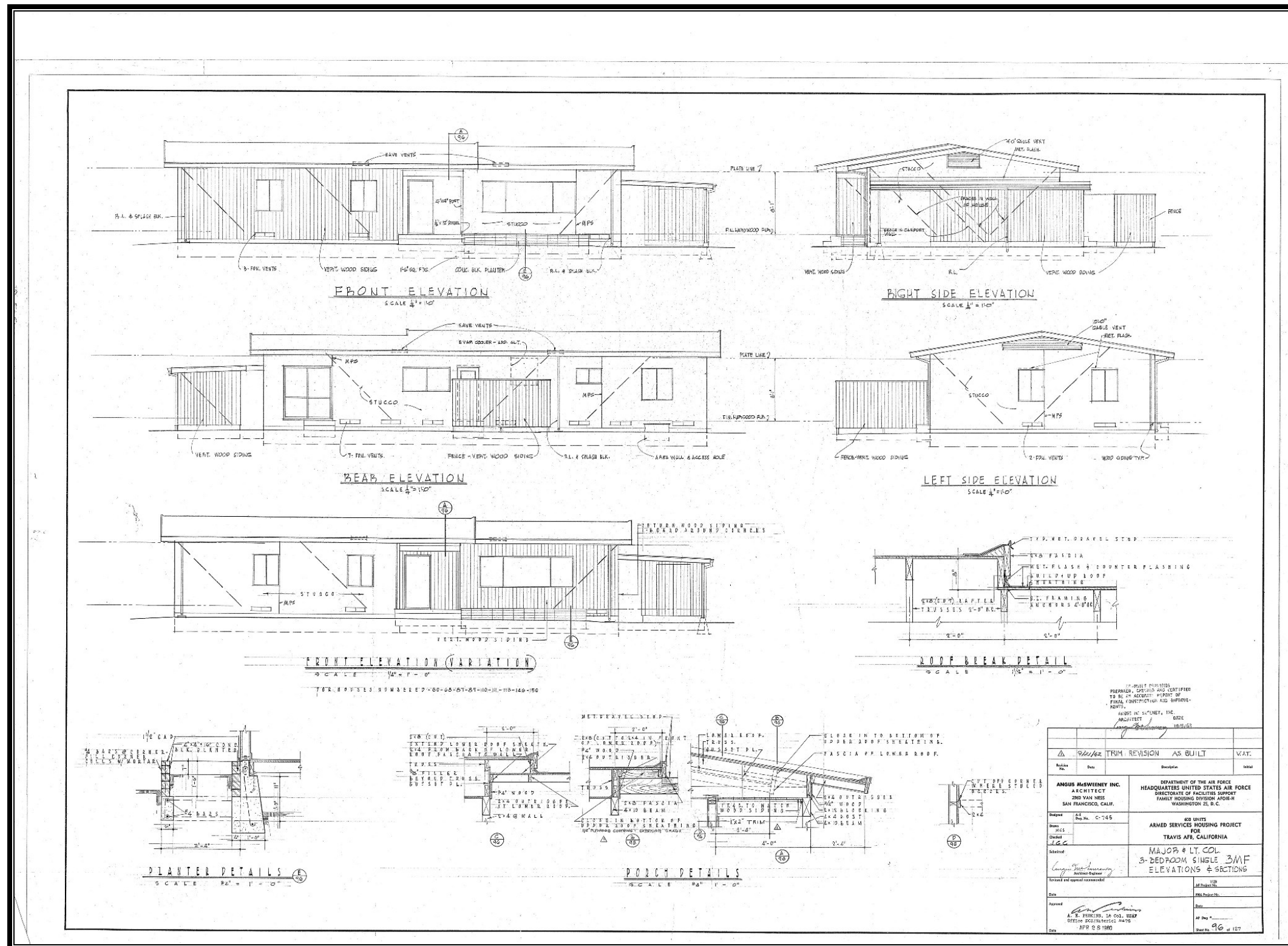


Figure A.5.31. Three-bedroom officer house elevation (Type 3MF, New Capehart housing), Travis AFB, California, 1962. (Courtesy of Travis AFB, 60<sup>th</sup> Civil Engineer Squadron)



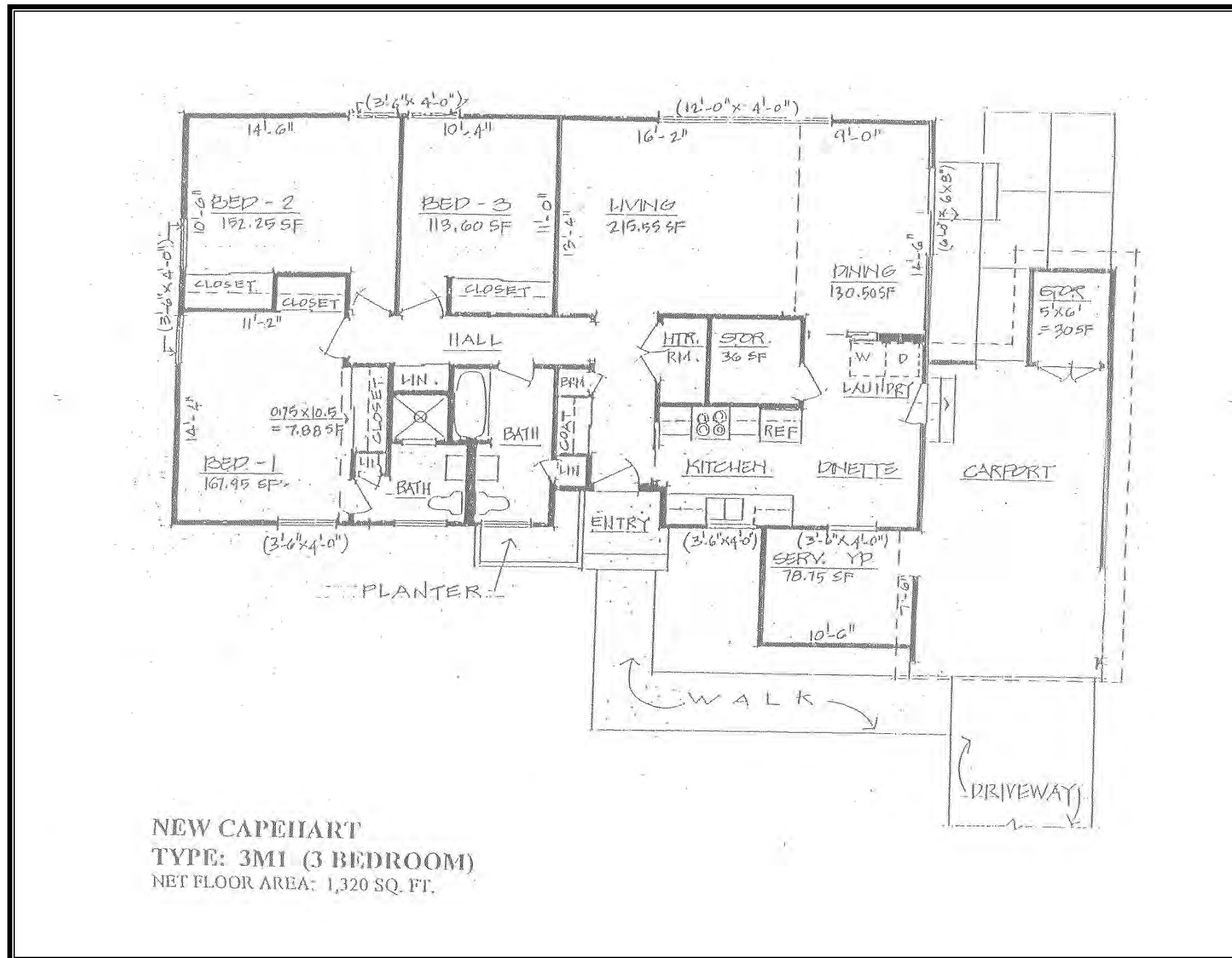


Figure A.5.33. Three-bedroom officer house floor plan (Type 3M1, New Capehart housing), Travis AFB, California. (Courtesy of Travis AFB, Housing Office)





Figure A.5.35. 183 Collins Street master bedroom closets (Type 3M1, New Capehart housing), Travis AFB, California, 2005. (Photo taken by RCG&A)



Figure A.5.36. 907 Turner Street front elevation (Colonel, New Capehart housing), Travis AFB, California, 2005. (Photo taken by RCG&A)





Figure A.5.37. 908 Turner Street front elevation (General, New Capehart housing), Travis AFB, California, 2005. (Photo taken by RCG&A)



Figure A.5.40. 904 Luke Street front elevation (General, Appropriated Funds housing), Travis AFB, California, 2005. (Photo taken by RCG&A)

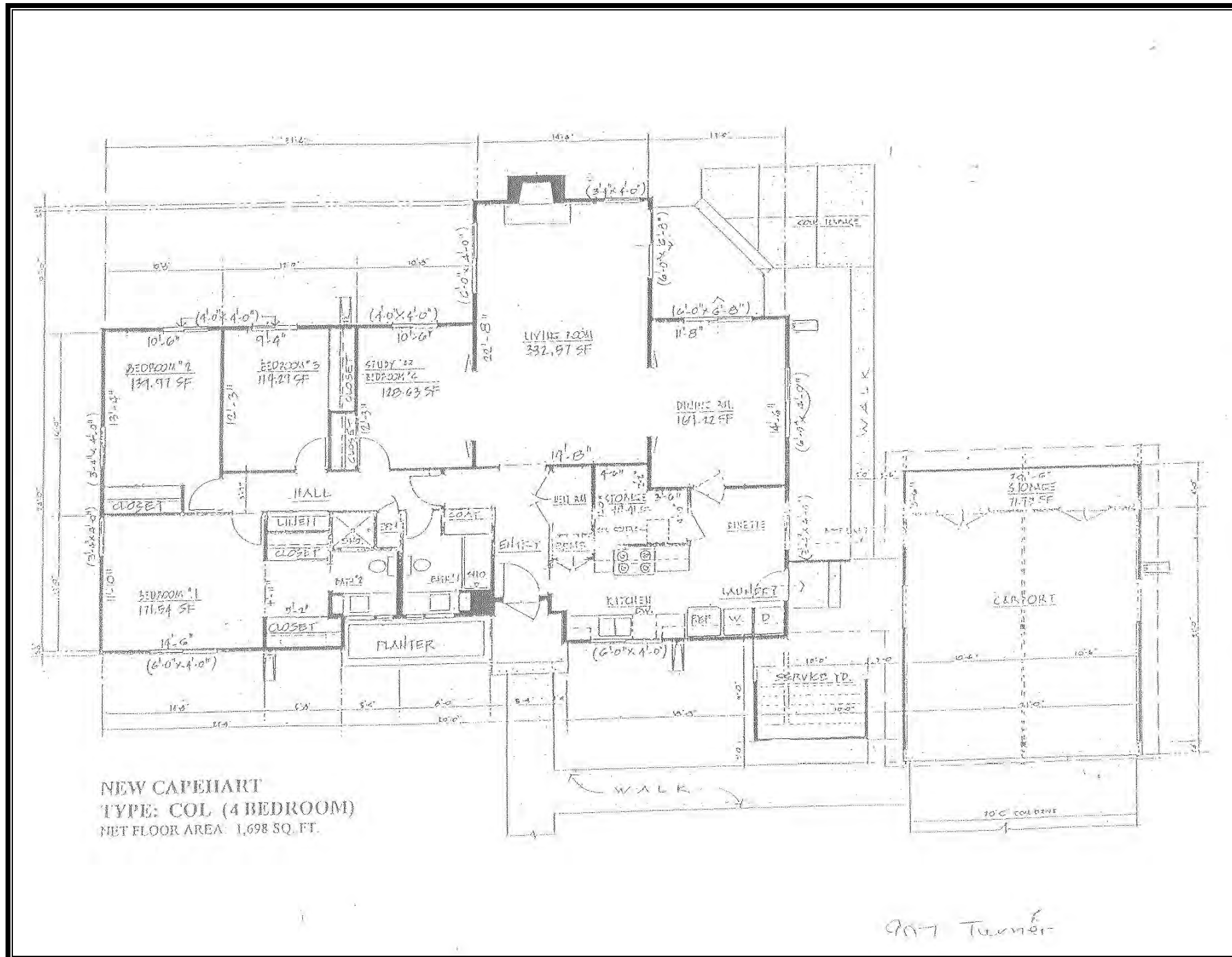


Figure A.5.38. Senior officer house floor plan (Colonel, New Capehart housing), Travis AFB, California. (Courtesy of Travis AFB, Housing Office)



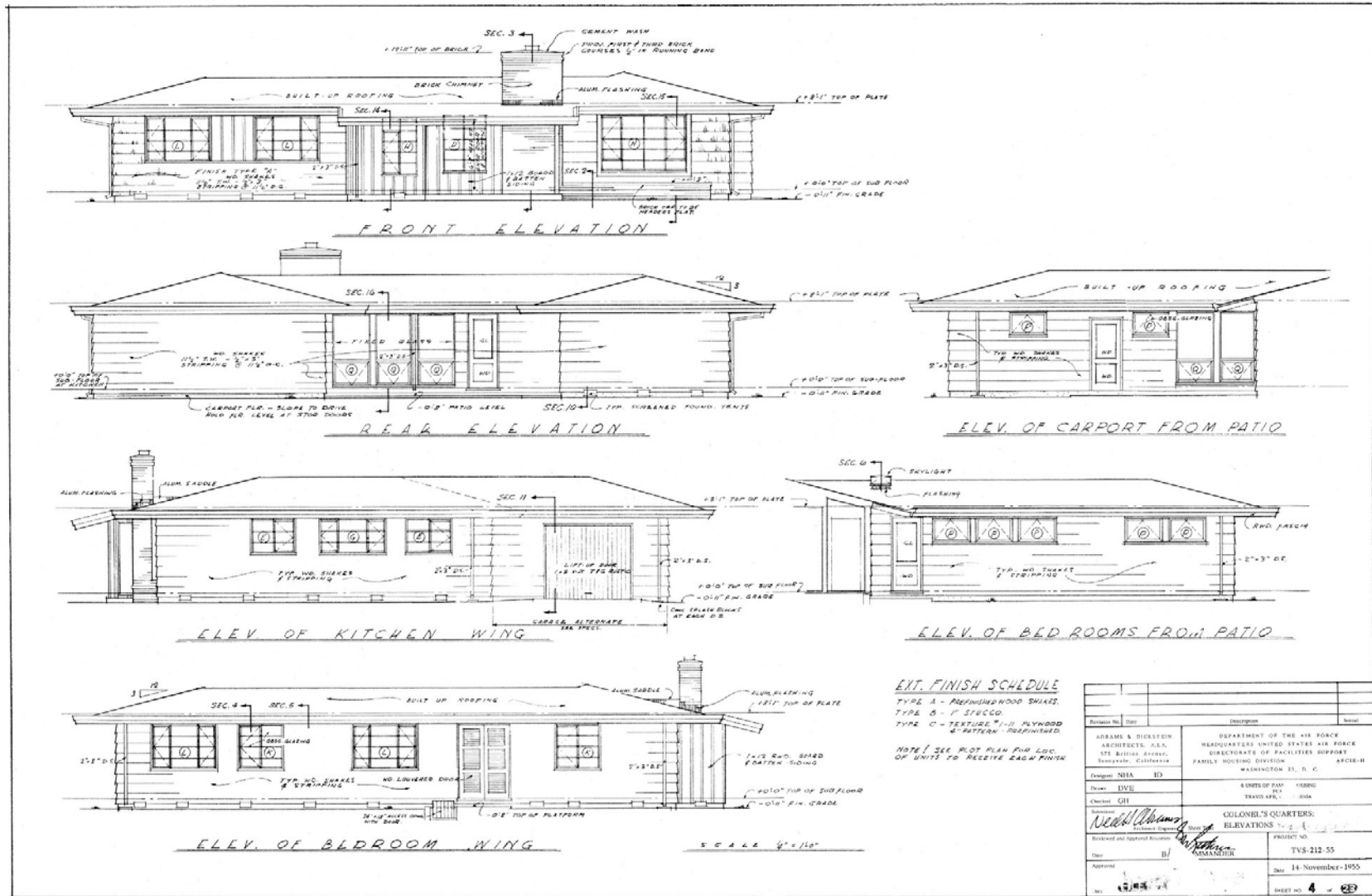


Figure A.5.39. Colonel's Quarters elevation (appropriated-funds housing), Travis AFB, California, 1955. (Courtesy of Travis AFB, 60<sup>th</sup> Civil Engineer Squadron)







Figure A.5.41. 904 Luke Street side elevation (General, Appropriated Funds housing), Travis AFB, California, 2005. (Photo taken by RCG&A)





**APPENDIX B**

**IDENTIFIED WHERRY, CAPEHART, AND  
APPROPRIATED FUNDS SPONSORS AND  
ARCHITECTS**



## **IDENTIFIED WHERRY, CAPEHART, AND APPROPRIATED FUNDS SPONSORS AND ARCHITECTS**

The following tables of sponsors and architects associated with the Air Force's and Navy's Wherry, Capehart, and appropriated funds housing programs were compiled from several sources. These included: archival records at the Naval Facilities Engineering Command Archives at Port Hueneme, California; Air Force installation surveys; transcripts of Congressional hearings on military family housing; original drawings obtained during site visits; lists of Wherry housing project acquisitions and progress reports on Capehart housing projects located at Headquarters, Air Force Family Housing; and, drawings located in Record Group 385, Naval Facilities Engineering Command, at the National Archives and Records Administration. Additional architects were identified in cultural resources surveys prepared for the Naval Facilities Engineering Command Engineering Field Division South (specific report titles are included in the bibliography) and a 1959 analysis of Capehart housing projects by the architecture firm Keyes, Lethbridge & Condon. Many more sponsors and architects are associated with housing under the three programs than the architects listed in the tables.

The names of Naval installations have changed over time. In the interest of simplicity, the names included in the tables that follow represent the current installation name.

**Table B.1. Wherry Sponsors**  
**AIR FORCE, NAVY, AND MARINE CORPS - WHERRY SPONSORS**

<b>Installation</b>	<b>State</b>	<b>Sponsor</b>
<b>AIR FORCE</b>		
Brookley Air Force Base	AL	Brookley Manor
Craig Air Force Base	AL	Pine Glen Apartments
Williams Air Force Base	AZ	Rubenstein Development Company, Inc.
Castle Air Force Base	CA	Castle Garden Homes, Inc. Castle Garden Addition, Inc.
Edwards Air Force Base	CA	Edwards Base Housing Corp. Muroc Housing Corp. Desert Villa, Inc. Desert Lake Homes, Inc.
Hamilton Air Force Base	CA	Rafael Village, Inc.
March Air Force Base	CA	March Field Homese
Mather Air Force Base	CA	North Mather Heights South Mather Heights
McClellan Air Force Base	CA	McClellan Housing, Inc.
Travis Air Force Base	CA	Fairfield Gardens, Inc.
Lowry Air Force Base	CO	Lowry Plaza, Inc. Lowry Annex, Inc.
Eglin Air Force Base	FL	Eglin Village, Inc. (G.W. Klasterman, Eglin Villiage Inc., Eglin AFB, FL) Eglin Homes, Inc. (G.W. Klasterman)
MacGill Air Force Base	FL	Tampa Bay Garden Apartments, Inc. (Albert G. McCarthy, New York, NY)
Patrick Air Firce Base	FL	Patrick Gardens, Inc. (Albert G. McCarthy, New York, NY) Patrick Village, Inc. (Albert Ge. McCarthy)
Tyndall Air Force Base	FL	Tyndall Field Military Housing, Inc. (W.D. Jemison, Memphis, TN)
George Air Force Base	GA	Mesa Estates, Inc. Victor Valley Housing Corp.
Hunter Air Force Base	GA	D.L. Phillips, Hunter Field Housing Inc., Charlotte, NC
Robins Air Force Base	GA	W.R. Homes, Inc. Robins Homes, Inc. Warner Homes, Inc.
Mountain Home Air Force Base	ID	Mountain Village, Inc.
Chanute Air Force Base	IL	Chanute Gardens Corporation (Ian Woodner, Jonathan Woodner, Co., Washington, DC) Chanute Apartments Corporation (Ian Woodner, Jonathan Woodner, Co.)
Scott Air Force Base	IL	Daly, Acres, Inc. (F.M. Keller, Scott Field Management Co., Richmond, CA) Lewis Acres, Inc. (Wray Sagaser, Scott Field Management Co., Richmond, CA)
Barksdale Air Force Base	LA	Eugene S. Mindlin, Shreveport Housing Corp., New York, NY
Westover Air Force Base	MA	Westover Development Corp. (Hamilton Shields, Portland, ME) Westover Development Corp., Inc. (Hamilton Shields)  Westover Development Corp. (Hamilton Shields) Westover Reality Corp. (Hamilton Shields)

## AIR FORCE, NAVY, AND MARINE CORPS - WHERRY SPONSORS

Installation	State	Sponsor
		Westover Homes, Inc. (Gilbane, Thomas & Williams, Providence, RI)
Loring (Limestone) Air Force Base	ME	Limestone Gardens, Inc. (Murchison Bros. & Winston & Muss, New York, NY)
Presque Isle Air Force Base	MI	Presque Isle Manor, Inc.
Selfridge Air National Guard Base	MI	Selfridge Apartments Inc. (E.H. Marhoefer, Jr., Chicago, IL)
Keesler Air Force Base	MS	Military Housing, Inc. (Wilkinson, Snowden & McGehee, Memphis, TN)
Great Falls Air Force Base	MT	R.F. Kitchingman, Great Falls, MT
		Harold G. Schnitzer, Harsh Montana Corp., Portland, OR
Malmstrom Air Force Base	MT	East Base Housing Corp. Harsh Montana Corp.
Offutt Air Force Base	NE	Offutt Housing, Corp. (Carl C. Wilson, Omaha, NE)
Holloman Air Force Base	NM	Holloman Housing, Inc. (Dicker-Frank-Hexter, Dallas, TX)
Kirland Air Force Base	NM	Henry C. Beck, Sandia Housing Management Co., Kirtland Heights, Dallas, TX
Walker Air Force Base	NM	Roswell Gardens Homes, (C. W. Murchison, Jr., Dallas, TX)
		Texas Ideal Homes, Inc. (C. W. Murchison, Jr.)
Nellis Air Force Base	NV	Nellis Housing Corp. (George M. Holstein, Costa Mesa, CA)
Mitchel Air Force Base	NY	Mitchel Manor Corp., New York, NY
Stewart Air Force Base	NY	Dayton Development Corp. (William Zuckerman (Harris Associates, Inc.), Brooklyn, NY)
Lockbourne Air Force Base	OH	Lockbourne Manor, Inc.
Wright-Patterson Air Force Base	OH	Page Manor, Dayton, OH
Shaw Air Force Base	SC	Cooper-Shawview Heights, Inc., Columbia, SC Shawview Heights Addition, Inc.
Ellsworth Air Force Base	SD	Skyway Homes, Inc. (John C. Cassidy, Minneapolis, MN) Renal Heights, Inc.
Rapid City Air Force Base	SD	Wells & Grinnan, Dallas, TX
Sewart Air Force Base	TN	Stones River Homes, Inc., Smyrna, TN
Bergstrom Air Force Base	TX	Epps Hill, C.B. Hagerman, the Bergstrom Corp., Dallas, TX
Biggs Air Force Base	TX	Likins, Foster & Associates, Likins-Foster Biggs Corp., Oklahoma City, OK Likins, Foster & Associates, Likins-Foster El Paso Corp., Oklahoma City, OK
Carswell Air Force Base	TX	Raymond E. Buck, Fort Worth, TX
James Connally Air Force Base	TX	A.W. Kornman, Cavu Village Homes, Inc., New Orleans, LA
Kelly Air Force Base	TX	Billy Mitchell Village, San Antonio, TX
Lackland Air Force Base	TX	Lackland Village, Inc., San Antonio, TX
Perrin Air Force Base	TX	Perrin Housing, Inc.
Randolph Air Force Base	TX	Tom Lively, Dallas, TX
Reese Air Force Base	TX	Reese Village, Inc.
Sheppard Air Force Base	TX	Sheppard Housing, Inc., Dallas, TX

## AIR FORCE, NAVY, AND MARINE CORPS - WHERRY SPONSORS

Installation	State	Sponsor
Wolters Air Force Base	TX	Williams, Dunlap & Sturgis, Dallas, TX
Hill Air Force Base	UT	Harsh Utah Construction Corp. (Harold G. Schnitzer, Portland, OR)
Fairchild Air Force Base	WA	Air Base Housing, Inc. (Cuthrie Construction Co., Spokane, WA)
Larson Air Force Base	WA	Moses Lake Houses, Inc. Larson Aire Housing, Inc. Larson Heights, Inc.
Francis E. Warren Air Force Base	WY	Wyoming Builders, Inc. (A. K. Morely, Cheyenne, WY)
<b>NAVY</b>		
San Francisco Metropolitan Area	CA	Army-developed project <b>Alliance Construction Company, South Pasadena, CA*</b>
Naval Air Auxillary Station El Centro	CA	
Naval Air Station Moffett Field	CA	Ned Abrams, Sunnyvale, CA
Naval Base San Diego	CA	Frank L. Hope Organization, San Diego, CA; C.J. Podewewski, Delmar Mitchel and Louis A. Dean, Los Angeles, CA
Naval Base Ventura County (Naval Batallion Construction Center Port Hueneme and Naval Air Missile Test Center Point Mugo (combined project))	CA	William F. Mellin, San Bernadino, CA, Oxnard Homes, Inc.
Naval Hospital Oakland	CA	H.C. Baumann, San Francisco, CA
Naval Magazine Port Chicago	CA	John Carl Warnecke, San Francisco, CA
Naval Ordnance Test Center Inyokern	CA	S.H. Woodruff Associates, Los Angeles, CA
Naval School and Naval Auxiliary Air Station Monterey	CA	Alliance Military Housing Corp., Pasadena CA
Naval Shipyard Mare Island	CA	Barnett, Haynes, and Barnett, San Francisco, CA
San Francisco Metropolitan Area	CA	H.C. Baumann, San Francisco, CA Angus McSweeney, San Francisco, CA
Naval Supply Center Stockton Annex, Oakland	CA	Engard House, Inc., Long Beach, CA
Naval Submarine Base New London	CT	Kelly and Gruzen, New York, NY
Naval Air Station Key West	FL	Brown L. Whatley, Key West Homes Co., Jacksonville, FL
Naval Air Station Pensacola	FL	Yonge and Hart, Pensacola, FL
Naval Auxilliary Air Station Whiting Field	FL	Karl W. Stark, Magda Village Apartments, Inc., Anaconda Properties, Inc., Jacksonville, FL Yonge and Hart, Pensacola, FL
Naval Station Green Cove Springs	FL	Karl W. Stark, Magda Village Apartments, Inc., Anaconda Properties, Inc., Jacksonville, FL (Southeastern Development Co.?)
Naval Air Station Barbers Point	HI	Len Construction Co., Los Angeles, CA
Naval Base Pearl Harbor	HI	F.M. Weggeland, Manalua Manor, Honolulu, HI  F.M. Weggeland, Manalua Manor, Honolulu, HI K. Gatzemeyer, Penisula Homes, Ltd., Honolulu, HI  George Reitas, Radford Terrace, Ltd., Honolulu, HI

## AIR FORCE, NAVY, AND MARINE CORPS - WHERRY SPONSORS

Installation	State	Sponsor
		Phillip Fisk, Johnson and Perkins, V. Ossipoff, A. Preis, and H. Bartholomew and Associates, Honolulu, HI
Great Lakes Naval Training Center	IL	Louis P. Corbetta, Corbetta Price Co., Inc., Chicago, IL
Naval Air Station Glenview	IL	Pace Associates, Chicago, IL
Naval Ammunition Depot Crane	IN	Eagle Construction Co., Newark, NJ Allen and Kelley, Indianapolis, IN
Naval Avionics Facility (Naval Ordnance Plant) Indianapolis	IN	E.F. Hohlt, Indianapolis, IN
Naval Air Station Olathe	KS	Likins, Foster & Associates, Likins-Foster Olathe Corp., Oklahoma City, OK
Naval Station New Orleans	LA	Rosenthal, Kessels, Jones, Godat and Associates, New Orleans
Naval Base Boston	MA	North Boston (127): North Boston, Glaser and Gray, Boston, MA South Boston (302): I. Richmond and C. Goldbert, Boston, MA
Naval Academy	MD	Henry Knott, Arundeland, Inc., Baltimore, MD
Naval Air Station Patuxent River	MD	Cottage Construction Co., Inc., River Edge, NJ
Naval Powder Factory Indian Head	MD	David A. Bleznak, Riverview Manor, Woodbury, NJ David A. Bleznak, Riverview Manor Annex, Woodbury, NJ Milton J. Prassas, Inc., Washington, D.C.
Naval Training Center Bainbridge	MD	De Chiaro & Siberman, Baltimore, MD
Naval Air Station Brunswick (Bath site)	ME	Kaplan-Radice Construction Corp., Englewood, NJ
Naval Communication Station Winter Harbor	ME	Alonzo J. Harriman, Auburn ME
Naval Air Station Minneapolis	MN	Long and Thorshov, Minneapolis, MN
Naval Air Facility Elizabeth City	NC	Edwards, Pugh, and McKimmon and Lief Valand, Raleigh, NC
Naval Air Facility Weeksville	NC	Richards Building Co., Raleigh, NC
Naval Air Rockets Test Station Lake Denmark, Dover	NJ	Neil J. Convery, Newark, NJ
Naval Air Station Lakehurst	NJ	Edwards and Green, Camden, N.J.
Naval Supply Depot Bayonne	NJ	R. H. Toth, Hopelawn, NJ Barnett D. Singer, Bayonne, N.J.
Naval Air Station Niagara Falls	NY	Highland and Highland, Buffalo, NY
New York Metropolitan area	NY	Gustave W. Iser, New York, NY
Port Washington	NY	J.I. Kislak Mortgage Corporation, Jersey City, NY*
Naval Air Station Akron	OH	Firestone and Cassidy, Akron, OH
Naval Station Tongue Point	OR	Don Byers, Portland, OR
Naval Air Station Willow Grove; Naval Air Development Center Johnsville	PA	W. Morton Keast, Philadelphia, PA
Naval Air Station Newport	RI	Mitola Bros., Inc., Thornton, RI Anthony P. Miller, Inc., Atlantic City, NJ
Naval Air Station Quonset Point	RI	Westover-Gilbane Construction, Co., Providence, RI
Naval Air Station Quonset Point, and Bureau of Yards and Docks Supply Depot Davisville	RI	Charles A. Maguire, Providence, RI



## AIR FORCE, NAVY, AND MARINE CORPS - WHERRY SPONSORS

Installation	State	Sponsor
Naval Base Newport	RI	Creer, Kent, Mather, Cruise, and Aldrich, Providence, RI <b>Mitola Bros., Inc., Thornton, RI*</b> <b>Anthony P. Miller, Inc., Atlantic City, NJ*</b>
Naval Air Station Memphis	TN	Shelby Construction Co., Inc., New Orleans, LA
Naval Air Station Corpus Christi	TX	E.E. Cloer General Contractors, Inc., Laguna Shores, Fort Worth, TX William McClendon and Associates, Corpus Christi, TX
Naval Air Station Dallas	TX	Huddleston-Seaman & Associates, Kingsville, TX Wyatt C. Hedrick, Dallas, TX
Naval Air Station Kingsville	TX	Clint Murchison, Centex Construction Co., Inc., Dallas, TX
Fifth Naval District Headquarters Norfolk (Hewitt Farms)	VA	Norman, Flax & Lidsky Associates, Norfolk, VA
Fleet Air Development Training Center Dam Neck	VA	Bernard B. Spigel, Norfolk, VA
Little Creek Amphibious Base Norfolk	VA	Norman, Flax & Lidsky Associates, Norfolk, VA
Naval Air Station Oceana	VA	Housing Engineering Co., Baltimore, MD Bernard B. Spigel, Norfolk, VA
Naval Mine Depot Yorktown	VA	Albert T. Brout, Skiffes Creek Apartments, Newport News, VA
Naval Ordnance Test Station Chincoteague	VA	Ralph E. Bush, Bush Construction Co., Norfolk, VA
Naval Proving Ground Dahlgren	VA	E. Tucker Carleton, Richmond, VA
Naval School of Mine Warfare Yorktown	VA	Williams, Coille, and Blanchard, Newport News, VA
Naval Shipyard Portsmouth	VA	Jack I. Bender, Washington, DC
Norfolk Area	VA	M.C. Lee, Richmond, VA and T.D. Fitz-Gibbon, Norfolk, VA E. Tucker Carlton, Richmond, VA A.B. Pentacost, Norfolk, VA
Portsmouth Area	VA	E. Tucker Carleton, Richmond, VA
Naval Air Station Whidbey Island	WA	E.Q. Myers, Grant Major, E.W. Lutz, and P.B. Lutz, Longview, WA Leland McArthur and Associates, Inc., Las Vegas, NV
<b>MARINE CORPS</b>		
Marine Barracks Camp Pendleton	CA	John N. Douglas, Pasadena, CA <b>Wynne-Grinnan, Dallas, TX*</b>
Marine Corps Air Station El Toro	CA	Yousem, Myers, Russell Company, Los Angeles, CA
Marine Corps Supply Depot Barstow	CA	S.H. Woodruff Associates, Los Angeles, CA
Twentynine Palms	CA	Western Area Housing Company
Camp Lejeune	NC	C.D. Spangler Construction Co., Charlotte, NC
Marine Corps Air Station Cherry Point	NC	D.L. Phillips, Charlotte, NC Slocum Village Corporation
Parris Island Recruit Depot	SC	Coconato & Sons Construction Corp., Long Island City, NY
Quantico Marine Corps School	VA	Franklin A. Trice, Richmond, VA

\*Archival record does not indicate whether these units were constructed.

**Table B.2. Wherry Architects**

**AIR FORCE, NAVY, AND MARINE CORPS - WHERRY ARCHITECTS**

<b>Installation</b>	<b>State</b>	<b>Service</b>	<b>Architect</b>
<b>AIR FORCE</b>			
Eglin Air Force Base	FL	Air Force	Joseph H. Bryson, AIA
Mountain Home Air Force Base	ID	Air Force	Hummel, Hummel & Jones; Neutra & Alexander, Architects
Malmstrom Air Force Base	MT	Air Force	A.V. McIver & Associates with Miller & Ahlson
Holloman Air Force Base	NM	Air Force	Flatow & Moore
<b>NAVY</b>			
Marine Corps Air Station El Toro	CA	Navy	Hugh Gibbs
Naval Air Station Denver	CA	Navy	T.H. Buell and Company
Naval Base San Diego	CA	Navy	Adrian Wilson, Paderewski, Mitchell, Dean; Hugh Gibbs; Frank L. Hope Organization
San Francisco, San Bruno Site	CA	Navy	Angus McSweeney
Naval Air Station Key West	FL	Navy	Gordon Severud
Naval Air Station Glenview	IL	Navy	Pace Associates
Naval Air Field South Weymouth	MA	Navy	I. Richmond & Company
Naval Air Station Bath	ME	Navy	Prentiss & Carlise Company, Inc.
Naval Air Station Minneapolis	MN	Navy	Long & Thorshov, Inc.
Naval Air Station Niagra Falls	NY	Navy	Highland & Highland
Naval Air Station Memphis	TN	Navy	W.C. Lester
Naval Air Station Whidbey Island	WA	Navy	Stuart & Durham
<b>MARINE CORPS</b>			
Twentynine Palms	CA	Marines	John N. Douglas, K.F. Tuttle Engineering
Marine Corps Air Station Cherry Point	NC	Marines	Edwards, Pugh & McKimmon, Leif Valand

**Table B.3. Capehart Sponsors and Architects**

**AIR FORCE, NAVY, AND MARINE CORPS –  
CAPEHART SPONSORS AND ARCHITECTS**

<b>Installation</b>	<b>State</b>	<b>Sponsor/Contractor</b>	<b>Architect</b>
<b>AIR FORCE</b>			
Blytheville Air Force Base	AR	Centex Construction Company, Inc. H.L. Coble Construction Company	Swaim & Allen Associates Swaim & Allen Associates
Little Rock Air Force Base	AR	Miles Construction Corporation	Wittenberg, Delony & Davidson
Luke Air Force Base	AZ	Mr. Philip Yousem	Johansen & Girand; Ralph Haver
Beale Air Force Base	CA	Hal B. Hayes & Associates, Inc. Alcan Pacific Co.	Clair A. Hill & Associates Clair A. Hill & Associates
Edwards Air Force Base	CA	Cal-Apex Incorporated	Edward H. Fickett
Hamilton Air Force Base	CA	Murray-Sanders & Associates, George A. Fuller Company	Norberg & Coleman, Wilsey & Ham
Mather Air Force Base	CA	D&L Construction Company; J.D. Bradley, Inc. Sheridan-Murray	Hugh Gibbs, AIA Hugh Gibbs, AIA
McClellan Air Force Base	CA	Sun Gold, Inc; L.E. Dixon Company; American Pipe & Construction Company	A. Quincy Jones & F.E. Emmons
Oxnard Air Force Base	CA	Murray-Sanders & Associates, George A. Fuller Company	Porter, Urquhart, McCreary & O'Brien
Travis Air Force Base	CA	Sun Gold, Inc.; Inland Empire Builders, Inc. Gresham Construction Company Albert Gersten Building Company	Abrams & Dickstein Associates Ned H. Abrams & Associates Angus McSweeney
Vandenberg Air Force Base	CA	George A. Fuller Company Del E. Webb Construction Company Del E. Webb Construction Company	Hugh Gibbs, AIA Hugh Gibbs, AIA Benedict & Beckler & Associates
Air Force Academy	CO	Del E. Webb Construction Company; Rubenstein Construction Co.	Skidmore, Owings & Merrill
Dover Air Force Base	DE	Terminal Construction Corporation; Frouge Construction Company, Inc. Terminal Construction Corporation	Pope & Kruse Pope & Kruse
Eglin Air Force Base	FL	Centex Construction Company, Inc.	Joseph H. Bryson, AIA
Homestead Air Force Base	FL	Terminal Construction Corporation, Frouge Construction Company, Inc.	Norman Giller & Associates

**AIR FORCE, NAVY, AND MARINE CORPS –  
CAPEHART SPONSORS AND ARCHITECTS**

Installation	State	Sponsor/Contractor	Architect
McCoy Air Force Base	FL	R.F. Ball Construction Company, Inc.	Joseph H. Bryson, AIA
Patrick Air Force Base	FL	Florida Builders, Inc.	Norman Giller & Associates
Tyndall Air Force Base	FL	R.F. Ball Construction Company, Inc.	James C. Wise
Robins Air Force Base	GA	C.D. Spangler Construction, Company Smith & Turley, Inc.	James C. Wise James C. Wise
Turner Air Force Base	GA	A.G. Samford, Inc.	James C. Wise
		H.L. Coble Construction Company	J.C. Wise-Aiken-Simpson & Associates, Inc.
Hickam Air Force Base	HI	Pacific Construction Company, Ltd	Groll-Beach & Associates
Sioux City Air Force Base	IA	J.W. Bateson Construction Company, Inc.	Amos Emery & Associates
Mountain Home Air Force Base	ID	Sheriden, Incorporated	Hummel, Hummel & Jones; Neutra & Alexander
		Arthur A. Danekas, W.G. Ellis, John J. Martin, Sea View Lumber Company, Inc., a Joint Venture	Hummel, Hummel & Jones; Neutra & Alexander
Chanute Air Force Base	IL	Heftler Construction Company	Yost & Taylor
Bunker Hill Air Force Base	IN	Heftler Construction Company; Louis Lesser Enterprises, Inc., Lesser Industrial Properties, Ltd.	Allied Architects & Engineers of Indianapolis
		Centex Construction Company, Inc.	Allied Architects & Engineers of Indianapolis
Forbes Air Force Base	KS	George G. Emery, Jr. Centex Construction Company, Inc.	Williamson-Loebsack & Associates, Inc. Williamson-Loebsack & Associates, Inc.
McConnell Air Force Base	KS	Centex Construction Company, Inc.	Lawrence E. Wells
Schilling Air Force Base	KS	McCann Construction Company, Inc.	Cushing, Servis, Van Doren & Hazard
		George B. Emory, Jr.	Cushing, Servis, Van Doren & Hazard
England Air Force Base	LA	Williams & Dunlap	Bodman, Murrell & Smith
Laurence G. Hanscom Field (Hanscom Air Force Base)	MA	Green Manor Construction Company, Inc.	Congdon, Gurney & Towle, Inc.; Desmond & Lord
Westover Air Force Base	MA	The Ferber Company; A. Kaplan & Son, Ltd. The Frouge Corporation	Anderson-Nichols & Company Pederson & Tilney
Dow Air Force Base	ME	Davison Construction Company, Inc.	Alonzo J. Harriman, Inc.
		Urban Construction Company	Higgins, Webster, Pederson & Tilney

**AIR FORCE, NAVY, AND MARINE CORPS –  
CAPEHART SPONSORS AND ARCHITECTS**

Installation	State	Sponsor/Contractor	Architect
Topsham Air Force Base	ME	Davison Construction Company, Inc.	Kelly & Gruzen
Custer Air Force Station	MI	A. J. Etkin Construction Company	McGaughan & Johnson
K.I. Sawyer Air Force Base	MI	Knapp-Stiles & Associates	McGaughan & Johnson
		J.W. Bateson Construction Company, Inc.	McGaughan & Johnson
		Knapp-Stiles & Associates	J. & G. Daverman Company
Kinross (Kincheloe) Air Force Base	MI	J.W. Bateson Construction Company, Inc.	Yost & Taylor
		Knapp-Stiles, Inc.	Yost & Taylor
		Knapp-Stiles, Inc.	D. Coder Taylor Associates
Selfridge Air National Guard Base	MI	Kaufman & Broad Building Company	F.N. Pease & Company
Wurtsmith Air Force Base	MI	J.W. Bateson Construction Company, Inc.	McGaughan & Johnson
		Beacon Construction Company of Massachusetts, Inc.	Eberle M. Smith Associates, Inc.
Duluth Municipal Airport	MN	Modern Home Manufacturing Corporation; Fowler-Veranth Construction Company	Melander, Fugelso & Associates
Richards-Gebaur Air Force	MO	J.W. Bateson Construction Company, Inc.	Louis H. Geis; George L. Dahl
Whiteman Air Force Base	MO	Del E. Webb Construction Company & Swartout Company, a Joint Venture	Williamson-Loebsack & Associates, Inc.
Columbus Air Force Base	MS	Wilkinson & Snowden Developments, Inc.	William I. Rosamund & Associates
		H.L. Coble Construction Company	William I. Rosamund & Associates
Keesler Air Force Base	MS	Busboom & Rauh, C.E. Fritch Kesk, Inc.	William Rosemond & Associates Landry & Matthes
Glasgow Air Force Base	MT	Glasgow Associates	Cushing, Servis, Van Doren & Hazard
		Burl Johnson Associates	Cushing, Servis, Van Doren & Hazard
Malmstrom Air Force Base	MT	Heers Associates	McIver, Hess & Haugsjaa
		Sletten Construction Company and William M. Kessner, Inc.	McIver, Hess & Haugsjaa
		Electronic & Missile Facilities, Inc.	McIver & Hess
Seymour-Johnson Air Force Base	NC	H.L. Coble Construction Company; Nello L. Teer Company, W.H. Weaver Construction Company	J.N. Pease

**AIR FORCE, NAVY, AND MARINE CORPS –  
CAPEHART SPONSORS AND ARCHITECTS**

Installation	State	Sponsor/Contractor	Architect
Grand Forks Air Force Base	ND	Progressive Contractors Inc, Dohoran-Klinger, Joint Venture	Forx-Stanely Engineering Company
		Wilshire Contractors, Inc, Myers - Sanders, A Joint Venture	Forx-Stanely Engineering Company
		Centex Construction Company, Inc.	Forx-Stanely Engineering Company
Minot Air Force Base	ND	MacDonald Construction Company	Cushing, Servis, Van Doren & Hazard
		Cedric Sanders Company	Cushing, Servis, Van Doren & Hazard
		United Mack, A Joint Venture	James R. Cushing, Architect; Servis, Van Doren & Hazard, Engineers
Lincoln Air Force Base	NE	J.J. Fritch, General Contractor, Inc.	Clark & Enersen
Offutt Air Force Base	NE	J.J. Fritch, General Contractor, Inc.	Henningson, Durham & Richardson; Steele, Sandham & Weinstein
		Del E. Webb Corporation	Henningson, Durham & Richardson
		Philip Yousem	Henningson, Durham & Richardson
		Centex Construction Company, Inc.	Henningson, Durham & Richardson
Pease Air Force Base	NH	Davison Construction Company, Inc.	Koehler & Isaak
McGuire Air Force Base	NJ	B. J. Lucarelli & Company, Inc.	Eriwn Gerber
		Terminal Construction Company	Pope & Kruse
Holloman Air Force Base	NM	C.H. Leavell & Company	Flatow, Moore, Bryan & Fairburn
		Nelse Mortenson & Company, Inc.	Cushing, Servis, Van Doren & Hazard
Kirtland Air Force Base	NM	U & C Construction Company	Flatow, Moore, Bryan & Fairburn
Nellis Air Force Base	NV	Philip Yousem	Zich & Sharp
Stead Air Force Base	NV	Carl M. Buck Company	Ferris & Erskine
Griffiss Air Force Base	NY	B.J. Lucarelli & Company, Inc.	Lorimer Rich & Associates
		Green Manor Construction Company, Inc.	Waasdorp & Northrup
Hancock Field (Syracuse Air Force Base)	NY	F.D. Rich Company, Inc.	McGaughan & Johnson
Niagara Falls Municipal Airport	NY	Anthony P. Miller, Inc.	Highland & Highland
Plattsburgh Air Force Base	NY	S.S. Silberblatt, Inc.	Kelly & Gruzen
Stewart Air Force Base	NY	B.J. Lucarelli & Company, Inc.	Eriwn Gerber
Suffolk County Air Force Base	NY	Tufano Contractig Corp.; Anthony Grace & Sons, Inc.	Holden, Egan, Wilson & Corser

**AIR FORCE, NAVY, AND MARINE CORPS –  
CAPEHART SPONSORS AND ARCHITECTS**

Installation	State	Sponsor/Contractor	Architect
Lockbourne Air Force Base	OH	A. Kaplen & Son, Ltd; The Ferber Company	C. Curtiss Insko
Altus Air Force Base	OK	Southeastern, Incorporated	Parr & Aderhold; C.H. guernsey & Co.
Clinton-Sherman Air Force Base	OK	V.O. Stringfellow & Associates  Clinton Associates  Burl Johnson, Burl Johnson & Associates, Joint Venturers	Hudgins, Thompson, Ball & Associates  Hudgins, Thompson, Ball & Associates  Hudgins, Thompson, Ball & Associates
Tinker Air Force Base	OK	Metropolitan Paving Company, Inc.; Gill Construction Company; Centex Construction Company; Cowen Construction Company	Hudgins, Thompson, Ball & Associates
Vance Air Force Base	OK	Walsh & Lewallen Construction Company	Caudill, Rowlett & Scott
Kingsley Field	OR	Gresham Alcan Company	Howard R. Perrin
Olmstead Air Force Base	PA	Kaul & Associates	Bowers & Barblatt
Charleston Air Force Base	SC	D.L. Phillips Construction Company  Thompson & Street Company	Hudgins, Thompson, Ball & Associates  Lyles, Bisset, Carlisle & Wolff
Myrtle Beach Air Force Base	SC	Phillips Construction Company, Inc.	Lyles, Bisset, Carlisle & Wolff
Ellsworth Air Force Base	SD	Sunset Contractors, Inc., Cedric Sanders Company  The Erezina Construction, Company, Inc.  Kesk, Inc.	Henningson, Durham & Richardson; Julian Staven  Steven Engineering Company; Henningson, Durham & Richardson  Henningson, Durham & Richardson
Ellsworth Air Force Base	SD	Kesk, Inc.	Staven Engineering Company
Sewart Air Force Base	TN	E.P. Wilson & Son	Marr & Holman
Amarillo Air Force Base	TX	Stringfellow Amarillo Associates	Hudgins, Thompson, Ball & Associates
Brooks Air Force Base	TX	R.F. Ball Construction Company, Inc.	Noonon, Krodcoc & Rogers
Dyess Air Force Base	TX	Charles Leavell & Dan Ponder  Hill & Moore Construction Company	Associated Architects & Engineers, C.A. Johnson  Alexander, Dunaway, Jones, Johnson, Brown & Butler
James Connally Air Force Base	TX	J.W. Bateson Construction Company, Inc.	McKie, Kamrath & Johnson
Laughlin Air Force Base	TX	Dicker-Frank & Associates, Inc.	Roscoe Dewitt
Medina Base	TX	Richmond Equipment Company	Addis E. Noonan Associates and Jerry Rogers



**AIR FORCE, NAVY, AND MARINE CORPS –  
CAPEHART SPONSORS AND ARCHITECTS**

Installation	State	Sponsor/Contractor	Architect
Sheppard Air Force Base	TX	H.B. Zachry Company	Carter & Burgess
Webb Air Force Base	TX	Williams & Dunlap	John W. Floore
Langley Air Force Base	VA	J.W. Bateson Construction Company, Inc.	Lublin, McGaughy & Associates
Fairchild Air Force Base	WA	Burl Johnson & Associates	Bassetti & Morse; McClure & Adkins
Geiger Field	WA	Burl Johnson & Associates	Leo A. Daly Company
Larson Air Force Base	WA	General Investment Company	McClure & Adkison
McChord Air Force Base	WA	George A. Fuller Company; Murray-Sanders	Bassetti & Morse; McClure & Adkinson; Beck & Associates
Truax Field	WI	F.D. Rich Company, Inc.	Williamson-Loebsack & Associates, Inc.
Francis E. Warren Air Force Base	WY	G.A. Goodwin and Associates	J.T. Banner Associates
Fort Lee	VA	C.D. Spangler Construction, Company	Lublin, McGaughy & Associates
<b>NAVY</b>			
Naval Air Station Alameda	CA		Anshen & Allen, Robert D. Dewell, Lewis & Polkinghorn
Naval Air Station Lemoore	CA	Philip Yousem	Richard J. Neutra, Robert E. Alexander, Donald Francis Haines (Associated Architects, a Joint Venture)
Naval Base San Diego	CA	Sun Gold, Inc., L.E. Dixon Company, and American Pipe and Construction Company	
Naval Base Ventura County (Naval Air Missile Test Center Point Mugo)	CA	Murray-Sanders Construction Company Alcan Pacific Co.	Hugh Gibbs
Naval Facility Big Sur	CA	James E. Roberts Company Aloha Construction Company and Associates	West America Engineering Co., Inc.
Naval Facility Centerville	CA		West America Engineering Co., Inc.
Naval Ordinance Test Station China Lake	CA		Palmer and Krisel
Naval Ordinance Test Station China Lake	CA	J. W. Bateson Construction Company, Inc.	
U.S. Naval Postgraduate School Monterey	CA		Angus McSweeney
New London Naval Submarine Base	CT	Joseph P. Blitz, Inc.	
Naval Air Station Key West	FL	Florida Builders, Inc.	Norman Giller & Associates
Naval Air Station Pensacola	FL	V. Coconato and Sons, Inc.	Weed, Russell, and Johnson

**AIR FORCE, NAVY, AND MARINE CORPS –  
CAPEHART SPONSORS AND ARCHITECTS**

Installation	State	Sponsor/Contractor	Architect
Naval Air Station Whiting Field	FL	H.L. Coble Construction Company	Joseph H. Bryson, AIA
Naval Base Key West	FL	Florida Builders, Inc.	
Naval Station Mayport	FL	H.L. Coble Construction Company	Joseph H. Bryson, AIA
Naval Air Station Glynco	GA	D & L Corporation	Abreu and Robeson
Naval Air Station Barber's Point	HI	Murray-Sanders Construction and George A. Fuller Company	Earl Jackson, Benedict & Beckler Austin and Towill, LTD., H.A.R. Austin & Associates, Inc.
Naval Ammunition Depot Lualualei	HI	The Len Company	Belt, Lemmon & Lo
Naval Amunition Depot Waikale Branch	HI		Hugh Gibbs, AIA & Engineering Service Corporation
Naval Base Pearl Harbor	HI		Belt, Lemmon & Lo
Naval Base Pearl Harbor (Manana Housing Area)	HI	Murray-Sanders & Associates and George A. Fuller Company	
U.S. Naval Training Center Great Lakes	IL	J.W. Bateson Construction Company, Inc.	D. Coder Taylor
Naval Air Station, Hutchinson	KS		F. L. McALeavey
Naval Radio Station Winter Harbor	ME		William O. Armitage
Naval Air Auxiliary Station Meridian	MS	Kesk, Inc.	Lacy & Stahnke; May & McNair, and James T. Canizaro
Marine Corps Air Station Cherry Point	NC	H.L. Coble Construction Company	Edwards, McKimmon & Etheredge
Naval Facility Coos Head	OR	V.O. Stringfellow & Associates	
Naval Base Newport	RI	F.D. Rich Company, Inc.	
Naval Ammunition Depot Charleston (Naval Weapons Station Charleston)	SC	Blythe, Thompson, and Street Company A.C. Samford, Inc.	Reid Hearn Associates Reid Hearn Associates Coastal Cabinet Works, Inc.
Naval Air Station Memphis	TN	Smith & Turley, Inc.	Thomas F. Faires & Associates, Inc.
Naval Auxiliary Air Station Chase Field	TX		Milam Roper
Naval Air Station Whidbey Island	WA	V.O. Stringfellow & Associates	Bassetti & Morse, R.W. Beck and Associates
Naval Facility Pacific Beach	WA	V.O. Stringfellow & Associates	

**AIR FORCE, NAVY, AND MARINE CORPS –  
CAPEHART SPONSORS AND ARCHITECTS**

Installation	State	Sponsor/Contractor	Architect
<b>MARINE CORPS</b>			
Marine Corps Supply Center Albany	GA	Smith & Turey, Inc.	James C. Wise
Marine Corps Auxillary Air Station Yuma	AZ		Scholer and Fuller
Twentynine Palms	CA		Palmer and Krisel
Camp H.M. Smith Halawa Heights	HI	George A. Fuller Company and Murray-Sanders Associates	Belt, Lemmon & Lo  Hugh Gibbs, AIA & Engineering Service Corporation
Marine Corps Air Station Kaneohe	HI	Richards Construction Company	Hugh Gibbs, AIA & Engineering Service Corporation
Marine Corps Base Camp Lejune	NC	Atlantic Contractors, Inc.	
Marine Corps Auxiliary Air Station Beaufort	SC	Gersten & Associates	Reid Hearn Associates

**Table B.4. Appropriated-Funds Sponsors and Architects**

<b>APPROPRIATED-FUNDS SPONSORS AND ARCHITECTS</b>				
<b>Installation</b>	<b>State</b>	<b>Service</b>	<b>Sponsor/Contractor</b>	<b>Architect</b>
Marine Corps Auxiliary Air Station Mojave	CA	Navy	Unknown	Richard Neutra and Robert Alexander
Naval Hospital Oakland	CA	Navy	Williams & Burrows, Inc.	Unknown
Naval Radio Station Skaggs Island	CA	Navy	Williams & Burrows, Inc.	Unknown
Travis Air Force Base	CA	Air Force	Unknown	Abrams and Dickstein, Architects
Naval Air Station Key West	FL	Navy	Porter, Wagor, Russell, Inc.	Unknown
Naval Station Mayport	FL	Navy	J. Young Construction Company	Joseph Bryson, AIA
Naval Support Activity Panama City	FL	Navy	Unknown	Keyes, Smith, Satterlee & Lethbridge
Naval Construction Battalion Center Gulfport	MS	Navy	Frederick T. Hoff	Unknown
U.S. Naval Hospital Beaufort	SC	Navy	Unknown	Keyes, Smith, and Satterlee

**APPENDIX C**

**PROFILES ON SELECTED ARCHITECTS  
ASSOCIATED WITH  
WHERRY, CAPEHART, AND  
APPROPRIATED-FUNDS HOUSING  
PROJECTS**



Appendix C presents biographical data on architects associated with Wherry, Capehart, and appropriated-funds projects. As discussed in Appendix B, architects were identified in several sources. A master list of architects was created, and was used to gather biographical data from the 1955, 1962, and 1970 directories of members of the American Institute of Architects. The profiles represent architects for whom biographical data was provided. Architects identified for this study represented a small number of the overall number of architects associated with Wherry and Capehart era family housing projects nationwide. Several architects completed multiple projects at different installations. The profiles are arranged alphabetically by firm name.

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## ARCHITECT BIOGRAPHIES

### **Ned H. Abrams & Associates, Sunnyvale, California**

**Ned H. Abrams** received a bachelor's degree in architecture in 1937 and a master's degree in architecture in 1938, both from the University of Pennsylvania. After serving as a War Department architect and a draftsman, he formed his own firm in 1948. His work encompassed the following categories: residential, commercial, industrial, religious, educational, health facilities, penal institutions, public buildings, mortuary structures, and city planning. Principal works included a cereal plant in Lodi, California, in 1948; the Ridpath Hotel in Spokane, Washington, in 1951; and, a public safety building in Sunnyvale in 1952 (Koyl 1962:2). In 1958, Abrams designed 500 units of Capehart housing at Travis Air Force Base with Irving Dickstein.

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### **Abreu & Robeson, Architects and Engineers, Atlanta and Brunswick, Georgia**

Francis L. Abreu

Thornton M. Deas

James L. Robeson

E. Mell Wayne Jr.

Matt L. Jorgensen

Henry V. Jova

Frank H. Griggs

W.S. Ledbetter Jr.

W. Montgomery Anderson

**Francis L. Abreu** earned a bachelor's degree in architecture from Cornell University. Starting in private practice in 1924, he designed winter homes for Fort Lauderdale's elite. He used barrel-tile roofs, twisted columns, arched walkways, antique lanterns, iron gates, and heavy, dark wooden doors in his designs. In 1928, his firm designed parts of the famous Cloister Hotel on Sea Island, Georgia. One of the other homes he designed on Sea Island was that of playwright Eugene O'Neill. Abreu and James Robeson formed Abreu & Robeson in 1929. Abreu's projects included hospitals, banks, and government buildings (American Institute of Architects archival files 2006; The Abreu Charitable Trust 2002:1-2).

**James L. Robeson** received a bachelor of science degree in architecture from Georgia School of Technology in 1926. His principal works (all in Atlanta unless otherwise specified) included a housing project in Brunswick in 1941; the Beach Club on Sea Island and the Hughes Spalding Infirmary in 1950; Chatham Memorial Hospital in Savannah in 1955; State Farmers Market in 1957; Fulton Federal Bank Building in 1958; Hamilton Memorial Hospital in Dalton in 1959; Science



Center at University of Georgia, Athens, in 1960; Stephens County Hospital in Toccoa in 1967; an addition to Morton Plant Hospital in Clearwater, Florida, in 1968; Mid-State Baptist Hospital, Nashville, Tennessee in 1969; and Brunswick (Georgia) Junior College in 1969. His work comprised nine categories: commercial, recreational, health, public buildings, residential, educational, military, communications, and scientific structures (Koyl 1955:465; Koyl 1962:592; Gane 1970:770).

**Matt L. Jorgensen** received a bachelor's degree from the University of California in 1927, a master's degree in architecture from Harvard University in 1929, and a degree from the Cranbrook Academy of Art in 1935. From 1929 to 1942 he was an associate professor of design in the architecture department at Georgia School of Technology. He also operated his own practice from 1932 to 1940. From 1942 to 1944 he was a designer and chief draftsman for Abreu & Robeson, and became an associate with the firm in 1945. His principal works included the infantry school at Fort Benning, Georgia in 1961; the Morton Plant Hospital addition in Clearwater, Florida in 1968; Baptist Medical Center in Nashville in 1968; Trust Company of Georgia Office Building in Atlanta in 1969; and St. Joseph's Hospital in Savannah in 1970 (American Institute of Architects archival files 2006:5; Gane 1970:465).

**Frank H. Griggs** received a bachelor of science degree in architecture from Georgia School of Technology in 1926. He operated his own architecture practice in Clearwater, Florida, from 1932 to 1935. Between 1935 and 1945 he worked for three architecture firms, and joined Abreu & Robeson in 1945 as the office manager and an associate architect (American Institute of Architects archival files 2006).

**Wallace Smith Ledbetter, Jr.** received bachelor's and advanced degrees from Georgia Institute of Technology in 1952 and 1955. His principal works included Jane Macon Junior High School in Brunswick in 1960; public housing in Reidsville, Alma, and Waycross, Georgia, during the 1960s; and Candler County Hospital in Metter, Georgia, in 1962 (Gane 1970:531).

**Abreu & Robeson** was established in 1929. The firm was known early on for its design of Mediterranean Revival-style buildings in Fort Lauderdale and coastal Georgia. The firm later favored the International Style in the late 1930s. Between 1930 and 1940 the firm designed public housing, and between 1941 and 1946 designed war housing, both in Brunswick. The firm also designed the Archdiocese of Atlanta's St. Joseph Infirmary when it was relocated in 1977 (Archdiocese of Atlanta 1971:1; Archdiocese of Atlanta 1975:2). Other projects included schools, private housing, a USO recreation building, and the Johnes Home for Aged Couples in Newburgh, New York. In 1946, the firm designed the "B" addition to the Art Deco-style W.W. Orr Doctors' Building. The firm designed the Whitfield County, Georgia, Courthouse in 1961 in the Modern Style (Carl Vinson Institute of Government 2006:1).

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### **Anshen & Allen, San Francisco, California**

S. Robert Anshen  
William Stephen Allen

**Anshen & Allen** was organized in 1940. Projects included the visitor center at the Dinosaur National Monument, operated by the National Park Service; U.S. Navy housing; the San Francisco ticket office for United Air Lines; architectural and interior design work on passenger accommodations in freighters, passenger ships, and cruise ships; and, the Chemistry Building at the University of California, Berkeley (American Institute of Architects archival files 2006).

**S. Robert Anshen** received a bachelor's degree in architecture in 1935 and a master's degree in architecture in 1936, both from the University of Pennsylvania. His work encompassed the following categories: residential, commercial, religious, educational, recreational, health facilities, military structures, transportation, scientific structures, mortuary structures, city planning, landscape design, and interior design. Principal work included more than 3,000 homes in San Francisco for Eichler Homes Inc. in 1950 (Koyl 1962:17).

**William Stephen Allen** received a bachelor's degree in architecture in 1935 and a master's degree in architecture in 1936, both from the University of Pennsylvania. His work encompassed the following categories: residential, commercial, religious, educational, recreational, health facilities, military structures, transportation, scientific structures, mortuary structures, city planning, landscape design, and interior design. Principal work included more than 3,000 homes in San Francisco for Eichler Homes Inc. in 1950 (Koyl 1962:10).

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### **Belt, Lemmon & Lo, Honolulu, Hawaii**

Cyril W. Lemmon

**Cyril W. Lemmon** studied at the University of Pennsylvania and Liverpool University in England. His work encompassed the following categories: residential, commercial, industrial, religious, educational, health facilities, public buildings, military structures, transportation, communications, scientific structures, city planning, and mortuary structures. Principal works included the Occidental Life Insurance Co. building in 1951, the Waikiki-Kapahulu Library in 1952, and the University of Hawaii Library in 1953 (Koyl 1955:327; Koyl 1962:414).

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### **Bodman, Murrell & Smith, Baton Rouge, Louisiana**

Ralph Bodman

Richard C. Murrell

William Bailey Smith

**Ralph Bodman** studied at Tulane University and Columbia University. He co-founded Bodman, Murrell & Smith in 1934. His work encompassed the following categories: residential, commercial, industrial, religious, educational, recreational, health facilities, penal institutions, public buildings and structures, transportation, communications, scientific structures, city planning, and interior design. Principal works included men's housing at Louisiana State University in Baton Rouge in 1948, industrial buildings for Ethyl Corp. in Houston in 1951 and 1952, buildings at Lake Charles Air Force Base in 1952 and 1953, the Baton Rouge city and parish municipal building in 1956, and the Louisiana State University library in 1957 (Koyl 1955:49-50; Koyl 1962:63).

**Richard Murrell** received a bachelor of science degree in architecture from Tulane University in 1926. He co-founded Bodman, Murrell & Smith in 1933. His work encompassed the following categories: residential, commercial, industrial, religious, educational, recreational, health facilities, penal institutions, public buildings, military structures, communications, and scientific structures. Principal works included Dalton's Department Store in Baton Rouge during the 1940s, the Louisiana State Penitentiary receiving station and hospital in Angola in 1949, and the State Times Building in Baton Rouge in 1953 (Koyl 1955:397; Koyl 1962:504).

**William Bailey Smith** received a bachelor of science degree in architectural engineering from Washington University in 1933. He was an architect with the National Park Service from 1937 to

1939, and worked as a draftsman, specifications writer, and associate for Bodman & Murrell from 1939 to 1952, when he became a partner and the firm was renamed Bodman, Murrell & Smith. His work encompassed the following categories: commercial, industrial, religious, educational, recreational, health facilities, public buildings, military structures, and communications. Principal work included Our Lady of Lourdes Hospital in Lafayette in 1949 and an eight-story office building in Baton Rouge in 1955 (Koyl 1955:521).

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**Bryan & Fairburn, Albuquerque, New Mexico**

Garlan Diggs Bryan, Jr.

Robert W. Fairburn

**Robert W. Fairburn** studied at Syracuse University, received a bachelor's degree in architecture from Rensselaer Polytechnic Institute in 1949, and received a master's degree in architecture and urban design from Cranbrook Academy of Art in 1950. He joined Flatow, Moore, Bryan & Fairburn in 1949. His work encompassed the following categories: residential, commercial, industrial, religious, educational, recreational, health facilities, public buildings, public structures, military structures, transportation, scientific structures, city planning, and mortuary structures. Principal work included the master plan for Kirtland Air Force Base in 1954 (Koyl 1955:164).

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**Joseph H. Bryson, Jacksonville, Florida**

**Joseph H. Bryson** received a bachelor of science degree in architecture from the Georgia Institute of Technology in 1928. His principal works were residential, and included Wherry and Capehart housing at Eglin Air Force Base, Capehart housing at Mayport Naval Station, and housing at Naval Auxiliary Air Station Whiting Field and McCoy Air Force Base. All of the installations were located in Florida (Koyl 1955:70; Koyl 1962:89; Gane 1970:116).

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**T.H. Buell & Co., Denver, Colorado**

Temple Hoyne Buell

**Temple Hoyne Buell** received a bachelor's degree in architecture from the University of Illinois in 1916 and a master's degree in architecture from Columbia University in 1917. His work encompassed the following categories: residential, commercial, industrial, educational, recreational, health facilities, penal institutions, public buildings and structures, military structures, transportation, communications, scientific structures, mortuary structures, landscape design, and city planning. Principal works included the Geology and Geophysics Building at the Colorado School of Mines in 1939, the Denver Post printing plant in 1950, and the Colorado State Highway building in 1955 (Koyl 1955:72; Koyl 1962:90).

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**James T. Canizaro, Jackson, Mississippi**

**James T. Canizaro** received a bachelor of science degree in architecture from University of Notre Dame in 1928, and studied at the Center for Arts & Crafts in London. He started his own firm in 1937. His work encompassed the following categories: residential, commercial, industrial, religious, educational, health facilities, public buildings, and communications. Principal works included six buildings for the Armstrong Tire & Rubber Co. in Natchez from 1938 to 1946; the Narcotic &

Alcoholic Building in Whitfield in 1949 in association with architect J.T. Liddle; and, the municipal courts and jail building in Jackson, Mississippi in 1953 (Koyl 1955:81).

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**Caudill, Rowlett & Scott, Houston, Oklahoma City, Stamford, Connecticut**

William W. Caudill

John M. Rowlett

Wallie E. Scott, Jr.

**William W. Caudill** received a bachelor's degree in architecture from Oklahoma State University in 1937 and a master's degree in architecture from the Massachusetts Institute of Technology in 1939. He was a professor of architecture at Texas A&M University from 1939 to 1950, the head of the architecture division of the Texas Engineering Experiment Station from 1946 to 1954, co-founded Caudill, Rowlett & Scott in 1946, and became chairman of the architecture department at The Rice University in 1961. His work encompassed the following categories: residential, commercial, religious, educational, recreational, penal institutions, public buildings, scientific structures, city planning, landscape design, and interior design. Principal work included the Brazos County courthouse and jail in Bryan, Texas, in 1956 (Koyl 1962:110).

**John M. Rowlett** received bachelor's degrees in architecture and education from the University of Texas in 1938. He was a partner in Caudill & Rowlett and in Caudill, Rowlett & Scott. His work encompassed the following categories: residential, commercial, religious, educational, recreational, health facilities, penal institutions, public buildings and structures, scientific structures, and city planning. Principal works included the Brazos County courthouse and jail in Bryan, Texas, in 1956 (Koyl 1962:602).

**Wallie E. Scott, Jr.** received a bachelor of science degree in 1943 and a bachelor's degree in architecture in 1947, both from Texas A&M College. He co-founded Caudill, Rowlett & Scott. His work encompassed the following categories: residential, commercial, religious, educational, recreational, health facilities, penal institutions, public buildings, scientific structures, and city planning. Principal work included the Brazos County courthouse and jail in Bryan, Texas in 1956 (Koyl 1962:628).

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**Clark & Enersen, Lincoln, Nebraska**

Kenneth Bowhay Clark

L.A. Enersen

**Kenneth Bowhay Clark** received a bachelor of arts degree from the University of Nebraska College of Architecture and Science in 1936, studied at the university's College of Engineering, and received a bachelor's degree in architecture from the Harvard University Graduate School of Design in 1940. He co-founded Clark & Enersen in 1946. His work encompassed the following categories: residential, commercial, religious, educational, recreational, city planning, health facilities, public buildings, and landscape design. Principal work included work as a supervisory architect for the U.S. Naval Training Center in Lincoln in 1948 and for the master plan for Lincoln Air Force Base in 1950; Capehart housing at Lincoln Air Force Base in 1957; and dormitories at the University of Nebraska Agriculture College in 1958 (Koyl 1955:96-7; Koyl 1962:120).

**L.A. Enersen** received a bachelor of arts degree from Carleton College in 1931 and a master's degree in landscape architecture from Harvard University in 1935. His work encompassed the

following categories: residential, commercial, educational, health facilities, military structures, city planning, religious, recreational, public buildings, and landscape design. Principal work included Capehart housing at the Air Force Academy in 1960, in association with the firm Skidmore, Owings & Merrill, the student center at Peru State Teachers College in 1960, the student center at Chadron State Teachers College in 1961, and the master plan for the College of Agriculture at the University of Nebraska in 1961 (Koyl 1955:158; Koyl 1961:196).

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### **George L. Dahl, Dallas, Texas**

**George L. Dahl** received a bachelor of arts degree in architecture from the University of Minnesota in 1921 and a Master of Arts degree in architecture from Harvard University in 1922. He began his own firm in 1943. His work encompassed the following categories: residential, commercial, industrial, religious, educational, recreational, health facilities, penal institutions, public buildings, military structures, transportation, communications, scientific structures, city planning, mortuary structures, landscape design, and interior design. Principal works included the Dallas Morning News building in 1950, the Dallas Red Cross building in 1951, and the Dallas Public Library in 1955 (Koyl 1955:122; Koyl 1962:150).

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### **J. & G. Daverman Co., Grand Rapids, Michigan**

Edward H. Daverman  
Herbert G. Daverman  
Joseph T. Daverman  
Robert J. Daverman  
Jacob H. Knol  
Peter R. Van Putten  
Jay H. Volkers

**Herbert G. Daverman** received a bachelor of arts degree from Calvin College in 1935 and a bachelor's degree in architecture in 1937. That year, he joined J. & G. Daverman Co., which was formed in 1904. His work encompassed the following categories: commercial, industrial, religious, educational, recreational, health facilities, penal institutions, public buildings, transportation, scientific structures, mortuary structures, and city planning. Principal works included the science building at Calvin College in Grand Rapids in 1947; the Hospital for the Nervous in Cutlerville, Michigan in 1951; the Michigan State Prison in Ionia in 1955; and shopping centers in Omaha, San Antonio, and Iowa in the late 1950s in association with several other architects (Koyl 1955:124; Koyl 1962:154).

**Joseph T. Daverman** received a bachelor of arts degree from Calvin College in 1934 and a bachelor's degree from University of Michigan in 1937. He joined J. & G. Daverman Co. in 1937. His work encompassed the following categories: commercial, industrial, religious, educational, recreational, health facilities, penal institutions, public buildings, military structures, transportation, scientific structures, mortuary structures, city planning, and communications. Principal works included the science building at Calvin College in Grand Rapids in 1947; the Hospital for the Nervous in Cutlerville, Michigan, in 1951; the Michigan State Prison in Ionia in 1955; shopping centers in Omaha, San Antonio, and Iowa in the late 1950s in association with several other architects; and the first phase of a new campus for Calvin College in 1962 (Koyl 1955:124; Koyl 1962:154).

