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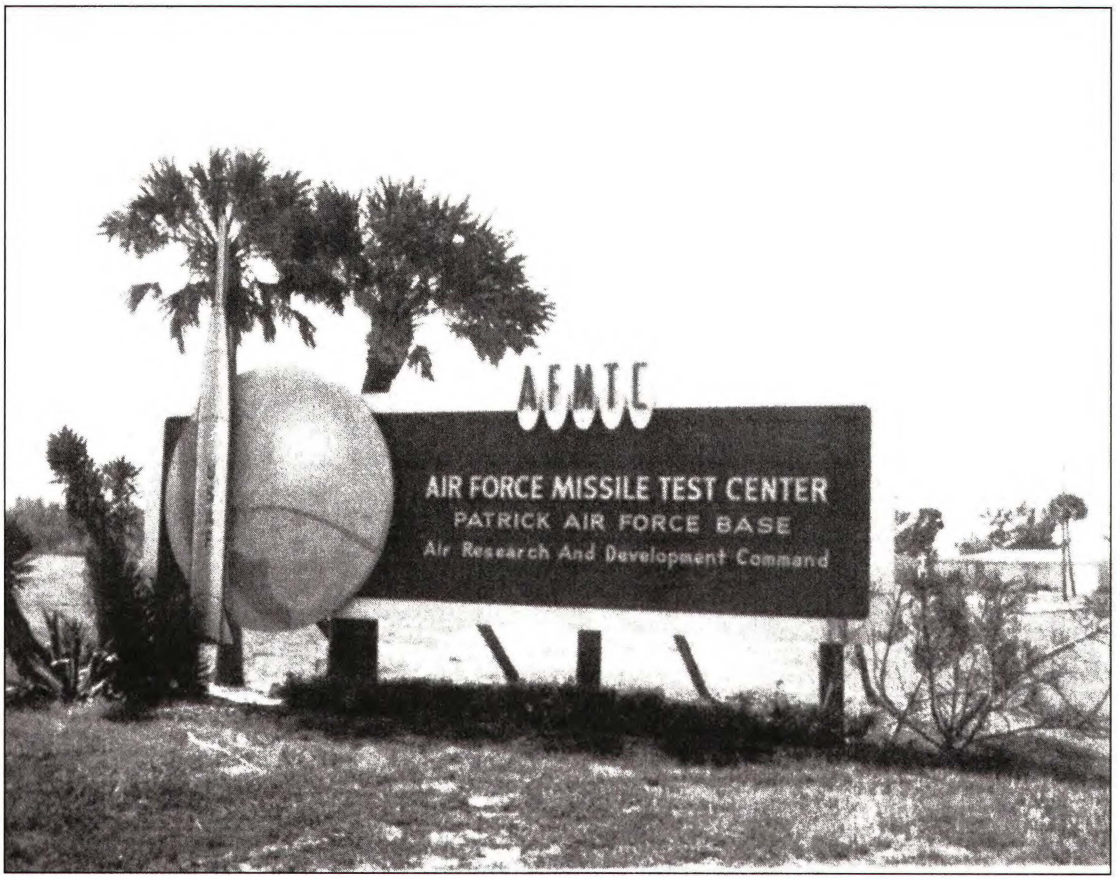
Historic American Buildings Survey Level II Documentation of Building 431, Theater and Building 439, Seaside Chapel Patrick Air Force Base, Florida

Susan I. Enscore, Julie L. Webster, and Martin J. Stupich

July 2004



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Final Report

Prepared for 45 SW CES/CEVP
Patrick Air Force Base, Florida 32925-3343

Under Work Unit #SXHT037263

ABSTRACT: This report presents Historic American Buildings Survey (HABS) Level II documentation of the Theater, Building 431, and the Seaside Chapel, Building 439, at Patrick Air Force Base, Florida.

Contents

Preface

This study was conducted for Patrick Air Force Base under Military Interdepartmental Purchase Request (MIPR) N12FY03000394, entitled "HABS/HAER Documentation of 2 Historic Bldgs at Patrick AFB," Work Unit number SXHT037263. The technical monitor was Wesley J.P. Westphal II, 45 Civil Engineer Squadron/Civil Engineer Environmental Planning Element (45 CES/CEVP).

The work was performed by the Land and Heritage Conservation Branch (CN-C) of the Installations Division (CN), Construction Engineering Research Laboratory (CERL). The CERL Principal Investigator was Dr. Susan I. Enscore. Contributing authors included Julie L. Webster (architect) and Martin Stupich (photographer). Dr. Lucy Whalley is Chief, CEERD-CN-C, and Dr. John T. Bandy is Chief, CEERD-CN. The associated Technical Director was Dr. William D. Severinghaus, CEERD-CV-T. The Director of CERL is Dr. Alan W. Moore.

CERL is an element of the U.S. Army Engineer Research and Development Center (ERDC), U.S. Army Corps of Engineers. The Commander and Executive Director of ERDC is COL James R. Rowan, EN and the Director of ERDC is Dr. James R. Houston.

1 Introduction

Background

In 1994, ERDC/CERL produced an inventory and historical significance evaluation for approximately 150 buildings and structures at Patrick Air Force Base (PAFB), Florida. Buildings 431 and 439 were included in the Administration Historic District proposed by ERDC/CERL as contributing buildings. Constructed in 1942, Building 431 still retains its original function of theater. Building 439 still serves as a base chapel, as it has since being constructed in 1945. Both buildings are significant for their association with the Banana River Naval Air Station, an installation developed in response to both public and military opinion of Florida's vulnerability to enemy attack during World War II.

The National Historic Preservation Act of 1966 (NHPA), as amended, provides requirements for consideration of historic properties by Federal agencies. Section 110 of the NHPA [16 U.S.C. 470h-2(b)] requires Federal agencies to initiate measures to assure that where, as a result of Federal action, a historic property is to be substantially altered or demolished, timely steps are taken to make or have made appropriate records, and that such records then be deposited, in accordance with section 101(a) of the NHPA, in the Library of Congress or with such other appropriate agency as may be designated by the Secretary of the Interior, for future use and reference.

Constructed as part of the Banana River Naval Air Station, Buildings 431 and 439 at Patrick Air Force Base were in use by 1945, just 5 years after construction on the installation began. For nearly 60 years, they have provided for the entertainment and spiritual needs of thousands of Naval and Air Force personnel. The buildings' exteriors have changed little over the years, imparting a physical and visual link to the past.

Objective

This project will provide the Patrick AFB Cultural Resource Manager (CRM) with recordation to HABS Level II standards of Building 431 (Theater) and Building 439 (Chapel). Analysis and the resulting documentation will (1) pro-

vide valuable information towards understanding the role of these support buildings to PAFB, and (2) mitigate future undertakings on the two buildings, including the currently planned demolition of both buildings, provided PAFB establishes a valid Memorandum of Agreement with the Florida State Historic Preservation Officer prior to submission of the HABS documentation.

Approach

U.S. Army Engineer Research and Development Center, Construction Engineering Research Laboratory (ERDC/CERL) personnel were tasked with preparing complete documentation on the buildings equal to Historic American Buildings Survey (HABS) Level II standards for transmittal to the Florida State Historic Preservation Officer/Regional HABS office. The team conducted field work to document the complex in February 2004. Ms. Julie L. Webster, Project Architect, prepared the architectural description of the complex. Dr. Susan Enscore, Project Historian and Project Manager, researched and prepared the historical overview of PAFB and the history of Building 431 and Building 439.

Historical research focused on the acquisition and interpretation of primary documents relating to the mission of PAFB, as well as the construction histories of Building 431 and Building 439. Research and documentation procedures followed the standards established in the National Park Service Historic American Buildings Survey (HABS) *Guidelines For Preparing Written Historical and Descriptive Data* (May 1985).

Sources consulted and referenced include Real Property Records, "As Builts" and other engineering drawings, reports, base newspapers, and historic photographs located at PAFB, as well as historic maps and photographs from the National Archives and Records Administration. Interviews were conducted with individuals familiar with the uses and modifications of Building 439.

Mode of Technology Transfer

The final product is a report providing in-depth documentation of Buildings 431 and 439 at Patrick Air Force Base. Incorporated into the report are digital copies of historic photographs, current condition photographs, and architectural drawings. Large format archival exterior and interior photographs visually document the buildings. Archival prints and negatives will accompany the final submission of the report to the Florida Department of State, Division of Historical Resources.

This report will be made accessible through the World Wide Web (WWW) at URL:

http://www.cecer.army.mil

PATRICK AIR FORCE BASE
North of Melbourne on Hwy A1A
Melbourne Vicinity
Brevard County
Florida

HABS No. FL-

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

HISTORIC AMERICAN BUILDINGS SURVEY
National Park Service
Southeast Region
Department of the Interior
Atlanta, GA 30303

HISTORIC AMERICAN BUILDINGS SURVEY
PATRICK AIR FORCE BASE HABS No. FL-

Location: Patrick Air Force Base
North of Melbourne on Hwy A1A
Melbourne Vicinity
Brevard County
Florida

Present Owner: United States Department of Defense

Present Occupant: U.S. Air Force

Original Use: Naval Air Station, Banana River

Present Use: U.S. Air Force Base

Significance: Patrick Air Force Base began as the Naval Air Station, Banana River, built in 1940 to help defend the southeast coast as World War II loomed ahead. Home to naval aviation training and defense patrols, the station expanded continuously until the war's end. By 1947, it was placed in caretaker status, but saw new life two years later when it became the support facility for the new Joint Long Range Proving Ground planned for Cape Canaveral a few miles to the north. Transferred to the newly minted U.S. Air Force, it was christened Patrick Air Force Base in 1950. The installation has served a unique function in providing headquarters and support for the test range over a period of more than fifty years, and has been an integral part of the United States military and civilian space efforts.

PART I. HISTORICAL INFORMATION

A. Physical History:

1. Original Construction Date: Initial construction began on Naval Air Station, Banana River in January 1940.

2. Planner: U.S. Navy Department, Bureau of Yards and Docks

3. Original and Subsequent Owners: U. S. Navy Department, U.S. Department of Defense

4. Builders, Contractors and Suppliers: John F. Reynolds Consulting Engineer, Jacksonville, FL; Reynolds, Brewton, Smith & Hills, Jacksonville, FL; Atlantic, Gulf and Pacific Dredging Company of New York.

5. Alterations and Additions: Naval Air Station, Banana River grew rapidly in 1940 and continued to expand both in area and in number of buildings until it was placed in caretaker status in August 1947. Under Air Force control since 1 September 1948, there has been continued facility expansion as the support mission for the missile test range changed to support new technologies. Large numbers of Capehart and Wherry housing were constructed in the 1950s to house families, and a very large testing facility anchored expansion to the south of the airfield in the mid-1950s. More recently, airfield expansion and construction of housing tracts and community facilities continued this southward development trend.

B. Historical Context[1]:

HISTORICAL OVERVIEW

Patrick Air Force Base (PAFB) and Cape Canaveral Air Force Station (CCAFS) are located in Brevard County, approximately 15 miles from each other, on barrier islands that lie between the Atlantic coast of central Florida and the Banana River. PAFB was initially developed in 1940 as the Banana River Naval Air Station (NAS). During World War II, NAS Banana River played a vital role in anti-submarine reconnaissance along the Florida Coast, while at the same time serving as a naval aviation pilot training base. After initially using only seaplanes, the station quickly required land plane facilities for expanded operations.[2]

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[1] Material in this section is largely taken directly from three sources: Sheila McCarthy and Patrick Nowlan, "Historic American Engineering Record of Launch Complex 17, Cape Canaveral Air Station, Cape Canaveral, Florida," (Champaign, IL: U.S. Army Construction Engineering Research Laboratories, 1997); Virge Jenkins Temme, et.al., "Historical and Architectural Documentation Reports of Patrick Air Force Base, Cocoa Beach, Florida," (Champaign, IL: U.S. Army Construction Engineering Research Laboratories, 1994), and "Cultural Resource Management Plan, Cape Canaveral Air Force Station, Patrick Air Force Base, Malabar Transmitter Annex, and Jonathan Dickinson Missile Tracking Annex, Florida: 2001- 2006," (Patrick AFB, FL: 45th Space Wing, 2001. Additional information has been added by Dr. Susan Enscore, ERDC-CERL, 2004.

[2] "Cultural Resource Management Plan," 4, 6.

Banana River NAS faced closure in 1947, but in 1948 the Navy transferred it to the jurisdiction of the Air Force as a base for the Joint Long-Range Proving Ground to be used by the Army, Navy, and Air Force for missile testing. Changing requirements in terms of oversight and technology led to the expansion of the missile range to the Indian Ocean and resulted in a number of name changes:[3]

1949	Long-Range Proving Ground (LRPG)
1952	Florida Missile Test Range (FMTR)
1958	Atlantic Missile Range (AMR)
1964	Air Force Eastern Test Range (AFETR)
1991	Eastern Range (ER)

Construction of the first missile launch pads and support facilities at the Cape, along with new roads and downrange tracking stations, was begun in 1950. Again, technological advancements forced changes, and the launch facilities at Cape Canaveral have evolved constantly over the years. In order to support the missile activities, new administrative and technical units at PAFB have mirrored this evolution.[4]

The first missile, a German V-2 rocket with an Army WAC Corporal second stage, was launched from the Cape on July 24, 1950. During the next three years various cruise-type missiles were tested, including the Matador in 1951 and later the Snark and Bomarc. These were followed by a group of long-range ballistic missiles such as the Redstone, Atlas, Titan, Thor, Jupiter, Minuteman, Polaris, Poseidon, and Trident. World events, particularly Russia's launch of Sputnik I in 1957, turned America's attention to the rapid expansion of space exploration. The early satellite launches and all manned Mercury and Gemini flights originated from Cape Canaveral. When the Manned Lunar Landing Program was initiated in 1961, a large section of Merritt Island across the Banana River from CCAFS was selected as the launch center for the Apollo Program. This area would become the John F. Kennedy Space Center (KSC), containing facilities for the enormous Saturn V launch vehicle.[5]

Activities at CCAFS had reached their peak in 1966, and the years following saw a gradual decline in many phases of operations. Many facilities which had been transferred to NASA during the early 1960s, gradually returned to Air Force control. Current Air Force launch programs include ballistic missile operations and commercial launch vehicles. Operation and

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[3] "Cultural Resource Management Plan," 6-7; McCarthy and Nowlan, "Historic American Engineering Record of Launch Complex 17," 5. Between October 5, 1951 and December 15, 1964, the Cape was designated as Cape Canaveral Auxiliary Air Force Base. Between December 15, 1955 and January 22, 1964, the Cape carried the designation Cape Canaveral Missile Test Annex. From then until 1974, it was Cape Kennedy, and became Cape Canaveral Air Station in 1994. The current designation of Cape Canaveral Air Force Station was received on 4 February 2004.

[4] "Cultural Resource Management Plan," 7.

[5] "Cultural Resource Management Plan," 6, 8.

maintenance of the missile test range has been the responsibility of a civilian contractor since 1953. The current range contractor is Space Gateway Support, Inc. Patrick AFB continues as the center of administrative activities of Headquarters 45th Space Wing (45 SW), including Cape Canaveral Air Force Station, Antigua Air Station, Ascension Auxiliary Air Field, MTA, and JDMTA.[6]

DEVELOPMENT OF BANANA RIVER NAS

The creation and early development of today's Patrick Air Force Base can be traced to passage of the Naval Expansion Act in May of 1938.[7] This Act allowed the Navy Secretary, Claude A. Swanson, to appoint a group of officers to investigate the need and to propose locations for additional air bases. The group, known as the Hepburn Board, was charged with increasing the number of naval aircraft by 50 percent while recommending strategic locations for new bases throughout the continental United States.[8]

As war clouds loomed over Europe, the strategic placement of U.S. naval defense installations intensified. Military and public opinion focused on the vulnerability of Florida's peninsula. Concern for the state's isolated shoreline, proximity to foreign owned islands, and location within air striking distance of the Panama Canal, convinced the Hepburn Board to recommend development of additional air bases in Florida.[9] The Board considered the importance of powerful air facilities and endorsed the creation of a major installation near Jacksonville. Determining an exact location for the "Southern Base" proved difficult. Specifications including deep water for surface ships and protected areas for seaplanes were necessary since the Navy had not yet utilized shore-based aircraft. Prior to 1940, naval air forces, except for training and utility planes, relied upon seaplanes and carrier-based aircraft. In the pre-World War II era adequate water resources were imperative to the Navy's sea-based fleet.[10]

In March 1939, the Hepburn Board chose to split the Southern Base. It recommended establishing the Jacksonville station and an auxiliary base for seaplane operations along the Banana River near Cocoa Beach.[11] The Board's findings were summarized in Report No. 263 and submitted to the Senate Committee on Naval Affairs. The recommendations, designed to accompany House

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[6] "Cultural Resource Management Plan," 8-9.

[7] History Office, Patrick AFB, "Origin and Development of the Eastern Space and Missile Center and Patrick Air Force Base," Florida, ND, 1.

[8] John T. Montgomery, History of Naval Air Station Banana River Florida 1940-1944, History Office, Patrick AFB, Florida, ND, 1; Temme, "Historical and Architectural Documentation Reports," 5.

[9] History Office, 6550th Air Base Group AFETR ARSC, Chronology of Atlantic Missile Range and Air Force Missile Test Center 1938-1959, Patrick AFB, Florida, 1975, 1.

[10] Temme, "Historical and Architectural Documentation Reports," 5.

[11] Montgomery, History of Naval Air Station Banana River, 2.

Bill No. 4278, authorized base construction at a cost of $17,000,000 with Jacksonville receiving $15.2 million and Banana River $1.8 million.[12]

The site of the Banana River Naval Air Station was selected by Comdr. W.M. Angus, Public Works Officer of the 7th Naval District, and a group of civilian officials from Melbourne, Cocoa, and Eau Gallie. One early site inspection took place in spring 1939 when the group drove south from Cocoa Beach down a winding trail and past an ancient burial mound toward their destination.[13] With a surveyor's flag in sight the crew spread out several enormous white sheets to stake a framework for initial construction.[14]

The new air station encompassed 1,823 acres at the narrowest point of a peninsula between the Banana River, a landlocked saltwater lagoon, and the Atlantic Ocean.[15] This area was late reduced to 1,791 acres. By the fall of 1939, eleven lump sum contracts totaling $1,067,088 had been let for site preparation and first phase construction. On October 16, the Bureau of Yards and Docks formally requested the Judge Advocate General to initiate condemnation proceedings. Subsequently three suits totaling $110,478 were filed with the Brevard County court.[16] Development efforts began on December 18 with clearing and grubbing 260 acres of palmetto brush. By January 1940, a large twenty-two inch pumper dredge arrived to dig a channel from the Banana River's mouth at Eau Gallie to the new station. Dredging the seaplane landing area and dumping the sand spoil raised the site an average of 4 feet. After this procedure, the nascent station contained 540 buildable acres.[17]

In late February 1940, construction of a seawall, ramps, and hangar apron led to the development of five original structures including Hangar 312, BOQ 412, Warehouse 413, the south wing of the Dispensary, and Building 501 (Figure 1). Building 501 housed the enlisted barracks and mess hall, a cold storage and ice plant, barber shop, recreation room, and brig. Initial construction projects were supervised by Comdr. C.H. Cotter, CEC. Based in Jacksonville, Cotter was assisted by J.B. Sale, assistant civil engineer, and Alvin M. Faville, Clarence A. Tovey, and Lucian Lytz, inspectors of construction.[18]

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[12] History Office, 6550th Air Base Group, Chronology, 1; Temme, "Historical and Architectural Documentation Reports," 6.

[13] History Office, 6550th Air Base Group, Chronology, 1.

[14] Frank L. Brown, "Story of PAFB Shows Its Wilderness Beginning," The Missileer, Patrick Air Force Base, Florida, December 3, 1951, 1; Temme, "Historical and Architectural Documentation Reports," 6.

[15] Montgomery, History of Naval Air Station Banana River, 3.

[16] Ibid.

[17] Brown, Story of PAFB, 1; Temme, "Historical and Architectural Documentation Reports," 6.

[18] Montgomery, History of Naval Air Station Banana River, 4; Temme, "Historical and Architectural Documentation Reports," 6.

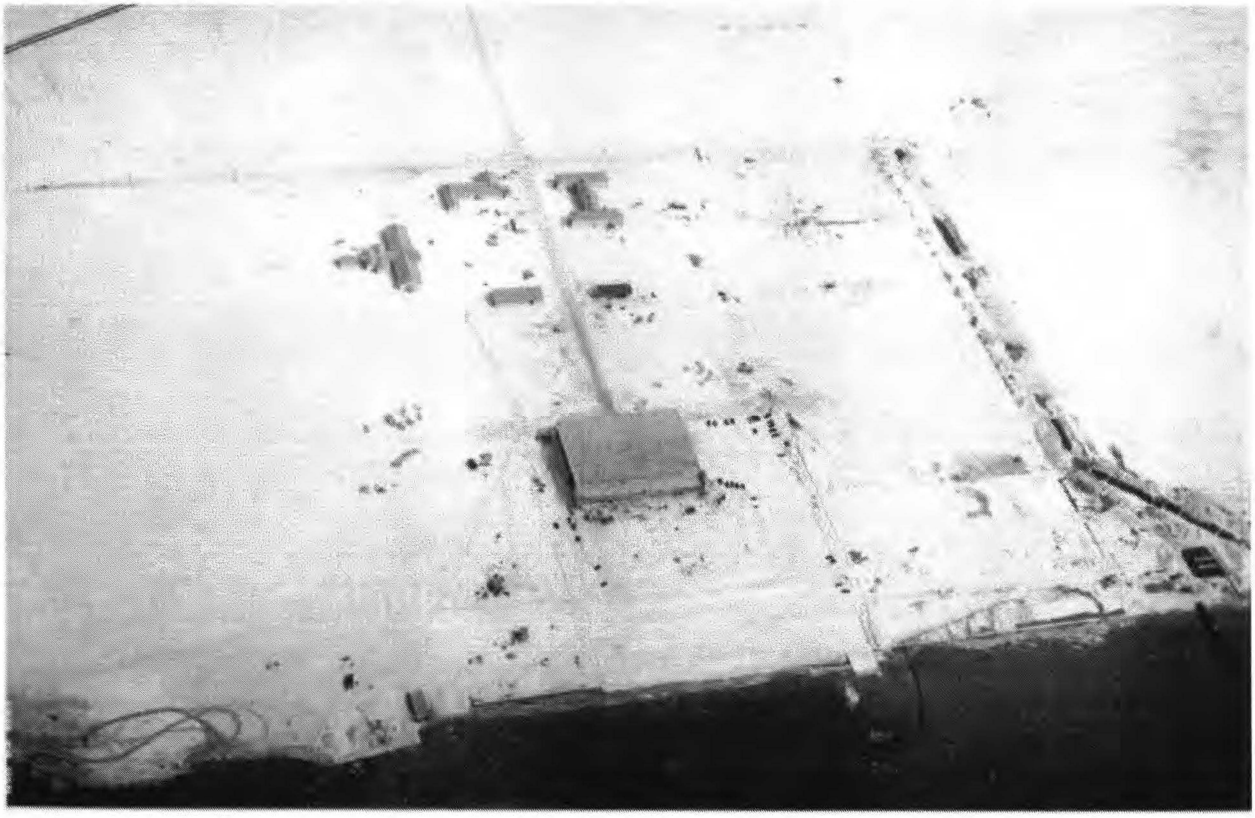

Figure 1. Aerial Oblique View of NAS Banana River, Florida, 27 September 1940. (NARA, RG 80-G Box 1979 463726).

The Banana River Naval Air Station was officially commissioned on October 1, 1940. Lt. Comdr. Waldo Tullsen, accompanied by Lieut. Comdr. F. P. Gardner, read the orders to a gathering of twenty-nine enlisted personnel and several local officials.[19] Tullsen ordered the ensign raised and watches set. During several post-ceremony weeks, base administrative offices remained in the hangar and personnel were forced to live ashore due to lack of quarters. From base dedication until the following spring, construction projects and administrative procedures focused on preparing Banana River for its role as an operating base of the Atlantic Coast Defense System (Figure 2).[20]

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[19] Montgomery, History of Naval Air Station Banana River, 4.

[20] Temme, "Historical and Architectural Documentation Reports," 7.

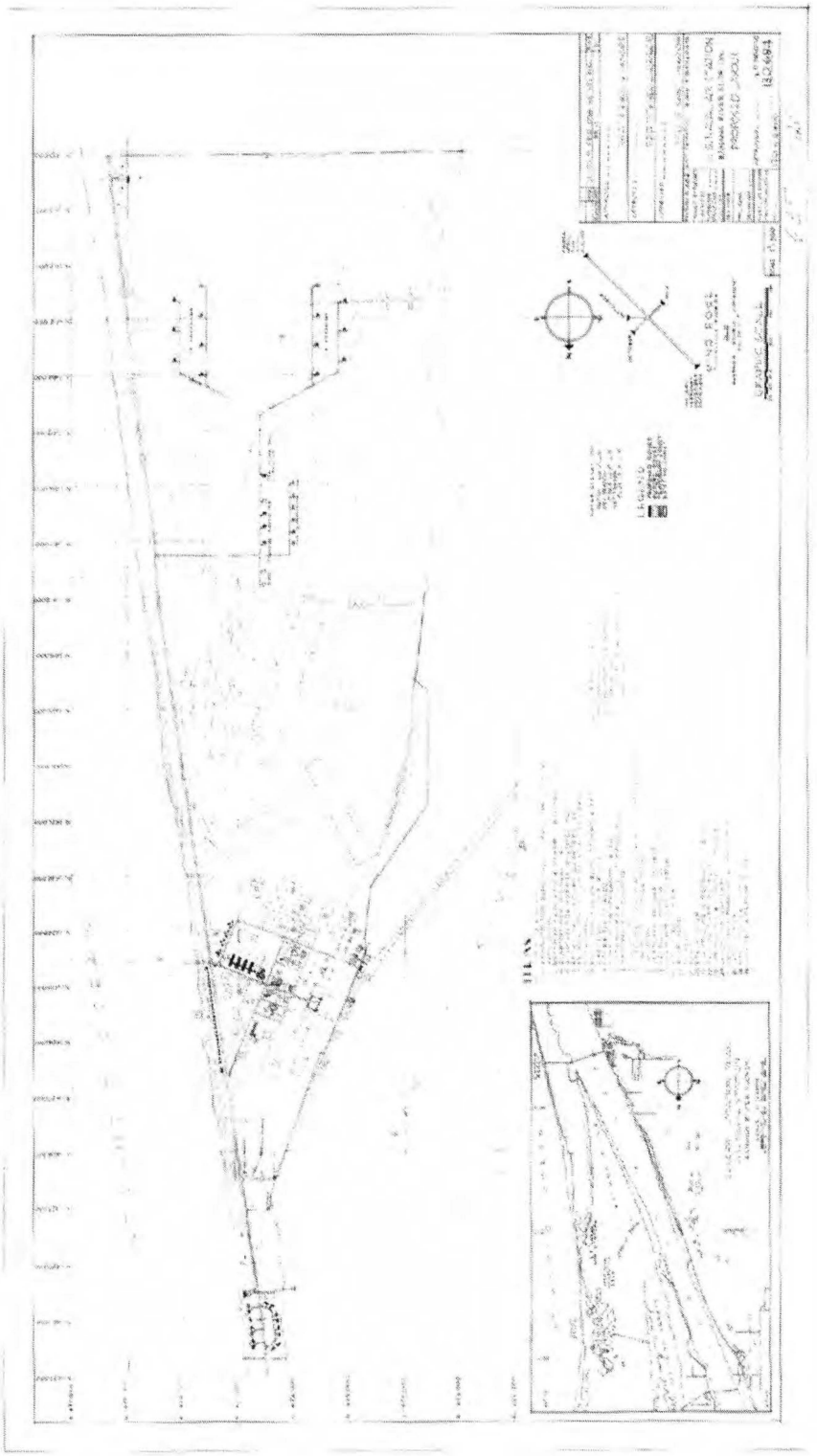

Figure 2. Proposed Layout of Banana River NAS, 1941 Revision. (NARA, RG 71, 635-3-20).

In the spring of 1941, the station received its first plane, a J2F. The craft, principally used for inspection flights, was flown exclusively by Lt. Comdr. Tullsen for several months.[21] In July, Commander, Atlantic Air Forces (ComAirLant) determined that the Norfolk seaplane area was too crowded for primary flight instruction of the large patrol bomber, the PMB, created by the Martin Company.[22] In agreement with the 7th Naval District it sent six training planes to Banana River. On August 2, two of the six PBMs arrived under command of Lieut. W.C. Anderson. Within three months this detachment had six planes, fourteen officers, and a trickle of pilot graduates.[23] ComAirLant's decision to send a PBM detachment to Banana River allowed the station to become a major training facility while maintaining its primary mission.[24]

Offshore arrival of German submarine wolfpacks brought the reality of World War II to Banana River. Coastal defense and anti-submarine activities forced pilot training to a standstill as daily safety patrols covered Cape Canaveral and Jupiter Inlet.[25] Flight instructors fought against wolfpacks but the PBM's age, lack of speed, and propensity to fail impaired their efforts. Additional safety precautions included wheeling two three-inch landing cannons, obsolete even in the previous war, down to the beach. Sandboxes and hand pumps were scattered over rooftops as civilian and naval personnel received fire-fighting training.[26]

As the war grew more intense, a group of giant Martin Patrol Bombers arrived. Carrier-based type fighters, torpedo bombers, shoot carrier landings, and aerial gunnery practices took off from the station's newly constructed runway. The SNB squadron, developed to train and instruct navigators and bombardiers, practiced with smoke and flash bomb targets north of Cocoa Causeway. In February 1942, Gulf Sea Frontier ordered the station to establish a scouting squadron for coastal anti-submarine reconnaissance and convey duty. On March 12, Lieut. Robert B. Moore commissioned the VS-1D7 with nine pilots, twenty-nine enlisted personnel, and four OS2U planes. This squadron allowed the PBM detachment to resume training on a limited scale. Though slow, lightly armed, and with a limited flight range, the Sea Frontier VS squadron accompanied ships through the dangerous waters and became efficient as an aerial escort.[27]

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[21] History Office, 6550th Air Base Group, Chronology, 3.

[22] Ibid., 5.

[23] Ibid., 4.

[24] Temme, "Historical and Architectural Documentation Reports," 7.

[25] History Office, 6550th Air Base Group, Chronology, 4.

[26] "Brevard County's War Scarred Beaches," The Missileer, November 6, 1964, 8; Temme, "Historical and Architectural Documentation Reports," 8.

[27] Montgomery, History of Naval Air Station Banana River, 7; Temme, "Historical and Architectural Documentation Reports," 8.

The master plan of 1942 called for quick construction of barracks, hangars, runways, and torpedo magazines (Figure 3). Buildings 400 and 430 were completed during this period. The Base Officer's Quarters 400 served as a temporary facility for visiting officials, dignitaries, heads of state, and military personnel. Station administrative headquarters, previously housed in the hangar, relocated to Building 430. Appropriations granted in spring 1942 helped construct a landplane field with runways and hangar on behalf of Project Baker, an experimental activity charged with field testing airborne electronic devices (Figure 4).[28] The mission and scope of Project Baker was "testing in the experimental and developmental stage, electronic airborne and related ground equipment utilized by naval aircraft for navigation, instrument low approach, radio communications and certain forms of television and counter-measure apparatus."[29] The unit arrived on April 3 to remain at Banana River until construction of Patuxent River NAS was complete. Project Baker's arrival placed overcrowding at the forefront of base concern. Drastic space needs forced the field and hangar to serve as classrooms and bulk storage before landplane activities could occur (Figure 5).[30]

Despite overcrowding, conditions in Florida were advantageous. Project Baker's previous experience in San Diego had proven that for the sake of expedience and safety, the nature of the project's flight testing required almost exclusive use of the air field. The station's main activity, PBM seaplane training, in no way conflicted with test flights. The Banana River site offered almost unlimited flying weather, both landplane and seaplane facilities, unrestricted adjacent sea areas, and clearance from terrain, structures, and electrical disturbances (Figure 6).[31]

Continual overcrowding of base facilities, coupled with Project Baker's arrival, hampered station administrative procedures. By spring 1943, a new focus was brought to this confusing situation as the Chief of Naval Operations specifically assigned Banana River to the newly organized Naval Air Operational Training Command. This directive covered all station units except TTSA and VS fleets and the reclassification eliminated paperwork, standardized routines, and permitted faster decision making by higher authority.[32] The newly defined mission also permitted construction of major projects to quadruple the Assembly and Repair Shops and relieve the seaplane hangar with construction of an additional hangar and ramp. A central operations building was designed to handle both sea and land plane flights. Critical overcrowding forced personnel to be housed in every available building as new arrivals quartered on deck. However, heavy increases in base personnel provided Banana River with a new distinction: the station had

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[28] History Office, 6550th Air Base Group, Chronology, 5.

[29] John T. Montgomery, History of Naval Air Station Banana River Florida November 1944-March 1945 #3, 15.

[30] Montgomery, History of Naval Air Station Banana River 1944- 1945 #3, 11; Temme, "Historical and Architectural Documentation Reports," 9.

[31] Montgomery, History of Naval Air Station Banana River 1944-1945 #3; 11; Temme, "Historical and Architectural Documentation Reports," 9.

[32] Montgomery, History of Naval Air Station Banana River 1944-1945 #3, 11.

grown into a bustling naval base and could no longer be described as an auxiliary installation (Figures 7 and 8). Additional expansion projects included construction of a new supply building, barracks for TTSA personnel, extension of the seaplane parking area, and an enlarged dispensary.[33]

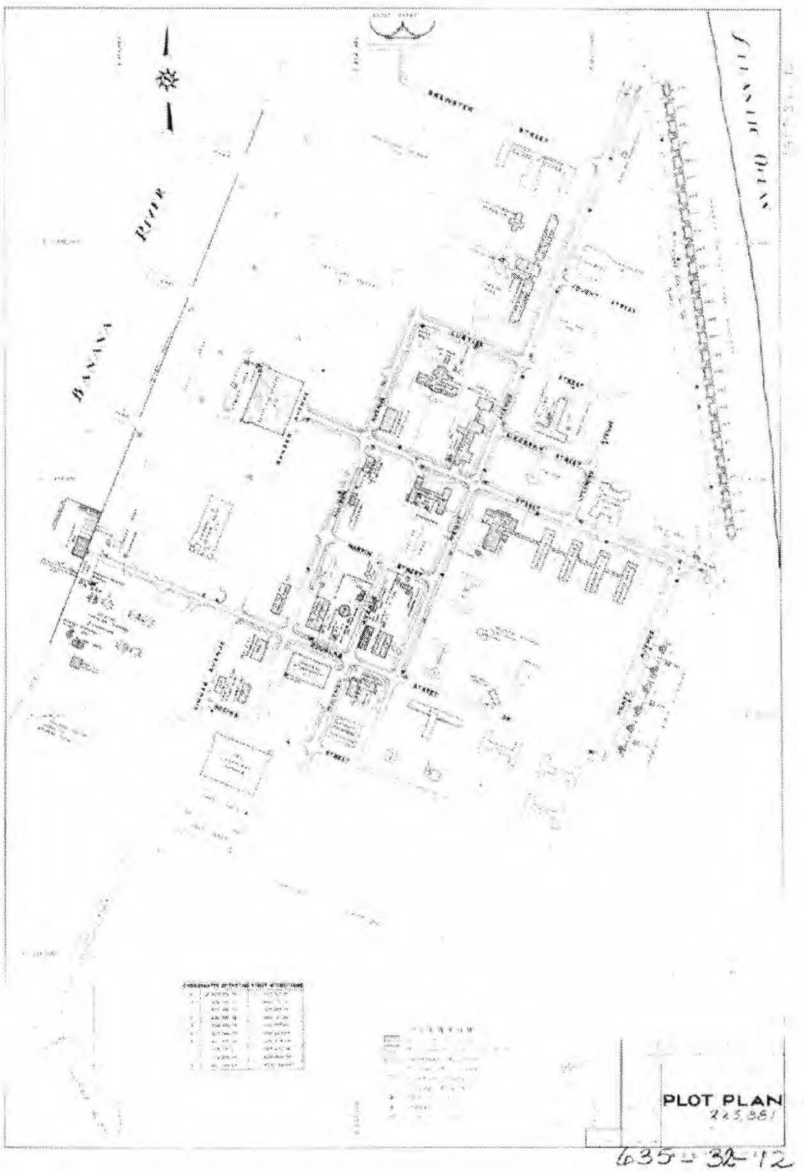

Figure 3. Banana River NAS Plot Plan, July 1942. (NARA, RG 71, 635-32-12).

[33] Temme, "Historical and Architectural Documentation Reports," 9-10.

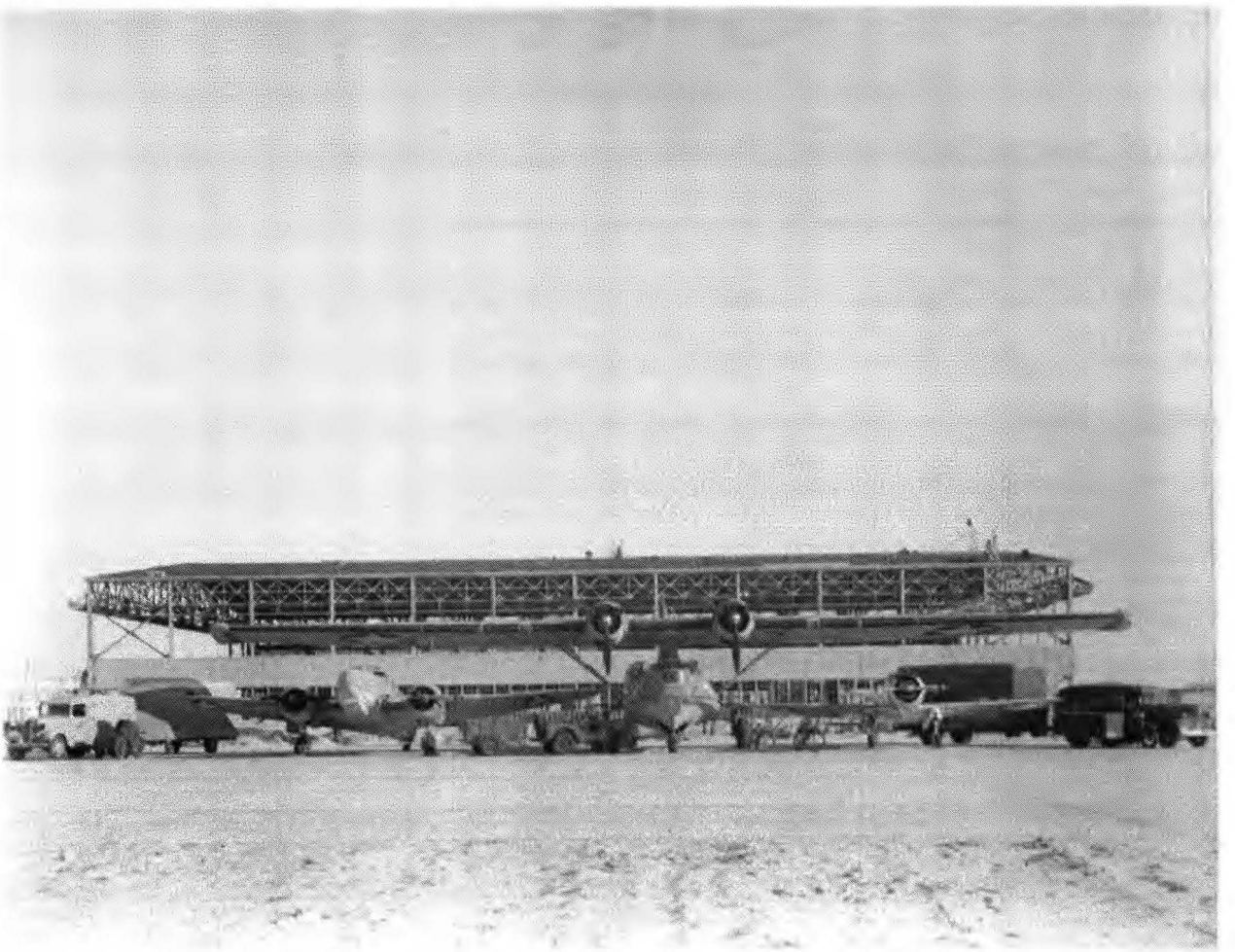

Figure 4. Planes, Equipment and Hangar of Project Baker at NAS Banana River, 5 December 1942. (NARA, RG 80-G Box 104 21973).

Figure 5. "Mock-ups" in Electrical Shop in NAS Banana River, Florida, 19 August 1943. (NARA, RG 80-G Box 1480 381974).

Figure 6. NAS Banana River, Florida. Alt. 10,000' F. L. 20', 9 Dec. 1942. (NARA, RG 80-G Box 104 21978).

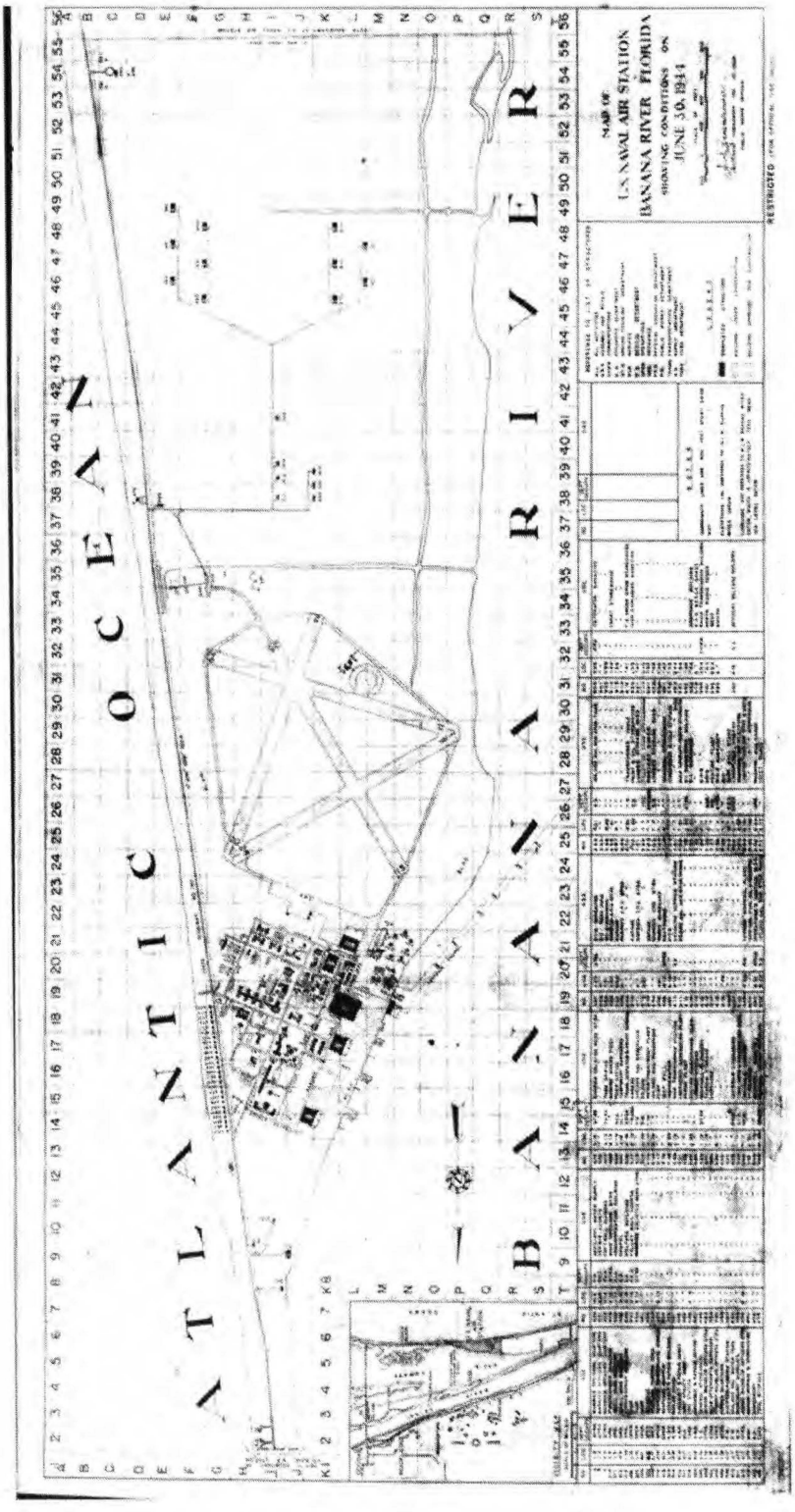

Figure 7. Map of Banana River NAS, 30 June 1944. (NARA, RG71, 635-32-12)

Figure 8. Aerial of NAS Banana River, Florida, 15 September 1944. (NARA, RG 80-G Box 1450 376853).

On January 17, 1944 the first Waves arrived. The Women's Reserve provided qualified personnel so male officers could be released for duty afloat. The station requested a complement of six female officers and 120 enlisted personnel. A lack of adequate housing forced the first arrivals to live ashore and delayed transfer of the additional Waves. As a result barracks were quickly completed and the first draft of enlisted Wave personnel arrived in late February.[34] By the spring of 1945, total station personnel had increased from 4,233 to 5,237 enlisted and from 548 to 739 officers. Base records for training time flying hours and motors overhauled led to

[34] Montgomery, History of Naval Air Station Banana River 1944-1945 #3, 13.

accolades from high authority which described Banana River "as the most beautiful and efficient Naval establishment on the eastern seaboard."[35]

On June 15, 1945 Project Baker celebrated the completion of its Hangar/Laboratory. The west side of Building 703 housed administrative offices, project rooms, laboratories, screen rooms, vault, visiting officer's quarters, and tower. The second deck contained enlisted men's barracks while the east wing's first deck housed the shops, stock room, ready room, and leading Chief Officer facilities.[36]

As base expansion continued, the need for PBM ground training became apparent. Base overcrowding forced impromptu lectures and demonstrations to be held in every available space in and around the hangar. In the first ground training classroom, a large yet makeshift location above the Ships Service, everything from First Aid to Radar was taught.[37] By January 1946, extension of Runways 2 and 20 and the widening of taxiways accommodated increased land plane activities.[38]

Despite its continued expansion and increased activities, the Banana River station faced closure at the end of World War II. Although a deactivation order was received dated August 1, 1947 the base remained active by altering its mission.[39] A 1946 joint Research and Development Board subcommittee on guided missiles inspired this conversion. The subcommittee was charged with recommending sites for the development of a Joint Long Range Proving Ground (JLRPG).[40] The apprehensive temperament of a nation and world during various periods following World War II determined the demand for a JLRPG. Distrust between the United States and the Soviet Union shaped an arms race. This atmosphere forced American military and congressional leaders to agree that manned bombers, supplemented by pilotless aircraft and guided missiles, would serve as the country's best "deterrent force." The post war era heralded space missile development devoted to this end.[41]

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[35] Montgomery, History of Naval Air Station Banana River 1944-1945 #3, 16; Temme, "Historical and Architectural Documentation Reports," 10.

[36] Montgomery, History of Naval Air Station Banana River 1944-1945 #3, 15.

[37] Ibid., 11.

[38] Temme, "Historical and Architectural Documentation Reports," 10-11.

[39] History Office, 6550th Air Base Group, Chronology, 7.

[40] Vic Craft, "The Making of a Missile Range!," MTP News – The RCA Missile Test Project 1953-1988, Florida, September 1988, 2.

[41] Air Force Missile Test Center 1963, Produced by the Office of Public Affairs, AFMTC, Patrick AFB, Florida, 30 min., Videocassette, 1963; Temme, "Historical and Architectural Documentation Reports," 11.