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**John N. Douglas, Pasadena, California**

**John N. Douglas** attended the University of Pittsburgh, University of Southern California, and the California Institute of Technology. His training included a year as a draftsman for Frank Lloyd Wright. Douglas conducted extensive research in reinforced concrete, especially in pre-casting, and was described as a “pioneer” in this field (American Institute of Architects archival files 2006).

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**Edwards, Pugh & McKimmon, Raleigh, North Carolina**

James M. Edwards, Jr.  
Edward St. Clair Pugh, Jr.  
Arthur McKimmon, II

**Arthur McKimmon, II** received a bachelor of science degree in architectural engineering from North Carolina State College in 1940. After co-founding Pugh & McKimmon, he co-founded Edwards, Pugh & McKimmon, and co-organized Edwards & McKimmon in 1950. His work encompassed four categories: residential, religious, educational, and mortuary structures. Principal works included the Tarawa Terrace housing project at Camp Lejeune, North Carolina in 1953, associated with architect Leif Valand; and public housing in Goldsboro, North Carolina in 1954, associated with architect W.B. Griffin (Koyl 1955:356; Koyl 1962:450). In 1952, Edwards, Pugh & McKimmon designed Wherry housing at Marine Corps Air Station Cherry Point, North Carolina. In 1957, Edwards, McKimmon & Etheredge designed Capehart housing at Cherry Point.

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**Amos B. Emery & Associates, Des Moines, Iowa**

**Amos B. Emery** received certification from the Ecole des Beaux Arts in Paris in 1919 and received a bachelor’s degree in architecture from the University of Pennsylvania in 1922. He began operating his own firm in 1930. His work encompassed five categories: residential, commercial, industrial, religious, and recreational. Principal works included the Great West Insurance building in Des Moines in 1930, Hills Department Store in Des Moines in 1936, the Des Moines Register & Tribune building in 1946, two television station buildings in Des Moines in 1955 and 1956, and housing at the Sioux City Air Force Base in 1959 (Koyl 1955:157; Koyl 1962:195).

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**Ferris & Erskine, Reno, Nevada**

Lehman Ashmead  
Graham Erskine

**Lehman Ashmead** studied at the University of Nevada. He operated his own firm until 1947, when he co-founded Ferris & Erskine. His work encompassed the following categories: residential, commercial, religious, educational, recreational, health facilities, public buildings, and communications.

**Graham Erskine** received a bachelor of arts degree from Columbia College in 1933, a bachelor’s degree in architecture from Columbia University in 1936, and a degree in architecture from the University of Rome, Italy, in 1937. He co-founded Ferris & Erskine in 1947. His work encompassed the following categories: residential, commercial, religious, educational, recreational, health facilities, military structures, and communications. Principal work included housing at Stead

Air Force Base in 1957; Elko Hospital in Elko, Nevada, in 1959; and St. Mary's Hospital in Reno in 1961 (Koyl 1962:198).

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### **Edward H. Fickett, Los Angeles, California**

**Edward H. Fickett** studied at the University of Southern California. After working as a draftsman, he worked for Heusel & Fickett in 1946 and 1947 and began operating as an independent architect in 1948. His work encompassed the following categories: residential, commercial, educational, recreational, health facilities, public buildings, military structures, city planning, and interior design. Principal works included military family housing at Edwards Air Force Base in 1960, and a Los Angeles County park, library, and community center in West Hollywood in 1960 (Koyl 1962:210).

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### **Flatow & Moore, Albuquerque, New Mexico**

Max Flatow

Jason P. Moore

**Max Flatow** received a bachelor's degree in architectural engineering from the University of Texas in 1941. He operated as an independent architect for three years, and co-founded Flatow & Moore in 1950. Flatow, Moore, Bryan & Fairburn was organized in 1955. His work encompassed the following categories: residential, commercial, industrial, educational, recreational, health facilities, public buildings, scientific structures, city planning, and landscape design. Principal works included a hospital for the Relief Society of Las Vegas in 1953; an Indian hospital in Gallup, New Mexico, in 1960; buildings for the University of New Mexico during the 1960s; and, the federal courthouse in Albuquerque in 1967 (Koyl 1962:216; Gane 1970:281).

**Jason P. Moore** studied at the North Texas State Teachers College and received a bachelor's degree in architecture from the University of Texas in 1939. His work encompassed the following categories: residential, commercial, industrial, religious, educational, recreational, health facilities, public buildings, military structures, transportation, scientific structures, city planning, landscape design, and interior design. Principal works included Las Vegas Hospital in New Mexico in 1951, housing at Holloman Air Force Base in 1959, a U.S. Public Health Service hospital in Gallup, New Mexico in 1960, and the Ferris Engineering Center at the University of New Mexico (Koyl 1962:493; Gane 1970:637).

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### **Louis H. Geis, Kansas City, Missouri**

**Louis H. Geis** received a bachelor of science degree in architecture from the University of Nebraska in 1933 and a Bachelor of Science degree in structural engineering from Finlay Engineering College in 1948. He was a foreman architect for the National Park Service from 1936 to 1940 and an architectural examiner for the Federal Housing Administration from 1941 to 1947. He was a partner in Hansen & Geis from 1948 to 1949 and operated his own firm from 1949 to 1958. He co-founded Geis, Hunter, Ramos in 1958. His work encompassed three categories: residential, commercial, and religious. Principal work included the Ruskin Heights tract housing project in Hickman Mills, Missouri, in 1953; Capehart housing at Richards Gebaur Air Force Base in Jackson County, Missouri, in 1959, in association with architect George L. Dahl; and, an armed forces building in Kansas City in 1960 (Koyl 1955:193; Koyl 1962:242).

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**Hugh Gibbs, Long Beach, California**

**Hugh Gibbs** received a degree from the School of Architecture at the University of Southern California. He became a Fellow of the American Institute of Architects in 1969. His work encompassed schools, hospitals, office buildings, and apartment buildings. Projects included the U.S. Naval Hospital at Long Beach, and 200 housing units at George Air Force Base in California (American Institute of Architects archival file, Hugh Gibbs).

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**Norman Giller & Associates, Miami Beach, Florida**

**Norman Giller** studied at Georgia Institute of Technology and received a bachelor's degree in architecture from the University of Florida in 1945. He began operating as an independent architect in 1944. His work encompassed the following categories: residential, commercial, religious, educational, recreational, health facilities, penal institutions, public buildings and structures, military structures, transportation, city planning, industrial, mortuary structures, landscape design, interior design, and restorations. Principal work included buildings for the Miami Beach police station in 1953; Coral Way Village Homes in Miami in 1955; supervisory architect for the Miami Beach Housing Authority in 1952 and the Hillel Foundation building at University of Miami in 1954; Food Fair supermarkets and shopping centers in Florida between 1955 and 1960; and a 999-unit Capehart housing project and city plan for Cape Canaveral in 1957 (Koyl 1955:197; Koyl 1962:247-8).

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**Groll, Beach & Associates, Washington, D.C.**

Elkan Wiley Groll  
Howard P. Beach

**Elkan Wiley Groll** received a bachelor of science degree from the University of Minnesota in 1936, a master's degree in landscape architecture from Harvard University in 1939, and a city planning degree from The George Washington University in 1942. He worked for several federal agencies, including as an architect for the Resettlement Administration in 1936 and 1937, an architect and site planner for the War Department from 1939 to 1943, and an urban development specialist for the National Housing Agency in 1946 and 1947. He worked as an independent architect from 1948 to 1952, and co-founded Groll, Beach & Associates in 1952. His work encompassed the following categories: residential, commercial, recreational, military structures, transportation, scientific structures, city planning, landscape design, and interior design. Principal works included airports in Iceland and the Azores in 1952; the master plan for Fort Belvoir, Virginia, in 1954; laboratory and engineering buildings at Aberdeen, Maryland, in 1955, housing at Hickam Air Force Base in Hawaii in 1958; and, the master plan for Wright-Patterson Air Force Base in Dayton in 1959 (Koyl 1955:212; Koyl 1962:269).

**Howard P. Beach** studied at Catholic University, Columbus University, Southeastern University, and The George Washington University. From 1946 to 1951, he worked for private airport-related firms and as chief of the buildings division for the Civil Aeronautics Administration. He co-founded Groll, Beach & Associates in 1952. His work encompassed the following categories: industrial, recreational, military structures, transportation, scientific structures, and city planning. Principal works included the Washington National Airport terminal building in 1938, and work as a supervisory or consulting architect on airport terminal construction in Mexico and Philadelphia (Koyl 1955:31; Koyl 1962:40-1).

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**Alonzo J. Harriman, Auburn, Maine**

**Alonzo J. Harriman** received a bachelor of science degree in mechanical engineering from the University of Maine in 1920 and a Master of Arts degree in architecture from Harvard University in 1928. He began operating his own firm in 1939 and founded Alonzo J. Harriman & Associates in 1961. His work encompassed the following categories: residential, commercial, industrial, educational, recreational, health facilities, military structures, and communications. Principal work included the South Portland shipyard in 1943, a men's dormitory at the University of Maine at Orono in 1955, buildings at Loring Air Force Base from 1946 to 1961, and buildings for New England Telephone and Telegraph Co. from 1946 to 1961 (Koyl 1955:230; Koyl 1961:289).

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**Ralph Haver, Phoenix, Arizona**

**Ralph Haver** received an Associate of Arts degree from Pasadena Junior College in 1937 and a bachelor's degree in architecture from the University of Southern California in 1941. After working as a draftsman for several firms, he began working as an independent architect in 1946. His work encompassed three categories: residential, commercial, and educational. Principal work included the Country Club Apartments in Phoenix in 1947, and housing in San Manuel, Arizona in 1954 (Koyl 1955:235; Koyl 1962:296).

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**Higgins, Webster, Pedersen & Tilney, Bangor, Maine**

Ambrose S. Higgins  
W.F. Pedersen  
Bradford S. Tilney

**Ambrose S. Higgins** received a bachelor of science degree from Trinity College in Hartford, Connecticut in 1931 and studied at the Massachusetts Institute of Technology. He formed his own firm in 1943 and co-founded Crowell, Lancaster & Higgins in 1952. His work encompassed the following categories: residential, commercial, industrial, religious, educational, recreational, health facilities, penal institutions, public buildings and structures, military structures, transportation, scientific structures, and mortuary structures. Principal work included buildings at Dow Air Force Base from 1954 to 1956 in association with architects Pedersen & Tilney, the Millinocket Community Hospital in 1955, buildings at East Maine General Hospital in 1959, the College of Education building at the University of Maine in Orono in 1960, and a Capehart elementary school at Dow Air Force Base in 1961 (Koyl 1955:247; Koyl 1962:311).

**W.F. Pedersen** received a bachelor of arts degree in 1931 and a master of arts degree in 1934, both from Harvard University. He operated his own practice from 1934 to 1940, when he co-founded Pedersen & Tilney. His work encompassed the following categories: residential, commercial, religious, educational, recreational, health facilities, public buildings, military structures, scientific structures, industrial, penal institutions, city planning, landscape design, and restorations. Principal works included Army, Navy, and Air Force facilities built between 1950 and 1955 (Koyl 1955:426; Koyl 1962:541).

**Bradford S. Tilney** received a bachelor of arts degree from Yale University in 1930 and a bachelor of fine arts degree from the Yale University School of Architecture in 1933. He worked in site and advance planning for the New York District of the U.S. Army Corps of Engineers in 1942 and 1943,

and co-founded Pedersen & Tilney in 1946. His work encompassed the following categories: residential, commercial, industrial, religious, educational, recreational, health facilities, public buildings, military structures, transportation, scientific structures, city planning, landscape design, interior design, and restorations. Principal works included shop buildings at the Naval Submarine Base in New London, Connecticut; a National Guard hangar at Dow Air Force Base in association with the firm Crowell, Lancaster & Higgins in 1955; the town plan for East Windsor, Connecticut in 1958; a Coast Guard physical education building in Groton, Connecticut, in 1959; and, office buildings for IBM in Hartford, Detroit, and Baltimore in 1960 (Koyl 1955:560; Koyl 1962:706).

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### **Highland & Highland, Buffalo, New York**

John N. Highland

John N. Highland, Jr.

**John N. Highland, Jr.** studied at The George Washington University, University of Michigan, and Cornell University. He joined Highland & Highland in 1938, became a partner in 1947, and became the owner in 1949. His work encompassed the following categories: residential, commercial, industrial, religious, educational, recreational, health facilities, public buildings, military structures, mortuary structures, city planning, and landscape design. His principal work included a 290-unit housing project at Niagara Falls Air Force Base in 1960 and Clearfield Shopping Plaza in Amherst, New York in 1961 (Koyl 1962:312).

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### **Holden, Egan, Wilson & Corser, New York**

**Arthur C. Holden**

John Taylor Egan

William D. Wilson

John B. Corser, Jr.

**Arthur C. Holden** studied at Princeton University, and received a bachelor's degree in architecture and a master of arts degree in economics from Columbia University in 1915. He was a draftsman for McKim, Mead & White from 1916 to 1919. He operated his own firm from 1920 to 1930, and was a partner in Holden, McLaughlin & Associates from 1930 to 1953. He co-founded Holden, Egan, Wilson & Corser in 1954. His work encompassed the following categories: residential, commercial, educational, recreational, and city planning. Principal work included an 800-family community in Dragerton, Utah, in 1942, in association with architect Edward Anderson; the General Charles Berry Houses in Staten Island, New York, in 1948 and 1949; faculty houses at Princeton University from 1948 to 1952; and, work as a consulting architect for the postwar plan for White Plains, New York from 1944 to 1946 and for the Norwalk, Connecticut, Redevelopment Agency (Koyl 1955:252).

**William D. Wilson** received a bachelor of arts degree in 1941 and a master of fine arts degree in 1948, both from Princeton University. He co-founded Holden, Egan, Wilson & Corser in 1954. His work encompassed the following categories: residential, educational, recreational, health facilities, military structures, and city planning. Principal work included work as a consulting architect for the Norwalk, Connecticut, Redevelopment Agency from 1951 to 1955 and the Biblical Seminary in New York from 1953 to 1955 (Koyl 1955:612; Koyl 1962:769).

**John B. Corser, Jr.**, received a bachelor of arts degree in 1927 and a master of fine arts degree in 1930, both from Princeton University. He co-founded Holden, Egan, Wilson & Courser in 1954. His work encompassed the following categories: residential, educational, recreational, health

facilities, public buildings, and city planning. Principal work included the Wilbur Peck Court housing project in Greenwich, Connecticut, in 1953; the Berkeley Heights housing project in Waterbury, Connecticut, in 1954; a psychiatric outpatient department building in White Plains in 1956; and, the Bouyea and Stern housing projects in Plattsburgh, New York, in 1961 (Koyl 1955:110-1; Koyl 1962:137).

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### **Frank L. Hope Organization, San Diego, California**

**Frank L. Hope** studied at the University of California and the Carnegie Institute of Technology. He organized Frank L. Hope & Associates in 1928. His work encompassed the following categories: commercial, industrial, religious, educational, recreational, health facilities, public buildings, military structures, transportation, communications, scientific structures, city planning, and mortuary structures. Principal works included Scripps Memorial Hospital in La Jolla, California, in 1949; San Diego College for Women in 1952; and, a children's hospital in South Dakota in 1954 (Koyl 1955:256; Koyl 1962:324).

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### **Hudgins, Thompson, Ball & Associates, Oklahoma City, Oklahoma**

G. Ed Hudgins  
V.G. Thompson  
Ralph M. Ball  
Herman E. Smith  
Gene C. Cunningham

**G. Ed Hudgins** received a bachelor's degree in architecture from Oklahoma State University in 1931. He operated his own firm in 1941 and 1942, and was a partner in Hudgins, Cobb, Thompson & Ball in 1942 and 1943. He co-founded Hudgins, Thompson, Ball & Associates in 1942. His work encompassed the following categories: residential, commercial, religious, educational, recreational, health facilities, public buildings, military structures, and transportation. Principal works included the Monitor Building in Oklahoma City in 1956, the science building at Northeastern State College in Tahlequah in 1957, and dormitories and housing at Eastern Oklahoma A&M College in 1961 (Koyl 1962:331).

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### **Hummel, Hummel & Jones, Boise, Idaho**

Frank K. Hummel  
Frederick C. Hummel  
Charles F. Hummel  
Jedd Jones III

**Frederick C. Hummel** received a certificate of proficiency in architecture from the University of Pennsylvania in 1909. After working in the family-owned firm Tourtelotte & Hummel from 1909 to 1945, he co-founded Hummel, Hummel & Jones in 1945. In 1962, he co-organized Hummel, Hummel, Jones & Shawver. His work encompassed the following categories: residential, commercial, religious, educational, recreational, health facilities, public buildings, military structures, communications, industrial, penal institutions, and transportation. Principal works included a post office building in Weiser, Idaho, in 1933; buildings for the Mountain States Telephone and Telegraph company in Boise in 1953 and Pocatello in 1958; and, a building for the Idaho State Hospital in 1953 (Koyl 1955:263; Koyl 1962:333; Gane 1970:431).

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**Charles F. Hummel** received a bachelor's degree in architecture from Catholic University of America in 1950 and a master of science degree from Colorado University in 1953. His work encompassed five categories: residential, commercial, religious, educational, and transportation. His principal works included the Idaho State Capitol legislative chambers in 1967 and the U.S. Courthouse and federal office building in 1968 (Koyl 1962:333; Gane 1970:431).

**Jedd Jones III** received a bachelor's degree in architecture from the University of Pennsylvania in 1937 and a master's degree in 1938. His work encompassed the following categories: residential, commercial, industrial, religious, educational, recreational, health facilities, penal institutions, public buildings, military structures, transportation, communications, and interior design. Principal works included the State of Idaho Industrial Administration Building in 1957; buildings for the Idaho highway and law enforcement departments in 1960, in association with the firm Wayland & Cline; a library at Boise State College in 1964; and, renovation of the governor's suite at the Idaho State Capitol in 1966 (Koyl 1962:357; Gane 1970:462).

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#### **A. Quincy Jones & F.E. Emmons, Los Angeles, California**

A. Quincy Jones  
F.E. Emmons

**A. Quincy Jones** received a bachelor's degree in architecture from the University of Washington in 1936. He operated as an independent architect from 1945 to 1950, and co-founded A. Quincy Jones & F.E. Emmons in 1950. His work encompassed the following categories: residential, commercial, industrial, religious, educational, recreational, public buildings, military structures, and mortuary structures. Principal work included consulting architect on the Pabco Linoleum Plant in New Jersey in 1948 and 1949, a ceramic studio and factory in Los Angeles in 1954, and the Consulate General office building in Singapore in 1961 (Koyl 1955:281; Koyl 1962:356).

**F.E. Emmons** received a bachelor's degree in architecture from Cornell University in 1929. He practiced as an independent architect from 1946 to 1950 and co-founded A. Quincy Jones & F.E. Emmons in 1950. His work encompassed the following categories: residential, commercial, industrial, religious, educational, recreational, health facilities, military structures, and mortuary structures. Principal work included the Sascha Brastoff Factory in Los Angeles in 1953; the Building Contractors Association building in Pomona, California, in 1954; and, buildings at the University of California, Santa Barbara in 1959 and the University of Southern California (Koyl 1955:158; Koyl 1962:195-6).

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#### **Kelly & Gruzen, New York**

Hugh A. Kelly  
B. Sumner Gruzen

**B. Sumner Gruzen** received a bachelor's degree in architecture in 1926 and a master's degree in architecture in 1928, both from Massachusetts Institute of Technology. He co-founded Kelly & Gruzen in 1928. His work encompassed the following categories: residential, commercial, industrial, religious, educational, recreational, health facilities, public buildings, military structures, transportation, city planning, landscape design, and scientific structures. Principal work included the U.S. Army Signal Corps School at Fort Monmouth, New Jersey, in 1951; the Albert Einstein College

of Medicine in Bronx, New York, in 1955; and, the U.S. Mission to the U.N. Building in New York in 1961 (Koyl 1955:214; Koyl 1962:271).

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**Keyes, Smith, Saterlee, & Lethbridge, Washington, D.C.**

Arthur H. Keyes Jr.

Chloethiel Woodard Smith

Nicholas Saterlee

Francis D. Lethbridge

**Arthur H. Keyes, Jr.**, received a bachelor of arts degree in architecture from Princeton University in 1939, a bachelor's degree in architecture from the Harvard Graduate School of Design in 1942, and a certificate in Naval architecture from MIT in 1942. His work comprised the following categories: residential, commercial, industrial, religious, educational, recreational, health facilities, public buildings, public structures, military structures, communications, scientific, city planning, landscape design, and interior design. Principal works included a redevelopment plan for Southwest Washington, D.C., from 1953 to 1955; development of Department of Defense housing standards in 1955, a residence and office building for the United States Embassy in Asuncion, Paraguay, in 1955; and, the National Institutes of Health administration building in 1961 (Koyl 1955: 297; Koyl 1962:376).

**Chloethiel Woodard Smith** received a bachelor's degree in architecture from University of Oregon in 1932 and a master's degree in architecture from Washington University in 1933. Before co-organizing the firm in 1951, she operated as an independent architect in Washington, D.C., and Canada between 1939 and 1941 and in Bolivia between 1942 and 1944. Principal works included a redevelopment plan for Southwest Washington, D.C., from 1953 to 1955; development of Department of Defense housing standards in 1955; a residence and office building for the United States Embassy in Asuncion, Paraguay, in 1955; and, the National Institutes of Health administration building in 1961 (Koyl 1955: 297; Koyl 1962:376).

**Nicholas Saterlee** received a bachelor of arts degree from Harvard College in 1938 and a degree from Harvard Graduate School of Design in 1941. He operated as an independent architect in 1949 and 1950 and in a partnership with Francis D. Lethbridge in 1950 and 1951. He co-organized the firm in 1951. His work encompassed the following categories: residential, commercial, industrial, religious, recreational, health facilities, military, communications, and mortuary structures. Principal works included a redevelopment plan for Southwest Washington, D.C., from 1953 to 1955; development of Department of Defense housing standards in 1955; and, a residence and office building for the United States Embassy in Asuncion, Paraguay, in 1955 (Koyl 1955: 297; Koyl 1962:376).

**Francis D. Lethbridge** received degrees from Stevens Institute of Technology, University of Colorado, and Yale University School of Architecture. His work encompassed the following categories: residential, commercial, industrial, religious, recreational, health facilities, military structures, transportation, communications, city planning, educational, public buildings and structures, scientific structures, landscape design, and interior design. Principal works included a redevelopment plan for Southwest Washington, D.C., from 1953 to 1955; development of Department of Defense Housing Standards in 1955; a residence and office building for the United States Embassy in Asuncion, Paraguay, in 1955; a U.S. Embassy office building in Lima, Peru, in 1959; and an administration building for the National Institutes of Health in 1961 (Koyl 1955:329; Koyl 1962:416).

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**Koehler & Isaak, Manchester, New Hampshire**

Richard Koehler

Nicholas Isaak

**Richard Koehler** received a bachelor of science degree in architecture from the University of New Hampshire in 1934. He operated his own firm from 1936 to 1942, and co-founded Koehler & Isaak in 1946. His work encompassed the following categories: residential, commercial, industrial, religious, educational, recreational, penal institutions, public buildings, military structures, and communications. Principal works included St. Anselm's Monastery in 1955, and Portsmouth Air Force Base in 1956 (Koyl 1955:308; Koyl 1962:390).

**Nicholas Isaak** studied at St. Anselm's College and received a bachelor of science degree from the University of New Hampshire in 1936. He co-founded Koehler & Isaak in 1946. Principal works included the New Hampshire State Industrial School in Manchester in 1948; housing in Manchester in 1950, in association with architects J.D. Betley and C.E. Peterson; Portsmouth Air Force Base in 1955; dormitories at the University of New Hampshire in 1956; the New Hampshire Employment Security Building in 1958; buildings at St. Anselm's College in 1960; graduate student housing at University of New Hampshire in 1959; and, the Manchester air terminal in 1961 (Koyl 1955:269; Koyl 1962:340-1).

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**Landry & Matthes, Hattiesburg, Mississippi**

Juan G. Landry

Carl E. Matthes

Juan E. Landry

Carl E. Matthes, Jr.

**Juan G. Landry** studied at Jesuit College in New Orleans and at the ICS Correspondence School. He operated his own firm from 1930 to 1937, and co-founded Landry & Matthes in 1937. His work encompassed the following categories: residential, commercial, industrial, religious, educational, recreational, health facilities, penal institutions, public buildings, military structures, communications, mortuary structures, and city planning. Principal work included the U.S. Post Office in Hattiesburg in 1931; low-rent housing projects in Laurel, Mississippi, in 1938; war housing projects in Pascagoula, Mississippi in 1943; and, railhead facilities at Camp Shelby in Hattiesburg in 1951 (Koyl 1955:317; Koyl 1962:402).

**Carl E. Matthes** studied in Chicago and worked as a draftsman for two firms, including Howard Van Doren Shaw. He operated his own firm from 1920 to 1937, when he co-founded Landry & Matthes. His work encompassed the following categories: residential, commercial, industrial, religious, educational, recreational, health facilities, penal institutions, public buildings, military structures, communications, city planning, and mortuary structures. Principal works included low-rent housing projects in Laurel, Mississippi in 1938, war housing projects in Pascagoula in 1943, and railhead facilities at Camp Shelby in Hattiesburg in 1951 (Koyl 1955:372; Koyl 1962:471).

**Juan E. Landry** studied at Alabama Polytechnic Institute. His work encompassed the following categories: residential, commercial, industrial, religious, educational, recreational, health facilities, penal institutions, public buildings and structures, military structures, transportation, communications, and city planning. Principal works included the Student Union building at Mississippi Southern College in Hattiesburg in 1956; family housing and men's and women's



dormitories at Mississippi Southern College in 1960; and, Veteran's Administration buildings in Biloxi in 1961 (Koyl 1962:402).

**Carl E. Matthes, Jr.** received a bachelor of science degree in civil engineering from Mississippi State University in 1949, a bachelor of science degree from Georgia Institute of Technology in 1952, and a bachelor's degree in architecture from Georgia Institute of Technology in 1953. His work encompassed the following categories: residential, commercial, industrial, religious, educational, recreational, health facilities, penal institutions, public buildings, transportation, mortuary structures, city planning, and landscape design. Principal works included dormitories at Mississippi Southern College in Hattiesburg in 1959 and a gym at William Carey College in Biloxi in 1961 (Koyl 1962:471).

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### **Long & Thorshov, Minneapolis, Minnesota**

Roy N. Thorshov

**Roy N. Thorshov** received a bachelor of arts degree from the University of Minnesota in 1928 and a diploma from the Fontainebleau School of Fine Arts in France in 1929. He also studied at the University of Minnesota graduate school. He worked for Long & Thorshov from 1928 to 1951 and Thorshov & Cerny, Inc., from 1951 to 1960. Beginning in 1960, he was a principal with Thorsen & Thorshov Associates, Inc. His work encompassed the following categories: residential, commercial, industrial, religious, educational, recreational, health facilities, penal institutions, public buildings, and military structures. Principal work included Clearwater County Memorial Hospital in Bagley, Minnesota, in 1950; Hardware Mutual Life Insurance Co. in Minneapolis, 1955; Metropolitan Baseball Stadium in Bloomington, Minnesota, in 1958; and, the University of Minnesota School of Architecture building in 1960 (Koyl 1955:559; Gane 1970:917).

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### **McGaughan & Johnson, Washington, D.C.**

A. Stanley McGaughan

Hugh B. Johnson

**A. Stanley McGaughan** studied architecture at University of Michigan and economics at American University. From 1936 to 1947, he worked as an architect and engineer for the federal government and as an economist. He co-founded McGaughan & Johnson in 1947. His work encompassed the following categories: residential, commercial, industrial, educational, recreational, health facilities, military structures, transportation, communications, scientific structures, penal institutions, city planning, and landscape design. Principal work included being a consulting architect for the National Security Resources Board and the Defense Production Administration (Koyl 1955:353; Koyl 1962:446).

**Hugh B. Johnson** studied at Syracuse University. He operated his own firm from 1947 to 1950, and co-founded McGaughan & Johnson in 1950. His work encompassed the following categories: residential, industrial, educational, military structures, communications, scientific structures, commercial, religious, recreational, health facilities, penal institutions, transportation, city planning, and landscape design.

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**A.V. McIver & Associates, Great Falls, Montana**

A.V. McIver  
Knut S. Haugsjaa  
William J. Hess

**A.V. McIver** received a degree from the University of Michigan in 1915. After he worked as a partner with several other firms, he formed A.V. McIver & Associates, Inc., in 1950. McIver, Hess & Haugsjaa was formed in 1953. His work encompassed the following categories: residential, commercial, industrial, religious, educational, recreational, health facilities, public buildings and structures, military structures, transportation, communications, mortuary structures, and city planning. Principal works included a veterans hospital in Miles City, Montana, in 1950, associated with the architect firm Cushing & Terrell; Air Force housing in Great Falls, Montana, in 1953; 150 Capehart housing units at Malmstrom Air Force Base, Montana, in 1958; 300 units of military family housing in 1960; 260 units of military family housing in 1961; a men's dormitory at Montana State College in Bozeman in 1960; and, the Montana State University library in 1965 (Koyl 1955:354; Koyl 1962:449; Gane 1970:579).

**William J. Hess** received a bachelor of science degree in architecture from Montana State College in 1937. After working for A.V. McIver from 1939 to 1953, he co-founded McIver, Hess & Haugsjaa in 1953. His work encompassed the following categories: residential, commercial, religious, educational, recreational, health facilities, transportation, communications, mortuary structures, public buildings and structures, and military structures. Principal works included military family housing at Great Falls Air Force Base in 1951; a men's residence hall at Montana State College in 1960; and, Capehart housing at Malmstrom Air Force Base in 1961 (Koyl 1955:245; Koyl 1962:309).

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**Angus McSweeney, San Francisco, California**

**Angus McSweeney** studied the Beaux Arts movement at the University of Oregon. After operating as an independent architect from 1929 to 1967, he co-organized McSweeney and Schuppel in 1967. His principal works included apartment, office, and religious buildings (Gane 1970:584).

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**Melander, Fugelso & Associates, Duluth, Minnesota**

A. Reinhold Melander  
Norman Karl Fugelso

**A. Reinhold Melander** received a bachelor of science degree in architecture from the University of Minnesota in 1921 and a certificate from the University of Besançon. He operated his own firm from 1930 to 1957, when he co-founded Melander, Fugelso & Associates. His work encompassed the following categories: residential, commercial, industrial, religious, educational, recreational, health facilities, public buildings, military structures, transportation, communications, mortuary structures, and interior design. Principal works included St. Luke's Hospital in Duluth in 1950, St. Mary's Hospital in Duluth in 1953, housing at Duluth Air Force Base in 1956 and 1959, and buildings at the University of Minnesota between 1948 and 1961 (Koyl 1955:376; Koyl 1962:476).

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### **Miller & Ahlson, Seattle, Washington**

Charles T. Miller

Frederick T. Ahlson

**Charles T. Miller** studied at the University of Michigan. After working for the U.S. government from 1931 to 1945, he co-founded Miller & Ahlson in 1946. His work encompassed the following categories: residential, commercial, recreational, health facilities, military structures, and city planning.

**Frederick T. Ahlson** received a bachelor's degree in fine arts from Yale University in 1930. He co-founded Miller & Ahlson in 1946. His work encompassed the following categories: residential, commercial, industrial, educational, recreational, health facilities, public buildings, military structures, and city planning.

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### **Neutra & Alexander, Los Angeles, California**

Richard Josef Neutra

Robert E. Alexander

**Richard Josef Neutra** attended the Polytechnical College at the University of Vienna and the University of Zurich, from which he received a diploma with distinction in 1918. He received a doctorate degree at the Technical University of West Berlin in 1954. Neutra began his architecture career as a city planner in Switzerland from 1919 to 1923. He worked for several firms from 1923 to 1925, including Holabird and Root and Frank Lloyd Wright. He operated his own practice from 1926 to 1949. His partnership with Robert E. Alexander lasted from 1949 to 1961. His other partnerships included Neutra & Alexander & Donald Haines, 1959, and Neutra & Alexander & Carrington Lewis, 1960. He resumed his own practice in 1962. His principal works comprised twelve categories: residential, commercial, religious, educational, recreational, health facilities, public buildings, public structures, military structures, city planning, landscape design, and interior design. His principal works (all in California unless otherwise specified) included the Channel Heights Housing Project, San Pedro, 1944; and the Northwest Mutual Fire Association building, 1950. Neutra also was the consulting architect to the government of Puerto Rico and several Latin American countries from 1944 to 1946, and to the civil government of Guam in 1951. He published several books and articles and received many national and international awards and honors throughout his career (Koyl 1955:403; Koyl 1962:512).

**Robert E. Alexander** received a bachelor of arts degree from Cornell University in 1930. He worked in several partnerships from 1935 to 1946 and in his own practice from 1946 to 1949. He partnered with Richard Neutra from 1949 to 1961. His principal works comprised ten categories: residential, commercial, industrial, religious, educational, recreational, health, public buildings, scientific structures, and mortuary structures. His principal works included Baldwin Hills Village, Los Angeles, 1940; Estrada Courts, Los Angeles, 1941; Oxnard Housing Project, Oxnard, California, 1951; Elysion Parks Heights housing, Los Angeles, 1951; Title VIII housing at Mountain Home Air Force Base, Idaho, 1954; fine arts buildings at San Fernando State College and the University of Nevada, 1958; Adelphia College library, Garden City, New York, 1958; University of Nevada library, Reno, 1959; University of California San Diego residence halls and central facilities building, 1966, and basic science facility, 1969; Camp Pendleton Theater, California, 1969; and Bunker Hill Towers first increment, Los Angeles, 1969. He was a consulting architect to the Home Builders Institute, 1948; the Washington, DC Public Housing Authority, 1950; the United Nations Mission to India, 1951; and, the government of Guam, 1951-52. Alexander published several books

and articles and received many national awards and honors throughout his career (Koyl 1955:6-7; Koyl 1962:8; Gane 1970:11).

The principal works of **Neutra & Alexander** includes Orange Coast College, California, 1957; Fernald School building at University of California Los Angeles, 1957; family housing, Yuma Proving Ground, Arizona, 1957; Mellon Hall and Francis Scott Key Auditorium at St. John's College, Annapolis, Maryland, 1958; the Hall of Records and the Civic Center, Los Angeles, 1958; the National Park Service Visitor Center and Cyclorama Building, Gettysburg, Pennsylvania, 1958; the Painted Desert Community, Arizona, 1958; Mountain Home Air Force Base, Idaho, 1959; San Fernando Fine Arts Building, Los Angeles, 1959; the United States Embassy, Karachi, Pakistan, 1961; Lemoore Military Housing, Los Angeles, 1961; and, Palos Verdes High School, California, 1961 (Koyl 1955:6-7, 403; Koyl 1962:8, 512, Gane 1970:11; Allaback 2000:2-3; Smith et al. 1999; Several 1998; St. John's College 2006; UCLA Office of Academic Planning and Budget 2006:64).

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### **Norberg & Coleman, Burlingame, California**

Ernest L. Norberg

David Coleman

**Ernest L. Norberg** attended the Wilmerding School of Industrial Arts, Mark Hopkins Art Institute, and the University of California. After working with the firm Edwards & Norberg, he began operating as an independent architect in 1916. His work encompassed the following categories: residential, commercial, educational, recreational, military structures, mortuary structures, city planning, and landscape design. His principal works included Wherry housing at Hamilton Air Force Base in 1952; the U.S. Geological building in Menlo Park, California, in 1953; Wherry housing at March Air Force Base in 1953; a site plan at Hamilton Air Force Base in 1953; Wherry housing at Port Hueneme in 1954; and, Capehart housing at Hamilton Air Force Base in 1958 in association with architect David Coleman (Koyl 1955:407; Koyl 1962:517).

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### **Pace Associates, Chicago, Illinois; Cleveland, Ohio**

Wilbur H. Binford

Charles Booher Genther

John F. Kausal

**John F. Kausal** received a bachelor of science degree from the University of Illinois in 1934 and a master of arts degree from Harvard University in 1939. After working for Holabird & Root from 1936 to 1941 and a successor firm from 1941 to 1942, Kausal joined Pace Associates in 1946. His work encompassed the following categories: commercial, industrial, religious, educational, recreational, health facilities, public buildings and structures, military structures, transportation, scientific structures, and city planning. Principal works include an operations building at Glenview Naval Air Station in 1952 and barracks and mess hall buildings at Great Lakes Naval Training Center in 1957 and 1958 (Koyl 1962:367).

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### **Paderewski, Mitchell & Dean, San Diego, California**

Clarence Joseph Paderewski

Delmar Stuart Mitchell

Louis Abbott Dean

**Clarence Joseph Paderewski** received a bachelor of arts degree in architecture from the University of California in 1932. After operating as an independent architect, he co-organized Paderewski, Mitchell & Dean in 1948. His work encompassed the following categories: residential, commercial, industrial, religious, educational, recreational, health facilities, public buildings, military structures, transportation, communications, scientific structures, mortuary structures, and city planning. Principal works included Family Hospital for the 11<sup>th</sup> Naval District in San Diego in 1952; a California State Highway office building and Wherry housing in South Dakota, both completed in 1953 with architect Adrian Wilson; buildings for Palomar College in San Marcos, California, between 1952 and 1970; San Diego County University Hospital in 1963 with architects Wulff & Fifield; and, a terminal at San Diego International Airport in 1967 (Koyl 1955:417; Koyl 1962:530; Gane 1970: 688).

**Delmar Stuart Mitchell** received a bachelor of arts degree from the University of Washington in 1939. He co-founded Paderewski, Mitchell & Dean in 1948. His work encompassed the following categories: residential, commercial, industrial, religious, educational, recreational, health facilities, public buildings, military structures, transportation, communications, scientific structures, city planning, and mortuary structures. Principal works included the Charactron Lab for the 11<sup>th</sup> Naval District in San Diego in 1952, and a California State Highway office building and Wherry housing in South Dakota, both completed in 1953 with architect Adrian Wilson (Koyl 1955:384; Koyl 1962:688).

**Louis Abbott Dean** received a degree from the Yale University School of Architecture in 1934. After working as an architect with the 11<sup>th</sup> Naval District Public Works Department from 1940 to 1947, he co-founded Paderewski, Mitchell & Dean in 1948. Principal works included the Charactron Lab for the 11<sup>th</sup> Naval District in San Diego in 1952; a California State Highway office building and Wherry housing in South Dakota, both completed in 1953 with architect Adrian Wilson; a terminal at San Diego International Airport in 1967; bachelor officer quarters and a mess hall at Camp Pendleton, California, in 1968; a United Airlines cargo facility in San Diego in 1968; a U.S. Naval Hospital outpatient clinic in San Diego in 1969; and, bachelor officer quarters and barracks with mess hall at Ballast Point in San Diego in 1970 (Koyl 1955:129; Koyl 1962:159; Gane 1970:210).

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### **Parr & Aderhold, Oklahoma City, Oklahoma**

William G. Parr  
George Aderhold

**William G. Parr** studied at Oklahoma A&M College. He co-founded Parr & Aderhold in 1941 and began operating his own firm in 1960. His work encompassed the following categories: industrial, religious, educational, penal institutions, public buildings, military structures, and communications. Principal works included the YMCA in Oklahoma City in 1951, the county jail in Denver in 1955, a distribution center for Safeway Stores, Inc. in Oklahoma City from 1951 to 1961, and the Oklahoma Bar Center in Oklahoma City in 1961 (Koyl 1955:421; Koyl 1962:535).

**George Aderhold** received a bachelor's degree in architecture from the University of Pennsylvania in 1933 and a master's degree in architecture from the Massachusetts Institute of Technology in 1936. He co-founded Parr & Aderhold in 1941, and became supervisory architect for the Department of Justice Bureau of Prisons in 1961. His work encompassed the following categories: industrial, religious, educational, penal institutions, public buildings, military structures, and communications. His principal works included the county jail in Denver in 1955, in association with architect G. Meredith Musick; the Oklahoma Art Center in Oklahoma City in 1958; consulting architect on the Florida Prison for Men in Raiford in 1958; the Numerical Analysis Lab at Oklahoma

University in 1959; and, consulting architect on the Federal Maximum Custody Penitentiary in Marion, Illinois in 1960 (Koyl 1955:4; Koyl 1962:4).

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**Palmer & Krisel, Los Angeles, California**

Dan Saxon Palmer  
William Krisel

**Dan Saxon Palmer** received a bachelor's degree in architecture from New York University in 1942. After operating as an independent architect, he co-founded Palmer & Krisel in 1949. His work encompassed three categories: residential, commercial, and health facilities. Principal work included Brown Shopping Center in Los Angeles in 1951 (Koyl 1955:418; Koyl 1962:531).

**William Krisel** received a bachelor's degree in architecture from the University of Southern California in 1949. His work encompassed three categories: residential, commercial, and health facilities. Principal work included Brown Shopping Center in Los Angeles in 1951, housing in the Fernando Valley of Los Angeles from 1953 to 1955, Mount Sinai Hospital in Los Angeles in 1955 (Koyl 1955:312; Koyl 1962:394).

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**J.N. Pease & Co., Charlotte, North Carolina**

J. Norman Pease, P.E.  
George S. Rawlins, P.E.  
J.A. Stenhouse  
J. Norman Pease Jr.  
R.A. Botsford  
Fred C. Hobson, P.E.  
John V. Ward

**J. Norman Pease, Jr.**, was born in Charlotte, North Carolina, on 29 August 1921. He attended North Carolina State College and received a bachelor's degree in architecture from Alabama Polytechnic Institute in 1955. He joined J.N. Pease & Co. in 1949. His principal works (all in Charlotte unless otherwise specified) included Republic Steel Corp. office building in 1956; Home Finance Co. office building in 1957; Southern Bell Telephone Co., Goldsboro, North Carolina, in 1958; Harris Hall Dormitory at Queens College in 1959; First Citizens Bank & Trust Co. in 1960; Eastern Air Lines computer building in 1961 and 1966; Central Piedmont Community College Classroom Building in 1968; First Citizens Bank & Trust Co., Gastonia, North Carolina, in 1969; Eastern Airlines Regional Reservations Center, Woodbridge, New Jersey, in 1969; and Presbyterian Home for the Elderly in 1969 (Koyl 1962:541; Gane 1970:704).

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**Pope & Kruse, Wilmington, Delaware**

George E. Pope  
Albert Kruse

**Albert Kruse** studied at the Massachusetts Institute of Technology. He co-founded George E. Pope & Albert Kruse in 1935. His work encompassed five categories: residential, religious, educational, public buildings, and scientific structures. Principal work included the State Highway Department administration building in Dover in 1941 and the state Supreme Court building in Dover in 1953 (Koyl 1955:313; Koyl 1962:396).

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### **Lorimer Rich & Associates, New York**

**Lorimer Rich** received a bachelor's degree in architecture from Syracuse University in 1914. He worked for the firm McKim, Mead & White from 1922 to 1928. His work encompassed the following categories: educational, health facilities, public buildings and structures, military structures, city planning, and mortuary structures. Principal work included approaches to the Tomb of the Unknown Soldier and Memorial in Arlington, Virginia, the Madison Square Post Office in New York in 1935, a dormitory at Oswego State Teachers College in New York in 1952, the men's gym at Syracuse University in 1951 in association with architect Harvy A. & F. Curtis King, and a building at Allegheny College in 1954 (Koyl 1955:459; Koyl 1962:583).

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### **I. Richmond & Co., Boston, Massachusetts**

**Isidor Richmond** received a special certificate in architecture from the Massachusetts Institute of Technology in 1916. After working as an independent architect, he co-organized Isidor Richmond & Carney Goldberg in 1946. His work encompassed the following categories: residential, commercial, industrial, religious, educational, recreational, transportation, communications, health facilities, public buildings and structures, military structures, mortuary structures, city planning, and interior design. Principal works included housing projects in Brookline, Massachusetts, in 1948; men's and women's dormitories at Salem State College, Massachusetts, in 1967; and, the Joseph M. Linsey Sports Center at Brandeis University in 1968 (Koyl 1955:460; Koyl 1962:585; Gane 1970:761).

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### **Scholer & Fuller, Tucson, Arizona**

Emerson C. Scholer  
Santry C. Fuller

**Emerson C. Scholer** studied at Purdue University from 1935 to 1937 and received a bachelor of science degree in architecture from the University of Illinois in 1942. After operating as an independent architect from 1947 to 1950, he co-founded Scholer, Sakellar & Fuller in 1950. In 1956, the successor firm Scholer & Fuller was formed. Scholer's work encompassed the following categories: residential, commercial, industrial, religious, educational, recreational, health facilities, penal institutions, and military structures. Principal works included buildings at Davis-Monthan Air Force Base in 1953 (Koyl 1955:491; Koyl 1962:623).

**Santry C. Fuller** received a bachelor of science degree in architecture from the University of Illinois in 1940. His work encompassed the following categories: residential, commercial, religious, educational, recreational, health facilities, and public buildings and structures. Principal works included bachelor officer quarters field house at Fort Huachuca, Arizona, in 1956, and Capehart housing in Yuma, Arizona, in 1960 (Koyl 1955:186; Koyl 1962:234).

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### **Gordon M. Severud, Miami, Florida**

**Gordon M. Severud** received a bachelor's degree in architecture from the University of Minnesota in 1934 and a master's degree from the Harvard University Graduate School of Architecture in 1935. He operated as an independent architect from 1940 to 1962, and co-founded Severud and Knight in 1962. His work encompassed the following categories: residential, commercial, industrial, religious,



educational, recreational, health facilities, public buildings, transportation, and landscape design. His principal work included Navy housing in Key West, Florida, in 1956; the Musicians Union Building in Miami in 1960; and, a motel in Everglades National Park in 1960 (Koyl 1955:498; Koyl 1962:633).

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**Skidmore, Owings & Merrill, New York, Chicago, San Francisco, Portland, Oregon**

Louis Skidmore

Nathaniel A. Owings

John O. Merrill

**Louis Skidmore** studied at the Massachusetts Institute of Technology. He served as assistant to the general manager of the Chicago World's Fair from 1929 to 1935, and co-founded Skidmore & Owings in 1935. The firm became Skidmore, Owings & Merrill in 1936. Skidmore retired in 1955. His work encompassed the following categories: residential, commercial, industrial, religious, educational, recreational, health facilities, public buildings and structures, military structures, transportation, communications, scientific structures, city planning, landscape design, and interior design. Principal work included the Atomic Energy Commission town site in Oak Ridge, Tennessee, in 1945, Manufacturers Trust Company in New York in 1954, the U.S. Air Force Academy in Colorado Springs in 1960, various facilities for the H.J. Heinz Co. of Pittsburgh, and buildings for the New York City Housing Authority (Koyl 1955:510; Koyl 1962:647).

**Nathaniel A. Owings** studied at the University of Illinois and received a bachelor of science in architecture from Cornell University in 1927. He worked for the Chicago World's Fair from 1930 to 1934 and co-founded Skidmore and Owings in 1935. The firm became Skidmore, Owings & Merrill in 1936. His work encompassed the following categories: residential, commercial, industrial, religious, educational, recreational, health facilities, public buildings, military structures, transportation, communications, scientific structures, city planning, and mortuary structures. Principal work included the Atomic Energy Commission town site in Oak Ridge, Tennessee, in 1945; the Ohio State University Medical Center in Columbus in 1949; U.S. Army Corps of Engineers facilities for three installations in Okinawa in 1953; the Greyhound bus terminal in Chicago in 1953; the U.S. Air Force Academy in Colorado Springs in 1960; and, the Chase Manhattan Bank office building in New York (Koyl 1955:416; Koyl 1955:529).

**John O. Merrill** studied at the University of Wisconsin and received a bachelor of science degree from the Massachusetts Institute of Technology in 1921. He was a partner in Skidmore, Owings & Merrill until he retired in 1958. His work encompassed the following categories: residential, commercial, industrial, religious, educational, recreational, health facilities, public buildings, military structures, transportation, communications, scientific structures, city planning, and mortuary structures. Principal works included the Atomic Energy Commission town site in Oak Ridge, Tennessee, in 1945, a Veterans Administration hospital in Brooklyn, New York, in 1948, U.S. Army Corps of Engineers facilities for three installations in Okinawa in 1953, U.S. Far East Command facilities in Japan, and the U.S. Air Force Academy in Colorado Springs (Koyl 1955:377).

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**Steele, Sandham & Weinstein, Omaha, Nebraska**

William L. Steele, Jr.

J.D. Sandham

Alex Weinstein

**William L. Steele, Jr.**, was involved in government construction projects from 1941 to 1946, and co-founded Steele, Sandham & Steele in 1946. He co-founded Steele, Sandham & Weinstein in 1956. His work encompassed the following categories: residential, commercial, religious, educational, health facilities, public buildings and structures, military structures, communications, industrial, recreational, and scientific structures. Principal work included St. Vincent's Home for the Aged in Omaha in 1952, the Agronomy Building at the University of Nebraska in Lincoln in 1952, Benedictine Seminary in Elkhorn in 1956, the student health center at the University of Nebraska in Lincoln in 1958, and the federal building and courthouse in Omaha in 1960 (Koyl 1955:532; Koyl 1962: 670).

**J.D. Sandham** studied architecture at Rose Polytechnical Institute in Terre Haute, Indiana. Sandham was involved in Kimball, Steele & Sandham from 1928 to 1945 and Steele, Sandham & Steele from 1946 to 1956, and co-founded Steele, Sandham, and Weinstein in 1956. His work encompassed the following categories: residential, commercial, religious, educational, health facilities, public buildings, military structures, communications, and scientific structures. Principal work included a federal office building in Omaha in 1932, in association with architect George B. Prinz; a Northwest Bell Telephone building in Grand Island, Nebraska, in 1941; buildings for the State Hospital in Hastings in 1948; the Agronomy Building at University of Nebraska in Lincoln in 1952; St. Vincent's Home in Omaha in 1953; a Northwest Bell Telephone building in Rapid City, South Dakota, in 1954; and, work as a supervisory architect on Beth Israel Synagogue in Omaha in 1951 and 1952 and on Temple Israel in Omaha in 1953 and 1954 (Koyl 1955:482; Koyl 1962:611).

**Alex Weinstein** received a bachelor of science degree in architectural engineering from Iowa State College in 1943 and a master's degree in architecture from the Massachusetts Institute of Technology in 1948. He joined Steele, Sandham & Steele in 1949 and became a partner in 1956. His work encompassed the following categories: residential, commercial, religious, educational, recreational, health facilities, public buildings, military structures, transportation, communications, and scientific structures. Principal works included St. Vincent's Home in Omaha in 1953, work as a supervisory architect for Temple Israel in Omaha from 1953 to 1955, the student health center at the University of Nebraska, Lincoln, in 1956, and the U.S. Post Office and the federal courthouse in Omaha, both in 1960 (Koyl 1955:592; Koyl 1962:747).

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### **Stuart & Durham, Seattle, Washington**

B. Dudley Stuart  
Robert L. Durham

**Robert L. Durham** studied at the College of Puget Sound in 1930 and received a bachelor's degree in architecture from the University of Washington in 1936. After serving as a construction engineer for the Federal Housing Administration from 1937 to 1941, he co-founded Stuart & Durham in 1941. He operated Robert L. Durham & Associates from 1951 to 1954, and co-founded Durham, Anderson & Freed in 1954. His work encompassed the following categories: residential, commercial, religious, educational, recreational, health facilities, public buildings, military structures, mortuary structures. Principal work included family housing at Fort Lewis, Washington, in 1955, and dormitories at Seattle Pacific College in 1961 (Koyl 1955:148; Koyl 1962:184).

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### **Swaim & Allen, Little Rock, Arkansas**

Guy W. Swaim  
William S. Allen

**Guy W. Swaim** received a bachelor's degree in architecture from Alabama Polytechnic Institute in 1932. He co-founded Brueggeman, Swaim & Allen in 1933, and co-founded Swaim & Allen in 1950. His work encompassed the following categories: residential, commercial, industrial, religious, educational, recreational, health facilities, penal institutions, public buildings and structures, military structures, transportation, city planning, and mortuary structures. Principal work included a federal veterans hospital in Little Rock in 1950 in association with the firm Erhart, Eichenbaum & Rauch, and the state Game and Fish building and the state welfare building, both in Little Rock, in 1950 (Koyl 1955:546; Koyl 1962:688).

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#### **Waasdorp & Northrup, Rochester, New York**

Leonard A. Waasdorp

Charles V. Northrup

**Leonard A. Waasdorp** studied at the Museum of Fine Arts in Utrecht, Holland and at the Rochester Institute of Technology. He co-founded Waasdorp & Northrup in 1951, and Waasdorp, Northrup & Kaelber in 1961. His work encompassed the following categories: commercial, industrial, religious, educational, recreational, health facilities, public buildings, transportation, communications, and scientific structures. Principal work included buildings for the University of Rochester Hospital and Medical School from 1925 to 1954, the atomic energy building and laboratories at University of Rochester in 1950, and the YWCA building in Rochester in 1950 (Koyl 1955:579-80; Koyl 1962:731).

**Charles V. Northrup** studied architecture at Cornell University. He co-founded Waasdorp and Northrup in 1951. His work encompassed the following categories: commercial, industrial, religious, educational, recreational, health facilities, public buildings, transportation, communications, and scientific structures. Principal works included women's dormitories at the University of Rochester in 1955 (Koyl 1955:408; Koyl 1962:518).

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#### **Weed, Russell & Johnson, Miami, Florida**

Robert Law Weed

T. Trip Russell

Herbert H. Johnson

**Robert Law Weed** studied at Carnegie Institute of Technology in Pittsburgh, Pennsylvania. He operated as an independent architect until 1950, when he co-founded Weed, Russell, & Johnson. His work encompassed the following categories: residential, commercial, industrial, religious, educational, recreational, health facilities, public buildings, military structures, transportation, communications, mortuary structures, and city planning. Principal works included housing and classrooms at the University of Miami in Coral Gables in 1947, air base plans and operations buildings at 15 bases in the southeastern United States and the Caribbean in 1952, Burdines Department Store in Miami Beach in 1953, and the Fleet Sonar School in Key West in 1953 (Koyl 1955:590).

**T. Trip Russell** received a bachelor of arts degree in architecture in 1934 and a master of arts degree in architecture in 1935, both from the University of Pennsylvania. He co-founded Polevitzky & Russell in 1936 and was associated with the firm until 1941. He co-founded Weed, Russell, & Johnson. His work encompassed the following categories: residential, commercial, industrial,

religious, educational, recreational, health facilities, public buildings, military structures, transportation, communications, city planning, and mortuary structures. Principal works included housing and classrooms at University of Miami in Coral Gables in 1947, air base plans and operations buildings at 15 bases in the southeastern United States and the Caribbean in 1952, Burdines Department Store in Miami Beach in 1953, and the Fleet Sonar School in Key West in 1953 (Koyl 1955:478).

**Herbert H. Johnson** received bachelor of arts and bachelor of science degrees in architecture from Rice Institute and a certification in Naval architecture from Michigan University. He co-founded Weed, Russell & Johnson in 1950. Principal works included housing and classrooms at University of Miami in Coral Gables in 1947, air base plans and operations buildings at 15 bases in the southeastern United States and the Caribbean in 1952, Burdines Department Store in Miami Beach in 1953, the Fleet Sonar School in Key West in 1953, the National Airlines nose hangar in Miami in 1957, and the Miami Daily News plant in 1957 (Koyl 1955:478; Koyl 1962:352).

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#### **Williamson, Loebsock & Associates, Topeka, Kansas**

Thomas W. Williamson

**Thomas W. Williamson** studied at the University of Pennsylvania. He operated his own firm from 1912 to 1945, and co-founded Williamson, Loebsock & Associates in 1945. His work encompassed four categories: educational, health facilities, public buildings, and military structures. Principal work included high schools in Topeka and El Dorado Kansas during the 1930s, the National Bank of Topeka in 1935, Pratt County Hospital in Kansas in 1950, and the Washburn College administration building in Topeka in 1950 (Koyl 1955:609; Koyl 1962:766).

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#### **Adrian Wilson, Los Angeles, California**

**Adrian Wilson** studied at the School of Architectural Engineering at Washington University in St. Louis from 1917 to 1919, and took night-school courses in architecture and structural and mechanical engineering from 1924 to 1926. He was a partner in Webster & Wilson from 1930 to 1936, and he began his own practice in 1936. His work encompassed the following categories: residential, commercial, industrial, religious, educational, recreational, health facilities, public buildings and structures, military structures, transportation, city planning, penal institutions, and communications. Principal works included five buildings at Los Angeles General Hospital from 1949 to 1955, buildings at air bases between 1952 and 1955, the Los Angeles Courthouse in 1956, the Las Vegas Convention Center in 1959, and the United States Embassy in Saigon in 1968 (Koyl 1955:610; Koyl 1962:767; Gane 1970:999).

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#### **Wise, Simpson, Aiken & Associates, Atlanta, Georgia**

James C. Wise

William M. Simpson

Hobert W. Aiken

**William M. Simpson** received a bachelor of science degree from Georgia School of Technology in 1942 (later known as Georgia Institute of Technology). In 1946 he joined James C. Wise, the firm's predecessor. Simpson was a draftsman from 1946 to 1949, an architect from 1949 to 1952, an

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associate architect in 1952, and later a participating associate. Projects completed for James C. Wise comprised six types: residential, commercial, industrial, recreational, health facility, and transportation. He was treasurer and a vice president for Wise, Simpson, Aiken & Associates (Koyl 1955:508-509; Koyl 1962:645).

**Hobert W. Aiken** attended Biltmore College from 1937 to 1939 and received a bachelor of science degree in architecture in 1941 and an advanced architecture degree in 1947, both from Georgia Institute of Technology. He worked in the Office of the Quartermaster General of the Army in 1941. He was an architecture instructor at Georgia Tech in 1947 and 1948. He was a draftsman for Lindsey M. Gudger from 1937 to 1939, followed by Anthony Lord from 1939 to 1946, and James C. Wise during 1947. His work comprised fourteen categories: commercial, industrial, educational, penal, public buildings and structures, military, transportation, scientific, restoration, residential, religious, recreational, and health (Koyl 1955:6; Koyl 1962:6).

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### **Wittenberg, Delony & Davidson, Little Rock, Arkansas**

Gordon G. Wittenberg

Lawson L. Delony

Julian B. Davidson

**Gordon G. Wittenberg** studied at the University of Arkansas and received a bachelor of science degree in architectural engineering from the University of Illinois in 1943. He joined Wittenberg, Delony & Davidson in 1952. His work encompassed the following categories: residential, commercial, industrial, religious, educational, recreational, health facilities, public buildings, military structures, and scientific structures. Principal work included buildings at Little Rock Air Force Base, in association with architects Erhart, Eichenbaum & Rauch and Ginnochio & Cromwell (Koyl 1955:615; Koyl 1962:773).

**Lawson L. Delony** studied at the University of Illinois and Columbia University (American Institute of Architects archival files 2006).

**Julian B. Davidson** received a bachelor's degree in architecture from Washington University in 1928 and studied at the Massachusetts Institute of Technology in 1944 and 1945. His work encompassed the following categories: residential, commercial, religious, educational, recreational, health facilities, public buildings, military structures, and scientific structures. Davidson joined Wittenberg, Delony & Davidson in 1946. Principal works included a dormitory at the University of Arkansas, Fayetteville in 1949, and Boone County Hospital in Harrison, Arkansas, in 1952 (Koyl 1955:125; Koyl 1962:154).

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### **Yost & Taylor, Kenilworth, Illinois**

L. Morgan Yost

D. Coder Taylor

**L. Morgan Yost** studied at Northwestern University and received a bachelor's degree from Ohio State University in 1931. He worked as an independent architect from 1932 to 1952, and co-founded Yost & Taylor in 1952. His work encompassed the following categories: residential, commercial, industrial, religious, educational, and public buildings.

**D. Coder Taylor** studied at the University of Washington and received a bachelor's degree in architecture from the Carnegie Institute of Technology in 1935. He was associated with two other firms from 1940 to 1952, and co-founded Yost & Taylor in 1952. His work encompassed the following categories: residential, commercial, industrial, religious, educational, recreational, health facilities, public buildings and structures, military structures, scientific structures, mortuary structures, city planning, landscape design, and interior design. Principal works included the St. Charles, Illinois municipal building in 1940 (Koyl 1955:551; Koyl 1962:694).

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### **Zick & Sharp, Las Vegas, Nevada**

Walter F. Zick

Harris P. Sharp

**Walter F. Zick** received a bachelor of science degree in architecture and a master of science degree in education in 1932, both from the University of Southern California. He co-founded Zick & Sharp in 1949. His work encompassed the following categories: residential, commercial, religious, educational, recreational, health facilities, penal institutions, public buildings, transportation, mortuary structures, and city planning. Principal work included the Flamingo Hotel in Las Vegas in 1948, in association with architect Richard Stadelman; buildings at Nellis Air Force Base in 1953; the Moulin Rouge Hotel in Las Vegas and the River Queen and Silver Lode hotels in Reno, all in 1955; Capehart housing at Nellis Air Force Base in 1959; and, the Nevada Power Company office building and the Clark County courthouse, both in Las Vegas in 1961, in association with architect Welton Becket & Associates (Koyl 1955:628; Koyl 1962:790).

**Harris P. Sharp** studied at the University of Arizona and the University of New Mexico, and received a bachelor's degree in architecture from the University of Southern California in 1943. He co-founded Zick & Sharp in 1949. His work encompassed the following categories: residential, commercial, industrial, religious, educational, recreational, health facilities, penal institutions, public buildings, military structures, transportation, scientific structures, mortuary structures, and city planning. Principal works included the Southern Nevada Power Company in Las Vegas in 1955 in association with architect Welton Becket & Associates, and the River Queen and Silver Lode hotels in Reno and the Moulin Rouge Hotel in Las Vegas, both in 1955 (Koyl 1955:499; Koyl 1962:634).

**APPENDIX D**

**AIR FORCE AND NAVY WHERRY,  
CAPEHART, AND APPROPRIATED  
FUNDS PROJECTS**





**AIR FORCE AND NAVY WHERRY, CAPEHART, AND  
APPROPRIATED-FUNDS PROJECTS**

Lists of Wherry, Capehart, and appropriated-funds projects built by installation are provided in Tables D.1., D.2., D.3., and D.4. The lists were developed from military and civilian newspaper articles and government documents from the period 1949 to 1962. Each time a project was mentioned, the number of units and the installation was tabulated for the appropriate fiscal year (FY). Table D.1. summarizes housing planned and built by program and service. For Tables D.2. and D.3., which list, respectively, Wherry and Capehart construction, projects in the planning stage are denoted with a “p” next to the number of units in the project. Projects under construction are denoted with a “uc.” Completed projects are denoted with a “c.” For Tables D.4., which lists appropriated-funds construction, projects are recorded in the following categories: “r” for requested, “auth” for authorized, “a” for awarded, “ud” for under design, “d” for deferred, and “c” for completed. “Unknown authorization” refers to family housing authorized in Public Laws that did not specify the number of units authorized. Instead, installations were authorized to spend a specific total dollar amount on various construction projects. The last column in each table contains the total number of completed units for each installation, with a grand total at the bottom of the column. The lists reflect installations that were active during the period, some of which are no longer active Navy or Air Force installations.

The tables reveal discrepancies. Several factors contributed to these discrepancies. Data sources were limited, particularly for those units constructed under the appropriated-funds program. Records of appropriated-fund housing built during the period of this study were difficult to find. Inventories of military family housing presented in transcripts of Congressional hearings or in internal military documents often provided total numbers of housing classified as public quarters, but did not specify when this housing was built. It would have been incorrect to assume these public quarters were built during the period of this study, because they could have been officer family housing built before the post-World War II period. Additionally, data occasionally conflicted among sources consulted. These sources included Air Force and Navy records; Congressional hearings reporting numbers of Wherry, Capehart, and appropriated-funds units authorized and approved; public laws that authorized construction of specific numbers of units for a fiscal year; documents located at the National Archives; information obtained from installations; and data provided by the Department of the Air Force and the Department of the Navy. The Air Force and the Navy databases identify the numbers and types of buildings currently under their management, and are presented in Appendix E. Building uses have changed since the database was compiled, making exact calculations difficult.