INITIAL DEVELOPMENT OF PATRICK AIR FORCE BASE AND THE JLRPG

In October 1946, the Committee on a JLRPG was created to study possible locations for downrange missile facilities.[42] By June 1947, the Committee of both Army and Navy officers recommended development of proving ground headquarter sites in either California or Florida. The committee's first preference, El Centro Marine Corps Base was located in the Gulf of California area and extended to Baja California-Mexico. Second choice of a Banana River-Bahamas Island range was to include launch facilities near Cape Canaveral.[43] The Joint Research and Development board approved committee suggestions on September 5, 1947. Subsequently, the Air Force activated a staff group to execute the recommendations. Brig. Gen. William L. Richardson led the JLRPG Group, which had been designated the National Guided Missile Range Group (NGMRG) with passage of the National Security Act.[44] This 1947 act also established a Department of the Air Force coequal with the Army and Navy.[45]

During a January 1948 analysis of proposed sites the NGMRG abandoned El Centro. Initial negotiations with the Mexican government, concerning sovereignty rights for tracking stations, proved futile.[46] On the other hand, the Cape Canaveral area had several factors working in its favor, not the least of which was an over-water range that would allow long-range missile flights over an area relatively free from major shipping lanes and inhabited land masses. In addition, the numerous islands extending out into the Atlantic Ocean offered suitable locations for permanent stations to track missile flights and record performance information. The relative isolation of the Cape area was ideal for safety and security reasons and the weather conditions of the area would allow for year round operation.[47] Also, the nearby Banana River NAS would make an ideal support base. Aside from these advantages, locating the missile proving ground at Cape Canaveral also had economic advantages. The U.S. government already owned portions of the Cape and the undeveloped land on the Cape was considerably less expensive than land at other locations.[48]

As a result, the Secretary of the Air Force requested the Navy Secretary to reserve the Banana River NAS as a headquarter site. By spring, an Army Materiel Command (AMC) contract was

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[42] History Office, 6550th Air Base Group, Chronology, 6.

[43] History Office, Patrick Air Force Base, "Origin and Development," 1.

[44] Ibid., 6.

[45] Temme, "Historical and Architectural Documentation Reports," 11-12.

[46] History Office, 6550th Air Base Group, Chronology, 27.

[47] From Sand to Moondust: A Narrative of Cape Kennedy, Then and Now, (U.S. Air Force and Pan American World Airways, Inc., 1974), 9.

[48] David Barton and Richard S. Levy, An Architectural and Engineering Survey and Evaluation of Facilities at Cape Canaveral Air Force Station, Brevard County, Florida, (Resource Analyst, Inc., 16 March 1984), 3; McCarthy and Nowlan, "Historic American Engineering Record of Launch Complex 17," 4.

awarded to Sverdup and Parcel, Inc. of St. Louis, Missouri, to study the minimum essential facilities needed for a Proving Ground. In July, the Air Force accepted an offer from the Navy Bureau of Yards and Docks to produce engineering and construction drawings for all offshore and downrange stations. Also in July, HQ AMC designated 1st Lieut. Raymond C. Barwick as the USAF representative for the Banana River transfer. On July 22, Barwick met with R. Admr. E.W. Litch, Commandant of the 7th Naval District, and other officials at Jacksonville, Florida. This discussion led to a Joint Chiefs of Staff authorization to transfer Banana River to the Air Force.[49]

The Banana River Naval Air Station became Air Force property on September 1, 1948. First Lieut. Barwick took command to prepare the station for its role as the administrative and support headquarters of the JLRPG. At this time plans were underway to prepare the Silver Beach family quarters for occupancy. In October the NGMRG received an interim report from Sverdup and Parcel, Inc. The Group requested the firm to continue its study and submit an additional report on community facilities. Sverdup's contract was modified to exclude downrange installations, include a master plan, and provide final construction plans and specification costs.[50]

By January 1949, representatives of HQ USAF and the Army Corps of Engineers agreed that the Air Force would carry out Proving Ground installation master planning. The Air Force would plan, design, and provide specifications for technical items and the Corps agreed to plan, design, estimate, and inspect construction of common-type items and contract all construction projects.[51] With establishment of Banana River as the JLRPG headquarters, negotiations continued with the British to establish downrange stations in the Bahamas. By February 1949, a preliminary agreement was reached and in March the NGMRG received cost estimates and schematic drawings for downrange stations form the Navy Bureau of Yards and Docks and a community plan form Sverdup and Parcel, Inc.[52]

As negotiations with the British continued, legislation providing for the JLRPG passed the 81st Congress. On May 11, 1949 President Truman signed Public Law 60 authorizing the establishment of the joint long-range proving ground to be used by the Army, Navy, and Air Force for the development and testing of missiles and other weapons.[53] Brig. General William L. Richardson was named to direct the project.[54] The bill also provided $75,000,000 for construction of essential facilities at Banana River. The operational range, scheduled for

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[49] Temme, "Historical and Architectural Documentation Reports," 12.

[50] Ibid.

[51] History Office, 6550th Air Base Group, Chronology, 20.

[52] History Office, 6550th Air Base Group, Chronology, 20; Temme, "Historical and Architectural Documentation Reports," 12-13.

[53] "Cape History: Establishment of the Eastern Test Range," Spaceport News, 14 October 1977.

[54] Master Plan of the Cape Canaveral Missile Test Annex, (Pan American World Airways, Inc., 1971), 1.

completion by July 1951, would be limited to 500 miles with eventual extensions to 5,000 miles. On June 10, 1949 the station under command of Col. Wallace W. Millard, USAF was redesignated the Joint Long Range Proving Ground, Cocoa, Florida.[55]

An advance headquarters was set up at the Air Base on October 1, 1949 and Brigadier General Richardson assumed command the following April. The name of the installation was changed in August of 1950 to Patrick Air Force Base in honor of Major General Mason M. Patrick, the Army Air Corps' first Chief. During that same year, construction began on the first missile launching pad (Pad 3) and the first support facilities at Cape Canaveral. In June, Cape Canaveral was officially declared operational and became Operating Sub-Division No. 1 or Station 1 of the Joint Long Range Proving Ground.[56] Within a month, the first rockets would blast off from the new launch pads and Patrick Air Force Base's continuing mission of administration and support would begin in earnest.

PHYSICAL DEVELOPMENT AT PATRICK AIR FORCE BASE

The Advance Headquarters set up on October 1, 1949, was established to coordinate operations of all echelons stationed at the JLRPG, Cocoa, Florida. Ranks included the Army Command, Air Force, and Navy Divisions. On this date, the total JLRPG working population stood at 457, including 37 officers, 211 enlisted, 195 federal civilians, and 24 attached personnel. The mission of the JLRPG was to develop, operate, and maintain a range for flight testing of long-range guided missiles.[57]

The first physical changes involved refurbishing the buildings which had set idle for two years. Next, the new facilities required had to be constructed. Two months earlier, preliminary planning of five JLRPG laboratories: electronics, guidance and control, instrumentation, propulsion and fuels, and photographic was completed.[58] The base hospital approached operational readiness, and initial surveys of the launch site, construction of a blockhouse, launch pad, and a 3,500-foot track area at Cape Canaveral were completed. In September, the JLRPG Base received several community improvements including an NCO Club and complete renovation of the Silver Beach housing units.[59]

The first of many new housing projects began on January 5, 1950 when HQ JLRPG sent out 59 invitations for proposals to construct the first increment of 180 Wherry housing units under

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[55] History Office, 6550th Air Base Group, Chronology, 21; Temme, "Historical and Architectural Documentation Reports," 13.

[56] Barton and Levy, Architectural and Engineering Survey and Evaluation, 4; McCarthy and Nowlan, "Historic American Engineering Record of Launch Complex 17," 5.

[57] Temme, "Historical and Architectural Documentation Reports," 13-14.

[58] History Office, 6550th Air Base Group, Chronology, 22.

[59] Temme, "Historical and Architectural Documentation Reports," 13.

Public Law 211. Other construction projects followed suit in 1951 when the Duval Construction Company received a contract to pave twenty-one miles of road. The project contained three phases: (1) relocation of a section of State Road A1A into the working area of Patrick AFB, (2) resurfacing and widening of State Road A1A from the Cocoa Causeway to the south boundary of the Cape launching area and construction of a road around the Port Canaveral ship turning basin, and (3) the construction of eighteen access and service roads within the launching area.[60]

On May 11, 1951 a draft LRPG Master Plan was released and Patrick's first restricted area, Building 312 (the assembly site for the Matador missile) was secured.[61] In the next few years, however, problems with transporting assembled missiles to the launch site would result in the removal of most assembly functions to the Cape. Base improvements during June 1951 included relocation of the Officers' Mess from Building 400 to the newly renovated Officers' Beach Club and clearing for an extension of Patrick's new runway and taxiway. In November, the completion of Central Control at Cape Canaveral led to construction of additional housing for base personnel. The Secretary of the Air Force issued a certificate of need for 500 additional Wherry housing units. By January 1952, a survey of available housing for PAFB personnel indicated a shortage of approximately 1,300 units between January-June 1952.[62] This would not be an isolated problem; at various times in the base's history, the local communities have been called upon to help supply housing for both Navy and Air Force personnel.

A milestone was reached in December 1952, when PAFB's role as the administrative support headquarters for the AFMTC was solidified and the base received its designation as a permanent Air Force installation.[63] This designation, of course, only encouraged more construction and expansion of facilities (Figure 10). Soon, it became more feasible for the base to be run by a contractor, thereby freeing up Air Force personnel for other duties. In June 1953, the Air Force and Pan American World Services entered into a contract for the private maintenance and operation of facilities and equipment at Patrick AFB and Cape Canaveral. Pan Am chose the RCA Service Company as its primary subcontractor to provide communications, photographic, electronic, and optical tracking services.[64] Management and direction of range operations remained the responsibility of the AFMTC.[65]

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[60] History Office, 6550th Air Base Group, Chronology, 48; Temme, "Historical and Architectural Documentation Reports," 14, 19.

[61] Temme, "Historical and Architectural Documentation Reports," 19.

[62] Temme, "Historical and Architectural Documentation Reports," 19-20.

[63] Temme, "Historical and Architectural Documentation Reports," 21.

[64] Craft, "The Making of a Missile Range!," 2; Temme, "Historical and Architectural Documentation Reports," 22.

[65] "Cape History: Establishment of the Eastern Test Range," 1; Temme, "Historical and Architectural Documentation Reports," 22.

Figure 9. Patrick Air Force Base, Building Layout, April 1953. (45 CES/CEVP)

Operations at the Cape became much intensive throughout the 1950s, and this necessitated new and more advanced technical support facilities at PAFB. On July 1, 1953 the Burnup and Sims Construction Company completed the Technical and Humidity Control Warehouse. The project was begun in September 1952 and cost $278,500. Also at this time, the J.H. Sapp Company completed its construction of three missile assembly buildings (Hangars A and B at PAFB and Hangar C at Cape Canaveral).[66]

Until this point, the built-up area at PAFB was concentrated north of the airfield. One of the first large facilities to appear on the southern part of the base began in October 1954, when clearing along South Patrick Drive initiated construction of a Research Laboratory. This structure, designed to house the Range Contractor technical facilities, had an estimated cost of $2,000,000. A structure of this magnitude emphasized the importance of the AFMTC and reflected its rapid growth. In December, the working population of the AFMTC was 7,107 and by mid-June 1955, assets of HQ AFMTC stood at $146,600,000, an increase of $14.9 million from fiscal year 1954.[67]

Many government agencies and contractors opened field offices at PAFB for ease of coordination and liason purposes, such as the Douglas Aircraft Company for the Thor program. Public relations were also taken seriously, given the high profile of the AFMTC. On May 20 (Armed Forces Day) 1956, the first public launch of a Matador took place. The 6555th Guided Missile squadron launched the Matador from a mobile pad just north of Building 800 at PAFB. Continuing successful launches and missile programs led to continued expansion. The July 1956 construction of Building 425, a first phase structure with an estimated cost of $1.8 million, centralized administrative activities. At year's end, the Test Center's working population totaled 12,058 with an increase of over 2,000 since mid-summer. As personnel needs continued to increase, 1,125 Capehart housing units were constructed in 1956. Falling very short of the need, more housing was required, leading to an October 1957 contract for Florida Builders, Inc. of Tampa to construct 999 additional Capehart units at a cost of $16,090,131.[68]

Improvements at Patrick during 1958 included construction of the Range Contractor Building 423, Base Communications, and Religious Education buildings. In October, NASA became the controlling agency for non-military scientific space projects and in November established a Missile Range Operations Office at the AFMTC. Capital plant investment in the AMTC stood at $467,152,000 with a total working population of 17,469.[69]

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[66] History Office, 6550th Air Base Group, Chronology,81; Temme, "Historical and Architectural Documentation Reports," 22.

[67] Temme, "Historical and Architectural Documentation Reports," 23.

[68] History Office, 6550th Air Base Group, Chronology,89; Temme, "Historical and Architectural Documentation Reports," 23.

[69] Temme, "Historical and Architectural Documentation Reports," 24.

In February 1960, the Air Force released $1.6 million for new Test Center military construction. In June, Congress passed a military authorization bill for $10.3 million in construction projects at the AFMTC during fiscal year 1961. As part of this build-up, the Army Corps of Engineers called for construction bids on a 2,800 square foot concrete block building at the southeast corner of PAFB in April 1961. The structure was designed to house equipment for a unit of the Semi-Automatic Ground Environment (SAGE) Air Defense System. With continuing base improvements (Figure 10), Patrick's administrative space needs reached a critical stage and AFMTC officials requested missile contractors to vacate certain offices by mid-summer.[70]

Beginning on October 22, 1962, the Cuban Missile Crisis forced PAFB to assume strict security measures. That evening, during a televised broadcast, President John F. Kennedy informed the nation that the Soviet Union had installed nuclear weapons on Cuba and that an offensive buildup was underway. He outlined a seven-step action plan, which included placing the military on DEFCON 3 alert, and creating a huge defense buildup throughout the southeastern United States. During this national emergency, the AFMTC served as a support base and staging area. Patrick provided billeting and mess facilities, assisted combat troops on their way south and stood ready as an evacuation station for Homestead AFB. Military billets were increased by the erection of approximately 375 tents. The largest number of combat and support forces deployed to Patrick during the crisis included 140 officers and 998 enlisted personnel.[71]

During the crisis, traffic moved along Highway A1A but security guards, posted at base entrances, checked personnel thoroughly before entry. In addition to a quarantine of shipping in the waters surrounding Cuba, a major escalation of force by the three armed services was apparent.[72] Air police patrolled the Banana River and an Air Defense Command fighter interceptor squadron was strengthened by pilots who received briefings four to eight times daily or as conditions warranted. Tactical Air Command (TAC) and Army elements also received the benefit of stepped-up weather reports. Despite a military buildup, Patrick remained functional and, during the thirty-seven day period following the President's announcement, fourteen major missile and space vehicles were launched.[73] During this period, a $1,761,380 construction contract was also awarded for a two-wing addition at Building 423.[74]

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[70] Ibid., 23-24, 26-27.

[71] History Office, 6550th Air Base Group, Chronology, 46; Temme, "Historical and Architectural Documentation Reports," 27.

[72] History Office, 6550th Air Base Group, Chronology, 46.

[73] "October 1962-Patrick Responds As Crisis Grows," The Missileer, September 1967.

[74] Temme, "Historical and Architectural Documentation Reports," 28.

Figure 10. Aerial View of Patrick AFB, Florida, 25 October 1962. (NARA, RG 342-B 06-017 Box 939 Folder 2 38457).

Base development and expansion continued apace through the 1960s. In early 1964, groundbreaking ceremonies took place at PAFB for construction of a new hospital. The facility, located near the southern boundary of Patrick Drive, had a programmed cost of $2,574,900. On April 24, 1966, after a six-day transfer period, patients were established at the new PAFB hospital. A 75-bed composite medical facility replaced the old building and consisted of 74,000 square feet constructed at a final cost of $3,092,920.[75]

On June 1, 1967, acquisition of a line-of-sight easement for 200 acres south of Patrick AFB was complete with the addition of 6.98 acres. Total base area stood at 2,332 acres including 1,791 in PAFB proper and 316 in Capehart housing owned in fee, plus 225 acres controlled by line-of-sight easements. In September, construction began on a new Base Exchange Building with funds totaling $849,000 from a non-appropriated account.[76]

Throughout their history, Banana River NAS and Patrick AFB have grown in response to technological development, whether for experimental aviation projects or new generations of missile systems. From its activation on October 1, 1949, PAFB has been a major contributor to the economic growth of South Brevard County. The Base has maintained a total working population ranging from 7,107 in 1954 to a peak of 25,826 in 1962. Patrick officials support local construction of highways, bridges, housing, and schools.[77] Today, Patrick AFB encompasses approximately 2,108 acres bordered on the east by the Atlantic Ocean and on the west by the Banana River.[78] The installation continues to function as headquarters for downrange space launch program under the auspices of the 45th Space Wing.[79]

PART II. ARCHITECTURAL INFORMATION

A. General Statement:

1. Architectural Character: Buildings and structures are primarily utilitarian in appearance, although a few standard design features are visible in older parts of the administration area. Administrative buildings and barracks from the 1940s and 1950s are generally two to three

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[75] Ibid., 29.

[76] History Office, 6550th Air Base Group, Chronology,105, 133; Temme, "Historical and Architectural Documentation Reports," 29-30.

[77] Marvin R. Whipple, "History of Patrick Air Force Base," History Office, Air Force Eastern Test Range, Patrick Air Force Base, Florida, ND, 4.

[78] EDAW, Inc., "Concept Summary," Base Comprehensive Plan ESMC, Atlanta, ND, 1.

[79] Temme, "Historical and Architectural Documentation Reports," 29, 32.

stories in height with flat roofs containing wide overhangs and/or flat cantilevered concrete awnings. These sun-shade awnings sometimes covered rows of windows on all floors. Walls were constructed of concrete block, usually clad in flat or scored stucco. Exterior decoration was minimal and stripped-down, although occasional Art Moderne or Art Deco motifs were used near entranceways. Windows were generally rectangular aluminum double-hung sashes (wood in WW II era construction), sometimes arranged in groups to give a horizontal appearance. Glass blocks were also used in some smaller windows. Hangars are constructed with either gabled or bowed roofs and large sliding doors on two sides, sometimes with pocket towers for storage. Warehouses and other support buildings are more variable in appearance with concrete and metal as the most common construction materials. There is currently an effort to institute a Mediterranean-style architectural theme for the base, although there is no historical precedent for this type of architecture.[80]

2. Condition of the Fabric: Many of the older buildings on the base have been heavily modified. While they lack some historic integrity, they are currently in good condition. Newer structures seem to be well maintained and in good condition.

B. Site:

1. General Setting: Patrick Air Force Base is located on a barrier island between the Banana River to the west and the Atlantic Ocean to the east. The land is flat and sandy. A large amount of sand was dredged from the river to provide buildable space for the Naval Air Station in 1940. The installation borders on Highway A1A which runs north-south along the coastline. Family housing was originally constructed across the highway on the beach, and now occupies the far north and south ends of the base.

2. Landscaping, Enclosures: The main entrance to Patrick Air Force Base lies along Highway A1A to the east. Previous landscaping features have given way to the barriers and bollards of Force Protection needs. The original vegetation was cleared for the initial construction. Today, the main organic landscape elements are grass and palm trees.

3. Buildings: The administrative area follows a linear pattern on a very narrow strip of land near the main gate. Buildings from the 1950s filled in gaps left by WWII era construction. Immediately to the south, technical and support buildings surround hangars, runways, aprons and munitions magazines in a less symmetrical pattern.[81]

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[80] "Cultural Resource Management Plan," 67.

[81] Ibid.

PART III. SOURCES OF INFORMATION

A. Architectural Drawings:

Original drawings and reproductions of original drawings for Patrick Air Force Base are housed at the 45 CES/CEVP, Building 535, Patrick Air Force Base, Florida.

B. Early Views:

A significant collection of historical photographs is housed at the 45 SW History Office, Patrick Air Force Base, Florida. Additionally, many historical photographs can be found in the Still Pictures Branch, National Archives and Records Administration (NARA), College Park, MD. Maps and layout plans for Banana River NAS are available at NARA, College Park. Maps and plans for Patrick Air Force Base are available at the 45 CES/CEVP, Building 535, Patrick Air Force Base, Florida.

C: Interviews:

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Field photographs taken by Julie L. Webster and Martin Stupich. February 3-6, 2004.

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E. Likely Sources Not Yet Investigated: Further research into material at the National Archives and at the Air Force Historical Research Agency, Maxwell Air Force Base, Alabama, would be beneficial.

F. Supplemental Material: None.

PART IV. PROJECT INFORMATION

The project was funded by the U.S. Air Force 45 Civil Engineer Squadron/Civil Engineer Environmental Planning Element and produced to provide the U.S. Air Force with documentation for proper stewardship of its cultural resources. The work was performed by Dr. Susan I. Enscore, Julie L. Webster, R.A., and Martin Stupich of the United States Army Engineer Research and Development Center, Construction Engineering Research Laboratory. Dr. Enscore served as project manager and project historian. Ms. Webster served as project architect, and Mr. Stupich photographed and produced the large-format photography contained in the report. Documentation was coordinated through the Environmental Flight section of the 45 Civil Engineer Squadron/Civil Engineer Environmental Planning Element, Patrick Air Force Base, with special assistance from Wesley J.P. Westphal II, Environmental Planner, and Dale Hawkins, Environmental Planner, under the direction of Robin Sutherland, Civil Engineer Environmental Planning Element Chief.

PATRICK AIR FORCE BASE, THEATER
(Patrick Air Force Base, Building 431)
Intersection of Edward H. White Road and Titan Road
Melbourne Vicinity
Brevard County
Florida

HABS No. FL-

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

PHOTOGRAPHS

HISTORIC AMERICAN BUILDINGS SURVEY
National Park Service
Southeast Region
Department of the Interior
Atlanta, GA 30303

HISTORIC AMERICAN BUILDINGS SURVEY

PATRICK AIR FORCE BASE, THEATER HABS No. FL-
(Patrick Air Force Base, Building 431)

For information about other structures at the Patrick Air Force Base site, see:

HABS No. FL- Patrick Air Force Base
HABS No. FL- Patrick Air Force Base, Seaside Chapel

Documentation: 12 exterior photos (2004)
6 interior photos (2004)
48 data pages (2004)

Location: Patrick Air Force Base
Theater, Building 431
Intersection of Edward H. White Road and Titan Road
Melbourne Vicinity
Brevard County
Florida

Date of Construction: 1945

Engineer: Bureau of Yards and Docks

Present Owner: United States Air Force

Present Use: Theater

Significance: The Theater is the oldest surviving theater at Patrick Air Force Base, and dates to the Navy's use of this land as the Banana River Naval Air Station. This facility provided entertainment for both Naval and, later on, Air Force personnel. The theater functioned as a multi-use venue, with a film screen and a stage that was used for live shows. The Theater continues to provide entertainment for installation personnel. It is significant for its association with the Banana River Naval Air Station, the Naval Expansion Act of 1938, and the Atlantic Coastal Defense System. It has been designated as a contributing building to the Administrative Historic District at Patrick Air Force Base.

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Construction Engineering Research Laboratory
2902 Newmark Drive Champaign, IL 61822

Date: June 4, 2004

A. General Statement[1]:

1. History: The theater at the Banana River NAS was constructed in 1945 at a cost of $127,068.[2] Work commenced in the first quarter of 1945 and was finished later that year, with new projectors and sound equipment installed in March 1946[3] A new air conditioning system was installed at the same time. It was reported in late 1946 that a charge of ten cents per person was inaugurated for the movies, and the theater continued to provide entertainment even as the station was slowly shutting down, becoming one of the last recreation options available.[4] Run by the Army and Air Force Motion Picture Service, and later by the Army and Air Force Exchange Service (AAFES), it has provided sailors and airmen an entertainment venue for nearly sixty years. Recreational opportunities on the station were somewhat limited during World War II, and the theater served as a major element in boosting morale. During this time, the theater showed the latest movies twice daily.[5] In addition to films, entertainment for the sailors often included USO shows. Typical shows were titled "Bublin' Over," "The Camel Caravan," and "Full Speed Ahead." As is still the case, these shows featured entertainers such as singers, dancers, and comedians. Various other entertainments came to the station regularly and probably used the theater as their venue for a variety of musical and theatrical fare.[6]

2. Architectural Character: Building 431 is irregular in plan and composed of three primary areas: a service block at the front, an auditorium in the middle, and a stage and mechanical zone at the rear. The large scalloped-shaped auditorium dominates the layout and massing of Building 431. The front and back areas of the theater are similarly divided into central two-story masses with flanking single-story wings. The two-story portion of the service block contains the lobby below and projection room above. An office/concession wing extends to the south, and a restroom wing extends to the north. At the stage/mechanical zone, the stage house is two stories in

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[1] Sources for the architectural description are the following, unless otherwise noted: Drawings on file at 45 CES/CE; Field notes taken by Julie L. Webster, February 3-6, 2004; Field photographs taken by Julie L. Webster and Martin Stupich, February 3-6, 2004. For bibliography and additional project information, see HABS No. FL-, Patrick Air Force Base.