**Table D.1. Air Force and Navy Family Housing Units Planned and Built (1949-1962)**

Service	Wherry Units		Capehart Units		Appropriated Funds Units	
	Planned*	Built	Planned*	Built	Planned*	Built
Air Force	38,014***	38,014	119,023	62,816	17,267**	5,140
Navy	25,318	17,434	26,388	10,020	2,191	916
Marines	8,081	7,027	14,193	4,372	949	551
<b>Total Units</b>	<b>71,413</b>	<b>62,475</b>	<b>159,604</b>	<b>77,208</b>	<b>20,407</b>	<b>6,607</b>

\*Indicates housing approved and either built or canceled

\*\*Approximate. Public laws for some fiscal years did not provide figures for authorized appropriated-funds housing

\*\*\*Available sources provided figures only for Air Force Wherry housing built, not housing planned but canceled

Note: See Appendix D for breakdowns by installation

Source: See Page D-1

**Table D.2. Air Force and Navy Wherry Projects by Fiscal Year**

Installation	State	Service	FY 1949	FY 1950	FY 1951	FY 1952	FY 1953	FY 1954	FY 1955	FY 1956	Wherry Total Units
Brookley Air Force Base	AL	Air Force									175
Craig Air Force Base	AL	Air Force									225
Maxwell Air Force Base	AL	Air Force		250c							250
Davis-Monthan Air Force Base	AZ	Air Force									550
Williams Air Force Base	AZ	Air Force			500c						500
Castle Air Force Base	CA	Air Force			500uc						700
Edwards Air Force Base	CA	Air Force				500c					1,350
George Air Force Base	CA	Air Force			650c						650
March Air Force Base	CA	Air Force					644c				644
Mather Air Force Base	CA	Air Force			750c						750
McClellan Air Force Base	CA	Air Force				105c					105
Travis Air Force Base	CA	Air Force				980c					980
Hamilton Air Force Base	CA	Air Force									505
Lowry Air Force Base	CO	Air Force									480
Eglin Air Force Base	FL	Air Force									750
MacDill Air Force Base	FL	Air Force			550c						800
Patrick Air Force Base	FL	Air Force									680
Tyndall Air Force Base	FL	Air Force									450
Hunter Air Force Base	GA	Air Force									500
Robins Air Force Base	GA	Air Force									500
Mountain Home Air Force Base	ID	Air Force								500c	500
Chanute Air Force Base	IL	Air Force									800
Scott Air Force Base	IL	Air Force			1,000c						1,000
Barksdale Air Force Base	LA	Air Force									692
Westover Air Force Base	MA	Air Force									1,150

Key:  
p = planned  
uc = under construction  
c = completed

Installation	State	Service	FY 1949	FY 1950	FY 1951	FY 1952	FY 1953	FY 1954	FY 1955	FY 1956	Wherry Total Units
Limestone (Loring) Air Force Base	ME	Air Force									1,500
Presque Isle Air Force Base	ME	Air Force									192
Selfridge Air National Guard Base	MI	Air Force			511						511
Keesler Air Force Base	MS	Air Force									858
Malmstrom Air Force Base	MT	Air Force			192c	400 c					592
Pope Air Force Base	NC	Air Force									125
Offutt Air Force Base	NE	Air Force									611
McGuire Air Force Base	NJ	Air Force									322
Holloman Air Force Base	NM	Air Force									600
Kirtland Air Force Base	NM	Air Force									460
Walker Air Force Base	NM	Air Force									800
Nellis Air Force Base	NV	Air Force									800
Mitchell Air Force Base	NY	Air Force									628
Stewart Air Force Base	NY	Air Force									284
Lockbourne Air Force Base	OH	Air Force									500
Wright-Patterson Air Force Base	OH	Air Force				2,000 c					2,000
Shaw Air Force Base	SC	Air Force									900
Ellsworth Air Force Base	SD	Air Force				401c		490c			891
Rapid City Air Force Base	SD	Air Force									490
Stewart Air Force Base	TN	Air Force									600
Bergstrom Air Force Base	TX	Air Force									480
Biggs Air Force Base	TX	Air Force									800
Carswell Air Force Base	TX	Air Force			600 c						600
James Connally Air Force Base	TX	Air Force									500
Kelly Air Force Base	TX	Air Force									592
Lackland Air Force Base	TX	Air Force									600
Perrin Air Force Base	TX	Air Force									300
Randolph Air Force Base	TX	Air Force				612 c					612
Reese Air Force Base	TX	Air Force					418 c				418

Key:  
p = planned  
uc = under construction  
c = completed

Installation	State	Service	FY 1949	FY 1950	FY 1951	FY 1952	FY 1953	FY 1954	FY 1955	FY 1956	Wherry Total Units
Sheppard Air Force Base	TX	Air Force									612
Walters Air Force Base	TX	Air Force									500
Hill Air Force Base	UT	Air Force									350
Fairchild Air Force Base	WA	Air Force									1,000
Larson Air Force Base	WA	Air Force									800
Francis E. Warren Air Force Base	WY	Air Force									500
<b>NAVY</b>											
Naval Air Station Moffett Field	CA	Navy				72p					72
Naval Supply Center/Naval Air Station Oakland	CA	Navy				349p (w/NAS Alameda)					
Naval Air Station Alameda	CA	Navy				349p (w/NSC, NAS Oakland)					
Naval Auxilliary Air Station El Centro	CA	Navy									70
Naval Auxilliary Air Station Monterey	CA	Navy				135p					
Port Hueneme, Naval Base Ventura County	CA	Navy				123p					123
Point Mugu, Naval Base Ventura County						203p					203
Naval Hospital Oakland	CA	Navy				55p					
Naval Magazine Port Chicago	CA	Navy				126p					
Naval Ordnance Test Center Inyokern	CA	Navy				120p: 712p					600
Naval School Monterey	CA	Navy	157 p			135p					523
Naval Shipyard Mare Island	CA	Navy				358p					
Naval Station San Diego	CA	Navy				1,791p		1,791c			1,791
Naval Supply Annex Stockton	CA	Navy				43p					43
San Francisco Metropolitan Area	CA	Navy				483p (133 dev. by Army)					
Naval Air Station, Denver	CO	Navy				92p					
Naval Submarine Base New London	CT	Navy				450p					450
Naval Air Station Pensacola	FL	Navy				200p					
Naval Auxilliary Air Station Whiting Field	FL	Navy				96p					96

Key:  
p = planned  
uc = under construction  
c = completed

Installation	State	Service	FY 1949	FY 1950	FY 1951	FY 1952	FY 1953	FY 1954	FY 1955	FY 1956	Wherry Total Units
Naval Base Key West	FL	Navy				1,000c					1,000
Naval Station Green Cove Springs	FL	Navy				392p					392
Naval Air Station Barbers Point	HI	Navy				355p					615
Naval Station Pearl Harbor	HI	Navy				962p					1,462
Naval Air Station Glenview	IL	Navy				264p					264
Naval Training Center Great Lakes	IL	Navy				1,000p					1,000
Naval Ammunition Depot Crane	IN	Navy				200p					200
Naval Avionics Facility (Naval Ordnance Plant)	IN	Navy									10
Naval Air Station Olathe	KS	Navy				120p					196
Naval Station New Orleans	LA	Navy				90p					90
Naval Air Station Squantum	MA	Navy									150
Naval Base Boston	MA	Navy				429p					
Naval Academy	MD	Navy				390c					396
Naval Air Station Patuxent River	MD	Navy				1,000p					1,000
Naval Powder Factory Indian Head	MD	Navy				400p					379
Naval Training Center Bainbridge	MD	Navy				1,249p		740c			740
Naval Communication Station Cheltenham	MD	Navy				23p					
Naval Communication Station Winter Harbor	ME	Navy				19p					
Naval Facility Brunswick (Bath site) NAF	ME	Navy									232
Naval Air Station Minneapolis	MN	Navy				96p					
Naval Air Facility Weeksville	NC	Navy				42p					42
Naval Air Rockets Test Station Lake Denmark	NJ	Navy				25p					
Naval Air Station Lakehurst	NJ	Navy				230p					230
Naval Supply Depot Bayonne	NJ	Navy				155p					157
Naval Air Station Niagara Falls	NY	Navy				33p					
New York Metropolitan Area	NY	Navy				408p					
Naval Air Station Akron	OH	Navy				58p					
Naval Station Tongue Point	OR	Navy				50p					
Naval Base Philadelphia	PA	Navy				540p					
Naval Air Station Willow Grove/Naval Air Development Center, Johnsville	PA	Navy				124p					

Key:

p = planned

uc = under construction

c = completed

Installation	State	Service	FY 1949	FY 1950	FY 1951	FY 1952	FY 1953	FY 1954	FY 1955	FY 1956	Wherry Total Units
Naval Air Station Quonset Point	RI	Navy				522p					351
Naval Base Newport	RI	Navy				52p		356c			356
Naval Hospital Beaufort	SC	Navy						85c			85
Naval Air Station Memphis	TN	Navy				540p					540
Naval Air Station Corpus Christi	TX	Navy				340p		340c			340
Naval Air Station Dallas	TX	Navy				129p					129
Naval Auxiliary Air Station Kingsville	TX	Navy									296
Fleet Air Development Training Center Dam Neck	VA	Navy				28p					
Little Creek Amphibious Base Norfolk	VA	Navy									400
Naval Air Station Oceana	VA	Navy				256p					554
Naval Aviation Ordnance Test Station Chincoteague	VA	Navy				306p					306
Naval Base Norfolk	VA	Navy				1,316p					916
Naval Mine Depot Yorktown	VA	Navy				29p					130
Naval Proving Ground Dahlgren	VA	Navy				50p					
Naval Radio Transmission Facility Driver	VA	Navy									20
Naval Security Group Activity Northwest	VA	Navy									26
Naval Shipyard Portsmouth	VA	Navy				159p		159c			159
Naval Air Station Whidbey Island	WA	Navy				300p					300
<b>MARINES</b>											
Marine Corps Air Station El Toro	CA	Marines				571p					571
Marine Corps Base Camp Pendleton	CA	Marines				562p					1,562
Marine Corps Supply Depot Barstow	CA	Marines				337p					337
Marine Corps Training Center Twentynine Palms	CA	Marines									493
Marine Corps Base Camp Lejeune	NC	Marines				1,054p		2,108c			2,108
Marine Corps Air Station Cherry Point	NC	Marines				1,421p					1,421
Marine Corps Recruit Depot Parris Island	SC	Marines				85p					85
Marine Corps Schools Quantico	VA	Marines				450p					450
<b>Totals Units</b>											<b>62,475</b>

Key:  
p = planned  
uc = under construction  
c = completed



**Table D.3. Air Force and Navy Capchart Projects by Fiscal Year**

Installation	State	Service	FY 1956	FY 1957	FY 1958	FY 1959	FY 1960	FY 1961	FY 1962	FY 1963	Capchart Total Units
<b>AIR FORCE</b>											
Craig Air Force Base	AL	Air Force					200p; 270p				
Eielson Air Force Base	AK	Air Force	250p								
Luke Air Force Base	AZ	Air Force	795p					725c			725
Williams Air Force Base	AZ	Air Force				150p (auth but transf. to another base)					
Yuma County Air Force Base	AZ	Air Force	320p								
Blytheville Air Force Base	AR	Air Force	360p		360c		470p; 590p; 430p		470c		830
Little Rock Air Force Base	AR	Air Force	1,535p			1,535 c					1,535
Beale Air Force Base	CA	Air Force				970p	230p	230p; 570c	230c; 400c		1,200
Cooke Air Force Base	CA	Air Force				525p					
Edwards Air Force Base	CA	Air Force				778p	778 c				778
Hamilton Air Force Base	CA	Air Force	550p			550p		550c			550
Mather Air Force Base	CA	Air Force				220p	230p, 220c		230c		450
McClellan Air Force Base	CA	Air Force	125p			540p	540c				540
Oxnard Air Force Base	CA	Air Force	200p; 350p			315p	315c				315
Travis Air Force Base	CA	Air Force	500p			48c; 500c	780p; 600p	600p		600c	1,148
Vandenberg Air Force Base	CA	Air Force				525 c; 880c	600p; 950p; 400p	400c; 200p; 270p	270p		1,805
Ent Air Force Base	CO	Air Force	480p								
Lowry Air Force Base	CO	Air Force					700p; 100p	100p; 350p			
United States Air Force Academy	CO	Air Force			1,200p	300p (auth. but transf. to another base)	1,200c				1,200

Key:  
p = planned  
uc = under construction  
c = completed

Installation	State	Service	FY 1956	FY 1957	FY 1958	FY 1959	FY 1960	FY 1961	FY 1962	FY 1963	Caphart Total Units
Dover Air Force Base	DE	Air Force	2,075p	1,000p		500 c	250p; 500c		250c		1,250
Eglin Air Force Base	FL	Air Force		500p	500c						500
Homestead Air Force Base	FL	Air Force		1,570p		1,255 c					1,255
McCoy Air Force Base	FL	Air Force				668p		668 c			668
Patrick Air Force Base	FL	Air Force		1,125p		999 c					999
Tyndall Air Force Base	FL	Air Force		420p		420c					420
Moody Air Force Base	GA	Air Force		500p			200p	200p			
Robins Air Force Base	GA	Air Force		273p	273p	150p; 273 c	150 c				423
Turner Air Force Base	GA	Air Force				200p	200c; 430p	430p; 200c; 260p	260p	430c	830
Hickam Air Force Base	HI	Air Force		600p			600c				600
Sioux City Municipal Airport	IA	Air Force		325p		235p	235 c				235
Mountain Home Air Force Base	ID	Air Force		270p		270p	820p; 270c	820p; 300p		300c	570
Chanute Air Force Base	IL	Air Force				450p	100p; 450c				450
Bunker Hill Air Force Base	IN	Air Force		680p		400p; 250p; 680c	400p; 500p; 240p	250c			930
Forbes Air Force Base	KS	Air Force		640p	640 c	414p	490c	414c			1,054
McConnell Air Force Base	KS	Air Force		490p							490
Schilling Air Force Base	KS	Air Force				535c	200p; 275p		200c		735
Smoky Hill Air Force Base	KS	Air Force		535p							
Chennault Air Force Base	LA	Air Force				300p					
England Air Force Base	LA	Air Force		300p	300 c						300
Houma Air Force Base	LA	Air Force		30p							
Lake Charles Air Force Base	LA	Air Force				300p					
Hanscom Air Force Base	MA	Air Force		670p		395c		200p	200p		395
Westover Air Force Base	MA	Air Force		310p		310p	310c; 180p	180p	180c		490
Andrews Air Force Base	MD	Air Force		280p			300p	300p			
Bolling Air Force Base	MD	Air Force					260p				

Key:  
p = planned  
uc = under construction  
c = completed

Installation	State	Service	FY 1956	FY 1957	FY 1958	FY 1959	FY 1960	FY 1961	FY 1962	FY 1963	Caphart Total Units
Dow Air Force Base	ME	Air Force		685p		530p	480p; 280p; 530c	333p	270p	480c	1,010
Loring Air Force Base	ME	Air Force	64p				114p		114c		114
Presque Isle Air Force Base	ME	Air Force	114p			114p (auth but later transferred to Loring)					
Topsham Air Force Station	ME	Air Force				177p	177p		177c		177
Custer Air Force Station	MI	Air Force				169p	169c				169
K.I. Sawyer Air Force Base	MI	Air Force	340p		340p	595p; 360p	470p; 370p; 235 c; 340c	100p; 352c	100p; 100uc	368c; 100c	1,395
Kinross (Kincheloe) Air Force Base	MI	Air Force	258p			475p	390p; 520p; 330p; 190p	475c; 190p	190p; 190uc; 330c	190c	995
Selfridge Air National Guard Base	MI	Air Force				380 p; 580p (auth but 200 transf. to another base)		380 c			380
Wurtsmith Air Force Base	MI	Air Force	325p; 105p			618p	390p; 420p; 330p	618c	330c		948
Duluth Air Force Base	MN	Air Force	240p			365p	240 c				240
Grandview (Richards-Gebaur) Air Force Base	MO	Air Force	700p			610p	610c				610
Whiteman (Sedalia) Air Force Base	MO	Air Force				154p	350p	618c; 350c	504c		1,452
Columbus Air Force Base	MS	Air Force	480p		480 c		340p; 450p; 300p		340c		820
Kessler Air Force Base	MS	Air Force				290p	240p; 500p		290c	240c	530
Glasgow Air Force Base	MT	Air Force	200p			760p	500p	300c; 90p; 200p; 460c	200c		960
Malmstrom Air Force Base	MT	Air Force				150p; 150c	560p; 355p	300p; 260p	260p; 260uc; 300c	260c	710
Lincoln Air Force Base	NE	Air Force	600p				600 c				600

Key:  
p = planned  
uc = under construction  
c = completed

Installation	State	Service	FY 1956	FY 1957	FY 1958	FY 1959	FY 1960	FY 1961	FY 1962	FY 1963	Caphart Total Units
Offutt Air Force Base	NE	Air Force				616p; 216p	800p; 400p; 500p	400 p; 400c; 500p	500uc; 216c	400c; 500c (in FY64)	1,516
Nellis Air Force Base	NV	Air Force	395p			200p	200c	160c			360
Stead Air Force Base	NV	Air Force	645p			645c					645
Pease Air Force Base	NH	Air Force				483p; 1,100c					1,100
Portsmouth Air Force Base	NH	Air Force	1,700p								
Highlands Air Force Base	NJ	Air Force					110p	90p			
McGuire Air Force Base	NJ	Air Force	2,000p		300p	1,450p	300c	1,450c			1,750
Cannon Air Force Base	NM	Air Force					160p; 190p				
Holloman Air Force Base	NM	Air Force	400p			400p	400c				400
Kirtland Air Force Base	NM	Air Force				490p	490 c				490
Griffiss Air Force Base	NY	Air Force	460p		460p	270p	135p, 460c	135p; 270c			730
Hancock Field (Syracuse Air Force Base)	NY	Air Force						216c			216
Niagara Falls Air Force Base	NY	Air Force	290p			290p	290c (90 units loaned to Army)				200
Plattsburgh Air Force Base	NY	Air Force	1,685p				1,685c				1,685
Stewart Air Force Base	NY	Air Force	300p			300p	300 c				300
Suffolk County Air Force Base	NY	Air Force	350p			220p	220 c				220
Syracuse Air Force Station	NY	Air Force	216p			216p		216c			216
Pope Air Force Base	NC	Air Force	560p					31c (borrowed from Army)			31
Seymour Johnson Air Force Base	NC	Air Force	1,500p			1,500 c					1,500
Grand Forks Air Force Base	ND	Air Force	240p			1,049p; 744p	670p; 710p; 350p; 366p; 305p	240c; 744uc; 304uc	744c	304c; 366c	1,654
Minot Air Force Base	ND	Air Force	450p			932p; 320p	530p; 115p	320c; 150p; 210p; 644c; 288c	210c		1,462

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Installation	State	Service	FY 1956	FY 1957	FY 1958	FY 1959	FY 1960	FY 1961	FY 1962	FY 1963	Caphart Total Units
Clinton County Air Force Base	OH	Air Force				536p	150p; 350p; 300p				
Lockbourne Air Force Base	OH	Air Force	400p			400p	400 c				400
Youngstown Air Force Base	OH	Air Force	250p								
Altus Air Force Base	OK	Air Force	700p				700c				700
Ardmore Air Force Base	OK	Air Force	750p								
Clinton-Sherman Air Force Base	OK	Air Force	500p			50p; 450c; 50 c	270p; 300p; 400p	300 c; 100p			800
Tinker Air Force Base	OK	Air Force	268p			268 c					268
Vance Air Force Base	OK	Air Force	230p			230p	170p; 230c				230
Camp Adair Air Force Station	OR	Air Force				150p		150c			150
Kingsley Air Force Base	OR	Air Force				220c, 70c					290
Klamath Falls Air Force Base	OR	Air Force	220p; 320p								
Olmstead Air Force Base	PA	Air Force	140p				140c				140
Charleston Air Force Base	SC	Air Force	600p				350p; 600c		350c		950
Donaldson Air Force Base	SC	Air Force				275p (auth then transf. to another base)					
Myrtle Beach Air Force Base	SC	Air Force	800p				800c				800
Ellsworth Air Force Base	SD	Air Force				220p	190p; 300p; 50p	220uc	500p; 500uc; 190c	500c (in FY64); 220c	910
McGhee-Tyson Airport	TN	Air Force	181p								
Sewart Air Force Base	TN	Air Force	87p	87 c							87
Abilene Air Force Base	TX	Air Force	944p; 1,000p								
Amarillo Air Force Base	TX	Air Force				500p	600p; 100p; 500c	100p; 500c			1,000
Brooks Air Force Base	TX	Air Force					170p	170p	170 c		170
Bryan Air Force Base	TX	Air Force	135p								
Dyess Air Force Base	TX	Air Force	944 c			56 c					1,000

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c = completed

Installation	State	Service	FY 1956	FY 1957	FY 1958	FY 1959	FY 1960	FY 1961	FY 1962	FY 1963	Caphart Total Units
Foster Air Force Base	TX	Air Force		500p							
Goodfellow Air Force Base	TX	Air Force		160p							
Gray Air Force Base	TX	Air Force						37c (borrowed from Army)			37
James Connally Air Force Base	TX	Air Force				366p	366c				366
Lackland Air Force Base	TX	Air Force				500 c	530p	125c			625
Laredo Air Force Base	TX	Air Force		345p							
Laughlin Air Force Base	TX	Air Force	635p	500p			110p; 500c				500
Medina Base	TX						125c (transferred from Army)				125
Perrin Air Force Base	TX	Air Force					200p				
Sheppard Air Force Base	TX	Air Force				500p	500c	290p	290p		500
Webb Air Force Base	TX	Air Force		460p			460c				460
Hill Air Force Base	UT	Air Force						380p	300p		
Fort Lee Air Force Station	VA	Army, Air Force				154p	304c (154 occupied by Air Force)				154
Langley Air Force Base	VA	Air Force				500p	350p	370p; 500c	370p		500
Fairchild Air Force Base	WA	Air Force		250p			250c	64c (borrowed from Army)			314
Geiger Field	WA	Air Force		228p		168p	228 c				228
Larson Air Force Base	WA	Air Force				200p	330p; 430p; 200c	347c	330c		877
McCord Air Force Base	WA	Air Force	1,415p	1,000p		1,000p	600c				600
Richard Bong Air Force Base	WI	Air Force		350p		900p					
Truax Field	WI	Air Force		523p		280p		280p		280c	280
Francis E. Warren Air Force Base	WY	Air Force					156p; 100p	100p	100 c		100

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Installation	State	Service	FY 1956	FY 1957	FY 1958	FY 1959	FY 1960	FY 1961	FY 1962	FY 1963	Caphart Total Units
<b>NAVY</b>											
Naval Auxiliary Air Station Barin	AL	Navy	214p								
Naval Air Station Alameda	CA	Navy						900p			
Naval Air Station Lemoore	CA	Navy	1,507p		800p	500p			200p; 1,300c		1,300
Naval Auxiliary Air Station El Centro	CA	Navy	241p								
Naval Air Station Miramar	CA	Navy							72c		72
Naval Construction Battalion Center Port Hueneeme	CA	Navy							200p; 8p	8c	8
Naval Base San Diego	CA	Navy		1,000p; 947p		1,000p			875c		875
Naval Facility Centerville	CA	Navy				24p			24c		24
Naval Facility Point Sur	CA	Navy				24p			24c		24
Naval Ordnance Test Station China Lake	CA	Navy		288p			500p		500c		500
Naval Post Graduate School Monterey	CA	Navy						250p; 150p	150c		150
Pacific Missile Range Point Mugu	CA	Navy		360p	360c			300p; 200p	192p	192c	552
Naval Submarine Base New London	CT	Navy				500p	500p		200p; 1,000uc; 250p		1,000
Naval Facility Fort Miles	DE	Navy							30p		
Naval Auxiliary Air Station Mayport	FL	Navy					40p		540p		
Naval Station Mayport	FL	Navy					40p	500p	540p		
Naval Auxiliary Air Station Whiting Field	FL	Navy		289p			229p		229c		229
Naval Mine Defense Laboratory Panama City	FL	Navy					42p				
Naval Air Station Pensacola	FL	Navy		1,000p							
Naval Air Station Key West	FL	Navy		213p							
Naval Station Key West	FL	Navy		277p					500p		500
Naval Air Station Glynco	GA	Navy		590p			225p		225c		225

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Installation	State	Service	FY 1956	FY 1957	FY 1958	FY 1959	FY 1960	FY 1961	FY 1962	FY 1963	Caphart Total Units
Naval Air Station Barber's Point	HI	Navy	1,140p	1,140p	1,140p	1,140uc			1,139c		1,139
Naval Ammunition Depot Oahu	HI	Navy		80p	80p	80p					
Naval Ammunition Depot Luahalei Branch	HI	Navy	34p	34p	34p	34c					34
Naval Station Pearl Harbor	HI	Navy	650p	650p	650p	650uc			730c		730
Fleet Marine Force, Pacific, Headquarters	HI	Navy				168p					
Naval Receiving Station Wahiawa	HI	Navy	160p								
Naval Ammunition Depot Waikale	HI	Navy	43p			43uc					
Naval Ammunition Depot West Loch	HI	Navy	37p			37uc					
Naval Training Center Great Lakes	IL	Navy	590p			425p		250p; 108p	425c; 92p	108c (FY63 or FY64)	533
Naval Air Station Hutchinson	KS	Navy	438p								
Naval Auxiliary Air Station New Iberia	LA	Navy	431p				178p				
Naval Ammunition Depot Hingham	MA	Navy	17p								
Naval Facility Nantucket	MA	Navy				19p; 19uc			19c		19
Naval Training Center Bainbridge	MD	Navy	300p								
Naval Receiving Station Cheltenham	MD	Navy	120p								
Naval Administrative Unit Annex, Foxville	MD	Navy							20c		20
Naval Air Station Brunswick	ME	Navy	277p			277p		277uc	277c		277
Naval Radio Station Washington County (Cutler)	ME	Navy				33p	33p		33c		33
Naval Security Group Activity Winter Harbor	ME	Navy	20p				20c		30p		20
Naval Auxiliary Air Station Meridian	MS	Navy	382p				320p				320
Seaplane Facility Harvey Point	NC	Navy	510p								
Naval Auxiliary Air Station Edenton	NC	Navy	632p								
Naval Facility Cape Hatteras	NC	Navy			27p	27p			27c		27
Naval Air Facility Weeksville	NC	Navy	70p								

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Installation	State	Service	FY 1956	FY 1957	FY 1958	FY 1959	FY 1960	FY 1961	FY 1962	FY 1963	Caphart Total Units
Naval Ordnance Missile Test Facility	NM	Navy		51p		51p					
Naval Auxiliary Air Station Fallon	NV	Navy					106p		106c		106
Naval Facility Coos Head	OR	Navy				24p			24c		24
Naval Base Philadelphia	PA	Navy			800p			400p	400p		
Naval Station Newport	RI	Navy	2,000p				500p		500p		
Naval Ammunition Depot Charleston (Naval Weapons Station Charleston)	SC	Navy					40p		184c; 40c; 200p		224
Naval Station Charleston	SC	Navy						500p	200p; 500p		
Naval Air Station Memphis	TN	Navy						500p; 250p	250p	250c	250
Naval Auxiliary Air Station Chase Field	TX	Navy	225p		225p		225c				225
Naval Base Norfolk	VA	Navy							300p		
Naval Air Station Oceana	VA	Navy						40p			
Naval Air Station Whidbey Island	WA	Navy	660p		550p	550p			550c		550
Naval Facility Pacific Beach	WA	Navy				30p			30c		30
Naval Radio Research Station Sugar Grove	WV	Navy					142p				
<b>MARINES</b>											
Marine Corps Auxiliary Air Station Yuma	AZ	Marine Corps					100p; 60p		60c		60
Marine Corps Air Station El Toro	CA	Marine Corps	600p								
Marine Corps Base Camp Pendleton	CA	Marine Corps						400p			
Marine Corps Training Center Twentynine Palms	CA	Marine Corps					150p	150p; 100p	150c; 100p		150
Marine Corps Supply Center Albany	GA	Marine Corps	160p		160c						160
Marine Corps Camp H.M. Smith	HI	Marine Corps	168p		168p	168uc			168c		168

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Installation	State	Service	FY 1956	FY 1957	FY 1958	FY 1959	FY 1960	FY 1961	FY 1962	FY 1963	Caphart Total Units
Marine Corps Air Station Kaneohe Bay	HI	Marine Corps		921p	650p	650p	650uc		650c		650
Marine Corps Air Station Cherry Point	NC	Marine Corps		1,784p	849p	849p; 849c					849
Marine Corps Base Camp Lejeune	NC	Marine Corps		1,124p		800p		800uc	800p		800
Marine Corps Air Facility New River	NC	Marine Corps		435p	435p; 435c						435
Marine Corps Auxiliary Air Station (Marine Corps Air Station) Beaufort	SC	Marine Corps		2,565p	1,100p				1,100c		1,100
Marine Corps Recruit Depot Parris Island	SC	Marine Corps		415p	355p						
Marine Corps Schools Quantico	VA	Marine Corps		1,003p			450p		450p		
Naval Facility Coos Head	OR	Marine Corps				24p					
<b>Total Units</b>											<b>77,208</b>

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**Table D.4. Air Force and Navy Appropriated-Funds Projects by Fiscal Year**

Installation	State	Service	FY 1950	FY 1951	FY 1952	FY 1955	FY 1956	FY 1957	FY 1958	FY 1959	FY 1960	FY 1961	FY 1962	Appropriated -Funds Total Units
<b>AIR FORCE</b>														
Eielson Air Force Base	AK	Air Force	Unknown auth.		Unknown auth.			250 auth.						
Elmendorf Air Force Base	AK	Air Force			Unknown auth.									
Ladd Air Force Base	AK	Air Force		Unknown auth.	Unknown auth.									
Little Rock Air Force Base	AR	Air Force					100 auth.	100d						
Davis-Monthan Air Force Base	AZ	Air Force				5 auth.		5ud						
Luke Air Force Base	AZ	Air Force				125 auth.		125d						
Beale Air Force Base	CA	Air Force			Unknown auth.	225 auth.	113 auth.	338d						
Hamilton Air Force Base	CA	Air Force						132c						132
Hammer Field	CA	Air Force			Unknown auth.									
Mather Air Force Base	CA	Air Force				4 auth.		4c						4
McClellan Air Force Base	CA	Air Force						31c						31
Oxnard Air Force Base	CA	Air Force			Unknown auth.	70 auth.		5c; 70d						5
Parks Air Force Base	CA	Air Force				85 auth.		85d						
Sacramento Peak	CA	Air Force						6 auth.; 6ud						
Travis Air Force Base	CA	Air Force				6 auth.		6c						6

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for other reason (high bid, utility issues, etc.)

Installation	State	Service	FY 1950	FY 1951	FY 1952	FY 1955	FY 1956	FY 1957	FY 1958	FY 1959	FY 1960	FY 1961	FY 1962	Appropriated -Funds Total Units
Vandenberg Air Force Base	CA	Air Force												
Ent Air Force Base	CO	Air Force			Unknown auth.	90 auth.	100 auth.	190d						
Dover Air Force Base	DE	Air Force			Unknown auth.		352 auth.	5c; 352d						5
Newcastle County Airport	DE	Air Force			Unknown auth.	100 auth.		100c						100
Buckingham Weapons Area	FL	Air Force					100 auth.	100d						
Homestead Air Force Base	FL	Air Force					84 auth.	84d						
Hurlburt Air Force Base	FL	Air Force				275 auth.		275c						275
Morrison Field	FL	Air Force			Unknown auth.									
Orlando Air Force Base	FL	Air Force			Unknown auth.									
Patrick Air Force Base	FL	Air Force						19c						19
Pincastle Air Force Base	FL	Air Force			Unknown auth.									
Tyndall Air Force Base	FL	Air Force						23c						23
Dobbins Air Force Base	GA	Air Force							5 auth.					
Hunter Air Force Base	GA	Air Force				5 auth.		5ud						
Moody Air Force Base	GA	Air Force			Unknown auth.	140 auth.	170 auth.	5c; 310d						5
Robins Air Force Base	GA	Air Force						16c						16
Hickam Air Force Base	HI	Air Force						943c						943
Mountain Home Air Force Base	ID	Air Force				4 auth.	150 auth.	4c; 150d						4

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for other reason (high bid, utility issues, etc.)

Installation	State	Service	FY 1950	FY 1951	FY 1952	FY 1955	FY 1956	FY 1957	FY 1958	FY 1959	FY 1960	FY 1961	FY 1962	Appropriated -Funds Total Units
O'Hare International Airport	IL	Air Force			Unknown auth.									
Sioux City Municipal Airport	IA	Air Force				50 auth.		50c						50
Forbes Air Force Base	KS	Air Force			Unknown auth.			5c						5
McConnell Air Force Base	KS	Air Force				150 auth.		9c; 4c; 146d						13
Smoky Hill Air Force Base	KS	Air Force			Unknown auth.	280 auth.	255 auth.	5c; 535d						5
Wichita Air Force Base	KS	Air Force			Unknown auth.									
Campbell Air Force Base	KY	Air Force			Unknown auth.									
Alexandria Municipal Airport	LA	Air Force			Unknown auth.									
England Air Force Base	LA	Air Force						6c						6
Lake Charles Air Force Base	LA	Air Force			Unknown auth.	200 auth.		180c; 20d						180
Hanscom Airport	MA	Air Force			Unknown auth.		60 auth.	60d						
Otis Air Force Base	MA	Air Force			Unknown auth.	200 auth.	300 auth.	200 auth.; 500c; 200ud	488 auth.					500
Westover Air Force Base	MA	Air Force						31c						31
Andrews Air Force Base	MD	Air Force						301c						301
Friendship International Airport	MD	Air Force			Unknown auth.									
Dow Air Force Base	ME	Air Force				300 auth.		300d						
Limestone (Loring) Air Force Base	ME	Air Force			Unknown auth.	4 auth.		4uc						

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Installation	State	Service	FY 1950	FY 1951	FY 1952	FY 1955	FY 1956	FY 1957	FY 1958	FY 1959	FY 1960	FY 1961	FY 1962	Appropriated -Funds Total Units
Presque Isle Air Force Base	ME	Air Force			Unknown auth.	50 auth.	100 auth.	150d						
Kinross (Kincheloe) Air Force Base	MI	Air Force			Unknown auth.	90 auth.	100 auth.	190c	39 auth.					190
Oscoda Air Force Base	MI	Air Force			Unknown auth.									
K.I. Sawyer Municipal Airport	MI	Air Force					200 auth.	2c; 200d						2
Wurtsmith Air Force Base	MI	Air Force				50 auth.	50 auth.	50 auth., d; 100c						100
Duluth Air Force Base	MN	Air Force			Unknown auth.	100 auth.	5 auth.;; 100 auth.	100c; 5c						105
Minneapolis-Saint Paul Airport	MN	Air Force				70 auth.		70d						
Wold-Chamberlain Field	MN	Air Force			Unknown auth.									
Grandview (Richards-Gebaur) Air Force Base	MO	Air Force			Unknown auth.		100 auth.	100d						
Sedalia (Whiteman) Air Force Base	MO	Air Force			Unknown auth.	400 auth.	400 auth.	400c; 88ud; 312d						400
Columbus Air Force Base	MS	Air Force				30 auth.	100 auth.	130d						
Crystal Springs Air Force Station	MS	Air Force									27 r			
Greenville Air Force Base	MS	Air Force				120 auth.		120d						
Glasgow Airport	MT	Air Force					100 auth.	100 auth.;; 200ud	67 auth.					
Malmstrom Air Force Base	MT	Air Force				4 auth.		4ud	4 c					4
Pope Air Force Base	NC	Air Force						21c						21

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Installation	State	Service	FY 1950	FY 1951	FY 1952	FY 1955	FY 1956	FY 1957	FY 1958	FY 1959	FY 1960	FY 1961	FY 1962	Appropriated -Funds Total Units
Grand Forks Air Force Base	ND	Air Force				100 auth.	100d							
Minot Air Force Base	ND	Air Force				65 auth.	65d							
Hastings Air Force Station	NE	Air Force							27 auth.					
Lincoln Air Force Base	NE	Air Force			Unknown auth.	400 auth.	400c							400
Offutt Air Force Base	NE	Air Force						5 auth., d						
Portsmouth Air Force Base	NH	Air Force			Unknown auth.		1,000 auth.	16c; 1,000d						16
McGuire Air Force Base	NJ	Air Force				5	270 auth.	5c; 270d						5
Clovis Air Force Base	NM	Air Force				170 auth.	187 auth.	357c						357
Kirtland Air Force Base	NM	Air Force				5		5c						5
Indian Springs Air Force Base	NV	Air Force						25 auth.; 50ud						
Nellis Air Force Base	NV	Air Force				5		5c						5
Stead Air Force Base	NV	Air Force				90	200 auth.	115c; 290d						115
Griffiss Air Force Base	NY	Air Force					178 auth.	34c; 178d						34
Niagara Falls Air Force Base	NY	Air Force			Unknown auth.	50		5c; 50d						5
Plattsburgh Air Force Base	NY	Air Force					950 auth.	72c; 950d						72
Stewart Air Force Base	NY	Air Force						39c						39
Suffolk County Air Force Base	NY	Air Force				100	50 auth.	5c; 150d						5
Syracuse Air Force Station	NY	Air Force						11c						11

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Installation	State	Service	FY 1950	FY 1951	FY 1952	FY 1955	FY 1956	FY 1957	FY 1958	FY 1959	FY 1960	FY 1961	FY 1962	Appropriated -Funds Total Units
Lockbourne Air Force Base	OH	Air Force				4 auth.		44c; 4c						48
Wilkins Air Force Base	OH	Air Force						5 auth.; 5ud						
Youngstown Municipal Airport	OH	Air Force			Unknown auth.	50 auth.		5c; 50d						5
Altus Air Force Base	OK	Air Force			Unknown auth.	360 auth.	150 auth.	1c; 510d						1
Ardmore Airfield	OK	Air Force			Unknown auth.		400 auth.	400d						
Clinton-Sherman Air Force Base	OK	Air Force					195 auth.	1c; 195d						1
Portland Municipal Airport	OR	Air Force			Unknown auth.	60 auth.		60d						
Klamath Falls Air Force Base	OR	Air Force					74 auth.	74d						
Greater Pittsburgh Airport	PA	Air Force			Unknown auth.	50 auth.		50d						
Olmsted Air Force Base	PA	Air Force						16c						16
Charleston Air Force Base	SC	Air Force			Unknown auth.	450 auth.		5c; 450d						5
Greenville Air Force Base	SC	Air Force			Unknown auth.									
Shaw Air Force Base	SC	Air Force				5 auth.	300 auth.	5c; 300d						5
McGhee-Tyson Airport	TN	Air Force			Unknown auth.	50 auth.		50d						
Sewart Air Force Base	TN	Air Force						1c						1
Amarillo Air Force Base	TX	Air Force			Unknown auth.									
Big Spring Municipal Airport	TX	Air Force			Unknown auth.									

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for other reason (high bid, utility issues, etc.)

Installation	State	Service	FY 1950	FY 1951	FY 1952	FY 1955	FY 1956	FY 1957	FY 1958	FY 1959	FY 1960	FY 1961	FY 1962	Appropriated -Funds Total Units
Bryan Air Force Base	TX	Air Force						5c						5
Camp Wolters	TX	Air Force			Unknown auth.									
Ellington Air Force Base	TX	Air Force			Unknown auth.									
Foster Field	TX	Air Force			Unknown auth.	200 auth.	300 auth.	5c; 500d						5
Gray Air Force Base	TX	Air Force			Unknown auth.	100 auth.		100c (transf. to Army)						
Hartlingen Air Force Base	TX	Air Force			Unknown auth.									
Hensley Naval Air Station	TX	Air Force			Unknown auth.									
Laredo Air Force Base	TX	Air Force			Unknown auth.	100 auth.	85 auth.	5c; 185d						5
Laughlin Air Force Base	TX	Air Force			Unknown auth.	150 auth.	200 auth.	350d						
San Marcos Air Force Base	TX	Air Force			Unknown auth.									
Webb Air Force Base	TX	Air Force				85 auth.	170 auth.	255d						
Hill Air Force Base	UT	Air Force											300 auth.	
Burlington Airport	VT	Air Force			Unknown auth.									
Fairchild Air Force Base	WA	Air Force				5 auth.		43c; 5c						48
Geiger Field	WA	Air Force			Unknown auth.	50 auth.	20 auth.	90 auth., d; 70c; 5c						75
Larson Air Force Base	WA	Air Force				5 auth.		5c						5

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for other reason (high bid, utility issues, etc.)

Installation	State	Service	FY 1950	FY 1951	FY 1952	FY 1955	FY 1956	FY 1957	FY 1958	FY 1959	FY 1960	FY 1961	FY 1962	Appropriated -Funds Total Units
McChord Air Force Base	WA	Air Force					150 auth.	180c; 110uc; 40d						290
Paine Field	WA	Air Force			Unknown auth.	70 auth.		70c						70
Richard Bong Air Force Base	WI	Air Force				120 auth.	120d							
Truax Air Force Base	WI	Air Force			Unknown auth.	100 auth.		5c; 100d						5
Sundance Air Force Station	WY	Air Force							27 auth.					
<b>NAVY</b>														
Naval Station Adak	AK	Navy	Unknown auth.				71 auth.	61c; 10d	81 auth.	81 auth.				61
Naval Station Kodiak	AK	Navy	Unknown auth.				103 auth.							
Naval Air Station Lemoore	CA	Navy											200 auth., ud	
Naval Air Station Miramar	CA	Navy				15 auth.		13c; 2d						13
Naval Ordnance Test Station China Lake	CA	Navy	4c		8c									12
Naval Amphibious Base Coronado	CA	Navy				2 auth.		2d						
Naval Auxiliary Air Station Brown Field	CA	Navy					15 auth.	15d						
Naval Communication Station Skaags Island	CA	Navy				50 auth.		50c						50
Naval Construction Battalion Center Port Hueneme	CA	Navy		3c									200 auth., ud; 200c (FY 63)	203
Pacific Missile Range Point Mugu	CA	Navy	16c											16
Naval Hospital Corona	CA	Navy					23 auth.	23c						23
Naval Hospital Oakland	CA	Navy				10 auth.		10c						10

Key: r = requested; auth. = authorized;  
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d = deferred to Title VIII, or delayed or cancelled  
for other reason (high bid, utility issues, etc.)

Installation	State	Service	FY 1950	FY 1951	FY 1952	FY 1955	FY 1956	FY 1957	FY 1958	FY 1959	FY 1960	FY 1961	FY 1962	Appropriated -Funds Total Units
Naval Supply Center Oakland	CA	Navy				10 auth.		10d						
Naval Hospital San Diego	CA	Navy				10 auth.		10d						
Naval Submarine Base New London	CT	Navy											200 auth., ud	
Naval Underwater Sound Laboratory New London	CT	Navy					5 auth.	5c						5
Navy Department	DC	Navy					3 auth.	3d						
Naval Facility Fort Miles	DE	Navy											30 auth., ud	
Naval Air Station Cecil Field	FL	Navy				90 auth.		90c						90
Naval Auxiliary Air Station Sanford	FL	Navy					13 auth.	13d						
Naval Hospital, Jacksonville	FL	Navy				30 auth.		30c						30
Naval Air Station Key West	FL	Navy				20 auth.		20d						
Naval Station Key West	FL	Navy				80 auth.		80c						80
Naval Station Mayport	FL	Navy											140 auth., ud	
Naval Mine Countermeasures Station Panama City	FL	Navy				25 auth.		25c						25
Naval Hospital Pensacola	FL	Navy				25 auth.		25c						25
Naval Fuel Depot Jacksonville	FL	Navy					1 auth.							
Naval Auxiliary Air Station Glynco	GA	Navy				80 auth.		80c						80
Naval Supply Corps School Athens	GA	Navy				30 auth.		30c						30
Naval Hospital Chelsea	MA	Navy					15 auth.	12c; 3d						12

Key: r = requested; auth. = authorized;  
ud = under design; a = awarded; c = completed;  
d = deferred to Title VIII, or delayed or cancelled  
for other reason (high bid, utility issues, etc.)

Installation	State	Service	FY 1950	FY 1951	FY 1952	FY 1955	FY 1956	FY 1957	FY 1958	FY 1959	FY 1960	FY 1961	FY 1962	Appropriated -Funds Total Units
Naval Security Group Activity Winter Harbor	ME	Navy											30 auth., ud	
Naval Construction Battalion Center Gulfport	MS	Navy				7 auth.		7c						7
Naval Hospital Camp Lejeune	NC	Navy				50 auth.		50d						
Naval Auxiliary Air Station Fallon	NV	Navy				60 auth.		60c						60
Naval Hospital Saint Albans	NY	Navy				10 auth.		10c						10
Naval Shipyard Philadelphia	PA	Navy				25 auth.		25d						
Naval Hospital Philadelphia	PA	Navy				10 auth.		10d						
Naval Hospital Newport	RI	Navy				10 auth.		9c; 1d						9
Naval Base Charleston	SC	Navy											200 auth., ud	
Naval Hospital Beaufort	SC	Navy				50 auth.		50c						50
Naval Auxiliary Air Station Chase Field	TX	Navy				80 auth.	40 auth.	120d						
Naval Hospital Portsmouth	VA	Navy				10 auth.		10c						10
Naval Mine Depot Yorktown	VA	Navy				5 auth.		5c						5
<b>MARINES</b>														
Marine Corps Supply Annex Barstow	CA	Marine Corps				1 auth.		1c						1
Marine Corps Recruit Depot San Diego	CA	Marine Corps				12 auth.								
Marine Corps Training Center Twentynine Palms	CA	Marine Corps					2 auth.	2d						
Marine Corps Auxiliary Air Station, Mojave	CA	Marine Corps					162 auth.;	162d						

Key: r = requested; auth. = authorized;  
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d = deferred to Title VIII, or delayed or cancelled  
for other reason (high bid, utility issues, etc.)

Installation	State	Service	FY 1950	FY 1951	FY 1952	FY 1955	FY 1956	FY 1957	FY 1958	FY 1959	FY 1960	FY 1961	FY 1962	Appropriated -Funds Total Units
Marine Corps Depot of Supplies Albany	GA	Marine Corps				100 auth.		100c						100
Marine Corps Air Station Kaneohe Bay	HI	Marine Corps					55 auth.	55c						55
Marine Corps Barracks Pearl Harbor	HI	Marine Corps				2 auth.		2c						2
Marine Corps Air Facility New River	NC	Marine Corps				35 auth.		35d						
Marine Corps Auxiliary Air Station Edenton	NC	Marine Corps					105 auth.	105d						
Marine Corps Auxiliary Air Station Beaufort	SC	Marine Corps				175 auth.		175c						175
Marine Corps School Quantico	VA	Marine Corps				300 auth.		218c; 82d						218
<b>Total Units</b>														<b>6,607</b>

Key: r = requested; auth. = authorized;  
ud = under design; a = awarded; c = completed;  
d = deferred to Title VIII, or delayed or cancelled  
for other reason (high bid, utility issues, etc.)





## **APPENDIX E**

# **AIR FORCE AND NAVY FAMILY HOUSING IN AIR FORCE RPI DATABASE AND NAVY INFADS DATABASE**



Table E.1. Air Force Wherry, Capehart, and Appropriated Funds Housing Inventory  
by Installation (1949-1964\*\*\*)  
Data from RPI\*

Installation	State	Major Cnd	Number of Buildings Completed By Year													Grand Total		Notes***		
			1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963		1964	Buildings
Altus AFB	OK	AETC	1															630	630	Scheduled to be privatized November 2006
			2															35	70	
			Totals																665	
Andrews AFB	MD	AMC	2															1	2	Scheduled to be privatized March 2007
			8	15														15	120	
			1															1	1	
			Totals	1	15													17	123	
Arnold AFB	TN	AFMC	1															6	6	
			2															3	6	
			4															7	28	
			Totals														16	40		
Barksdale AFB	LA	ACC	1															10	10	Scheduled to be privatized May 2007
			2															95	190	
			Totals															105	200	
Beale AFB	CA	ACC	1															1067	1067	Scheduled to be privatized September 2007
			Totals															437	630	
			Totals																1067	
Brandywine Family Housing Annex	MD	AMC	3															1	3	Housing annex for Andrews AFB; not currently scheduled for privatization
			4															1	4	
			5																1	
			Totals														3	12		
Cannon AFB	NM	ACC	1															29	29	Privatization schedule to be determined
			2															166	332	
			Totals																195	
Charleston AFB	SC	AMC	1															296	296	
			2															290	580	
			Totals																586	
Columbus AFB	MS	AETC	1															17	17	Scheduled to be privatized September 2007
			2															177	337	
			Totals																268	
Davis-Monthan AFB	AZ	ACC	1															138	276	Scheduled to be privatized November 2006
			2															406	544	
			Totals																406	
Dover AFB	DE	AMC	1															140	140	Privatized September 2005
			2															70	140	
			4															54	216	
			Totals														2	10		
Dyess AFB	TX	ACC	1															325	977	Privatized September 2000
			2															185	370	
			Totals																535	
Edwards AFB	CA	AFMC	2															10	20	
			3															10	30	
			4															9	36	
			Totals														99	99		
Eglin AFB	FL	AFMC	1															906	963	Scheduled to be privatized September 2007
			2															55	55	
			4															86	344	
			Totals														200	200		
			Totals															149	298	
			Totals															349	412	
			Totals															591	1123	

Table E.1. Air Force Wherry, Capehart, and Appropriated Funds Housing Inventory  
by Installation (1949-1964\*\*)  
Data from RPI\*

Installation	State	Major Cnd	Construction Program	Units Per Building	Number of Buildings Completed By Year													Grand Total		Notes***		
					1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963		1964	Buildings
Edgla Air Force Auxiliary Field #9 (Hurbart Field)	FL	AFSOC	Approp. FY49-64	1	8														8	8	Scheduled to be privatized September 2007	
			Approp. FY49-64 Totals	2	129	137													137	266		
Eielson AFB	AK	PACAF	Approp. FY49-64	1					1										1	1		
			Approp. FY49-64	2				20											20	40		
			Approp. FY49-64	3		1														1		3
			Approp. FY49-64	4		17				7										36		144
			Approp. FY49-64	6		2				1										5		30
			Approp. FY49-64	8		12	9	2												30		240
			Totals		12	27	2	37	15											93		458
			Totals		1					2												18
Elisworth AFB	SD	ACC	Capehart	2				1										52	250			
			Capehart	4					108	89									50		200	
			Totals				1				110	139	68						318		718	
			Totals				1			30	48								78		78	
Fairchild AFB	WA	AMC	Capehart	1					110									110	220	Scheduled to be privatized September 2007		
			Capehart	2					140	48									189		299	
			Totals				1			16									16		16	
			Totals				1			16									16		16	
Fairchild Family Housing Annex	WA	AMC	Capehart	1														1	1	Housing annex for Fairchild AFB Scheduled to be privatized September 2007		
			Capehart	2					39										39		78	
			Totals				1			40									40		79	
Francis E. Warren AFB	WY	AFSPC	Capehart	1					10									10	10	Scheduled to be privatized July 2007		
			Capehart	2					45	45									45		90	
			Totals				1			55	55								55		100	
			Totals				3			3									3		3	
Grand Forks AFB	ND	AMC	Capehart	2					44									44	88			
			Capehart	4					107										107		428	
			Capehart	6					30										30		180	
			Approp. FY49-64	2					143										143		286	
			Totals				184			184									327		985	
			Totals				4			6									10		10	
Hill AFB	UT	AFMC	Approp. FY49-64	1					123	121								244	488	Privatized September 2005		
			Approp. FY49-64	2					127	127									254		498	
			Totals				48			24									72		72	
			Totals				77			44									121		242	
Holloman AFB	NM	ACC	Wherry	4					43									65	260	Scheduled to be privatized November 2006		
			Wherry	1					60									60	60			
			Capehart	2					170									170	340			
			Totals				168			89								488	974			
Hunley Park Military Family Housing	SC	AMC	Capehart	1					36									36	36	Housing annex for Charleston AFB		
			Capehart	2					207									207	414			
			Totals				133			243								243	450			
Kessler AFB	MS	AETC	Wherry	1					212									212	424			
			Wherry	2					52									52	52			
			Capehart	2					237									237	474			
			Approp. FY49-64	1					99									99	99			
Totals				345			289								753	1182						

Table E.1. Air Force Wherry, Capehart, and Appropriated Funds Housing Inventory  
by Installation (1949-1964\*\*)  
Data from RPI\*

Installation	State	Major Cnd	Construction Program	Units Per Building	Number of Buildings Completed By Year												Grand Total		Notes***		
					1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962		1963	1964
Kirtland AFB	NM	AFMC	Wherry	1	755														755	755	Privatized April 2003
			Capehart	1		32	17												49	49	
			Approp. FY49-64	2			52	101											153	306	
			Approp. FY49-64	2		6	1	1											8	8	
			Other	1					2										4	4	
Totals				1	755	6	3	85	118								968	208			
Lackland AFB	TX	AETC	Wherry	1	15													15	15	Scheduled to be privatized December 2006	
			Wherry	3	4													4	4		
			Wherry	4	13														13		52
			Wherry	5	3														3		15
			Wherry	6	11														11		66
Totals			6	46	6	3	85	118								52	208				
Lackland Training Annex	TX	AETC	Capehart	1													8	8	Annex for Lackland AFB Scheduled to be privatized December 2006		
			Capehart	2			8											58		116	
Totals						65				1						66	124				
Langley Family Housing Annex	VA	ACC	Capehart	1													64	64	Housing annex for Langley AFB Scheduled to be privatized May 2007		
			Capehart	2			218										218	436			
Totals						282										282	500				
Laughlin AFB	TX	AETC	Capehart	1													60	60	Scheduled to be privatized September 2007		
			Capehart	2			200										200	400			
Totals						260										260	460				
Luke AFB	AZ	AETC	Capehart	1													87	87	Scheduled to be privatized September 2007		
			Capehart	2			240										240	480			
Totals						327										327	567				
MacDill AFB	FL	AMC	Wherry	1	14												14	14	Scheduled to be privatized May 2007		
			Wherry	2	15												15	30			
			Wherry	4	7												7	28			
			Wherry	7	67												67	469			
			Wherry	8	6												6	48			
Totals			109												109	589					
Malstrom AFB	MT	AFSPC	Wherry	2													2	4	Scheduled to be privatized September 2007		
			Wherry	4			3									3	12				
			Wherry	6			11									11	66				
			Wherry	8			28									28	224				
			Wherry	1			2									2	2				
Totals					4	26	135	128						289	578						
Maxwell Family Housing Annex	AL	AETC	Capehart	1												4	4	Housing annex for Maxwell AFB Scheduled to be privatized September 2007			
			Capehart	2			74									74	74				
Totals						124									124	174					
McClellan AFB	WA	AMC	Capehart	1												90	90	Scheduled to be privatized September 2007			
			Capehart	2			254								254	508					
			Approp. FY49-64	1			8								8	8					
			Approp. FY49-64	2			51								51	102					
			Totals					59	344							403	708				
McClellan AFB	CA	AFMC	Wherry	1	35										35	35	Base closed 2001 Housing units inactive				
			Wherry	2	34										34	68					
Totals						69								69	103						
McClellan Family Housing Annex	CA	AFMC	Capehart	1											89	89	Housing annex for McClellan AFB Base closed 2001 Housing units inactive				
			Capehart	2			192								192	384					
Totals						281								281	473						

Table E.I. Air Force Wherry, Capehart, and Appropriated Funds Housing Inventory  
by Installation (1949-1964\*\*\*)  
Data from RPI\*

Installation	State	Major Cnd	Construction Program	Units Per Building	Number of Buildings Completed By Year												Grand Total Buildings	Grand Total Units	Notes***					
					1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960				1961	1962	1963	1964	
McConnell AFB	KS	AMC	Capehart	1															82	82				
			Capehart	2																148	296			
			Approp. FY49-64	1																	4	4		
			Totals	4															234	382				
McGuire AFB	NJ	AMC	Capehart	1															36	169				
			Capehart	4																18	64			
			Capehart	6																	14	84		
			Capehart	8																	128	1024		
			Totals		68																429	1641		
						Totals		10		6												16	16	Privatized September 2006
Minot AFB	ND	ACC	Capehart	1															65	5	20			
			Capehart	2																2	2			
			Capehart	3																	2	6		
			Capehart	4																	193	58	32	
			Capehart	5																	2	2		
			Approp. FY49-64	1																	48	18		
			Approp. FY49-64	2															126	161				
			Totals		272		63		58		174		179						746	1984				
Moody AFB	GA	AFSOC	Approp. FY49-64	1															3	3				
			Totals		3															3	3	Privatized February 2004		
Mountain Home AFB	ID	ACC	Capehart	1															4	2				
			Capehart	2																51	149			
			Approp. FY49-64	1																	4	4		
			Totals		4		4		55		151								210	410				
Nellis AFB	NV	ACC	Wherry	1	16														329	329				
			Capehart	1																26	26			
			Capehart	2																	87	174		
			Approp. FY49-64	1																	5	5		
			Totals		16		313		5		113								447	534				
North Charleston Family Housing Annex	SC	AMC	Approp. FY49-64	1															22	22				
			Capehart	1																22	22			
			Totals		22																22	22	Housing annex for Charleston AFB	
Patrick AFB	FL	AFSFC	Capehart	1															6	6				
			Capehart	2																4	8			
			Totals		10																10	14	Privatized October 2003	
Point Arena AFS	CA	ACC	Approp. FY49-64	1															27	27				
			Totals		27																27	27	Site decommissioned in 1997 Housing units inactive	
Pope AFB	NC	AMC	Approp. FY49-64	1															30	30				
			Approp. FY49-64	2																125	125			
			Totals		155																155	280		
Randolph AFB	TX	AETC	Wherry	3															15	15				
			Wherry	4																48	48			
			Approp. FY49-64	8																	10	80		
			Totals		10		63												73	317	Scheduled to be privatized September 2007			
Robins AFB	GA	AFMC	Capehart	1															69	30				
			Capehart	2																101	59			
			Totals		188		170		89										259	419	Scheduled to be privatized January 2007			
Seymour Johnson AFB	NC	ACC	Capehart	1															188	188				
			Capehart	2																626	1252			
			Totals		814																814	1440		
Shaw AFB	SC	ACC	Wherry	1															134	134				
			Wherry	2																183	764			
			Approp. FY49-64	1																	2	2	Privatization schedule to be determined	
			Totals		317		2		199										518	900				

Table E.1. Air Force Wherry, Capehart, and Appropriated Funds Housing Inventory  
by Installation (1949-1964\*\*)  
Data from RPI\*

Installation	State	Major Cmd	Construction Program	Units Per Building	Number of Buildings Completed By Year												Grand Total Buildings	Grand Total Units	Notes***		
					1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960				1961	1962
Sheppard AFB	TX	AETC	Wherry	1	130													130	Scheduled to be privatized November 2006		
			Wherry	2	178															178	
			Capehart	1						126											126
Spokane Family Housing Annex	WA	AMC	Capehart	2														187	Housing annex for Fairchild AFB Scheduled to be privatized September 2007		
			Totals		308															308	
			Capehart	1						36											36
Tinker AFB	OK	AFMC	Capehart	2														95	Scheduled to be privatized September 2007		
			Totals																	131	
			Capehart	1						44											44
Travis AFB	CA	AMC	Capehart	1														94	Scheduled to be privatized September 2007		
			Totals																	138	
			Wherry	12																	12
Tyndall AFB	FL	AETC	Wherry	1														35	Scheduled to be privatized November 2006		
			Capehart	2																161	
			Totals		35																246
USAF Academy	CO	USAFA	Capehart	1														281	Scheduled to be privatized March 2007		
			Capehart	2																390	
			Approp. FY49-64	1																50	
Vance AFB	OK	AETC	Totals															721	Scheduled to be privatized September 2007		
			Capehart	1																176	
			Totals																	176	
Vandenberg AFB	CA	AFSPC	Capehart	1														872	Scheduled to be privatized January 2008		
			Capehart	2																1	
			Totals																	873	
Whiteman AFB	MO	ACC	Capehart	1														94	Scheduled to be privatized September 2007		
			Capehart	2																204	
			Capehart	3																1	
Totals			Wherry	192	1101	197	313	89	199	243	513	63						2597	Scheduled to be privatized September 2007		
			Privateized	771																1084	
			Totals	963	1101	197	313	89	199	243	513	63								3681	
Capehart			AF Owned															12613	Scheduled to be privatized September 2007		
			Privateized																	1654	
			Totals																	14267	
Approp. FY49-64			AF Owned	100	130	12	27	2	105	490	108	27	22	37	174	508	1743	3468	Scheduled to be privatized September 2007		
			Privateized	3																127	
			Totals	100	130	12	27	2	111	498	108	28	22	37	174	508	1743	3468			
Other			AF Owned	1														2015	Scheduled to be privatized September 2007		
			Privateized	1																1	
			Totals	1																2	
Grand Totals			AF Owned	100	130	192	1113	224	2	194	689	1919	4759	2691	1441	2481	441	576	16954	Scheduled to be privatized September 2007	
			Privateized	771																	28790
			Totals	101	130	963	1113	222	315	2	200	1232	2050	5059	2922	1899	2481	568	703		19965

\* Data obtained from the Air Force 2005 Real Property Inventory (RPI) database.

\*\* Table includes construction completion data through 1964 in order to capture housing appropriations through 1964.

\*\*\* Status current as of 1 Oct 2006.

Gray rows indicate military family housing that has been privatized and is no longer in the Air Force inventory as of 1 Oct 2006. The current status of these units is unknown.

**Table E.2. Air Force Wherry, Capehart, and Appropriated Funds Housing Inventory  
By Construction Program (1949-1964\*\*)  
Data from RPI\***

Construction Program	Status***	Number of Units Per Building												Total Buildings	
		1	2	3	4	5	6	7	8	9	10	11	12		
Wherry	AF Owned	967	1237	29	231	3	28	67	34					1	2597
	Privatized	1084													1084
	Totals	2051	1237	29	231	3	28	67	34					1	3681
Capehart	AF Owned	6302	5836	3	440	2	30								12613
	Privatized	777	538		136	2	14	1	186						1654
	Totals	7079	6374	3	576	4	44	1	186						14267
Approp. FY49-64	AF Owned	503	1126	2	44	1	5	62							1743
	Privatized	26	246												272
	Totals	529	1372	2	44	1	5	62							2015
Other	AF Owned	1													1
	Privatized	1													1
	Totals	2													2
Grand Totals	AF Owned	7773	8199	34	715	6	63	67	96				1	16954	
	Privatized	1888	784		136	2	14	1	186					3011	
	Totals	9661	8983	34	851	8	77	68	282				1	19965	

\* Data obtained from the Air Force 2005 Real Property Inventory (RPI) database.

\*\* Table includes construction completion data through 1964 in order to capture housing appropriations through 1962.

\*\*\* Status current as of 1 Oct 2006.











Table E.4. Marine Corps Wherry and Capehart Housing Inventory (1949-1962)  
Data from iNFADS\*

	MCAS Beaufort		MCB Hawaii, Manama		MCB Hawaii, Kaneohe Bay		MCAS Cherry Point, NC		MCAS Yuma		TOTALS	
	Capehart	Wherry	Capehart	Wherry	Capehart	Wherry	Capehart	Wherry	Capehart	Wherry	Capehart	Wherry
Number of units by type (single-family, duplexes, multi-family)	1,077 single-family	0	42 single-family; 126 duplexes	0	218 single-family; 416 duplexes	0	847 single-family	37 single-family; 148 duplex; 128 4 plex; 45 - 5 plex; 138 - 6-plex	10 single-family; 50 duplex	0		
Number of buildings by type	1,077	0	42 single-family; 63 duplex	0	218 single-family; 208 duplex	0	847 single-family	37 single-family; 74 duplex; 32 4-plex; 9 5-plex; 23 6-plex	10 single-family; 25 duplex	0		
Total number of buildings	1,077	0	105	0	426	0	1,022		35	0		
Number of garages/carports	0	0	0	0	647	0	847	0	0	0		
Total number of units by construction program	1,077	0	168	0	634	0	847	496	60	0	2,786	496
Number of buildings by construction program	1,077	0	105	0	426	0	847	175	35	0	2,490	175
Dates of major renovations	whole house repairs began in 1989; completed 1993	0	0	0	0	0	1989-1999	1980-1981	2000-2002	0		

\* Internet Navy Facility Assets Data Store Management System Database (iNFADS)



**APPENDIX F**

**ANALYSIS OF CASE STUDIES TO  
DETERMINE PROPERTIES OF  
PARTICULAR IMPORTANCE**





## ANALYSIS OF CASE STUDIES TO DETERMINE PROPERTIES OF PARTICULAR IMPORTANCE

This appendix presents the results of archival research and field surveys for five Air Force, Navy, and Marine installations visited for case studies and to determine Properties of Particular Importance. Installations were chosen based on archival information and data provided by the Air Force Real Property Inventory (RPI) and the Navy’s Internet Navy Facility Assets Data Store Management System (iNFADS). Analysis of the data resulted in the identification of criteria for selecting installations for field surveys. Installations were selected for their potential:

- to illustrate the broad social history of military housing between 1949 and 1962 for the Air Force, Navy, and Marine Corps;
- to provide examples of Wherry, Capehart, and appropriated-funds housing to compare and contrast the types of housing constructed under each program, and the types of housing built based on rank;
- to illustrate neighborhood planning concepts and community amenities;
- to represent the work of important architects and designers, developers, and contractors;
- to illustrate the range of contemporary housing types and styles from geographically diverse locations; and,
- to retain large numbers of housing units in the active inventory from the period 1949 to 1962.

Table F.1 summarizes the installations and neighborhoods visited.

**Table F.1. Installations Visited for Field Surveys and to Determine Properties of Particular Importance**

INSTALLATION	CONSTRUCTION PROGRAM	YEAR BUILT	TYPE
MCAS Cherry Point	Wherry	1952	Multi-family, single-family, and duplex
	Capehart	1958	Single-family
Naval Support Activity Mid-south	Wherry	1951	Multi-family, single-family, and duplex
	Capehart	1961	Single-family and duplex
Travis AFB	Capehart	1958, 1962	Single-family and duplex
	Appropriated funds	1957	Single-family
Mountain Home AFB	Wherry	1956	Single-family and multi-family
	Capehart	1959, 1962	Single-family and duplex
	Appropriated funds	1957	Single-family
Naval Base Ventura County	Wherry	1954	Multi-family, single-family, and duplex
	Capehart	1958, 1959, 1962	Multi-family, single-family, and duplex
	Appropriated funds	1949, 1951, 1963	Multi-family, single-family, and duplex

Site investigations combined archival research and building surveys to describe fully the programs at each installation. Data were compiled on the respective construction programs, building types, dates of construction, features of note, architects, associated neighborhood or landscape features, and changes over time. These data were analyzed further for architectural design, building collection, historical association, alterations within the period of study, construction materials, property types, and military association.

The five installations were evaluated to determine if any merited further consideration as properties of particular importance. The evaluation of all five installations was based on data compiled from archival sources and the field surveys, and by applying the National Register of Historic Places criteria for significance and integrity.

The National Register criteria for evaluation establishes that for buildings to be eligible for listing in the National Register within an identified theme, they should (1) possess an association with events that made a significant contribution to the broad pattern of military history; (2) possess an association with a person significant in the past; (3) embody the distinctive characteristics of type, period, or method of construction; or represent the work of a master; or possess high artistic values; or, (4) yield, or may be likely to yield, information important in prehistory or history.

In order to meet National Register criteria for evaluation, a property must not only possess significance within a historic context, but also retain integrity to the period during which the building achieves significance. Integrity is a property's ability to convey its significance through the retention of essential physical characteristics from its period of significance. The evaluation of Navy, Air Force, and Marine facilities for possible designation as a property of particular importance was completed with an assessment of the integrity of location, design, setting, materials, workmanship, feeling, and association for each resource in the real property inventories. Table F.2 summarizes the evaluations of resources at all five installations.

An analysis of the archival and field survey data, and the application of National Register criteria for significance and integrity, allowed for the determination of properties of particular importance. Generally, for a Capehart, Wherry, or appropriated funds housing area to merit consideration as a property of particular importance it must satisfy several of the following criteria:

- ability to physically convey the broad social history of military housing during the 1950s and 1960s;
- ability to represent the work of important architects, designers, developers, or contractors;
- ability to illustrate the range of contemporary housing types and styles;
- ability to represent the greatest number of units;
- ability to demonstrate post-World War II planning principles and suburbanization themes;
- ability to represent change over time; and,
- ability to retain integrity to the period of significance.

Table F.3 provides the matrix for evaluating properties of particular importance.

**Table F.2. Summary of Candidates for Properties of Particular Importance**

Installation	Type of Housing	Year Built	SIGNIFICANCE				INTEGRITY						
			Construction Program	Designer or Other Individual Association	Type, Period, or Method of Construction	Information Potential	Design	Feeling	Association	Materials	Workmanship	Setting	Location
MCAS Cherry Point	Multi-family, single-family, and duplex	1952	The resources are associated with the Wherry Program	Eugene R. Martini; Edwards, Puch & McKimmon; Lief Valand - archival research did not discover information to allow for a scholarly judgement on the contributions of any of the designers	The resources are typical of those constructed during the Wherry and Capehart eras	Alterations and demolition limits the information potential of the resources	Alterations to exteriors and interiors negatively impacts integrity of design	Demolition of numerous buildings negatively impacts integrity of feeling	The resources retain integrity of association to the Wherry Program	Alterations to exteriors and interiors negatively impacts integrity of materials	Alterations to exteriors and interiors negatively impacts integrity of workmanship	Alterations to original landscape plans and demolition of a large number of buildings negatively impacts integrity of setting	The remaining Wherry-era buildings are in their original locations
MCAS Cherry Point	Single-family	1958	The resources are associated with the Capehart Program	Edwards, McKimmon, & Etheredge - archival research did not discover information to allow for a scholarly judgement on the contributions of any of the designers	The resources are typical of those constructed during the Wherry and Capehart eras	Alterations limit the information potential of the resources	Alterations to exteriors and interiors negatively impacts integrity of design	Privatization of officer housing in 2005, and extensive renovations negatively impacts integrity of feeling	The resources retain integrity of association to the Capehart Program	Alterations to exteriors and interiors negatively impacts integrity of materials	Alterations to exteriors and interiors negatively impacts integrity of workmanship	Archival research did not locate an original landscape plan for the neighborhood, and a scholarly judgement on setting could not be made.	The Capehart-era buildings are in their original locations
Naval Support Activity Mid-South	Multi-family	1951-1952	The resources are associated with the Wherry Program	William C. Lester - archival research did not discover information to allow for a scholarly judgement on the contributions of any of the designers	The resources are typical of those constructed during the Wherry and Capehart eras	Alterations and demolition limits the information potential of the resources	Alterations to exteriors and interiors negatively impacts integrity of design	Demolition of numerous buildings negatively impacts integrity of feeling	The resources retain integrity of association to the Wherry Program	Alterations to exteriors and interiors negatively impacts integrity of materials	Alterations to exteriors and interiors negatively impacts integrity of workmanship	Alterations to original landscape plans and demolition of a large number of buildings negatively impacts integrity of setting	The remaining Wherry-era buildings are in their original locations
Naval Support Activity Mid-South	Single-family and duplex	1961	The resources are associated with the Capehart Program	Thomas F. Faires & Associates - archival research did not discover information to allow for a scholarly judgement on the contributions of any of the designers	The resources are typical of those constructed during the Wherry and Capehart eras	Alterations limit the information potential of the resources	Alterations to exteriors and interiors negatively impacts integrity of design	Renovation of numerous buildings negatively impacts integrity of feeling	The resources retain integrity of association to the Capehart Program	Alterations to exteriors and interiors negatively impacts integrity of materials	Alterations to exteriors and interiors negatively impacts integrity of workmanship	Alterations to original landscape plans negatively impacts integrity of setting	The Capehart-era buildings are in their original locations
Travis AFB	Multi-family, single-family, and duplex	1951	The resources are associated with the Wherry Program	W.D. Peugh; W.B. Glenn & A.J. Loubet, Associates - archival research did not discover information to allow for a scholarly judgement on the contributions of any of the designers	The resources are typical of those constructed during the Wherry and Capehart eras	Alterations limit the information potential of the resources	Alterations to exteriors and interiors negatively impacts integrity of design	Renovation of numerous buildings negatively impacts integrity of feeling	Complete renovation of numerous buildings negatively impacts integrity of association	Alterations to exteriors and interiors negatively impacts integrity of materials	Alterations to exteriors and interiors negatively impacts integrity of workmanship	Installation of new landscaping negatively impacts integrity of setting	The remaining Wherry-era buildings are in their original locations

Installation	Type of Housing	Year Built	SIGNIFICANCE				INTEGRITY						
			Construction Program	Designer or Other Individual Association	Type, Period, or Method of Construction	Information Potential	Design	Feeling	Association	Materials	Workmanship	Setting	Location
Travis AFB	Single-family and duplex	1958, 1962	The resources are associated with the Capehart Program	Abrams and Dickstein; Angus McSweeney - archival research did not discover information to allow for a scholarly judgement on the contributions of any of the designers	The resources are typical of those constructed during the Wherry and Capehart eras	Alterations limit the information potential of the resources	Alterations to exteriors and interiors negatively impacts integrity of design	Renovation of numerous buildings negatively impacts integrity of feeling	The resources retain integrity of association to the Capehart Program	Alterations to exteriors and interiors negatively impacts integrity of materials	Alterations to exteriors and interiors negatively impacts integrity of workmanship	Partial implementation of original landscape plans from 1958 and installation of new landscaping negatively impacts integrity of setting	The Capehart-era buildings are in their original locations
Travis AFB	Single-family	1957	The resources are associated with the Appropriated Funds Housing	Abrams and Dickstein - archival research did not discover information to allow for a scholarly judgement on the contributions of any of the designers	The resources are typical of those constructed during the Wherry and Capehart eras	The buildings have not experienced major alterations; however, only 6 units were constructed limiting the information potential of the resources	The buildings retain integrity of design	The buildings retain integrity of feeling	The resources retain integrity of association to Appropriated Funds Housing	The buildings retain integrity of materials	The buildings retain integrity of workmanship	Archival research did not locate an original landscape plan for the neighborhood, and a scholarly judgement on setting could not be made.	The buildings are in their original locations
Mountain Home AFB	Multi-family and single-family	1956	The resources are associated with the Wherry Program	Hummel, Hummel, & Jones; R.J. Neutra & R.E. Alexander - the firm of Neutra & Alexander is an architectural firm of national significance	The resources reflect the International style of architecture and is atypical of housing constructed during the Wherry and Capehart eras	Alterations and demolition limits the information potential of the resources	Alterations to exteriors and interiors negatively impacts integrity of design	Demolition of numerous buildings negatively impacts integrity of feeling	The resources retain integrity of association to the Wherry Program	Alterations to exteriors and interiors negatively impacts integrity of materials	Alterations to exteriors and interiors negatively impacts integrity of workmanship	Alterations to original landscape plans and demolition of a large number of buildings negatively impacts integrity of setting	The remaining Wherry-era buildings are in their original locations
Mountain Home AFB	Single-family and duplex	1959, 1962	The resources are associated with the Capehart Program	Hummel, Hummel, & Jones; R.J. Neutra & R.E. Alexander - the firm of Neutra & Alexander is an architectural firm of national significance	The resources reflect the International style of architecture and is atypical of housing constructed during the Wherry and Capehart eras	Alterations and demolition limits the information potential of the resources as a district; however, three buildings retain sufficient integrity to merit further consideration as individual significance	Alterations to exteriors and interiors negatively impacts integrity of design of the majority of the buildings; however, three buildings retain integrity of design	Demolition of numerous buildings negatively impacts integrity of feeling of the majority of the buildings; however, three buildings retain integrity of feeling	The resources retain integrity of association to the Capehart Program	Alterations to exteriors and interiors negatively impacts integrity of materials of the majority of the buildings; however, three buildings retain integrity of materials	Alterations to exteriors and interiors negatively impacts integrity of workmanship of the majority of the buildings; however, three buildings retain integrity of workmanship	Alterations to original landscape plans and demolition of a large number of buildings negatively impacts integrity of setting	The remaining Capehart-era buildings are in their original locations

Installation	Type of Housing	Year Built	SIGNIFICANCE				INTEGRITY						
			Construction Program	Designer or Other Individual Association	Type, Period, or Method of Construction	Information Potential	Design	Feeling	Association	Materials	Workmanship	Setting	Location
Naval Base Ventura County	Multi-family and single-family	1954	The resources are associated with the Wherry Program	The designer of the buildings is not known	The resources are typical of those constructed during the Wherry and Capehart eras	Alterations limit the information potential of the resources	Alterations to exteriors and interiors negatively impacts integrity of design	Renovation of numerous buildings negatively impacts integrity of feeling	The resources retain integrity of association to the Wherry Program	Alterations to exteriors and interiors negatively impacts integrity of materials	Alterations to exteriors and interiors negatively impacts integrity of workmanship	Archival research did not locate an original landscape plan for the neighborhood, and a scholarly judgement on setting could not be made.	The Wherry-era buildings are in their original locations
Naval Base Ventura County	Multi-family, single-family, and duplex	1959, 1962	The resources are associated with the Capehart Program	Hugh Gibbs; Victor J. Spotts; Porter, Urquhart, McCreary & O'Brien - archival research did not discover information to allow for a scholarly judgement on the contributions of any of the designers	The resources are typical of those constructed during the Wherry and Capehart eras	Alterations limit the information potential of the Santa Rosa, Santa Cruz, and San Miguel housing areas; however, the Catalina Heights housing area retains sufficient integrity to merit further consideration for significance	Alterations to exteriors and interiors negatively impacts integrity of design of the majority of the buildings; however, Catalina Heights retains integrity of design	Renovation of numerous buildings negatively impacts integrity of feeling of the majority of the buildings; however, Catalina Heights retains integrity of feeling	The resources retain integrity of association to the Capehart Program	Alterations to exteriors and interiors negatively impacts integrity of materials of the majority of the buildings; however, Catalina Heights retains integrity of materials	Alterations to exteriors and interiors negatively impacts integrity of workmanship of the majority of the buildings; however, Catalina Heights retains integrity of workmanship	Archival research did not locate an original landscape plan for the neighborhood, and a scholarly judgement on setting could not be made.	The Capehart-era buildings are in their original locations
Naval Base Ventura County	Multi-family, single-family, and duplex	1949, 1951, 1963	The resources are associated with the Appropriated Funds Housing	Hugh Gibbs; Parsons-Aerojet - archival research did not discover information to allow for a scholarly judgement on the contributions of any of the designers	The resources are typical of those constructed during the Wherry and Capehart eras	Alterations limit the information potential of the resources	Alterations to exteriors and interiors negatively impacts integrity of design	Renovation of numerous buildings negatively impacts integrity of feeling	The resources retain integrity of association to Appropriated Funds Housing	Alterations to exteriors and interiors negatively impacts integrity of materials	Alterations to exteriors and interiors negatively impacts integrity of workmanship	Archival research did not locate an original landscape plan for the neighborhood, and a scholarly judgement on setting could not be made.	The buildings are in their original locations





The following properties were identified as possessing particular importance within the Wherry and Capehart era:

- Three Capehart senior officer houses at Mountain Home Air Force Base, Idaho, and
- The Catalina Heights neighborhood at Naval Base Ventura County, California as a collection of Capehart program dwellings that collectively convey the principles of postwar suburbanization adapted to a military context.

Detailed data on the above installations are included in Appendix G. The remaining properties investigated were not considered properties of particular importance because they no longer retained sufficient integrity to convey significance through the retention of character-defining features from the period of significance, 1949 to 1962.



**APPENDIX G**

**RECOMMENDATIONS FOR PROPERTIES  
OF PARTICULAR IMPORTANCE**



## PROPERTIES OF PARTICULAR IMPORTANCE

This appendix provides details on the Properties of Particular Importance. Designation as a Property of Particular Importance is based on data provided from the Air Force and Navy real property records and the criteria for significance and integrity defined in Chapter 7 and Appendix F. To be considered a Property of Particular Importance, a property must achieve significance within the historic context and retain sufficient integrity to convey that significance.

Based on archival research and an analysis of data obtained during site investigation, the following properties were identified as possessing particular importance within the Wherry and Capehart era:

- Three senior Capehart officer houses at Mountain Home Air Force Base, Idaho, and
- The Catalina Heights neighborhood at Naval Base Ventura County as a collection of Capehart program dwellings that collectively convey the principles of postwar suburbanization adapted to a military context.

### **Mountain Home Air Force Base – Three Senior Officer Capehart Houses**

The three senior officer houses designed in the International Style by Richard J. Neutra at Mountain Home Air Force Base (AFB) represent the work of important architects for the military between 1949 and 1962. The three houses were constructed as part of a 270-unit Capehart project in 1959. The three buildings occupied one block in the center of the Old Capehart officer housing area known as Gunfighter Manor. The original drawings indicated that the houses were designed by “RJN,” although Charles Hummel, senior principal of Hummel Architects, identified Robert Evans Alexander as the actual designer (Mountain Home AFB 2006). These three senior officer houses exhibited the most qualities of the International Style and were strikingly different from the rest of the buildings in the officer neighborhood.

Neutra and Alexander was a prominent architectural firm, and both principals were highly successful individuals. Richard Josef Neutra was born in Vienna, Austria, on 8 April 1892. He attended the Polytechnical College at the University of Vienna and the University of Zurich, from which he received a diploma with distinction in 1918. He received a doctorate degree at the Technical University of West Berlin in 1954. Neutra began his architecture career as a city planner in Switzerland from 1919 to 1923. He worked for several firms from 1923 to 1925, including Holabird and Root and Frank Lloyd Wright. He operated his own practice from 1926 to 1949. His partnership with Robert E. Alexander lasted from 1949 to 1961. His other partnerships included Neutra and Alexander and Donald Haines, 1959, and Neutra and Alexander and Carrington Lewis, 1960. He resumed his own practice in 1962. His principal works (all in California unless otherwise specified) included the Lovell Health House, Los Angeles, 1929; Corona Avenue School, Bell, 1936; Channel Heights Housing Project, San Pedro, 1944; the Kaufman residence, Palm Springs, 1947; the Tremaine residence, Santa Barbara, 1948; and, the Northwest Mutual Fire Association building, 1950. Neutra also was the consulting architect to the government of Puerto Rico and several Latin American countries from 1944 to 1946, and to the civil government of Guam in 1951. He published several books and articles and received many national and international awards and honors throughout his career (Koyl 1955:403; Koyl 1962:512).