[2] Virge Jenkins Temme, et.al., "Historical and Architectural Documentation Reports of Patrick Air Force Base, Cocoa Beach, Florida," (Champaign, IL: U.S. Army Construction Engineering Research Laboratories, 1994).

[3] John T. Montgomery, History of Naval Air Station Banana River Florida November 1944-March 1945 #3, History Office, Patrick Air Force Base, Florida, ND; Idem, Naval Air Station Banana River Florida, History Supplement First Quarter 1946, History Office, Patrick Air Force Base, Florida, ND, 3; Idem, Naval Air Station Banana River, January 1946-March 1946 and October 1946-December 1946, History Office, Patrick Air Force Base, Florida, ND, 25.

[4] Ibid, 82; Idem, Naval Air Station Banana River Florida, History Supplement Second Quarter 1947, History Office, Patrick Air Force Base, Florida, ND, 4.

[5] Melissa Williford Euziere, "From Mosquito Clouds to War Clouds: The Rise of Naval Air Station Banana River," M.A. Thesis, (Tallahassee, Florida: Florida State University, 2003), 50-51.

[6] Ibid., 50.

height, approximately matching the height of the two-story front service block. The fan room steps up an additional story that bridges the center of the stage house below. This mechanical space approximately matches the height of the auditorium structure. To either side of the central stage/mechanical zone are matching wings that contain dressing rooms and storage. All roof surfaces are reasonably flat and terminate in copper gutters or coping. Foundations, floors, and the structural frame are reinforced poured-in-place concrete. Walls are concrete block in-fill covered with stucco. The north and south walls of the auditorium flare inward between structural bays giving this space its scallop-shaped plan. The public entrance is up a wide exterior concrete staircase and under a projecting eave on the west end of the building. Although Building 431 was constructed in the 1940s, it has Art Deco features typical of the 1920s and 1930s.

The exterior appearance (Figure 1) is largely intact with the exception of window and door replacements, the removal of some window and vent openings, and the replacement of wood and metal features with those of metal and concrete. One example of the conversion to more durable materials is the exterior stair to the fan room. This stair was originally iron, but was later reconstructed in reinforced concrete during a 1981 rehabilitation. Metal ladders and vents also replace most of the original wood versions.

The interior of Building 431 is largely intact with the exception of the front service block. This area has been substantially altered over the course of multiple reconfiguration projects. Initial alterations affected only the south service wing, but recent 1998 modifications brought significant changes to the lobby and north wing as well. Most floors, walls, ceilings, finishes, openings, lighting, and furnishings have been modified in these areas. The 1998 upgrades also included overall electrical, life safety, and accessibility updates.[7]

Areas of Building 431 that retain the most historical integrity are the projection room stair hall, north storage room, and boiler room (Figure 2). Here original flooring, walls, ceilings, finishes, and openings remain. At the time of recordation, Building 431 was in good condition due to frequent use and upkeep.

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[7] Memo dated 23 November 1994 between 45 CES/CE, Patrick AFB, FL and the Division of Historical Resources, Tallahassee, FL, Vertical File "Fac 431," Real Property Office, Patrick Air Force Base, Florida, 3.

Figure 1. Base Theater at the Air Force Missile Test Center, Patrick Air Force Base, Cocoa, Florida. 22 April 1952. (NARA, RG 342-FH Box 2111 G-327).

Figure 2. Intact Projection Room Stair Hall.

B. Description of the Exterior:

1. Overall Dimensions:[8] Building 431 is 160'10" by 86' and irregular in plan. The building contains 14,272 square feet of floor space on primarily one level. The floor elevation of the auditorium runs from 5'10" (5.83 feet) at the lobby/service block end to 0'0" (0.0 feet) at the stage end (the baseline). The exterior entry stairs account for the 5'10" (5.83 feet) rise to the lower level service block. The floor-to-floor height between levels of the service block is 10'0" (10.0 feet), making the floor elevation of the projection room 15'10" (15.83 feet). The floor elevation of the stage is 3'4" (3.33 feet) above the lowest point of the auditorium (the baseline). The floor-to-floor height between the stage and overhead fan room is 23'5" (23.42 feet), making the floor elevation of the fan room 26'9" (26.75 feet). The fan room tops out at 36'5½" (36.46 feet), making it only slightly higher than the auditorium portion of the theater. The large 8'11" (8.92 feet) structural steel trusses add substantial height beyond the finished auditorium ceiling for a total height of 34.5 feet.

2. Foundations: Foundations are continuous and stepped spread footings, with isolated spread footings at interior column locations. Perimeter foundation walls are constructed of concrete block, and isolated piers are poured-in-place reinforced concrete. Footings at the auditorium sidewalls are substantially oversized to withstand the load of the long-span steel trusses.

3. Walls: All exterior walls are 8" thick concrete block, covered with stucco, and painted a light cream color. Paint is peeling off the southeast corner of the auditorium, revealing the previous pale green color scheme. Original fluted stucco panels run between and to either side of the front projection room windows. This is the first of two Art Deco features found on Building 431 (Figure 3). Several "ghost" outlines of former window openings are visible at the west, north, and south sides of the front service wings. Similar outlines are located on either side of the main entry doors where billboards were once mounted. Large stucco wall expanses are interrupted periodically with oversized brown copper downspouts that run from gutters or parapet scuppers above to the splash blocks at grade. In the original design, these copper downspouts were galvanized iron.

In late 1973, the exterior walls were refurbished and repainted. Loose stucco was routed out, repaired, and resurfaced to match the adjacent wall surfaces. Cracks were filled with polysulfide caulking compound. The stucco exterior was finished with a single coat of masonry waterproofing. In 1992, the exterior was painted again as part of a three-building painting project.[9]

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[8] Dimensions are given in two formats: as feet (') and inch ("), and as decimals. The former is a common short form and the latter will aid the reader when viewing the original drawings.

[9] BCE Completed Work Order Cost Report, Work Order SXHTA 92656, 91-1015 Paint Exterior of 3 Buildings, Vertical File "Fac 431," Real Property Office, Patrick Air Force Base, Florida, 1-3.

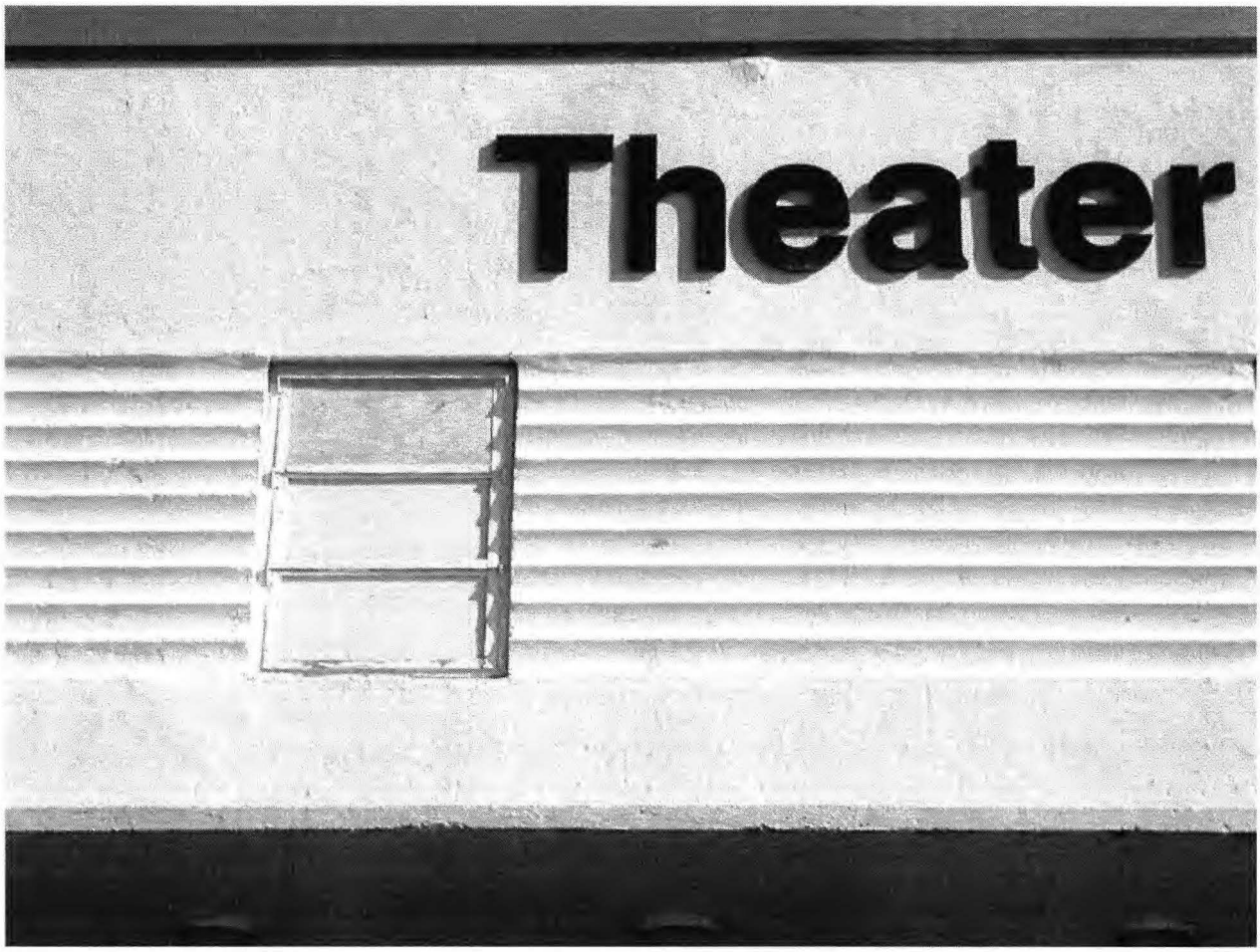

Figure 3. Art Deco Fluted Stucco Panels.

4. Structural System: Building 431 has a reinforced concrete structural frame. Floors and ceilings of the front service block and rear stage/mechanical zone are concrete slabs. Large steel trusses bridge the long span across the auditorium and rest on oversized reinforced concrete columns. These columns are visible on the building exterior at the north and south auditorium walls. The inward flare between these oversized columns gives the theater its distinctive buttressed appearance. In 1981, many of the columns and beams of the stage house and fan room were repaired or reconstructed. At this same time, the exterior walls of the fan room were recon-

structed as well. In 1998, additional structural improvements were made, including the replacement of steel components, hand applied spall repairs, and Shotcrete column and beam repairs.[10]

5. Porches, Exterior Stairs: The only porch on Building 431 is at the front entry. Here a simple concrete canopy extends 7 feet from the west face of the building at an approximate height of 10 feet. The canopy is 6 inches thick at the wall and tapers slightly to a thickness of 3 inches at its outer edge. The outside corners of the canopy are rounded to a 4-foot radius. These rounded forms are the second of two Art Deco features found on the theater (Figure 4). During the early 1980s, the canopy was cleaned and painted. A 10-riser concrete staircase leads up to the entry porch. Three-foot-wide concrete block plinths with concrete caps flank the stairs. The staircase was painted gray and three new aluminum handrails installed in 1998.[11]

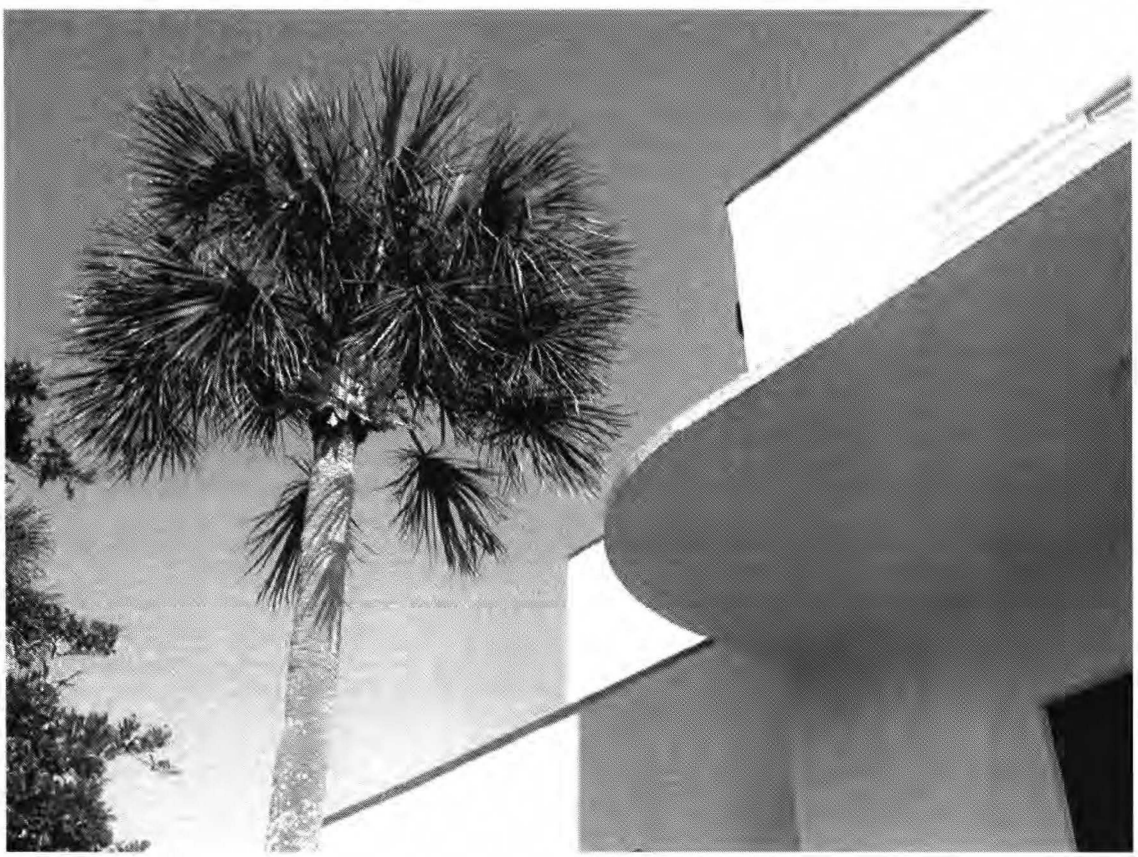

Figure 4. Art Deco Rounded Canopy.

[10] BCE Completed Work Order Cost Report, Work Order SXHTA 92656, 91-1015 Paint Exterior of 3 Buildings, Vertical File "Fac 431," Real Property Office, Patrick Air Force Base, Florida, 1-3.

[11] Memo dated 23 November, Attachment 3: Drawings of Proposed Work on Building Number 431.

Multiple exterior stairs surround the theater. Most notable are the two egress stairs, one per side, that exit the auditorium. These stairs are reinforced concrete with nine risers. The area below the stairs is enclosed by concrete block sidewalls. Pipe rails run down both sides (Figure 5). Two additional points of egress are located near the stage on either side of the auditorium. Here doors lead out to simple concrete landings at grade and provide handicap accessibility. Stairs to the men's and women's dressing rooms are located on the west side of each wing near the stage. These stairs are reinforced concrete with five risers. They lead up to corner landings and feature pipe rails. A virtually identical stair is located on the east side of Building 431. Here it provides access to the south end of the stage. (A loading area mimics this access on the north end of the stage.)

Figure 5. Exterior Egress Stairs at Auditorium.

Aside from the main entry stair, the most prominent exterior stair leads to the fan room. This L-shaped staircase runs along the south face of the equipment room and the east face of the stage house. Originally of iron, the stairs were reconstructed of reinforced concrete during the 1981 rehabilitation of the stage house and fan room (Figure 6). Concrete pads and footings were laid to support the new stairs. The lower run is 17 treads and the upper run is 18 treads. The bottom edge of the interim platform is even with the roof of the equipment (compressor) room.

Figure 6. L-shaped Exterior Stairs to Fan Room.

In addition to exterior staircases, a series of steel ladders lead to the rooftops of the front service wing, projection room, and auditorium (Figure 7). The lowest ladder is protected with a cage. These replace the original wood ladders that were once mounted to the exterior.

Figure 7. Multiple Ladders to Rooftops.

6. Chimneys: A flue rises from the grade-level boiler room and extends 3 feet beyond the east wall of the fan room. It is aligned with the stage centerline. Tie beams connect the flue with the floor and ceiling slabs of the fan room. Firebricks line the flue for safety.

7. Openings:

a. Doors: All exterior doors to Building 431 were originally wood flush doors unless otherwise noted. All wood doors have been replaced with metal doors. All exterior frames were

originally wood unless otherwise noted, and likewise, all wood frames have been replaced with metal frames.

Primary access to the theater was originally through four pairs of doors, two pairs per rough opening. In 1962, the original flush two-light doors and hardware were replaced.[12] Currently this entry has the original door configuration; however, recent aluminum-and-glass storefront units replace the 1962 doors (Figure 8). Hardware on the storefront doors is copper. Side egress doors at the auditorium sidewalls are simple flush doors like their originals. The only deviation is that metal doors replace the original wood doors. Those pairs near the stage are located in exterior wall alcoves that receive the doors when opened. The projection room had a door to the exterior on its south wall. This door and its frame were originally metal due to the extreme flammability of nitrate film housed in the space. A similar door is at this location today. Double flush doors once provided access to the fan room at the upper east side of the building. The double opening was reduced, and a single metal flush door was added during the 1993 renovations. A single flush metal door is also located at the south end of the stage, and two similar doors provide access to the men's and women's dressing rooms at their west sides (Figure 9). Originally two pairs of flush three-light doors provided access to the equipment and boiler rooms on the back of the theater. Today these doors are simple flush metal doors, and the rightmost door to the equipment room has a louvered vent near the bottom (Figure 10). The last exterior doors are a pair of flush metal doors located at the north end of the stage. These doors are 3'4" above grade with a bumper mounted to the wall below them to accommodate the loading and unloading of stage equipment (Figure 11).

b. Windows: Original windows in Building 431 were all wood awning units, varying only in number of awnings. Single awnings were located on the front service wings, at the former Women Accepted for Volunteer Emergency Services (WAVES) powder room, and the projection room toilet. Double awnings were found at the dressing and storage rooms. Triple awnings were most prominent, located at the projection room and the north service wing's former office. All original units have been removed except the one- and three-awning windows at the projection room (Figure 12). Three-awning units on the front façade near the stucco fluting have been painted over. Typical replacements for the original single awning units are fixed bronze aluminum windows. Two of the single awning windows at the women's restroom (one at the concession area and one at the south janitor's closet) have been blocked, and their openings were covered in stucco (Figure 13). Replacements for the original double awning windows at the dressing and storage rooms are double hung aluminum units with obscure glass. A single three-awning window at the north service wing's former office has been blocked and treated to match the exterior stucco walls.

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[12] Ibid., 2.

Figure 8. Front Entry Doors.

Figure 9. Typical Dressing Room Exterior Access Door.

Figure 10. Equipment Room Exterior Access Door.

Figure 11. Stage Equipment Doors/Loading Dock.

Figure 12. Original Projection Room Awning Window.

Figure 13. Blocked Window Opening Covered in Stucco (right).

8. Roof:

a. Shape: All roofs are flat with a slight pitch. Built-up roofing over gypsum fill is typical throughout. All roof surfaces terminate into copper gutters or coping with a brown patina. Some new galvanized gutters and downspouts were added during the 1981 stage house/fan room rehabilitation project. Roofing was replaced in 1993 and is warranted until 06 April 2014.[13] Note that trusses that span the auditorium are a full story in profile, adding substantial overall height to the auditorium.

b. Skylights, Vents: Original wood-louvered sliding sash vents at the dressing room toilets have been replaced with Nutone brand vents. The same Nutone brand vent is also located on the

[13] Ibid.

west façade at the location of the current restrooms. Additional wood louvered vents originally ran along the upper east wall of the equipment and boiler rooms. Today all of these vents are blocked except for the northernmost pair located over the boiler room doors (Figure 14). Screened crawl space vents are located on the lower walls of the stage house and dressing rooms.

Figure 14. Original Boiler Room Louvered Vents.

C. Description of the Interior:

1. Floor Plans: The main entrance to Building 431 is on the west side beneath a centered concrete canopy. Once inside, patrons pass through the lobby to the auditorium. An 8-foot wide level walk runs along the back of the auditorium, separated from the main seating area by a free-standing wall (Figure 15). Beyond this wall, auditorium seating slopes down to the stage. South of the lobby is the concession area. Further south beyond the concession area is an office and janitor's closet. This area originally housed telephone booths, powder rooms, toilets, and gear (or janitor's) closets. Subsequent layouts of this area included a ladies room, concession stand, and ticket booth in various configurations. In 1998, the men's and women's restrooms were relocated north of the lobby. This area originally housed an office, toilet, and gear closet—an arrangement that remained in various forms until the 1998 modification. Atop the lobby is the projection room, accessible by a staircase between the lobby and restroom area. Tucked beneath the staircase and opening to the lobby is a ticket booth. Centered on the opposite end of the auditorium is the stage house. This area contains the stage, overhead stage apparatus, and audio-visual controls. The stage is 3'4" above the lowest point of the auditorium, and below it is unfinished crawlspace. North of the stage is the men's dressing room and accompanying toilet room. A storage room is located in the northeast corner of this wing. South of the stage is a mirror image of the north side arrangement: the women's dressing and toilet rooms, and a southeast corner storage room that currently contains chapel-related items (Figures16 and 17).

The equipment and boiler rooms are located behind the stage house and are only accessible from the exterior. An exterior staircase south of the equipment room leads to the upper-level fan room. This space spans the central portion of the stage house.[14]

[14] The HABS field crew did not have access to the equipment, boiler, and fan rooms.

Figure 15. Aisle at Back of Auditorium.

Figure 16. Women's Dressing Room.

Figure 17. Southeast Corner Storage Room.

2. Stairways: Building 431 stairways are limited to those that rise up either side of the stage and the staircase to the projection room. Those at the stage are both of wood frame construction, have 6 risers, and are carpeted. Three lower risers lead to an irregular landing. The landing makes a 120-degree turn towards center stage, and then three additional risers ascend to the stage. Stairs on both the north and south end of the stage are mirror images of the other. Stairs to the projection room are reinforced concrete. Fifteen 8" risers run between the top and bottom landings. Concrete tread noses are rounded, and each riser recedes 1" from its tread nose to allow for toe room. Stair treads are covered in an older vinyl tile flooring with a diamond pattern. An abrasive non-skid stair pad is applied to each tread for safety. Original pipe rails run along both walls beyond the length of the stairs.

3. Flooring: Flooring in the theater was originally exposed concrete, except for isolated use of asphalt tile and wood flooring. The lobby and auditorium corridors were originally asphalt tile. In 1965, the lobby floor received new asbestos tiles.[15] In 1980, the lobby floor was again refinished in vinyl tiles. In 1981 the auditorium corridors were covered in carpet tiles. In 1998, the carpet tiles were removed and replaced with low pile rolled carpet.[16] The same carpet now covers the lobby as well. Original wood flooring remains at the stage, dressing rooms, and storage rooms. These wood floors were refinished in mid-1972 and in late 1981. Warped and rotted portions of the stage floor were replaced in 1998. At this same time, early 1990s era carpet in the dressing and storage rooms was removed, and the original wood floors were resurfaced.[17] Original crawlspace access doors remain in the wood floors of the stage and two storage rooms (Figure 18). Concrete remains exposed at the auditorium seating areas, although painting had been specified in a 1981 remodeling. The dressing room toilets, janitor's closets, concession area, ticket booth, and projection room currently have vinyl tile flooring. In the 1980s, the entire south service wing was floored in sheet vinyl. This was applied over existing asbestos tiles that were removed during the 1998 rehabilitation.[18] The southwest office currently has the same low pile carpet found in the lobby and on auditorium aisles. The men's toilet in the north service wing was floored in ceramic tile to match its walls and base during a 1985 update. In 1998, the men's and women's restrooms were relocated to their current location. The 1998 finishes include 2x2-inch blue and gray ceramic tile floors to match their walls. Ceramic tiles were laid in the drinking fountain niches as well. Landings in the projection room stair hall have older vinyl tile flooring with a diamond pattern. This is similar to the nearby vinyl stair treads.