Robert E. Alexander was born in Bayonne, New Jersey, on 23 November 1907. He received a bachelor of arts degree from Cornell University in 1930. From 1928 to 1935 he worked with various firms in New York and Los Angeles, including Corbett, Harrison & McMurry. He worked in several partnerships from 1935 to 1946 and in his own practice from 1946 to 1949. He partnered with Richard Neutra from 1949 to 1961. His principal works included Baldwin Hills Village, Los Angeles, 1940; Estrada Courts, Los Angeles, 1941; Oxnard Housing Project, 1951; Elysion Parks Heights housing, Los Angeles, 1951; Title VIII housing at Mountain Home Air Force Base, Idaho, 1954; the fine arts buildings at San Fernando State College and the University of Nevada, 1958; Adelphia College library, Garden City, New York, 1958; the University of Nevada library, Reno, 1959; University of California San Diego residence halls and central facilities building, 1966, and basic science facility, 1969; Camp Pendleton Theater, California, 1969; and, Bunker Hill Towers first increment, Los Angeles, 1969. He also was a consulting architect to the Home Builders Institute, 1948; the Washington, D.C. Public Housing Authority, 1950; the United Nations Mission to India, 1951; and, the government of Guam, 1951-52. Alexander published several books and articles and received many national awards and honors throughout his career (Koyl 1955:6-7; Koyl 1962:8; Gane 1970:11).

As a firm, the principal works of Neutra and Alexander included Orange Coast College, California, 1957; Fernald School building at the University of California Los Angeles, 1957; Mellon Hall and Francis Scott Key Auditorium at St. John's College, Annapolis, Maryland, 1958; the Hall of Records and the Civic Center, Los Angeles, 1958; the National Park Service Visitor Center and Cyclorama Building, Gettysburg, Pennsylvania, 1958; the Painted Desert Community, Arizona, 1958; Mountain Home Air Force Base, Idaho, 1959; San Fernando Fine Arts Building, Los Angeles, 1959; the United States Embassy, Karachi, Pakistan, 1961; Lemoore Military Housing, Los Angeles, 1961; and, Palos Verdes High School, California, 1961 (Koyl 1955:6-7, 403; Koyl 1962:8, 512, Gane 1970:11; Allaback 2000:2-3; Smith et al. 1999; Several 1998; St. John's College 2002; UCLA Office of Academic Planning and Budget 2002:64).

The three senior officer houses at Mountain Home Air Force Base were low, one-story, wood-frame buildings set on concrete slab foundations and clad with brick veneer and vertical tongue-and-groove wood siding. The houses had flat roofs with raised sections over the living rooms. The windows were metal-frame fixed and sliding units. A brick-walled service yard was located in each front yard. Typical of the International Style, no ornamentation was present on the exterior of the buildings. The interiors also exhibited minimal ornamentation. Elements of the International Style were incorporated into the interior space, particularly as featured in the ceiling in the living and dining areas.

### **Catalina Heights Neighborhood at Naval Base Ventura County**

Completed in 1958, the Catalina Heights neighborhood was an Air Force project to supply family housing to nearby Oxnard Air Force Base. The housing area was off base, and located about five miles from the base. As a Navy family housing area, Catalina Heights is approximately twelve miles from Naval Base Ventura County. The Capehart project provided single-family, duplex, and multi-family units for enlisted men, non-commissioned officers, and officers. The neighborhood was designed by the architectural firm of Porter, Urquhart, McCreary & O'Brien in partnership with Victor J. Spotts. Seventy-two buildings containing 315 housing units were constructed. In general, the neighborhood lacked formal landscaping; sidewalks lined one side of the street. Housing Area 27 embodies the typical characteristics of Wherry and Capehart era design and methods of construction as applied between 1949 and 1962. The housing area exhibits civilian suburban design ideals applied to a military context and retains integrity to its original period of construction.

The buildings constructed in Catalina Heights consisted of stucco-covered concrete-masonry-unit construction accented with vertical-board trim. The buildings were supported by concrete slab foundations. The one- and two-story buildings had shallow-pitched gable roofs. Windows were horizontal-sliding aluminum sash units. Original designs for Catalina Heights included attached carports for officers and non-commissioned officers. Detached, concrete-masonry-unit walls were constructed on the front of some units creating a small patio area. Retractable clotheslines were attached to privacy walls.

The interiors of the units were similar to other Capehart housing units. The primary doorways opened onto small entry areas. Additional entrances were located off the kitchens to provide access to the patio areas, and in the living rooms to provide access to the backyards. The kitchens were located at the front of the units, with living and dining rooms looking out on the backyards. The two-story units contained a half bath on the first floor with a full bath on the upper level. The second stories contained the bedrooms. The single-story units, both single-family and duplex, were reserved for officer housing. The interiors of the one-story buildings were similar to the other Capehart housing units with an entry hall, front-facing kitchen, and living and dining rooms overlooking the back yards. Narrow halls led to the bedrooms. Each unit contained two bathrooms, one of which was attached to the master bedroom.

Catalina Heights exhibited one of the highest levels of integrity of the Capehart era housing still in active use by either the Navy or the Air Force. Some roofing material and trim was replaced, but many buildings retained original windows, flooring, kitchen cabinets, hardwood floors, and bathroom tile wainscots. The neighborhood also retained its retail store and master TV antenna system.

**Table G.1. Recommendations for Properties of Particular Importance**

Recommendations for Properties of Particular Importance								
Installation	Design	Building Type or Collection	Architect (i.e. work of master)	Historical Association	Alterations within Period of Importance	Method of Construction (i.e. materials technology)	Ability to Represent Class of Property Type	Military Association
<b>Mountain Home AFB</b>	International Style	Three senior officer houses designed by Neutra & Alexander	Neutra & Alexander and Hummel, Hummel & Jones	Capehart	None	Wood and brick siding on concrete foundation	Single-family dwellings	Three houses constructed as part of larger Capehart project during expansion of base.
<b>Naval Base Ventura County</b>	Ranch Style	Single-family, duplex, and multi-family units at Catalina Heights neighborhood	Urquhart, McCreary & O'Brien	Capehart	None	Poured, reinforced concrete foundation. Walls are concrete masonry units with wood trim and accents.	Single-family, duplex, and multi-family dwellings	Constructed as Capehart housing for Oxnard Air Force Base; the housing was transferred to Naval Base Ventura County.

INTEGRITY							
	Location	Design	Setting	Materials	Workmanship	Feeling	Association
<b>Mountain Home AFB</b>	Unaltered	Minimal exterior alterations. Retention of major interior spaces.	Unaltered.	Some interior modifications and upgrades of appliances.	Design reflects Neutra and Alexander International Style.	Unaltered. Three senior officer houses retain International Style.	Retains association with design of significant architect and International Style.
<b>Naval Base Ventura County</b>	Unaltered	Minimal alterations made during period of significance. Low, rectangular; symmetrical façade; shallow-pitched hip roofs; prominent, overhanging eaves.	Unaltered. Neighborhood conveys suburban planning concepts. Regular intervals between buildings, uniform setbacks from the street.	Minor interior modifications; upgrades of appliances; bathroom fixtures.	Construction is characteristic of mass-produced housing that resulted from World War II mobilization efforts, and was refined during the postwar housing boom.	Unaltered. The neighborhood retains its master TV antenna and retail store.	Unaltered. Neighborhood still retains its historic character and its association with Capehart program.





**APPENDIX H**

**FHA SQUARE FOOTAGES BY  
BUILDING TYPE**



**Table H.1 FHA Minimum Room Sizes for Separate Rooms**

Dimensions are in square feet unless otherwise noted.			
<b>MARKET RATE</b>			
<b>Single Family (1958 FHA Standards)</b>			
	1-Bedroom unit	4-Bedroom Unit	Least Dimension
Living Room	160	180	11'
Kitchen	60	80	3'4"
Dining Room	80	110	8'
Total Bedroom	120	380	N/A
Minimum Bedroom	N/A	80	8'
<b>MARKET RATE</b>			
<b>Multi Family (1960 FHA Standards)</b>			
Living Room	160	180	11'
Kitchen	60	80	5'4"
Dining Room	100	80	8'4"
Total Bedroom	120	400	8'
Minimum Bedroom	N/A	N/A	9'4"
<b>LOW COST</b>			
<b>(1961 FHA Standards)</b>			
Living Room	140	160	11'
Kitchen	3	70	3'
Dining Room	80	100	8'
Total Bedroom	N/A	320	N/A
Minimum Bedroom	N/A	N/A	7'

For the low-cost unit, the least dimension of first bedroom living unit, 9'4" minimum. The kitchen dimension for a low-cost housing unit allowed a minimum of 3 feet of clear passage space.

Source: Federal Housing Administration



**APPENDIX I**

**FEDERAL HOUSING LEGISLATION**



## FEDERAL HOUSING LEGISLATION

Public housing is defined as housing built and owned by the Federal, state, or local government. This includes housing built for low- to moderate-income families and the military. The names of legislation, if provided, are the popular names of the bills. Once a bill is passed by both houses of Congress and signed by the President, the bill becomes a law, and is referred to as a public law or statute. Before a bill or resolution becomes a law, it is titled H.R. for House of Representatives or S. for Senate to indicate the chamber in which the legislation was introduced.

**Table I.1. Federal Housing Legislation**

<b>Housing Legislation</b>	<b>Key Provisions</b>
National Housing Act of 1934 (Public Law 73-479)	<ul style="list-style-type: none"> <li>• Created the Federal Housing Administration (FHA) to provide a uniform system of mortgage insurance.</li> <li>• Created the Federal Savings and Loan Insurance Corporation (FSLIC) to insure savings accounts.</li> </ul>
Section 608 of the National Housing Act of 1934, as amended	<ul style="list-style-type: none"> <li>• Precursor to the Wherry Act, provided mortgage insurance for all construction of war worker housing, and for rental housing for returning veterans.</li> </ul>
U.S. Housing Act of 1937 (Public Law 75-412)	<ul style="list-style-type: none"> <li>• Authorized public housing programs.</li> <li>• Created the U.S. Housing Authority, which made loans or capital grants to local public housing agencies (PHAs).</li> </ul>
Housing Act of 1949 (Public Law 81-171)	<ul style="list-style-type: none"> <li>• Declared that every American deserved “a decent home and a suitable living environment” accomplished through private enterprise.</li> <li>• Title I financed slum clearance under urban redevelopment programs.</li> <li>• Title II increased authorization of FHA mortgage insurance.</li> <li>• Title III authorized the construction of 810,000 public housing units.</li> </ul>

<p>Housing Act of 1954 (Public Law 83-560)</p>	<ul style="list-style-type: none"> <li>• Introduced programs to encourage rehabilitation of housing in urban renewal areas.</li> <li>• Section 220 authorized FHA insurance for one- to four-unit dwellings in urban renewal areas.</li> <li>• Section 221 authorized FHA insurance for multi-family units.</li> </ul>
<p>Lanham Act, 1940 (Public Law 76-849)</p>	<ul style="list-style-type: none"> <li>• Authorized construction of public war housing accommodations.</li> </ul>
<p>Military Housing Insurance Act (<b>Wherry Act</b>), 1949 (Public Law 211) Title VIII of the National Housing Act, as amended</p>	<ul style="list-style-type: none"> <li>• Authorized construction of family housing units for the military through FHA-guaranteed mortgages. Private contractors built the units, and project sponsors owned, managed, and operated the units.</li> </ul>
<p>Armed Services Housing Mortgage Insurance (<b>Capehart Act</b>), 1955 (Public Law 345) Title VIII of the National Housing Act, as amended</p>	<ul style="list-style-type: none"> <li>• Like the Wherry Act, the Capehart legislation authorized construction of family housing units for the military through FHA mortgage insurance. The service requesting the units was responsible for acquiring the units from the sponsor after the buildings were placed in service.</li> </ul>



**APPENDIX J**

**GLOSSARY OF TERMS**



**Table J.1. Glossary of Terms**

<b>Term</b>	<b>Definition</b>
Activity	<ul style="list-style-type: none"> <li>• Term used by the Navy to denote a Naval base or installation.</li> </ul>
Appropriated Funds Housing Construction	<ul style="list-style-type: none"> <li>• The line item in the Federal budget in which Congress designated that Federal funds be spent on construction of military family housing. Sometimes referred to as Military Construction (MILCON).</li> </ul>
Appropriation	<ul style="list-style-type: none"> <li>• Funds formally set aside by Congress for a specific use.</li> </ul>
Architrave	<ul style="list-style-type: none"> <li>• A molded or decorative band framing a rectangular door or window opening.</li> </ul>
Authorization	<ul style="list-style-type: none"> <li>• Approval granted by Congress to undertake an action.</li> </ul>
Basic Allowance for Quarters (BAQ)	<ul style="list-style-type: none"> <li>• Money assigned to military personnel to pay for their housing. Also known as a housing allowance. Personnel living voluntarily in Wherry housing used their BAQ to pay rent. With Capehart and Appropriated Funds housing, the government kept the BAQ and used it to pay back the costs of construction.</li> </ul>
Building	<ul style="list-style-type: none"> <li>• An enclosed structure constructed for habitable use. In the case of residential buildings, the structure can consist of many dwelling units.</li> </ul>
Bureau of Yards and Docks	<ul style="list-style-type: none"> <li>• Established in 1862, designed, constructed, and maintained all Naval facilities.</li> </ul>
Casement window	<ul style="list-style-type: none"> <li>• A window with hinges on the upright side of its frame. This window opens outward from the center.</li> </ul>
District Public Works Officer (DPWO)	<ul style="list-style-type: none"> <li>• Provided facilities engineering and public works services for the Navy's Bureau of Yards and Docks. With respect to housing, the DPWO represented the Chief of the Bureau of Yards and Docks, coordinated management, maintenance, and operation of public quarters, and oversaw management of the Wherry and Capehart programs.</li> </ul>
Double-hung window	<ul style="list-style-type: none"> <li>• A window with two vertically sliding sashes, each in separate grooves or window tracks and closing half of the</li> </ul>

Term	Definition
	window.
Dwelling unit	<ul style="list-style-type: none"> <li>The space within a building designed for living and consisting of a number of rooms, including a minimum of a kitchen, a bedroom, and a bathroom.</li> </ul>
Fenestration	<ul style="list-style-type: none"> <li>Arrangement of windows, doors, and other openings on a building.</li> </ul>
Gable	<ul style="list-style-type: none"> <li>The triangular portion of wall enclosing the end of a pitched roof from the edges of the two roof planes to their meeting point at the ridge or top of the roof.</li> </ul>
Horizontally sliding window	<ul style="list-style-type: none"> <li>A window with two or more sashes, of which at least one slides along horizontal grooves or tracks.</li> </ul>
Installation	<ul style="list-style-type: none"> <li>An Air Force or Naval base designated for “permanent” or long-term use</li> </ul>
Modular measure	<ul style="list-style-type: none"> <li>A construction system based on standardized building materials, such as the 4’ x 8’ plywood sheet and the eight-foot-long 2” x 4”. This building method minimized on-site preparation of materials.</li> </ul>
Public housing	<ul style="list-style-type: none"> <li>Housing owned and managed by the Federal, state, or local government, also referred to as low-income or low-cost housing.</li> </ul>
Public Law	<ul style="list-style-type: none"> <li>A bill or resolution passed by Congress and signed by the President. Also referred to as a law or statute.</li> </ul>
Quarters	<ul style="list-style-type: none"> <li>Living space of any type.</li> </ul>
Setback	<ul style="list-style-type: none"> <li>The distance from the footprint of a building to a boundary. Typically, the front setback is measured from the face of the building to the centerline of the street right-of-way. Side and back setbacks are measured to the property boundary. Or, the portion of a building that is recessed from the rest of the building.</li> </ul>
Siding	<ul style="list-style-type: none"> <li>A weatherproof material used to surface the exterior walls of a frame building.</li> </ul>
Single-hung window	<ul style="list-style-type: none"> <li>A window having two sashes, of which only one is a movable window.</li> </ul>
Title VIII	<ul style="list-style-type: none"> <li>The section of the National Housing Act of 1934, as amended, in which the</li> </ul>

Term	Definition
	Wherry and Capehart Acts are located.
Unit	<ul style="list-style-type: none"> <li>• A room or group of rooms, including a kitchen and a bathroom, that is designed for occupancy by a family for living and sleeping purposes.</li> </ul>
United States Army Corps of Engineers	<ul style="list-style-type: none"> <li>• Acts as the construction contracting agent for the Department of the Army. The agency served this role for the Department of the Air Force during the late 1940s.</li> </ul>



## **APPENDIX K**

# **LIST OF ACRONYMS**





## LIST OF ACRONYMS

ABD – Advance Base Depot

AFB – Air Force Base

AFIR – Air Force Installations Representative

AMC – Air Mobility Command

AMW – Air Mobility Wing

ASTM – American Society for Testing Materials

ATD – Acorn Training Detachment

ATW – Air Transport Wing

BAQ – Basic Allowance for Quarters

BUDOCKS – Bureau of Yards and Docks

CBC – Construction Battalion Center

DoD – Department of Defense

DPWO – District Public Works Officer

EFC – Emergency Fleet Corporation

FHA – Federal Housing Administration

FPHA – Federal Public Housing Authority

GNP – Gross National Product

HHFA – Housing and Home Finance Agency

ICBM – Intercontinental Ballistic Missile

iNFADS – Navy and Marine Corps Internet Navy Facility Assets Data Store Management System

MAC – Military Air Command

MATS – Military Air Transport Service

MAW – Marine Air Wing or Military Airlift Wing

MCAAS – Marine Corps Auxiliary Air Station

MCAS – Marine Corps Air Station

MCSC – Marine Corps Supply Center

NAAS – Naval Auxiliary Air Station

NADEP – Naval Aviation Depot

NAS – Naval Air Station

NAVFAC – Naval Facilities Engineering Command

NAWS – Naval Air Weapons Station

NBVC – Naval Base Ventura County

NHPA – National Historic Preservation Act

NMC – Naval Missile Center

NSA – Naval Support Activity

NSGA – Naval Security Group Activity

RPI – Air Force Real Property Inventory

SAC – Strategic Air Command

TAC – Tactical Air Command

USAEC – United States Army Environmental Center

USAMRAA – United States Army Medical Research Acquisition Activity

VA – Veterans Administration

**APPENDIX L**

**ORAL HISTORY INTERVIEWS WITH  
FORMER RESIDENTS OF WHERRY AND  
CAPEHART HOUSING**



## **ORAL HISTORY INTERVIEWS WITH FORMER RESIDENTS OF WHERRY AND CAPEHART HOUSING**

Appendix L presents the results of oral history interviews with former residents of Wherry and Capehart housing. Informants were sought through a notice circulated at Air Force and Navy post exchanges in the Washington, D.C. metropolitan area, associations of retired military personnel, military newspapers, and the Armed Forces Retirement Home in Washington, D.C. Interviews were conducted by telephone and tape-recorded, and verbatim transcripts were prepared. The transcripts are included in this appendix. Photographs and unscaled floor plan sketches submitted by informants are included after the relevant transcripts.

The interviews were an important source of information about residents' opinions of this housing. Former residents interviewed included: three former residents of Wherry housing at Air Force bases, two residents of Capehart housing at Air Force bases, one resident of Wherry housing at a Navy base, two residents of Wherry housing at Marine bases, and three residents of Capehart housing at Navy bases. These residents lived in Wherry and Capehart housing primarily during the period of construction, 1949 to 1962. Residents included military personnel, wives of military personnel, and children of military personnel.

The purpose of the interviews was to determine residents' viewpoints on whether the objectives of the Wherry and Capehart housing programs were achieved. Therefore, the objective was not to gather detailed information about the physical features of the housing, which already is contained in the architectural record, but to gather information about aspects of the housing important to residents, such as whether the housing layout was conducive to family life or whether the house and neighborhood met the needs of children.

The interviews revealed that residents generally were pleased with Wherry and Capehart housing because it provided family housing adequate by standards of the 1950s in convenient locations on or near installations. The interviews largely confirmed several other conclusions drawn as a result of archival research, including:

- The housing and surrounding neighborhoods provided suburban amenities, such as landscaping and child-friendly environments, while reflecting government attempts to economize.
- The housing reflected post-World War II ideas about housing and neighborhood design, such as the open floor plan, curving streets, and cul-de-sacs.
- It reflected ideas of the period regarding house amenities, such as housing size, number of bedrooms, and number of bathrooms.
- It reflected regional construction practices, such as varying architectural styles, presence of garages or carports according to climate, presence or lack of basements and attics, and choice of building materials, such as stucco, brick, or wood.
- Capehart housing represented changing ideas about housing, such as the need for larger rooms, more bathrooms and bedrooms, more storage space, and individual car storage at the residence.
- While this housing was relatively attractive aesthetically, its appearance reflected its primarily practical purpose.

Original audiotapes, transcripts, and photos and other documentary information were submitted to the Library of Congress Veterans History Project, the Air Force Historical Research Agency, and the Naval Historical Center. Also submitted were a release form developed for this project and various forms required by the Library of Congress Veterans History Project.

# **SEEKING FORMER RESIDENTS OF WHERRY FAMILY HOUSING CAPEHART FAMILY HOUSING**

## **AT AIR FORCE, NAVY, AND MARINE CORPS INSTALLATIONS**

If you lived in Wherry or Capehart family housing during the 1950s, your memories are needed to help the Departments of the Air Force and the Navy document the history of this housing. On behalf of the Air Force and the Navy, R. Christopher Goodwin & Associates, Inc., is interviewing former residents, including enlisted personnel, officers, and their dependents.

The Wherry and Capehart Acts represented the first large-scale federal effort to provide comprehensive military family housing. Wherry and Capehart housing was built at military installations throughout the United States from 1949 to 1962.

Individuals who lived in Wherry and Capehart housing at Air Force, Navy, and Marine Corps installations between 1949 and 1962 are being sought for interviews documenting these important housing programs. Interview transcripts will be used in the historical documentation of these programs and will be maintained at military history repositories. Interview topics include:

- **House layout**
- **Yard appearance/landscaping**
- **Construction materials**
- **Memories of neighborhood**

**PLEASE CONTACT US BY PHONE OR E-MAIL UNTIL  
JULY 15, 2006**

Ms. Chris Heidenrich, Historian  
R. Christopher Goodwin & Associates, Inc.  
241 E. Fourth St., Suite 100  
Frederick, Md. 21701  
800/340-2724  
cheidenrich@rcgoodwin.com

**AIR FORCE/NAVY WHERRY CAPEHART  
QUESTIONS FOR ORAL HISTORY INTERVIEWS**

**Basic Biographical Information**

1. Name
2. City and state of current residence
3. Branch of service
4. Number of years in service
5. Summary of service – starting and ending years; changes in rank; rank when lived in Wherry/Capehart housing
6. Career field during military service

**Basic information about Wherry/Capehart residence**

1. Summary of which housing program (Wherry or Capehart), installation location, and years of residence
2. Why were you or your military family member stationed at this installation
3. Name of housing area, if remembered
4. Type of quarters – single-family detached, duplex, etc.

**Questions**

1. What type of housing did you live in before you lived in Wherry or Capehart housing? How did it compare to the Wherry/Capehart housing you lived in?
2. Did your living conditions change dramatically when you moved to Wherry or Capehart housing? Was this housing an improvement over your earlier living conditions?
3. In general, did you like living in this housing? Why? Did the housing meet your family's needs? Did you and your family members generally feel comfortable?
4. How did your housing compare to housing in the civilian sector?
5. Did the housing provide enough space for your family?
6. Did family members have privacy within the house?
7. Where was the closet and storage space? Did you feel that storage space was adequate?
8. If you were raising children in the housing, did you think it was adequate for children? Why and how? Was the neighborhood a good place for children to live?

9. One of the objectives of this housing was to provide “open” floor plans to create a feeling of spaciousness, to allow family members to congregate easily, and to allow parents to watch their children. Did your housing succeed in this? Was the housing layout/plan conducive to family life?
10. Did the housing and the neighborhood design help you feel a sense of community with the neighborhood?
11. How would you characterize your level of privacy in reference to the neighborhood? Did you feel that the housing provided privacy?
12. How would you characterize the amount of outdoor space available to your unit? What kind of outdoor space did you have, and was it adequate? What kind of views did you have of outdoor space from indoors?
13. One intent of these housing programs was to create a “suburban” environment. What feeling did the outdoor environment (such as landscaping and street layout) create, both around your house and in the neighborhood? Was it an appealing place to live?
14. This housing reflects the government’s desire to provide housing that was not excessive or too costly. Did you see evidence of attempts to economize? For instance, did all the closets and cabinets have doors? Did this economy affect your opinion of this housing?
15. What do you remember about the physical features of the house?
16. What physical features of the house did you like, and what features did you dislike?



RELEASE FORM FOR ORAL HISTORY INTERVIEWS

*HOUSING AN AIR FORCE AND A NAVY: THE WHERRY AND CAPEHART ERA SOLUTIONS TO THE POSTWAR FAMILY HOUSING SHORTAGE (1949-1962)*

I, \_\_\_\_\_, hereby give and grant to  
(printed name of interviewee)

THE DEPARTMENT OF THE AIR FORCE AND THE DEPARTMENT OF THE NAVY my tape-recorded memoir as a donation for such scholarly and educational purposes as THE DEPARTMENT OF THE AIR FORCE AND THE DEPARTMENT OF THE NAVY shall determine. It is expressly understood that the full literary property rights, legal title, and copyright of this memoir shall pass to THE DEPARTMENT OF THE AIR FORCE AND THE DEPARTMENT OF THE NAVY and that no rights whatsoever are to vest in me or my heirs now or at my death.

Signature of Interviewee: \_\_\_\_\_

Address of Interviewee: \_\_\_\_\_

Signature of Interviewer: \_\_\_\_\_

Address of Interviewer: \_\_\_\_\_

Date of Agreement: \_\_\_\_\_



# Audio and Video Recording Log

## 1. Name and address of collector or interviewer.

Name of Collector/Interviewer \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ ZIP \_\_\_\_\_ - \_\_\_\_\_

Telephone ( \_\_\_\_\_ ) - \_\_\_\_\_ Email \_\_\_\_\_

Organization or Affiliation (if any) \_\_\_\_\_

## 2. Full name and birth date of the veteran or civilian being interviewed as it appears on the recording label and Biographical Data Form.

Name of Veteran/Civilian \_\_\_\_\_ Birth Date \_\_\_\_\_  
month/day/year

## 3. Recording format (please check)

VIDEO type: Betacam  VHS  8mm  High-8  Digital  Other  \_\_\_\_\_

AUDIO type: Cassette  Microcassette  CD  Reel  Digital (DAT)  \_\_\_\_\_ (identify)

If audio, is the cassette or reel recorded on both sides? Yes  No

Is item: Original  Copy

## 4. Date of Recording \_\_\_\_\_

Estimated length of recording (in minutes) \_\_\_\_\_

## 5. Location of recording \_\_\_\_\_

## 6. Corresponding materials (please check)

Have you included materials other than the recording? Yes  No

If so, please complete the Photograph Log and/or the Manuscript Data Sheet.

## 7. Please summarize the topics discussed in the interview in their order of appearance on the recording.

Meter Reading  
or Minute Mark

Topics presented in order of discussion on recording

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

(Continue on back or on additional sheets as needed.)





# Biographical Data Form

To ensure inclusion in our National Registry of Service, this form must accompany each submission. Please use a separate form or additional sheet for service in more than one war.

PLEASE PRINT CLEARLY

Veteran  Civilian  \_\_\_\_\_  
first middle last maiden name

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ ZIP \_\_\_\_\_ -

Telephone ( \_\_\_\_\_ ) - \_\_\_\_\_ Email \_\_\_\_\_

Place of Birth \_\_\_\_\_ Birth Date \_\_\_\_\_

Race/Ethnicity (optional) \_\_\_\_\_ Male  Female  month/day/year

Branch of Service or Wartime Activity \_\_\_\_\_

Battalion, Regiment, Division, Unit, Ship, etc. \_\_\_\_\_

Highest Rank \_\_\_\_\_

Enlisted  Drafted  Service dates \_\_\_\_\_ to \_\_\_\_\_

War(s) in which individual served \_\_\_\_\_

Locations of military or civilian service \_\_\_\_\_

Was the veteran a prisoner-of-war? Yes  No

Did the veteran or civilian sustain combat or service-related injuries? Yes  No

Medals or special service awards. If so, please list (be as specific as possible):

Are photographs included? Yes  No  (If yes, please complete the Photograph Log in this kit.)

Are manuscripts included? Yes  No  (If yes, please complete the Manuscript Data Sheet in this kit.)

Does the veteran or civilian have field maps Yes  No  or wartime-related home movies Yes  No   
that he or she would like to share with the Library of Congress? (If yes, we will contact you shortly.)

Interviewer (if applicable) \_\_\_\_\_

Partner organization affiliation (if any, i.e. AARP, etc.) \_\_\_\_\_

Please use reverse for additional biographical information.



## Additional Information:

---



# Photograph Log

Photographic prints should be numbered with a soft (no.1) pencil on the back of the photograph in the lower-right corner. If the back is too slick to write on, enclose each photograph in a labeled envelope. Please do not use a pen or marker to label prints. Slides may be numbered on the frame housing. Photographers should sign a release form when possible. If more than five photographs are submitted, please make photocopies of the second page of this form to complete.

Name of Veteran/Civilian \_\_\_\_\_ Birth Date \_\_\_\_\_  
month/day/year

## PHOTOGRAPH # 1

Place \_\_\_\_\_ Date \_\_\_\_\_

Person(s) left to right \_\_\_\_\_ month/day/year

\_\_\_\_\_  
\_\_\_\_\_

Description \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Photographer (if known) \_\_\_\_\_

## PHOTOGRAPH # 2

Place \_\_\_\_\_ Date \_\_\_\_\_

Person(s) left to right \_\_\_\_\_ month/day/year

\_\_\_\_\_  
\_\_\_\_\_

Description \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Photographer (if known) \_\_\_\_\_

(Continue on back.)

(You may photocopy this side of the form or print additional copies to use for additional photographs if needed.)

PHOTOGRAPH # \_\_\_\_

Place \_\_\_\_\_ Date \_\_\_\_\_  
month/day/year

Person(s) left to right \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Description \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Photographer (if known) \_\_\_\_\_

PHOTOGRAPH # \_\_\_\_

Place \_\_\_\_\_ Date \_\_\_\_\_  
month/day/year

Person(s) left to right \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Description \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Photographer (if known) \_\_\_\_\_

PHOTOGRAPH # \_\_\_\_

Place \_\_\_\_\_ Date \_\_\_\_\_  
month/day/year

Person(s) left to right \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Description \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Photographer (if known) \_\_\_\_\_



# Veteran's Release Form

TO BE COMPLETED BY VETERAN OR CIVILIAN

(In cases of deceased veterans, to be completed by the donor of the material.)

I, \_\_\_\_\_, am a participant in the Veterans History Project (hereinafter "VHP"). I understand that the purpose of the VHP is to collect audio- and video-taped oral histories of America's war veterans and of those who served in support of them as well as selected related documentary materials (such as photographs and manuscripts) that may be deposited in the permanent collections of the American Folklife Center at the Library of Congress. The deposited documentary materials will serve as a record of American veterans' wartime experiences; and may be used for scholarly and educational purposes. I understand that the American Folklife Center plans to retain the product of my participation as part of its permanent collection and that the materials may be used for exhibition, publication, presentation on the World Wide Web and successor technologies, and for promotion of the Library of Congress and its activities in any medium.

I hereby grant to the Library of Congress ownership of the physical property delivered to the Library and the right to use the property that is the product of my participation (for example, my interview, performance, photographs, and written materials) as stated above. By giving permission, I understand that I do not give up any copyright or performance rights that I may hold.

I also grant to the Library of Congress my absolute and irrevocable consent for any photograph(s) provided by me or taken of me in the course of my participation in the VHP to be used, published, and copied by the Library of Congress and its assignees in any medium.

I agree that the Library may use my name, video or photographic image or likeness, statements, performance, and voice reproduction, or other sound effects without further approval on my part.

I release the Library of Congress, and its assignees and designees, from any and all claims and demands arising out of or in connection with the use of such recordings, documents, and artifacts, including but not limited to, any claims for defamation, invasion of privacy, or right of publicity.

ACCEPTED AND AGREED

Signature \_\_\_\_\_ Date \_\_\_\_\_

Printed Name \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ ZIP \_\_\_\_\_ - \_\_\_\_\_

Telephone ( \_\_\_\_\_ ) - \_\_\_\_\_





# Interviewer's Release Form

TO BE COMPLETED BY INTERVIEWERS, RECORDING OPERATORS, AND PHOTOGRAPHERS

I, \_\_\_\_\_, am a participant in the Veterans History Project (hereinafter "VHP"). I understand that the purpose of the VHP is to collect audio- and video-recorded oral histories of America's war veterans and of those who served in support of them as well as selected related documentary materials such as photographs and manuscripts that may be deposited in the permanent collections of the American Folklife Center at the Library of Congress. The deposited documentary materials will serve as a record of American veterans' wartime experiences; and may be used for scholarly and educational purposes. I understand that the American Folklife Center plans to retain the product of my participation as part of its permanent collection and that the materials may be used for exhibition, publication, presentation on the World Wide Web and successor technologies, and for promotion of the Library of Congress and its activities in any medium.

I hereby grant to the Library of Congress ownership of the physical property delivered to the Library and the right to use the property that is the product of my participation (for example, my interview, performance, photographs, and written materials) as stated above. By giving permission, I understand that I do not give up any copyright or performance rights that I may hold.

I also grant to the Library of Congress my absolute and irrevocable consent for any photograph(s) provided by me or taken of me in the course of my participation in the VHP to be used, published, and copied by the Library of Congress and its assignees in any medium.

I agree that the Library may use my name, video or photographic image or likeness, statements, performance, and voice reproduction, or other sound effects without further approval on my part.

I release the Library of Congress, and its assignees and designees, from any and all claims and demands arising out of or in connection with the use of such recordings, documents, and artifacts, including but not limited to, any claims for defamation, invasion of privacy, or right of publicity.

ACCEPTED AND AGREED

Signature \_\_\_\_\_ Date \_\_\_\_\_

Printed Name \_\_\_\_\_

Signature of Parent or Guardian (if interviewer is a minor) \_\_\_\_\_ Date \_\_\_\_\_  
month/day/year

Printed Name of Parent or Guardian \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ ZIP \_\_\_\_\_ - \_\_\_\_\_  
month/day/year

Telephone ( \_\_\_\_\_ ) - \_\_\_\_\_

Relationship to veteran/civilian \_\_\_\_\_

## **JOHN W. BACON**

Ms. Chris Heidenrich, M.A., a historian with R. Christopher Goodwin & Associates, Inc., conducted a recorded interview with John W. Bacon via telephone on 29 August 2006. Mr. Bacon was interviewed for a project sponsored by the Department of the Air Force and the Department of the Navy to document the history of military family housing constructed under the Wherry and Capehart programs between 1949 and 1962. Ten other former residents of Air Force and Navy Wherry and Capehart housing were interviewed. A historic context, neighborhood design guidelines, and a tax-credit brochure also were completed for the project.

John W. Bacon served in the U.S. Air Force from 1950 to 1971 and worked in aircraft fuel system repair. He enlisted as an airman and retired as a master sergeant. Mr. and Mrs. Bacon and their three children resided in Wherry housing at Fairchild Air Force Base, Washington, from 1957 to 1960 and Capehart housing at Glasgow Air Force Base, Montana, from 1961 to 1962. He held the ranks of staff sergeant and technical sergeant during this period. The Wherry housing was a one-story, three-bedroom duplex with a living room, dining room, bathroom, kitchen, and basement. A detached garage was located next to the unit. The duplex was remodeled into a single-family house during the Bacon family's residence; the Bacons lived in the house and the other family in the duplex moved to other housing. The Capehart housing was a two-story, three-bedroom fourplex with a living room, dining room, kitchen, bathroom, and basement.

**CHRIS HEIDENRICH:** This is Chris Heidenrich from R. Christopher Goodwin & Associates interviewing John W. Bacon on August 29, 2006. OK, it's on. If you could just acknowledge that you know you're being recorded, that would be great.

**JOHN W. BACON:** Yes, I acknowledge that.

**HEIDENRICH:** OK, thanks. Well, first of all, I just want to say thank you for taking the time to speak with me about your experiences at the Wherry and Capehart housing. We appreciate your insights, and it will add to our understanding of the history of the housing, so thank you. And I just want to make sure that we have some basic information correct, and biographical information correct here. You were in the Air Force.

**BACON:** Yes, ma'am.

**H:** And you served from 1950 to 1971.

**B:** That's correct.

**H:** What was your career field during your military service?

**B:** I was trained in aircraft maintenance. I specialized in aircraft fuel system repair.

**H:** OK. And what was your rank when you lived in the Wherry housing and the – let's say from '57 to '62.

**B:** When I moved in, I was a staff sergeant, and when I left – well, at the end of '62, I was a tech sergeant. I made master in 1967.

**H:** OK. So you went from staff sergeant to tech sergeant. OK. Your rank at enlistment?

B: I was an airman basic.

H: And the housing you lived in, Wherry housing at Fairchild Air Force Base from '57 to '60, and then the Capehart housing at Glasgow Air Force Base '61 to '62. And I know that you lived in other Wherry housing after that, but our period –

B: I also lived in Wherry housing at Ramey Air Force Base in Puerto Rico in 1962.

H: OK. Our focus is on the continental U.S. and Alaska and Hawaii, so we'll stick with that. But certainly you have a lot of extensive experience with this housing, so I'll be interested in your general impressions, not just the impressions of this housing. So, do you remember whether either of those two developments had names, or were they just referred to as the Wherry housing or the base housing, or the Capehart housing?

B: I think just base housing.

H: OK. Base housing. We found some of them had a subdivision-style name. The Wherry housing, I noted that it was first, it was a duplex, and then it was turned into a single-family house –

B: Yes, it was.

H: -- while you were there. OK. And that was the Wherry. What about the Capehart? What kind of housing was that? Single-family detached, duplex, et cetera?

B: It was a fourplex.

H: Fourplex, OK. And then was the duplex two-story or one-story?

B: It was single-story with a basement.

H: OK, and then what about that fourplex?

B: That was two-story with basement.

H: OK. And what other rooms were in the Wherry housing? You know, living room, dining room, et cetera.

B: Living room, dining room, bathroom, and three bedrooms, and kitchen.

H: OK, so one bath. Three bedrooms, kitchen. And then the Capehart.

B: It was much the same. I think there were – yeah, there was just one bathroom in it.

H: OK. And then living room, dining room, kitchen. And three bedrooms in that one, as well?

B: Yeah. Upstairs.

H: OK. And how many family members were there living with you in this housing? Your wife, and you had kids?

B: In both places, my wife and three children.

H: OK. Were they younger or teenagers, or what was their...

B: They were much younger.

H: OK, great. OK, well let's – I'd like to focus on the Wherry housing, and then I'll also ask you a few questions about Capehart. What type of housing did you folks live in before you lived in, before you moved into that Wherry housing at Fairchild, and how did it compare to the Wherry housing?

B: We lived in various apartments and private housing in Spokane, Washington. Nowhere compared with Wherry housing. It was much, much cheaper to live in Wherry.

H: OK. Was the, were those apartments and private housing nicer, or not as nice?

B: Some aspects were nicer, and some were not as good.

H: Yeah. So it kind of varied? It wasn't overall the Wherry was so much better or anything like that?

B: The best part was that Wherry was on base. You didn't have that long drive from Spokane twice a day. And it was close to the commissary and post exchange.

H: Yeah. I bet that made a big difference.

B: It surely did.

H: And like you said, the Wherry was cheaper for you, right?

B: Yes. We just surrendered our quarters allowance for that.

H: OK. So, did your living conditions change in any way when you moved to the Wherry? Was there any dramatic change?

B: Well, nothing dramatic, I don't suppose.

H: Just basically, like you said, you had varied experiences in the previous housing. OK. What was your general impression of the Wherry housing? Did you like it, or did it meet your needs?

B: We liked it very much.

H: What did you like about it?

B: Besides being a good house, it also had a detached garage.

H: Your own garage?

B: Each housing unit had its own garage.

H: OK. Were the garages connected to each other?

B: No, ma'am.

H: It was part of your –

B: Stand-alone.

H: OK. So it was attached to your unit?

B: No. It was separated by a sidewalk, about ten feet.

H: Oh, OK, right. Detached. Of course. And so it was an actual garage, not a carport, I suppose because you were in the Northwest with the weather –

B: Yes.

H: -- that it was probably better to have a garage.

B: Definitely.

H: Yeah. And so did you feel, did everyone generally feel comfortable in this housing?

B: Yes, they did.

H: And how did it compare to a similar type of housing in the civilian sector? I know you just got through saying you had lived in some apartments. How did it compare with comparable civilian housing?

B: Well, I didn't live in comparable civilian housing.

H: Yeah. Or any friends that you visited who lived in civilian housing?

B: Yes, there were several in Spokane.

H: And how did that compare to the Wherry housing?

B: I thought the Wherry was a lot better.

H: Oh, really?

B: Yeah.

H: In terms of what?

B: Building maintenance, mostly.

H: You mean where the government – did the government or was your housing still operated by a contractor?

B: No, it was government housing, and the Civil Engineering Squadron maintained it.

H: Oh, OK. So they paid more attention to maintenance than in the –

B: Mostly, yes.

H: Yeah. And did this Wherry housing provide enough space for everybody, for your family?

B: Yeah. We didn't have to put anybody in the basement, unless they wanted to play.

H: Boy, that was nice that you had a basement.

B: Yes.

H: Did you use that for the children? Is that a play area?

B: They would go down there and play.

H: Oh, OK. Now, the basement, was that weather-related? I just haven't come across a lot of housing with basements. Do you have any idea why yours had a basement?

B: Well, all the housing there in Wherry had basements.

H: Interesting. OK. I mean, did it serve any particular purpose as far as the climate? You know, any kind of unique reason to have – maybe if there are places, I suppose, that were closer to the water, maybe they couldn't have basements. Maybe that was the distinction.

B: It was great in the winter.

H: Yeah?

B: Kept you nice and warm. You didn't have to have the kids outdoors playing all the time.

H: Oh, OK. You were able to have them inside.

B: Oh, yes.

H: So space elsewhere in the house was good? I know that your children were young, and you know, they don't need a lot of space.

B: Yeah, I thought it was good.

H: Where was the closet and storage space? Did each bedroom have a closet?

B: Each bedroom had its own closet.

H: Oh, OK. And then was there closet space elsewhere in the house, like maybe in the entryway, or...

B: Yes, there was, in the living room, just inside the entry door.

H: Oh, OK. What did you put in that?

B: Usually outside clothing.

H: Oh, OK. Coats and stuff.

B: Yes.

H: OK. So each bedroom had a closet, and then there was a closet inside the living room.

B: And the basement was a great storage place, too.

H: Oh, of course. And then you didn't have to worry about flooding, probably.

B: No. We had no water near us.

H: Oh, that's good. OK. And what kind of things were you able to store in the basement? I've just heard from many military families who've said, you know, we really couldn't keep that much because we didn't have a lot of room. But I suppose the basement gave you a lot of extra room to store things.

B: It did. There was off-season clothing down there. And like you were told before, we didn't accumulate much because we had a weight allowance that was very dearly priced if you went over.

H: Oh, OK. So that governed how much you were able to have.

B: That's right. Because it came time to move, everything was weighed very carefully.

H: Sounds like they were very strict about that.

B: Yes, ma'am.

H: Now, so you had the basement and those closets. What about the kitchen? Are you familiar, at the Wherry house, how the space was in the kitchen?

B: We had sufficient storage area in the cabinets.

H: So there was cabinet space. And was there any kind of pantry or anything in the kitchen?

B: I don't recall one at Fairchild.

H: OK. The children, was the housing adequate for them, and was the neighborhood a good place for children to live?

B: The neighborhood was excellent. It was patrolled by the air police, very little vandalism. You've got to remember, Fairchild was a Strategic Air Command base, and Strategic Air Command had very strict rules for everything, including family behavior.

H: Oh, really.

B: Yes.

H: So, was there a lot of room outside for children to play?

B: We had a good-sized yard.

H: Back yard?

B: Yes, ma'am.

H: And what about a front yard? Did you have a front yard?

B: Small.

H: Yeah. Was the back yard fenced off?

B: Partly. Just between the two tenants' yards is all.

H: OK. And was there anything within the development for children, like a playground or anything like that?

B: I believe there was a small playground there.

H: OK. So kids used to be able to go there.

B: In those years, kids found lots of things to do right at home in the back yard.

H: Maybe a little more inventive than –

B: Especially with boys. They were always digging in the ground.

H: Right. Was your living room and dining room connected? Was it open between them, or were they separate rooms?

B: They were sort of combined.

H: OK. So the, one of the objectives of this housing was to provide these open floor plans to create this idea of spaciousness.

B: I think so.

H: You think that your house accomplished that?

B: Oh, yes.

H: Did you like that design?

B: Yes, ma'am.

H: Was the kitchen sort of separated off from everything, or did the dining room lead into the kitchen?

B: There was a doorway leading into the kitchen. It was just a frame. There was no door in it.

H: Yeah. OK. And so did you feel that the layout of the house, and the kind of the plan of the house was conducive to family life, where everyone could gather...

B: Yes, I think so.

H: ... and you could keep track of everyone. What about outside? Did you know your neighbors? Were people able to get to know each other?



B: Typical small-town atmosphere. Everybody knew everybody else. A lot of that came from everybody working together.

H: Yeah, yeah. How much do you think the housing and the design of the neighborhood helped foster that?

B: I think it was quite conducive to that.

H: How did the neighborhood do that?

B: Well, everybody was doing the same job. It was close living.

H: Where the houses were close together?

B: Yes.

H: Yeah. Now, was it a, were there curving streets, stuff like that, where it was safe to get outside and gather, and maybe cul-de-sacs? How was your neighborhood designed?

B: I don't remember any cul-de-sacs there. It was mostly just through streets.

H: OK. Was it just in a grid, or was it curving streets?

B: No, they were pretty much straight streets.

H: What about your level of privacy in reference to the rest of the neighborhood? Did you feel that you had enough privacy as a family in reference to the rest of the neighborhood?

B: Yes, I did.

H: Despite the closeness of the housing? People couldn't – were you able to hear, did you share a wall with the duplex?

B: Oh, yeah.

H: Were you able to hear?

B: Oh, yeah. Especially when they were fighting.

H: Oh, no.

B: We shared the duplex with a couple who were very heavy drinkers.

H: Oh. So you could hear them sometimes.

B: I was afraid they were coming through the wall sometimes.

H: Wow. So in that way, I suppose, there was a little bit, maybe not quite as much privacy as a single-family home, maybe. But in general, I mean, aside from that, you felt that...

B: About the only thing I never heard was gunshots.

H: Oh, from them?

B: Yes.

H: Oh, my. What was that – did something happen?

B: No. They just went to the NCO club too frequently and got drunk, came home and fought like tigers.

H: Oh, wow. And they were shooting guns?

B: No, I said the only thing we didn't hear was guns.

H: Oh, you didn't hear. Oh, OK. And they just fought a lot.

B: Oh, yes.

H: OK. So was that something that detracted from the housing, or just kind of not a major part of your existence there?

B: Well, it detracted a little bit, especially in the middle of the night.

H: But other than that, everything else was...

B: Everything else was great.

H: Yeah. Were there any other ways that you felt that you're kind of not as private within the neighborhood, or was that the only way?

B: No. No. It was great.

H: What about outdoor space? You mentioned you had a nice, big back yard...

B: Not large, but it was adequate.

H: ... and you had a little bit of a front yard. Yeah, OK. Was your window space, did you have good views of the outdoors from indoors?

B: Yes, we did. They were not large windows, but it was adequate.

H: Provided enough light?

B: Yes.

H: And another intent of the housing program was to create this suburban environment. What kind of feeling would you say that the outdoor environment created? Was there a lot of landscaping, or any landscaping?

B: There was a little bit.

H: Like what kind?

B: Small shrubs.

H: Like around your house?

B: Yes.

H: OK. Were there any trees?

B: In Washington State, there was a lot of pine trees everywhere.

H: OK. Did you have any on your property, on your unit?

B: No, I don't think we did. There were lots of them on the base.

H: And just kind of around the neighborhood?

B: Yes.

H: OK. And was it a suburban environment?

B: Not like you'd have today.

H: In what way was it different?

B: For one thing, you didn't have vendors up and down the street like you do today, selling ice cream from trucks and other things. You didn't have a lot of door-to-door salesmen, either. It was not allowed.

H: Back then.

B: Yes.

H: But in general, the general appearance would you say was suburban?

B: Yes, I'd say that.

H: And the housing also reflects the government's desire to economize and not provide excessive...

B: You could say that, yes.

H: So you did notice examples of that in your house?

B: Yes.

H: Any specific examples come to mind?

B: There wasn't a great overabundance of light fixtures.

H: Any other examples?

B: Not that I can think of off the top of my head right now.

H: How did that affect your opinion of the housing?

B: After living in a civilian community for a long time, I thought Wherry was the best thing that ever happened to us.

H: Really?

B: Yes.

H: Why was that?

B: I felt we had a lot more room to ourselves.

H: OK, roomier.

B: Safer.

H: OK. And do you remember anything about any of the physical features of the house, interior or exterior? You know, building materials or other physical aspects of the house?

B: No.

H: Anything special, like a wood floor or anything like that?

B: I don't think so.

H: Yeah. And what physical features of the house did you like, and what did you dislike?

B: I liked having that basement.

H: Anything that you disliked?

B: No, I don't think so.

H: Now, you mentioned that your housing was remodeled from a duplex to a single-family house. So does that mean that the whole building, then, became one single-family house?

B: Yes.

H: What was that like? What was your opinion of those changes?

B: We didn't live in it long enough after the modification. We got transferred to Montana.

H: How long did you live in it after the modification?

B: Probably six months.

H: OK. What kind of changes were made?

B: The wall between the two areas was done away with. You had free access from one end to the other. Boy, it was huge, too.

H: So you got a lot more space.

B: Oh, yeah.

H: Did kind of the general – was the layout similar, or did they enlarge some of the rooms? Or what did they do?

B: The bedrooms appeared to be larger. And of course, the basement was a lot larger.

H: I guess that would have been doubled in size.

B: Oh, yes.

H: OK. So there was a noticeable difference?

B: Very definitely.

H: How many more bathrooms did you have?

B: One.

H: OK, so you went from one bath to two baths.

B: The government didn't go in for a lot of bathrooms.

H: Yeah, it's funny, the Wherry housing in particular typically was one bathroom. So it's interesting that they changed it to two. Some of the Capehart housing seems like that was more likely to have more than one bathroom. So that's interesting.

B: I believe the Capehart housing they built there at Fairchild while I was still there had two bathrooms. That and Montana did.

H: So what did you think of the changes that were made from the duplex to the single-family house?

B: I think they waited too long to do it.

H: Yeah, you wish they had done it sooner.

B: Oh, yeah, much sooner.

H: Why? Because of the space reasons? What was your –

B: Yes.

H: How did this Wherry housing compare to the Capehart housing that you lived in?

B: The Capehart was brand new, so it was like the difference between night and day.

H: OK, so the Wherry, you were not one of the earlier tenants.

B: No. I think that was built in the late '40s and early '50s.

H: Oh, OK. So it must have been some of the earliest Wherry housing, then.

B: I think it was.

H: So you kind of caught it when it was maybe ten years old.

B: I expect so.

H: So the Capehart was newer. Did you notice any other details that reflected a change? Like maybe there were more – it seems like some of the Capehart residents I've interviewed have mentioned some little decorative features that maybe were not present in Wherry. Did you have anything like that?

B: There probably were. It was brand new houses. That was the biggest thing I noticed. With a lawn that had to be grown. A lot of mud up there in Montana.

H: Obviously, they installed the lawn, but did you have to maintain that?

B: Yeah. They had an inspection every week.

H: OK. And was it just – when you say newer, just everything was just generally nicer?

B: Yes.

H: OK.

B: Everything was brand new from the ground up.

H: And what about spacewise? How did it compare to the Wherry?

B: I thought the bedrooms were just a little smaller.

H: Oh, OK. That's interesting. Anything about the basement was different? Did they just provide a standard, kind of unfinished –

B: Well, the basement was smaller, too, because instead of a long, single-story house, you had a shorter two-story.

H: How did you like having a two-story versus a one-story?

B: It just seemed to be warmer in the wintertime. Montana's weather was very cold in the winter. The difference probably was that we had gas heat versus oil in the Wherry.

H: So how is gas heat better?

B: You don't get the smell of oil. It had a big tank in the basement in Wherry. You could always smell oil.

H: And then someone had to come and put the oil in, right?

B: Oh, yeah. They came out real regular. Every month, they refilled the oil tank.

H: So, now, was it similar in some of the other ways that we were talking about, like the yard space and the –

B: I had a huge back yard in Montana.

H: And was it a good place there, too, for children?

B: Yes, and cows and everything else that wandered through.

H: You had some cows wandering through?

B: Yes, we did. Several times.

H: Through the development or through your yard?

B: Both. Montana was open range country.

H: OK. So they just kind of wandered through there.

B: I guess they're more steers than cows.

H: So then, was it a recognizable difference between the Capehart and the Wherry?

B: Yeah, just the appearance of the housing alone was so much different.

H: In what way?

B: Two-story instead of one.

H: What about the attractiveness? Would you call either of the Wherry or Capehart housing attractive?

B: Yeah, I think so.

H: What was the building material for the Wherry house?

B: Wood with siding. Same thing in the Capehart.

H: OK. Well, what about any kind of inside or outside, any details of the Capehart housing versus the Wherry? Did you notice any difference in terms of the type of materials used, that maybe the materials in the Capehart housing were nicer, or anything like that that you noticed?

B: Only nicer because they were newer, I think.

H: OK. But just a similar approach to providing utilitarian housing, nothing really fancy.

B: No, ma'am.

H: OK. Anything else to add about your general impressions of either the Wherry or the Capehart housing that you lived in?

B: In the Capehart in Montana, we had some curvy streets and some cul-de-sacs.

H: OK. Versus the Wherry, where you didn't. Anything else to add?

B: No, ma'am.

H: OK. Well, do you have any photos of either of those two developments?

B: No, I don't.

H: OK. Well, if you happen to think of anything else that you'd like to add, please feel free to give me a call or e-mail. I'd love to hear from you, and I appreciate your taking the time to speak with us.

B: Oh, you're welcome.

H: And this will be given to the Air Force Historical Research Agency and the Library of Congress.

B: OK.

H: So I thank you so much for your time.

B: Thank you.

H: OK. Take care.

B: Bye-bye.

H: Bye.

END



## AUDREY CLARK

Ms. Chris Heidenrich, M.A., a historian with R. Christopher Goodwin & Associates, Inc., conducted a recorded interview with Audrey Clark via telephone on 29 August 2006. Ms. Clark was interviewed for a project sponsored by the Department of the Air Force and the Department of the Navy to document the history of military family housing constructed under the Wherry and Capehart programs between 1949 and 1962. Ten other former residents of Air Force and Navy Wherry and Capehart housing were interviewed. A historic context, neighborhood design guidelines, and a tax-credit brochure also were completed for the project.

Audrey Clark was the wife of a U.S. Navy lithographer and photographer who served in the Navy from 1948 to 1969. She, her husband, and their four children resided in Capehart housing at Naval Air Station Lemoore, California, from 1962 to 1965 while her husband was a chief petty officer and an ensign. The Clark family lived in a one-story residence with three bedrooms, two bathrooms, a dining room, a living room, and a carport.

CHRIS HEIDENRICH: This is Chris Heidenrich from R. Christopher Goodwin & Associates interviewing Audrey Clark on August 29, 2006. OK, and if you could just acknowledge that you know you're being recorded, that would be great. Just say you know you're being recorded.

AUDREY CLARK: I know I'm being recorded.

HEIDENRICH: Great. Thank you. Well, I just also wanted to say thanks a lot for participating. I know that I'm looking forward to hearing what you have to say about your time in the Capehart housing. And it's just very, you know, as you saw in the mailing, just the questions are about your impressions and stuff like that. So hopefully, it won't be too taxing. Well, first of all, I want to make sure that we have some correct biographical information. Your husband was in the Navy.

CLARK: Right.

H: And do you know approximately – I know it's you we're speaking with, but just to gather a little bit more information on him, any idea of the years that he was in the service?

C: Yes, he was in for 21 years, from 1948 to '69.

H: OK. Great. And what was his rank when you folks lived in this Capehart housing?

C: He was chief, and then he made ensign while we were there.

H: And that would be chief petty officer?

C: Yes. No, photo.

H: Photo?

C: Chief photographer.

H: Oh, chief photographer, OK. And are those enlisted ranks or officer ranks?

C: The chief photographer is enlisted, and he went up to what is called, for officer, an ensign. He made ensign while we were there. So that was the start of being an officer.

H: And what was his career field during his service?

C: Well, he started out as a lithographer, and then he switched over to photographer. And he ended up as an ensign, as a photo officer.

H: So, his rank at enlistment, did he start at the beginning, or where did he –

C: Yes. He enlisted in San Diego in 194 – well, San Jose, but he went to San Diego boot camp in 1948.

H: OK, so like a seaman, I guess they would call themselves?

C: Mm-hmm.

H: OK. And so you lived at Capehart housing at Lemoore Naval Air Station from '62 to '65. Did your housing area have a name, you know, like a subdivision? Or was it just referred to as Capehart?

C: Oh, you know, I can't think right now. I think it did, but I can't.

H: Well, if you happen to remember a little bit later, you know, that's fine. You can just mention it. And your quarters, what kind of quarters was it? Was it single-family detached, or duplex?

C: Well, they were all sort of separate, but yet they were hooked on by a fence or something. Part of it, ours was, anyway, it was hooked up to the neighbor's house. It was in a cul-de-sac. Ours was in a cul-de-sac.

H: OK. So was it, were they attached by a, through the carports?

C: Yes. One side was a carport with a neighbor, and the other side was their house.

H: OK. So did you folks share a wall of living space?

C: No, we really didn't. We didn't, because the way it was, it was sort of, ours was one way, and then theirs was the other way, so it was just sort of on the end.

H: OK. So they were detached houses?

C: No. They were kind of hooked together, but it wasn't really – how do I explain it? It wasn't back-to-back wall.

H: OK. Maybe through like a pathway.

C: Yeah. Sort of like that. And then the carport was on the other side, our carport.

H: OK, on the other side of that neighboring house.

C: So our cars were side to side.

H: Oh, OK. I see. Now, were the carports in the middle of the two houses then?

C: On the one side, yes.

H: OK. So the carports were next to each other, but they were not in the middle of the two houses. Or were they?

C: Well, let's see. Well, from the front door, it would be on our left. The carports were together. Then on our right was other housing. You weren't really hooked, but yet you couldn't get out. They were closed in, where people couldn't walk around your house.

H: I see. OK.

C: But it wasn't really, you know, wall to wall, I'm trying to say.

H: And the types of rooms, you mentioned in your e-mail it was three bedrooms, two baths, dining room, and living room, and then a carport. Is that right?

C: Yes.

H: OK. Now, how many stories?

C: Just one.

H: One story. OK. And what type of housing did you live in before you lived in this Capehart housing? You mentioned, kind of referenced some of the housing you'd lived in, World War II housing.

C: Yeah. How far back do you want me to go?

H: Just right, I guess, right before the Capehart, unless it was kind of temporary for just a couple months.

C: Well, yeah, it was. Because, my husband was down at the Antarctic for 14 months, so the kids and I lived up here in San Jose in a duplex. And before that, we lived back at Quonset Point, Rhode Island, and that was in that old two-story World War II housing.

H: OK. Well, how did both of those sets of previous housing, how did those compare to the Capehart housing?

C: Oh, nothing. (LAUGHS) No way to compare. Like I said, it was like a palace for me.

H: Yeah. Yeah, that was a neat turn of phrase.

C: I guess it's kind of dumb if people don't know what you lived in, but it was so neat because, through all – it's what, you know, like I said, what we lived in before was this here, there, and old, and then waiting in a motel for housing, that was pretty bad.

H: So definitely, your living conditions changed dramatically when you moved to the Capehart housing?

C: Oh, yes. Yes.

H: It sounds like it was a big improvement.

C: Oh, great. Yeah. I just couldn't believe it, because we thought was going to have to rent from civilians down there at Lemoore, and all of a sudden, our name came through on housing. And we really had two choices of houses happened to be empty at that time. We were the second people to live in this one because, see, they moved Lemoore from the Bay area here. They moved all the jets down to the desert. And so they had just built this station down there. So everything was new and nice.

H: Oh, yeah. Makes a difference. Well, speaking of the civilian housing, how did this housing, the Capehart, compare to housing that was available in the civilian sector?

C: Well, that was all new, too, so it was sort of the housing there that we could have got into was practically first-time people moving in. This was all new down there.

H: Oh, OK, because of the new air station.

C: New base. There was other housing in town, but we really didn't look there because they'd just started – they were just building all over down there then.

H: So would you have had to pay more for civilian housing?

C: Yeah, but don't ask me how much, because I don't remember.

H: Sure. No, that's OK, just the fact that you had to pay more is certainly –

C: Oh, yeah. It would have been a lot more, and then it would have been a drive into the station, further away, because it was actually in the little town of Lemoore.

H: And so in general, did you – obviously, you sound like you really liked, you and your family liked living in this Capehart housing.

C: Oh, yes, definitely.

H: People felt comfortable, and it met your needs?

C: Yes.

H: OK. Now, what about space? Did the housing generally provide enough space for everybody in your family?

C: Oh, yeah, really. I had three kids when we moved down there, and the two girls shared a room, my son had his room, and we had our, the big master room, master bedroom with a bath off of it. So we had our own bath, and never had that before (LAUGHS)

H: Wow. That's the first time I've heard about that in this housing.

C: Oh, yeah. It had the bathroom right off of the master bedroom, and then the other bathroom down the end of the hall that the kids used.

H: OK. So those were the two bathrooms in the house.

C: Right.

H: And so, did family members have privacy? I guess you mentioned you had three children. What was their age range at the time? Were they real young, or teenagers, or where did they fall?

C: Well, dear, now, let's see. They must have been – I was going to have all this written down.

H: Oh, that's OK.

C: The oldest one was born in '54.

H: OK, so let's see, in '62, the oldest was eight.

C: Eight. And then my son was six, and then the little one was four. OK, four, six, and eight. Because the four-year-old started kindergarten there, I know.

H: So then it sounds like the kids were young enough maybe where they didn't mind, the two kids who shared the room, maybe they didn't mind doing that.

C: No, the two girls, they were fine. We had twin beds.

H: And so everybody had enough privacy?

C: Right.

H: Where was the closet and storage space? Did each bedroom have a closet?

C: Yes, it did. Each bedroom had a closet.

H: And was there other closets in the house? Like in the foyer?

C: You know, I don't remember that now. I don't know if we had – we must have had – I think there was one as you come in the door. Right around the corner or something. Yeah, I'm pretty sure, but, you know, (LAUGHS).

H: It's hard to remember after all this time. I know. I see that you had a storage shed next to the carport.

C: Oh, yeah. That was great. That was great. A big storage shed. And we even put our deep freezer out there.

H: Those things make a difference when you're able to have that kind of stuff.

C: Oh, yeah.

H: Did you feel that there was enough storage space in the house? You know, in general, including the –

C: Yes, plenty.

H: What about in the kitchen? Was there enough room in the kitchen?

C: There was a lot of room in the kitchen, and it was all sort of in one way, and it had windows all above the front of it. The sink and everything, you could look out all over. And the washer and dryer was right next to the sink. And we built a counter in the back of the room there, so we had counter space. There wasn't a – we didn't really have a kitchen table, but we had this counter that we built with stools and all, up high enough where you could sit there and look out the window. The opposite side of the counter and the sink and everything.

H: And there was enough cabinet space and other space in the kitchen?

C: Plenty.

H: Now, did you have to provide the washer and drier?

C: Yes, we did.

H: OK, but they provided the hookup, obviously.

C: Oh, yeah. Everything was there.

H: OK. And about the children, did you think the housing and the neighborhood were a good place for children?

C: Oh, definitely. Definitely. Because everybody had about the same age kids, so they had plenty of friends right close by, and it was, it felt safe enough they could walk from one cul-de-sac to the other. But most of the kids just sort of stayed in our own little neighborhood and walked to school together. And it just seemed like they had plenty to do.

H: Was there enough room for them inside the house to, you know, kind of run around if they wanted?

C: Oh, yeah. The living area was fairly large. And then the fenced-in back yard, that was a pretty good size.

H: OK, so the yards were all individually fenced for each unit.

C: Yes. The front yard, we kind of shared the front yard with our one neighbor, you know, because there was no fences in the front yard. But in the back yard, everybody had a fenced-in back yard.

H: Oh, OK. And the, was there sidewalks in the neighborhood?

C: Yes. Of course, we were in a cul-de-sac, so that was all paved, you know.

H: Was there any parks or kind of playground equipment provided in the development?

C: No, not right where we were. They had what the kids called the "rocky road," and that was outside of all the places where they could play in the dirt and stuff. And then up at the school, they had playground equipment where they could walk to.

H: It sounds like, though, it was pretty safe in general for them.

C: Definitely. And then, like I said, Boy Scouts and Girl Scouts was really popular. Everybody was involved in that. Our neighbors, the people that were the leaders just lived right in the neighborhood. And we kept in close touch with all of them, and we had one Girl Scout leader was very active.

H: Sounds nice.

C: Yeah, it was, compared to nowadays, it was really nice.

H: Now, so, the kids had enough room in the house to store all their stuff, like the things they wanted in their room and their games and toys. There was enough room for them?

C: Yes.

H: Now, in regards to the living room and dining room, when you say a separate dining room, was it –

C: Well, it wasn't a separate room. It was at one end. It was sort of like an L shape.

H: OK. So, sort of an open, big open area.

C: Yes.

H: Now, that references the, kind of one of the trends of that era, kind of the open floor plan to create a feeling of spaciousness and allow family members to congregate. Did your housing succeed in this? It sounds like that definitely adhered, that open living room and dining room kind of adhered to that?

C: It was right off of the kitchen, and then the table was right there at the end of the L, and then the living area was in the other. And then the patio door was from the living room. And the back yard was right out there.

H: So everything was kind of open.

C: And then there was big windows.

H: OK. Where were the windows?

C: They were at the end of the living room, look out into the back yard.

H: OK. When you say big, sort of like picture windows?

C: No, we had regular, from floor to floor I think, because we had these big drapes, you know. Drapes were provided.

H: So the windows were not picture windows?

C: No. They were just regular patio windows.

H: Oh, like a sliding glass door?

C: Yeah, we had a sliding-glass door, and then another bigger window, or door right next to it so you could look out.

H: So did you like this open, you know, the idea of the connected living room and dining room?

C: Yes, it was very nice.

H: Just to get an idea of what you were just saying about the patio, was there a large patio out there?

C: Yes. It was a fairly-sized patio, and then grass and all through the back gate. We had a back gate.

H: OK. And was there room on the patio for like a picnic table? Or how big was it?

C: Yes, and a barbecue.

H: Oh, OK. That sounds big. Picnic table, barbecue. So sounds like the whole family could gather there if they wanted.

C: And then we ended up putting a swing I know out in the back yard. It was a pretty good size.

H: Oh, OK. Wow. Very spacious. And did you have a side yard?

C: Well, what was considered a side yard was really, maintenance took care of it. It was like, we could have taken care of it if we wanted it, but it was just opened up for other people outside. We really didn't have – we had a front yard and a back yard.

H: And what was the sense of community within the neighborhood? Did people generally have that? I mean, did you know a lot of your neighbors?

C: Well, I think we knew everybody right in our own cul-de-sac.

H: How many people were in that cul-de-sac? I mean, how many homes?

C: How many houses? Let's see, there was, I think we had eight in ours.

H: OK, so you knew everybody there.

C: Oh, yeah.

H: And did you feel that the housing and the – how did the housing and the neighborhood design contribute to the sense of community? I mean, it sounds like if you're all arranged in a cul-de-sac, I mean that made it very convenient to know each other and for the kids to feel safe gathering in the middle of the cul-de-sac.

C: Yeah. Yeah, it was fun.

H: So, did you feel that that sort of helped create the sense of community? The design of the neighborhood?

C: Well, yes. Like I say, when people would move, we'd feel so sad because you know how military people do.

H: Moving around a lot.



C: Lose friends, yeah. And then new ones would move in, and it, you know, and we shared going to commissary together when we got together. And we took care of each other's kids, and it was just a nice place.

H: Now, was the entire neighborhood – were there other cul-de-sacs, too?

C: Yes. The whole area there. It was, well, let's see, what used to be on our side of the road, they had a main road going down to the housing area, and one side was for officers, and our side – and the other side was for enlisted. It was divided. They had a big ball park, and they had the Little League, and had a lot of stuff for the kids going on.

H: So, were there like cul-de-sacs coming off of the main road?

C: Well, yeah, you go in, you had to drive down this one main road. Well, there was two, really, main roads. We always went to the one, and then all the streets just went off of it. It was all, each cul-de-sac you could turn into off of the street.

H: How would you characterize your level of privacy in reference to the neighborhood? Did you feel like your family had enough privacy within the house compared to, you know, where people couldn't look inside easily.

C: No, nobody could really look inside. The windows were up high enough. In the kitchen, they were all across the front, but you couldn't see in. They were up high enough. And then, of course, the back, the fenced-in yard, you couldn't see through there.

H: So did you generally feel then you had enough privacy within the neighborhood there?

C: Yes.

H: OK. Now, what kind of fence was that?

C: That was a wood fence.

H: A wood fence. So it was like a privacy fence –

C: Oh, yeah.

H: Where people couldn't see –

C: And it was up high enough that you really couldn't see over it. Really nice, with a gate in the back where the kids would go out when they walked to school. That's how they went down the "rocky road."

H: OK. Because somebody was telling me yesterday that they were only able to put up a chain-link fence.

C: Oh, well, this was already there when we moved in. We didn't have to put it up.

H: But that one of their criticisms was that they didn't feel like the back yard provided enough privacy because they weren't allowed – I got the impression they weren't allowed to put a fence where you couldn't see inside.

C: Oh, really? That wasn't at Lemoore, though.

H: No.

C: Oh, OK. No, these were already all in place all over the – that's the way it was built, with the high fences.

H: And did you feel that you had enough outdoor space, then? It sounds like the back yard was huge.

C: Oh, yeah. Yeah. We planted stuff there, and I planted stuff in the front yard, and the trees.

H: So that brings to mind another focus of this type of housing is to kind of create a suburban-style environment. And so it sounds like you had landscaping?

C: Well, if you want to call it what I did. In our little area – now some people didn't do anything. They just, you know, mowed the grass, and that was it. There was grass there when we got there, and some people didn't plant any extra flowers or anything. And then there was one cul-de-sac that everybody in the cul-de-sac had a yard full of flowers and trees, and they had a committee that would come around and look at all the people that fixed up their yards. And they would give a tree to the one that week. My yard got looked at once, but I never got a tree. (LAUGHS) I didn't win. But this one cul-de-sac, everybody did. Their cul-de-sac was full of trees because every month or – I don't know how often they did this. Now I don't remember. Anyway, they had trees all over it, so their cul-de-sac was, they'd win every time. (LAUGHS) Because everybody was interested in making the yard look good. And you could do anything you wanted to, you know, as long as it was an improvement. And they encouraged it, really.

H: Oh, yeah. So, did they provide any trees? You know, aside from these contests.

C: Yeah, yeah. They did give trees away. My eucalyptus tree, I got that one. I planted it in the front yard.

H: So, as the development was built, did it include – so it included some trees when it was built.

C: Oh, yeah. It was well-landscaped, and then everybody could do what they wanted in their own yard. But they did have trees out in the open places.

H: Did they provide any bushes or shrubs by your house, in front of your house or around your house?

C: I don't remember if they were there or not. I had some there, but I don't remember if I put them in or if they were there. I think some of them were already there. I think some of them – yeah, I think some of them were provided on each one of the places.

H: Would you call it – is it accurate to call your neighborhood a suburban-type of neighborhood, the way it was designed?

C: Oh, well, I would think so, yeah. You didn't really feel like you were, you know, out in the boonies somewhere. It was a nice neighborhood.

H: Also, the housing reflected the government's attempts to economize and provide housing that wasn't too excessive or too costly, and I was wondering if you saw any evidence of attempts to economize in your housing.

C: No, I really didn't. A couple walls were with that cinderblock, you know, but it worked out real well. I don't know if that was economizing or not.