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[15] Memo dated 22 December 1994 between 45 CES/CE, Patrick AFB, FL and the Division of Historical Resources, Tallahassee, FL, Attachment: Base Theater Project, Previous Significant Projects, Vertical File "Fac 431," Real Property Office, Patrick Air Force Base, Florida, 2.

[16] Internal memo dated 28 January 1999, Attachment: As-Built Changes; Memo dated 23 November 1994, Attachment 3: Drawings of Proposed Work on Building Number 431.

[17] Memo dated 23 November 1994, 3.

[18] Ibid., Attachment 3: Drawings of Proposed Work on Building Number 431.

Figure 18. Original Crawlspace Access Hatch in Floor.

4. Wall and Ceiling Finishes: Most interior walls in Building 431 are original, with a few noted exceptions. These were typically painted concrete block in the original design. Exceptions include unpainted block in the fan room and plaster walls in the original powder rooms and toilets. Most of the powder and toilet room walls (except for the dressing room toilets) have been reconfigured and therefore no longer exist. The walls in the dressing rooms, their toilets, and the south storage room are now textured wallboard. Walls in the north storage room and the projection room stair hall are in their original state: painted concrete block. The poured concrete structural frame is visible in both spaces.

The south service wing was reconfigured in 1961, and the lobby was reconfigured in 1965. Both modifications involved new wall construction. The original lobby telephone booths were likely removed during this 1965 reconfiguration. In 1980, the walls of the south service wing were again modified and covered in a vinyl wall covering. This area and the ticket booth currently feature gypsum wallboard. Lobby walls are now covered with gray low pile carpet. The men's toilet in the north service wing was updated in 1985, and the walls were covered in ceramic tile. As

previously mentioned, this area was modified again 1998 to accommodate both the men's and women's restrooms. The new restrooms were finished in 2x2-inch blue and gray ceramic tile to match their floors. To make room for the women's restroom, the existing northwest corner office was relocated to the southwest corner.

During the 1981 stage house upgrades, the back wall of the stage was insulated from the stage floor to the concrete slab above the stage. A fire rated gypsum wallboard was applied over the insulation. The upper sidewalls of the stage house received the same treatment. These modifications remain intact, except that paint used on the back wall of the stage was changed 1998. High gloss white was covered with flat white to cut down on light deflection off the stage.[19]

At the auditorium, new sound absorbing asbestos insulation was installed on the back wall in 1967.[20] In 1981, auditorium wainscoting was carpeted and its defining wood cap was painted. Subsequently, the cap was removed, and the entire height of the auditorium walls received low pile gray carpeting for added sound attenuation. The original 4'6" concrete block standee wall that once separated the rear aisle from the sloped portion of the auditorium was replaced with a freestanding 5' high elliptical wall. In 1998, the 1967 era acoustical wall covering along the back wall was removed.[21] In the same year, framing of the elliptical wall was repaired, the wall was extended 2', and both sides received new wallboard.[22] This higher wall now blocks disruptions from light and traffic coming from the lobby and other service spaces (Figure 19). This wall is carpeted to match the remaining walls of the auditorium and features a chair rail.

Painted concrete slab ceilings were typical in the original design, with a few exceptions. In utilitarian spaces (e.g. the storage, boiler, and fan rooms) concrete ceilings were originally left unpainted. Spaces where it was critical to control sound featured acoustical board ceilings. These areas included the lobby, auditorium, and stage. In 1981, the stage ceiling was covered with fire-rated gypsum wallboard over insulation to match its walls. The current auditorium ceiling steps in a sawtooth fashion for improved acoustics. Two furred beams running from the stage to the projection room contain supply ducts and vents. Although modified, this ceiling configuration closely matches the original design.

The south service wing and lobby area had suspended acoustical tile ceilings as early as 1965. Suspended ceilings are currently found at the dressing rooms, their toilets, and the south storage room. A removed ceiling tile at the men's dressing room toilet reveals the previous gypsum wallboard ceiling painted tan. Above the tan wallboard is exposed concrete. The suspended ceil-

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[19] Internal memo dated 28 January 1999, Attachment: As-Built Changes.

[20] Entry dated 14 May 1968 on Air Force Form 1430, Real Property Accountable Record – Buildings, for Building 431, Real Property Office, Patrick Air Force Base, Florida.

[21] Memo dated 23 November 1994, Attachment 3: Drawings of Proposed Work on Building Number 431.

[22] Entry dated 14 May 1968 on Air Force Form 1430.

ing in the north service wing men's toilet was raised and replaced with a suspended luminous ceiling system in 1985. In 1998, the entire north service wing (men's and women's restrooms) was fitted with a suspended acoustical tile ceiling system. At the same time, the existing suspended ceiling tiles were removed, and two elaborately framed recessed lighting coves were constructed over the lobby. The deep crown molding that defines the coves is painted gloss white.[23] Brass reflective panels line the ceiling surface inside the coves. Ceiling surfaces outside the coves are painted gypsum wallboard. By contrast, the original austere poured concrete ceilings of the north storage room and projection room stair hall remain exposed and intact.

Figure 19. Auditorium Elliptical Wall.

[23] Ibid.; Memo dated 23 November 1994, 3.

5. Openings:

a. Doors: As originally designed, flush doors were typical throughout the theater interior. Some of these flush doors featured louvers for ventilation. Top and bottom louvered openings were found in the original doors to WAVES and officer toilet rooms, as well as gear closets. An additional louvered door was originally specified at the men's dressing room. Special metal interior doors and frames provided access to the projection room and its toilet. As stated earlier, metal was used in the projection room due to the extreme flammability of nitrate film housed in the space. One additional interior door of note is the original Dutch door at the lobby ticket booth. A Dutch door with two faux panel insets replaces the original (Figure 20). Both the original and the replacement feature a counter shelf atop the lower half of the door for ticket transactions.

Figure 20. Lobby Ticket Booth Dutch Door.

In 1965, the theater lobby was substantially altered. The original telephone booths were likely removed at this time and replaced with a closet and ticket booth. Both spaces were secured with new wood doors, and existing lobby doors and frames were painted. In 1998, existing interior lobby doors were replaced again with painted wood doors featuring two decorative faux panel insets. The same doors were used throughout the service wings, except for the flush wood doors with closers at the men's and women's restrooms, a louvered door at the concession area closet, and a sliding wood pocket door between the concession area and southwest corner office. Virtually all remaining interior and exterior doors were replaced in 1998 with flush metal replacements.[24]

b. Windows: The interior faces of window openings in Building 431 were originally trimmed with simple wood surrounds and sills for a finished appearance. These original treatments can be found in the projection room stair hall. In spaces that have since received wallboard walls, window openings have neatly boxed out wallboard sills and surrounds. Similar boxed out window openings in ceramic tile appear in the north service wing restrooms.

Projection room openings and their shutters are situated along the back wall of the auditorium. Originally, a pipe shutter control bar ran atop these openings inside the projection room. From the bar, chains were hung to raise and lower the shutters along their guides. Most of the openings remain; however, one has been enlarged and an additional opening was added. Shutters have since been removed, but their guides remain on the walls inside the projection room.

6. Decorative Features and Trim: The wall bases were originally concrete to match the concrete block walls. Exceptions include wood baseboards at the lobby, auditorium, stage, and dressing rooms. The only original wainscot was painted concrete block in the auditorium. It was covered in wall carpet during the 1981 rehabilitation. In the original design, a 1x5-inch wood cap ran along the interior face of the auditorium walls, from mid-door height at the rear to 8'4" at the stage end. This decorative cap has since been removed, and a plastic handrail now runs down the north/south walls of the auditorium 3' above the sloped floor. At the back of the auditorium, behind the standee wall, a chair rail originally trimmed the space at a 3'6" height. Today that 3'6" chair rail is found only on the elliptical wall that stands in the location of the former standee wall.

Vinyl cove baseboards were typical at the concession, toilet, and lobby areas in the early 1980s. The same type of vinyl baseboards is currently located at the elliptical wall in the auditorium, along the back side of the auditorium, and in the dressing rooms and their toilets, the south storage room, the southwest janitor's closet and office, the current concession area, and the ticket

[24] Memo dated 23 November 1994, Attachment 3: Drawings of Proposed Work on Building Number 431.

booth off the lobby. Decorative wood baseboards, fluted wood door frames, and corner rosettes were added to the lobby during the 1998 remodeling.[25]

7. Hardware: No original hardware was found in Building 431.

8. Mechanical Equipment:

a. Heating and Air Conditioning, Ventilation: The fan room that bridges the stage overhead is the original location of the theater ventilation system. The system included a large fan, heating coils, and accompanying ductwork. From this location, supply and return ducts projected out into the auditorium ceiling plenum.[26] Supply ducts ran air to eight Anemostat diffusers evenly spaced over the auditorium seating area. A catwalk ran along the original supply ducts just above the finished ceiling. A small door in the fan room provided access to the catwalk. Return ducts ran from 3'x3' return air grilles located on the north and south auditorium walls near the stage. These grilles remain intact. An additional return duct ran to the original north and south toilet areas of the service block. An inlet fan situated over the projection room stair hall provided ventilation to the projection room.

In 1950, the original heating system was replaced with 660,000 British Thermal Unit (BTU) heating. A new 80-ton air conditioning system was installed at the same time. New mechanical controls and electrical wiring updates were also completed to power the new climate control systems.[27]

The boiler room originally contained a Kewanee brand boiler and various circulating and condensation pumps that provided steam heat to the building. In 1971, these boilers were replaced.[28] The adjacent equipment room housed compressors and condensers for refrigeration. Existing aluminum condensers were replaced in 1970 with higher quality Cooper brand units.[29] These two 40-ton air conditioning condensers sat on the roof of the equipment and boiler rooms. A pair of subsequent replacement condensers was installed on a new concrete pad east of the equipment and boiler rooms. These were replaced in 1993 with a new Marley brand cooling tower resting on a new larger concrete pad that subsumes the existing pad. The same cooling tower currently services the theater.

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[25] Ibid.

[26] The HABS field crew did not have access to the auditorium plenum.

[27] Memo dated 23 November 1994, 2; Entry dated 21 March 1951 on War Department AGO Form 661, War Department Installed Property Record Card, for Building 431, Real Property Office, Patrick Air Force Base, Florida.

[28] Memo dated 23 November 1994, 2.

[29] Entry dated 16 April 1970 on Air Force Form 1433, Real Property Accountable Record – Plants, for Building 431, Real Property Office, Patrick Air Force Base, Florida.

Many additional repairs and upgrades were part of the 1993 air conditioning systems project, and most of the equipment remains in use. The two existing compressors and receivers were removed from the ground level equipment room. The two existing concrete pads for the old compressors were removed, and three new 4" concrete pads were constructed. A new chiller and two new pumps were placed on these new pads. The original louvered vents here were blocked and covered with stucco, and a new circular exhaust fan was installed. Two hollow metal doors with full-height louvers were specified for the removal of the chiller tube. No changes were made to the boiler room.

During the same project, the following heating, ventilating, and air conditioning equipment was removed from the upper level fan room: the existing supply fan, existing return air ductwork, cooling coils and piping, heating coils and piping, air filters, and all insulated sheet metal housing. This equipment was replaced with a 27,000 cubic feet per minute air handling unit that includes a blower, chilled water cooling coil, and heating coil all in a single unit that rests on a new 6" concrete pad. The new system utilized existing ductwork in the auditorium. A new louvered wall opening was specified on the north wall opposite the heating and cooling coils.

An additional residential-sized air conditioning condenser sits on grade just outside the current office and concession area. This was likely added during the last reconfiguration of the south service wing.

b. Lighting and Electrical: Original lighting in the theater was largely ceiling mounted incandescent fixtures. Exit lights were similar wall mounted incandescent units. Fluorescent fixtures were limited to areas requiring increased illumination—the lobby, the upper auditorium aisle, and over the dressing tables in the dressing rooms. Fluorescent fixtures were also employed in the original auditorium lighting cove. The coves were tucked nicely into the steps of the north and south sidewalls and the co-located steps in the ceiling. Fluorescent luminous tubing in semicircular reflectors ran up one sidewall, across the ceiling (averting the furred ceiling beams), and down the other sidewall. These coves and a majority of the other original lighting fixtures were removed during subsequent remodeling projects.

The main theater entry is lit with exterior canopy and stair fixtures. Three original ceiling mounted fixtures at the underside of the entry canopy have been replaced with four ceiling mounted fixtures with lens covers. Some time after initial construction, two fixtures were mounted to each of the flanking plinths to illuminate the stairs for safety. Recent rectangular light fixtures with protective lenses appear over all exterior doors, except those to the boiler room. Overhead louvered vents at this location prevent placement of overhead lighting.

Original fluorescent fixtures in the lobby were replaced in 1965 during wholesale upgrades to the space. In 1998, fluorescent cove lighting was added to the central lobby, as well as recessed downlights at the concession stand. Currently, the most prevalent light fixtures throughout the building are recessed fluorescents, found in spaces with suspended ceiling systems. These spaces include the south service wing office, the concession area, the men's and women's restrooms, the dressing rooms, and the south storage room. Recessed fluorescent fixtures are also found within the 1985 luminous ceiling panels located in front of the men's restroom and in front

of the office/concession area at the upper auditorium aisle. Circular ceiling mounted fluorescent fixtures are located in the dressing room toilet rooms, in the south service wing janitor's closet, and at the lobby ticket booth. Wall mounted fluorescent fixtures are found above the dressing tables in the dressing rooms and above the lavatories in the men's and women's restrooms. The north storage room has a fluorescent fixture hanging from its exposed slab ceiling. Original ceiling mounted incandescent fixtures and wall mounted exit lights in the fan and projection rooms were replaced in 1981 with like fixtures. A similar ceiling mounted incandescent fixture is located at the top of the projection room stair hall.

In the mid-1970s, additional lighting was added in the auditorium. Five pairs of 200-watt incandescent downlights were installed 5' off the stage centerline over the central seating. One pair of similar fixtures was added closer to the stage 4' off the centerline. Three more fixtures were mounted over the side seating areas near the stage. Dimming controls for the new setup were installed out of sight in the southwest corner of the stage house. In 1998, aisle lighting was added at the carpets edge.[30] The current house lights are recessed incandescent downlights.

Stage lighting has varied over the years. Footlights originally ran along the front of the stage. These were removed in 1998 and replacement boards are visible over the former lighting trough.[31] Twenty-two additional spotlights were added to the stage in 1958. In the early 1980s, the stage had three banks of lights: over the proscenium, over the stage just behind the proscenium, and over center stage. Four tracks of lighting are currently located near the proscenium, two ceiling mounted and two column mounted. The breaker box and controls for the various track and house lights are located in the northwest corner of the stage house.

In addition to task and ambient lighting, various mechanical and electrical devices are necessary for operation of the auditorium and stage (Figure 21). Many of these control devices were updated in 1998.[32] The large, heavy stage curtains suspend from a track operated by a curtain pulley system with its own dedicated motor. The pulley/motor system is mounted in the floor at the south end of the stage. Over the stage at the fan room level are various circuits serving the fire alarms, emergency and exit lighting, attic lights, and the fan control. Audio components that service the auditorium include: (1) an amplifier located near the dimmers in the southwest corner of the stage house, (2) speakers mounted on the auditorium walls at steps in the structural bays, (3) larger JBL brand loudspeakers mounted to the wall either side of the proscenium, and (4) a series of JBL brand floor standing speakers located at the back of the stage behind a large convex movie screen. The screen appears to be an early 1980s acquisition.

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[30] Memo dated 23 November 1994, Attachment 3: Drawings of Proposed Work on Building Number 431.

[31] Ibid., 3.

[32] Ibid.; Internal memo dated 28 January 1999, Attachment: Completed Work Order/Project Checklist Construction.

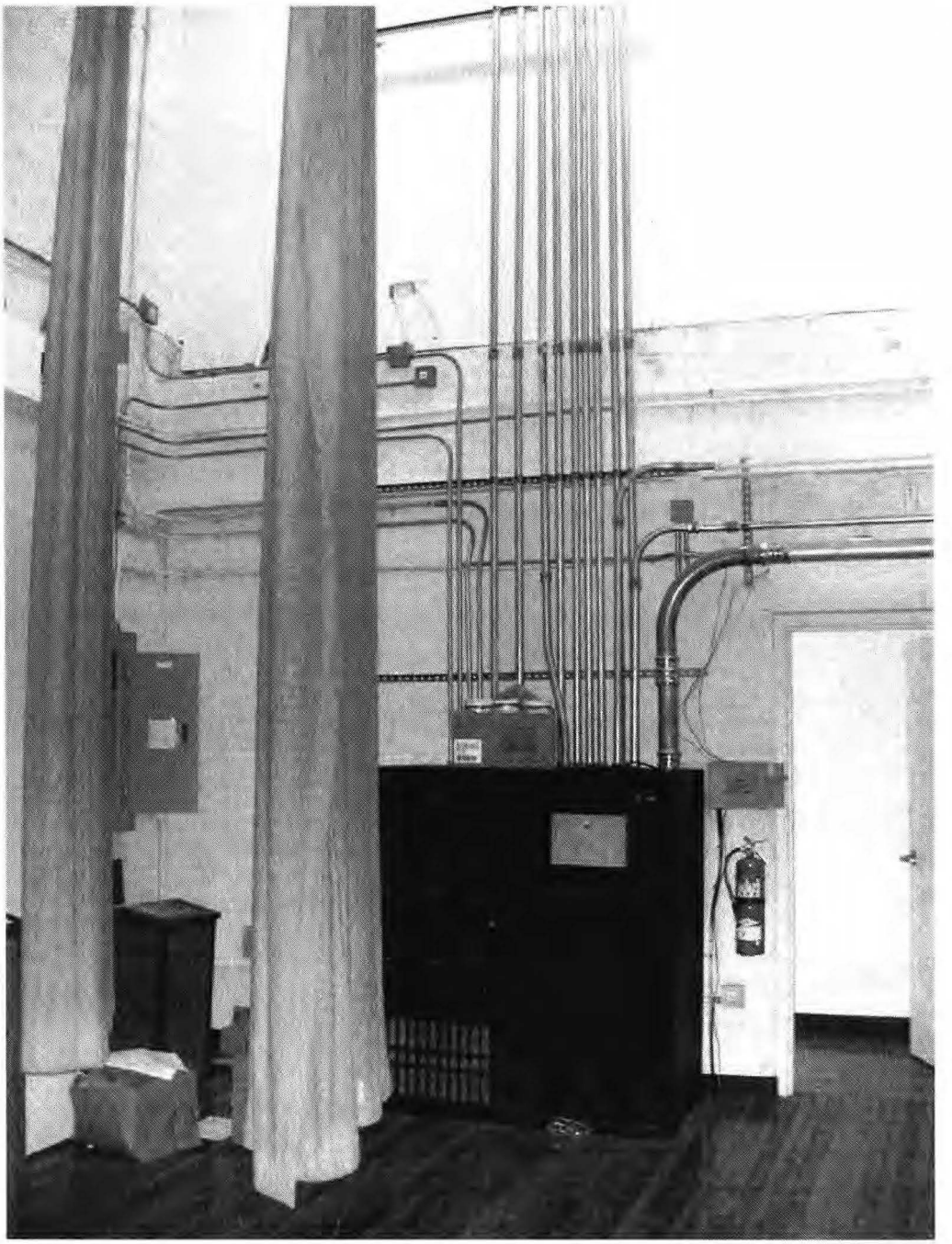

Figure 21. Stage Mechanical and Electrical Devices.

c. Plumbing Fixtures: All toilets, urinals, faucets, and lavatories throughout Building 431 are replacements. Kohler brand lavatories, toilets, and urinals are located in the men's and women's restrooms and in the dressing room toilets. The men's and women's restrooms feature Kohler brand faucets and the dressing room toilets have faucets by Moen. The south service

wing janitor's closet has a low utility sink, and the adjacent office has a brushed stainless steel triple basin sink. The stainless steel sink was added in 1998. Elkay brand accessible drinking fountains were also installed in 1998.[33] These were placed in niches in front of the men's restroom and in front of the office/concession area at the upper auditorium aisle. Exposed pipes run up the wall in the men's dressing room toilet. Original water service to Building 431 was likely via existing water mains located south of the site.

d. Conveyance Systems: A Concord Elevator brand handicap lift is located in the auditorium near the northeast stairs to the stage. This lift was installed in 1998 to replace the existing lift.[34]

9. Furnishings: Auditorium seating makes up the majority of the theater furnishings. The seating itself was considered real property, while the stage equipment was tracked as theater property. The original capacity of Building 431 was 1,027 seats. In 1958, this was reduced to 951 seats. The 1970 installation of the current seats by the Massey Seating Company of Nashville, Tennessee changed the capacity again. In 1979, the Massey seating was refinished and repaired as necessary. All seats were cleaned and painted a sand color. Upholstery for many of the seats was repaired at that time. In 1981, seats were removed down near the stage to form a reserved box to accommodate wheelchairs. This box was later moved to the center top seating area. A level platform was constructed near the elliptical wall. In 1998, this platform was removed and replaced with theater seating.[35] The current auditorium seating is upholstered in blue fabric. Ends and armrests are made of laminate construction (Figure 22).

In the original design, four custom telephone booths were located along the south wall of the lobby (Figure 23). These booths featured a combination of painted concrete block, plaster, and wood walls. Flooring was asphalt tile with wood baseboards. Ceilings were furred plaster. Booths were self-contained for private telephone conversations. A layer of ½" insulation was placed between the two layers of tongue-and-groove wood partitions. Each booth had its own door, shelf, and telephone. Typical doors were 2'2" wide, and featured three lights above and a single louvered vent below. An additional 1" vent opening ran across the top of each door opening. Except for glazing and hardware, all door components were wood. The interior 1x10-inch shelf was mounted 3'6" above the floor. As stated earlier, the original telephone booths were likely removed during the 1965 reconfiguration of the lobby.

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[33] Internal memo dated 28 January 1999, Attachment: As-Built Changes.

[34] Standard Form 1442, Part 1 – The Schedule, Section B, Repair Base Theater.

[35] Internal memo dated 28 January 1999, Attachment: As-Built Changes.

Figure 22. Current Auditorium Seating. (Martin Stupich, 2004)

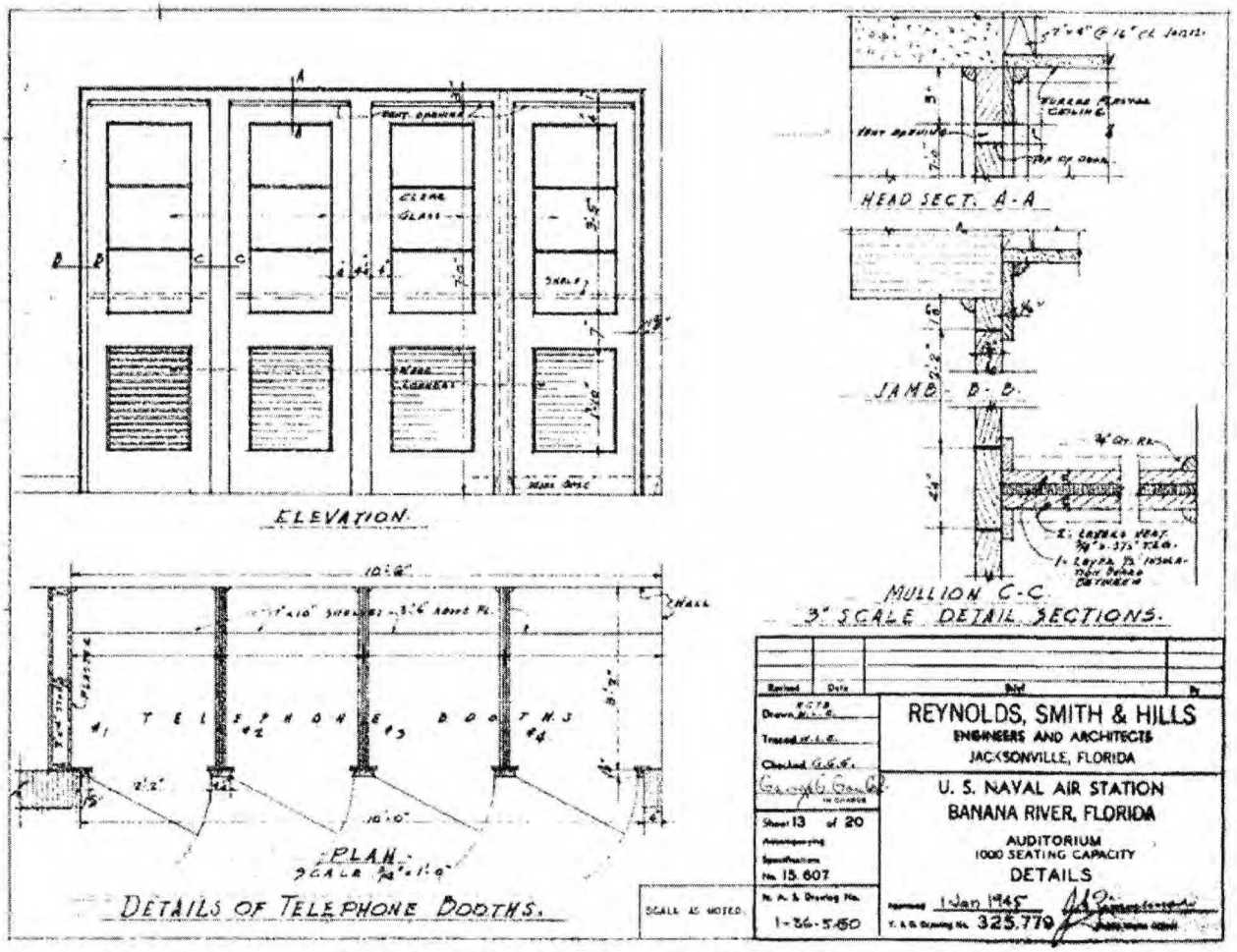

Figure 23. Elevation, Plan, and Detail of Original Lobby Phone Booths. (Y&D Drawing No. 325-779)

Custom wood dressing tables were constructed in the original dressing rooms. Their 6" tabletops were mounted at a height of 2'6". Wood framed mirrors were mounted overhead onto felt asbestos board. These originals have since been replaced with gray laminate countertops mounted at the dressing room perimeter (Figure 24). The original mirrors have been replaced with metal-framed full-length mirrors located near the doors. Similar laminate countertops—configured in a "C" shape—are located over storage cabinets in the concession area. This space also contains an ice machine, popcorn popper, and wall mounted soda dispenser (Figure 25). Opposite the concession area in the lobby are two lighted wall mounted movie poster cases (Figure26).

Figure 24. Dressing Room Laminate Countertops.

Figure 25. Concession Area Cabinets.

Figure 26. Movie Poster Cases in Lobby.

All original toilet stall partitions were custom-made for the theater. Wood frames were anchored to the floor and held wood tongue-and-groove wall partitions. The various stall components were trimmed in quarter round for a finished appearance. This original millwork was removed during multiple toilet room reconfigurations. Now, the plastic stall components installed in 1998 subdivide the men's and women's restrooms (Figure 27). Four stalls, one with handrails for accessibility, are typical. During the 1998 upgrades, these restrooms were outfitted with various recessed towel, product, and wastebasket units. Lavatories sit in gray laminate countertops. In the men's restroom, a wing wall is located at the end of its lavatory counter to obscure two urinals (Figure 28). Dressing room toilets have Bobrick brand wall mounted tissue dispensers, and recessed towel/wastebasket units like those in the men's and women's restrooms (Figure 29). These toilet rooms are also equipped with wall-mounted handrails for accessibility.

Figure 27. Typical Stall Components in Men's and Women's Restrooms.

Figure 28. Lavatories, Wing Wall, and Urinals in Men's Restroom.

Figure 29. Typical Dressing Room Restroom Furnishings.

D. Site:

1. General Setting and Orientation: Building 431 faces west onto Titan Road (formerly Lycoming Avenue) near the Jupiter Street (formerly "Y" Street) gate. It is the southernmost in a series of three morale, welfare, and recreation (MWR) facilities that back up to the eastern boundary of Patrick Air Force Base. The Atlantic Ocean is located to the east, directly across Highway A1A. The main entrance to Building 431 is on the west side of the building, across from an open plaza to the south. Due to security protocols, vehicular access to the theater is now restricted to Titan Road. A service road runs between Buildings 431 and 439, providing access to the theater stage house and mechanical areas at the rear. A large parking lot is adjacent to the theater to the south, and a smaller one is located behind the theater to the east.

2. Historic Landscape Design: Prior to the construction of Building 431, a large welfare building (former Building 440) was located directly south of the theater site where a large parking lot now stands. Also near the site was the former chapel (Building 438). A note on the original plot plan states the chapel was to be moved by the Navy prior to construction of the theater (Figure 30).

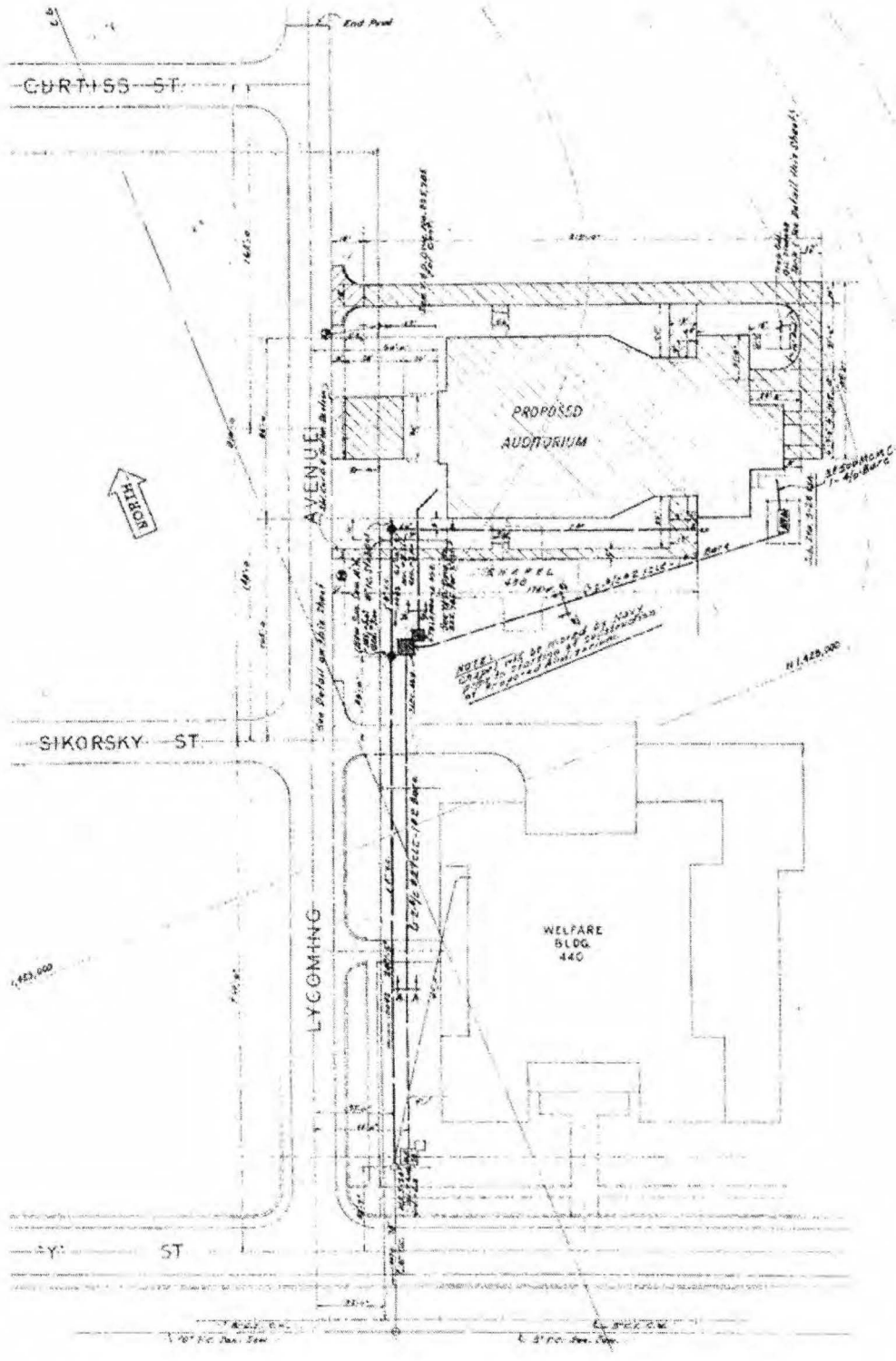

Figure 30. Portion of Original Plot Plan. (Y&D Drawing No. 325-775)

Existing walks include a broad entry walk from the street to the main theater entrance. A 5' sidewalk runs along the south side of Building 431, providing a path from both sets of egress doors on the south side of the auditorium. Additional short walks connect the north auditorium egress doors with the service road that runs north of the theater. Substantial paved area is provided for the transport of items to and from the stage house and mechanical spaces at the rear of the theater. All of these currently paved areas and walks are shown on the original plot plan. In 1998, the deteriorated asphalt paving at the loading dock and the concrete sidewalk to the equipment room were both replaced with concrete paving.[36] The theater's east side paving is now contiguous with the east side parking lot.

No historic landscape plan was found. Palm trees are placed informally about the lawn, while hedges and foundation plantings are located near the theater perimeter. A long earthen berm planted with low shrubs runs along the south side of the theater site, providing visual separation from the parking lot (Figure 31). In the southwest corner of the site, a sign with interchangeable letters is fixed to a concrete block base. This sign acts as the theater marquee, displaying currently showing films.

Figure 31. Long Earthen Berm Along Southern Edge of Site.

[36] Ibid., Attachment: Completed Work Order/Project Checklist Construction.

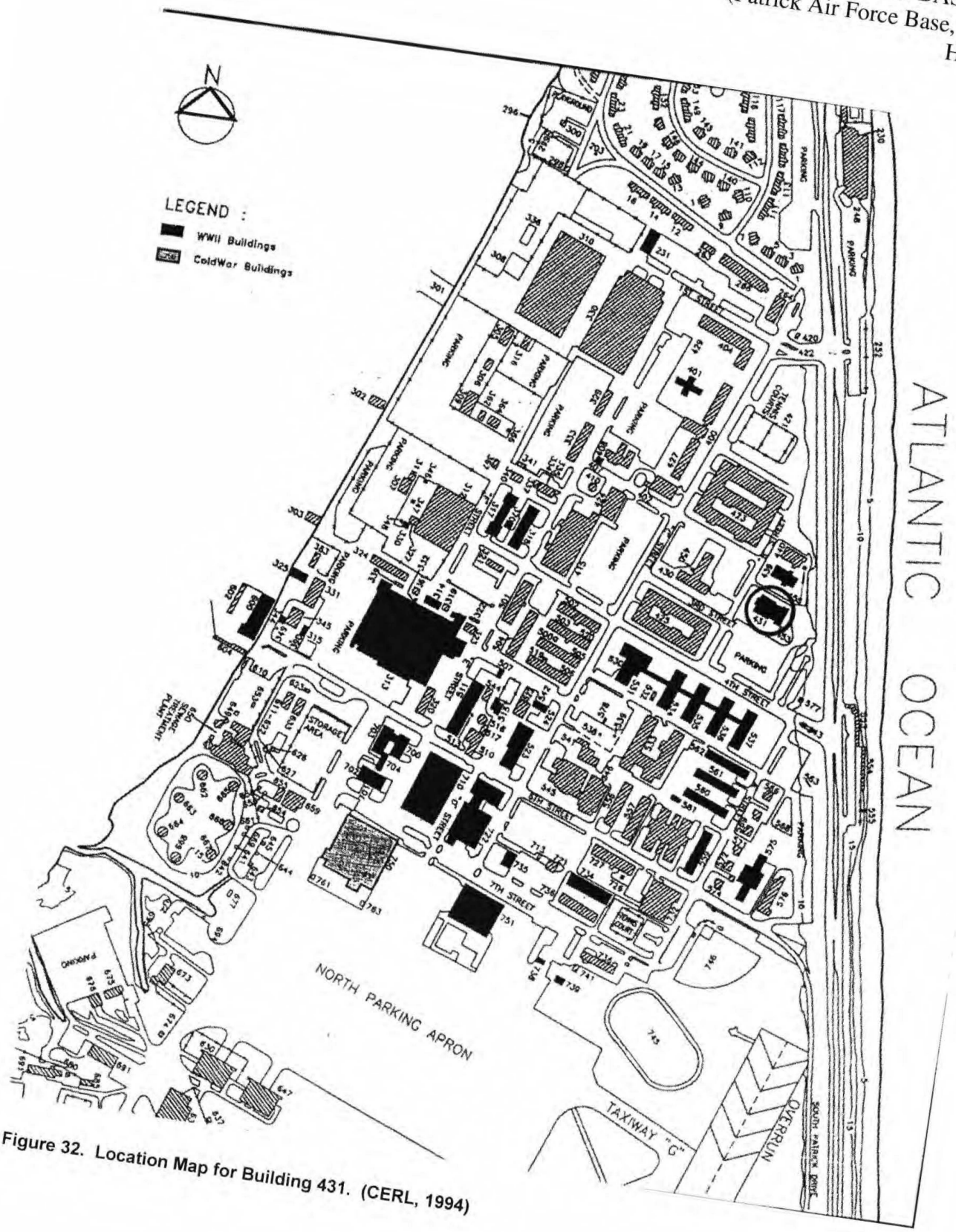

Figure 32. Location Map for Building 431. (CERL, 1994)

3. Outbuildings: Building 453, an electrical substation, is located southeast of the theater building (Figure 33). The small, rectangular structure was built in 1953 of concrete block construction. It features a built-up flat roof, a single flush wood door, and two louvered vents. Cracking on the lower walls of Building 453 indicate moisture damage. Oil for the original boiler was once stored in a 1000-gallon storage tank. The tank, located on a concrete pad at the northeast corner of the theater, was replaced in 1960 with a 500-gallon fuel tank.[37]

Figure 33. Electrical Substation, Building 453.

[37] Entry dated 01 August 1960 on Air Force Form 1430, Real Property Accountable Record – Buildings, for Building 431, Real Property Office, Patrick Air Force Base, Florida.

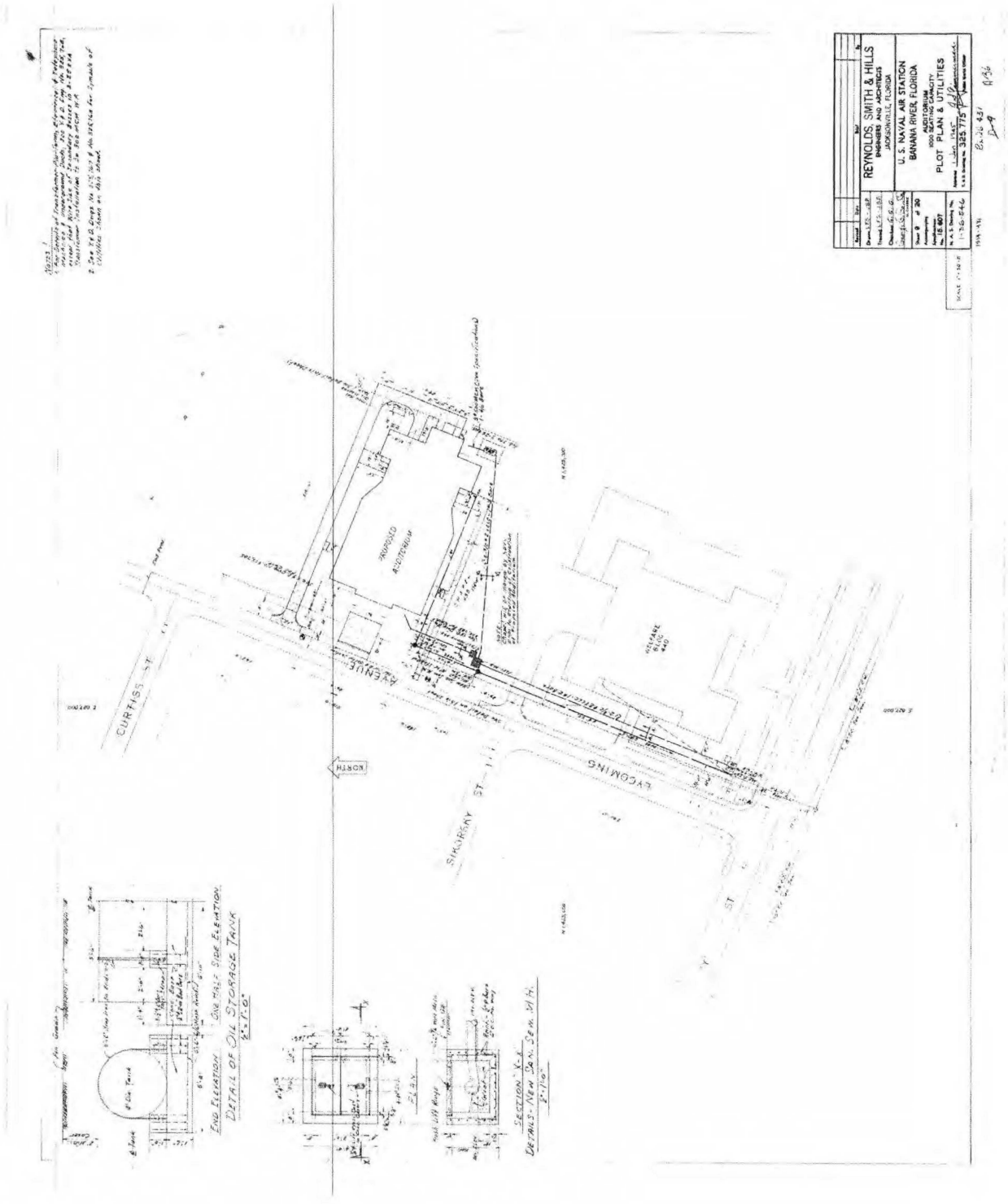

Figure 34. Plot Plan and Utilities, Auditorium, U.S. Naval Air Station Banana River, Florida, 1 January 1945.

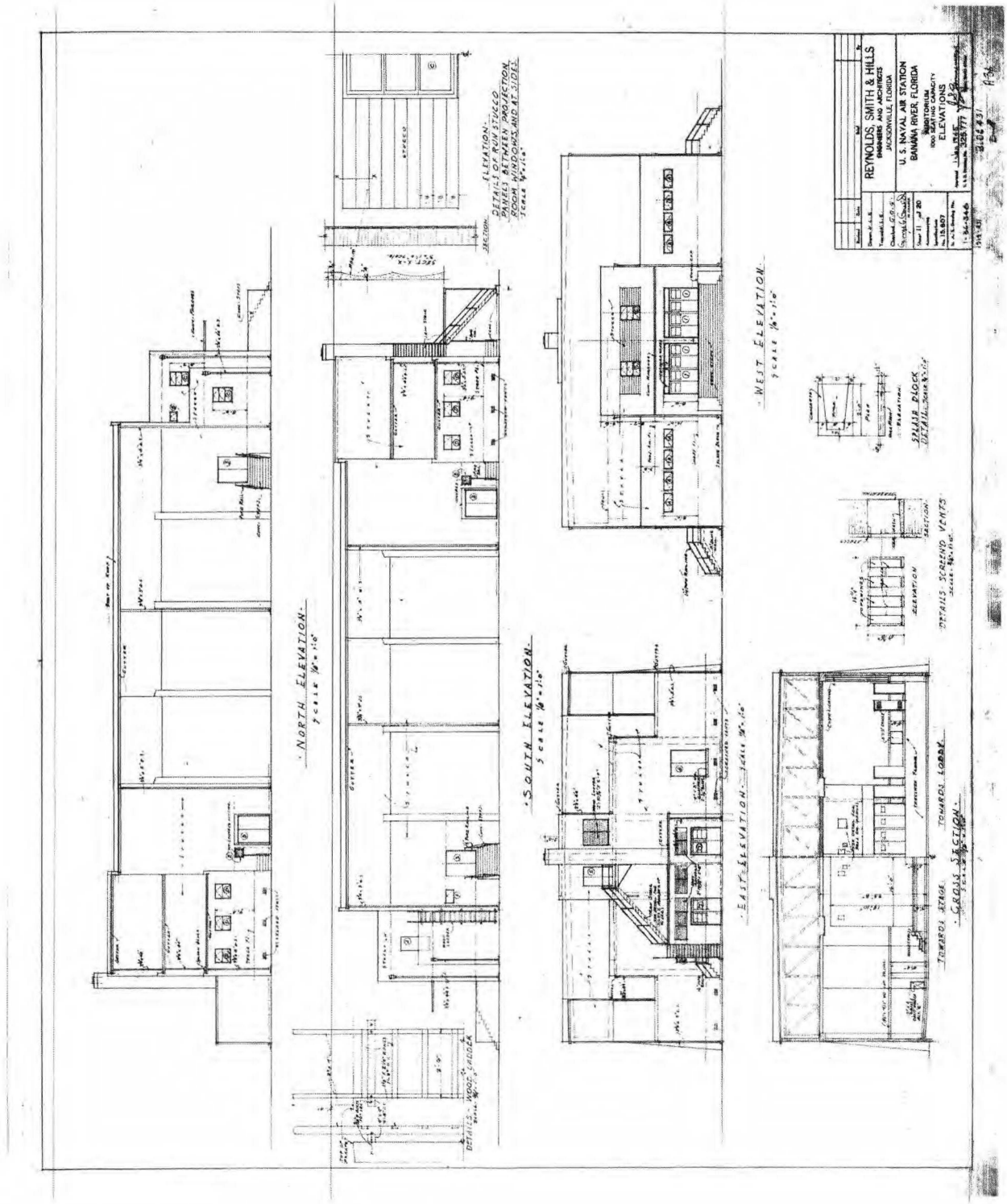

Figure 35. Elevations, Auditorium, U.S. Naval Air Station Banana River, Florida, 1 January 1945.