H: Like any of the materials that were used, you know, in addition to that cinderblock. Some extreme examples were some housing that didn't have maybe a door for some of the shelving.

C: Oh, no. Everything, we had closet doors. I can't think if we were out of anything.

H: So nothing really comes to mind as an example of economizing.

C: No, other than you say maybe instead of putting wallboard up, they had just left the cinderblocks, but it was so it looked all right.

H: So was it cinderblock all throughout the house?

C: No, just on the end of the living room, I remember, and the end of my son's bedroom. His was the one on the end.

H: OK, so just along one wall.

C: On the end of the – let's see. In the living room, I know we had it, and there was a bedroom back to it, and then another bedroom, and the second bedroom back had cinderblock. So there was two rooms, really, that had cinderblock for a wall.

H: And do you remember anything in particular about the physical features of the house, like maybe what the floors were made of, or just any specific details about the physical features, either inside or outside?

C: Well, I don't really remember now what we even had on the floors. I guess we must have had – you know, I don't remember.

H: Anything like, was there any kind of decorative details that were used, or architectural details, or anything like that?

C: I don't maybe understand what you mean by that.

H: Like somebody mentioned that the windows had mullions, you know, like the dividing pieces of wood to make windowpanes. Or maybe there was some crown molding or, you know, some of the officer housing was probably – I talked to an officer, and he had a fireplace. Stuff like that.

C: Yeah, I guess they were considered – we didn't have a fireplace, no.

H: Yeah. But anything like that that you recall.

C: No, I think it was just good living rooms and quarters. Nothing really fancy. It was just what we needed and which was adequate.

H: And what physical features of the house did you like, and what features did you dislike?

C: Well, I can't think of anything I disliked, and what I liked was the two bathrooms. (LAUGHS)

H: Makes sense. And they were two full baths?

C: Oh, yes.

H: And would you say that the house was attractive?

C: Well, they all looked alike. There wasn't any much difference to them, you know. They were all built, just all sort of, the whole area looked the same.

H: What was the house, the exterior material, building material?

C: I think it was stucco.

H: OK. Was it painted?

C: Yeah, it was painted.

H: Any recollection of the color?

C: It was a light color.

H: OK, like off-white or something?

C: Yeah.

H: OK. Well, do you have anything else to add, any other recollections about the housing?

C: I can't think of anything.

H: I guess I'm noticing that, just reviewing your e-mail a little bit more...

C: What else did I say in it?

H: You had a swamp cooler?

C: Yeah, a swamp cooler. Yeah. That's how you had your air conditioning was a swamp cooler.

H: Now, that wasn't central air, was it?

C: No, it was up on top of the house, run with water through it in some way.

H: And let's see here. Oh, I saw that the eucalyptus tree had remained. You saw that it remained.

C: Yeah. It may not be there now, but it was when we went down there, because, see, they tore all that out. And they were building all around, so it may be gone by now.

H: OK. Well, do you happen to have any photos of the house?

C: You know, we took pictures like crazy, and I looked up some, and I've given my kids some, but, you know, I'm going to go through our stuff. I was wondering about that, if you wanted photographs because we took a lot of slides, you know.

H: If you happen to come across any, that would be great. We're planning to complete this work in early October, so if it works out for you to provide copies of those photos, that would be great.

C: I've tried to get rid of stuff like that, you know. (LAUGHS) My kids don't have to throw it all away. I'm going through photos now, and I was thinking, I was just wondering if you wanted any, because I know we took pictures all the time of everything. Of course, mostly the kids were in it, but we were always taking pictures.

H: Sure, yeah, we would love to include those, definitely.

C: So if I find any, then I should send them to your address here, in Maryland?

H: That's right. Yes. That would be great. And if you want to indicate whether we need to return them, we'd be happy to just scan them here in the office and then just return them.

C: OK. I'll get busy now and see what I can find, because I know, like I said, we were always taking pictures.

H: OK, well...

C: I noticed that I didn't send this letter. It says "Veterans Release Form," but it said completed by veteran or civilian, where I sign it for the Library of Congress? I didn't send that. I've just got it with all these papers.

H: If you wouldn't mind mailing that, that would be great. I know that you yourself are not a veteran. But the Library of Congress, even though we interviewed some people who are not veterans, they're still interested because it's a military issue. So if you wouldn't mind returning that, that would be great.

C: OK, yeah, I'll do that. I was just going over my notes here. I don't think I've left out anything. Like I said, it was nice the kids could walk to school. And our – I guess that's about the main thing. If I think of anything else...

H: Yes. Please e-mail me or call me. I'd be happy to hear from you. And then the photos, too, definitely. Thank you so much for your time. I appreciate it.

C: OK. Thank you.

H: OK. And take care.

C: And I guess this is going to be in a book or something?

H: We're giving this report, I guess you could say, to the Air Force and the Navy, and it's to help them document the history of this housing. And so we've interviewed about 11 people who used to live in the housing, and talking about the history of the housing from their perspective, what it was like for them to actually live in it. You know, we have all this information about, from historians and just

people who did research, and from the raw documents that were preserved about the construction and the program, just the overall program, but nothing with residents talking about what it was like.

C: Yeah, well now, when we did live there, like I say, my husband did make officer, and we were asked to, if we wanted to move across the road to the officer housing. But I liked my place so much that I said no. I was happy to stay where I was. (LAUGHS) So we stayed there until we got orders down to Miramar. Like I said, we really did like it, and I, it was just like a palace.

H: Yeah. That's a good testament to the housing. Very interesting. Great. Well, if you think of anything else, please feel free to call.

C: OK, will do. Thank you for calling.

H: OK. Sure. Take care.

C: OK. Bye-bye.

H: Bye-bye.

END

#### ADDENDUMS

Mrs. Clark later called to clarify that their fourth child, a daughter, was born during the family's residence at Lemoore. The baby was born in July 1964 and slept in her parents' bedroom, which was large enough to accommodate a crib. The girl slept in the crib until the Clarks moved out of the Capehart housing in April 1965.

In addition, Mrs. Clark later clarified via e-mail that her husband's enlisted rank during their residence in Capehart housing was chief petty officer.



Figure L.1. Two views of the front elevation of a Capehart house at Naval Air Station Lemoore, California, photographed when the Clark family lived there from 1962 to 1965. (Courtesy of Audrey Clark)

## **ROGER W. DAVISON**

Ms. Chris Heidenrich, M.A., a historian with R. Christopher Goodwin & Associates, Inc., conducted a recorded interview with Roger W. Davison via telephone on 22 August 2006. Mr. Davison was interviewed for a project sponsored by the Department of the Air Force and the Department of the Navy to document the history of military family housing constructed under the Wherry and Capehart programs between 1949 and 1962. Ten other former residents of Air Force and Navy Wherry and Capehart housing were interviewed. A historic context, neighborhood design guidelines, and a tax-credit brochure also were completed for the project.

Roger W. Davison served in the U.S. Air Force from 1946 to 1970 as a parachute and fabric supervisor and an aircrew protection superintendent. He retired as a senior master sergeant.

The Davisons resided in Capehart housing at Chanute Air Force Base, Illinois, from 1959 to 1963 while Mr. Davison held the rank of senior master sergeant. Mr. and Mrs. Davison and their two children lived in a two-story duplex consisting of four bedrooms, a kitchen, a combined living room-dining room, a bathroom, and a basement.

**CHRIS HEIDENRICH:** This is Chris Heidenrich of R. Christopher Goodwin & Associates interviewing Roger W. Davison on August 22, 2006. All right, and if you wouldn't mind just acknowledging that you know that you're being recorded.

**ROGER W. DAVISON:** Certainly. I acknowledge and approve. No problem.

**HEIDENRICH:** OK. Great. Thanks. Well, I definitely just wanted to first of all say thank you for participating in our project here, to document Wherry and Capehart housing, and thanks for taking the time to speak with me. I appreciate that.

**DAVISON:** Well, Chris, it's – I don't know whether I mentioned it or not, but it was a tremendous step up from what we were living in in south Texas when we moved into a brand-new Capehart, you know?

**H:** That's the impression that I got from your information you provided.

**D:** It was just like – you can't imagine the difference in floor space and facilities and just overall environment. And it was important at the time. We had two small children then, and, you know, at times you can go along with certain things for a certain period of time, but then enough's enough's enough. (LAUGHS)

**H:** Right. Exactly.

**D:** So I'll be quiet now.

**H:** Oh, that's OK. Well, I wanted to just get some, make sure I'm clear on some biographical details here. You served in the Air Force from '46 to '70.

**D:** That's right.

**H:** And your career field was for ten years you were a parachute and fabric supervisor...



D: That's right.

H: ... and then for fourteen years you were an aircrew protection superintendent.

D: Correct.

H: OK. And then during your time living in the Capehart housing, you were a senior master sergeant.

D: That's correct.

H: Now, you lived in Capehart at Chanute Air Force Base in Illinois from 1959 to 1963.

D: Correct.

H: OK. And now, the housing did not have a particular name, it was just referred to as the Capehart housing area, is that right?

D: No, they just called it the Capeharts.

H: OK. Some of them had – it may have just been the Wherrys, but some places had, like, kind of a suburban subdivision-type name. So I just like to ask that.

D: They had Wherrys there at Chanute. And that was the Wherry. And then we were the Capeharts.

H: And then you lived in a duplex?

D: Yes.

H: OK. Do you remember how many bedrooms and what other rooms were there?

D: OK. You entered into a foyer like, and then to the right was the kitchen. In the front was a huge, was a cathedral-ceiling living room. Steps leading upstairs to the left. And let's see. There was one, two, three, four bedrooms, yeah, upstairs. All upstairs. There was a full basement underneath. And I don't know if you'll get into it later, but the only problems we had was with the basement flooding.

H: And did you have a separate dining room?

D: Well, we made one in the huge living room, right outside the door of the kitchen. The kitchen was relatively small. I mean, there was a table, a small table there, and what have you, but we had a dining area with a hutch and what have you. The longer we were there, the more beautiful the furniture got, too. (LAUGHS)

H: Oh. They provided it, or you provided it?

D: Oh, yes. Oh, yes.

H: They provided the furniture?

D: They certainly did. And because it was new housing, why, we got new furniture. And it was beautiful, good stuff. Again, you know, we knew we were being blessed.

H: Yeah. How many bathrooms did you have?

D: Just the one. Let me think. I'm trying to think if there was a bathroom downstairs at all. No, no. Just the main bathroom upstairs.

H: OK. One bath. OK. And so who constituted your family? You were married and you had how many children?

D: Two.

H: OK. And so you had an extra bedroom?

D: Yeah, right. And it was nice. For the first time – see, my home's over in northern Indiana, which was roughly 150 miles from where we lived there at Chanute. And my ex-wife was from Dubuque, Iowa, which was about 200 miles from us. So we could ask people if they wanted to come over and visit, and put them up. Yes, it was nice. A couple of times, my niece, for instance, was in the WAF, WAF, W-A-F, Women's Air Force, and worked in the hospital there at Chanute. She lived with us for a while until she got settled into her quarters. My brother-in-law from northern Indian, who retired as full colonel in the Air Force, was periodically called to active duty from the Indiana National Guard, and one of the schools he attended was there at Chanute. He lived with us for six, eight weeks. And, you know, things like that. It was nice to have the extra bedroom.

H: Yeah, wow, that does sound nice to be able to have – you know, this housing, military housing in general, I'm sure, has sort of a reputation of just being a little more utilitarian.

D: Right.

H: And then to be able to host overnight guests in your house must have been nice. Well, now, the housing you lived in before this...

D: Oh, yes.

H: ... what was that like?

D: OK, well, first of all, it was the City of Haringen housing project.

H: And where was that?

D: In Harlingen, Texas. And that, if you're looking for it, is go as far south as you can in Texas, clear down at the very tip, right across from Metamoros, Mexico, and that's where Harlingen-Brownsville's at. Brownsville's the city of any size down there. Harlingen's just a – well, it's not a small city, but you know what I mean. But it's the –up until about 20 years ago, why, people, even a lot of people in Texas would say, oh, Arlington, yeah, I know where that – and no, no, not Arlington. Har, h-a-r. And then they'd say, where's that at? You know. Well, down south and what have you. You had to be going there to get there, if you know what I mean.

H: It was a destination. You don't know of it until you go there.

D: And it was, like I said, the city of Harlingen. We had, oh, well, we moved into a two-bedroom place. Everything was tiny. Everything was small. And in a quadrex, four units stretched into a row. You know what I mean?

H: Mm-hmm. Like a rowhouse, rowhouses.

D: Yeah. It left a lot to be desired, I'll tell you.

H: Why was that?

D: Well, first of all, it was not furnished by the city, Harlingen, you know, at all. It was just the building itself. There were very little maintenance performed on them. If anything was done and you wanted to do it, that was fine. That type of thing. Very low rent, but two or three times – see, remember, I was down there for five and a half years, a long tour of duty. And we twice seriously considered moving into, buying our first home down there to get away from those conditions that we were living under, cramped and what have you. And it was beautiful homes, relatively inexpensive now, by our terms now. For instance, one time we looked not too far from where we lived. A brand-new duplex, all brick, beautiful facilities and everything else, you know, \$23,000.

H: Oh, my.

D: Yeah. I mean, well, part of it was because they had cheap labor from Mexico. It was a case where they could just build them like that. And every time when we would seriously consider it, we got to thinking, well, we've been here two or three or four years, their chances of moving us was pretty good, so, no, we better not. Well, sure enough, what happened, we didn't buy down there. When we transferred up to Chanute, within a year, Harlingen closed. And everybody that did own property around there suffered horribly.

H: Oh, no. So that was an Air Force base?

D: Yes. Yeah, they closed the base. It was a reserve base. It had been activated when the Korean War come along, and deactivated when no longer needed. And you know, so, in that respect, we were fortunate, but we suffered for it, too, quite truthfully. We were very, very well pleased at Chanute. The only drawback as such is that we had to put in our yards ourselves.

H: Oh, you mean like grass, or –

D: The whole works out there. Right. All it was was dirt. (LAUGHS) And they furnished everything for us – the grass seed and the implements and everything like that, but it was up to the owners, to the homeowners, to put in the yards. And it was – we had a lot of yard, too, I'll tell you.

H: Oh, did you?

D: Oh, yeah, because where they located us was the end of one of the runways. An awful ways from it, and, really, Chanute didn't have that much air traffic out there. Once in a while. But, yeah, we had, as a matter of fact, my older daughters both remember when it used to snow, and what have you, why there was like a pond created in the back yard. I mean, it was a pretty good size two or three times. The kids did ice skate on it. It wasn't but maybe six, eight inches thick. You know, just enough to make a big plate of ice out there. And the kids used to get out there and play and have all kinds of fun. And if it cracked, no problem. You didn't fall very far, and no water. How's that? Yeah, that was nice. But like I said, mowing that was something else again.

H: So you had to maintain the yard as well?

D: Right.

H: Now, did they provide any, like, trees or shrubs or anything?

D: Oh, yeah. There was a few around. Yeah. Like I say, when we moved there, everything was brand-new, and they came in and planted a few trees. There weren't many. We came back and visited, oh, about four years after we left, and what have you, and was surprised at how much they had grown, you know?

H: Oh, of course, yeah. So then definitely it sounds like your living conditions improved a great deal when you moved to this housing.

D: Oh, yes. For sure.

H: And so it's safe to say that your family liked the housing and that it met everybody's needs and people felt comfortable?

D: We had a huge basement. Like I say, a full basement. And the kids had a third of it down there to play in, you know, what have you. In the wintertime, that's important. And the first year, the first spring we were there, the basement flooded. And so we learned a lesson to put everything up on about – let's see, if I'm not mistaken – about a foot, on platform like, like the refrigerator-freezer we had down there and things of that nature, and so forth. And we learned to live with it. It was a reverse plumbing problem is what it was.

H: Oh, no.

D: Yeah. And fortunately, the plumbing inside the house, no problem. We had an outside stairwell that you could have access to the basement. Well, water would come in there, drain at the drain at the bottom of that, into the basement. Or, it would clog up out there and build up behind the door. You opened the door and here was a tidal wave. (LAUGHS) So until we learned what was going on, and they had to reroute some of the plumbing – or the, you know – what am I trying to say? – not the plumbing, but the actual pipes. That's what I'm trying to say, coming in. And then, finally, the last couple years we were there, we didn't have the problem anymore. They finally got a handle on it.

H: Oh, OK. So then, was it – the property, the housing was maintained by the government? They provided the maintenance?

D: Right. We had a phone number to call in the work orders and what have you. And another – if I remember, yeah, I remember one area that was, when we first moved in. It was all hardwood floors. Very nice, very nice. However, when they put in – they were about eight-inch squares on the hardwood floors. When they put them down, they used a glue of some kind that oozed out of the edges all the way around. And it looked like the very devil. And you couldn't polish it or anything like that until you cleaned that up. So we spent several weekends on our hands and knees on the floor with knives, scraping, getting the excess glue from those tiles off. And then we could polish them. (LAUGHS)

H: Oh, my.

D: It was quite a feat, but we did it. I mean, we were so pleased to have good quarters, doing that and putting in the yard was secondary to having very nice quarters. How's that?

H: Yeah, definitely. Definitely. So, how did your housing compare to housing that was available in the civilian sector? I know that you were near Rantoul, which isn't a very big town.

D: Well, Champaign-Urbana, University of Illinois, is just north of there a smidgen. And also, I was fortunate, a good friend of my ex-wife's lived in Champaign-Urbana. They grew up and went to school together in Dubuque, Iowa. And we visited them. And he was a builder. (LAUGHS) And he visited us and remarked, wow, he says. He was in the Army during World War II. He was a paratrooper, and what have you. So he says, wow, he says, the government's come a long ways, haven't they? And they had. It compared favorably, how's that?

H: OK, so you had better, your housing was better than what was available. Is that what you mean?

D: That's right. That's right.

H: Do you think that you could afford – if you went to the civilian market to get housing, would you have paid more?

D: Oh, no. No, no. Uh-uh. Would have, to get what I had, number of bedrooms, et cetera, et cetera, et cetera downtown would have easily taken 50 percent or more of housing allowance. Right. Yeah. See, all this Capehart cost me was forfeiting my housing allowance.

H: So you would have had to pay more to get worse housing.

D: Oh, yes. Very definitely. (inaudible) and what have you. I mean, let's face it, you heat your house in the wintertime – you ever lived up north?

H: Yes.

D: (LAUGHS) You know what I'm talking about.

H: I'm from Chicago, so yes.

D: Oh, well.

H: Actually, I went to University of Illinois, too, so kind of familiar with that area.

D: That wind cuts through you like you can't believe. (LAUGHS)

H: Oh, yes. I can remember walking from, like the last day of exams, across the quad, just bitter, bitter cold. So I know exactly what you mean.

D: To this day, the tips of my ears are frostbitten.

H: Wow. Oh.

D: They still peel a little bit. You know, like a little bit of athlete's foot, you know? And that's caused from when I was at Chanute. There was one huge building. And then across the street, why, they had smaller ones for, oh, for odds and end. And one of them was a barbershop. I left the main building and walked just across the street in a freezing wind. The wind comes – and the wind froze the tips of my ears. Just in a matter of a few minutes. And I remember going to the barbershop, walking in, and my ears tingling, and to this day, like I say, it never seems to heal. The tips of ears were frostbitten, courtesy of Chanute.

H: Oh, wow. That's quite a legacy. Yeah. Now, your neighborhood, was it all duplex?

D: Right, right.

H: OK. So everybody lived that way. Was it like a subdivision?

D: No, it was brand-new, meaning there was no other housing out there, that area, at all. The Wherry was on further into the base area, and no, we drove out to our own, and it was all – as a matter of fact, let me give you a little history on what happened there. We moved up there in about September or October of '59, I think it was. And I went out to the base the day before I was required to sign in, to check on housing, whether or not, you know, like, get your name on the list and find your housing, you better take the kids back home, or what have you. You know what I mean.

H: Yeah.

D: And so I went to the base housing, and lo and behold, it was, I don't know, not a big building, not a small one, but a building out there. And a whole bunch of people there. Whole bunch of cars and everything else. And went inside and it was jammed. And I was looking around to see if somebody worked there as to what was going on. And somebody said, Davison. I turned around, and would you believe there was a lieutenant colonel that I had known from Randolph Field back in '48, '49, and '50? And we shook hands, and he says, what are you doing here? He says, you got one of these houses? And I said, no. I said, Colonel, I said, I just got here and I'm trying to figure out what's available. And he says, you want a Capehart? And I said, what's a Capehart? I didn't know what they were. And he says, well, they're brand-new. And he says, come here. He said, Dave, I'm base housing officer.

H: Oh, perfect.

D: And he says, I have got to open these units. Now what had happened, two or three months before, they were supposed to open. And Congressman was bearing down on him like crazy. Why aren't they open? You say you need housing, and then it sits there. You know what I'm saying?

H: Yeah. Yeah.

D: And he was under the gun. So he took me by the arm, and we made our way over to this huge board that depicted all the units. He looked up there, and he said, who's got so-and-so? Well, the NCO working the desk said, nobody signed up. He says, give me the keys. (LAUGHS) He turned around to me, and he says, Dave, be at this address tomorrow morning at 8 o'clock. If other people are there, they have no claim to it because you have the keys. It had been a bitter political battle to get moved into Capehart. You see what I mean? The people that were there wanted priority, and et cetera and et cetera and et cetera. And it was just going around and around and around. And he had to settle it down. So this is what he was doing in his own way. So he gave me the keys, and I walked out, and Shirley and the kids were in the car. (LAUGHS) And I said, we've got a Capehart. Let's go find out what they look like. (LAUGHS) And we drove out there, and they were beautiful, I mean in comparison, like I said, to what we expected.

H: Yeah. Yeah. Well, what did they look like?

D: Like I say, if you can imagine a new house subdivision with the trees not developed yet and no yards and a lot of construction equipment still roaming around, you know, trying to fix things and so forth and so on. The building itself was pretty utilitarian, you might say. It had the cathedral point at the top, and when you, out facing it, had big bay windows for our downstairs in the living room and the dining room area, looked out into the houses across the street, and what have you. The back yard,

like I said, not too far over was the end of the active runway. And, but other than – I'm trying to think. It reminded me in some respects of a church. You know, sort of a big building with a single peak on top, tapering down. Then of course the people that shared the other side of us had that half. And to the left was our half.

H: OK. So the peak was in the middle of the whole building.

D: Right.

H: OK. Not each – each side didn't have its own peak.

D: No, no. It was shared. But the huge building itself was that. And then everything was contained in it. Now, it had a carport, covered. And my neighbor across from me, oh, I don't know, it was easily 50, 60 feet away from your closest neighbor except, you know, your duplex, had half of it. And plenty of privacy. No problem there.

H: What about within your house? Did everybody have enough privacy?

D: Oh, yes. Oh, yes. See, my kids – Patty, well, let's see. Patty was born in '53, and we moved there in '59, so she was six. Yeah, yeah. She started first grade there, and what have you. So – Patty was six, and Sandy was three. See, they were pretty small when we moved there.

H: Yeah, so they don't really need much privacy.

D: Right.

H: OK. And then closet and storage space, you said here that you had a lot.

D: Plenty. Each room had quite a bit, you know. No problems there at all.

H: Was there like any other storage space? I know you had that basement.

D: No, just the basement.

H: Attic, or anything like that?

D: No. No.

H: How was the kitchen? You mentioned that was kind of small.

D: Yes. Yeah. It was really – we didn't eat most of our meals in the kitchen. We ate most of the meals right around the partition, you might say. And it was kind of open, if you know what I mean.

H: Between the kitchen and the eating area?

D: Right. It had a doorway into the kitchen, yes. And then you go short round to the right, and there was the huge living room, of which we took the first third and made into a dining area. How's that?

H: Yeah, OK, I can imagine that.

D: We put down some rugs, but mostly just left the hardwood floors, because they were nice anyhow.

H: Yeah, sounds nice. And did the kitchen have enough storage space?

D: Oh, yeah, yeah. Shirley never complained about that. There was a lot of cabinets all over. Right.

H: What were the appliances provided?

D: Let me think. There was a dishwasher, garbage disposal, and stove, of course, oven, kind of stuff. Can't remember any other than that.

H: Did they provide a washer and dryer?

D: No.

H: OK. Did you provide that?

D: Right. We put that down in the basement. And we had our, had a refrigerator upstairs, but a refrigerator/freezer down in the basement.

H: Now, was the basement finished, or was it, you know, like cement floors?

D: No, it wasn't finished. But it was not rough either, if you know what I mean. It was nice enough to where we didn't ever consider finishing it. You know what I mean?

H: Yeah.

D: No, the girls had all the space they needed down there to play in, and all the storage space we needed, no problem. I can remember keeping my – the windows, we had, you know, storm windows, stored down there in the summertime. Took them off in the spring and put them back on in the fall. My tires for the car, snow tires down there in the summertime. But yeah, we had plenty of storage space, no problem there at all.

H: So, did all the housing have this type of availability?

D: Yeah. They were all in this same floor plan and the basement and so forth.

H: Oh, OK. Now, about your children, I noted that you said that it was very adequate for kids. It was a lot of places for kids to play, and stuff like that?

D: Yeah, right. You could put up your own playground stuff in your back yard if you wanted to. We did somewhat, but mostly the kids, well, they played inside quite a bit, and especially in the wintertime. The school system was perfect, too. The buses came right up to the house, no problem.

H: Now, was that a school on base?

D: No, no. Downtown. In Rantoul.

H: OK. And another, as you read in the questions here, just one of the objectives of the housing was to provide this open floor plan to create spaciousness and let people gather easily and let parents watch over their children. Did you feel that your housing succeeded in this?



D: Oh, yes. Very definitely. I can remember, after the first year or two, everybody had their yards in, and we were socializing more and more. And a family moved in across the street. Had girls a little older than mine. And my kids used to play together all the time with them. And I can remember in the evening when it started to cool off a little bit, why, going out and sitting on the curb and talking just across the street with the neighbors, if you know what I mean. And that was when Sputniks were going up. At a certain time, we'd agree to meet out there, you know, and we'd bring thermoses of coffee, (LAUGHS) you know, that type of thing. But yes, it was conducive to family life, right.

H: OK, so outside as well, the whole neighborhood was.

D: Sure.

H: So, do you think as far as this community aspect, this sense of community, do you think that was created by the housing and the neighborhood, or did the fact that you all were in the same boat play a role as well?

D: Well, we all knew the fact that we couldn't afford what we had downtown. You know what I mean? That it's just pure and simple with the housing allowance. And if you feel like you can't afford to rent downtown, the only alternative is that mom and the kids got to go someplace. And a lot of the airmen worked for me, what have you, that's exactly what happened until they finally got on the housing list or got notified, you know, they had Wherry or Capehart.

H: They couldn't live with their – the families couldn't live with them.

D: That's right. Well, they couldn't afford it.

H: So, but this community, kind of being able to congregate with your neighbors and everything, do you think that was created by the housing and the neighborhood design or by, you know, the fact that you all were the same employment and the same employer and the same type of job?

D: Well, we were all grateful to the service for providing it. I don't know, of the two, and certainly we all were in the same military. But it, well, like I say, I can't really answer the question except to say that we did appreciate it, that it was something that Congress was doing that benefited us immeasurably and helped us do our jobs. You do a better job when you know your family's taken care of. And part of the reason you stay for 20, at least, is because you know that you can roam around while the family will be taken care of.

H: Yeah. If you have to do some other mission somewhere else, they have housing.

D: I was fortunate from that time on, anytime I made a move. Being senior master helped, of course. That's why I moved into base quarters every place I went. It was nice having that available to me, and it was easier to put in 24. How's that?

H: Yeah, definitely. Makes sense. Back to the outdoor space issue, you mentioned that you had bay windows. Is that right?

D: Right. Each side looked out into the front.

H: You mean each side of the duplex building?

D: Right.

H: OK. So in the front you had bay windows.

D: Right.

H: Did you feel in general that you had enough window space and enough outdoor views?

D: Yes. Oh, yeah. All the rooms upstairs, all the bedrooms, of course, had big windows. And the double window downstairs there, the bay window, the kitchen, and so forth. Yeah.

H: I know that was another idea about this type of housing during the postwar period is creating an expansive view of the outdoors. Now, was your – you had kind of mentioned, too, that you had landscaping and you had – just, it sounds like it was a very suburban environment. Is that true?

D: It was. Right.

H: How were the streets designed? Were they straight or curved?

D: No, no. Typical housing project. No, not on the square. They were curved and, you know – let's see, I wasn't on a cul-de-sac. It was, let's see. Trying to think. One, two, three – four, maybe six, I can't really remember, houses on the pulloff around. Well, yeah, there was, counting on both sides of the street.

H: OK. On your road?

D: Right. On the road. And it was just one of the turnoffs off the main road. How's that? You follow me?

H: Oh, I see. OK. But it wasn't a cul-de-sac.

D: No, it wasn't a cul-de-sac. It was a loop off of it.

H: Oh, OK. I see.

D: And there was, if I remember correctly, three or four of those. I've been trying to remember how many units were up there, but it seems to me like almost 100. Oh, yeah. It was not a small thing. Maybe it wasn't quite that many, but I would say at least 75.

H: Buildings, with two units in each building?

D: Right.

H: Oh, wow, that's pretty big. Now would you say your housing was attractive?

D: Attractive?

H: Yeah.

D: Oh, yeah. Very definitely.

H: What was the exterior material?

D: Oh, not tile. Oh, rats. You know, it was painted dark brown. It was nice. I know that.

H: So it wasn't wood or brick, it sounds like.

D: No, no. It wasn't wood or brick. Well, I'll be darned. Anyhow, it was like a ceramic and what have you. It was good color schemes throughout the units.

H: And the housing also reflects the government's desire to economize, you know, not provide housing that is excessive or too costly. Did you see evidence of that in your house?

D: Not in the least.

H: Really?

D: No. They – I won't say the worst – well, for instance, like we putting in our own yards and things of that nature. When Shirley would call in a work order, sometimes they'll say, well, we haven't got any of those in stock. It'll be a while before that could be replaced. Well, that's because some people called in for light bulbs. Well, phooey, you know, I know how to put in a light bulb. You know, things of that nature. But the important stuff, why, no problem at all. Like I said, we had beautiful furniture, living room furniture, and – I mean, dining room furniture. Now, living room furniture I had to get myself. I mean, there were certain things that they furnished, and certain things they didn't.

H: OK. So you provided your own living room furniture. They provided dining room furniture. And then you probably provided your own bedroom furniture, too.

D: Right. Right.

H: And did they provide the typical stuff like a couch, chair, coffee table, in the living room?

D: No. Like I say, the living room was all mine.

H: Oh, I'm sorry. I meant the dining room. Did they provide just table and chairs?

D: The dining room was real nice, dining room table, seated eight. And a nice hutch to match it. And six chairs. Yeah, you know. Very nice.

H: And I noticed that you said that they could have provided more shrubs and trees, that you thought maybe that would have been...

D: But then that's something that every unit, housing unit is that way to begin with.

H: When it's new.

D: Right, when it's new.

H: So, do you remember anything distinctive about the physical features? You mentioned like the cathedral ceiling in the living room. Was there anything else, wood floors?

D: No, not really.

H: Just other things were pretty indistinct?

D: Like I say, there was no air conditioning, which now is seen as a minus. But then, we suffered with living down south Texas a hell of a lot worse. (LAUGHS) I used to tell people that I knew the existence of every Tastee Freez in south Texas. Because, see, when you've got kids in the car, you go from one ice cream place to the next. I'm sorry, what did you say?

H: No, just nothing else was very distinctive?

D: No.

H: OK. And what physical features of the house did you like, and what features did you dislike?

D: OK, the openness, the more than adequate space. Again, my family was still pretty small. You know, the girls were pretty young yet and what have you. And the overall feeling of support. You know, you feel better and more comfortable with your family being located on base than downtown. I mean, you don't have to worry about them, so to speak, you know. We knew their police patrolled out there, and what have you. No, just the overall feeling that – thank you, Air Force, for taking care of mine.

H: Yeah. Now, you said that the open carport construction could have been a little bit better.

D: Well, you know, just open versus enclosed. You know what I mean?

H: OK. Yeah, maybe in that climate during the winter would have been better.

D: And, you know, you had to shovel off that driveway, and it would drift. You know those winds up there. The snow would drift around the house, and sometimes you could get out and sometimes you couldn't.

H: Right. Right. There was – I talked with somebody yesterday who was stationed where there was a lot of sand. And so he said, yeah, the sand would drift into his carport, so that's kind of interesting.

Well, do you have anything else to add as far as your experience with the Capehart housing?

D: No. Just except if this helps at all in the future, authorizing them or constructing them, that type, why I'm glad to be part of the survey.

H: OK. And do you have any photos that you would be interested in sharing?

D: No, not really. I looked. That stuff just doesn't make it when you move. My middle daughter, Sandy, is the family historian. You remember Chanute. But you know what the kids remember? This is silly. When you pulled into the gate to come on to Chanute area, there was a housing gate, the one we used down there. Well, you pulled in for a little ways, and then you hit a big circle. And you took off on about four streets from that circle. Well, we'd be coming home from a trip to either Shirley's up in Iowa or over in Indiana, or just maybe the family was out for a drive. And we get to the circle, and the first thing the girls would say: Do it, Daddy! Meaning, two or three times, go around the circle. In other words, right past our turnoff, you know. About the second time, I'd look over, and Shirley was looking at me like, let's go home. (LAUGHS) And then the kids are saying, oh, do it, Daddy! Do it, Daddy! Isn't it funny what you remember?

H: Yeah, that's great. That's great. Definitely. It sounds like they thought of it as home, too, just that they were relaxed there.

D: Oh, yeah. That four years at Chanute, see, Patty started school, and Sandy started school. And you know, Sandy remembers, too, she had a kitten there. Things of that nature. By the way, we were authorized to have any pets we wanted. No problem.

H: Great. Well, I thank you so much for your time and for sharing your experiences. This helps us document.

D: Hey, Chris, you make it easy, you know. You talk to an old man about reminiscence.

H: Oh, it's fun. It's fun. I really enjoyed hearing your stories and experiences, definitely.

D: I'm glad I could help, Chris.

H: Thank you so much. If you think of anything else, feel free to call.

D: All righty, and good luck to you.

H: Thank you. Take care.

D: Bye-bye, Chris.

H: OK. Bye.

END

## **WILLIAM L. AND BETTE EVANS**

Ms. Chris Heidenrich, M.A., a historian with R. Christopher Goodwin & Associates, Inc., conducted a recorded interview with William L. and Bette Evans via telephone on 16 August 2006. Mr. and Mrs. Evans were interviewed for a project sponsored by the Department of the Air Force and the Department of the Navy to document the history of military family housing constructed under the Wherry and Capehart programs between 1949 and 1962. Ten other former residents of Air Force and Navy Wherry and Capehart housing were interviewed. A historic context, neighborhood design guidelines, and a tax-credit brochure also were completed for the project.

William L. Evans was an aviation electronics technician and an avionics weapons officer in the U.S. Navy from 1947 to 1977. Mr. Evans entered the Navy as a seaman and retired with the rank of lieutenant.

The Evanses resided in Wherry housing at Marine Corps Air Station El Toro, California, from 1953 to 1955 while Mr. Evans held the rank of 1<sup>st</sup> class petty officer. Mr. and Mrs. Evans lived in a duplex building, in a unit consisting of two bedrooms, one bathroom, a living room, a dining room, and a kitchen. For one year during their tenancy, Mrs. Evans worked for the contractor who had built and was managing the development.

**CHRIS HEIDENRICH:** This is Chris Heidenrich of R. Christopher Goodwin & Associates interviewing William L. and Bette Evans on August 16, 2006. OK, so the tape recorder is on. And would you both just acknowledge that you know that you're being taped.

**WILLIAM EVANS:** Roger, we are being taped.

**HEIDENRICH:** OK.

**BETTE EVANS:** Yes.

**H:** Great. Thank you. Well, first of all, thanks a lot for participating, and thanks for sending back all that paperwork. I've got the information. I just want to ask a couple of other biographical questions. First of all, I know that you served in the Navy, Mr. Evans, from '47 to '77. I was wondering what your rank was when you lived in the Wherry housing. You mentioned you lived in Wherry housing at Marine Corps Air Station El Toro, California.

**W. EVANS:** I believe I was E-5, 1<sup>st</sup> class petty officer.

**B. EVANS:** Now, wait a minute.

**W.E.:** Yes, because I had not made chief yet until I moved down to –

**B.E.:** San Diego.

**W.E.:** Yes, that's correct.

**H:** OK. E-5. OK. And what was your rank when you entered the service?

**W.E.:** When I went into the service?

H: Yeah.

W.E.: (LAUGHS) I guess you'd call me a seaman recruit.

H: OK. OK. And then, did you have a particular career field when you were in the service?

W.E.: Yes. I was an aviation electronics technician, to be then converted when I got my commission to an avionics weapons officer.

H: OK. So I see that you retired as a lieutenant. Right?

W.E.: That's correct. O-3.

H: Now, as I said, you had mentioned you lived in Wherry housing at Marine Corps Air Station El Toro, California. Do you recall what years those were?

W.E.: Well, I'll think about it. You got an answer, Bette? We were married in '51. We spent Memphis in '52. I'd say '53, '54, and '55. I don't think –

B.E.: Somewhere around in there.

W.E.: It's right around there.

H: OK. Great.

W.E.: It was right – by the way, it was at the time that Wherry housing opened there at El Toro. It had just got started by the time we got there.

H: Oh.

B.E.: We were some of the first ones to move in.

H: Oh, OK. OK. Great. And what – was there a neighborhood, did it have a neighborhood name?

W.E.: No. But we were, the Wherry housing was on the side of the base – the opposite side of the base from where the main gate was. In fact, you could almost say it was the back of it. And it went up onto this hill. Bette, there wasn't nothing on either side of the housing, right?

B.E.: Capehart was first.

W.E.: Where was that?

B.E.: You came up to – we called it Tobacco Road. It's Trabuco Road (LAUGHS). You came off of whatever the highway was from Santa Ana. And you came up to Trabuco Road and you turned off there, and there was Capehart housing there, which was completely different from what we had.

H: Oh, OK.

W.E.: There was nothing on either side of us, though, right?

B.E.: No. The base was on – we were on the back side of the base.

W.E.: There was no housing on either side of Wherry housing.

B.E.: No. There was just Capehart, and then there was the fields.

H: And what type of quarters did you live in? Was it single-family detached, a duplex, et cetera?

B.E.: No, if I remember correctly, I don't think it was a fourplex. I know it was at least a duplex, because I remember the other side. We just moved, and I can't find any pictures or anything. I've got pictures and all that stuff. And we just can't find it.

W.E.: I agree with my wife, but I think it was a duplex. I don't think it was a fourplex. But the garages were detached. They were out behind the house on a separate sort of entranceway.

H: OK. Now, how many bedrooms, and what other rooms were there?

B.E.: There was a living room and an L-shaped dining room, then a kitchen, and we were in a two-bedroom, one bath.

H: And did you have any kids with you at the time?

W.E.: No.

B.E.: No.

H: OK. Now, just to shift to the open-ended questions here, what type of housing did you live in before you lived in this housing? How did it compare?

B.E.: (LAUGHS)

W.E.: (LAUGHS)

H: You're laughing.

B.E.: In the town of Santa Ana, there was some – well, it was like the in-town. It was a new building, but the – I don't know what you'd call it, but the bed came out of the wall in the living room.

H: Oh, like a Murphy bed.

B.E.: Like a Murphy bed. And that's what we had. I don't know how long we lived there. I just can't remember. It wasn't too long.

H: That was an apartment?

B.E.: Ma'am?

H: That was an apartment?

B.E.: Yeah, it was like two rows you – there was a sidewalk down the middle, and then there was about four or five, probably four little apartments on either side. It was a private thing.

W.E.: We were where we were before that for 30 seconds.



H: You weren't there too long, huh?

W.E.: Well, what happened was, when I arrived out at El Toro, I went for base housing. And they offered me base housing at the testing lighter-than-air facility there. And it was a half Quonset hut from World War II.

B.E.: (MAKES NOISE SHOWING DISPLEASURE)

H: Oh, my.

W.E.: And my wife walked in, and she turned right around and says, "I'm not staying here."

H: (LAUGHS)

W.E.: We had come there, which is probably more appropriate, from the Naval Air Technical Training Center in Millington, Tennessee, which is Memphis, Tennessee. And at Millington, they had this base housing right outside the base, which Bette could guess, but I'd say it almost had to go back to World War II or shortly thereafter.

B.E.: Yeah, there were little duplexes.

W.E.: Very small duplexes. Of course, we thought they were neat, because we were just married, but that was it. And, yeah, that was (inaudible) housing before. It was military housing, but nowhere near as wonderful and great as Wherry was.

H: Ah, OK. So you thought your Wherry housing was a drastic improvement.

W.E.: Oh, big upgrade.

B.E.: Yeah. Roomy. (LAUGHS)

H: Yeah. So is that the major difference, is its roominess?

W.E.: No. It was new, lot of yard space, roominess, like you said. Everything about it was great, as far as we were concerned.

H: And so the housing generally met your needs, and you were comfortable?

B.E.: Yeah.

W.E.: Very much so.

H: Yeah. How was the kitchen space?

W.E.: I wouldn't know. I never go in there. Bette?

B.E.: It was adequate, but it was small. I don't think it's any smaller than this place we have now. We came from a great big country kitchen in Arkansas, in a home we owned. And this condo has, it's got a huge living room and everything, but boy, I'll tell you, that kitchen, there's really a lot to be desired.

W.E.: In our motor home.

B.E.: We have a motor home also.

W.E.: What's next?

H: So how did the housing, the Wherry housing compare to housing in the civilian sector?

W.E.: Well, that's California, you know, southern California. I'd say for our income bracket, it was very good in comparison to – I really couldn't tell you. We had friends from the church who had their own private, individual, separate housing. Those were nice houses, which obviously were better than –

B.E.: What we had.

W.E.: Go ahead, Bette.

B.E.: They were better than what we had. We never compared oranges and apples. We always were very satisfied with what we had.

H: Sure. Of course. And did your housing – it sounds like the Wherry housing provided you enough space.

B.E.: Oh, yeah. There was plenty of space there, yeah, for the two of us.

H: What was the closet space and the storage space like?

W.E.: Don't ask me.

B.E.: I don't remember.

H: Did the bedrooms have closets?

B.E.: Oh, yeah.

H: Yeah. And was there a front storage closet?

B.E.: No. I don't think so.

H: Was there any other storage space in the house, like an attic?

B.E.: Oh, no. We didn't have an attic.

W.E.: You've got to understand, this is early in our marriage, so we had not accumulated 50 years of stuff.

B.E.: (LAUGHS) Today, it's completely different. It's horrible.

H: (LAUGHS) Right. And did you feel that you each had enough privacy within the house?

W.E.: Oh, absolutely. You talking about privacy between she and I or with the neighbors?

H: I was going to ask about the neighbors a little bit later, but yes, between each of you as an individual.

W.E.: Oh, yes. Bette, you agree?

B.E.: Yeah.

H: And I know that you said that you didn't have children while you were living in this housing, but was the neighborhood adequate for children?

B.E.: Oh, yeah, a lot of play area. And I think there was actually a swing and slide area for the kids.

H: Did you know anybody with children, where they, you know, expressed –

B.E.: Yeah, we had a couple of friends that had children.

H: And it seemed adequate for them?

B.E.: Yeah, they never complained.

W.E.: Understand that I think we put it in our information there that Bette went to work for the housing project.

H: Yes, I did note that. And –

W.E.: And so she was probably more aware of what was going on throughout the project. See, the enlisted men were on the bottom of the hill, and as you went up the hill, it got higher in rank, so at the very top of the hill, you probably had, what, majors –

B.E.: Yeah.

W.E.: -- Marine majors and so forth living up there.

H: I see. OK. And –

W.E.: By the way, she would know what those conditions, those Wherry houses were in comparison to ours.

B.E.: Oh, they were all separate houses.

H: Single family?

B.E.: Yeah.

H: This would be the officer housing area?

B.E.: This was the officer housing, yeah.

W.E.: She had the responsibility of checking them out. And it was really an eye-opener for us. You know, but some of those officers left horrible conditions in the housing.

B.E.: They were dirty.

H: Oh, really?

B.E.: Yeah.

W.E.: They'd be redone by the housing authority there and put on ready for the next group. But she knows a lot more about the whole property than just our own house.

H: Oh, yes. Yes, I actually did write up some extra questions to ask you about that. I guess as long as we're talking about that, I could ask you about that right now. So, your main role in working for the contractor was to do home inspections, is that right?

B.E.: Yeah, when the people were going to be transferred, then I went up there before – mostly, I think – I don't know if we gave, we had to pay a damage deposit. I think so. Before we'd give them their money back, why, I'd go out and I'd look at the house. And sometimes it was amazing how dirty people were. I mean, refrigerators had mold in them, and, you know, just – they weren't clean people, that's all. And you know, there was little fingerprints up on the ceilings of the closets, and but a lot of instances, they were all right.

H: And did you work for the contractor the whole time that you folks lived in that Wherry housing?

B.E.: No, what happened was, it was really dirty. There was a couple, Margaret and Paul Bowman (PHONETIC) was their name. And they had no children at all. And they were civilians. And I don't know how they got the job. I had no idea. But we were friends with them as well as worked – I worked with them. And they ran the thing, and I was just, you know, I was the go-fer or helper. I worked with them. It happened really quickly. They got ousted out of the job. Somebody else took over. I don't know who it was. And we were out of the job, too.

W.E.: On the very day after I had bought a brand-new car.

H: Oh, no.

B.E.: We bought a great big Oldsmobile 98, which we had no business having. We bought that and had to pay \$90-a-month notes on it, and I was out of a job. (LAUGHS)

H: Oh, no. So how long had you worked for them?

W.E.: I don't know, a year or so.

B.E.: I guess a year or so. I don't actually remember.

H: OK. So they were the contractor, this Margaret and Paul?

B.E.: I don't know where they came –

H: Maybe they represented the contractor?

B.E.: Yeah, they were involved with the contractors, I know, but in what, you know, way, I don't know that much about it.

H: Yeah. OK. Now, as far as how the contractor operated, I guess, what did they, was it sort of like a management company?

B.E.: Yeah.

H: So did they collect, they collected the rent and maintained the property?

W.E.: Wasn't it just automatically taken from our pay as our housing allowance?

B.E.: Housing allowance, I think.

W.E.: We didn't actually go up there and pay anything directly, did we, Bette?

B.E.: I don't remember. I don't think so, though.

H: Yeah, that sounds right that they took it out of your pay. And did the contractor, was it any kind of, any other aspects to their job other than maintaining the property?

B.E.: Well, it was quite a job. That was a great big housing area. And, you know, there was always upkeep work on the houses. I think Paul, he did some of the, you know, some of the work, you know, fixing them up and in between families living in there. It was all brand-new when we moved there. Up on the hill, where the officers lived, I don't think it was hardly even finished yet. And it was muddy dirt roads. We lived right down on the main "Tobacco" Road.

H: And what was the actual name of the street?

B.E.: Trabuco, T-R-A-B-U-C-O.

W.E.: She remembers the addresses for 50 years of marriage.

H: I know. That's great. And did the residents like that arrangement, you know, dealing with the contractors kind of as if it's a private entity?

B.E.: I don't think they had much to do with any of them. The houses had been passed over to the government, and they dealt with our office if there was any problems.

H: I see. So the houses were no longer owned by the contractor. They were owned by the government?

B.E.: As far as I know. I don't know that much about it.

H: Oh, OK. OK.

B.E.: All I know is it was Senator Wherry from Nebraska. It was named for him.

H: Right. Right. Now, you already mentioned some generalizations about the housing based on your inspection work. Is there anything else you would want to add, your impressions of the housing based on –

B.E.: Bill and I have never been fussy about housing. We were glad they provided for us, and we always took advantage of housing except for those Quonset huts. We always took advantage of the housing if they had it.

H: Did you notice anything else in particular about Wherry housing that you noticed as part of your job while you were doing your job with the contractor?

B.E.: No. It was just, you know, just everyday, mundane, you know, upkeep of keeping your records and files straight. And I felt very fortunate because I only lived a block or a block and a half from the housing office. The people lived, the contract – Margaret and Paul, lived in the other half. They lived in a duplex, I know, because they lived in the other half of it.

H: I see. OK.

B.E.: They got let out. They got a dirty deal on it, whatever it was. We came along with the program.

W.E.: We didn't live in too many different military housing. The other part we lived in was, we told you about outside the base at NATDC. But eventually, we ended up going back and living on base housing there at NATDC.

B.E.: Memphis.

H: OK.

W.E.: So it was mostly World War II stuff, except for the new officer housing. So we thought this Wherry housing was just fantastic.

B.E.: It was really nice. It was plush compared to what we had in Memphis there. It was a two-bedroom duplex on each side, but there was stairs and only one bathroom. And we adopted a little boy while we were there. So it was hard living in that place.

H: Well, back to a few more questions about the Wherry housing. One of the objectives of the Wherry housing was to provide a so-called open floor plan to create a feeling of spaciousness. Did your housing, did you feel that your housing succeeded in this? Was the layout conducive to family life?

B.E.: Oh we weren't – yeah. Of course, we didn't have a lot of furniture. Had just the essentials, a bedroom suite and, you know, a couch and a couple of chairs, and just a chrome dining room table and chairs, and you know, that was all. I remember we had an old gas refrigerator.

H: Oh, OK. Was that provided as part of the housing?

B.E.: Yeah.

H: OK. And did they provide any other appliances? They must have provided a stove and –

B.E.: Oh, yeah. I think it was just a little, you know, four-burner stove, one of the small ones. I believe. I'm not really – I can't really remember. It was a small refrigerator, and, you know, that's all we needed back then.

H: Did they provide a washer and drier?

B.E.: Oh, no.

H: Did the housing and the design of the neighborhood, how did that affect your sense of community? Did it provide a sense of community?

B.E.: They were all alike.

H: Yeah. The housing was all alike, OK.

W.E.: They were Marines and I was Navy. No. We didn't really have that much – most of my community relationships, we established in the city with our church, and I was deeply involved in Boy Scout adult leadership roles, so that was where most of my social life – but as far as, Bette could tell you about people right there in the neighborhood. She knows people that I didn't even know, since she met them on a business as well as a neighborly basis. So it was like she says, you knew some children. I don't even remember the children. Bette, go ahead.

B.E.: Well, I couldn't tell you who had kids, and who didn't. I don't remember any names or anything like that.

H: What did the neighborhood look like? What were the streets – were they, you know, straight streets or curving streets?

B.E.: They were laid out similar to a subdivision.

H: Like a subdivision.

B.E.: Yeah.

W.E.: And it went right straight up the hill.

B.E.: Main Street went right up the hill.

H: Was it like a suburban-style neighborhood?

B.E.: Yeah, I guess you would say so. The houses, they were nice. They were, you know, all alike. Painted green. Painted a light green. All painted the same inside.

H: And was there landscaping outside?

B.E.: Barely, yeah. I know the officers had – we didn't have any patio out in back. But the officers had a patio, you know, sliding-glass door and patio. But they lived up right next to the top of the hill. And it wasn't anything for them to have snakes curled up in the sun, poisonous ones.

H: Oh, wow. Wow.

B.E.: And then we had also up at the very top of the hill, it was around the holiday time. Some kid got loose of a, on a – he was from a training, some kind of a training school. And he borrowed somebody's car illegally. And he drove straight up the hill, and he was being chased, apparently, and he went through somebody's living room. And they had company. Some officer's living room.

H: Wow. Was he part of the neighborhood?

B.E.: No, the kid wasn't.

H: Oh, wow. That's pretty scary.

B.E.: That was our excitement for the –

H: For the year. Well, now, as far as the yard, we were just talking about. So you didn't have any kind of a concrete slab or anything for the patio.

B.E.: I don't remember it, no.

W.E.: I don't think so.

H: Was there a front porch, like a little entryway.

B.E.: Just to get out.

H: OK. And did you have a back yard?

B.E.: It was all open.

H: OK. Grassy?

B.E.: Yeah. No – it wasn't fenced in or anything.

H: OK. Was there any outdoor storage?

W.E.: Not that I recall.

H: You said that you had a detached garage. Is like a group garage?

W.E.: Yes.

H: Back behind your units. OK.

B.E.: Like four garages together.

H: I see. And did you feel that your personal unit provided you enough privacy from – as far as the rest of the neighborhood?

B.E.: Oh, we never worried about that.

W.E.: I'd say yes.

H: You didn't feel like people were right on top of you.

B.E.: No, those people were picky. (LAUGHS)

H: And did you like the amount of outdoor space? Do you feel that was adequate?

B.E.: Oh, yeah.



W.E.: Plenty.

B.E.: We never utilized it or anything. I don't even know if we had a – no, I don't think we even had a cooker. You know, a little barbecue then.

H: Oh, a grill. Yeah. And did you like the window space – number of windows? Did you feel that you had enough?

B.E.: Yeah, it was just windows.

H: Yeah. I just – the designs were kind of roughly based on these suburban ideas of the postwar period, and so that was all big on openness inside the house and lots of views of the outside, and so we're just trying to ascertain whether the housing, you know, whether people perceived that occurring.

B.E.: I remember, I think it was tile floors.

H: Tile floors.

B.E.: I believe, yeah.

H: Yeah. OK. So, did you feel that the neighborhood and housing was an appealing place to live in general?

B.E.: Well, it was open enough that, you know, you never bothered with the neighbors much. You came out and talked at night, or something like that. We'd talk in front of our houses, but other than that, why – I know some of the women worked, I guess.

W.E.: It wasn't the kind of neighborhood that I would say like we had later on where you developed block parties and things like that where the girls get together for coffee klatches and stuff like that. If it went on, we were not aware of it because, A, it was a new neighborhood, we were Navy –

B.E.: They were Marines.

H: OK, those are good points.

W.E.: She worked. And so – I'm not saying anything against the housing. We just did not get involved in that sort of situation.

H: Yeah. Those are good points.

W.E.: It might have been very adequate, but we were not aware of it.

H: Also, the housing was built to be economical and not excessive. Did you see –

B.E.: This was not excessive.

H: Yeah. Did you see evidence in your house of attempts to economize, the government's attempts to economize?

B.E.: Oh, well, yes.

H: Yeah. What were some examples of that?

B.E.: There was no luxuries, you know, like in the bathrooms, you know, like you have today. Everything was just all plain-Jane.

H: Yeah. No molding on the ceilings or –

B.E.: No. You mean crown molding?

H: Yeah.

B.E.: Oh, heavens, no. (LAUGHS)

H: Some of the housing that we've looked at, Wherry, some of the cabinets didn't have doors, and –

B.E.: Oh, no, we had doors, as much as I remember. And I didn't like that gas refrigerator. That was, you know – I put a pumpkin pie up on top one time, and you know, just until we could use it up, and not realizing there was gas heat up there. It turned the pie green. (LAUGHS)

H: Oh, no. You mean like on top of the refrigerator?

B.E.: Yeah. (LAUGHS)

H: Oh, no.

B.E.: It was the only gas refrigerator we ever had.

H: Yeah, wow.

W.E.: There was a lot better – you've got to understand, this is 55 years ago.

H: Sure, sure.

W.E.: So she remembers a lot of this stuff that I never even have any idea about.

H: Right. Right. Now, what else do you remember about the physical features of the house?

B.E.: It was just all, you know – well, we didn't have a lot of furniture then.

W.E.: There was a lot of room.

B.E.: A lot of room.

H: Yeah. Was there – you said there was tile floors.

B.E.: I think so. As much as I remember.

H: Was there any extra decoration –

W.E.: Oh, no.

H: -- you know, like around the windows or anything like that?

B.E.: No, they were just like a double window in the front of the house. I think toward the back, it wasn't a sliding-glass -- I don't believe it was sliding-glass door. But it was, you know, it was like three windows across the back of the living room. That made it, you know -- but that was all the windows in the living room and the dining room both. And then a small window and back door.

H: So nothing ornate or overly --

B.E.: Oh, no. Very basic.

H: Yeah. Yeah. Well, what physical features of the house did you like, and what features did you dislike? I think you kind of touched upon some of those.

B.E.: I said I wasn't picky.

W.E.: They were just really nice, you know?

B.E.: It was very adequate, and I never gave it too much thought. I was just glad to get a clean house.

W.E.: Nice, clean.

B.E.: We've moved in behind some real people that were, I mean, they were really filthy. Civilian housing, I mean. One place in San Diego, we rented a two-bedroom house, and it took us a week to get it ready to even move into. We cleaned one room a night when we were working.

H: My goodness.

W.E.: The main point I think my wife is making there is that there were rules and policies and security deposit, and her inspections ensured that new people moving in after users had a very clean and usable space instead of going into some crummy place. I would say the management and control of the housing was above average and, therefore, did a great job for people moving in.

H: Oh, OK. OK. So that worked out well.

B.E.: Yeah, Margaret and I were -- I mean, we were really, you know, we were picky to --

W.E.: Nitpickers.

B.E.: -- make people clean before they left. And on many a time, I had people move and leaving town and not getting their money back. They got it back eventually, I guess. I don't know what happened, but --

W.E.: Then what happened? Did the company then go ahead and hire somebody to come in and clean?

B.E.: Yeah. No, we didn't clean or anything, but we had people that did clean.

H: Yeah. What kind of, what did they do besides cleaning, to spruce up the place for the next tenant? Did they paint?

B.E.: Well, the houses were all new. Some of them had to be painted, because as I said, when you have fingerprints on the ceiling and food on the walls. People really live like scumbugs.

H: Right. Rental housing, right.

B.E.: You know, they don't have any sense of owning a place. We always tried to treat a place as if we owned it, and keep it clean. But everybody doesn't live that way. We have our faults, but that wasn't one of them.

H: Yeah, right. Now, actually, I never asked, was your house one story or two stories?

B.E.: Just one. I don't think there was any, there was no two-story in those houses.

W.E.: When we saw the pictures in the Navy Times, we noticed that one of the pictures they ran was a two-story facility.

B.E.: That was someplace else.

W.E.: Different part of the country, I guess.

H: Yeah, I can't quite remember where those pictures were from, but, yes, some two-story.

W.E.: Like she said, we were among enlisted. We were in a multiple group, where the officers were in single housing. Which is typical in the Navy and the Marine Corps, by the way.

B.E.: Some of the officers had duplexes. When they got higher up, you know, senior officers, well then they rated a single house.

W.E.: That was all Wherry housing.

H: And your house, was it – what was the exterior material?

B.E.: Stucco. Everything was stucco.

H: Stucco. OK.

B.E.: Pale green stucco. And then some of them were a tan stucco. A lot of houses in California are made of stucco.

H: Oh, yeah, I can imagine.

W.E.: You asked for something negative. I'll give you something negative. Right across the main street, there was a fence and a back area where the Marines did night maintenance on their jets. And then the jets would then turn up, you know, full engine power for checking out the engines. So, well into the night, and sometimes all night, you would hear a very large amount of jet noise. We got used to it, but if I was to make a recommendation to housing, I would not put it right on top of a flight line or right on top of a run-up line.

B.E.: We had a very basic TV then, but you couldn't even hear the TV across the room at all when those jets were turning up, getting ready to take off. They really blasted you.

W.E.: It's an item worth noting, you know, in your report. The location of the housing in relationship to the military flight line.

B.E.: Well, I don't think they even do that anymore now, from what I've seen.

H: OK, well, is there – do you have anything else to add, any more general impressions or any other thoughts about the housing?

B.E.: Well, I don't know that we've been much help, but that's – we lived plain-Jane down there.

H: You definitely were a lot of help. It's definitely true – that's what people have been saying, that the housing was very basic, but better than where they had come from earlier, and it was better in comparison to what they could afford on the civilian market.

B.E.: Oh, yes.

H: That definitely adds to our understanding of the housing. Well, I thank you for the photo, by the way, Mr. Evans. It's a very distinguished-looking photo.

(GENERAL DISCUSSION ABOUT THE PURPOSE OF THE ORAL HISTORY PROJECT AND THE EVANSES' ATTEMPTS TO FIND PHOTOS OF THEIR WHERRY UNIT)

W.E.: You know, we've seen a lot of military housing over the years, both in and out of the Navy. And I'd say in our case – at least in mine. I don't know about Bette – but in my case, it was the very best military housing we were ever exposed to. Very best. You know, understand, we were enlisted men. We were not – I wasn't even a chief yet. And to me, it was great. You know? It was very – I complained about the noise, but it was also right outside the gate, so I had almost very short distance to drive. But we've seen military housing down in San Diego. We've seen it in a variety of places around the United States. And none of them looked as nice and good as that did to us at that time. I know today, when I even see Navy Times running articles on new barracks they're talking about building down in San Diego –

B.E.: Oh, I can't believe it.

W.E.: -- those enlisted men's barracks are going to be better than Wherry housing or any other military housing.

B.E.: Probably nicer than this eleventh-floor condo we have now.

W.E.: I understand, you know, the government's got to balance off, you know, the amount of money they have to spend. But, you know, the biggest thing in military housing is keep it up. They need to ensure, and I did this in business after I got out of the Navy, maintenance costs and maintenance support dollars are just as important, if not more so, than new construction dollars.

You can put that in your report that that was not very important to us in our Wherry housing because it was new. But after you have military housing for, I don't know, five years, ten years, and 20 years, you better have a good amount of maintenance and support. Because otherwise, those neighborhoods deteriorate, and deteriorate bad. And I'm sure you drove around Washington or other places where you see old military World War II housing, which you wouldn't even put your dog in.

B.E.: Memphis was especially bad for that. They had military housing, and it was – well, I'll tell you, in Memphis, there's the same old duplexes still being rented today.

H: Oh, my. Long time.

B.E.: I couldn't believe that. We were up there, oh, six, eight months ago. We live close to there now. I keep forgetting where we live. (LAUGHS)

(GENERAL DISCUSSION ABOUT CONSTRUCTION COSTS, IMPRESSIONS OF CURRENT MILITARY HOUSING AT AIR FORCE AND NAVY BASES, DESIRE FOR GOVERNMENT TO PUBLICIZE RESULTS OF THIS PROJECT, LOCATION OF TRANSCRIPTS, PARAMETERS OF WHERRY AND CAPEHART PROGRAMS)

H: Well, I thank you very much, and if you think of anything to add, please don't hesitate to call me.

W.E.: All-righty.

B.E.: We will.

H: OK.

B.E.: Thank you very much –

H: Take care.

B.E.: -- for giving us the opportunity.

H: Oh, you're quite welcome.

B.E.: Bye-bye.

H: OK. Bye-bye.

END



Figure L.2. Navy Lt. William L. Evans, 1977.  
(Courtesy of William L. Evans)

## **GEORGE H. GENTRY, JR.**

Ms. Chris Heidenrich, M.A., a historian with R. Christopher Goodwin & Associates, Inc., conducted a recorded interview with Mr. George H. Gentry, Jr. via telephone on 15 August 2006. Mr. Gentry was interviewed for a project sponsored by the Department of the Air Force and the Department of the Navy to document the history of military family housing constructed under the Wherry and Capehart programs between 1949 and 1962. Ten other former residents of Air Force and Navy Wherry and Capehart housing were interviewed. A historic context, neighborhood design guidelines, and a tax-credit brochure also were completed for the project.

Mr. Gentry was an infantry officer in the U.S. Marine Corps from 1951 to 1977. After receiving a commission from the Navy Reserve Officers' Training Corps at the University of Texas, Mr. Gentry entered the Marines as a second lieutenant. He retired as a colonel.

Mr. Gentry resided in the Tarawa Terrace #2 Wherry housing at Marine Corps Base Camp Lejeune, N.C., from 1955 to 1957, while holding the rank of captain. Mr. Gentry, his wife, and their infant daughter lived in a one-story duplex consisting of two bedrooms, one bath, a combined living-dining room, and a kitchen.

CHRIS HEIDENRICH: This is Chris Heidenrich of R. Christopher Goodwin & Associates interviewing George H. Gentry, Jr. of Cibolo, Texas by telephone on August 15, 2006. OK, now the tape is on. And would you just acknowledge that you know that you're being recorded?

GEORGE H. GENTRY, JR: My name is George Gentry, and I know I'm being recorded.

HEIDENRICH: Thank you. OK. Well, first of all, I just wanted to get some basic biographical information out of the way. We do have the questionnaire that you filled out, but just a couple of other details. What was your rank when you lived in Wherry and Capehart housing?

GENTRY: I lived in Capehart and Wherry housing. I was ranked, was a captain.

H: OK. During both periods.

G: Both periods.

H: OK. So then, you had first told me, or you had told me that you lived in Wherry --

G: That's correct.

H: -- at Camp Lejeune, 1954 to '56.

G: No, actually, it was 1955 to '57.

H: I'm sorry, that's right. I did change that in one of my other documents, and I didn't write that down on this one. OK, '55 to '57. Now, the Capehart, my notes had said that you weren't sure whether it was Wherry or Capehart, but was that --

G: That's correct. That was when I was stationed at the Naval Training Command in Bainbridge, Maryland. And I can give you the addresses of these places.



H: Oh, great, sure. What was the Camp Lejeune address?

G: My Camp Lejeune address was 3405 Hagaru Drive.

H: How is that spelled?

G: H-A-G-A-R-U. Hagaru Drive. Tarawa Terrace. That's two words, Tarawa Terrace 2.

H: OK. Number 2, OK.

G: And that's in North Carolina.

H: OK. And Tarawa. Is that T-A-R-A-W-A?

G: That's correct.

H: OK. And now the Bainbridge, what address was that?

G: OK, I lived in actually two different quarters, but they were in the same Capehart housing. The first place I lived in was at 16A Barton Road, Manor Heights, M-A-N-O-R Heights. And the mailing address was Port Deposit, Maryland.

H: All right.

G: And after I'd lived there for about a year, I moved across the street to 11B Barton Road. And that's Manor Heights, Port Deposit, Maryland. And like I say, that period of time went from 1957 to 1960.

H: OK, great. OK, now, since you're not sure if that was Wherry or Capehart, I thought we could focus on the Camp Lejeune period. And what type of quarters were those?

G: This was a duplex that I was in, and it was sort of a one-story duplex. It had two bedrooms and one bath. It had a combined living and dining area with a kitchen. And there was no garage or anything with it. It was a parking space out in front of it.

H: OK. And let's get into a little bit more now of the open-ended questions here. These are along the lines of what I had mailed to you.

G: All right.

H: Just to compare between the Wherry-Capehart and previous housing that you had lived in, did you live in previous military housing before the Wherry housing?

G: No. When my wife and I got married, we moved into an attic apartment above a house, and it was in Portsmouth, Virginia. And the address at that was 2007 Leckie Street, Portsmouth, Virginia.

H: OK. And so that was private housing, right?

G: That was private housing.

H: OK. Well, how did that compare to your Wherry housing?

G: Well, of course, being living in an upstairs above a house, it was fairly cramped and limited space up there. But, and we had to go upstairs to get to it, an outdoor stairs to get to the house, to the quarters there. We lived there a little more than – well, about a year after we got married. And then we moved from there to Camp Lejeune, or to Tarawa Terrace.

H: OK.

G: And the Tarawa Terrace, I won't say that we were one of the first people in that quarters, but they hadn't been built long in 1955, to my knowledge. There were two different terraces, Tarawa Terrace 1 and Tarawa Terrace 2. And we lived in 2. I believe, now of course I can't guarantee this, but I believe that Tarawa Terrace 1 was basically enlisted housing. And this is off-base, but right next to Camp Lejeune, North Carolina.

H: OK. And that was where Marine families lived.

G: That's right. There were Marine and Navy families there.

H: OK. And, so the Wherry housing, then, it sounds like it was an improvement over what you had earlier.

G: That's correct.

H: Yeah. And in general, did you like living in this Tarawa Terrace housing?

G: Well, yes, because I had nothing to compare it with, other than that initial thing. I did enjoy living there. However, if I had been assigned to that base longer than I was there – I was there two years – I would have moved onto the base and moved into base quarters.

H: Why is that?

G: Well, there was just limited numbers of quarters available on the base, and you had to wait until one of those quarters became available before you could move in. And so, basically, you took the Wherry housing as an intermediate step to going into the base. In other words, I was only there two years. If we'd have been there another year, I'm sure I would have been on the base, and not stayed out there at Tarawa Terrace.

H: Well, was it just a matter of the fact that the Wherry housing was off-base, or that the base quarters were nicer? What made you say that you would want to move to base housing?

G: Well, one thing, it would be on base. You wouldn't have to drive. We had to drive about ten miles to get to the commissary and exchange. In other words, it was that far off-base. And if we'd have been on base, it would have only been a mile or so to drive to get to the quarters.

H: I see.

G: And like I say, we had never lived in base housing, so we didn't know too much about it. But we had friends that did, and we visited their quarters, and it was roomier on the base. Their quarters were roomier. They had more room. And they, like I say, had the advantage of being closer to the facilities, particularly the wives on the base.

H: I see. OK. So then it sounds like then it was about – the base quarters were bigger and just simply closer to everything on the base that you were using.

G: That's right.

H: OK. Aside from that, though, the Wherry housing, now, was it just you and your wife, or did you have other family members?

G: We had a child. We had a little – when we moved, our daughter was three months old. (LAUGHS)

H: Oh. When you moved in?

G: Yeah. So she got to grow up there. She spent her first two years of her life in there.

H: I see. So did you and your family members generally feel comfortable living in the housing?

G: We did. We were – like I say, I think we did. We had, like I say, nothing to compare it with, of being better than it was. So, it was good living, and we had next-door neighbors who were in the other part of the duplex that we knew, and of course the neighbors on the other side of us. And we socialized with both of those families. And they had young children, about the same age as our daughter.

H: I see.

G: So, it all worked out.

H: Yeah, it really sounds like people developed a community. The housing enabled people to get to know their neighbors, and –

G: That's right. That's exactly true.

H: -- just meet other people in their same situation. And I know that you mentioned living in the apartment above the house before that, but as far as your general knowledge about housing at the time in the civilian sector, would you say that – how did this Wherry housing compare to housing available in the civilian sector?

G: (LAUGHS) Once again, I was a bachelor up to the time we moved into that one little apartment. And I had nothing to compare it with. I lived in a bachelor officer's quarter. Actually, at the time that we were living in the Portsmouth quarters, I was on sea duty, aboard a ship, so I didn't have any place – it wasn't like living on a ship, by any means.

H: Oh, of course, of course, right. But I guess, so you just had no experience with other types of civilian housing to really know.

G: Not while I was in the military. In other words, it wasn't like what I left behind when I went in.

H: OK. What about the housing you grew up in and left as an adult?

G: We had a nice home. I lived in three different towns. I was born out in west Texas in Big Spring, and we moved into a house there, and although we left there when I was ten, my knowledge of

remembering it is very limited. And then we moved to Temple, Texas, in 1939, and I spent most of those years there, including before I went off to college. And we had a nice, big old home with big rooms, high ceilings. One bath.

H: Oh.

G: There was never a multi-bath place. We had plenty of storage space. Had a big yard, a fenced yard. And then we moved from there. When I went off to college, we moved to Baytown, Texas. And once again, the housing there was very nice. It was probably not more than four or five years old, but still, once again, we were dealing with one bathroom. And two bedrooms downstairs, and then there was an attic bedroom, and that's where they let me stay when I came back from college. My brother, who was younger than myself stayed in the other place. But I was very happy with it.

H: Yeah. I see.

G: Of course, I lived in a dormitory while I was in college the first three years, and then I moved out into a garage apartment my senior year in college. So I had a lot of places I lived before I ever went to Wherry housing, but they were all civilian.

H: Mm-hmm. OK. So it sounds like maybe the Wherry was a little – although you said it provided for your needs, it sounds like maybe it was a little bit smaller than –

G: It was smaller.

H: -- a family home in the civilian sector.

G: Yes. It was smaller.

H: Now, just to touch on a couple of other issues in relation to just general thoughts, did the housing provide enough space for everybody?

G: Well, once again, we were a small family. We just had one little girl and my wife and I. And we didn't have much to compare it with, military-wise. We had seen, like I say, the base quarters, which we had visited friends that were living on base quarters. And their space was a little more – it was larger.

H: Yes.

G: But whether that meant more to them or not, I don't know. I know that years later, when we were stationed out on the West Coast at Camp Pendleton, I lived on base. And we had three bedrooms, two baths, upstairs, downstairs, so – and that was base housing. And I was a lieutenant colonel at that time, so I had a little better quarters.

H: I see. OK. And as far as closet and storage space in your house, the Wherry house, did you feel that it was adequate?

G: Well, it was, you know, basically because my daughter didn't have much with a baby. She didn't need a lot of things. So, we were able to use the closet space in her room for any overflow of clothes or things that we had. Although we didn't have that many clothes at the time. In other words, I was a junior officer and didn't have that much to spend on clothing. But we seemed to have gotten by with the space that we had in there.

H: So, did each of the bedrooms, the two bedrooms have a closet?

G: Yes, they both had a pretty good-sized closet in both bedrooms.

H: OK. And then, I guess, was there a front-hall closet or any closet in the main room?

G: I'm just trying to recall that. I can't recall that. There may have been, but I don't really remember.

H: And in the kitchen, do you have a general understanding of whether that space was adequate, the storage space?

G: I think it was more than enough shelf space in there for our pantries. And we had room for a washer and a drier. Up in the kitchen area, there was connection places there where we could do that. And that was good to have it with a three-month-old baby.

H: Oh, I'm sure, yes.

G: (LAUGHS) Because you didn't have the throwaway diapers in those days. You had cloth diapers.

H: Oh, right. Right. So then, you had a washer and drier. And was that provided?

G: Well, no. We had a washer. I didn't have a drier. We did all our washing. But we had an area between the Capehart – or between the Wherry housing units there were driers, one of these spin driers, poles –

H: Oh, poles.

G: -- yeah, that you can hang clothes on, and it goes around and around. Rather than long clotheslines, it was a spinner-type. And they were well-used. All of the neighbors all did the same as we did.

H: Mm-hmm. OK, so each unit had its own spinner.

G: That was for outdoor drying. We didn't own a drier. We owned a washing machine, but not a drier.

H: OK, so they provided the connection, and you provided –

G: Right. They had the connections there, electrical and the outlets.

H: I see. OK. And then elsewhere in the kitchen, you said there was a pantry, and then I assume there were some cabinets for dishes and stuff.

G: Right. And we had a stove with an oven, I would say a regular-sized electric stove. It wasn't gas. Electric. And we had a refrigerator. And that stove and refrigerator were part of Wherry housing. We didn't have to buy that. We didn't have to do that.

H: I see. OK. And was there any other storage space, like any kind of a, I don't know, extra room?

G: I don't remember any storage space outside, if you're talking about an outside storage. I don't remember it. And there might have been some storage space in the attic, but I don't remember that, either.

H: So you're not sure if there was an attic? Is that what you mean?

G: No. Like I say, we had very limited furniture and things like that. We were basically just married.

H: OK. Well, speaking of outdoor space, was there a carport?

G: No. There was – in the, let's see, I'd say an offset on the street. You didn't have to park on the street, but there was a place to park that had been cut into the sidewalk so that your car wasn't on the street but it was not covered.

H: OK. I see. And so there was no outdoor storage either.

G: No. Not to my knowledge. I cannot recall any. I know that if you got on the base you would have had a garage and you would have had some outdoor spaces. I do know that. But once again, that was on-base housing, and it was not part of Wherry or Capehart.

H: I see. OK. Well, in regards to children, I know that with your daughter having been so young, that you didn't need things like playground quite yet.

G: No.

H: But in general, did you think that, just as a parent, did you think that the area was adequate for children?

G: Well, I would say, you know, by the time she was two, she could play outdoors. And there was no, there was plenty of room for her to run and ride her tricycle on the sidewalks and things like that. We had a slide for her out back that I rigged up, and things like that. So it was – the area around it was play area, but it was not a playground as such.

H: I see.

G: There may have been some there, but, you know, at that young age, we weren't taking our child or letting them go off at two years of age to a playground, if there was one available. She just stayed around close to the house.

H: I see. And so, did you get an impression, a positive impression from the other parents who maybe had older children that it was, whether it was a good place for children?

G: Well, most of the parents' children were the same age as ours. They were various – two, three years of age. And like I say, they were young Marine officers like I was. Their families were young. There was no more senior type. Now, like I say, if you'd been on the base, you'd have seen the more senior officers with older children, where you might have seen them. I never had that to contend with or look at. I didn't see it – in fact, when we moved out to California, it was really the first time I could say our children got away from home with an area to play.

H: OK. But in your particular area, there was enough room in a kind of backyard area for you to put in a slide?

G: There was a front yard and a back yard. There was plenty of room to play for the children, for a small child, in other words.

H: I see. Now, back inside the house, I guess one of the objectives of this housing when it was designed, in general, was to provide an open floor plan to create an idea of spaciousness and allow family members to get together easily and allow parents to watch their children, sort of more conducive for families. Did you have this open plan? I guess you did mention that the living room and the dining room were together.

G: Yeah. We did have that.

H: Did you – and again, I know that you were a very young family, and you didn't have a lot of people. But did you feel that the layout and the plan, the design were conducive to family life in that way?

G: Yeah, I thought so. We weren't even, ever felt crowded or anything like that. When the weather was bad, there was plenty of room for the little girl to play.

H: OK. Did you like how the living room and dining room were, you know, sort of one big space?

G: Yes. There wasn't any problem with that at all. In other words, we didn't have that much furniture. We had a couch and some chairs. And then of course, we had a table and chairs for dining. And we had, I guess you could call it some kind of a dining table for our daughter that we could put her in, and so it was fine.

H: And the design of the neighborhood, did that help you feel a sense of community with the neighborhood? You know, the housing together, layout of the neighborhood, did it foster a sense of community?

G: Well, it did in the fact that everybody that lived around me were normally of the same rank that I was. And they might not have been in the same unit that I was a member of, but they went to work every morning like I did, and they came home at about the same time I did, and other than the duties that they pulled on base, they stayed in the general area. They weren't people who left the area, left where they were living to go elsewhere.

H: I see.

G: In other words, we had good neighbors on our right, and good neighbors on our left, and across the street we knew them. So the camaraderie was there, and all of the wives could of course get together and commiserate on their family problems while the husbands were at work.

H: (LAUGHS) Perfect. I guess, I mean, it seems like from what you're describing that people could see each other from across their back yards, and it didn't seem like, it just seemed like, also, too, everybody coming home could see each other, and leaving could see each other.

G: That's right. In other words, you knew when a person was, you know, everybody basically left at the same time, came home at the same time. But you knew if somebody was on a Med cruise that their family was there, and you sort of took care of them.

H: What was that word? Med?

G: Med cruise, in other words, the Marine Corps kept a battalion in the Mediterranean.

H: Oh, OK.

G: They would leave Camp Lejeune, or the Camp Lejeune area, and they would be deployed for six months in the Mediterranean. And if they were gone, like I say, the husbands would be gone, but the wives and children would stay there and live in the quarters available there. And everybody knew whose husband was gone, so the wives would sort of help take care of any needs. Basically, they got along real well.

H: OK. And so how did – I guess – maybe I'm getting at some sort of abstract concepts here, but did the neighborhood help foster that camaraderie?

G: Well, I would just think it was because we were all in the same service and we all went to the same base, so the camaraderie was there. Whether we had known each other before or not didn't make any difference. In other words, we had all been to similar jobs or similar places, and we'd served in, you know, where would we be? Like I came from sea duty, and before that I'd been in Quantico, Virginia, and before that, I'd been to Korea, and before that, Camp Pendleton. So I'd been to a lot of places as a bachelor. And I knew that the rest of my career would be spent on many, many bases and things, so when I got married, I had to indoctrinate my young wife on this. Of course, she wasn't too hard because she was a Navy nurse. She understood some of it.

H: As far as your home in reference to the rest of the neighborhood, how would you characterize your level of privacy? Did you feel that the housing provided you enough privacy?

G: Oh, yes. It was a private place. Nobody was looking over your shoulder. And you mentioned behind the house. Well, actually, we had some ground behind our house, but there was nobody, no other quarters behind us. There was a big drainage ditch behind us.

H: Oh, perfect.

G: And from behind that drainage ditch was some woods, so there was nobody there behind us. And it just sort of ran behind the quarters. Now, that was not true of the quarters across the street from us. They did have people backing up to them. And there would be back yards that they could – not that they were fenced or anything, but they had similar back yards where they used the same back space. But I didn't have that problem.

H: Right, with the drainage ditch. So was there fencing that separated the back yards?

G: I don't think so. Like I say, I really don't.

H: But you still felt that there was enough privacy where you could have your own space and people weren't able to really look in or notice.

G: That's correct.

H: Just back to the outdoor space, just to make sure that we've got that clear, there was front-yard space, green space, and backyard space. Did you have any, like a porch or a little patio in the front or the back?



G: No, it was just basically a slab, the entryway in the front and a slab entryway in the back. I'd say 4 feet by 6 feet slab in both places.

H: OK. And was the back door just a regular door?

G: Regular door.

H: No patio door.

G: No patio door.

H: OK. And did the units – did you have, just along the lines of this idea of openness, did you feel that you had enough windows? What kind of a view of the outdoors did you have?

G: Well, each of the bedrooms had two windows, and the kitchen had two windows, and the living-dining room had two windows. So there was plenty of light to come in.

H: Oh, that's good. So you felt like you had enough windows.

G: Oh, yeah. Yes.

H: Another intent of this program, Wherry and Capehart housing programs, was to create this suburban environment, and what kind of feeling would you say the outdoor environment created as far as a suburban environment goes? Was there a lot of landscaping? Was there kind of winding streets? How would you describe the environment?

G: The streets were winding. It was not block. They were winding. The landscaping was not very much. We had a small growth of a tree that wasn't very big in our front yard, and so did our next-door neighbor. But they weren't hardly any growth at all in the way of the trees. They were new planted. That's why I feel like I may have been one of the first – we might have been one of the first couples to live there. It might have been that the Wherry housing was no more than four or five years old, is what I'm trying to say, because the trees were so small. There wasn't any really landscaping in front.

H: Just a couple of trees, small trees?

G: Yeah, little trees. To my knowledge, I was trying to see if there was any plant life around the front of the house or anyplace else, but I can't recall it.

H: And the back yard, was there –

G: It was open. It didn't have any trees or anything, but across the drainage ditch there was more than enough trees there. They were big trees.

H: I see. Just sort of a maybe vacant piece of land.

G: It was vacant, right. It was something that was not developed. It was undeveloped.

H: I see. OK. And was it, would you say it was a suburban environment?

G: Yes. Definitely, but it was like I say, to us, it was just off-base housing. We were not a part of Jacksonville, North Carolina, which of course is the town closest to Camp Lejeune.

H: You're making the point that you were not part of the town. You were just part of the military –

G: We were just in the land that was between Jacksonville and the base itself. The quarters were that far away.

H: I see. OK. And also, so overall, it was an appealing place to live, the appearance, the landscaping, and the environment?

G: At that time.

H: OK. And another aspect of this housing is that it reflected the government's desire to provide housing that wasn't excessive or overly costly.

G: That's right. It wasn't elaborate, by any means. It was just enough to take care of you, and you had to make do with what they provided. And if you wanted any additional things like a washing machine or an air conditioner – in other words, we had no air conditioning, so I had to go out and buy an air conditioner. And it was a window unit that we had to put in. The heat that we had, and I was trying to be sure of what it was, but I think it was a gas heat. It was a stove located near the kitchen. But it was the only heat we had in the whole house. There wasn't a furnace or anything like that that pumped hot air throughout the house.

H: OK, no furnace, just an actual stove?

G: Yeah, a big stove.

H: OK. That was the heat source.

G: That was the heat source. And we had one air conditioner, and we had that in our room, in our bedroom.

H: I see. OK. So the stove, was that like kind of one of those old-fashioned stoves?

G: It was sort of like, it wasn't like a pot-bellied stove that you would put logs or coal in, but it was an older-type stove. And I'm really trying to remember whether we had to have fuel oil to heat it, or whether it was gas. But I think it was a gas stove, natural gas.

H: Oh, my. OK. And so, was there any other evidence that you remember of the government's attempts to economize? For instance, some of the housing that we've seen, some of the cabinets did not have doors?

G: No, no. As far as I can recall, all of the cabinets in the kitchen or in that area had doors.

H: Would you say that, was there any other examples of attempts to economize, or are you thinking of the amount of space or the types of materials that were used in the construction?

G: I was trying to think of what the materials was. As I recall, there was sort of a stucco.

H: On the outside?

G: On the outside. I'm not positive about that. I think there was, though.

H: OK. So what gives you the impression that this housing was economy-type housing?

G: Well, you could tell it was all alike. If you came into the housing area, you'd see a duplex, then a single house, and then a duplex, and a single house, and duplex all along the street. The single house was no larger than the duplex together. In other words, the duplex together would be larger than the single house. But it served two families, where the single house only would serve one. But they all had basically the same floor space – I won't say floor plan, but floor space.

And like I say, if there were any larger than two bedrooms and one bath, then I just don't remember. I'm sure there must have been some, but I can't remember them, because most of the families that were living there were young families. They were not with older children.

H: I see. OK. And did this kind of economy type of approach affect your opinion of the housing?

G: No. To me, it was better than trying to go out and find a place on the civilian market. If we'd have had to do that, we'd have had to go into Jacksonville, and Jacksonville, North Carolina, did not have at that time the houses necessary for junior officers, like I was, that we could afford, for one thing. And they didn't just have enough to take care of them all. If Wherry housing had not been built where it was at, I don't know where I would have had to put my wife and child. It was just a big savings. Even though we looked forward to going on the base, base housing was so limited that it really made a big difference.

H: Yeah, definitely the different Congressional hearings and examinations of the issue before the Wherry housing was built went into all the detail about how a lot of service members were being taken advantage of by high prices and very inadequate housing on the civilian market.

G: That's correct.

H: Now, as far as the physical features of the house, you mentioned that it was a one-story duplex, two bedroom, one bath, combined living room-dining room, and a kitchen. What do you remember about the physical features?

G: Not a lot.

H: Pardon me?

G: (LAUGHS) Not a lot.

H: OK, yeah. Like when you entered, did you enter into the living room?

G: No, you came in and you came into – the kitchen was to your left, and directly ahead was the dining room-living room. And then there was a small hallway that went off to the right. And when it went off to the right, there was a bedroom and a bathroom and the other bedroom were to the right. And that was the layout.

H: I see. OK. So then it was in a square? A total layout of a square?

G: I would say it was a square. Of course, like I say, it was a duplex, so it would have been a rectangle.

H: OK, the whole building footprint was –

G: The other side of the duplex was identical to what we were in.

H: So it was like two squares coming together into a rectangle.

G: That's right.

H: OK. Did you have any kind of features like a fireplace or anything like that?

G: No, no.

H: What physical features of the house did you like, and what features did you dislike?

G: Well, of course, once again, my wife and I had nothing to judge it by. We did not expect that we'd be living in housing like we had lived in in a civilian community. We didn't expect that. We were both hoping that we would be able to move onto the base, the base housing, but it appeared that the time I was there was such, it was two years. And by the time we came up to go on to the base – there was houses available – I had orders to go to Bainbridge, Maryland, so there was no use for us to pick up and move to the base for two or three months. And we didn't.

So, we really didn't have a lot to compare it with. It was larger and roomier than the one we lived in, the apartment over the – the attic apartment. It was larger than that. But once again, we were fairly well away from the base, and therefore you needed to use the facilities, the commissary and exchange, to make your money stretch. And if you did have to go shopping, I think that there was a, I won't call it a shopping center, a grocery store or filling station or something like that that was located right near where the Wherry housing was at. And you could drive there if you had to make some type of quick purchase.

H: So, but as far as – I mean, I know that maybe it's fuzzy at this point, all these specific details – was there anything like a particular amount of counter space in the kitchen or some kind of nice wood floor or any particular feature that you can remember that you liked?

G: I can remember that it wasn't wood floors. I can remember that we had linoleum floors. And the housing was on a slab, in my estimation. It was a cement slab, and they just put linoleum down. And we put in throw rugs in the bedrooms, and the living room, and the dining room areas.

H: So no particularly memorable physical features that were just outstanding. OK. Any features of the house that you didn't like?

G: Well, like I say, it was just a place to live. And we didn't have that much to compare it with.

H: Sure.

G: Now, when we moved from there up to Capehart housing up in Bainbridge, Maryland, it was a little better. It was two stories. They had four units, two downstairs, two upstairs units. And as I recall, they might have had some hardwood floors there in Bainbridge in the Capehart housing, but once again, that's hard for me to recall everything on even it, because we lived there from 1957 to 1960.

H: OK. Well, is there anything else that you wanted to add about your experience living in this Wherry housing at Camp Lejeune?

G: Well, I was glad to have it. I'll guarantee you that. It was something that I was very glad to have. I had nothing to compare it with, like I say, as I went into it. But it was something I didn't have to worry about. It provided us a place to live.

H: OK. And I meant to ask you earlier, did you have a career field during your military service?

G: Yes. I was an infantry officer.

H: Infantry officer.

G: Yes, and I retired as a colonel.

H: OK. So your career field during your military service was infantry officer.

G: Right.

H: OK. And then when you lived in this Wherry housing, you were a captain.

G: That's correct. I was a company commander at that time.

H: Company commander.

G: Right.

H: Is that the same thing as captain?

G: Yeah, well, no. Captain was my rank, but I commanded a rifle company.

H: I see, so that's where the infantry officer comes in.

G: Right.

H: OK. And then, do you happen to have any photos of that time period of the housing or the neighborhood.

G: I really don't think so. My wife and I had a 50<sup>th</sup> wedding anniversary a couple of years ago, and our children, who are in their 50s now, they took a lot of our photos and things, tried to give us a book of memorabilia. They took all of them and didn't return what they didn't use.

H: OK. Well, if anything else comes up that you remember, you know, you may feel free to give me a call, or if you have anything else to add, or you happen to stumble across a photo, feel free to give me a call.

G: Be glad to.

H: OK. And I want to thank you for your time, and actually, one last question is, what was your rank when you first enlisted?

G: I was a second lieutenant when I first went into the Marine Corps. I went in there from the Naval ROTC at the University of Texas is how I got my commission.

H: OK. Great. OK, well, again, thank you very much for contacting us, and just on behalf of the Air Force and the Navy — Navy specifically, I suppose — I just wanted to say thanks for your participation, and really appreciate your comments. They'll be helpful to us in documenting the history of this housing.

END

## **DONALD B. LEACH**

Ms. Chris Heidenrich, M.A., a historian with R. Christopher Goodwin & Associates, Inc., conducted a recorded interview with Donald B. Leach via telephone on 21 August 2006. Mr. Leach was interviewed for a project sponsored by the Department of the Air Force and the Department of the Navy to document the history of military family housing constructed under the Wherry and Capehart programs between 1949 and 1962. Ten other former residents of Air Force and Navy Wherry and Capehart housing were interviewed. A historic context, neighborhood design guidelines, and a tax-credit brochure also were completed for the project.

Donald B. Leach served in the U.S. Navy from 1949 to 1974 as a surface warfare officer specializing in undersea surveillance. He entered the Navy as an ensign and retired as a commander.

The Leaches resided in Capehart housing at Naval Facility Cape Hatteras, North Carolina from 1965 to 1967 while Mr. Leach held the rank of lieutenant commander and was commanding officer of the base. Mr. and Mrs. Leach and their two children lived in a one-story single-family detached house consisting of four bedrooms, two bathrooms, a living room, a dining room, a kitchen, a sun porch, and an attached single-car carport.

CHRIS HEIDENRICH: This is Chris Heidenrich interviewing Donald B. Leach on August 21, 2006. OK, the tape is on, and if you wouldn't mind just acknowledging that you know that you're being recorded, I'd appreciate it.

DONALD B. LEACH: I acknowledge I'm being recorded.

HEIDENRICH: OK. Great. Thank you. Well, first, I just wanted to thank you for participating. You've been really helpful. I appreciate all the photos and the floor plan that you mailed me, and of course all the biographical information. It gives us a lot of good information that we'll include with our materials. I'll include it at the end of your interview.

LEACH: I hoped the floor plan would add a little bit of something to give you a feel for what it actually looked like inside.

H: Yes. It definitely does. It definitely does. I wanted to just get some, make sure I'm clear on all the biographical information and then ask you a couple other biographical questions. OK, first, you were in the Navy. You served from '49 to '74, and you lived at Capehart housing at Naval Facility Cape Hatteras, North Carolina. That period was '63 to '67.

L: No, that period was '65 to '67.

H: OK, that's what I was just going to ask. I think there was some confusion. So you lived in the housing from '65 to '67.

L: Yes.

H: OK. As commanding officer?

L: Yes.

H: I see. OK. So '63 to '65 is not part of this?

L: No. No, no. I was on board a ship during that period.

H: I see. OK. What was your – I know you were a commanding officer. Is that – I guess commander, is that the rank that you were when you lived there?

L: No, I was a lieutenant commander at the time, but I was in charge of the base.

H: OK. And what was your career field during your military service?

L: Well, most of the time, I was a surface warfare officer, and my specialty was undersea surveillance. That was the mission of the naval facility at Cape Hatteras. It was part of a network of 26 or so similar stations around the East and West Coast of the United States and in the Caribbean that tracked via underwater listening devices the movements of Soviet submarines.

H: I see. OK. Well, that sounds really interesting. I did do a little online research, and I saw a little bit about that. And what was your rank when you entered the service? Did you enter with a commission?

L: Yeah, as an ensign.

H: OK. And that's an officer position?

L: Yeah. That's the lowest of the low officers. (LAUGHS)

H: I see. OK. Now, it looked like that housing area maybe was, I'm sure the base was not very large. And I don't know if that housing area had its own name, or was it just referred to...

L: No, it didn't have a name. It was just the quarters, the family quarters at the Naval Facility Cape Hatteras. We had 60 acres of land in the property that was owned by the National Park Service. We were kind of tenants in their property, one of these long, long leases. And at the time – this was before they moved the Cape Hatteras lighthouse – we were about, oh, 100 to 150, 200 yards from the old Cape Hatteras lighthouse.

H: OK. So it was, just like you said, a smallish sort of base, 60 acres.

L: We had about 150 enlisted people and about 17 officers, and I'd gather close to 200 dependents.

H: OK. So then those were the, were those the only family quarters on the installation?

L: Yes, they were. The only other housing was the enlisted barracks, and the bachelor officer quarters.

H: OK. OK. Now, your house was a single-family detached, right? You said you lived in one of the five...

L: Yes, single-family detached. There were five units like it, officer housing, and then there were 22 units of the duplex, all single-story ranch.

H: OK. Yeah, I was reviewing your e-mail correspondence this morning, and I noticed that. I'm glad you said that, because I was just going to read that. And I guess just to add that, they were made of cinderblock with decorative redwood siding panels?



L: They were made of partially of cinderblock and partially of lumber.

H: OK. And they had attached carports?

L: Yeah. In the single-family, the carports were at one end. And in the duplex, the dual carports were right in the center between two units.

H: Oh, OK. OK. And, now, your family. I saw some nice family photos in your submission there.

L: (LAUGHS)

H: (LAUGHS) Nice to see just kind of the impression of some family life. How big was your family?

L: At that time, we had two. We had one that became eight years old while we were there, and one that was three. Two boys.

H: And now, realizing that your high position at that time, some of these questions maybe were more designed for people who were enlisted before they lived in the housing and didn't have very good quarters to choose from, but I'll just ask anyway and just get an impression of what your experience was like. What type of housing did you live in before you lived in this Capehart housing, and how did it compare?

L: Well, the Capehart housing was about as nice a housing as I've ever lived in, aside from the house I'm in now. It definitely would – in fact, well, to quote my wife, she said she could have lived there on and on and on.

H: Oh. That's a good reference.

L: Yeah. We had just come down from Portsmouth, New Hampshire. And for a couple of years in Portsmouth, we lived in a second-story apartment, an old, old building, and then we moved – our second son arrived during the time at Portsmouth, so we moved to a ranch-style detached house in the suburbs of Portsmouth.

H: Oh, not military housing?

L: No. Neither one of them were military.

H: Oh, OK. So even though you were officer status, it sounds like you didn't have a great deal to choose from as far as housing.

L: No. We just went on the economy of each place we lived. Prior to Portsmouth, we had lived in half of a home in Castine, Maine, that was built in 1812. And our half of the house had 13 rooms.

H: Oh, my. Thirteen rooms. Wow. Spacious.

L: Yeah, \$75 a month.

H: I suppose at that time, that was quite a steal. So, now, then, would you say that your living conditions changed dramatically when you moved to Capehart?

L: They did change, but the housing was an improvement. The remoteness of the base makes it a little difficult down there. But this base was so well planned out and organized, with all of the facilities of a major base, only on a small scale. We had twice a week, sometimes three times a week, deliveries from the commissaries in Norfolk and the exchange system. We had our own medical department. We had visiting dentists that came in. We had a movie theater, a bowling alley, a fire department, our own ambulance for the base. It was very, very complete.

H: Well, that's very good, then, that you were able to take advantage of all those accommodations. So, did your family, you and your family, including your kids, generally like living in this housing?

L: Oh, yes, we loved it. And the two sons loved it because there was so much for them to do, and they had the freedom of the base, and we didn't really worry a great deal about them because there were so many sets of eyes of all the people living there and of the security features of the base that kept them under control.

H: So it sounds like the housing felt like a home to your family.

L: Yes, very much like a home. And it was, I think, to all of the enlisted people who were there during that time. I correspond with many of them still, and they always talk about how great it was to live there.

H: Oh. So everybody felt like there was enough space, and people felt comfortable with it?

L: Yeah. There was plenty of space in all of the quarters. We had a couple of families for a while that had five or six children, and they were a little cramped, but aside from the ones with big families, it was more than adequate.

H: Well, that's nice that people had that opportunity. How about compared to the civilian sector? Do you know how your housing, either your own house or what you know of the enlisted housing, how did that family housing compare to what was available at that time in the civilian sector?

L: It was much superior to anything south of – well, let's say within 60 miles.

H: Is this because, I guess it's just small towns around, that there just really weren't very many options?

L: Yeah, that was it. There were little towns of 100 or so people or less scattered all along the Outer Banks at that time. Nowadays, it's just a massive array of condominiums for miles and miles and miles. But back then, you could go north of where we were about seven miles to a little town called Salvo. And the post office at Salvo was six foot by six foot, a little shack sitting on cinderblocks.

H: Wow, that's small.

L: Yeah, and the nearest big village was Hatteras Village, and there were probably, year-round, probably 200 or 300 people.

H: Oh, OK. Yeah. So it sounds like there just really weren't, for a family, with...

L: No, they weren't set up for just going out on the market and renting. We always kept track of available rentals along the, within, say, ten miles of the base, because we did have people that weren't, they were married but couldn't get on base because we only had a limited number of units.

H: And I know that, as far as going back into your own house, the privacy issue. Did you and your wife feel like you just both each had enough privacy, where, I know the children wouldn't quite need as much. But did you both feel there was enough?

L: Oh, yes. Oh, yes. Plenty of that. Each of the boys had their own room, and then there was a bathroom for them, and of course, we had the one quarters. I used the spare bedroom – there were four bedrooms there – I used the spare for kind of an office.

H: Oh, how nice. Yeah. That's right, I meant to verify that, too. You said that your house was four bedrooms, two baths, a living room, dining room, kitchen, sun porch, and a single carport. Is that right?

L: Yes.

H: OK, and then the living room, one wall, solid-brick wall with a raised-hearth fireplace.

L: Yeah, you could see that in that picture.

H: Yeah. Very nice. And let's see – kitchen provided with a washer and drier, dishwasher, and room for a table for two. (LAUGHS) So I guess you always ate in the dining room, huh?

L: Yeah.

H: Now, storage space. Curious about, did each bedroom have a closet, or where was the closet space?

L: Yeah, each bedroom had a big closet, more than ample for things that we had to put away. And then there was a closet out in the hallway, and then the two working closets out in the carport. And they all had doors, the cabinets all had doors, the cabinets in the kitchen. Plenty of room to store all the kitchen utensils.

H: So you said there were two closets in the carport?

L: Yeah.

H: What did you use that for, things just like outdoor equipment?

L: I had a lawnmower out there and gardening tools, because one of our rules was that everybody looked after their own yard. And the base, the base personnel did all of the maintenance and repair for the quarters. And after each family moved out, then we showed the new family coming in the options on colors for paint, and we repainted.

H: Outside or inside?

L: Inside. Because, you know, some people didn't care for blue, and others didn't care for just a plain color, so we gave them a chance to decide which color they'd like to have to go with their furniture.

H: And so, there was a hallway closet, a closet in each bedroom, and storage space in the carport.

L: Mm-hmm.

H: That does sound like a lot. Was there any kind of an attic or anything?

L: No. There was an attic, but it wasn't anything usable.

H: Oh, OK. I actually had somebody who lived in a Wherry house who – it was like a duplex, and someone was up in their attic and their foot went through the ceiling.

L: (LAUGHS)

H: So, yeah, they were messing with an antenna or something, so definitely not usable. Well, in regards to your children, did you think – it sounds like you think the house was adequate for children. Did you feel that – did everybody think that, and was the neighborhood a good place for kids to grow up and live?

L: Oh, yes. It was a great place. There were, you know, baseball fields, softball fields, tennis courts, basketball courts.

H: Was that provided by the development, within the development?

L: No, that was on the base itself. But the kids had, with the exception of a couple of working spaces like generator buildings and the operations building, the kids had the run of the base. You never knew where they were going to show up.

H: Oh, well, I guess then it was a very safe environment, people felt.

L: The only problem that we had to deal with as far as the children and dependents and enlisted and officer people were that that area does, in fact, have copperhead snakes, timber rattlers, and cottonmouth moccasins. And I was in continual go-around with the National Park Service biologist because, in the spring, when the weather started to warm up and the snakes came out, I had a patrol of a Jeep with a driver and two men going around. And they were armed, and their job was to, in the morning and in the afternoon, look for and eradicate snakes. And the park biologist, of course, insisted that snakes were there before we were and had the right of way.

But we only had one dependent that suffered snakebite during the time that I was there.

H: Oh, that's good, did they get – were they OK?

L: Oh, yeah. A lady. She reached into a pair of her son's shoes that were left outside the door because of our sand, and there was what they call a canebrake rattler in the shoe, and it bit her hand. And so we got the snake and we got her, and we sent them both 125 miles up the road in our ambulance to the hospital in Elizabeth City, and that took care of that.

H: That's good. I guess she figures better her hand than her son's foot. Even though I'm sure it was very painful, I'm sure she was glad to not have it be her son's foot. So, what kind of yard space was there, then, just going along with the places for kids to spend time? Was there a back yard and front yard?

L: Oh. (LAUGHS) The whole area was available for kids to play. Our particular yard was about, I'd say 80 feet by about 40 feet deep.

H: OK. And now you were saying that it was landscaped, right? You were able to plant grass?

L: Yes. Mm-hmm.

H: Now, so, then, it was, I guess it's kind of, the installation was located on a spit, so it was pretty sandy, right?

L: Oh, everything was sand. But during my time, I managed to beg and cry enough to a couple of the big seed companies that they started shipping me grass seed for free. And out of our 60 acres, I think we got close to 40 acres with grass growing. It was a major – everybody said we were crazy, we couldn't grow grass in sand. But we did. And one of the things that did was to cut down on the problem we had with carports that would get six and eight inches deep in sand during sand storms. When the wind came up, it would blow the sand into the carports.

H: OK, because they were obviously completely open.

L: Yes.

H: OK. Wow, that's definitely part of the, you know, negotiating with Mother Nature wherever you get stationed, I guess.

L: We had a lot of that down there. And we had a lot of negotiating with the Coast Guard. You can see in the picture of our quarters that it had those front windows in the living room, and we looked out at the Cape Hatteras lighthouse. And we watched the light at night, but occasionally, it would lose power, and the tourists – and there were a lot of them in the summer, 50,000 a week – would call the Coast Guard. And the Coast Guard would give them my phone number at home to get the light fixed.

H: Oh, even though you really didn't have anything to do with the...

L: Oh, no.

H: I guess that's one of the things you have to deal with when you're in leadership.

L: Their commanding officer was tweaking me.

H: Oh. Well, just back to your house, in regards to some of the ideas behind the design of this housing, one of them was to provide these open floor plans to create a feeling of spaciousness and let people gather easily and, you know, let also the parents interact with their children and keep an eye on their children. It sounds like maybe your housing did this. I mean, it was a ranch, and it looked pretty open. Would you say that was the case?

L: Oh, yes. The floor plan was very open except when you got back towards the bedroom area, which was where you wanted your privacy. But you can see in the floor plan the dining room and living room could be accessed like one large room, and then right off the corner was the screened porch.

H: OK, yeah. I see that. Yeah. And right, a lot of these places have the open living room and the dining room, and I see that here. And then, of course, the hallway going off to the bedrooms. And did you – you've kind of touched upon this a little bit. The sense of community, was there, did the housing and the layout of the neighborhood and the design help create a sense of community?

L: Oh, yes. We were like a big family. And we were very meticulous. On Friday afternoon was zone inspection. And we divided base up into about four different sections. And I inspected one, and the executive officer inspected one, and we picked two other officers to make an inspection of the other

two. And the quarters were included in that inspection. We would come around and look and make sure that our residents were keeping their homes nice and tidy. We had trash service from a contractor, came through and picked up trash right in front of each set of quarters once a week. And we had good, fast fire response. My youngest son one day pulled the fire alarm for our residence and caused quite a stir when the fire truck and all of the emergency people showed up. (LAUGHS)

H: Yeah. So that was a false alarm?

L: Oh, yeah. He was riding around on a tricycle and saw this box, red box on the telephone pole, so he climbed up on the seat to investigate, and reached up and pulled the handles.

H: Oh, whoops. So, then do you think that, I guess did the neighborhood, like the housing itself and the neighborhood foster that? Or, some people have told me, well, gee, you know, we already, we all had the same job. We all were kind of doing the same thing. We were all in the same boat. So it didn't matter really that much where we lived. But did the housing play a role in that at all, this community, this sense of community?

L: I think this housing allowed people a lot of flexibility. There was an area about the size of a baseball field right in the middle of the quarters where the kids used to play. They could put up kites. They could play baseball or soccer or whatever they wanted out there.

H: It sounds like a suburban subdivision.

L: It really was. Then we kept things fairly busy on the base. Two or three times – I guess three times a year, we would hold an “all hands” get-together. Maybe one of them would be a fishing contest, and then in the evening after the contest, we'd have a big fish fry.

H: Oh, that sounds nice.

L: And then we had a luau, where we actually got a couple of young pigs and roasted them over the fire, and we had Western night, and then we had celebrated the Navy birthday with a ball. And the sailors all got dressed into their dress uniforms and let the wives get their hair all fancied up and get some nice long dresses. We tried to do things like that and with the kids because we were isolated.

H: The base was isolated.

L: Yeah, it was 150 miles south of Norfolk, and out there, if you look at a map of the Outer Banks, you realize it's pretty remote on our little spit of land. Just north of the base by a couple of miles, there was an area where between the ocean and Pamlico Sound it was only about 200 feet, so you could stand in the middle of the highway and throw a baseball into the ocean or into the Sound.

H: Oh, OK. Very nice. So then basically the whole base was kind of this family, and then of course the neighborhood, the design of the neighborhood encouraged that as well, played into that.

L: Yes, very much so.

H: OK. Well, especially with the central area for the kids, that definitely – and I think, too, I see some of the roads and the cul-de-sac, just the non-grid format of the roads.

L: Just that long road down, and the base, the housing area was not, you didn't have to go through security to get into the housing area. But the secure controlled entry onto the base was only about 50

feet below that road you see going into the housing, which meant that the guards on the gate were able to keep an eye on the whole housing. If you look at that photograph with all of the writing on it, and you see that long row of housing with the road coming into the housing area, right where that road meets the, at the end, towards the ocean, you'll see a little tiny building, and that was the guard location. And this was nice because, this way, people could have friends that came to visit without having to go through a guard-type of evolution.

H: Kind of, maybe a little intimidating.

L: Yeah.

H: OK. I see. Well, I'm sure that definitely did provide a nice environment for people, and safe, and that's good. Now, as far as your house and maybe how other people felt as well, how would you characterize your level of privacy in your house in reference to the neighborhood? Did your family feel like you had enough privacy within the neighborhood?

L: Oh, yes.

H: Like the people weren't right on top of each other, or the housing? People couldn't look inside readily?

L: No. You notice how you have that long row of housing. You can see that it's separated nicely from the base and has the road out front. There was no crowding up of houses like they're building nowadays, where they've got these McMansions that are ten feet apart.

H: Right. Right. Also, I'm sure it helped that the carports were in the center of each duplex so that it was kind of a way to separate the housing, maybe.

L: Yeah, and you'll notice that as you look at the roofs of these, there were different designs to the houses, so it wasn't all like a whole bunch of houses that had been just plopped down on the ground all being duplicates of every other one.

H: Didn't look like institutional.

L: No, not at all.

H: OK. I'm sure people appreciated that, too. So then people felt like they had enough privacy.

L: Yes. And this was shared because it isn't just my thought. It was the common feeling, because we did hold, periodically, meetings with all the residents just to see what issues, if any, they had, and what things they would like to suggest being done.

H: So you were able to learn how people felt about their housing.

L: And of course, periodically, we would ask them if there was any objection if we, during a zone inspection, we just randomly picked two or three houses and they gave us unqualified permission, come on in. Come on in and see how we live.

H: And then in regards to the landscaping, we talked about the grass. I see that your house had some bushes in the front and on the side there. Were there any trees? It looks like there weren't that many trees.

L: Hatteras is not noted for trees, except for when you get into the middle of this particular island.

H: OK, right. If it's right on the coast, I guess there wouldn't really be any trees.

L: There's a lot of low scrub. The lower part of that map or picture with all the writing on it, you'll see ground cover. And that's probably five- and six-foot, just kind of gnarled old pines and really tough, tough – looks like big bonsai, most of it.

H: Oh, OK. So did you think that the landscaping that was provided was enough to make you feel like, you know, it was a nice, appealing-looking place to live?

L: Sure.

H: OK. Well, I guess part of that was, you know, the whole suburban approach to kind of trying to create a suburban-style environment. I know that was one of the general ideas behind this housing as well, is to try and create this type of suburban environment.

L: Yeah, and you'll notice in that photograph of my quarters, taken from the opposite side of the circle, you'll notice the grass. We did get it growing.

H: Definitely. It looks like it's pretty healthy there. One other thing I was wondering about was economy. The housing was intended, as I'm sure you're aware, to be providing – it was intended to serve the purpose of providing housing but not be excessive or ornate or, you know, costly. And I was wondering if you noticed any evidence of attempts to economize. I don't think it would be in your house, but like some houses early on didn't have cabinet doors or stuff like that.

L: There were no indications anywhere in our quarters – and I refer to our quarters as the 27 units – of any attempt to economize. But they weren't overly done. They were just nice. They were – and they were finished out so you felt like you had a home rather than just a building that had been thrown there. You see the little trelliswork next to the carport in the picture. All the houses had these.

H: Oh, wow. Even the enlisted housing.

L: Oh, yes.

H: I think a little touch like that is something that maybe was added to Capehart housing. Because it sounds like the people I've spoken to who have lived in Wherry housing, the earlier program, were, didn't quite have some of those details, so that definitely makes it nicer.

L: Before we moved here, I mentioned we were in Portsmouth, New Hampshire. And a couple of, two or three times we were invited to the homes of some of the ship's officers who lived in Wherry housing at Kittery, Maine. And really, that was grim. They were small. They were cramped. There, you saw the economy. But I suspect part of it was that it was a different era when they were built.

H: Exactly. Right. Just right after the war, when that got started, versus the late '50s when the ideas were sort of advancing around what people needed for housing.

L: Well, those Wherry units even had lots of structural problems and leaks in plumbing and electrical problems.

H: Somebody told me they called their Wherry housing “weary” housing, like w-e-a-r-y.



L: (LAUGHS)

H: They moved into it a few years after it had been built, so a couple of other families had already lived in it. Well, I appreciate the picture, and I guess I was wondering, I obviously see the physical features of your house, but was there anything besides the trellis that you just mentioned that would be distinctive, that you would consider particularly memorable?

L: That jalousied porch. That was a great place during the winter because it warmed up very nicely with the sun shining. And it was a great place for the kids to play. That's where you see the birthday party going on there. And that became a play spot for a lot of the neighborhood kids.

H: OK. Any other memorable physical features?

L: Well, the fireplace in mine. And a couple of things that weren't so memorable, we listened to TV down there. Of course, that was before you got all these fancy big TV antennas and cables. So we very seldom had a picture, but we had sound. And the other thing was that any time you started a fire in that fireplace, you had to make sure you turned the thermostat way down.

H: In your house.

L: Yeah. Because otherwise, when the furnace came on, it would draw the air down the chimney and smoke out the house.

H: Oh, right. Yeah.

L: Oh, the kitchen also, you know, had the refrigerator and all that stuff in it.

H: Were those appliances all provided, or did you have to provide like...

L: Oh, no, they were all provided.

H: And what about for the other service members who lived in that development?

L: Same thing.

H: Oh, the washer and dryer was provided?

L: Yeah.

H: Oh. And you mentioned about a couple of the physical features there, but was there anything else that you didn't like, other physical features?

L: No. (LAUGHS) The sand getting in the carport.

H: Right. Did you consider the housing attractive?

L: Yes, all of it. I think you can see it in the background on some of the pictures during that visit by the two captains. And that's exactly the way it – those are the duplex units. You can see the double carport in the center. And you can see the siding on them, and you can see in the one with the two captains showing, you can notice that on the left house, you can see that they've got a jalousied porch, too. And that's all enlisted housing.

H: Oh, that's nice that an enlisted house had the porch as well. So in general you would say that people were happy, not only your family but all the other service members and their families generally were happy with this housing?

L: Yes, I think they were. When they looked at the alternatives out of town, they became much happier. The only ones that weren't happy were the ones that I don't think really felt very happy about being in the service.

H: Oh, OK. So they had other problems as well.

L: Yes, and it wasn't anything to do with the base or the housing.

H: Yeah. And particularly as the commanding officer, you felt that the housing was adequate to meet the needs of your personnel and kind of helped the Navy and the installation serve its mission?

L: Oh, yes. I had a very high re-enlistment rate.

H: Oh. Do you think the housing played a role in that?

L: I'm sure it did.

H: That's interesting, because definitely very early on before the Wherry program started, there were some different letters and memos that surfaced in the different hearings about poor housing, and it said, I just had my valued such-and-such employee resign from further service, and he said he and his wife can't stand the house that they live in.

L: No, this housing, the base was commissioned initially in January 1956. And this is the way it looked, of course, about nine years later.

H: OK, so you know that it hasn't been, it had not been remodeled before you got there.

L: No. And it wasn't afterwards. The only thing that was added afterwards was the TV tower. Now, the base was closed in June of 1982, and the quarters and the base itself, less some of the operational buildings, were turned over to the Coast Guard, and it became their headquarters of the Coast Guard group Cape Hatteras. And their people took over the housing. And a few years later than that, one of those big, massive hurricanes came along and took the roofs off about half of the housing. And I gather the Coast Guard decided it would be too expensive to replace all the housing, so they turned the housing back to the National Park Service. And however the operation came about, it is now – that area where you see the housing is now a gated community of two- and three-story townhouses.

H: Oh. Totally – did they demolish everything, then?

L: Oh yeah, it's gone. Completely.

H: Oh, wow. Now...

L: I speak from recent knowledge. I spent a week down in the area last April and took the opportunity to drive down to the base, and the caretaker, Coast Guard caretaker – they've even moved off the base now, but the caretaker gave me permission to go around through the old base and take pictures.

H: Oh, I'm sure that brought back many memories.

L: Oh, it sure did.

H: Yeah. So now, you did not have anything to do with the contractor who built the housing, right?

L: No.

H: OK. Do you know when it was built?

L: Well, it had to be in place sometime in 1956.

H: OK, for the base to open.

L: Yeah. Now, the base did open a little bit prior to all of the facilities being completed, and the first people that arrived were officer and enlisted with no families, and they lived in tents.

H: Oh, really? Wow. Sort of like the previous century.

L: Yeah. And that was while the base was being completed. See, the base, it was complete. We generated our own electric power, we had our own waterworks, we had our own sewerage treatment. We had everything that a major base would have, only in a miniature scale.

H: Oh, OK. So, very self-sufficient.

L: Yeah.

H: Yeah. Well, I believe that's everything I wanted to know. Is there anything else you want to add about, you know, your own house or the other part of the Capehart development?

L: I was just looking through my notes here. Well, let's see. I guess not.

H: OK. Well, if you think of anything else or if you happen to stumble upon even more photos or maps or whatever, feel free to give me a call, and I'll be happy to accept those as well. And I thank you very much for your time and your insights, and I appreciate the photos and everything.

L: Well, I've got other things that I'm going to dig through, and if it's any written stuff I can just fax it and send it up. I've got the fax number on the letterhead

H: OK. That sounds great. We'll be probably completing this work by October, if that gives you a sense of what our deadline is.

L: Yeah. I was thinking here – I've got one little note. Possibly the only weak link in this whole little base, and it always concerned me, was medical. We had excellent talent, independent hospital corpsmen, but there's a limit as to how much an enlisted man can do. And the nearest hospital then was 125 miles away, so we wore out ambulances at about two-year intervals.

H: Well, with all the dependents there, the kids that you were mentioning.

L: Well, it wasn't so much the dependents. It was the fact that that area receives about 50,000 tourists a week. And the tourists were continually getting in trouble. They were getting into the surf and

drowning, they were getting snakebites, they were stepping on broken glass, you know, all the myriad of medical problems that people generate, mostly by their own carelessness. And so, nowadays, it's changed because they have a hospital, a 40-bed hospital, and good medical facilities. But we did get a doctor in while we were there, as resident in the village of Hatteras. And we immediately put him on our bowling team.

H: (LAUGHS) Make friends with him.

L: (LAUGHS) And we had excellent rapport with this doctor, which helped a great deal.

H: Oh, that's good. Yeah, I'm sure that provided a little more service there that was missing. Well, great, I'm really happy that you have such a good memory. And I appreciate your time and sharing all this great information with us.

L: Oh, here's my note. My answer to one of your questions, number 15: one of the nicest places we have ever lived in, except for our current home. I'm sitting here right now in my little study on the second floor of the house, looking out into 500 acres of woods. And those woods are the, George Washington's Mount Vernon Estate.

H: OK, I was there recently. I think I know...

L: We share the property line with them.

H: Oh. Boy, yeah, that's beautiful out there.

L: Oh, yeah. In fact, the day before yesterday at dinnertime, we had six wild turkeys out back and two buck deer with all their antlers all showing.

H: Oh, that's nice. It's nice to commune with nature that way.

L: That's the location that I ended up at after – returned from the Navy, I worked for TRW in Mclean, and then when I retired from them after 15 years, I went to work over here at Mount Vernon, and I was the dockmaster in charge of the waterfront and the wharf.

H: Oh, yeah. I visited there recently, and I remember that part.

L: You want to get back in October or November, because the new education building will be opening. That's all that construction.

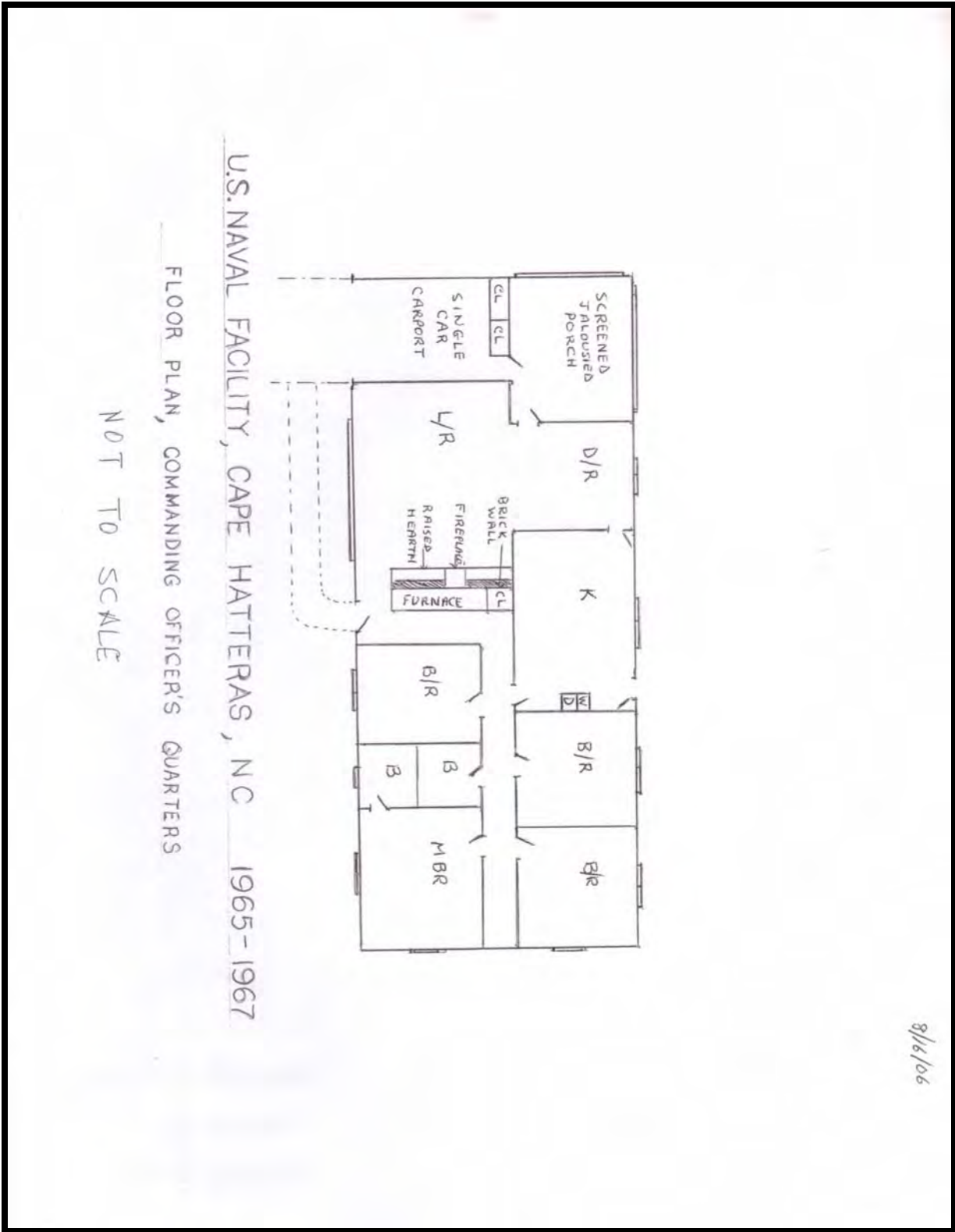
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Figure L.3. Rear elevation of Capehart housing, in background, at U.S. Naval Facility, Cape Hatteras, North Carolina, 1956-57. (Courtesy of Donald B. Leach)



Figure L.4. Front elevation of a Capehart house at the U.S. Naval Facility, Cape Hatteras, North Carolina, 1956-57. (Courtesy of Donald B. Leach)



U.S. NAVAL FACILITY, CAPE HATTERAS, NC 1965-1967

FLOOR PLAN, COMMANDING OFFICER'S QUARTERS

NOT TO SCALE

8/16/06

Figure L.5. Unscaled floor plan sketch of commanding officer's quarters, U.S. Naval Facility, Cape Hatteras, North Carolina, 1965-67. (Courtesy of Donald B. Leach)



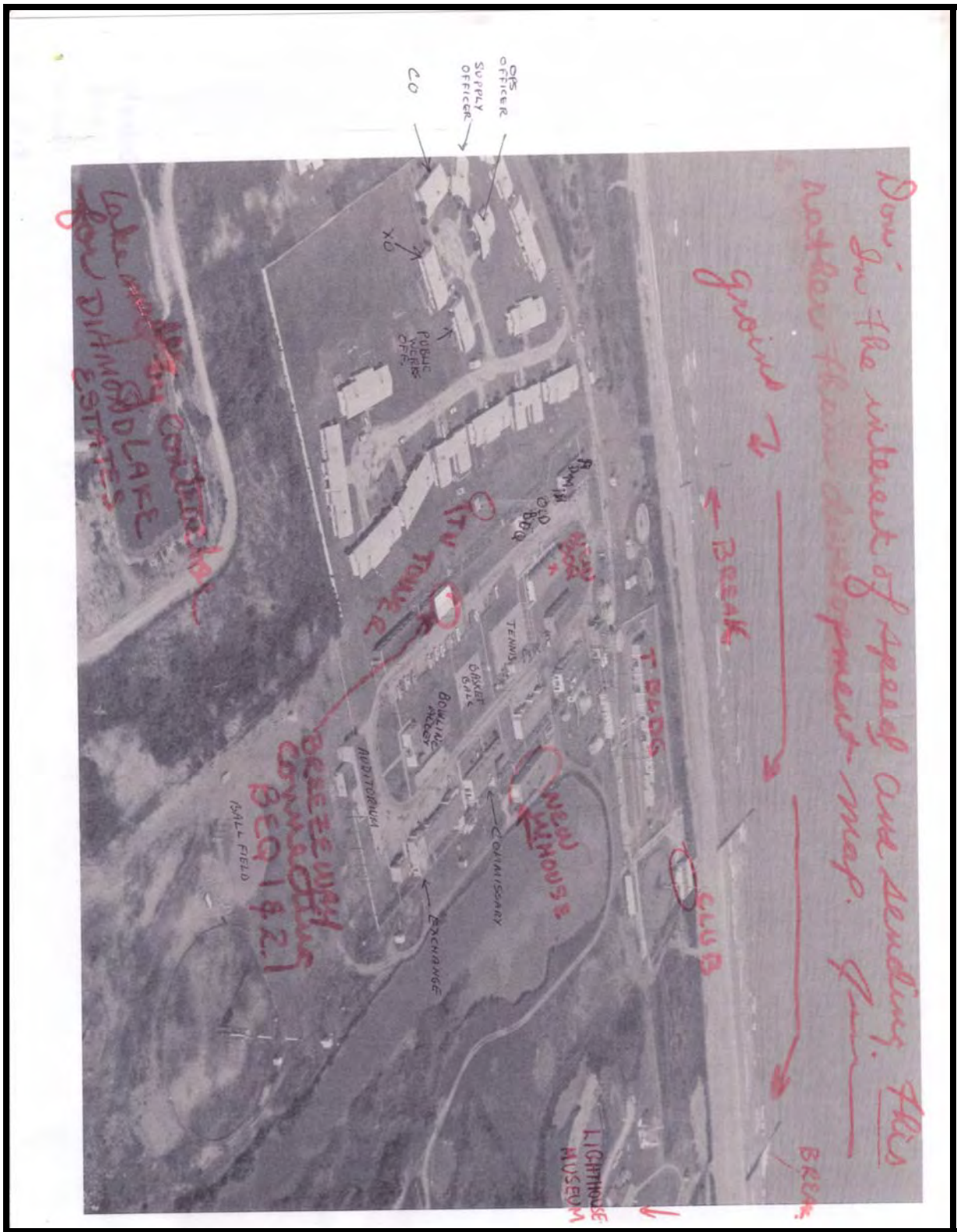


Figure L.6. Labeled aerial view of U.S. Naval Facility, Cape Hatteras, North Carolina, 1956-57, with Capehart housing located at mid-left. (Courtesy of Donald B. Leach)



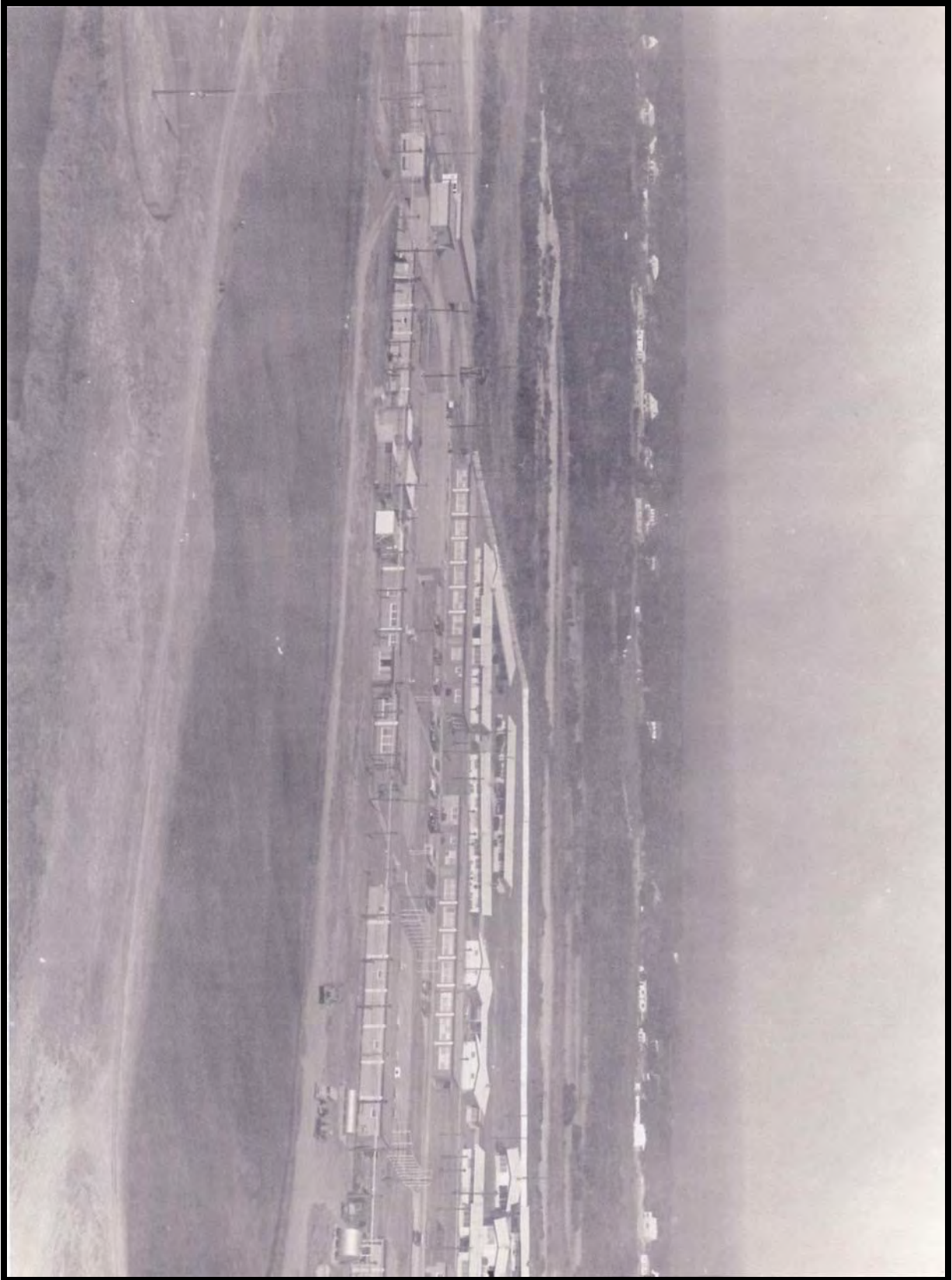


Figure L.7. Aerial view of U.S. Naval Facility, Cape Hatteras, North Carolina, 1956-57, with portion of Capehart housing located at mid-right. (Courtesy of Donald B. Leach)



Figure L.8. Aerial view of U.S. Naval Facility, Cape Hatteras, North Carolina, 1956-57, with portion of Capehart housing located at mid-left. (Courtesy of Donald B. Leach)





Figure L.9. Interior views of the Capehart residence of Donald B. Leach, who lived there with his family while serving as commanding officer of U.S. Naval Facility, Cape Hatteras, North Carolina, from 1965 to 1967. (Courtesy of Donald B. Leach)

## **JEROME LEVY**

Ms. Chris Heidenrich, M.A., a historian with R. Christopher Goodwin & Associates, Inc., conducted a recorded interview with Jerome Levy via telephone on 18 August 2006. Mr. Levy was interviewed for a project sponsored by the Department of the Air Force and the Department of the Navy to document the history of military family housing constructed under the Wherry and Capehart programs between 1949 and 1962. Ten other former residents of Air Force and Navy Wherry and Capehart housing were interviewed. A historic context, neighborhood design guidelines, and a tax-credit brochure also were completed for the project.

Jerome Levy served in the Medical Corps in the U.S. Navy from 1944 to 1947 and 1957 to 1975. He entered the Navy as an apprentice seaman in the V-12 program and retired as a captain.

The Levys and their three children resided in the Arundel Estates neighborhood of Wherry housing outside Naval Station Annapolis, Maryland, from 1959 to 1960 while Mr. Levy held the rank of lieutenant. Mr. and Mrs. Levy and their three children lived in a six-unit building, in a two-story unit consisting of three bedrooms, a living room, a dining room, a kitchen, and a bathroom.

CHRIS HEIDENRICH: This is Chris Heidenrich from R. Christopher Goodwin & Associates interviewing Mr. Jerome Levy on August 18, 2006. All right, the tape is now on, and if you wouldn't mind, could you please indicate that you know you're being recorded.

JEROME LEVY: I know I'm being recorded. My name is Jerome Levy.

HEIDENRICH: Great. Thanks a lot. And just first of all, I just want to say thanks a lot for taking the time to participate in the interview. I'm looking forward to hearing about your experience. I appreciate your also sending the paperwork. I got some good biographical information from that. Basically, you served in the Navy, and from '44 to '47 and '58 to '75.

LEVY: Active duty from '44 to '45, and reserve from '45 to '47. Well, actually, it was longer than that, but that's not important.

H: OK. And then you resumed service in '58.

L: Actually, '57.

H: '57, OK. And what was your career field during your military service? I guess something medical, right?

L: I was in the Medical Corps. Originally in '44 and '45, I was in the V-12 program, the officer training program.

H: What was your rank when you lived in Wherry housing?

L: Lieutenant.

H: OK. And when you first enlisted, I know that, I see that you were in school, so did you enlist as an officer?

L: Officer training. I was an apprentice seaman in the V-12 program. That's V as in Victor, 12.

H: OK. And you lived in Wherry housing at Naval Station Annapolis from 1959 to 1960.

L: Actually, it was not on the Naval Station property. It was adjacent to the academy. The Naval Station was across the river, across the Severn River.

H: OK. I can visualize that. And that was Arundel Estates, right?

L: Right. We called it A-Run-Down Estates.

H: Oh, I heard that from someone else. And what type of quarters did you live in, like single-family detached or duplex, or –

L: It was a rowhouse with six units.

H: And how many stories?

L: We had two.

H: So it was a two-story building that was in a rowhouse form with a unit kind of one after the other?

L: Yes, except that the two end units were single-story, one-bedroom units.

H: OK. And did you live in – how many bedrooms was your unit?

L: Three.

H: Three bedrooms. OK, and I assume that was two stories. One of the two-story units.

L: Yes.

H: OK. What other rooms were in your unit?

L: We had a living room, dining room, the kitchen, and the three bedrooms, and all I can remember is one bath, for some reason. I don't think there was more than one bath, but I'm not sure.

H: Wow, for three bedrooms. Wow. I'm finding that – we found that many of the Wherrys only had one bathroom, and I think that was one of the improvements they made when the Capeharts were built. And so it sounds like maybe you had some children. Who was in your – who did your family consist of?

L: Let's see. At that time, we had three children.

H: OK. You and your wife and your three children.

L: Yes.

H: OK. And what were approximately the age range of the three children? Like are we talking infants or young teenagers?

L: No, they were young. No, no. I think the – let's see. I think I had one 9-year-old, and about a 4-year-old, and an infant.

H: Oh, OK. That's quite a range. OK. And just to start out with talking about the housing that you lived in before you lived in this housing, was that military housing?

L: No. It was civilian housing, and it was in Newport, Rhode Island. It was in an old house, but it was quite adequate, and, I mean, it was really old. And the living conditions didn't change dramatically when we moved, but I think they were an improvement. In addition to which, the housing at Annapolis was convenient to the place of work.

H: Oh, OK. So it was right outside the base. OK. So you're saying the Wherry housing was a dramatic improvement from this house in Newport.

L: As far as condition, yes. It was kept up pretty well.

H: OK, I see. And in general, did you like the Wherry housing? Did your family feel like the housing met your needs?

L: It met our needs quite adequately. Nothing spectacular, but certainly adequate. And we felt comfortable. I think it was equivalent to the housing in the civilian sector. And space was sufficient. Of course, we would have liked to have had another bedroom.

H: Sure. I guess one of your children – or two of your children shared a bedroom.

L: Yes. The two oldest. And other than that, there was privacy. In other words, the bedrooms were upstairs, and all the other rooms were downstairs. And the storage space, which is your next question on your sheet, I can't remember much about the closets, but I will tell you that we have never been completely satisfied with the amount of closets, no matter where we were. We did have attic storage space, and it was adequate. We did well. We didn't have cartons lying all over the place.

And it was adequate for the children. We would have liked to have had another bathroom, obviously. The neighborhood was great for the kids because there was a swimming pool down the road in the complex. I don't know whether that was mentioned by other people.

H: No. Was that built by the developer?

L: Yes. And it was down near the entrance to the development, and it did belong to the development. And it was great. That's where I think two of our kids learned how to swim. And in addition to which, as far as schooling was concerned, there was a private school, an Annapolis private school up to the lower grades, nearby. And it was strictly for the Navy people, and it was pretty good.

H: Oh, OK. Now, when you say private, did you have to – you paid a tuition, your own?

L: I believe we did. I'd have to check with the Mrs., but I can't remember paying much, if we did. I remember the kids actually were taking French, and this is before – this is preschool. By that, I mean a kindergarten-type thing. And they were teaching them French. (inaudible) foreign language.

H: Wow. And so this school was separate from the base altogether. It was –

L: I think it was on the golf course, near the golf course. And it was convenient enough. I believe we delivered the kids there ourselves. I don't remember a school bus. But it was a great school.

H: Yeah. It sounds like it. So this was a totally private school that wasn't affiliated with the base, for  
–

L: It was on Navy property, but the Navy did not run it.

H: Oh, OK. I see. Now, just to go a little bit more into detail about the children, did they – you mentioned the swimming pool. Your property, your individual property, was there enough yard space for them?

L: Well, it's funny. It was a common space. There was no divider between the various unit back yards, so it was one big back yard. So the kids socialized with each other quite well in the back. In other words, they played with each other in the back. And there were quite a few kids. And I remember we had an inflatable pool in the back, and the kids could splash around. And I remember one of my sons kept picking on a young girl that was next door, the Connollys (PHONETIC). I remember the names of everybody in the housing development when we were there. And especially in our unit. There was George Connolly next door, and there was the Hockmans (PHONETIC) on the other side of us. Then there was the LaSources (PHONETIC) that were on the end unit, no kids. And so, there was a sense of community, obviously.

H: Yeah, definitely sounds like it. Now, I'm finding people are saying even though you had this suburban-style development where there was these common spaces for people to gather and these attached units where people were not on these half-acre, isolated lots, but still it was more the fact that you were all in the same boat as far as your professions and your stations in life that made the camaraderie happen, rather than the neighborhood.

What's your perspective? Did the neighborhood, like the design or the layout or the amenities play any role in creating this camaraderie?

L: Well, our unit was particularly close, and by that I mean the six units. And I'll give you an example. They had a common TV antenna in the attic, OK? And there was no flooring in the attic. They had the joists, you know, up there that you could step on. And our neighbor – and I won't name which one – felt that it was ridiculous for the management to charge us for the use of the antenna, which is what happened. In other words, it was a common antenna for our unit. So he took it upon himself to go into the attic and rewire all the antennae so that we all could get the signal on one charge. So that was how close we were.

In the process of which we had a hysterical event, because he fell through the ceiling of our unit stepping in between the joists (inaudible) floorboard that was the ceiling. Came through halfway. And so we were downstairs, and we heard this tremendous crash, so we ran upstairs, and there's this flashlight playing on the floor, and George – oops – sticking halfway out of the opening in the ceiling: "Where am I?"

H: Oh, no.

L: We were pretty close up there. And we're all in the same boat, as you said. When, for example, when it came to Halloween, we all dressed up, we had a party at our unit, I remember, then we all peeled off begging for drinks at all the other units. So it was pretty funny. The neighbors across the street, the Waltmyers (PHONETIC), he found an old boat, and several of us reconstructed the boat with the half that was left, and we worked on it all together. When we launched it, he got in it, and it immediately sunk, but we fixed it again.

H: In the Severn River or something?

L: Yeah. There was an offshoot near the housing units.

H: Oh, OK.

L: As far as the privacy was concerned, it was fair, I would say, because when my neighbor played his hi-fi, we could hear the base come thumping through our house. But otherwise, it was OK. You could hear an argument, you know. But you couldn't hear too much noise. We would have liked some more sound-proofing.

But I would say the amount of outdoor space was adequate. There was some openness between the kitchen and the dining room so, you know, you could pass food through. And the area was large enough for us to have a party. I can remember that.

H: In your home?

L: Vividly. Yeah, we have movies that reconstruct the events for us, you know, if we see that. That's how I have a memory of all this stuff, even though it's over 40 years. But if it wasn't for the pictures, I don't think I'd remember all this.

H: So you mean like photos, or you said movies.

L: I have photos and movies.

H: Oh, OK. Home movies, did you say?

L: Yeah. Indoor and outdoor.

H: Oh, great.

L: So, another example of things that were funny that we appreciated – I don't know whether you want anecdotes.

H: Sure, yes. It sounds wonderful.

L: OK. Well, the front of the house, the living room, had a number of mullions in the windows, you know, that divided into small panes. And what we did was we took a piece of graph paper, and we copied one of Moreau's Christmas card paintings. And we copied from the graph paper onto the mullions – I mean, using the windows, rather, using the mullions as squares so that we could copy it pretty exactly. You know what I mean? It's like transferring something like paint-by-numbers type of thing. Because if you had it on the graph paper and used the square on the graph paper as the equivalent of a pane of glass, you could transfer something pretty easily.

So we won a prize one year, which is hysterical, for that Moreau painting. When the committee started to leave, they said, incidentally, what is it supposed to be? They weren't familiar with Moreau, I guess, but anyway.

The views that we had were zilch, except that we could see the neighbors across the street. And that was about it.



H: You mean where there wasn't really a lot of landscaping?

L: No, the postage-stamp front lawn, you know. Thankfully, somebody else mowed it. You know, they came around with the gang mowers and mowed all the lawns at once. The upkeep was good.

H: OK. Now, were you living there at the time that the contractor still operated the property, or was this the government that operated it?

L: You know, I don't know. And frankly, I didn't care, as long as it was kept up. I really can't remember.

H: Yeah. The government – the Wherry program was where the contractor was supposed to own the buildings for 50 years, and then the government would take them. But that changed, and the government decided to buy up all the Wherry properties and took them over.

L: What year was that?

H: I would say it was in the mid-'50s when they decided to do that. When they made changes to the Wherry program and started the Capehart program, that was supposed to be one of the improvements is that the contractor would no longer own the building. They would just turn it over to the government right when it was finished.

L: Yeah, I guess that was true when we were there. That's maybe why it was kept up pretty well.

H: And so the landscaping, were there any trees?

L: No. None that I remember.

H: No trees. Or any small bushes in front of the house?

L: In the back – no, not in the front, but in the back, there were, sort of a screen from whatever was behind us. So that added to the privacy, not between units or between different sets of units. There was no privacy there. You could go from one to the other.

H: OK, like back through the back yards or the front yards?

L: Yes.

H: So there wasn't any little fence separating in any way the units?

L: Don't recall that at all.

H: Was there any patio space or porch space?

L: Ha. You've got to be kidding. There was a small concrete slab in back of the back door. And I remember my wife used to feed our kids back there. As a matter of fact, it was like a sidewalk running in back of all the units, and that came up to where the back steps were in the mudroom. It was a laundry room.

H: Oh, there was a separate laundry room.

L: Yeah. We called it a mudroom, because that's what it was.

H: Now, did you have a washer and dryer back there?

L: I believe so. Yeah.

H: And that was – you provided that, right?

L: Yeah. I don't recall the Navy providing it. I'm pretty sure it was ours. I wouldn't swear by it. There was no air conditioning, and it was in Annapolis, if you know what I mean. Because you're in Washington, you're nearby. So that made sort of – we had fans. There was no – well, I mentioned no downstairs bath, which was rather inconvenient.

H: To always have to go upstairs.

L: But the neighbors – I can remember another incident we had. An Academy graduate was our next-door neighbor, and he used to get upset with us doctors. He considered us non-military. So he would conduct, on the front porch, he would conduct shoe-shining inspections for the two doctors that were in our unit.

H: Oh, wow, to teach you the proper, theoretically.

L: Learn how to spit-shine. Of course, I knew how to do this from way before because I had been in the line. I had a line commission originally, so I sort of giggled at it. The guy next to me couldn't give a darn. He was a (inaudible), what they called a (inaudible). And so George had to take him in hand.

So, what we didn't like was what I mentioned: no downstairs bath, no air conditioning. We did like the rather open feel in the house.

H: And did you mention, was the living room and dining room sort of together?

L: Contiguous.

H: OK, yeah. It seems like that's the way it typically was. Now, about the economy question, did you notice any – I know you kind of touched on some things. Did you notice any other examples of attempts, the government's attempts to economize?

L: I thought that one of their attempts to economize was having no fences, because then they could simply do their landscaping by going from one house to the other in a continuous line. Same for the back. There wasn't much to take care of back there. And I thought that this was their economization. Except I don't remember – you asked about the closets, and I don't remember whether they had doors or not. And I imagine they did. I think they had sliding doors.

H: Oh, OK. I think some of the kitchen – in some areas, the kitchen cabinets didn't, occasionally didn't have doors.

L: I don't think that applied to us, but I'm not sure. That wasn't my department.

H: OK. But just to touch on the kitchen, actually, come to think of it, was it just a typical, you know, refrigerator, stove?

L: No compactor, none of that.

H: Yeah, sink, et cetera.

L: Nothing spectacular. Utilitarian, if you want to put it that way.

H: Did your wife, do you recall her complaining or commenting in any way about the space, like the, not only the cabinet and shelf space but things like the counter space or not enough room to move around?