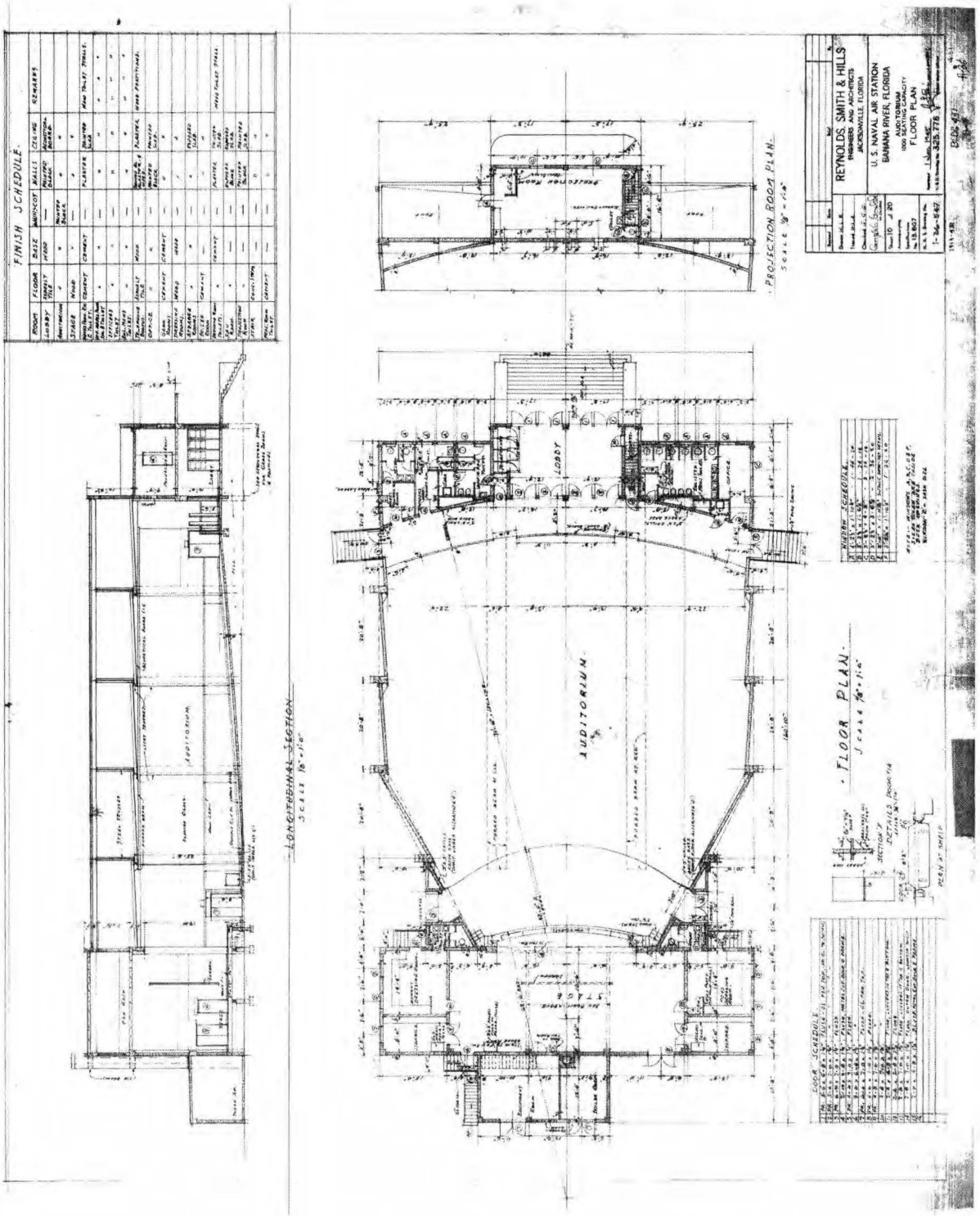

Figure 36. Floor Plan, Auditorium, U.S. Naval Air Station Banana River, Florida, 1 January 1945.

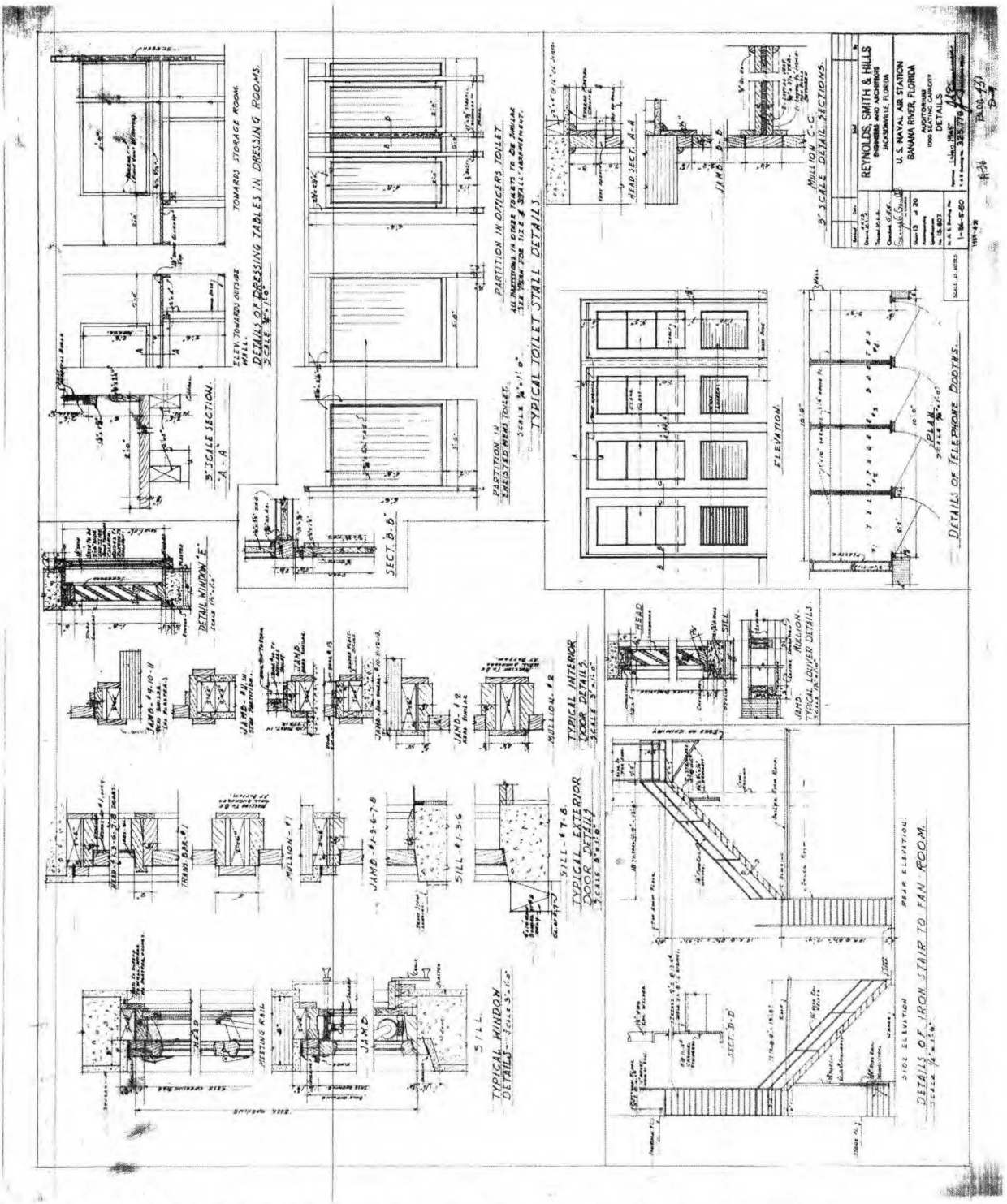

Figure 37. Details, Auditorium, U.S. Naval Air Station Banana River, Florida, 1 January 1945.

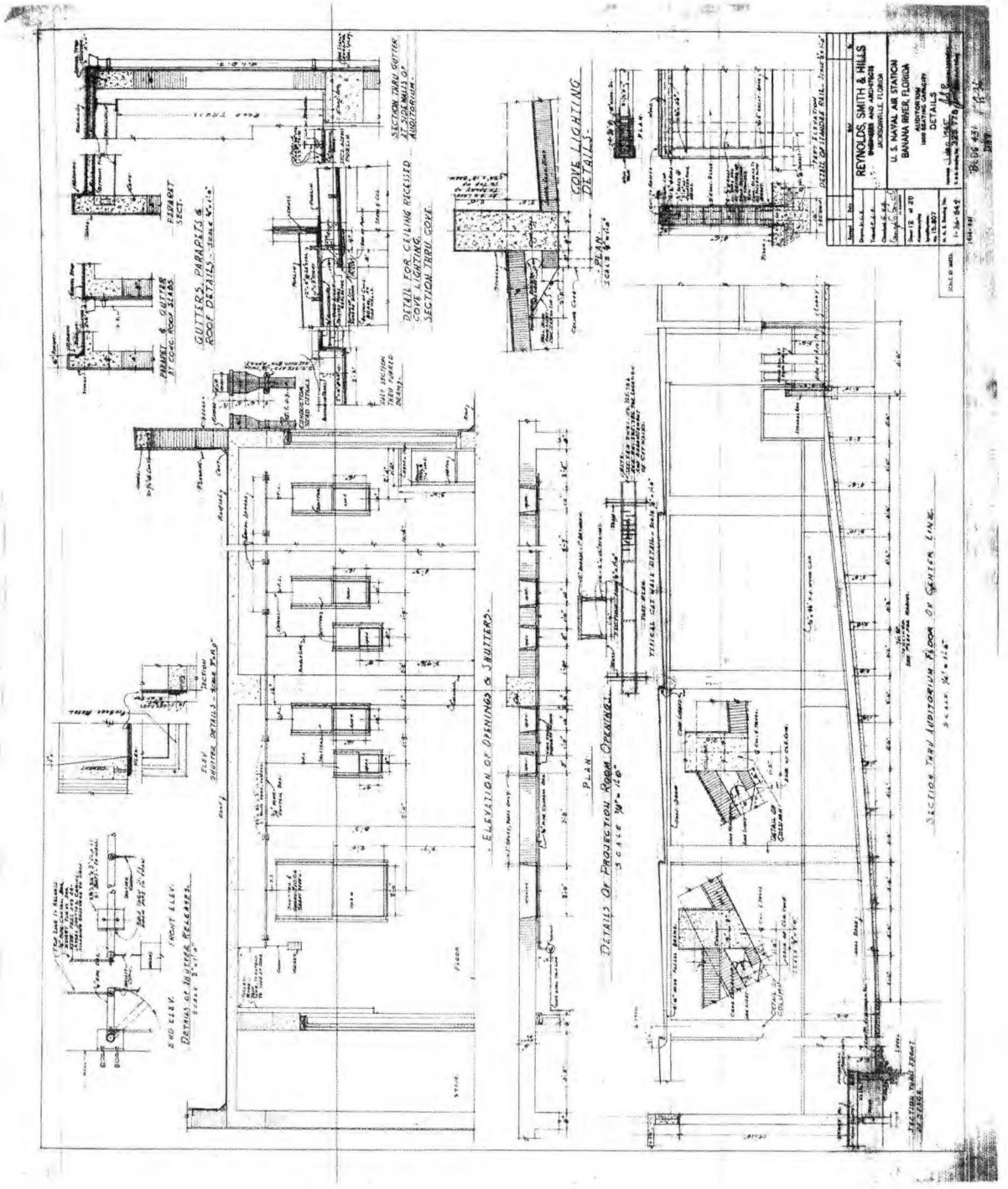

Figure 38. Details, Auditorium, U.S. Naval Air Station Banana River, Florida, 1 January 1945.

HISTORIC AMERICAN BUILDINGS SURVEY

INDEX TO PHOTOGRAPHS

PATRICK AIR FORCE BASE, THEATER — HABS No. FL-
(Patrick Air Force Base, Building 431)
Intersection of Edward H. White Road and Titan Road
Melbourne Vicinity
Brevard County
Florida

Martin Stupich, Photographer, February 2004
See photo key on page 3.

PAFB 431 -1	GENERAL VIEW FROM STREET, BUILDINGS IN CONTEXT, INCLUDING SEASIDE CHAPEL (FOREGROUND), VIEW TO SE
PAFB 431-2	WEST ELEVATION, VIEW TO E
PAFB 431-3	NORTH SIDE, VIEW INCLUDES FROM EAST END STAGE AREA TO WEST LOBBY PROJECTION AT RIGHT; VIEW TO SE
PAFB 431-4	OBLIQUE VIEW OF EAST AND NORTH SIDES; VIEW TO SW
PAFB 431-5	GENERAL VIEW OF EAST SIDE SHOWING CAST CONCRETE STAIR, CHIMNEY, REMOTE CHILLER; VIEW TO NW
PAFB 431-6	GENERAL OBLIQUE VIEW OF SOUTH AND EAST SIDES; VIEW TO NW
PAFB 431-7	DETAIL, EAST END OF SOUTH SIDE, SHOWING MASSING OF BACK-STAGE AREA; VIEW TO NE
PAFB 431-8	GENERAL VIEW OF SOUTH SIDE; VIEW TO NE
PAFB 431-9	DETAIL, FRONT ENTRY PORTICO/STAIR AREA; VIEW TO NE
PAFB 431-10	DETAIL SHOWING CAST CONCRETE PORTICO AWNING; VIEW TO S
PAFB 431-11	DETAIL OF WEST END OF SOUTH WALL, SHOWING TYPICAL INTACT DOWNSPOUT CATCHMENT AND SPOUT, INTACT FIRE ESCAPE LADDER FROM FOYER ROOF, AND SHADOW PATTERN REVEALING BUTTRESS REPEAT; VIEW TO E
PAFB 431-12	CHILLER UNIT; VIEW TO N

PAFB 431-13 AUDITORIUM GENERAL VIEW FROM STAGE TO BACK WALL, SHOWING PROJECTION ROOM PENETRATIONS AT CENTER REAR; VIEW TO W

PAFB 431-14 OBLIQUE VIEW OF AUDITORIUM FROM NORTHWEST CORNER; VIEW TO SE

PAFB 431-15 VIEW ACROSS STAGE, SHOWING CURTAIN CONCEALING FILM PROJECTION SCREEN; VIEW N TO S

PAFB 431-16 VIEW "BACKSTAGE" SHOWING AMP/SPEAKER IN PLACE BEHIND FILM PROJECTION SCREEN (WHICH IS STRETCHED IN STEEL TUBE FRAME) BEHIND CURTAIN; VIEW N TO S

PAFB 431-17 PROJECTION BOOTH, SHOWING LATE PROJECTORS MOUNTED ON ORIGINAL STEEL PEDESTALS, VIEW NW TO SE

PAFB 431-18 PROJECTION BOOTH DETAIL SHOWING WORK AREA WITH DESK, TAKE-UP REEL AND REEL STORAGE RACK; VIEW NE TO SW

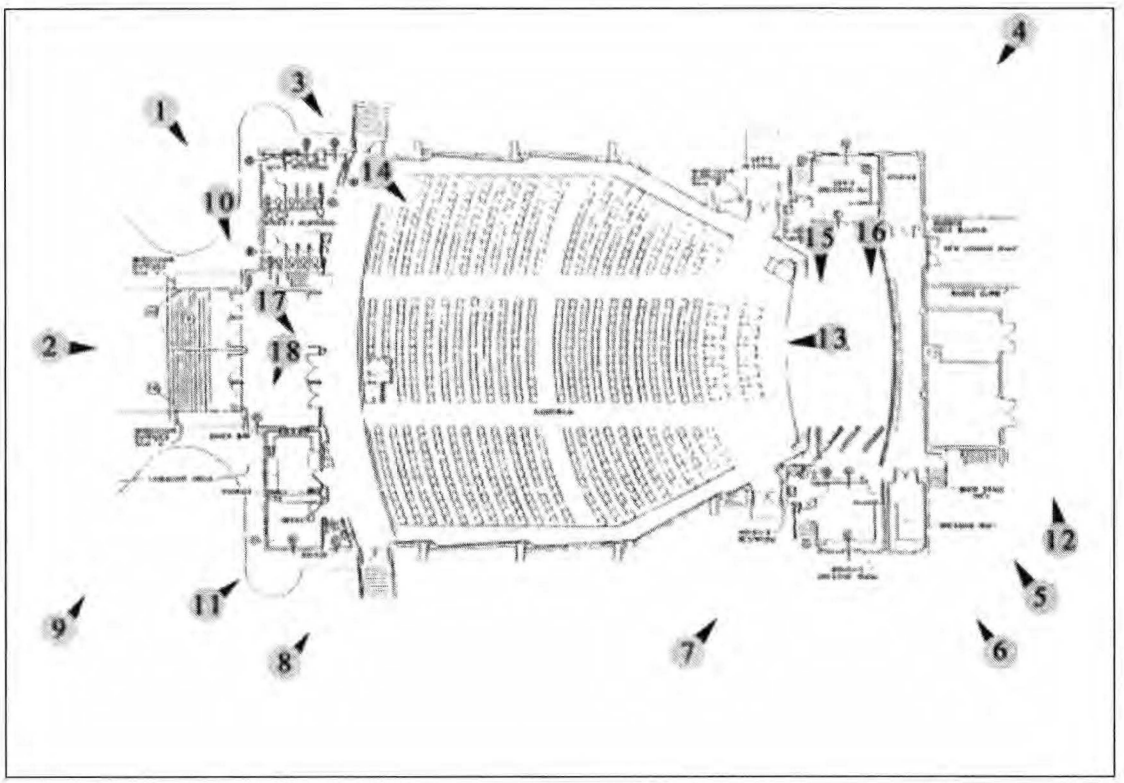

Photo key for Building 431, Theater, Patrick Air Force Base. Historic American Buildings Survey.

HISTORIC AMERICAN BUILDINGS SURVEY
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HABS No. FL-

PAFB 431-1

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PAFB 431-4

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PAFB 431-11

HISTORIC AMERICAN BUILDINGS SURVEY
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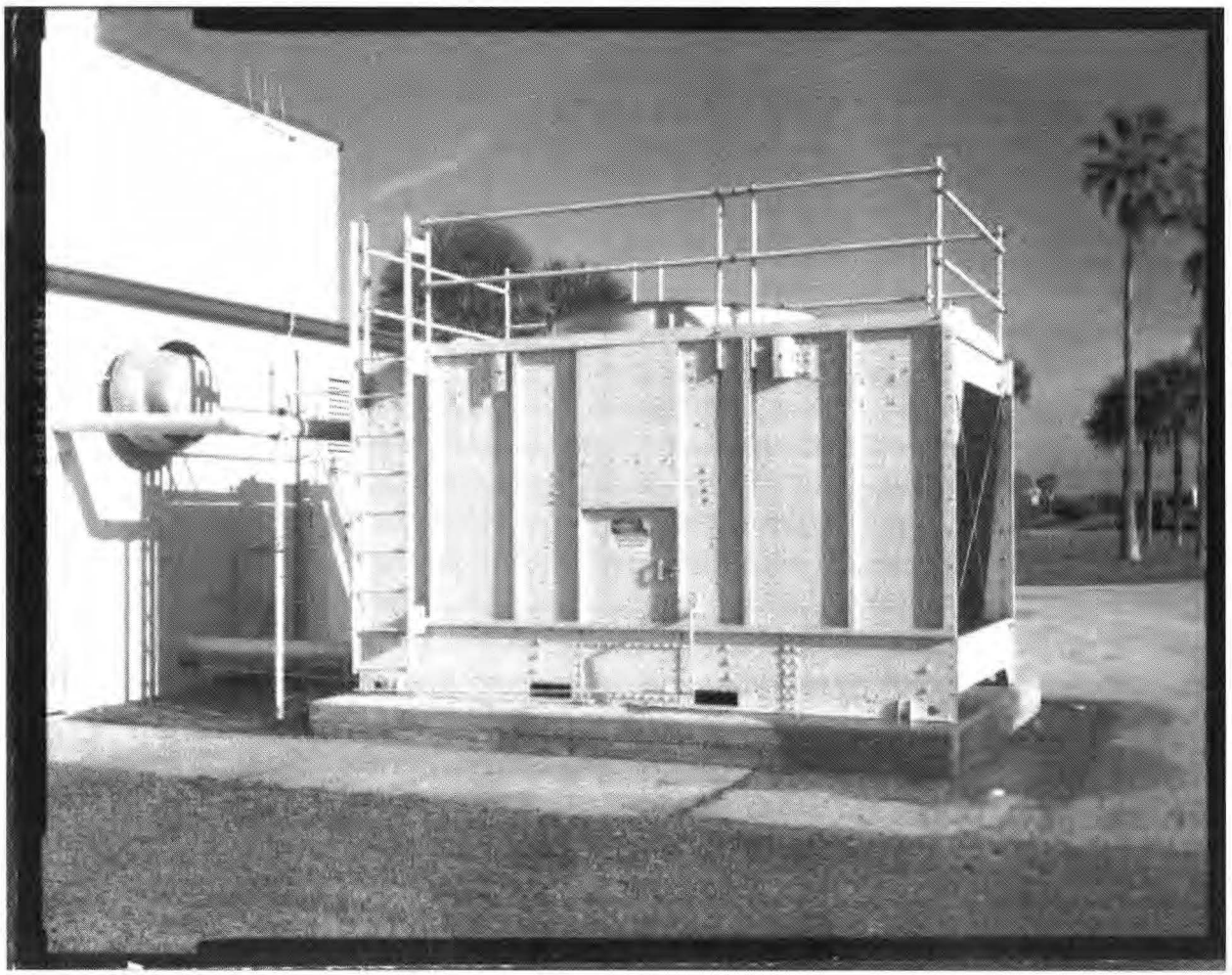
PAFB 431-12



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PAFB 431-13

HISTORIC AMERICAN BUILDINGS SURVEY
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PAFB 431-14

HISTORIC AMERICAN BUILDINGS SURVEY
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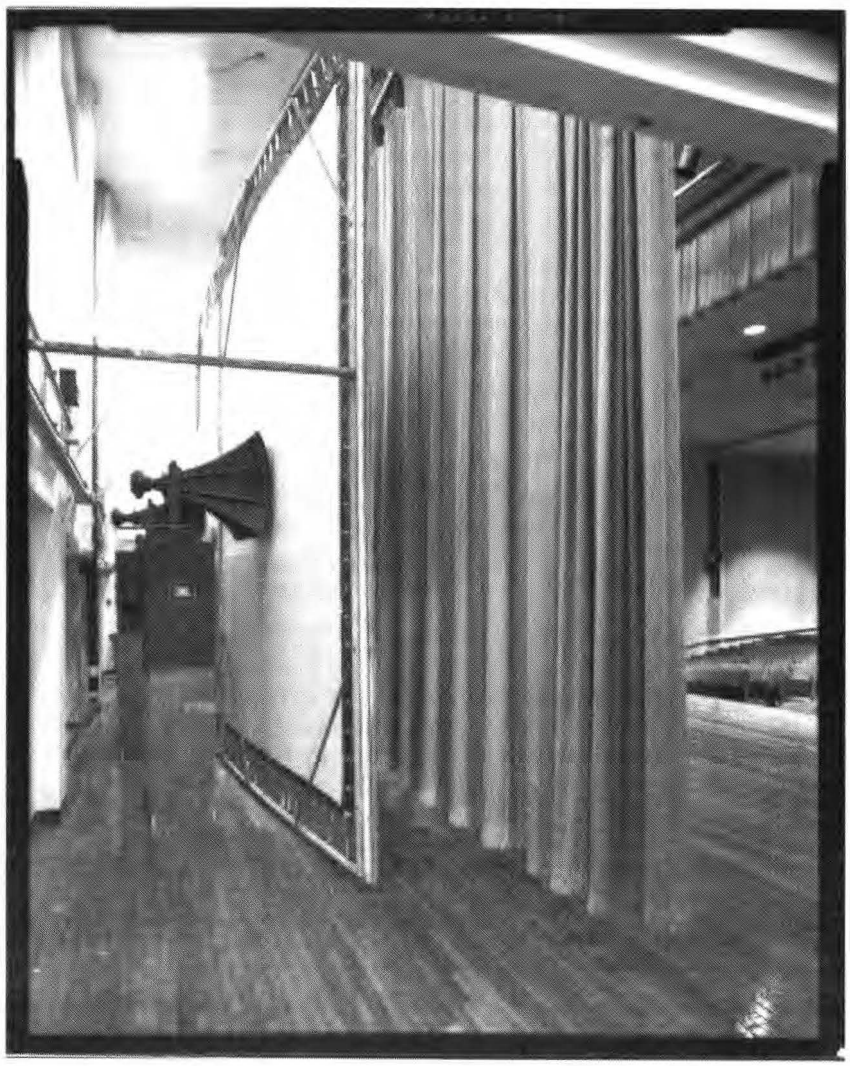
PAFB 431-15

HISTORIC AMERICAN BUILDINGS SURVEY
SEE INDEX TO PHOTOGRAPHS FOR CAPTION
HABS No. FL-

PAFB 431-16



HISTORIC AMERICAN BUILDINGS SURVEY
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HABS No. FL-

PAFB 431-17

HISTORIC AMERICAN BUILDINGS SURVEY
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HABS No. FL-

PAFB 431-18

PATRICK AIR FORCE BASE, SEASIDE CHAPEL
(Patrick Air Force Base, Building 439)
Intersection of Edward H. White Road and Titan Road
Melbourne Vicinity
Brevard County
Florida

HABS No. FL-

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

PHOTOGRAPHS

HISTORIC AMERICAN BUILDINGS SURVEY
National Park Service
Southeast Region
Department of the Interior
Atlanta, GA 30303

HISTORIC AMERICAN BUILDINGS SURVEY

PATRICK AIR FORCE BASE, SEASIDE CHAPEL HABS No. FL-
(Patrick Air Force Base, Building 439)

For information about other structures at the Patrick Air Force Base site, see:

HABS No. FL- Patrick Air Force Base
HABS No. FL- Patrick Air Force Base, Theater

Documentation: 11 exterior photos (2004)
2 interior photos (2004)
33 data pages (2004)

Location: Patrick Air Force Base
Seaside Chapel, Building 439
Intersection of Edward H. White Road and Titan Road
Melbourne Vicinity
Brevard County
Florida

Date of Construction: 1945

Engineer: Bureau of Yards and Docks

Present Owner: United States Air Force

Present Use: Chapel

Significance: The Seaside Chapel is the oldest surviving chapel at Patrick Air Force Base, and dates to the Navy's use of this land as the Banana River Naval Air Station. This facility provided worship services and spiritual support for both Naval and, later on, Air Force personnel. The chapel functioned as a multi-denominational place or worship, and had an unusual rotating alter for the various services. The Seaside Chapel continues to provide religious services and support for installation personnel. It has been designated as a contributing building to the Administrative Historic District at Patrick Air Force Base.