L: No. It was a small kitchen, but yeah, I remember a couple of times – she likes an island in the kitchen, and I don't think there was any such thing. That type of thing. At that time, we needed something like a compactor because we had a tremendous amount of garbage from three kids. We later had four kids, and of course, we increased it by another third. But at the time, we could have used more.

H: Sure, yeah. Do you remember anything else about the physical features about the house? Like was there any particularly striking, I don't know, architectural detail or building material?

L: I told you about the mullions. There was a direct entry into the living room, as I remember. There was no hall leading in. I don't recall any hallway. In other words, you open the door, and bang, you're in the living room. And most people usually like to have a hall closet there. If we had a closet, I don't recall.

H: OK. OK. And was there any parking? A garage or a carport or anything?

L: None whatsoever. That was another inconvenience feature, which I completely forgot about until you mentioned it. We had our car, we had our one car at that time, I think, parked outside in the street.

H: OK. No special spot created or anything?

L: No. There was absolutely nothing of that kind. And we would have liked to have had that.

H: Sure. Well, even though Annapolis is not known for its winters, I'm sure that it got cold enough at times where you would have preferred to have –

L: Well, there's a story about that, too. When it snowed one or two inches, everything closed.

H: Oh, tell me about it.

L: We thought that was hysterical, having come from Connecticut. So, yeah, if there was a sprinkling of snow, they had a school day. Everything stopped.

H: Yeah. I'm from Chicago, and I've definitely noticed that. It's amazing.

L: Paralysis. And nobody knew how to drive in the snow, that's for sure.

H: Yeah. So it was just a space, just a spot on the street, no indentation in the curb or anything like that.

L: No, or anything like that. I'm surprised nobody mentioned that swimming pool. I thought that was great.

H: Yeah. Actually, I only heard from one other person in Arundel Estates, and I'm not interviewing them because they lived there a little bit later than you, and I decided I wanted to interview someone a little bit earlier than them.

L: I have other stories about – well, I don't know. When George went through – whoops, I keep mentioning his name. When he came through our ceiling, he says, don't tell anybody. Well, of course it went all over the Academy grounds. And in fact, it reached the ward room, where I used to take care of the – what do you call it? – the auxiliary living ship that held the stewards for the base.

H: Did you say “ward room” earlier?

L: Yeah. It had a ward room on board. The ship had no engines. It was just moored there. And a ward room is where, you know, the officers sleep and eat. And so it was all over the base that he had come through. This guy was in charge of, second in charge of all the eating facilities. He was on the supply corps (phonetic). And the story went that he came through the ceiling and interrupted lovemaking in the bedroom and used his flashlight. The next day, it was all over the base. All he did was tell one person. It was a chief that was working for him. And the whole – they thought it was hysterical. So the story got magnified and went through the whole base in one morning.

H: Oh, that's funny. (LAUGHS)

L: But anyway, he was very straight-laced. He was the Academy graduate. And so what he did is, he says, don't tell anybody. We've got to paint over the ceiling. And of course, the paint he got from the maintenance people – I guess it must have been Navy – the paint he got from the maintenance people didn't match the paint that we had. So when we moved out, he showed up on our doorstep the day we were moving. He says, do you mind if I come in and paint the spot that I covered because it doesn't match. And when they have the inspection, they'll wonder what happened.

H: Oh, no. Wow. That was at least conscientious, I guess.

L: He was very conscientious. But we didn't ask for maintenance to repair that. And oh, yeah, he would run around disconnecting antennae from other people that moved in so that nobody would be suspicious.

H: Trying to cover his tracks. Oh, gosh.

L: That's funny.

H: Yeah, yeah. Great. Well, I think you touched on most of the questions. I guess we talked about just noticing the privacy. I'm curious about your children and their overall impression. I mean, I'm sure the two older children maybe didn't want to share a room necessarily, and I guess you kind of mentioned that, but were they satisfied with the amount of space and the privacy?

L: Oh, yeah. They didn't know much better. But they did play a lot in the back with the neighbors, you know, the neighbor kids. And they enjoyed that very much.

H: Oh, that's good. And was there any, did you put any playground equipment back there, or did anybody?

L: Yeah, we did. Remember, I mentioned the blowup swimming pool? You know, one of those horrible things you blow up. We had that, and I think we had a couple of swings back there that we put in. I don't remember the Navy supplying any. But we did our own. It was a community.

H: Yeah. Gee, it sure sounds like everybody pitched in and made a group effort.

L: Oh, yeah. Some hysterical events, of course, like I told you.

H: Yeah. Great. Well, is there anything else you'd like to add about your experience there?

L: No, except that I think the fact that we were all in the same boat, so to speak, made the living there much more enjoyable. And you touched on that when you first asked your questions. And I think that made us feel comfortable. The house, it was adequate, nothing spectacular. But it certainly served the purpose.

H: Yes. It seems like that's everybody's general impression. But I've only talked with people who lived in Wherry housing, so perhaps the Capehart people will have...

L: Better?

H: Yeah. Apparently, you know, that was supposed to be a little bit...

L: I hope they had air conditioning.

H: I can't remember what the policy was. I think there was a policy for certain, they had a certain temperature level for a certain number of days a year, and then they would qualify for air conditioning.

L: I'm surprised we didn't. (LAUGHS)

H: Yeah. I would be surprised as well.

L: Well, it was early in the century – well, mid-century. Maybe that was one of the reasons. Remember, this was, well, what, '59.

H: That makes sense.

L: Yeah. Not everybody had air conditioning then.

H: Now, you had mentioned, I think, when I very first spoke with you that you had some photos. And if you're willing to share those, if you want to make some copies, or if you need to have me make copies, I'd be happy to do that.

L: I could have copies. I think I have more movies than anything else. Then I would have to go researching in thousands and thousands of pictures we've accumulated.

H: Oh, OK. OK.

L: Remember, I'm ancient. I have my 80<sup>th</sup> birthday coming up.

H: Oh, congratulations.

L: Thank you. I'd have to look.

H: Sure. If it works out, feel free to contact me, and I see you did check for the Library of Congress that you have movies, so maybe they would contact you separately. That's a separate thing.

L: It's up to them?

H: Yeah. OK, well if you think of anything else to add, feel free to contact me, and I thank you very much for your time.

L: Well, you're welcome, Chris.

H: OK. Take care.

L: OK.

H: OK. Bye.

L: Bye.

END

## DAVID L. PATTON

Ms. Chris Heidenrich, M.A., a historian with R. Christopher Goodwin & Associates, Inc., conducted a recorded interview with David L. Patton via telephone on 17 August 2006. Mr. Patton was interviewed for a project sponsored by the Department of the Air Force and the Department of the Navy to document the history of military family housing constructed under the Wherry and Capehart programs between 1949 and 1962. Ten other former residents of Air Force and Navy Wherry and Capehart housing were interviewed. A historic context, neighborhood design guidelines, and a tax-credit brochure also were completed for the project.

David L. Patton was a pilot in the U.S. Air Force from 1952 to 1984. He entered the Air Force as a pre-cadet and retired as a brigadier general.

The Pattons resided in Wherry housing at Lockbourne Air Force Base, Ohio, from 1955 to 1964 while Mr. Patton held the ranks of second lieutenant, first lieutenant, captain, and major. Mr. and Mrs. Patton lived in a four-unit building, in a two-story unit consisting of two bedrooms, kitchen, living room, dining room, bathroom, mechanical/storage room, and a rear detached garage. Later during their residence in Wherry housing at Lockbourne AFB, the Pattons lived in a three-bedroom home. During their residence in Wherry housing, the Pattons had two children.

CHRIS HEIDENRICH: -- just acknowledge that you're being recorded.

DAVID L. PATTON: I'm being recorded.

HEIDENRICH: OK. And you're David L. Patton, and this is August 17, 2006. Well, first of all, I just want to get some biographical details out of the way. Oh, first, though, very first, I want to just say thank you for your time. I really appreciate your being willing to participate in the project. Looking forward to hearing about your experiences.

But about the biographical details, we've got the forms you filled out, and you were in the Air Force from 1952 to 1984, and you lived in Wherry housing at Lockbourne Air Force Base. And I know that I accidentally put a different date on your letter, and that in truth you lived there from 1955 to '64?

PATTON: Correct.

H: OK. Now, what was your rank when you lived in the Wherry housing?

P: Started at second lieutenant, first lieutenant, captain, then major.

H: OK. So this was all during the period that you lived in the housing, during the '55 to '64 period.

P: Yes.

H: OK. And did you have a career field during your military service?

P: Pilot.

H: Pilot. OK. Now, what was your rank when you first enlisted?

P: Enlisted before I was commissioned as an officer?

H: Yes. I guess you just kind of started out – I wasn't sure if some people went to school first.

P: I started out as an enlisted man, but I was designated when I enlisted as a pre-cadet. And I did that for one year, served as one year. Then I went to aviation cadet training to learn to be a pilot, the completion of which I was commissioned as second lieutenant, and also got my pilot wings. That program doesn't exist anymore.

H: And then, let's see here. Was there a neighborhood name to the area that you lived in, besides just being known as Wherry housing?

P: No, we always called it Wherry.

H: OK. Some of the areas on the installations had different kind of suburban subdivision-type names. What kind of quarters were they? Single-family, duplex?

P: They were in courtyards attached together, so it would be some had – let's see, I'm trying to picture – I think it was four with a single bedroom on either end. My particular one was a unit of four, two-story, and there were one, two, three, four, five – five units, making a semi-circle around in the units together.

H: OK. So you lived in one building that had four different units to it?

P: That's correct.

H: OK. And then your particular area there had five of these buildings like that?

P: That's correct. They weren't exactly the same, because some of them had a little one-bedroom attached on either end.

H: Oh, I see. OK. And how many bedrooms did your unit have?

P: When I started, two. But it was renovated while I was there. Actually, we moved among houses. We moved twice in there while they renovated, and wound up with three bedrooms.

H: Oh, OK. So for part of the time you lived in two bedrooms, and then you were able to move to a three-bedroom.

P: That's correct.

H: OK. And so did you live in the same neighborhood during this period?

P: Close. Within three minutes' walking distance.

H: OK. And what else was in the unit in terms of rooms?

P: Had a living room with an "L" off for dining. Had a kitchen off the dining room, stairs leading upstairs to two bedrooms, and a mechanical room, which also served as a storage room, and a bathroom upstairs, single, one bath upstairs, full bath. And at the end of the semi-circle, there were two rows of garages, and we had a single-car garage there.

H: I see. OK. And so those garages were sort of grouped together for everybody who lived there.



P: That's correct.

H: OK. And how many family members did you have?

P: I started with just my wife and me, and two of our three children were born in Wherry.

H: OK. And then, speaking of just trying to get an idea of the way that this housing compared to previous housing you lived in, what type of housing did you live in before you lived in this Wherry housing? Was it military housing?

P: No, we rented an apartment in Columbus, Ohio, awaiting the completion of Wherry housing.

H: OK. And how did the apartment compare to the Wherry?

P: (LAUGHS) Very small. About all a second lieutenant could afford.

H: So then your living conditions changed dramatically when you moved to the Wherry housing?

P: I had a lot more living room.

H: So it sounds like it could be considered an improvement, then.

P: Yes.

H: Yeah. Did you like the Wherry housing in general?

P: We were happy, because my job caused me to either be on home alert, which was like being locked up in a prison for a week, or deploying overseas about every six to eight weeks for three weeks at a time. And it was comforting to have, for my wife to live in a military community close to neighbors in the same situation, because most of us were pilots and we deployed at different times, and there was always a husband home to help with things.

H: So the housing, it sounds like the housing met your needs? Would you say that it met your needs, then?

P: Yes, I was comfortable in it.

H: And was it – like you just said, it was comfortable. OK. That's one of the questions I wrote down. Do you know – I know that – it sounds like you were quite young when you moved into Wherry, but do you know how your housing compared to housing in the civilian sector, similar housing?

P: Several of my squadron members bought homes. One had three kids, so he didn't have much to it. They had more room, and a lot of them had garages on their place, fenced-in yards, things like that.

H: So the Wherry was not quite up to the civilian market. Obviously, it sounds like it provided what you needed, but it wasn't quite as nice or quite as spacious.

P: That's true. However, the commute was at least 30 minutes to those homes, where it took me about four minutes to get to the squadron operations.

H: So that definitely served your needs in that way.

P: Because it was Columbus, Ohio, and then in the winter, they get some pretty good snow dumps.

H: So, right, driving in the weather wouldn't be a very good idea. And what kind of storage space was there in the housing? Did the rooms have closets?

P: The rooms had closets. We had adequate closet space, but for all of the other junk that you accumulate, luggage and things like that, it was tight. Storage was one of the weak parts. There was some room in the garage to put some things, but I would not call the storage one of the stronger points of the housing.

H: So besides the closet space, and you mentioned the mechanical room had some room for storage, it sounds like that was pretty much it then, aside from the garage, the room in the garage.

P: Exactly.

H: And, well, as long we're talking about, just kind of storage, just extra space, how was the kitchen space? Did that have – I know some of the kitchens had pantries. Did you have a pantry, and was there enough cabinet space?

P: I don't recall my wife particularly complaining about the kitchen. I know dishwashers were new at the time, and we had a portable in there for dishwashing, and it hooked up to the faucet. It was on wheels. And that made it a little tight in space. You were always bumping around that. By the time you got a refrigerator in there, a refrigerator/freezer combo and a table with chairs, there wasn't a whole lot of room left in the kitchen.

H: And was that your own portable dishwasher, or was that provided?

P: My own.

H: Your own. Yeah. Did you have a washer and dryer?

P: Yes.

H: And that was your own as well?

P: Yes.

H: OK. And it sounds like you – compared to some of the other folks I've spoken with who had very young families, it sounds like maybe you had a couple more people in the family, and I was wondering whether everybody felt like they had enough personal space, enough privacy in the house.

P: Well, as to privacy, it was just my wife and me, and we felt OK. Our first two children were quite small, very small. They were both born there, in that house -- in Wherry housing, not that specific house.

H: So the children being small enough, there was enough kind of personal space for everybody to feel that they weren't real cramped?

P: That's a true statement. I wouldn't call cramped the descriptive word for it. And one nice thing, with this huge courtyard out front in the semi-circle of homes, everybody could toss their kids out

there, and everybody watched everybody else's kids. So there was plenty of room for them to run and play.

H: Oh, that's nice. Speaking of children, I was going to ask about that next. I'm wondering if you thought that the neighborhood was a good place for children to live. Did it accommodate children, and did your house accommodate children very well?

P: Yes. It was a great place for children. They were safe, traffic was closely controlled, and no high-speed streets or anything to contend with, no animal problems.

H: And was there any playgrounds in the neighborhood, or did you have room for any kind of play equipment in your yard?

P: Yes, there was room, and some individuals put them up, and they were shared by all.

H: Oh. So there wasn't a neighborhood playground that was provided as part of the neighborhood?

P: Come to think of it, I believe there was a little fenced-in area. I can't picture it that well right now, but yes, I have to say there was something provided. But most of it was people putting up their own swing sets. Swing sets with the little seesaw and a sliding board were the only things that were vogue in that day, not the big elaborate things that you see nowadays around homes, wooden structures, and things like that. We didn't have that at that time, at least not where we were. So it was just small swing sets.

H: Yeah. So there was room in the back yard if somebody wanted to put up something like that?

P: Yeah. There was plenty of yard room. There was never a problem with yard room.

H: Now, was it – did people have fenced-in yards, or was it just kind of common back space?

P: Common. The entire area was fenced from the – our particular house backed up to the main gates, and there was a fence shielding the Wherry housing from the traffic at the main gate. But there were no fences for individuals or anything. Some people would put up a little chicken-wire thing or something for a small dog behind their house, but that would be the only thing you'd see.

H: And did people feel that was not an intrusion, in terms of not having fencing provided, that that was acceptable?

P: Yeah. And we all got along together. We were all doing the same job. We were all the same age, the same profession, and we all babysat for each other and partied together. So it was like one big family, rather than a neighborhood.

H: Yeah, that sounds like those commonalities made it easier for everyone to live together. And back inside the house, one of the objectives of the housing was to provide this open floor plan, attempting to create a feeling of spaciousness, kind of based on the suburban ideals of the housing of the postwar, post-World War II period. And I was wondering if your housing was built along those lines. Did you feel like it was open inside?

P: It was very open. You came in the front door, and you could see everything in the living room and the dining room. And there was an open door into the kitchen. And that constituted the entire downstairs.

H: Living room, dining room, kitchen?

P: Yes.

H: OK. Right. And then the stairs led to the bedrooms.

P: That's correct. And the bath. You had to go upstairs to the bath.

H: OK. And you already kind of touched upon the community, but so I guess is it safe to say the neighborhood fostered a sense of community? Or at the same time I know that it was easier because everybody was doing the same thing. So did the neighborhood play a role in the community, or was it more that people just had all these commonalities already?

P: I'm not real sure how to answer the question. When you say community, what are you referring to, the civilian community surrounding the base?

H: No, you folks in the neighborhood.

P: OK.

H: Yeah. Did everybody – did the housing and the neighborhood help create a sense of togetherness and community, or was it more like everybody had so much in common that it didn't matter what your housing looked like or how your neighborhood was structured?

P: Oh, I would say probably 60 percent would be the commonality of the community, because although most of us were pilots and did the same thing, there were others, like judges, doctors, and finance officers and things that were not fliers that did not go (inaudible) overseas with the frequency that we did. But they would live in there, too, and they shared our lives with us.

H: Oh, OK. So it was all kinds of people living in Wherry housing that were affiliated with the base, not just...

P: Not everyone was a pilot.

H: I see. OK. Now, as far as personal privacy for your own house, did you feel like you had privacy in reference to the neighborhood? Did the housing provide you enough privacy?

P: Oh, yeah. When you go – if you wanted to be alone, you go in and you close your door.

H: Definitely. I guess, it wasn't like all the housing was kind of too close together, or people's windows were on top of each other, or anything like that?

P: No, we didn't have that kind of problem because of the structure of the housing.

H: You talked a little bit about outdoor space. You said there was enough backyard and front-yard space. Did you have any patio space? Was there maybe a concrete slab or a front porch?

P: Very, very small front porch by the door, enough for two lawn chairs.

H: OK. Anything in the back?

P: No. Nothing.

H: OK. So it was just totally grassy in the back there?

P: Uh-huh. Well, there was a pavement that led from the back door to the garage area, but nothing that you would call a patio or anything.

H: OK. Sort of like a sidewalk, maybe?

P: Yes.

H: OK. And what about the windows? That was another kind of idea behind suburban development of this period, is a lot of open window space. You know, you think of a ranch-style building just having a lot of window space. Did you feel that that was accomplished in your housing?

P: Yeah, there was a lot of window space. It was light and airy.

H: Where were the windows? Each room had a window?

P: At least one, if not two.

H: So you felt that you got sufficient views of the outdoors from inside?

P: Yeah. Like our main bedroom had windows on the – we had an end unit, so we had windows on the side and windows on the back, or the front, I guess you'd call it. Windows in the dining room, windows in the living room, windows in the kitchen.

H: Another thought behind this housing was, in order to make it appealing, was to create a suburban environment. And I was wondering whether the outdoor environment, like landscaping and the way the streets were laid out, whether that created a kind of suburban environment. And did that make the neighborhood appealing?

P: Yeah, it did. They were curved streets, so you could not stand at one end of the street and see all the way, you know, a mile to the other end. There were winding streets and cul-de-sacs, so it lent itself to a development that you would see today, when a developer sets up a homesite.

H: And what kind of landscaping was there? Did you have any trees in your yard, or bushes?

P: There were occasional trees, but not a whole lot of trees.

H: Yeah. Any kind of bushes or anything that touched the house, you know, that were right in front of the house?

P: Neighbors, different neighbors put in different things, so we had little gardens and things like that, but nothing dramatic. Remember that when – I waited to move into these, and these were built from scratch, so at that time, there were no major – they looked like they saved some of the larger trees, but like builders do today, they kind of clean off the place and then start from spare ground up. So there was not a lot of time for big vegetation to have grown. And it was Columbus, Ohio, so you only had three-quarters of a year or half a year growing season.

H: OK. OK. Also, another aspect of the housing was that the government was trying to economize and provide housing that was not excessive or too costly. Did you see evidence of attempts to economize in the construction of the housing or any of the amenities that were provided?

P: Well, it was built primarily, from what I know today, builder-grade materials. There was no luxury-type things in there. But it was pretty basic, but adequate for a young family just starting out. We didn't have any particular needs that weren't provided.

H: Did you – some of the housing we've seen, some, for instance, some cabinets didn't have doors, and you know, that was an attempt to economize. Did you see any other examples like that?

P: As I recall, we had doors on our cabinets.

H: Besides the building materials, did you see any other examples of attempts to economize, any specific –

P: Not that I was aware of at the time.

H: Yeah. But everything functioned properly, the windows, and, you know, everything.

P: Well, if anything didn't function, that was another advantage of living on base. You just called civil engineers, and they sent somebody in a pretty timely manner to repair it.

H: And did you live there during a time when a contractor operated the neighborhood, or had you lived there only after the government started taking over?

P: There was a contract office. Now, the relationship, I'm not real sure, but there was a central office that wasn't military, as I recall. Now, remember, we're talking 1955, so give me a break.

H: Yeah. (LAUGHS)

P: But there was a small office near the entrance at one point in time. I don't know whether that was there the whole time we were there or not. But evidently, that was what you're referring to, a contractor office. I hadn't even thought of that until you brought it up this time.

H: So there was a point earlier on in your living there that – I guess if your pay was taken directly out of your – I mean, if your rent was taken directly out of your pay, you didn't really deal with them unless you had a maintenance issue.

P: That's exactly right.

H: OK. And then there was a point later where there was no more contracting office?

P: I'm not sure of that. I didn't know if they were still there when we left or not.

H: OK. OK. But it wasn't something that you really dealt with very much.

P: Right. Didn't have a lot to do with them.

H: Yeah. Do you remember any details about the physical features of the house, any of the building materials, or maybe was there any kind of decorative details?

P: They were pretty stark. Not a lot of filigree or anything like that on them. They were very basic-looking houses. Not unattractive, but not anything that would just jump out and say what a Parade of Homes type.

H: And what was the material that your house was made of? What was the exterior?

P: I want to say brick and stucco. It was not wood. It was like stucco.

H: OK. And was there just like a regular gable roof or flat roof?

P: No, it was a gable roof.

H: OK. And so there were no really – I've seen some pictures, and it may have been Capehart housing and not Wherry, but a couple fireplaces maybe, or, I saw a picture where one house had kind of wood beams going across the ceiling, kind of a rustic look.

JEAN PATTON (WIFE): This was Wherry, because the Capehart didn't even exist in Lockbourne.

H: OK. Yes, Wherry. So you had no little details like that.

P: No.

JEAN PATTON: We do have a picture.

H: Oh. I was going to ask, actually, if you were able to create a copy or e-mail it, or if you were willing to do that.

JEAN PATTON: It's mostly with our kids in front of it. (LAUGHS)

H: Oh, that's OK. If you're willing to provide it, that would be great. One last question here. What physical features of the house did you like, and what features did you dislike? And I know that you just got through saying that it was very basic and stark, but does anything strike you as that you particularly liked or disliked?

JEAN PATTON: I guess just from – I'll answer that since I haven't been answering any questions. Basically, I liked that – I mean, I was a newly married woman. From the time I was – well, actually, girl, because I was only 19 -- until we left there, so it was the security of being where I was. Not having to worry if something went wrong and my husband was gone. You know, like the plumbing or whatever. It was a little small, even without kids, and it got a little smaller when we had kids. But basically, the convenience of the location, and we had friends and neighbors, and we all could get together, and it was one big happy family, basically, you know, in each court.

It was adequate – oh, and the storage. I definitely think we would need more – today, I would say, oh, my gosh, we didn't have any storage. At the time, I didn't have anything, so it didn't matter. So, you know, it was like the start of his career. When we later went to Tucson and lived for three years in Tucson on base – I honestly don't remember, I think it was Capehart – we got tired of it because it was small. But that was later in my life. The kids were older, you know. So then we bought a house. I think a lot of it was the times. Of course, in those days, you didn't work. Women didn't work because they were officers' wives, and so they stayed home because that was what they were told to do. And that made it a lot nicer to be on base and have the friendship of the people on base, and we could all get together, and stuff like that. That's my take on it.

H: OK. So, are there – and thank you for that. And actually, before I forget, Mrs. Patton, could I get your first name?

JEAN PATTON: Jean. J-E-A-N.

H: J-E-A-N. OK, great. Thanks. Do you folks have anything else to add about your general impressions of the housing, your particular homes that you lived in, the Wherry housing, and the neighborhood, and anything else to add?

P: No. It was a lot of fun, but now in my older years, I enjoy the privacy of my house here. Though we're in a neighborhood – we're not isolated – we're on half-acre lots. And I enjoy the tranquility.

H: OK. All right. Well, I – let me make sure that I didn't forget anything here.

JEAN PATTON: Do we have your e-mail address?

H: I'd be happy to give it to you again. Is that how you would transmit the photos is through e-mail?

JEAN PATTON: Yeah.

(TAPE TURNED OFF)

JEAN PATTON: Well, in those days, we only had one car because that's all we could afford. Everybody only had one car. Everybody, you know, husband and wife didn't have separate cars. So for a while there, we had just the one car, so it was definitely very, you know, convenient.

H: Right, with the single-car garage.

JEAN PATTON: Well, single-car garage, plus the fact that if I wanted to go someplace, I could just drop him off at work, and there was no problem.

H: Oh, OK. Oh, yeah, right, because it was so close. Great.

P: There's another thing that, if they want to do another survey, a lot of – well, I don't know a lot, comparatively, but there are many installations that have historic homes, and that might be of interest, too. We served a two-year term at F.E. Warren Air Force Base in Cheyenne, Wyoming, which was old Army Fort Crook, and lived in a house that had 8,000 square feet and three stories, and it was kind of different.

H: Wow. Yeah, gee, that sounds like quite a change from Wherry housing.

P: My son, as we speak, is the commander of the, in the Navy, the commander of the Point Loma, California, sub base. And he lives in a historic old home that looks out on the water. It's just a beautiful place. These are all old, old, old places. But there are quite a few of them throughout the United States, and that might be of interest to a historian sometime to gather information about those homes, too.

H: Yeah, definitely. That is sort of along the lines of why we're doing this. And they hopefully have done that as well with those. And I can't say that they've done it with all of them, but yeah, this is part of some very specific federal laws related to historic preservation, so, to at least know the historic significance of the property. Yeah, historic preservation is part of the requirement.



P: I mean, to me, it was a real thrill because I was the commanding general of the base up there at F.E. Warren, and my predecessor all the way back in the Army during the cavalry days on the frontier lived in the same home. In fact, his office was in the house at that time. But, so, it's kind of interesting.

H: Yeah. The military definitely has an extensive history of historic properties. Definitely. That's a lot of, some of our work is helping them document the history of these buildings. Well, thank you again.

P: You're quite welcome.

END

## **SHERRY BILLINGS RAMSEY**

Ms. Chris Heidenrich, M.A., a historian with R. Christopher Goodwin & Associates, Inc., conducted a recorded interview with Sherry Billings Ramsey via telephone on 28 August 2006. Ms. Ramsey was interviewed for a project sponsored by the Department of the Air Force and the Department of the Navy to document the history of military family housing constructed under the Wherry and Capehart programs between 1949 and 1962. Ten other former residents of Air Force and Navy Wherry and Capehart housing were interviewed. A historic context, neighborhood design guidelines, and a tax-credit brochure also were completed for the project.

Sherry Billings Ramsey was the daughter of a sonar technician with the U.S. Navy. She and her family resided in Capehart housing in the Anchorage neighborhood at Newport Naval Base, Rhode Island, from 1962 to 1966 while her father was a senior chief petty officer. The Billings family lived in a two-story duplex consisting of three bedrooms, one and a half bathrooms, living room, and dining area. A carport was attached to the unit. The Billings family lived in Wherry housing at Newport Naval Base from spring to fall 1962 while the Capehart housing was being completed.

CHRIS HEIDENRICH: This is Chris Heidenrich from R. Christopher Goodwin and Associates interviewing Sherry Billings Ramsey on August 28, 2006. OK, and if you could just acknowledge that you know you're being recorded, that would be great.

SHERRY BILLINGS RAMSEY: OK, I know I'm being recorded. (LAUGHS)

HEIDENRICH: (LAUGHS) That's all I need. Super. Thanks. Well, first of all, I just want to say thank you very much for being willing to participate. It's nice to have the perspective of somebody who was young and a child at the time of their residence. You know, obviously, we have military people and military spouses. Just good to get perspective on the housing from somebody who was a young teenager like you were. So, thank you.

And just to go over some of your biographical details here, your dad was in the Navy. Now, you said that his rank at the time was senior chief petty officer. Is that right?

RAMSEY: Yes. He was an E-8.

H: E-8.

R: Yeah. He didn't become a master chief, I think, until we returned to Key West.

H: OK, and so master chief, is that the next level of enlisted?

R: That would be E-9, and that's the top of the enlisted ranks for the Navy.

H: And do you know if he had a career field during his military service?

R: Yes. He was a sonar technician.

H: OK. Great. And then you folks lived in Capehart housing at Newport Naval Base from 1962 to '66.

R: Actually, we lived in Wherry housing first.

H: OK, that's right. You lived there from spring to fall of '62, right?

R: Right. I think just before school started that year, which would have been 1962, we moved into the Capehart housing at Newport. And the Capehart housing, the unit that we moved in, was brand-new. We were the first family to occupy it after its completion. We were only in Wherry housing because when we got there, there wasn't anything available for us. And because of my dad's rate and the number of children, because we had three, and our ages – we were 12, 10, and 7 at the time, I being the oldest – we really were in substandard housing. But we were, you know, we needed a place to live. We were glad to have a place. So they just put us there until the housing that we were qualified for opened.

H: OK. And then you were, like you said, 12, and so –

R: I was 12 when we moved there. My birthday's in January, and we moved there in April 1962. I was already 12, and I was in the sixth grade.

H: OK. And you were 16 when you moved out, right?

R: Correct. I had just finished my junior year at Middletown High School, and we moved in, I believe, June or July. Because we took leave at the time because we were driving so far, and my grandmother was on the way and everything. We took leave and visited my grandmother, so I know we were in Key West by July or August. Because we waited for housing down there for a little bit, too. Not very long.

H: OK. And now you said that your housing area, the Wherry housing area, was called the Anchorage, or was that the style of the house?

R: That was the name of the place.

H: The Anchorage.

R: It was called the Anchorage. My mom said that the Capehart housing was also called the Anchorage. Because they were right by each other. I mean, one was like the – the Wherry Anchorage housing was kind of in front, I think, of the other, but there were spaces because there were so many streets. But it was all in the same general area. When we moved to the Capehart, we overlooked Newport Naval Base. If you went down a couple of hills and across the street, you could get to it, but of course, it was fenced. But we were actually sort of outside the base. I mean, we were still government property. I'm guessing that, because base housing's usually always on government property and patrolled, you know, by the government and stuff. But I mean, when we went into our back yard, we could see the Newport Naval Base just down the hills from us.

H: And the Capehart, it was a, I know you said a two-story, three-bedroom. Was that a single-family detached house or a duplex?

R: No, it was a duplex. It was like two townhouses – it was like a townhouse kind of thing with two families. You know, you shared the building, and then there was a wall, the walls between you. And, you know, they were duplicate, but kind of, you know, side-to-side thing. One unit, and then on each end would be your carport and your storage area outside. The middle part would be your residence. It was all one building, for only two families.

H: So it was a two-bedroom, and you mentioned –

R: No, it was three bedrooms.

H: I mean, excuse me, I'm looking at the "two" for two-story. OK. Three bedrooms. There was a half bath off the foyer and then a living room, a dining area, and a kitchen on the first floor.

R: Correct.

H: OK. And then upstairs, a full bath and a walk-in hall closet, and then three large bedrooms.

R: Correct. And downstairs there was a large storage closet, too. Off the dining area, it was kind of like, the way we had our table set up, the stairway going upstairs was kind of to the side. When we were sitting at the table, the side I sat on, my back was to the stairway. And my dad always sat at the head of the table. And where he was at, right behind him was the storage closet. Unless I reversed where he sat from where my mom sat. My mom sat on one end. My dad sat on the other. One of them was right next to a huge walk-in storage closet. There was also a closet as you came in the front door. If you went straight, you would smack right into the wall, and that was like a coat closet. It was big, though. It had sliding doors, and it was real big.

H: OK. So it sounds like there was a lot of space in general.

R: It was. And having, prior to living in the Wherry housing, when we were living in Key West, we lived in a mobile home. And back then, a big mobile home was 10 by 50, 10 by 55. So, yeah, even the Wherry housing seemed kind of like the rooms were large to us. Because we were only used to going, like, fore and aft. (LAUGHS) In mobile homes you don't – you didn't used to could go side to side. You can now, because I live in a double-wide now, so you can do that. But otherwise you just spend all your time going back and forth. (LAUGHS)

H: Right. That's actually what I was going to ask is the comparison between the housing you lived in before you lived in the Wherry and the Capehart housing. And obviously, it sounds like it was much smaller.

R: My parents raised us to be pretty much grateful for everything you get. And, you know, to kind of roll with the punches. When you're military and you move a lot, you've got to be very adaptable. So, I mean, you know, with five of us in the two-bedroom, it was a little crowded, but you know, we weren't uncomfortable or anything particularly. You know, we were glad to have a place to live.

H: Yeah. And so then, you said even the Wherry was a little bit bigger than the mobile home.

R: Mm-hmm. Because it had – you know, I don't really remember a whole lot about it. I do remember the layout sort of vaguely, which seems kind of weird. Because we lived in Jones Street just a few months later in the bigger housing. But I had been sick for quite a while before we moved, and I continued to be not too well. And I didn't – you know, I went to school for like half a day and then I'd come home, and mostly I just slept. I had mono real bad. And so I was sick. They weren't even sure when they moved me to the seventh grade, whether – I had missed so much school that whether or not I was going to have to be put back or anything. But I wasn't, and – that's why I said, when I went – I hadn't thought about it in years, and when I, you know, my mom told me about the, my brother saw the thing about the article and that you were looking for people that had lived in housing. And so that was when I really started to think about it again.

And I only had an impression of the first house. You know, I remembered that you came in the door, and you were in the living room, and the kitchen was to the left, and the bedrooms were in the back

with the bathroom kind of between them. But, you know, dimensions, it seems like the living room was a good size. And the bedroom had to be, because we put, like, a double bed in one corner of the room and a single bed on the other corner. And we had, like, wardrobes down the middle of the room, kind of like a dividing line. Reminds me of that movie, "It Happened One Night." (LAUGHS) With the curtain and stuff.

But, you know, so it, you know, to me it seemed spacious enough, you know. I mean, of course, the ideal would have been that my sister and I would have had our own room, and my brother would have had a room, which we did as soon as we moved to Capehart.

H: Yeah. So then the Capehart was obviously an improvement over the Wherry.

R: Oh, yes. Oh, yes. It was very nice. It was (inaudible) for the time frame, because that would have been, that was, you know, like I said, fall of '62, and I was going into seventh grade. And at Middletown that time, they had, the high school went seventh to twelfth grade. So if I'd have stayed there, you know, I would have gone to the same school for five years. You know, so, it was – well, actually, it may have been more than five years. But anyway, it ended up that I didn't stay there the whole time. We got orders and went back to Key West.

H: I guess one of the downfalls of being in the military.

R: Yeah, I didn't have my high school in one, in Newport – well, actually, it's Middletown. It's Newport Naval Base, but it's actually – it was Middletown at that time. The town was Middletown, because there's, like, three towns on the island there.

H: OK. And so in general, then, did you like living in the Capehart housing?

R: Yeah. Yeah, I did.

H: What did you like about it?

R: Oh, well, for one thing, it was a nice, new house, and I'd never remembered living in a house before. (LAUGHS) We had nice rooms. The neighborhood was good. A lot of the kids I went to school with, well, when you ride the bus, they come through and pick you all up, so you're all military kids on the bus, and you all live in the same neighborhood and have a lot in common, and went on to the same school, and so I saw some of the same people at school that lived in the area. So it was like any other neighborhood. We just happened to have dads that were in the service.

H: And I don't know if being young at the time if you would know this, but maybe you have more of an idea now, or maybe talking with your parents about it. Do you know how that Capehart housing compared with housing in the civilian sector? Or maybe you visited some of your friends who were in the—

R: Gosh, yeah, I did have a friend – I remember I had a couple of friends that lived in civilian housing. In fact, they lived close to me, because I remember walking to one of them's house. I don't really remember – I guess they owned their own house. I can't honestly say much about the house, though, a whole lot. I visited both of them. I mean, you know, in Newport on weekends, we'd drive around, but we looked at what were estates, you know. Then you would be impressed. You know, that was like people like Auchincloss and people like that. Now, that was Mrs. Kennedy's parents. You know, that was her mom and her stepdad. And, you know, The Breakers and all those kind of places like they filmed in "Gone with the Wind." I mean, we didn't go inside them, but even from a

distance, when you saw how far back from the road they were, and just how – they looked like – they were mansions.

But just regular houses that I visited? Oh, I would think we compared real well with people that were, you know, in our income bracket, and, you know, having to buy on the market. I think we compared fairly well.

H: Yeah. I actually had some people who had lived in these houses as adults, and so who knew the financials involved, and they said they were very grateful for this housing because it was cheaper than having to buy or find housing on the civilian market.

R: I'm in an interesting position now. My husband and I own a mobile home park, so we're landlords. Plus, I have friends that have lived on base here. I live right by Camp LeJeune. And I've seen the base housing here now, and it's beautiful. They've redone a lot. They've built a lot of new housing, and they're very nice. Because housing here out in our area, you would think there was gold under the land with what they want to charge for just a very average, nothing-fancy kind of house. Less than maybe 2,000 square feet, you're talking over \$100,000. You know, and we're not even a real metropolitan kind of area. We're kind of a bedroom community for Jacksonville, but even Jacksonville isn't huge. I think Onslow County has 150,000 population, and Jacksonville's the biggest city.

H: Oh, OK. Yeah. So did your Capehart house, then, provide enough space for the family?

R: Oh, yeah. Well, initially, we didn't have a lot of stuff. When we moved to Newport, we bought furniture. Practically all of our furniture was new, because all of our bedroom sets – we didn't have bedroom sets. When you live in a mobile home, used to be everything was built in, and your bed, all you had room for was like one of those metal frames and the mattress and box spring. So, we bought all new stuff – a washer and dryer, and beds, and chests of drawers, and vanities. And we had those the rest of our lives, I mean, until we left home. My parents, I think they had theirs until not too long ago. They went on and bought some more stuff because they ended up with quite a bit of places they traveled to.

H: Now, how did you feel sharing a room with your sister? Did you feel that was an imposition on you, or just kind of the way things were?

R: No, I wouldn't have thought it was an imposition, because I was already 12 years old, and I'd always shared a room with my sister. You don't really complain about something you've never known different. I mean, you just take that as a "that's the way things are" kind of thing.

H: Yeah. Well, it seems like kids today are used to having their own rooms. But back then, and certainly when I – I'm 36, and when I was growing up, I mean, I shared a room with my sister.

R: Well, when we lived in one of our trailers that we had, because we lived in, like, one, two, three – at least I lived in three different trailers. I think my parents lived in four or five different trailers, because they were still moving around when I left home to go to college. One of them, I know my dad built a bed – the old trailers, when you walked to the bathroom, you walked through somebody's bedroom. The hallway was part of their bedroom. And your bed was kind of like in a nook, you know? And that was your room. You got on the bed or you were in the hallway. My dad built a bed, like a bunk bed over top of our bed, and when my brother was little, he used to sleep up there, and my sister and I slept down below it. And, you know, my dad was quite ingenious and quite handy with things.

H: Yeah, so then, compared to that, it seemed like you had a lot more privacy and space.

R: Yes. Of course, I was a lot younger then. I'm talking about maybe when I was six years old. But, you know, as we got older, my brother always had his room and my sister and I shared a room.

H: So as you got older, it didn't make a difference?

R: No, no. Like I said, because I was already used to it. And my sister was only two years younger than me. So we were fairly close. We were like night and day, but we were. (LAUGHS) You know, one is always neat and one's always messy, and now it's reversed. Unfortunately, I should have kept the neat, like I was. Now she's the neat, and I'm the messy.

H: And so the closet and storage space, I just want to be sure I understand this. There was a closet in the foyer, there was a storage closet in the dining area –

R: And it was quite large. It was a walk-in. Large.

H: Nice.

R: It kind of ran under the stairs, I think. That's what made it big, because it ran diagonal. Let me see. It ran like at a 90-degree angle to the stairs. But I think it might have gone under part of the stairs. Because it was a fairly big closet. Like I said, it was a walk-in, big storage area.

H: I see. And then there was a closet up in the hallway upstairs.

R: Correct. Another walk-in closet with shelves and things. And each of us had a closet in our bedrooms, you know, good-sized closet for our clothes and everything, so that's three more closets upstairs.

H: What kind of things did your parents store in the hallway closets in the foyer and the dining room?

R: The closet as you came in the house?

H: Yeah.

R: Coats. You know, up there we had to have a lot of winter clothes, so we all had winter coats. And my dad may have hung some of his uniforms in there. I'm not sure. It was a fairly good-sized – you know, his dress uniforms. It was a fairly good-sized closet, though.

H: And the other two closets?

R: Uh, gosh, the one downstairs, I think my mom had, I think she kept her mending in there and maybe her sewing machine and some odds and ends and stuff. And upstairs we kept, like, I think there was linens and pictures and games. Because it had shelves and things. Oh, Christmas decorations and things were in one of them. It was either downstairs or upstairs. I'm not sure which. And then in the bedroom we had, each of our bedrooms, we had regular stuff. We had our hang-up clothes, you know, and I guess we kept some of our personal toys and stuff. We had games that the whole family used together, and then we had stuff that belonged to each of us. So my sister and I would keep, you know, our things in our room, and then my brother had his things in his room, and my parents had their things in their room. But I know, you know, our room was a pretty good size, because I had a double bed in our room. We had a vanity with a mirror. I'm not sure – I think we had

a chest of drawers, too. And we had a couch in our bedroom. We had a couch that we brought with us. I guess they couldn't figure out where to put it. That's where it ended up.

And downstairs, I think our furniture came from the base, because back then, they would give you furniture, too. And so our living room was the only thing that I remember was from the base, because my dad and mom had bought bedroom sets for each of us. My brother only had, like, a single bed, probably a chest of drawers and stuff. Because he was, you know, he was still pretty young. And he was into baseball and all that kind of stuff, so he had a lot of sporting things and stuff in his room.

H: So did the base provide both the living room furniture and dining room furniture?

R: No, we bought our own dining room set. I remember that. And we had a washer and dryer, which my mom and dad bought, and a dishwasher, which they had, that we bought. They had the kind then that you could roll to the sink and hook up and run it. But as far as I remember, the washer, the dryer, and the dishwasher were all in the kitchen, so the kitchen had to be pretty good-sized too, because there was space for that. And they just provided us with the living room furniture. And I think it was just like a sofa and a chair, and I don't know if it was like the coffee table and the end table, too. Basically, I think Mom and Dad only asked for what we didn't have. And my dad built a big cabinet that we put in the living room that had our stereo on it and records and things, and then we had our television and stuff like that. In fact, we had a television upstairs in my parents' room and one downstairs, too.

H: Oh, OK. Now, speaking of the kitchen, do you remember – being a kid, I know, but do you remember if there was enough space in there? I mean enough cabinet space, counter space.

R: I don't really remember what the cabinets were like or anything. I know the kitchen came with a refrigerator, and then it had a space for a hookup for a washer and dryer. And like I said, I'm not sure where my mom stuck the dishwasher, but I know it was in the kitchen. I'm just not sure where she positioned it at. I don't remember her ever complaining about anything, but my mom hardly ever complained about anything. Like I said, military families have to be adaptable. If you're a good military wife, you've got to be able to handle it all and not complain.

H: And do you remember if there was any kind of like a pantry or any kind of, you know, additional space in the kitchen besides cabinets?

R: No, I don't. I remember talking to my mom – you know, I said, after we looked at the thing, I talked to her about it. Because I, you know, I told her what I remembered and asked her if this was accurate, and she said yes. And I don't remember us ever saying about there being a pantry, so I don't know if there was or not. I don't remember one, but that doesn't – you know, that may have been something that I didn't consider at the time to be important. And it's been a lot of years. I'm 56 years old, so it happened a long time ago.

H: Sure. Yeah. In regards to outdoor storage, you mentioned there was a carport. Did you park a car there?

R: Yes, we did. We only had one car at the time, and we pulled in. It was roofed over with open sides like posts. And you had – I think you had one of those concrete parking things like you find in some parking lots to hold the car up so it keeps you from going up too far. I believe there was one of those. And then on the other side of that was where the storage area was. And, you know, out there we would keep things like bicycles and whatever we needed for outside. I'm guessing we might have had a mower. I don't remember whether we had to cut our own grass or not. I'm kind of thinking we



did, but I'm not positive about that. But I'm guessing we did. I know when we moved to Key West, we had to maintain our own yard, so I'm guessing that we did up there, too. So, you know, just normal stuff that people would keep in an outside storage thing.

H: Yeah. Did you feel that the housing was adequate for you and your brother and sister as children, and for other children?

R: Yeah. Yeah, I thought it was adequate, and we had a good play area. I don't know exactly how much of it was our yard, but because of the way the houses were placed, you know, between us and the next row of houses, the next row of houses down faced another street, and so we had this big open area. So we used to sled out there behind our house in the winter. And in the summer, we played baseball with, you know, just my brother, my sister, me, my dad. He'd get out there, and my brother played Little League, and he'd throw balls, and we got to field, and we got to bat. And we kind of played parallel to our house, so that if we hit the ball, it wasn't going to go down to the next houses. It would run between the houses kind of thing. So we had a good amount of space.

Also, we were in a section of the housing where the people across the street from us were all officers. That was all officer housing. And their housing was a little different from ours in that I don't think theirs was two-story. I think theirs was more like ranch style. And then right next to our building going up there was, I think, the admiral's quarters. So I kind of think that, you know, I don't think that our house was any different from others, but I think that might have added to the yard and stuff, you know, the way we were laid out and the area. And my mom said that they were very careful about what enlisted people they put in that area because everybody else was officers. They didn't want any rowdiness.

Across the street, I know one of the families moved out. And we were watching them, and we never saw such a bunch of cars come to work on a place before. I mean, it was like bees just swarming. And they were out there doing all kinds of stuff to the yard, and my mom said you'd think an admiral was moving in. And that's what was happening. They were preparing his quarters, and he had to have temporary quarters, and they moved him into one of the regular officers' houses across the street from us. So, boy, they went out there, and they were like raking the yard with a comb. (LAUGHS)

H: Yeah, right. (LAUGHS) That's a spectacle. Right. So now, the front yard, was that anything to speak of?

R: It wasn't all that big. We were fairly close to the street. There was a sidewalk out in front, a sidewalk on the street. I don't remember the yard being very big at all. You wouldn't like come out the door and fall into the road kind of thing, but it was probably, you know, an average distance for a development kind of thing. It wasn't real big, though we didn't usually play in the front yard very much. We usually always played in the back yard.

H: OK. So there was no fencing between the units?

R: No, no.

H: Or between the buildings either?

R: No.

H: OK. And the neighborhood in general, was that hospitable to kids? Was there like enough – were you able to ride bikes in the street? And was there a park or anything like that?

R: Yeah, I think we – I don't remember if I rode bikes on the street or I rode on the sidewalk. I know I rode sometimes. I think I did ride in the street sometimes. I went places on my bike. I know I remember that I always felt safe. I guess the idea that the military, you know, security was going to be looking out for everybody, you know, made me feel pretty safe.

H: So there were sidewalks?

R: Yes. Yeah, we had sidewalks. Because I had to walk a good distance to the bus stop, but it was still within the base housing, and it was still kind of on, well, when my street kind of met a cross street a ways up, it was probably just a few blocks. Because we weren't but maybe, oh, I'm guessing three miles from school. It seemed like a long way because I walked out a few times, too, coming home. Sometimes I'd miss the bus and have to walk home. (LAUGHS) You never wanted to do that in the winter, though, in Rhode Island. I don't think I ever missed in the winter.

H: Back inside, one of the objectives of this housing, or one of the styles that it kind of followed in general was this open floor plan to create spaciousness and allow the family members to gather easily. Did your housing have this?

R: Yeah. When you came in the front door, once you, like I said, if you walked straight, you were going to walk into the closet, because that was, as you opened the front door and came in, you had just an area there to stand, and you could take off your coat and hang it up kind of thing. And if you went to the right, you'd be in the bathroom. If you went to the left, you were in the living room. As soon as you took a couple of steps past that and were in the living room, you could see the living room and dining area all the way to the kitchen door. So it was pretty open.

And it was, I think the walls were probably a cream color. I'm guessing. I know they were light. And they were all the same color throughout the whole house. So it was either a white or a real light beige. And so that gave you kind of a feeling of lightness and airiness about it, you know. It made it bright. And there was a lot of windows, too.

H: Oh, OK. That's what I was going to ask, too.

R: The living room had, I'm guessing we had at least three windows across that faced the street. And upstairs, you know, we had a window or two. Gosh, we may have had, I think we had a window on the side and then a couple of windows facing the street on the bedroom. And I think my mom's bedroom had the same. I think they had a window – well, one of our bedroom windows kind of overlooked the top of the carport, and I think that's the same for my mom. And then she had a window that, you know, looked out towards the Newport Base. It's on the back yard. Now, my brother's room only had windows on the backside, because his room was on the other side and it wasn't on the corner. It was like next to my mom and dad's room. His was as you came up the stairs and you went past the walk-in closet, and you took a right, and you would be in his room. And you went straight, and then you could go left or right, and you either went into our room, my sister and mine, or my mom's and dad's. But, yeah, it was a light color. Yeah, we liked it. We liked living there.

H: OK. And did you feel – a lot of people are saying that the housing was certainly nice, but that it wasn't the only thing that created a sense of community, that another factor was that everybody was in the same boat. Everybody was in the military, and they were all doing similar jobs. So what was your perspective?

R: I think that's probably true, because the other thing is that two, I think at least two of the families that were up there when we were had been other duty stations we'd been. Of course, you know, if you're sonar, if you guys are sonar techs, they tend to go to the same places. In fact, with Navy, if you pretty much told somebody as a child, I lived in Norfolk, Virginia, Key West, Florida, and Newport, Rhode Island, they know your dad was in the service. (LAUGHS) That just kind of designates it, where you were.

But I know that at least two of the families we knew, maybe more, had been other duty stations with us. And so, my parents tended to stay in touch with people they had known from other places. So it didn't make changing over such a distance quite so hard because you felt like there was at least somebody you already knew, you know, kind of thing. And we got together and did things, but mostly we did stuff as a family because my dad worked five to six days a week. He was on the DESLANT staff.

H: The which staff?

R: DESLANT. COMCRUDESANT staff. He was stationed aboard a ship, and I'm guessing this was supposed to be his sea duty. But he actually was like an aide to one of the officers there, and worked there. And so as a result of that, he had a pretty stressful job. And when he left work, he wanted to be with us. You know, we did things like Little League games, and we traveled, and we'd go on picnics, and we did historical outings. We went to Boston, and sometimes we'd go visit my grandparents because they lived in Maine. And then in the summer, we always went and visited my other grandmother, who lived in North Carolina.

Our vacations every year pretty much were visit one grandmother or the other. Usually, we'd visit both of them. He would take 30 days, and we'd spend two weeks with each, along with travel time and stuff. When he was first, when he was lower-rated, we went like every other year, and once he got higher-rated, we went every year. We kept pretty close ties with our family, even though we traveled and were a long ways away.

H: OK. Actually, could you spell that term that you used? It sounded like "concrete."

R: (LAUGHS) It's an abbreviation. C-O-M-C-R-U-D-E-S-L-A-N-T. I think it's "Commander, Cruiser-Destroyer, Atlantic fleet," something like that. The Navy is great for shorthand.

H: I've found that in doing some of our work.

R: Yeah. I believe his records were aboard the Yosemite, that he was aboard the Yosemite. And the Yosemite was a carrier, I think, and it never went out. And if it did, they just transferred his papers somewhere else until it came back, because it would never be gone for long. So, you know, when we were at Key West, we were on shore duty. Down there, he was at the fleet sonar school at Key West. Like I said, he was a sonar tech.

H: Yeah, so just to follow up on the sense of community question, how much would you say the housing, your house, and the neighborhood design contributed to a sense of community in the neighborhood?

R: Gosh, I don't know. I don't really know how to answer that because, well, I mean, the way they were laid out, your neighbors were all close. And I know my sister was friends with some of the people across the street. Now, even though, like I said, the housing across the street was officers, for the most part that didn't interfere with us, you know, being friends with them or anything. I mean as

far as the kids. Most of the kids didn't care anything about rank or anything. Some of them did. (LAUGHS) Some of them were much more uppity than their parents. Of course, you run into that too with military wives. Sometimes the wife wears the rank more than the husband, you know, kind of thing.

But for the most part, we were just kids of military people. And you know, like I said, we saw each other at school. We played together after school. I guess the idea that the houses were close to each other, and, you know, we felt that the neighborhood was safe and secure. And of course, we didn't hear all the stuff that you hear nowadays about if your kid is out of your sight. So we were allowed to, you know, go places. And, you know, my parents always had to know where we were going and tell us when we were going to be back, and that kind of thing. In other words, we were allowed to walk alone to a friend's house if it was a reasonable distance and they knew about it. Nowadays, you have to kind of like know their life history before you let your kid go anywhere. Back then, I don't remember ever being afraid of any of those kind of things. I mean, my parents gave me certain warnings about things, but, you know, they didn't scare me, so I wasn't afraid of everything.

H: Another thing is a lot of these developments were developed in a sort of suburban style with a lot of landscaping and curving streets. Did your neighborhood give off that impression?

R: Yeah. Jones Street, you know, curved, and I'm sure the other ones did. I was more familiar with Jones Street because that's the one I lived on. And, yeah, and I walked it a lot. I had to go to the bus stop every day, you know, up and back. And it wasn't real far. And we were close to stuff. I mean, like one of the schools was near us. I think it was supposed to be the Anchorage, but it became, when John F. Kennedy was assassinated, it became, I think it was called Kennedy – John F. Kennedy is probably what they named it. But it hadn't even been – I don't even know if the school, I think the school had barely opened when they changed the name. But that was very near us, but that was an elementary school. And I think my brother went there, because like I said, when we moved there, he was in elementary school. And that was kind of in front – it was very close to the first housing we lived in, but we would still be in the district, even on Jones Street.

Yeah, I would think our housing, you know, even comparing it to developments now, like in the area I'm at now, just regular civilian developments, it looks pretty similar. You know, had the yards, and the houses were all laid out at a certain distance, and the only difference was all these houses looked pretty much alike. (LAUGHS) They would be the same color. I don't know that they do base housing exactly that way now, but back then, they looked exactly alike. (LAUGHS)

H: OK. A little more uniformity.

R: Yeah.

H: OK. And do you remember what the landscaping looked like? Did you have any bushes surrounding your house?

R: I'm trying to remember if there was any by the house or not.

H: Or any trees in the yard?

R: No. The front of the yard, no. And I don't remember – now, the only trees, gosh, they were off to – when we went out to play baseball and stuff, if I was standing, if I came out my back door and was just standing there, they would have been to my right, but they wouldn't have been in my yard. They

were off more by the admiral's quarters. They weren't in their yard either, because the admiral's quarters had a chain-link fence around it. They were kind of like outside the fence.

H: OK. So there were trees in the neighborhood, but not really on your property.

R: No, but it didn't look like, it didn't have a look of not being, you know, like they bulldozed everything. It was a lot of green because we had a lot of grass in the front and the back. And like I said, I guess there were, I remember there being trees off to the right. And in the housing itself, I don't really remember any. But it may have been when they built all that housing, they needed all the land for the housing. And I can't remember if there was any shrubs around. There might have been. I would have to go back and look at old pictures to really know. I know I have pictures of my sister and me that were out in front of our house, but I can't remember. I remember it looked nice. It was pretty. The yard was pretty and well-maintained. And like I said, I don't know if my dad cut the grass or they came around then and cut the grass.

H: OK. Did your family feel and did you feel like you had enough privacy in reference to the rest of the neighborhood?

R: Yeah. Yeah. I mean, when we really wanted to be, we just took off. (LAUGHS) But no. You know, friends came over once in a while, but usually only if we were expecting them. I don't remember that we had a ton of company, but we had company sometimes, and we had get-togethers with people. But like I said, my dad pretty much, when he wasn't working, he wanted to be with us.

H: Yeah, but people couldn't readily see inside, and –

R: No. I think we had either curtains or blinds. Gosh, I don't even remember. I'm pretty sure we had blinds. I remember, I know we did – like shades. Maybe we had shades, because I know in the bathroom, I think, in the upstairs bathroom I remember having a shade, and I'm thinking downstairs we did, too. And I think we probably pretty much left them down most of the time. And the front windows, I'm guessing we had curtains or stuff. If you left those open, yeah, you could see in, because we had a lot of windows. But my mom's really, you know, she keeps all that closed up. But it wasn't dark in our house. So like I said, I'm thinking that maybe she had them open during the day or something.

H: Did you think that the housing generally was attractive?

R: Yes. It was real nice. The outside was a light color, too. I believe it was either white or cream-colored also. And it seems like I remember it being white, and then the numbers on our house were black. Because they were well-marked so people could find you if they were looking for you. And I think it had some brick, too, like around the bottom or something. So they were quite nice-looking.

H: So it sounds like maybe it was brick accents but –

R: Right. That's kind of what I remember, down toward the bottom. And I remember we had, like, steam heat for the house.

H: OK. What was the overall construction material, just wood?

R: It was sided. I'm sure we had siding. That's what I think. Don't hold me to that. But that's my – as I think about it, it was like it was sided, with brick accents. And like I said, it looked quite attractive. We were very pleased when we got our house and got to move in.

H: Yeah. That's great. And do you remember any, was there any physical features of the house that were distinctive that you recall?

R: I don't know. I just, overall, to me, the rooms were big. Coming out of a mobile home, (LAUGHS) they were huge. Because we had a good-sized table, because when we sat down, we had five people at our dinner table. So we had a good-sized table that we used. And we didn't take up the whole room. There was still space on the other side of the table before you got to the windows that overlooked the back yard. I really liked the idea that we had two bathrooms. (LAUGHS) You know, in those days, that was pretty great. It still is, but I mean, now it's sort of, you expect it. Back then, it was a nice surprise. (LAUGHS)

H: That's really interesting. Well, I know that a lot of the Wherry housing only had one bathroom.

R: Yeah. We did only have one there. We only had a bath and a half in the Capehart. Now, when we moved to Key West and lived in the Capehart there, we had two full bathrooms. So that was really great. (LAUGHS)

H: And the housing also reflects the government's attempts to provide housing that wasn't excessive or too costly. And did you happen to notice or anybody recall any attempts, evidence of any attempts to economize? I guess maybe the fact that there were no distinctive little decorative features maybe.

R: Yeah. The closet coming in had sliding doors. The half bath, of course, had a toilet and a sink, and it had a regular interior house door that you would have. And our closet, our big closet downstairs and our big closet upstairs both had like regular interior doors. But yeah, I don't remember anything fancy about it. It was just a straightforward house. But we liked it. (LAUGHS) And it had, you know, just regular lines, clean, neat lines, not a lot of decorative molding. In fact, I don't remember any. I just remember – I know it had molding, but you know, just what does the job kind of thing. But yeah, as a kid, it isn't one of the things I would have thought about. I just looked at was my room big, was all my stuff going to fit. (LAUGHS)

H: And those things were satisfied?

R: Yes. Yes, they were. Oh, I also – we had a desk in our room, too. Yeah, we had a desk, and that was next to the vanity. And then, so, you know, to do our homework, I could sit at the desk, and I could kind of look out the window. And we had a good amount of wall space because I remember I had a really long poster of the Beatles on the wall. Individual pictures, and it ran down the whole wall. I mean, it was one big poster, but it was like individual pictures that had been stuck together in a poster. It was all down the, it was down the side of the wall. We were typical teenagers for the times, the '60s.

H: Yeah. Was there any features of the house that you disliked, that the family disliked?

R: I can't remember Mom ever saying about anything, and I can't remember personally of anything I didn't like. I mean, I liked all the storage and stuff. You know, it would have been nice to have your own room, but like I said, when you're used to sharing a room with your sister, it's not a big deal. You just, that's the way it's always been kind of thing.

H: OK, well, do you have anything else to add?

R: Gosh, I can't think of anything. Now, my brother and my sister and my mom would all be willing to talk to you too if you needed a slightly different perspective, you know, because my brother was a

lot younger, and my sister's only two years younger, and of course, my mom's still around. And she's 77 now. And they had all said they would be willing to talk to you if you want to.

H: Great. Well, that's very nice of them. We're only able to select a certain number for the project, but if for some reason that changes—

R: You could get back to me and I could give you their numbers.

H: Sure. That would be great.

R: Because my brother lives in Florida, my sister lives in Texas, and my mom normally lives in Florida, but she spends part of her time in North Carolina. So she's over near Charlotte right now. We've spread out. Fort Lauderdale, Stephenville, and Landis.

H: Yeah. All over the place.

R: Yeah. All over the place.

H: And do you have any photos?

R: I have pictures probably of my sister and me in front of the house or something. I would have to look in my album and round up and see what I could find.

H: Well, if you happen to, you know, come across anything that shows the house, inside or out, feel free to get back with me if you'd like to share those. That would be great.

R: Oh, OK. So they're just preparing an overall history about housing and what people thought of it?

H: This is part of a larger project to document the history of this housing, Capehart and Wherry. And the oral history of former residents is one of the pieces of the project. But we did an overall history of the program and how it fit in with design and civilian suburban trends going on at the time in the civilian world and what had been happening before that, and military housing before that, and just how much of a change this was.

R: The other thing is the amount of money that the people got for the housing in that time frame. When we were in Key West, my dad's housing allotment, I think, when he retired was \$120 a month. There's no way we could have gotten a house in Key West for that. We lived practically on the water. The water – well, it's hard to live anywhere in Key West that's not by the water. But we were like across the street from the water. And down there the houses are like ranch-style duplex. And there you had – I guess you would still call it a carport because it wasn't enclosed in the front. But they built the carport in the middle of the house, and the residences went to each side from that. So you shared – when you came out to get into your car, if your neighbor was getting in their car, you would be right by each other. That really kind of gave you a little more quiet and privacy, because your house was divided by this area where nobody would be but just for a short time, usually. So that made it nice and stuff down there.

We were living there when I left for college, because we moved there in '66 and lived there until – well, I lived there until '68. I think they moved in '69. I left for college in 1968. But we liked living down there, too. I mean, we were fairly close to everything. We were near the water. You could go fishing. I mean, it was just great. (LAUGHS)

H: Wow, yeah. And do you know if that housing had been remodeled before you moved in there?

R: In Key West?

H: Yeah.

R: Gosh, no, I don't know, because I'm not even sure how old that was. We lived in Sigsby Park, but Sigsby Park had been built in a lot of phases, and the older housing was probably more like the Wherry kind of housing. The part we lived in was not. We were kind of as you – when you go into Sigsby Park, the way the road is, when you turn in, there's a lot of road going across water before you get to the housing. Because I'm pretty sure they probably dredged the land out of the ocean and put it there and then built on it. So when you got kind of, not too far after you went past the road part and across the water, and you took a right, you could go into the housing. So we were in the, like, some of the first housing as you came into Sigsby Park. The older housing, you had to go further down the road to get to it.

But our housing, like I said, was a ranch style. The carport's in the middle of the house, and then you went off to the side, so everything was on one floor. And we lived in a three-bedroom, two-bath house. And I think while we were there, we did put a fence up around our back yard, because we had a dog. Off the living room, they had sliding glass doors, and you could go outside onto a patio for a nice recreational area. And there was trees and stuff around those houses. Florida and Key West has a lot of lush, tropical kind of stuff. The yards were real nice. And I remember we did cut our own grass down there. And my dad had a boat, and sometimes he had the boat under the carport, but I think for most of it, he had the boat off to the side of the house in our side yard near one of the trees. That way, because we had – after we'd been there for a while, we got two cars, and that way, we could park one car behind the other in our driveway/carport area.

Yeah, the house was real nice. I don't know that it was remodeled. I don't know that it, you know – they probably clean and paint and whatever they need to do before you move in, because I remember it was nice. Like I said, after we got to Key West, my dad became an E-9, so he was at the top of his rates. And then he retired in '69. And he did do, like, 23, 24 years in the military. And he always said after he retired, he said, give me 10 minutes and I'll get back in my uniform. Yeah, he loved the Navy.

H: Yeah. Sounds like it. Yeah. I was just curious about the remodeling because we're trying to focus on housing that, as it originally was built. Because the remodeling, of course, adds things sometimes don't reflect the original period of construction.

R: Yeah, I'm not sure, because I'm not sure when that housing was built. I don't even know if my mom knows. I know Sigsby Park was there before we moved to Rhode Island, but I don't know that the housing that we lived in when we went back was. The old housing was like brick apartment kind of thing. But this was not. This was a ranch-style house and was very nice. We liked it. I mean, we had three nice-sized bedrooms, two full baths. I'm not sure if we had quite as much storage space as we had when we were in Newport.

But the living room was a good size. The way the living room and the dining area were, oh, gosh, when you walked in the front door, you had a latticework to your left, kind of a stone latticework. So you could kind of, you know – I think it was like concrete block with cutouts. And it kind of carried through the theme from outside, because when you were in the carport, you could kind of look into the back yard because there was a latticework right there, like a concrete-type latticework. So you come in the door, and it kind of goes right into your house. So you could see into the living room, but that



did obstruct your view a little bit. But once you went – and I'm thinking there was a coat closet or a hall closet right there. As you came into the foyer, there was a closet there.

You go to the left in the living room, and the living room and the dining area formed an "L," and the living room, like I said, part of one wall was sliding glass doors and stuff. And that went out onto a concrete area. I think we had a picnic table out there. When we cooked out, we went out there and stuff. And if you followed the "L" on around, you went into the kitchen. If you came to the foyer and just went straight, you went into the kitchen. And so the kitchen was kind of a long ways, lengthwise, you know. It was more longer. There again, I think our washer and dryer was in our kitchen.

And then there was a door. You could kind of almost go straight from the front door out the back door, I believe. If you went through the kitchen, you could go right out to the side yard, which is where my dad used to have the boat. It was out there. And then instead of – when you come through the foyer, if you didn't go left into the living room, and you went right, you went down the hall, and that's where the bedrooms and bathrooms all were.

H: So it sounds like that housing maybe was just a tiny bit nicer even than the Newport Capehart.

R: Maybe slightly more fancy. I don't remember – well, by the time we moved there, I was 16 years old. And I liked the idea of not having to go up and down stairs. (LAUGHS) You know, and our bedroom was on the end. Now, my parents took the first bedroom and – on the hallway and to the left, and we got the second bedroom. And then as you went down the hallway on the right was the bathrooms. There was one bathroom and then there was another bathroom, and then there was my brother's bedroom. My brother's bedroom shared a wall with our bedroom. So we were on the – our two bedrooms faced the street. And my parents' bedroom was the first one as you came in the house and started down the hallway. They had the first bedroom.

So, you know, it was – like I said, and we had good lighting. I think we had windows on both sides of our bedroom. I'm thinking my brother probably only had one, because his would have been kind of near the carport, so I don't think – you know, one wall of it would have been – I don't think he had a window on that side. I think his window just faced the street. I think we had a window facing the street and one facing the side yard. Yeah, it was nice. That's the only thing fancy I remember about it. And I don't even think I thought of it being fancy. You know, like I said, it's like a latticework. Instead of a wall, they had a concrete thing with kind of holes in it.

H: OK. Yeah, that sounds interesting, the little flourish there.

R: Yeah, and of course then like sliding glass doors and stuff. But you know, the different areas of the country, you've got to look at what housing was like in Florida compared to what housing would be like in Newport. In Newport, you want to build for keeping the heat in and not having to, you know, use so much on heat in the winter. And then in Florida, you want to keep it as cool as possible all the time. And so I think that was the difference. You know, patio doors is kind of a thing that in Florida they allow – pretty much all of the houses probably have them, or a good many of them.

H: OK. You didn't have patio doors in Newport.

R: No. No. Just regular house doors. We had two downstairs doors, one facing the front of the, you know, out to the street, and one off the kitchen going into the back yard.

H: OK. And I forgot to ask, was there any, was there like a concrete slab out there in the back? Any kind of a patio?

R: No. Just where the carport was, and that was all. In the yard, no. And I think my mom had like a – gosh, I’m thinking she had a clothesline out there. I know she did. And I don’t know, she may have had one in Key West, too, a clothesline. Back then, they had the – I can’t think of the – like an umbrella-type clothes thing. It comes on a pole, and you open it up, and it has lines and it forms a square. We had that in Rhode Island, and I’m guessing she may have had that in Key West also, even though we had a drier.

H: Yeah. I guess people preferred that maybe.

R: Yeah, I think they were saving energy, and in Florida, things dried real fast. My mom always was one to conserve. She still is. She believes in ecology, all that before its time.

H: That’s good. Yeah. Great, well, I thank you very much for taking the time to share all these memories.

R: No problem. I enjoyed it.

H: Good.

R: If you have any further questions or anything that I can, you know, offer anything about, feel free to call me.

H: OK, and if, you know, same thing, if you have anything to add, feel free to be in touch with me as well. And as I mentioned in a couple of the correspondences, this will be shared with the Library of Congress and the – not sure, since you’re Navy, if the Air Force, that’s one of the repositories we’re providing the information to, but it may not – I think they only want Air Force. But there may be a Navy, eventually a Navy repository that will take our Navy interviews, too. But definitely the Library of Congress Veterans History Project.

Thank you for your time, and if you have any photos as well, feel free to be in touch.

R: All right. Sure thing. Thank you. Nice talking to you.

H: And you, too. Thanks a lot.

R: Bye-bye.

H: Bye.

END

## **WARREN TREKELL**

Ms. Chris Heidenrich, M.A., a historian with R. Christopher Goodwin & Associates, Inc., conducted a recorded interview with Mr. Warren Trekell via telephone on 30 August 2006. Mr. Trekell was interviewed for a project sponsored by the Department of the Air Force and the Department of the Navy to document the history of military family housing constructed under the Wherry and Capehart programs between 1949 and 1962. Ten other former residents of Air Force and Navy Wherry and Capehart housing were interviewed. A historic context, neighborhood design guidelines, and a tax-credit brochure also were completed for the project.

Mr. Trekell worked in personnel for the U.S. Air Force from 1946 to 1974. He enlisted as a private and retired as a senior master sergeant. Mr. Trekell resided in Wherry housing at Keesler Air Force Base, Mississippi, from 1951 to 1955 and at Patrick Air Force Base, Florida, from 1960 to 1962, while holding the ranks of technical sergeant and master sergeant. At Keesler, Mr. Trekell, his wife, and their children lived in two houses, both one story: a one-bedroom duplex with a kitchen, living room, and bathroom, with one child; and a two-bedroom duplex with a kitchen, living room, and bathroom, with two children. At Patrick, the family – increased to three children – lived in a detached, one-story, four-bedroom house with a kitchen, combined living room/dining room, two half baths with shared tub/shower, and a garage.

CHRIS HEIDENRICH: This is Chris Heidenrich from R. Christopher Goodwin & Associates interviewing Warren Trekell on August 30, 2006. OK. And if you wouldn't mind just acknowledging that you're aware that you're on tape.

WARREN TREKELL: Yes, I know you're taping me.

HEIDENRICH: OK, great. Thanks. Well, first of all, I just want to say thank you very much for taking the time to speak with me about your experiences in your Wherry housing. And it will definitely add to the Navy and the Air Force's understanding of residents' perspective on this housing, so thank you. I want to get some biographical details out of the way first. I can't remember what you had said. Did you ever receive our paperwork with the release forms and everything?

TREKELL: Yeah.

H: Is it possible to mail that back to us, if you could just sign those?

T: I thought I had. Either that or a deep hole has grabbed it.

H: Well, I'll look through my files again and see if I somehow missed finding it. If I don't find it, I'll just mail you another copy. I'll be happy to do that, with a return envelope inside.

Well, first of all, how many years were you in the service, what years to what years?

T: I was in from July of '46. I was active duty. July of '46 until July of '74.

H: OK. And then what was your rank when you lived in the Wherry housing. I guess that would at Keesler Air Force Base, '51 to '55.

T: Yeah, I was at Keesler and...

H: Patrick.

T: Let's see, I believe I had just made tech.

H: So that would be a tech sergeant?

T: Mm-hmm.

H: And then at Patrick from '60 to '62, were you still a tech sergeant?

T: No. I was a master sergeant then.

H: What was your career field during your service?

T: I was a personnelist all the way.

H: Say that again?

T: Personnel.

H: Personnel. OK. And did you enlist just at the beginning of the enlistment ladder there, or where was your rank when you enlisted?

T: Everybody's a private when they enlist. Everybody. They have no rank. I was called active duty because I was in the reserves. The Army was sending me to college from '45 to '46. I was in the reserves, and I was called to active duty in July of '46.

H: And then, let's see. So you lived in Wherry housing at Keesler Air Force Base '51 to '55, and then again at Patrick Air Force Base 1960 to '62. Now I know you also lived in Capehart housing at Clinton-Sherman from '65 to '67, but our period of interest is the period where you lived in those two Wherry developments, so I think we'll focus on that. But did either of those two housing have a name, like a subdivision name, or was it just referred to as the base housing or Wherry housing?

T: Well, I was in two different ones at Keesler, and one of them was on base and still exists today, or it did until the last, until Katrina. I don't know. And the other one was off base, and it seems to me like it was the Howard, the Howard Street – no, it's not Howard, because Howard, I think, is the name of the main street. You're talking about a long time ago. It was off base about three or four blocks. And after that, they built a bunch more west of Keesler, a mess of them, but I wasn't involved in any of those.

H: OK. So no specific neighborhood name at Keesler or Patrick.

T: No, no. Just (inaudible).

H: OK. And the type of quarters in Keesler and Patrick, the Wherry housing, was it duplex or single-family detached, or how would you describe them?

T: At Keesler, it was duplex, and at Patrick, I had, well, it was mixed units there, but I had one all to myself. It was a three-bedroom, and the three bedrooms were a unit unto themselves.

H: OK, so just like a house, detached house.

T: Yeah. Across the street were duplexes.

H: OK. And then what rooms were in each of them? How many bedrooms, you know, kitchen, living room, dining room, et cetera?

T: Well, let's see. In the first one, there was a kitchen, living room, bedroom, and bath.

H: How many bedrooms?

T: One.

H: Oh, really?

T: In the first one. Then when the kids, when more than one – when the second one arrived, I was upgraded and moved over to a two-bedroom house.

H: OK. Same, kitchen, living room.

T: Only it had two bedrooms. Now the other end of the duplex, in the one-bedroom, had three bedrooms.

H: Say that again?

T: (LAUGHS) The other end had three bedrooms.

H: Oh, OK, the other side of the duplex.

T: Yeah. So, it was just a matter of how they placed a wall at times, whether they had two and two or one and three.

H: I see. So then, the first one at Keesler had a one-bedroom.

T: One bedroom.

H: And then the second one at Keesler had two bedrooms.

T: Had two.

H: And then when you moved to Patrick later, three bedrooms.

T: I had three, and it was by itself. Different plan.

H: OK, and did they all have dining rooms?

T: No.

H: Oh, OK. So there was like – you ate in the kitchen.

T: Yeah, at Keesler.

H: OK. No dining room. For both of them at Keesler.

T: At Patrick, it was one big dining/living room, like a great room. And on the one side at the doors leading out to the screened patio porch was where we put the table. And it was possible to – it had a counter that split the little kitchen from the great room that you could put stools up to and eat there.

H: Oh, OK. Now, at Patrick, how many bathrooms did you have?

T: OK, now this is nice. You had a three-room unit of which there was a half bath and a half bath at each end, and then the center was a tub/shower. And you could enter from the hallway into the – let's see, OK. You could enter from the hallway into one of the bathrooms, one of the half baths, into the shower, and you entered from the master bedroom into one of the half baths. But they had doors then between the two half baths and the bath.

H: Oh, how interesting. I hadn't heard about those before.

T: Yeah, it was an interesting use of space. It gave you the two baths for privacy, but you also had a – you only needed one bathtub.

H: Oh, yeah. That makes sense. And who was in your family at the time? You had a wife and how many kids for each?

T: OK. At Keesler, a wife and one kid, and then two kids. And at Patrick, there was three. I had to think there because the fourth one was generated down there.

H: OK, so the fourth kid didn't – wasn't there yet.

T: Later on. She never got to enjoy Patrick.

H: What type of housing did you live in before the Wherry housing at Keesler, and how did it compare to the Wherry housing?

T: Let's see. Right after we got married, we moved to Biloxi and to the second floor of an apartment house. Old house. It had been upgraded into many rooms, and I guess there was about four families in the various levels.

H: OK. What was that like?

T: Oh, it wasn't bad. For a first time, it was pretty good. There was enough room, and the apartment had a bath and a kitchenette and kind of a living – you've got to remember, that was poor times, too. (LAUGHS)

H: What's that?

T: That was poor times, too.

H: Yeah, yeah. Right after the war.

T: Well, yeah. Korea broke open just a little bit after that.

H: And so how did that compare to the Wherry housing that you moved into?

T: Oh, the Wherry was much better. The end of a house on ground level that was my own, and brick, and plenty of room. And nice-size kitchen. The kitchen was a nice size.

H: Oh, really? It had enough space?

T: Yeah, it was a fair-size space.

H: And now you said the first one you lived in at Keesler had only one bedroom, but you had a child with you, right?

T: Well, he was born there.

H: OK. So when you moved in you didn't have...

T: Yes, I did have him. Yes, he was – I'm having to remember just about – I guess maybe he was about, because we lived at her mother's for a while, and then I got the housing. And I guess he probably was two months old or something, about that size when we got in there. And of course, the bedroom was big enough for a bed, our bed, and his crib, and dresser, and everything else.

H: OK, so it was big enough to accommodate a crib.

T: Yeah.

H: Oh, that's good. OK. So then it sounds like the Wherry was better than the apartment that you'd been living in.

T: Oh, definitely.

H: An improvement. OK.

T: Better concept, because you were, you had been upgraded.

H: Yeah, sounds like it. In general, did you folks like living in the Wherry housing?

T: Yeah, it was very interesting. Your neighbors were like you. And some of your working neighbors lived close by, and you could visit. The Wherry there, the cars had to be parked down the street, because the units were platted in a U-shape with a big common area, yard. And let's see, now at the first place, I was only about, oh, 30 or 40 feet from the car. It wasn't too bad. In the second one, about half a block.

H: Now, was this where – did you just park on the street, or did they provide a...

T: Yeah, yeah. It was strictly on the street. Now remember, this is – one, this is Mississippi, and you didn't, it wasn't absolutely necessary to have a garage. And it was the first shot at housing like this, because the housing it replaced was – you've heard the term "shotgun housing."

H: Uh-huh.

T: OK. It was on base, but it was shotgun housing. No, I won't say that. It looked like it, but you go inside, and it would be a lot better than what it looked. But that was also the kind that was torn down. In fact, some of it was even converted barracks.

H: Oh, really?

T: Yeah. Yeah. They had taken barracks and turned it into, seems like it was two apartments to a level, so that one barracks, old barracks would be four apartment. That's the kind of thing that that replaced, Wherry replaced.

H: I see. And so did the Wherry housing meet your family needs, and did you folks feel comfortable in the housing?

T: Oh, yeah. Yeah, the only thing it didn't have that later housing did have was air conditioning. And AC was just coming on, and you looked with envy at a neighbor over there that didn't have any kids, and money like yours, and he had a window unit.

H: Where they were able to afford to purchase a window unit.

T: You'd sneak over and visit once in a while. (LAUGHS)

H: Definitely. Do you know – go ahead.

T: In Mississippi, you needed the AC because it was hot and humid.

H: Oh, sure. Yeah. Do you know how your Wherry housing compared to housing in the civilian sector?

T: It was much better at that time.

H: You mean like it looked better?

T: Well, yeah, it even looked better, because these were brick houses. And in an area of frame construction. Have you seen pictures of Biloxi after Katrina?

H: I'm sure I have.

T: I mean, there was nothing. Those areas were loaded with houses, and they were wiped out. I mean, they were that kind of construction. They were gone. All that was left was a concrete slab.

H: Oh, yeah, I just heard about that on the radio yesterday, that just strictly concrete slabs.

T: It's hard for me to imagine – well, I wouldn't want to go back – I went through that area after the one in '69, and I couldn't hardly believe some of the things that disappeared. Well, Katrina, even more disappeared.

H: Yeah. I've heard some people say that they were able to use their housing allowance to pay for their rent in their Wherry house, but the housing allowance would not have covered enough of what they needed to live in a civilian house.

T: Well, I don't know about – I think, let's see. I'm having to think what it was. OK, I made tech sergeant, and that was one of the reasons I was able to move up to that. My housing allowance at the time was, I think, \$67.50. It doesn't sound like much, does it? It was \$67.50, and I believe it was \$57.50 for the rent, and that included, they paid water, electric, and gas. And that was very



reasonable, so that left, if you're big enough that you wanted to go out and get a telephone, why, that'd take care of that, too. But we didn't have phones in quarters in those days.

H: Oh, really? How did you...

T: No, that was just something you didn't have. You just weren't accustomed to having it. If they wanted you, they sent somebody after you.

H: Well, you were close enough, I guess. Yeah, that makes sense. Did the housing provide enough space for your family, I guess both of those at Keesler?

T: Well, seemed to. It's not like today. You didn't just have a world of possessions. I mean, I'm trying to – you didn't need a lawn mower. If you wanted a spade, you built a little shed and put it behind, and put garden tools in it, if you wanted to. But the base had a mowing team that went around and mowed all those areas.

H: OK. This was at Keesler?

T: Yeah. And let's see. What did we have at Patrick? That had a garage. I had a mower then.

H: OK, so you had a garage at Patrick.

T: Yeah.

H: Was that a carport?

T: Oh, no. No, no, no.

H: It was a garage.

T: Because, see, we were only about six blocks from the beach, and you had a lot of heavy salt air. And so all those places had a garage.

H: I see. To protect your car.

T: Yeah.

H: I see. And was that garage attached to your house?

T: Yeah. Yeah, the utility room was, with the AC unit, and the place for the washing machines and the freezer, it was in between the garage and the house.

H: I see. So it sounds like your Wherry housing at Patrick had been remodeled.

T: No.

H: It hadn't.

T: No. They started building that base, building it up – I'll put it that way, because it was a Naval air station during World War II – when it came into prominence for the missile program. And that started

– let's see. We went down there in '60. And I think we were probably the second family that had been in that house.

H: Well then maybe that housing was the last, one of the last Wherry projects.

T: I think it was. I think it was. And it was very well built. They had to dredge up the land. It had been old – I'm trying to think what kind of – if it was out in the southwest, it would be sagebrush land, but it wasn't down there. Palmetto land, that was what I was thinking of. Because that's what it was just on the other side of the brick fence we had across our back yard. You go down there today and it's solid houses and stores and everything there for the next ten miles. It wasn't then.

H: So you're sure that the Patrick housing was Wherry that you lived in, and not Capehart.

T: Yeah, yeah, yeah. Because that was the Old Galley Wherry housing, Old Galley being our post office. Or south Patrick. It had a lot of different names.

H: Did your family members have privacy within the house? It sounds like your kids were pretty young and maybe didn't need as much privacy, but did you and...

T: In the second house, the kids, being very young, had their own bedroom. And at Patrick, yeah, there was three kids and three bed – I said three bedrooms. That was a four-bedroom house.

H: Oh, that was a four-bedroom.

T: Yeah. The master and three across the north end.

H: Oh, OK. So each child had their own room.

T: Yeah.

H: OK. So everybody had enough privacy within all the houses that you lived in, the Wherry and Capehart – I mean, the Wherry?

T: Yeah.

H: And where was the closet and storage space? Was it – did each bedroom have a closet?

T: I have to go in there and wake my wife up. (LAUGHS) Yeah, yeah, yeah, they did. Not big ones. I'm thinking down at Patrick. Let's see, we had a small closet – yeah, they had small closets in the Keesler ones.

H: And was there any other closet or storage spaces in the houses, like maybe in the foyer?

T: There wasn't any foyer. You walk right into the living rooms in all of them. Oh, now, wait a minute. Patrick's a little different. Let's see. You came in – yeah, there was a – you came in and turned to the right and you walked into the great room. Straight ahead, you walked into the kitchen area, and to the left was down the hallway, and then dogleg and down the other hallway. And there was a small hall closet.

H: OK, and this was at Patrick?

T: Yeah.

H: But no hall closets or other closets in Keesler, besides the bedrooms.

T: No, no. No, they weren't terribly big units, and they made you use what they had.

H: So there was no other storage space then at Keesler, like outside or anything like that?

T: Unless you provided it yourself.

H: Oh, you could build? I think you mentioned building a shed.

T: Yeah, yeah. You could build a small shed.

H: But at Patrick, you had a storage room with the washing machine.

T: Yeah. It was a connector between the house and the garage, and, well, that's where the air conditioning unit and the water heater and everything else because, see, everything was ground-level. And they stashed it in that area. It was just a walk-through. It had enough room in it there. That was a good – there in a hurricane, that was where the barbecue unit was doing some cooking because the electricity was out, and you didn't have gas. Everything was electric at Patrick.

H: So you lived through a couple hurricanes down there?

T: Well, I went through one. We got to see Donna.

H: Oh, OK. Did you think that both at Keesler and Patrick that the housing and the neighborhood were good places for children to live?

T: Oh, yeah, because there were lots of other children running around there, too.

H: And it was adequate for children? It provided enough play space?

T: Oh, yeah. Like I said, well, at the first house at Keesler, too small. Don't know. The second one, it was like a big, humungous yard. I said the units were U-shaped. I mean arranged in a U. But between the left and the right one, maybe over 100 feet. So that made for a big yard for a lot of community playing.

H: Oh, I see, sort of like a common back yard behind each unit.

T: Yeah. Well, a front yard and back yard. And I know they played together because I caught the mumps, and I know the kids brought them home, because I didn't make contact with the people in the area that had it. (LAUGHS)

H: Was there any playground space provided in the developments?

T: They didn't have money for things like that then, so, no. Today's bases would have it. But not then.

H: And were there sidewalks? I mean, was it safe to have kids outside playing?

T: Yeah, there were sidewalks.

H: And one of the objectives of this housing was to provide an open floor plan to create this feeling of spaciousness and allow people to congregate easily. Did your housing succeed in this? It sounds like you had the combined – well, you didn't have a dining room in the Keesler houses, but the combined living room/dining room, I guess, at Patrick sort of had that.

T: That unit had a high-hipped, I guess you – yeah, cathedral is the word for that so-called great room. It had a south exposure on it and you had alternating glass and louvers, sections that were, oh, about three, they were about three foot, I guess.

H: Are these the windows? Windows you're talking about?

T: Yeah. But think of a window that runs from the floor all the way up to the top, to a cathedral-type ceiling. It got kind of high at one point. And, oh, yeah. During Donna, I saw that wall bow in about three inches from some of the gusts. If you looked down there, you'd say, oh, look there. (inaudible)

H: Wow. So that was at Patrick, the cathedral.

T: Yeah. But there was enough room in there. Heck, even when you put the Christmas tree up, there was plenty of room.

H: Did you like that, that open floor plan?

T: Oh, I lost you there for a bit.

H: Oh. Did you like the open floor plan?

T: Oh, yeah. We were so happy to have a house like that.

H: What did you like about that?

T: We had lots of room. The kids had lots of room. That house also, like I said, had a big screened patio porch. You could go out from the great room or from the master bedroom. Like I said, it was screened because that's mosquito country. But if you wanted to have a lot of lawn furniture on it, it was a good place to sit in the evening, too, when it cooled down.

H: That was big enough for a picnic table?

T: Yeah.

H: OK. Now, I forgot to ask you, in all your houses, was it one-story or two-story?

T: All those were one story.

H: OK. Keesler and Patrick.

T: Yeah.

H: OK. And so did the Keesler housing have any patio space in the back?

T: Only if you went out on the grass.

H: OK. So they didn't provide a concrete slab or anything.

T: They were not into that kind of thing then. They were so happy to provide the houses. You know the money just provided the houses. They didn't have enough for AC, well, they didn't know what AC was, except down in the classrooms. And they had to have it in the classrooms. I can remember those radio operators when they were going to school in the hangars, and they had both doors open, and it was still hot.

H: Well, I bet that was unpleasant. So, how much did the houses and the neighborhood design contribute to a sense of community in the neighborhood? I know that also another contributor was that you were all in the same boat and you all were doing similar jobs and, you know, were serving similar purposes. But did the housing and the neighborhood design contribute to any sense of community?

T: Oh, yeah. Well, like I say, you made friends with the people all around you. You had to. If you didn't, you might get run out. They might go to the base commander and say, hey, we want him out of here. He doesn't get along. That kind of thing.

H: So I guess the housing was pretty close together. I mean, it's not like these huge wooded lots like you would find today. So that probably contributed to...

T: Well, yeah, let's see. You'd probably have 25 feet between units, between the ends of units, I'll put it that way. And let's see. I'm thinking of the second place that – there was our unit on the right side of the U. Ours was down at the end. There was that unit. And then there was another unit. There was three units on a side. So there were six families on that row. And was it one or two units across the end? Seems like it was one.

H: So then your – at Keesler, the first building you lived in was a duplex, but the second one, it sounds like...

T: It was a duplex. Both of them were duplexes.

H: Where there was two units per building?

T: Yeah.

H: It sounded like you were saying there was three or four –

T: Well, I'm thinking of the number of the buildings. On the side we were on, there was three buildings. There were six families there.

H: Oh, within your immediate vicinity.

T: And then across the end, there was probably, trying to remember whether there was one or two buildings. I think it was one now. So there was two families there. And then right across the way from us, there was another six families.

H: I see. OK. And you said one of the neighborhoods was in a U shape.

T: That's the one. And that particular one there, there was 14 families there on that U.

H: OK. So then it sounds like the streets were maybe – were there curving streets, and it sounds like there was cul-de-sacs?

T: They were curving. I don't recall any cul-de-sacs. And on the base, there were strictly squares. They were built on existing square blocks.

H: So you mean when the housing was on the base, it was in squares.

T: Yeah.

H: And one of these at Keesler was on base, and one was not on base.

T: Yeah.

H: And Patrick was not on base?

T: No, no. It was an area that was two miles south of the base.

H: OK. And how would you characterize your level of privacy in reference to the neighborhood? Did you feel that you had enough privacy within the neighborhood? I mean, somebody was saying yesterday that their wall was thin enough where they could hear the neighbors.

T: No, ours was better than that, but mind you, down at Keesler, we didn't have AC, and so you had a lot of open windows. And if you had a loud one going on someplace, you knew about it. (LAUGHS)

H: (LAUGHS) You knew who was having problems.

T: Right.

H: But did you generally feel that you had enough privacy, or what's your assessment?

T: Oh, yeah. All you had to do is just keep your mouth shut. Not get loud.

H: And the outdoor space. Did you feel that you had enough outdoor space?

T: Oh, yeah. Well, of course, my kids were young, very young, down at Keesler. Well, in the second house, when they were old enough to play outside, yeah, they had a ton of space.

H: Now, were the back yards fenced in any way?

T: No. At Patrick, the only fence we had was our back fence, and that was a concrete-block fence about four feet high.

H: That was fencing your individual property?

T: No, it was just fencing off the government property from whoever's land on the other side. But in between the units, no, there were no fences. I could still remember my dog would chase other dogs across our back yard and to that invisible line, and she'd stop at the halfway point. (LAUGHS)

H: Oh, very well-trained.

T: Well, dachshunds, female dachshunds are very – they like their territory. Possessive. But she would take a collie or a big shepherd right across the yard if they were passing through, and give them a “don’t stop here” sign.

H: Territorial.

T: Yeah, very. No, there was no fencing in between houses.

H: You mentioned the cathedral style at the Patrick house.

T: Just on the four bedrooms.

H: OK. Did you have enough views of the outdoors from the indoors in all these houses?

T: (LAUGHS) You had a lot of view in that one.

H: What about in the other two at Keesler?

T: Yeah, windows was one thing that they had plenty of – well, of course, the bedrooms only had one window, but the living room seemed like it had about three.

H: OK. And so did you feel you had enough windows in general?

T: Oh, yeah. Well, you needed the windows there to open up so that – oh, I said they didn’t have AC, but they did have a ceiling fan – not a ceiling fan, an exhaust fan in the hallway. And it drew air in, and that’s one of the reasons the windows were open, and you had more windows.

H: And did you have any landscaping in any of the houses? Bushes near your house or any trees on your property?

T: Well, you had tons of pine trees down at Keesler. In fact, I had one just outside the living room at the first house, and I shinnied up it and nailed my TV antenna to it. (LAUGHS)

H: Wow. That’s ingenious.

T: And yes, we had trees. They had these pine trees, probably 60 feet tall.

H: Oh, so those were sprinkled throughout the development and on your property as well.

T: Well, yeah, they were there, and they just never cut them down.

H: OK. Did you have any shrubs or bushes?

T: Seems like there were some, but you didn’t – Uncle didn’t have a lot of money for shrubs for those first houses. At Patrick, yes, we did, because I can remember the kids playing through the bushes on the north corner of the house. Playing with the ones across the street, coming over there.

H: I see. Yeah. And would you characterize this – in all the three areas that you lived, would you characterize those as suburban environments?

T: Oh, yeah.

H: So, did that make it appealing? Did that add to the appeal at all?

T: Well, yes, because it was a different world. For instance, at the first area at Keesler, it was a different world from one block over. It was a totally different world. There, I was three blocks from work. And like I say, it was a different world.

H: You mean when you came into your neighborhood from the rest of the base?

T: Oh, yeah, because the rest of the base was lots of troops, and there it was just families.

H: I see. OK.

(PHONE CONNECTION CUT, INTERRUPTING INTERVIEW)

H: Turning the tape recorder back on. Let's see. Where were we here? My next question was going to be about economizing. The housing reflected the government's desire to provide housing that was not excessive or too costly, and I was wondering if you saw evidence of that, of the government's attempts to economize.

T: Well, they used a common plan. And yeah, well, and judicious use of space. And well, it was so much better than what we had, it didn't look like economizing. But for Keesler to go to brick housing, that was a big step. Then again, when you stop and think about it, it cut down on (inaudible) termites, and everything else. Termite maintenance down there was one thing that they had to worry about.

H: So, did you see any other examples of economizing, like use of particular types of materials.

T: Well, like I said, the brick was long-lasting. Because I have visited, let's see, I was on TDY at Keesler.

H: You were on what? I'm sorry.

T: Temporary duty. When I was up here at Scott, I went to a lot of places as a civilian to meetings. And Keesler was one of the places they held the meetings. And drove by my old house, and it was still there. Still a good-looking area. In fact, it was just a block over from where I was staying. I didn't realize that kind of building had gone on. They built a base hotel just a block away.

H: Do you remember anything in particular about the physical features of the houses you lived in, these three houses, aside from what you just mentioned about the brick? Was there any other physical features that you recall, like wood floors or, you know, anything like that?

T: Well, yeah, there was hardwood wood floors.

H: Oh, at all three?

T: No. Down at Patrick, we had, seemed like it was inlaid tiles. Yeah, it was. It was inlaid tiles.

H: At Patrick?

T: Yeah. Easier to keep clean.



H: And wood floors at Keesler?

T: Yeah.

H: OK. Any other physical features that stick out in your mind of either, any of the housing?

T: Well, all of them were on concrete slabs. I can remember the heating in the Keesler housing. It was a glass tube heater on the wall, and radiant – yeah, glass tube radiant heating. Fire went up through it, and it got hot, and man, it would radiate like mad. Well, I had tonsillitis at one time. I got into alternating chills and fever. And sometimes, I couldn't get any closer to that heater unless I crawled into it to get warm, and then other times I was so hot, I couldn't get far enough away from it. I can recall that. I'd forgotten that heater for a second.

H: Anything else? Some people mentioned, maybe there was a little architectural detail.

T: Well, they were just rectangular brick houses. And those get pretty common. Now, the one at Patrick, it was not brick. It was concrete-block, I believe. But it was arranged nicely. And the fact that they had used that area between the garage and the – I just remembered one family down the way with 13 kids. Yeah. I was at the hospital at that time, and he was over, worked over in the dental clinic. And yeah, they had – and they turned the garage into a bunkroom for the boys. Put plywood up on the screened porch. They were allowed to plywood it up, and some of the girls turned that into a bunkroom, too.

H: Oh, boy. They could have just moved back into the barracks. Very interesting. Well, what physical features of the housing did you like, and what did you dislike?

T: Well, Keesler, sure would have liked air conditioning. We did have it at Patrick, because we had the heat pump. And it adequately cooled you in the summertime, but times in the winter, it wasn't enough. Because it could take care of 15 degrees, and I remember 32 degrees on Christmas of 1960.

H: Oh, that's pretty cold for down there.

T: Yeah, it was. (LAUGHS) And I went fishing. But yeah, it was 32, and you could only get about 45 to 47 degrees in that house, so it was a cold time there for a day or two.

H: Now, your, the two experiences at the two installations were definitely at the front and back ends of the Wherry housing program. And so I was wondering if you could offer general comparisons of the two experiences at Keesler and Patrick.

T: Well, of course, being the kids were all a different size, that made a big difference on the experiences. But early on, that was totally adequate. Later on, it was totally adequate, too. So I really can't argue there. And going into the Capehart we had out at Clinton-Sherman, that was totally adequate, too, so I don't know.

H: So it just happened to all come together to meet your needs at the particular time of your life that you were at, where the Keesler, even though it seems very spare today, it just was what you needed at that time.

T: Yes, yes.

H: I see.

T: And any, the young ones that get into those – well, those one-bedroom houses today, it would be good enough for their needs, probably. But I imagine that there's been some things added on to the back sides of those. You know, like some of these small storage sheds the government buys up now from time to time, that I'll bet they have it today.

H: Yeah. So was the Patrick house generally nicer than the other two as far as just kind of the quality of the materials or just the general...

T: Well, the fact that it was a four-bedroom, by itself made it totally different. Because you went right across the street, and there's duplexes over there of two and three bedrooms. And although those were pretty nice over there for the people that had them. I just had more kids and got a bigger house.

H: Was this housing, both at Keesler and at Patrick, would you call it attractive, or how would you describe the appearance?

T: Oh, yes. Even today, if you took a picture – well, I don't know about the Patrick now, because my daughter was down there within the last year, and went by, and she had never got to live there, but she took some pictures and then described it, and everything had changed. But I've seen in the later years the Keesler, and you could still take pictures, and it looked like a storybook back there. With those big trees all around, and you take a picture, it would still look nice.

H: So the housing at Keesler, both of those were brick. And did you say the Patrick housing was brick, too?

T: It was concrete block.

H: That's right. Concrete block.

T: Concrete block and stuccoed a little on the outside. And it didn't make – well, built more for the hurricane season. You see more of them in Florida than you do in Mississippi. Although '49 and '69 and '04 – or '05, they had some humungous ones out there. Because in '49 there was one tore up Biloxi, and in '69, there was one tore up Biloxi, and in '05 destroyed Biloxi.

H: So even the brick, I guess I don't know if the housing is still standing.

T: I'll bet it's still there.

H: You think so?

T: Yeah. It's other parts of the base that got hurt.

H: OK. Well, do you have anything else that you'd like to add? Any other general comments about anything?

T: Well, my response has been mostly on your prompting here and there on something you wanted to find out about. So I don't know.

H: Any general comments about your impression of the housing, you know, your opinions of it, anything like that?

T: Oh, I was terribly happy to have it at the time, because what was available out there otherwise, no. It would cost a lot more, and definitely good for the money I was making at the time.

H: Well, that's good.

T: Because I've added up my pay back then. Current times, and – let's see, what was it? I sat down the minute we got married. I think I was getting \$348 a month, and I was a staff sergeant, older staff sergeant. And NCOs got paid more money. But \$348. No, wait a minute. I said \$348? No, \$248. So, not very much money. You bought a car and that was about it. And it was a used one at that.

H: OK. Well, do you happen to have any photos of any of these three houses?

T: No, I sure don't.

H: Well, if you happen to stumble on something, we'd love to – if you'd be willing to share it with us, we could always scan something here at the office and get it back to you, or...

T: Or if somebody's down at Patrick, take a look at 100 South Pine.

H: OK, 100 South Pine, OK. Well, I thank you so much for your time, and if you think of anything else that you'd like to add, feel free to get in touch with me.

T: OK.

H: Thank you very much.

T: Well, I'm happy to be of service.

H: OK. Thank you. Take care.

T: Bye.

H: OK, bye.

END

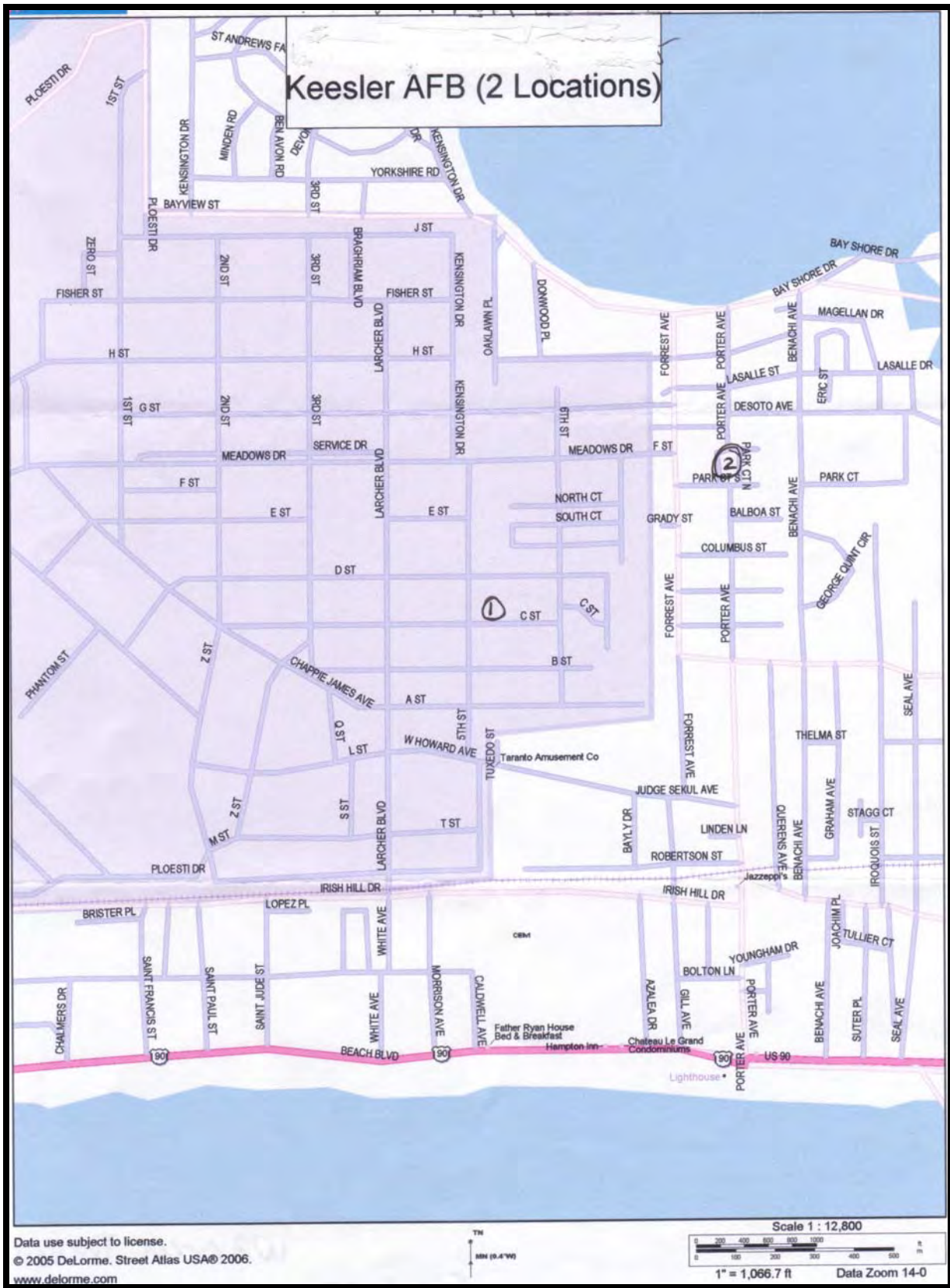


Figure L.10. Map showing two locations of Wherry housing at Keesler Air Force Base, Mississippi, where Warren Trekell and his family lived from 1951 to 1955. (Courtesy of Warren Trekell)



Figure L.11. Map showing location of Wherry housing at Patrick Air Force Base, Florida, where Warren Trekkell and his family lived from 1960 to 1962. (Courtesy of Warren Trekkell)



## MARY L. WAXLER

Ms. Chris Heidenrich, M.A., a historian with R. Christopher Goodwin & Associates, Inc., conducted a recorded interview with Mary L. Waxler via telephone on 28 August 2006. Ms. Waxler was interviewed for a project sponsored by the Department of the Air Force and the Department of the Navy to document the history of military family housing constructed under the Wherry and Capehart programs between 1949 and 1962. Ten other former residents of Air Force and Navy Wherry and Capehart housing were interviewed. A historic context, neighborhood design guidelines, and a tax-credit brochure also were completed for the project.

Mary L. Waxler was the daughter of a U.S. Air Force non-commissioned officer in charge at a survival equipment shop, who later was a first sergeant with a missile wing headquarters squadron. She, her parents, and her two sisters resided in Capehart housing at Little Rock Air Force Base, Arkansas, from 1958 to 1964 while her father was a master sergeant. The Waxler family lived in a one-story duplex consisting of three bedrooms, one bathroom, a living room, and a dining area. A carport was attached to the unit.

CHRIS HEIDENRICH: This is Chris Heidenrich from R. Christopher Goodwin & Associates interviewing Mary Waxler on August 28, 2006. All right, and if you could just acknowledge that you're being recorded, that would be great.

MARY WAXLER: OK. When, now?

HEIDENRICH: Yeah.

WAXLER: OK. I acknowledge that I'm being recorded.

H: OK, great. Thanks. Well, first of all, I just want to say thank you very much for participating. Glad to be able to get your perspective on living in this housing, especially a younger person, and feel that's important, too.

W: You're welcome.

H: I wanted just to clarify or make sure that we have the correct, some bibliographic – biographic information for you. Your father was in the Air Force. And do you recall what rank he was when you lived in this housing?

W: Well, when we left base housing, he was an E-7, and we lived on base for six years, so I would probably say he was E-6, E-7 when we lived there.

H: OK, that's fine. It kind of just gives us a general idea of the type of housing that you might have had access to. I guess that would be a non-commissioned officer.

W: Right.

H: OK. And what was his career field during his service?

W: He was an – well, prior to us living at Little Rock, he was in aircraft maintenance. And then when we moved to Little Rock Air Force Base, he was in the fabrication shop, and later became a first sergeant of a squadron.

H: OK, great. And then as you just mentioned, it was at Little Rock Air Force Base, Capehart housing, from '58 to '64, right? OK. And you were between the ages of 6 and 12 years old?

W: Yes.

H: OK. And did your housing area have a name, like kind of like a subdivision?

W: No.

H: Just referred to as the Capehart housing?

W: Well, yeah, just base housing. They just had two parts on base. They had NCO and officer, and there was a clear dividing line, if you will, with one of the divided streets and a lake on base, and officer housing was to one side, and NCO the other, so just NCO housing is what it was referred to.

H: I see. OK. And then, so you were at the NCO housing?

W: Yes.

H: OK. And is it, it was a duplex, right?

W: Yes.

H: OK. How many stories was that?

W: One.

H: OK. One-story duplex. And you said that it was three bedrooms, one bath, a kitchen, living room, a carport and storage room, and then another storage room.

W: In the back.

H: OK. Separately? Attached to the house?

W: Attached to the house. One was attached to the carport, and then one was attached on the back of the, actually on the back of the carport, but the door was off the back patio into it. It was on the same wall as the storage room that was on the carport. Two different rooms, two different entrances.

H: Oh, wow. OK. All right, well, to get into the questions here, first of all, what kind of housing did you live in before you lived in this housing, and how did it compare to the Capehart housing?

W: Well, the house we lived in when we first got assigned to Little Rock, because the housing on base wasn't quite ready for people to move in yet, was very small, just a little, gosh, tiny little wooden house. It was a rental. I don't recall having a carport. I remember in older years my mom, you know, driving by and saying, that's where we lived when we first got here. And it was just a small, I mean, it probably wasn't 900 square feet. It was tiny.

Now, prior to that, we lived in Alaska at Eielson Air Force Base. And we lived in base housing up there. And so we went from that base housing in Alaska down to Arkansas, and we were off base just a few months, not long, maybe four or five months, and then moved into base housing.

H: OK. Now, was the Eielson housing, was that Capehart or Wherry?

W: You know, I don't know. I remember it was two-story with a basement, but I don't know.

H: OK. And how did that housing compare, if you are able to remember that, since you were so young?

W: I don't really remember. I mean, I remember that it was – all the bedrooms were upstairs. The living room, kitchen, and dining room were downstairs. And then it had a basement downstairs, which is where we had a washing machine. I remember that. We had the old ringer washer. And that was downstairs. But as far as the layout or, you know, amenities, I don't remember that one.

H: OK. Do you remember whether it was comparable to the Capehart housing at Little Rock? It sounds like it was, sort of.

W: Yeah, yeah. I mean, it had three bedrooms, because there were three kids, and two of us shared and one had a room to their selves and my parents had a room. So it was, you know, three bedrooms, living room, kitchen, dining room. Now, the housing at Little Rock, it was a living room/dining room combination. You know, it was sort of like an abbreviated "L" shape, if you will. And so the dining room was, you know, kind of really was part of the living room. And I don't recall the layout in Alaska.

H: OK. Did your family, and you in particular, in general did you like the Capehart housing? Did everybody like living there?

W: Oh, yeah. Yeah, I mean, it was – we enjoyed the house. I recall when we first moved there, and this may sound funny, but you know, we would have a thunderstorm, and the wind would just howl terribly through the door jambs because there wasn't really weatherstripping in those days, if you will. And so every little crack, the wind would howl, and we would take a towel and roll it up and put it by the door to keep the wind from a bad storm from howling through. But yeah, it was comfortable. I mean, we had air conditioning, and in the South at that time, a lot of people didn't. You know? So it was very comfortable. I think the rooms, you know, were comfortable. I mean, you know, my sister and I shared a room. It was fine.

H: You both felt like you had enough space in your room?

W: Yeah.

H: OK. Oh, and so just to clarify, there were three of you, three of you siblings and your parents.

W: Yes.

H: OK. And where did you fall into that age range?

W: I was the youngest.

H: OK, so the other two kids were older than you.

W: Yes.

H: OK. And so everybody felt generally comfortable living in the housing, and there were no...



W: There were no – you know, not that the walls were thin, but, you know, you could occasionally hear a neighbor bump his furniture. The bedrooms were connected in the duplex, and so if someone were in the bedroom yelling out to someone in the living room, maybe, you know, like from one end of the house to the other, you might hear a voice. But, you know, it wasn't – and of course, you know, every time somebody PCS'd [moved to another base after receiving Permanent Change of Station orders], you had new neighbors. You never knew if you were going to get quiet neighbors or not. We were lucky in general. (LAUGHS) Not a lot of complaints there. But, you know, that was probably maybe the only complaint.

H: So then, you mean from the neighboring unit or from...

W: Right, yeah. But I mean, generally, you know, people are in the bedrooms in the evenings. Like, if we were in our living room, we couldn't hear them in their bedroom or in their living room. But if we were in the bedroom the same time they were in the bedroom, and somebody in their bedroom bumped a piece of furniture, we would hear it. Or if somebody from the bedroom yelled from one end of the house to the other, and we were in the bedroom and they were in the bedroom, we would, you know, you would hear it. Maybe not hear what they're saying, but you would hear the voice.

H: Yeah. OK. And I know that you were so young at the time, but maybe looking back from your perspective now or even just going to visit other friends in the civilian sector, do you know how this Capehart housing compared to housing available at that time in the civilian sector?

W: Well, I think it was pretty nice, actually. It was a small town when we got there. And, you know, I don't know, there weren't the neighborhoods like there are now, with, you know, big sprawling homes of, you know, 2 and 3,000 square feet.

H: The McMansions?

W: Yeah. They just – they weren't. It was a small town, and so, you know, I think of moderate income for most of the people. Because, I mean, I grew up there. Even after we moved off base, I continued to live there. So I know what the older part of town is, and how it's expanded over the years. And my family still lives there. And so, looking back at the, you know, original town, if you will, and its housing, not how its – you know, all towns expand out now, with big Wal-Mart megacenters and such. But looking back at the original town, I think it was, you know, comparable. It was base housing. It was a duplex. It wasn't an individual home. But for the times, I think it was nice.

H: And, I guess, going back to your, referring to your sister and you sharing a room, but just in general, did everybody feel like they had privacy within the house? Did people – you know, parents or your other siblings complain at all about any lack of personal space or privacy?

W: Well, you know, I think as my sisters got older, my two sisters are four and six years older than me, so as you can imagine, when I was, you know, 10, they were 16, and when I was 12, they were 18. And, you know, having privacy and a room to yourself and having to share with someone younger, and you know, and the houses weren't that big. But, you know, I don't know, because – I don't know, maybe back in those days, your house was your house. You didn't really think about everybody's going to have a room to their self. And you know, you had one TV in the house, and everybody went in the living room to watch it. So it's not like I want privacy in my bedroom to watch TV like nowadays. You know, it was a different kind of lifestyle. But the houses weren't big, but we were all right. I know my sisters probably wanted more space because they were teenagers. But me being 7, 8, 9 years old, I was fine.

H: Yeah. And so did you have enough room for all your stuff? I know that kids today have so much more stuff.

W: Well, now, that was one thing. We have often said in looking back that we never kept anything because there wasn't space to keep anything. You know, when military families move from place to place anyway, you're allowed so much weight, and so you sent out a lot of things, and maybe some of those keepsakes, you just get rid of. And so we really didn't have storage in that regard. It was like what we were using is what we had space for.

H: I see. So did you feel like you were able to keep enough of your own personal toys and things that were important to you?

W: You know, I was able to keep the things that I played with at the time, but I will tell you I have nothing from my childhood. We didn't have space. If something new came in, something went out. See, right now, my house here, you know, I'm able to save things for my grandkids. And you know, my kids who are not in the military have homes where they're storing keepsakes, and my daughter who's in the military is giving me her stuff to keep for her kids because she can't keep it.

H: The perennial problem. So a little bit more on that. The closet and storage space. Was there – I guess we've already established that maybe it was a little bit lacking in general just because it was military housing, but it sounds like a little bit of an improvement over this – I don't know if you're familiar with Wherry housing. That was the earlier program. But I guess you said you had a storage room in the house – or no, no, excuse me, a storage room in the carport and then the other storage room.

W: We had a storage room on the carport, which is, you know, like where the lawnmower went and tools. Then we had a storage room in the back, which maybe the bicycles went there and you know, maybe Christmas decorations. I recall we had a hall linen closet that was just sliding doors, two sliding doors. That was a hall linen closet. One of the bedrooms had double closets. I guess the master. And then the other two had single closets. All of them with the sliding doors as opposed to a single opening door. So, you know, pretty good width anyway of closets. And that was it. In the kitchen, we had all the cabinets and a space in the kitchen for a washer and dryer, and cabinet storage over it. And I'm trying to think if maybe we had a tiny little broom closet in the kitchen next to the washer and dryer. I can't recall, but like for the vacuum cleaner, you know, a single little closet somewhere where you put the vacuum cleaner and ironing board.

H: Slide that in there. And so did you say that all the bedrooms had at least one closet?

W: Yes.

H: OK. But one of them, presumably the master...

W: Yeah, I remember one of them having two. Two on one wall.

H: So for your, at least for your everyday needs, regardless of not being able to store kind of nostalgia items or just old baby clothes for the next kid, was there enough storage in the house for just sort of the day-to-day needs, like your clothes that you're wearing at the time?

W: Yeah, as far as I recall, yeah.

H: OK. And about your particular experience as a kid and maybe if you recall your sisters, did you think that the housing was adequate for children, and was the neighborhood for a child to be?

W: You know, it was fabulous. It was fabulous. We had – I mean, you've got to look at my age living there, elementary school. We had sidewalks, we could roller skate, we could play hopscotch, there were big open spaces behind the houses that we could play. You felt very safe living there. I mean, you just went out and played. You could ride your bike. There was a theater on base, and they would do a Saturday matinee. And tons of kids from base housing would walk to the base theater for the Saturday matinee. It was 25 cents to get in, and for another 25 cents you could get popcorn and a soda. And the theater would be packed. Every seat would be packed. And it was just a great place as a kid to live. It was a lot of fun.

H: Was there a park or any play area?

W: Yeah, not maybe by today's standards. But I do recall, and I don't know how many of them there were on base, but I know at the end of our street – our street was shaped like a horseshoe, and in the bottom of the horseshoe, out behind a couple of houses, there was actually space between two of the duplexes that you could actually walk through, there were common area swingsets and slides. The old metal, you know, swingset with the – I don't know what kind of seat it had. I want to say like the leather hooped, you know, seat in it, and the slides. And I think we had, if I recall, we had a little merry-go-round, little tiny little merry-go-round. Now, how many of those they had on base housing, I have no idea.

H: So was that part of the development then?

W: Yeah. It was not someone's yard. It was a common playground, if you will. Of course, that didn't prevent you from having your own swingset in your own back yard.

H: Oh, OK. Did some people do that?

W: Yes.

H: OK. And were the back yards fenced off?

W: No.

H: OK. Were all the streets curved? Was the development just centered around the horseshoe?

W: You know, pretty much a lot of base housing was like that. As I recall, there was like a main boulevard, if you will, on the east side of housing. And it was a divided road, one way each way. And then you had housing on both sides of it. Residential streets on both sides of it. And when you pulled into a residential street, it typically curved around, either in a horseshoe shape or in a large half-circle shape, or maybe it weaved in and out. But usually, it had an entrance, and somewhere down, it had an exit. I know like to get to my street, all the streets were named after states.

H: OK, you lived on Mississippi Loop, right?

W: I lived on Mississippi. So like the street Missouri was like a large half-circle, and in the middle of that half-circle off of it was a horseshoe that was Mississippi Loop. And then on the inside of that Missouri half-circle was a tiny little circle, and that was another street. So all the streets just kind of curved off of that main boulevard. And then at the other end of housing, kind of in the middle of the

base, was another two-lane divided road. And it had officer housing, and the lake on the one side of it, with the rest of enlisted housing on the left side of it. And all those streets just curved and weaved in and out.

H: OK. Well, now, that calls to mind another question. These Capehart housing, and Wherry housing to a certain extent, too, were designed according to these suburban ideals of that period. Did it look like – would you say it was sort of a suburban environment? The streets sound like...

W: Yeah. Yeah, I would. I would. You know, because you've got to remember, when I moved there, you know, it was brand-new, so all the landscaping was just getting planted. You know, it was pretty barren. But as years passed, you know, the trees and the shrubs were all filled in. But, yeah, you know, we had neighbors out behind us. We had quite a bit of space between our house and their house behind us. They were on a different street behind us. And your house sat reasonably close to the sidewalk. You had like a strip of grass, and then you had the sidewalk, and then you had your front yard. So your driveway could probably get one good-sized, you know, SUV in it, maybe, and then a car in the carport. So that's kind of how far off your house, back from the main street it was. And I recall we only had sidewalks on one side of the street, though.

H: So the front yard, there really wasn't a huge front yard.

W: No, not too big.

H: Another objective of the housing was to provide these open floor plans and try to create this, kind of how the ranch style is open and there's not really very many walls. It's an attempt to create a feeling of spaciousness and allow family members to congregate easily and let parents watch their kids. Was your housing this way? Did you feel that it kind of provided that? Was it a living room/dining room combination?

W: It was. The kitchen – if I could describe the house, as you walked into the front door of the house, you had a small hallway right in front of you, like a small entrance way. To the right was a doorway into the kitchen. A couple of steps further in to the left was a hallway that took you back to the bedrooms. It was actually an L-shaped hallway back to the bedrooms. And then as you walked all the way in, it opened up into the living room. And as you walked into the living room, if you were to turn back around to the right, you would have seen the dining room, and another door leading into the kitchen. So the kitchen had actually three doors in it: one into it from the carport, one into it from the dining room, and one into it from the hallway main entrance. So you could close that off if you wanted to, and then the living room and dining room were all open, so everybody was kind of there together. And then, to go to the bedrooms, you would go down this hallway. And I recall the bathroom was on the front, and there was a bedroom on the front, and then as you turned the L in the hallway, the other two bedrooms were to the back of the house. So a little bit of privacy from the living room, if you will, because they were back around.

H: Yeah. Separation of the private and public spaces.

W: Right.

H: How did that compare to the housing that you lived in in Alaska? Did you have that?

W: Yeah, I don't really remember. Yeah. I don't remember. But I would tell you that my parents built a ranch house that we moved into in 1964, and I didn't see that the house off base, although the floor plan was different, it was still pretty much – I mean, I live in Florida right now, and I'm living in

a house that's got high ceilings and is very open. Very open. A lot of glass, you know, and a kind of Southern Life floor plan down here. So, you know, the house had a big double-pane window on the back of the house, so you had a lot of light coming in the living room. And you had a back door from the living room out to the back patio. Not a sliding-glass door, now. Just a door. And as I recall, it had a window in it. It wasn't a solid door. So you had a lot of light coming in. And in the dining room was a window off of the carport that allowed light in. So, yeah, I mean, as you say, the public area was very open. Now, by today's standards, some living rooms and kitchens are all open with the half-bar counter that, you know, opens out into your family room. And it did not do that. The kitchen was completely closed off from the dining room and the living room.

H: OK. So, there were enough windows. That was something I was going to ask. It sounds like there was enough windows to provide enough light?

W: Oh, yeah.

H: And bigger windows, it sounds like, too.

W: Yeah, on the back of the house. And all the bedrooms had windows. But you know, I don't recall if the larger bedroom had like a double window in it or not. I don't recall. But I know of course they all had windows.

H: And do you feel that the housing and the design of the neighborhood, especially that sort of suburban feel, did it promote community within the neighborhood? I know that this is a unique situation where it's not just anyone kind of moving in from anywhere, but it's military people, and you're all in the same boat, and people even are doing similar jobs or have similar ranks, so obviously that is community as well. Did the housing and the neighborhood contribute to that community at all?

W: Well, I mean, we knew our neighbors, and did things with our neighbors. I know our neighbors out back, we did things, you know, like barbecue in the back yard. And I think the housing area lent itself to that. You know, I know where I live right now, I'm very close with our neighbors, but you hear a lot of people say, gee, I don't even know who my neighbors are. But we knew who our neighbors were, and when someone new moved in, you know, oh, hey, where'd you come from? You know, that's military bonding that goes on there anyway. But now were there block parties, community housing things? Not that I recall. But we did know our other neighbors and went over to other people's houses for – my parents, you know, for coffee or for a barbecue or a beer or whatever. And the kids played with each other.

H: Yeah. OK. Did you feel that your housing, looking back, provided enough privacy in reference to the rest of the neighborhood?

W: Well, the back yard didn't.

H: The back yard didn't.

W: Well, there was no fence. And even now, I mean, when I lived there, I don't recall that we could have – I think we had, we could put up not even chain-link by today's standards, but the old square wired fence, if you had a dog. And we had a dog. So we could put up a little fence for the dog. But you know, like, to have a privacy fence for privacy if you wanted to sit in your back yard and lay out and get a suntan, or have a barbecue you didn't invite your neighbors to, you didn't have a lot of privacy from that. It was kind of wide open.

H: So you weren't allowed to put up a fence?

W: Well, you had to get permission from housing, and they had to know what kind it was, and they had to know your purpose. As I recall, back then, if you had a dog, you could put up a fence. Now, I think you can put up a fence just if you want to put up a fence. But it has to be chain-link. You can't put up a privacy fence.

H: Oh, I see. Where there's really no privacy with even a chain-link fence.

W: Right. So basically, you're keeping your kids in or your dog in, but no privacy fence.

H: Well, about the back yard, actually, I meant to ask, you mentioned a patio. Did you have a patio back there, like a concrete...

W: Yes. A concrete slab patio.

H: Was there enough to – what would you put out there, like a picnic table? What did you do out there?

W: No. It was small. You know, like the barbecue grill, maybe a couple of chairs to sit on while my dad was grilling. And then we would put lawn chairs in the grass. Probably, I don't know, 8 by 10, 10 by 10.

H: OK. Yeah. Kind of small.

W: Yeah.

H: And you said the door was not a sliding-glass door. It was just a regular door.

W: Right.

H: OK. And another aspect of the housing was that it reflected the government's desire to not provide excessive housing or extra costly housing, and I was wondering if you remember any evidence of attempts to economize.

W: Yes, we – actually, when I first moved there, I don't know what age I was, or I'm not even sure if it was when we still lived there. Like I said, we moved off when I was 12, but I still lived in the area. But when we first moved on base, although the houses were modest, OK, I'll say that, they were modest homes, but like utility-wise, the best place to go at Christmas, to drive around and look at everybody's Christmas lights was base housing. Because everybody would decorate Christmas lights, because nobody had to pay the electric bill.

Now, they would do water. They would say if you live on the even side of the street, you water on certain days, and odd side, you water on certain days. And if the water got to be low, they'd tell you you can't water at all and wash your cars, that kind of thing. So water, they did conserve on. And we did not have dishwashers. Dishes were washed by hand. I'm trying to think at one point if they ever put dishwashers in them. But we washed dishes by hand. But then, later on, as the energy was starting to become an issue for the whole country, they did put meters on all the houses, and kind of was like, OK, this would be considered reasonable. If you go over this, you might get charged, and you'd start reserving. And then they started cutting the – you can't have Christmas lights, and you

know, they started conserving energy a little bit more. And so they kind of tightened up on that a little bit.

H: And what about any physical features of the house that were distinctive? Do you remember anything in particular about the physical features of the house?

W: I mean, I can picture the house perfectly in my head. I'm just not sure what you mean.

H: I guess, like, was there anything that comes to mind, like a particular way that the windows looked. Someone said that they had mullions, stuff like that.

W: No. I want to say that the back door that was glass was half solid wood with a glass window on the top, as I recall. And I think the front door was solid. I remember all the closet doors in the house were brown wood. The floor in part of the, most of the house was parquet wood tile. There was no carpet. It was parquet wood tile. And I can't recall if the kitchen had tile or linoleum. But I do recall that the bedrooms and living room and everything else had the parquet wood flooring. You know, I know all the colors – the houses were all sided, and they were all pastel colors.

H: OK, and you said yours was blue, right?

W: Ours was a very light blue, and they had yellow, and then they had kind of a, I don't know, pink isn't really the color, but kind of a pinkish beige, if you will.

H: And you mentioned that the outside, it was wood siding?

W: You know, I'm not sure if it was wood or if it was metal siding. Because, you know, quite honestly, I don't ever recall the house being painted. So, you know, I can't say. But it was, the style of the siding was the long, horizontal wood-looking, you know, like a clapboard house. But other than that – and the carport had, was open. The carport was closed in back with this storage shed. And it had the little concrete barrier to stop you from running into the shed. And then it had a couple of posts on the side for the, to hold up the carport. I don't recall any attic space. I don't recall my dad ever going into the attic.

And then, like I said, we had sidewalk on our side of the street, so there was the driveway, and then there was the grass, and then a piece of sidewalk, and then another little piece of grass, and then the curb. And it was a proper curb, too, which nowadays, it's, you know, your grass and your street are all flat together. This was a proper step-up onto the curb, like a city street, stepping onto.

H: So did your family feel that the house was attractive?

W: Yeah, I don't recall anybody complaining.

H: Did you think it was attractive?

W: Yeah, it was all right. I was a kid. (LAUGHS)

H: Yeah. Right. What did you need, yeah, in terms of an attractive house?

W: Yeah. I know when we moved off base, the one thing my mother wanted was, you know, nice big trees. The lot where we were building a house, she had them save some of the big trees. And I think it

was just because when we moved in, it was brand new, so everything was small. Takes a while for trees to grow. But I don't recall her complaining.

H: Was there particular physical features of the house that you liked, and you know, anything that spoke to you as a young person, or your siblings, and any features that you disliked?

W: Well, you know, it's kind of odd because years later, when I actually got married, I actually moved into that housing as a wife. And one of the things that I liked about the house as a wife, because, you know, as a kid when I was there, you know, I could care less. I liked being able to close off the kitchen. I liked that feature, you know, closing it off, so if you had somebody come in the front door and you had dirty dishes, you just close the door and they don't see it. They just come in, you know?

But, you know, I think the thing that I didn't like is that the washer and dryer was in the kitchen. It had no closet. It was in the kitchen. It sat out as an appliance, just like your refrigerator and your stove. You didn't have it sitting, like, in a closet with double folding doors to hide it, and so that was a feature I think that, you know, I didn't particularly care for.

I liked the fact when I was a kid, I stayed in one of the bedrooms in the back, and so if my family was out watching a TV show, I could go back in the bedroom and play.

H: Do your own thing.

W: Yeah. And, you know, my girlfriend, same thing, go to her house. And so we had a little bit of privacy. You know, it was nice because – I know it was a pain for my dad because they were very strict on yard maintenance. I mean, you want to talk about strict housing covenants. Base housing has very strict covenants for living there. But that makes it also a nice-looking place, because the yards are all mowed and edged and swept, and you don't have a lot of toys laying out all over in the front yard. Even though there were a lot of children in base housing, you were not allowed to leave bicycles and toys and cars, you know, up on jacks, those kinds of things. They had very strict rules.

H: Interesting. And inspections, right?

W: Yes. They would do weekly inspections. They would drive around base housing, and if you didn't have your yard in order, you would get a little note telling you that you needed to get your house in order. On the outside. I mean, they never came in your house. It was just strictly the outside appearance.

H: OK, well, is there anything else you wanted to add about just the housing in general, the neighborhood, your experience as a young person?

W: No. I know my mother told me the other day that our house has now been torn down. They are building a new house. The new housing is going in. So it was there for 48 years. You know, I just, at the time that I was there as a kid, it was a great place. And, you know, with a family of three, it was adequate space. But if you had four or five kids, three-bedroom house with one bath was the largest house.

H: Oh, in your development?

W: Yeah. The whole base. I think officers may have had a fourth bedroom, but – we just had three-bedroom houses. And so, you know, for our size family, my size family that was there, it was



adequate. And for the age of us, it was adequate. Had we lived there and all of us were teenagers, you know, 15, 13, 12 kind of age, you know, it might have been a little cramped. But when we moved there, I was six, and my sister was 10, and my other sister was 12, when we moved in. And so, for us, it was fine.

H: Yeah. Well, I meant to ask, how did your family feel about everyone sharing one bathroom?

W: Well, you know, that's all we knew. That was pretty much the norm no matter where you lived. Grandma had one bathroom, we had one bathroom, our friends off base had one bathroom. That was pretty much the norm.

H: Yeah. That's really interesting how standards have changed.

W: Oh, yeah. You don't have a house with two bathrooms in it now, oh my gosh. You know? But back then, it was the norm for everybody, on base, off base. You were rich if you had a house that had a bath and a half in it. You know, a powder room. And especially two bedrooms – or two bathrooms.

H: That's really interesting, because it seemed like when they started building the Capehart housing – this earlier Wherry housing typically had one bathroom. But it seemed like the Capehart housing, they were trying to build at least a bath and a half, so I was intrigued to find a Capehart development that still only had one bathroom. So everybody, that was the norm.

W: We only had one. Now, I don't recall officer housing. Officer housing was different, was a little bigger. Rank really did have its privileges. But did it have a half-bath in the master bedroom or any O-6 or general's quarters, did they have, you know, a bathroom? I couldn't tell you. I couldn't tell you. But, yeah, you know, and it is amazing just the way we have evolved as a culture, if you will. Because really, I mean back then, I mean, I can remember we got our first TV. We had one car. We had one bathroom. We had one TV, and it was black and white, and we were happy to have it. And it's not that we were poor. We were middle America. You know, this is, we were a typical family, and we felt typical. You know, we didn't feel like we were, you know – oftentimes, people will, you know, sarcastically maybe refer to base housing as, yeah, I live in the slums. But we didn't feel that way. You know, it was nice housing, it was new, it was air conditioned, we had hardwood floors. You know, it was, we were quite comfortable.

H: Yeah. It sounds like, very nice. Did your family provide the air, or was that part of the house?

W: Did my family provide what?

H: Did you bring your own air, window units?

W: Oh, no, no. It was central air conditioning.

H: Oh, OK.

W: Oh, yeah. Oh, yeah. See, now, when we lived off base, before we moved in, the house we lived in off base did not have air conditioning. And we had a little window unit that we had in the kitchen and living room for cooking. But at night, we slept under a sheet with like a little T-shirt and our underwear on with the windows cracked open. We did not have air conditioning. So when we moved on base and had central air with a unit out in the back of the house, we were in hog heaven.

H: Oh, I can imagine. What a luxury.

W: Yeah. Yeah, it was.

H: All right, well, thank you very much for spending your time sharing your memories of your childhood experience in the Capehart housing.

W: I have the paperwork. In fact, I think I mailed it today.

H: Oh, great. OK.

W: I got it all ready and asked my husband to slip it in the mailbox outside.

H: Oh, great. OK, well, I appreciate that. Do you have any photos of this housing?

W: You know, I don't know if I do here, but I know my mother does.

H: Well, if it ever is convenient, you know, for you to share that with us, that would be great.

W: OK. Well, I've got your e-mail address. And my sister lives in the same town as my mother. I can ask her to maybe dig up a couple of photos. I remember when my sister got her first car. There's a picture of her standing in front of the car in front of the house. You know, maybe we can grab a picture or two and scan them in and send them to you. So I'll ask.

H: That would be nice, yeah. And we're hoping to wrap this up by – I think we're going to be submitting all of our final materials in early October, so if you're able to do that before that time, that would be great.

W: OK, great.

H: So, thank you so much again.

W: You're welcome.

H: I appreciate it. If you have any more questions or anything else to add, feel free to call me.

W: All right. I sure will.

H: OK, thank you.

W: Thank you, Chris. Bye-bye.

H: OK, bye.

END

## **ADDENDUM**

On 9 October 2006, Mrs. Waxler e-mailed to correct the portion of the transcript in which she discusses her father's rank during the family's residence in Capehart housing at Little Rock AFB. He advanced from E-6 to E-7 prior to moving to Little Rock, and was an E-7/master sergeant throughout the family's residence on the base. The introduction contains this correct information.

## **APPENDIX M**

# **RESUMES OF KEY PROJECT PERSONNEL**



**KATHRYN M. KURANDA, M. ARCH. HIST.**

**SR. VICE PRESIDENT - ARCHITECTURAL SERVICES/ARCHITECTURAL HISTORIAN**

Kathryn M. Kuranda, M. Arch.Hist., Sr. Vice-President - Architectural Services, directs the architectural history and history programs of R. Christopher Goodwin & Associates, Inc. Ms. Kuranda holds a Bachelor of Arts degree in American Studies from Dickinson College and a Master of Architectural History degree from the University of Virginia, where she was a Thomas Jefferson Fellow. Ms. Kuranda's professional qualifications exceed those established by the Secretary of the Interior in the field of architectural history. She is a court-qualified architectural historian.

Prior to joining Goodwin & Associates, Inc., Ms. Kuranda served as the architectural historian with the Nevada State Historic Preservation Office, where she coordinated the state's program for built resources, and as Architectural Historian with the Bureau of Reclamation at their headquarters office in Denver. Since joining Goodwin & Associates, Inc. as a Senior Project Manager in 1989, Ms. Kuranda has served as Principal Investigator on numerous architectural identification, evaluation, planning, and management projects, both in the Washington, D.C. Metropolitan area and across the nation.

Architectural survey projects have ranged from single building evaluations to state- and nation-wide multiple-resource efforts. She has directed the development of nationwide historic contexts for the evaluation of Department of Defense resources constructed between 1790 and 1940, the Navy Guided Missile Program, World War II Permanent Military Construction, Army Fixed Wing Air Fields, and Army Housing Constructed under the Capehart, Wherry, and MCA Programs during the Cold War Era. She has directed architectural historical investigations at over 140 military installations, from Alaska to Florida, and from New England to the West Coast, as well as in Iceland and Puerto Rico. Level I and II HABS/HAER projects have included the recordation of eight industrial complexes on the site of Oriole Park at Camden Yards, Baltimore; 3 buildings on the site of the Maryland Library for the Blind and Physically Handicapped, Baltimore; the Kelly Springfield Tire Company, Cumberland, Maryland; Canal Street Car Barns in New Orleans; and, the Caryville Bridge, Florida. Recent bridge experience includes the Harford Road Bridge, Baltimore, Maryland. Preservation planning studies include Cultural Resource Management Plans for the Walter Reed Army Medical Center, Washington, D.C.; Langley Air Force Base, Langley, Virginia; and the Washington Aqueduct System, which included revisions to the NHL documentation. Ms. Kuranda also has experience in local preservation planning issues and has provided historic preservation expertise for such projects as the rehabilitation of the Francis Scott Key Hotel, Frederick County, Maryland; St. Timothy's School, Baltimore County, Maryland; and Brown's Tavern, in Prince George's County, Maryland.

**KIRSTEN PEELER, M.S.**

**PROJECT MANAGER**

Kirsten Peeler, M.S., Architectural Historian, received a Master of Science degree in Historic Preservation in 1996 from Columbia University and a Bachelor of Arts degree from Mount Holyoke College. Ms. Peeler has extensive experience in conducting architectural surveys and evaluations, and in mitigation. Ms. Peeler exceeds the Secretary of the Interior's professional qualifications for architectural history.

As an architectural historian at Goodwin & Associates, Inc., Ms. Peeler completed a nationwide context on Army family housing constructed between 1949 and 1962. This historic context was the component in an innovative strategy developed by the Department of the Army and the Advisory Council on Historic Preservation for compliance with Section 106 of the National Historic Preservation Act of 1966. As part of the project, she developed design guidelines for Army neighborhoods built during the 1950s and early 1960s. A 20-minute broadcast quality video documentary on three neighborhoods was produced as part of the project. Ms. Peeler wrote the script and provided project oversight on all aspects of the project, including the filming and editing process.

Ms. Peeler wrote alternative procedures for compliance with Section 106 of the National Historic Preservation Act of 1966 for Fort Benning, Georgia. The final document will be approved by the Georgia and Florida State Historic Preservation Officers and certified by the Advisory Council on Historic Preservation. She also researched, wrote, and developed a guidebook and accompanying regional maps of Department of Defense historic resources located on active military installations. The materials will be used to promote heritage tourism and to raise public awareness of DoD-owned historic resources.

Ms. Peeler participated in the architectural survey for the National Register nomination for Baltimore East/South Clifton Park Historic District. As an architectural historian at Goodwin & Associates, Inc., she has conducted surveys and evaluations applying the National Register criteria on numerous projects in Maryland, Texas, Georgia, Arizona, Virginia, Michigan, North Carolina, and Missouri.

Prior to joining Goodwin & Associates, Inc., Ms. Peeler was the historic preservation planner for the City of Frederick, Maryland. While at the City, she provided technical assistance to the Historic District Commission and property owners in the Frederick Town Historic District, and authored design guidelines for the Frederick Town Historic District. Ms. Peeler also gained practical preservation experience while at the Historic Warehouse District Development Corporation (HWDDC), a non-profit community development organization in Cleveland, Ohio, from 1996-2000. In Cleveland, Ms. Peeler staffed the organization's design review committee and represented the non-profit at Cleveland Landmarks Commission hearings. While at HWDDC, she managed the City's Storefront Renovation Program, a city program that provides technical and financial assistance to property owners undertaking rehabilitation projects.

**CHRISTINE HEIDENRICH, M.A.**

**HISTORIAN**

Ms. Chris Heidenrich, Historian, received a Master of Arts degree in public history in 2001 from Loyola University Chicago, and a Bachelor of Arts degree in history in 1993 from University of Illinois at Urbana-Champaign.

Since joining Goodwin & Associates, Inc., in 2002, Ms. Heidenrich has served as an historian for many cultural resources management projects. She has conducted archival research and provided historical analysis for Phase I and II architectural and archeological surveys in Maryland, Pennsylvania, West Virginia, Louisiana, Virginia, Washington, and Kansas; for National Register of Historic Places nominations; for cultural resources management plans; and for Maryland Inventory of Historic Properties forms. She has experience researching local primary documents such as land records, deeds, wills, and tax records to support archeological and architectural documentation projects. Her other project experience with Goodwin & Associates, Inc., includes writing state park histories for the Maryland Department of Natural Resources State-Owned Cultural Resources Assessment Program; writing a popular history of construction at military installations for the Department of Defense Heritage Showcase tourism program; and researching and writing copy for a plaque and interactive computer exhibit on the former Brown's Tavern in College Park, Md. In 2003, Ms. Heidenrich wrote the monograph, *Frederick: Local and National Crossroads* (Arcadia Publishing), a popular history of Frederick, Md.

Before joining Goodwin & Associates, Inc., Ms. Heidenrich conducted oral history interviews for Loyola University Chicago archives; served as researcher and writer for the historical marker program for the Historical Society of Oak Park and River Forest, Ill.; and researched ownership histories of riverfront tracts in northwestern Wisconsin and northeastern Minnesota for the National Park Service history entitled *Time and the River: A History of the Saint Croix*. She also collaborated on development of the history of lead paint for a litigation-related project, and for an exhibit on the history of the parcel now occupied by a Chicago nature center.

**KATHERINE GRANDINE, M.A.**

**SENIOR PROJECT MANAGER / SENIOR HISTORIAN**

Ms. Katherine Grandine, Senior Project Manager and Historian, received a Master of Arts degree in American Civilization with Emphasis on Historic Preservation in 1983 from the George Washington University, Washington, D.C. She has been professionally active in the field of historic preservation since 1981. Her project experience includes historic research for nationwide context studies and for local history, architectural surveys in numerous states, Historic American Buildings Survey documentation, National Register of Historic Places nominations, local landmark and historic district nominations, historic property mitigation documentation, and cultural resources planning documents.

Since joining Goodwin & Associates, Inc., Ms. Grandine has served as an historic preservation specialist in the development of nationwide historic contexts, including the National Historic Context for DoD Installations from 1790 to 1940, support and utility structures from 1917 to 1946, and Air Force and Navy Wherry and Capehart housing. She has performed reconnaissance-level and intensive-level architectural surveys at numerous DoD installations, including Aberdeen Proving Ground, Maryland; Charleston Naval Base, South Carolina; Fort Knox, Kentucky; Carlisle Barracks, Pennsylvania; FISC, Cheatham Annex, Virginia; Naval Weapons Station Yorktown, Virginia; Naval Base Norfolk, Virginia; and, Walter Reed Army Medical Center, Washington, D.C. She has conducted literature searches for Phase I archeological surveys, performed architectural surveys, and undertaken archival research for Phase II and Phase III archeological studies for projects in Maryland, Virginia, Pennsylvania, and Ohio. She has extensive experience in researching in local primary documents including land records, deeds, wills, and tax records to support archeological and architectural documentation projects. She has managed numerous architectural survey and evaluation projects and written National Register nominations for individual properties and large historic districts. She has co-authored integrated cultural resources management plans and numerous technical reports, and provided technical support for a variety of cultural resources projects.



**DEAN A. DOERRFELD, M.A.**  
**SENIOR PROJECT MANAGER / ARCHITECTURAL HISTORIAN**

Mr. Dean Doerrfeld, Senior Project Manager and Architectural Historian, received a Master of Arts Degree in Urban Affairs and Public Policy with emphasis on Historic Preservation Planning and Policy from the University of Delaware, Newark, Delaware in 1993. He has been professionally active in the field of historic preservation since the 1980s. His project experience includes architectural surveys in Virginia, Maryland, Delaware, New Jersey, and Kentucky; survey, fieldwork, measured drawings, and large format photography for Historic American Buildings Survey / Historic American Engineering Record documentation in Delaware, Maryland, Virginia, New Jersey, North Carolina, and Kentucky; researching and writing National Register of Historic Places nominations and local landmark and historic district nominations; preparation of applications for the issuance of Historic Preservation Tax Credits; development of local zoning ordinances and design guidelines; and the development of local and statewide preservation plans. Mr. Doerrfeld's professional qualifications exceed those established by the Secretary of the Interior in the field of architectural history.

Prior to joining R. Christopher Goodwin & Associates, Inc., Mr. Doerrfeld worked extensively in the Ohio River Valley completing projects for diverse clients including the U.S. Army Corps of Engineers, the U.S. Forest Service, the Kentucky Transportation Cabinet, the Ohio Department of Transportation, state and local governments, telecommunications providers, and local non-profit organizations. He has authored nearly 100 technical reports on preservation issues ranging from early-twentieth century industrialization in Delaware to the evolution of the Kentucky agricultural landscape from the mid-nineteenth century to the present. Mr. Doerrfeld also has extensive experience in local preservation planning and policy issues serving as Senior Administrative Officer to the Mayor of Lexington, Kentucky and as Local Preservation Officer. Duties during his tenure with the Lexington-Fayette Urban County Government included the administration of the Division of Historic Preservation and compliance issues within the locales fourteen, locally designated historic districts. Mr. Doerrfeld has served as Principal Investigator on numerous architectural identification, evaluation, planning, management, and documentation projects throughout the Midwest and Mid-Atlantic Regions. As adjunct faculty to the University of Kentucky, Lexington, Kentucky and Mary Washington College, Fredericksburg, Virginia, Mr. Doerrfeld has instructed at both the under-graduate and graduate levels in architectural history, land use and preservation planning, and field methods in architectural documentation.