Report Prepared by: Dr. Susan Enscore, Julie L. Webster, and Martin Stupich
U.S. Army Engineer Research and Development Center
Construction Engineering Research Laboratory
2902 Newmark Drive
Champaign, IL 61822

Date: June 4, 2004

A. General Statement[1]:

1. History: The Seaside Chapel was constructed in 1945 at a cost of $52,405[2] (Figures 1 through 4). For nearly sixty years it has served as a place of worship and a meeting place for spiritual and religious activities for sailors and airmen (Figures 5 and 6). The second chapel in the same general area during the Banana River NAS years, it offered sailors a full-time Chaplain and regularly scheduled worship services, bible studies, and Sunday school classes. The Chaplain wrote a column for the station newspaper, *Banana Peelings*, and the chapel was sometimes used for more secular recreation as well.[3] For example, programs of seasonal music were held, and a day nursery was operated at the chapel five days a week in 1946.[4] By early 1951, the chapel at PAFB was offering Protestant services, while those wishing to attend Catholic services were taken by bus to churches in Melbourne and Cocoa.[5] There were also periods when the chapel offered services for several denominations, with an altar that would revolve to face the appropriate rooms. The Seaside Chapel played a special part in history on June 30, 1996, when President Clinton attended a memorial service at the chapel for military personnel killed in the Khobar Towers terrorist attack.[6]

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[1] Sources for this architectural description are the following, unless otherwise noted: Drawings on file at 45 CES/CE; Field notes taken by Julie L. Webster, February 3-6, 2004; Field photographs taken by Julie L. Webster and Martin Stupich, February 3-6, 2004. For bibliography and additional project information, see HABS No. XXX, Patrick Air Force Base.

[2] Virge Jenkins Temme, et.al., "Historical and Architectural Documentation Reports of Patrick Air Force Base, Cocoa Beach, Florida," (Champaign, IL: U.S. Army Construction Engineering Research Laboratories, 1994).

[3] Melissa Williford Euziere, "From Mosquito Clouds to War Clouds: The Rise of Naval Air Station Banana River," M.A. Thesis, (Tallahassee, Florida: Florida State University, 2003), 51.

[4] John T. Montgomery, Naval Air Station Banana River, January 1946-March 1946 and October 1946-December 1946, History Office, Patrick Air Force Base, Florida, ND, 86.

[5] "Church Services," The Missileer, Patrick Air Force Base, Florida, March 5, 1951, 2.

[6] Interview with Chaplain Turner, Air Reserve Personnel Center, Chaplain's Office, Patrick Air Force Base, Florida. 4 February 2004.

Figure 1. Progress Shots of Chapel at NAS Banana River, Florida, Front Outside View, 6 August 1945. (NARA, RG 80-G Box 1281 339534)

Figure 2. Progress Shots of Chapel at NAS Banana River, Florida, Rear Outside View of New Chapel, 6 August 1945. (NARA, RG 80-G Box 1281 339535)

Figure 3. Progress Shots of Cchapel at NAS Banana River, Florida, Interior View, 14 August 1945. (NARA, RG 80-G Box 1281 339531).

Figure 4. Progress Shots of Chapel at NAS Banana River, Florida, Interior Looking Toward the Front of Chapel, 20 August 1945. (NARA, RG 80-G Box 1281 339538).

Figure 5. Interior of Base Chapel at Patrick Air Force Base, Cocoa, Florida, 18 November 1952. (NARA, RG 342-B 06-065 Box 297 Folder 1 1891).

Figure 6. Exterior View of the Base Chapel at Patrick AFB, 7 August 1964. (NARA, RG 342-B 06-017 Box 939 Folder 2 68047).

2. Architectural Character: Building 439 is cruciform in plan with an elongated nave to the west. All occupiable space is on a single level and most of this is dedicated to worship. The nave clerestory is taller than the transverse and rear wings, and there is a higher elevated block over the chancel. All roof surfaces are reasonably flat and terminate in oversized copper gutters at their respective drain edges. Foundations and floors are poured-in-place concrete, while walls are of concrete block. The north and south walls of the nave have four distinctive outwardly splayed sidewalls. The primary entrance is through a large concrete portico on the west end of the building.

The exterior appearance was substantially altered by the removal of the upper-level fan house and subsequent construction of a larger penthouse in its place. Aside from the fan house, the most notable modification to the exterior is the unsympathetic replacement or removal of original windows and doors. In particular, the character and use of the building was radically changed by the removal of doors in the splayed nave sidewalls. These unique features fell victim to the advent of air conditioning. Over time a series of porches were constructed on the front of the chapel that substantially altered the entry sequence as well.

The interior of the building has undergone substantial remodeling. Removal of the splayed sidewall doors and subsequent sealing of their openings altered the interior nave space dramatically. The addition of suspended ceiling tile throughout the building also impacted interior spaces. A significant original interior feature was the rotating altar. This altar underwent substantial alteration and was fixed in place during a 1960s renovation. As a result, worship spaces in the east and north wings—that were once serviced by the rotating altar—were reconfigured to offices and classrooms. This reduced the seating capacity of Building 439 considerably, from 400 persons to 260.

Areas of Building 439 that retain the most historical integrity are the storage and janitor's closets. Here the original flooring, walls, ceilings, and light fixtures are present. At the time of recordation, Building 439 was in poor to fair condition due to ongoing rehabilitation.

B. Description of the Exterior:

1. Overall Dimensions: Building 439 is 136'x84' and cruciform in plan. The building contains 6,786 square feet of floor space on one level. The finished main floor elevation is 9.0 feet. The chancel and sanctuary are at elevations of 10.0 feet and 10.5 feet, respectively. The original finished floor-to-ceiling height was approximately 13'8" at the primary gathering space. This height was reduced by 1' at the chancel and 1'6" at the sanctuary as the floor steps up to the central portion of the cruciform. As originally designed, the finished floor-to-ceiling height began at 11'6" at the east wing chapel and 12'6" at the north and south office wings. In both cases, the height gradually increased at a slope of 1:24 as the ceiling gently rose upward to the central sanctuary space.

2. Foundations: Foundations are continuous and stepped spread footings, with isolated spread footings at interior column locations. Perimeter foundation walls are constructed of concrete block, and isolated piers are poured-in-place reinforced concrete.

3. Walls: Exterior walls are 8" thick concrete block covered with stucco. Upper walls are trimmed with ¼" flat cement asbestos board to accommodate the slightly pitched roofline. Corrugated asbestos siding runs along the length and ends of the nave clerestory. The asbestos siding of the fan house was removed when the structure was replaced with the larger penthouse. The penthouse was sided with stucco to match the lower existing walls. Original tie rods span the east wing to assure no outward drifting of the walls takes place under loading of the former fan house and now the mechanical penthouse. A large wood cross was originally constructed and attached to the west wall of the nave clerestory. It has since been removed.

4. Structural System: Building 439 has a concrete block bearing wall system at its perimeter. Poured concrete beams, steel columns and beams, and minor timber framing members span and support elements within the building perimeter.

5. Porches, Exterior Stairs: Deep overhanging eaves span between the splayed sidewalls of the nave to form a series of covered porches along the north and south sides of the nave exterior. This feature, constructed of 2x10 joists, remains intact. The 2x10s are covered with plywood at the underside of eaves and quarter-round moldings trim where the eaves meet the exterior walls. In the early 1960s, while various other modifications were being made, a slightly pitched corrugated plastic canopy with aluminum frame and posts was added to the front of Building 439. The entry landing was extended at that time as well. This canopy has been replaced with a substantial concrete portico that extends quite a distance from the original front wall. This portico rests on four large square columns firmly planted in a larger raised concrete landing covered with outdoor carpeting (Figure 7). Its heavy concrete coffered roof structure connects to the covered walk canopy that adjoins Buildings 439 and 440 (Figure 8). Pipe rails surround the raised portico and run down two steps to the front sidewalk.

Other exterior extensions include an original wood lattice porch that was located on the east (rear) side of the chapel. The lattice was made of 2x4s and ½" round wood dowels, and supported a framed tongue and groove roof structure. The round dowels were eventually removed by 1994 and the original porch was subsequently removed and replaced with a simple steel post structure (Figure 9). A flat-roofed decorative concrete block enclosure was added to the north door from the former auxiliary chapel (Figure 10). All additional egress doors lead out to simple concrete landings. The exception is the north side hall egress door. Here a two-step stoop with pipe handrail leads to an additional covered walk to Building 440. There are also two exterior ladders mounted on the east end of the building that lead up to the mechanical penthouse (Figure 11).

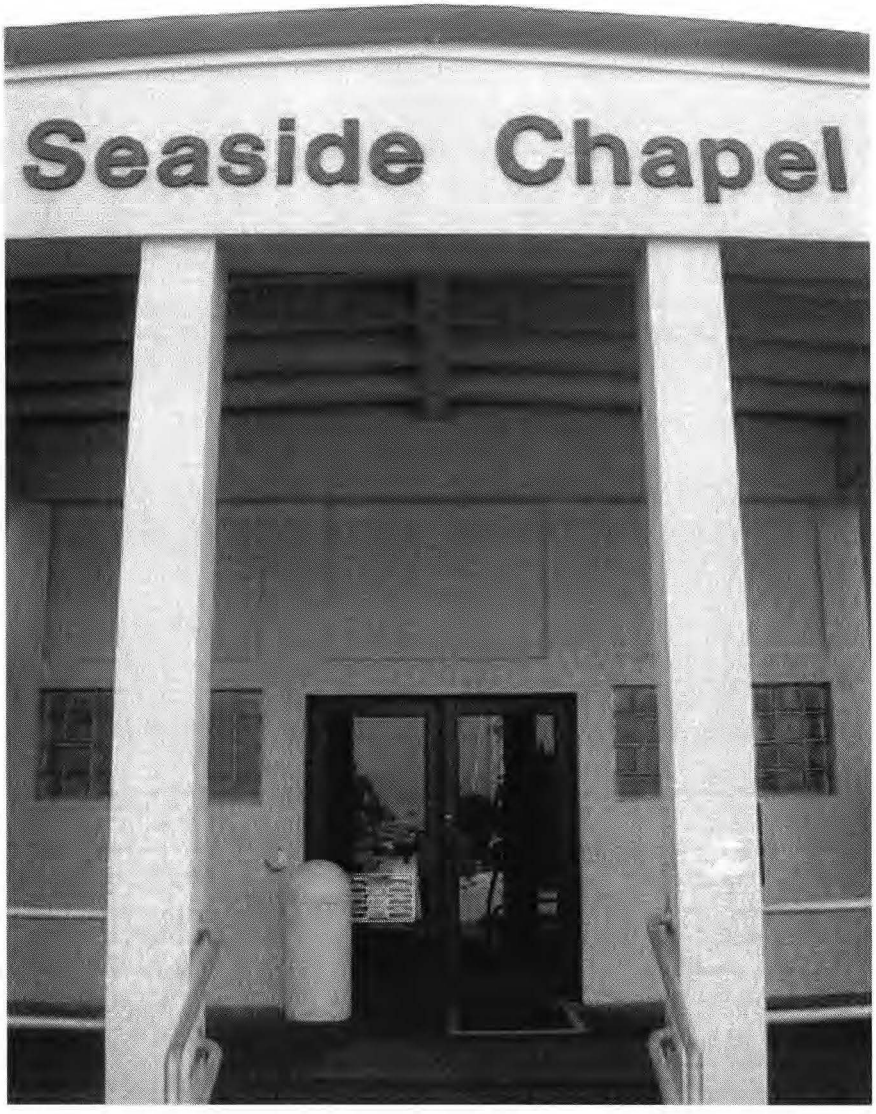

Figure 7. Primary Entry Portico and Doors.

Figure 8. Covered Walk Canopy to Building 440 Adjoins Building 439 Entry Portico.

Figure 9. Modified East (Rear) Entry Porch.

Figure 10. North Side Decorative Concrete Block Porch Addition.

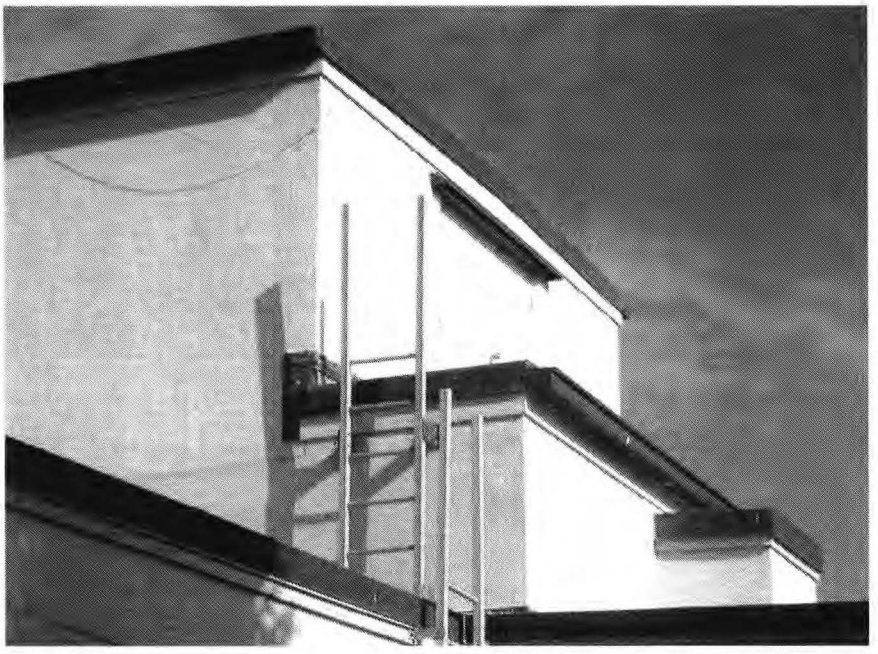

Figure 11. Exterior Ladders to Mechanical Penthouse.

6. Chimneys: None.

7. Openings:

a. Doors: The primary entry is on the west side of the building. Here three sets of double inward-swinging five-light wood doors and matching pairs of outward-swinging screen doors were originally centered in the narthex front façade projection. The outer double door openings have been blocked and partially filled with glass block, while a single pair of aluminum storefront doors replace the center set of original and subsequent wood doors. From the early 1980s on, primary entry doors were handicapped accessible. Secondary ingress and egress were originally through the four splayed sidewalls on both sides of the nave. Here offsets provided sheltered recessed areas for pairs of outward-swinging five-light wood doors and pairs of matching inward-swinging screen doors. Above the doors were three-light awning transoms for increased air circulation. These splayed openings are no longer used for entering or exiting the building, as they are sealed with translucent fiberglass-aluminum composite panels known as Kalwall. In the original design, single three-light, two-panel wood doors with matching screen storms provided egress from the chancel-flanking halls, and north-south wings. The former doors exit to the west inside corners at the building exterior. The latter featured two-light fixed transoms to allow the passage of light. A unique one-light, four-panel wood door with matching screen storm and no transom originally provided egress from the east wing chapel. Metal one-light flush units are currently found at all single exterior door locations. Original door transoms have been replaced with single fixed panes or have been blocked altogether (Figure 12). Typical exterior door heights throughout were 7 ft. A pair of nonstandard 7'6" wood tongue-and-groove/batten doors once provided access to the fan house on the east end. These doors were removed with the fan house. When the replacement penthouse was constructed in the early 1960s, a pair of louvered doors provided access. These doors have since been replaced with flush metal doors.

b. Windows: In the early 1960s, translucent tri-color Kalwall panels replaced paired doors at the splayed nave sidewalls, significantly impacting the use and appearance of these openings. The panels, featuring tiled rectangles that simulate stained glass, are fixed in place with wood framing members. Repeated attempts to replace the aging Kalwall with glass block have been rejected. Elsewhere, pairs of 6'10-5/8" five-light awning windows were typical throughout in the original design. Their openings were left unarticulated except by simple concrete sills. By the mid-1960s, aluminum three-over-two-light double hung windows replaced the original awning type. The vertical mullion orientation of the double hung units was a significant departure from the original horizontal design. Similar anodized aluminum three-over-two-light double hung windows were selected for the late 1990s windows upgrade, thus retaining the vertical mullion design. Less significant was the addition of smaller aluminum double hung windows of the one-over-one-light variety (Figure 13). These replaced the visually similar metal two-light awning units that were originally situated at the toilet rooms and crying room (former baptistery). Corrugated glass panels originally provided illumination at the west side of the transept clerestory. These have since been removed.

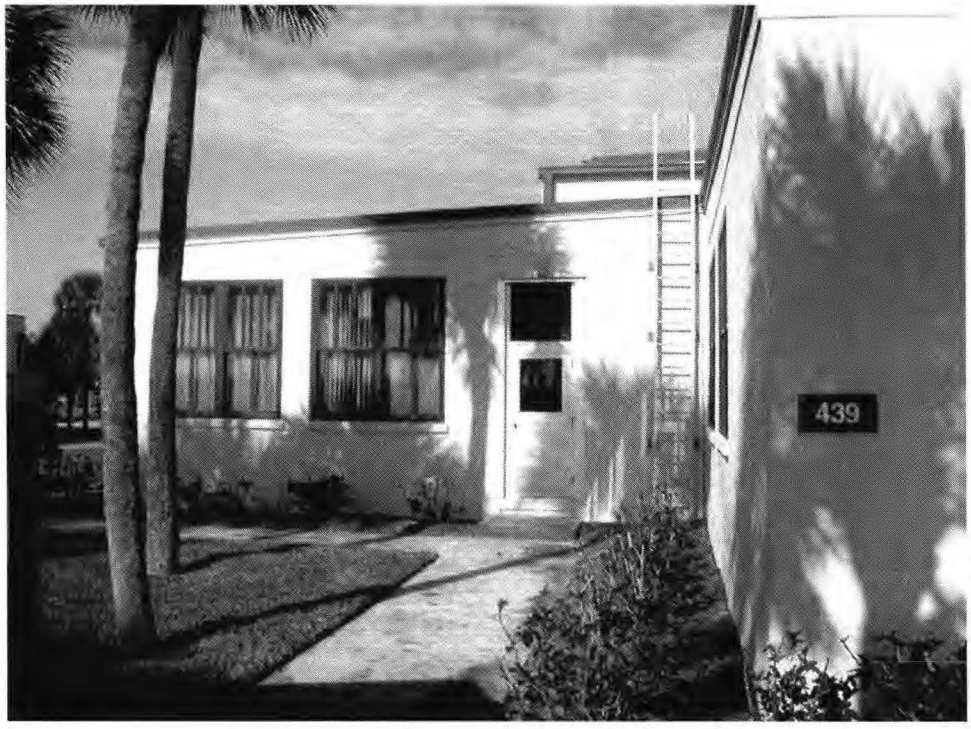

Figure 12. Typical Replacement Fixed Transom Over Door.

Figure 13. Typical Replacement Anodized Aluminum Windows.

8. Roof:

a. Shape: Slightly pitched flat roof forms cover most of the chapel. Rafters are 2x10s pitched to a 1:24 slope. Only the small, centrally located former fan house donned a hip roof. Its replacement penthouse has a slightly pitched flat roof similar to the rest of the building. Built-up roofing over gypsum roof sheathing is typical throughout. The eaves are pronounced with the substantial copper gutter system or copper coping.

b. Skylights, Vents: Building 439 has no skylights. A description of the former fan house vent feature can be found under "Heating and Air Conditioning, Ventilation."

C. Description of the Interior:

1. Floor Plans: The front entrance to Building 439 is on the west side through a centered entrance portico. This slightly pitched portico leads to the narthex that provides primary access to the chapel nave. Two toilet rooms located south of the narthex were being removed during HAER recordation. The crying room (former baptistery) north of the narthex is currently used as storage. The chapel nave is the primary gathering space. Here a distinctive series of stepped sidewalls splay outward at 30-degree angles (Figure 14). The nave terminates with a step up to the chancel. Hallways flank the chancel on both sides and provide access to the transverse wings and egress to the exterior. The southernmost wing includes two offices, reception area (former yeomen's office), and toilet room. It was dedicated to underling chaplains and staff. The "Blessed Sacrament Chapel" (former office), toilet room with janitor's closet, and early 1960s-era office (former auxiliary chapel) are contained in the northernmost wing. This wing housed the senior chaplain and later both he and his secretary. The nave and transverse wings intersect at the former sanctuary. This area originally housed a rotating interdenominational altar, but now features a fixed altar and serves as the vestry (Figure 15). A line of storage closets backs up against the former sanctuary, opening to the southern hallway and sanctuary passage. Behind the sanctuary to the east was the original secondary chapel (for Catholic worship). As originally designed, three confessionals stood in the southeast corner of this wing. The space was subsequently subdivided into an office and classroom by Self-Help in the 1980s, but now is in various stages of reconfiguration.[7]

2. Stairways: Building 439 is essentially a single-story structure with no interior staircases. Liturgical hierarchy is expressed in the floor plan, as shown by the rise in elevation at the most important spaces. Two risers step up to the chancel from the nave. An additional step up is required from all sides of the sanctuary to the altars. These steps have been preserved in subsequent renovations.

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[7] Interview with Chaplain Turner, 4 February 2004.

Figure 14. Interior View of Nave Stepped Sidewalls. (Martin Stupich, 2004)

Figure 15. Current Vestry at Former Location of Rotating Altar.

3. Flooring: Flooring in all spaces was originally asphalt tile, except at closets where the concrete floors were left exposed. Timed with the early 1970s replacement of church pews, 12"x12" vinyl asbestos tile was installed over the asphalt tile of the nave. Application over the existing tiles would assure completion of the project and installation of the new pews in time for Sunday worship. During this same retiling project, asphalt tile in most remaining areas of the chapel was removed and replaced with the same vinyl asbestos tiles, and vinyl baseboards were added to the newly tiled areas. Offices, toilet rooms, and closets were the exceptions. Offices and the nave aisle retained previously installed carpet. Currently, blue low pile carpet covers the 1970s vinyl tile and is typical throughout the building. Exceptions include ceramic tile in the toilet rooms, vinyl tile in the janitor's closets and in front of the vestry cabinet, and exposed concrete in the closets.

4. Wall and Ceiling Finishes: Most interior wall locations and surfaces are original to the construction of the building. The interior face of all exterior 8" concrete block walls was originally exposed and painted white. Interior 4" and 8" concrete block walls were also originally left exposed and painted white. During the early 1960s air conditioning upgrades, gypsum wallboard was fixed to furring strips applied to the exposed concrete block walls. Two-tone paneling was applied to the wallboard at the nave and chancel. The 1960s paneling remains in the nave and chancel. The chair rail that once separated the lower grooved walnut veneer from the upper smooth birch veneer has been removed. Deconstruction associated with the ongoing rehabilitation of Building 439 has exposed portions of the interior face of the concrete block nave walls. An earlier two-tone painting scheme is revealed: a green wainscot below and white above.

Also during the early 1960s air conditioning upgrades, the vertical louvered screen that originally separated the baptistery from the narthex was removed. A gypsum wall partition was constructed to fully enclose the newly created crying room. The remaining concrete block walls of this space were left exposed. Additional early modifications to wall and ceiling finishes occurred at the former yeoman's office in the south wing. Here mid-1960s updates included the addition of wallboard over the exposed concrete block walls and replacement of the original fiberboard ceiling with acoustical tile. At that time, all rough openings and joints in the space were trimmed in wood. Sometime after the 1960s renovations and before the installation of the current wallboard, some wall surfaces were treated with a faux fabric textured wall covering. Evidence of this is found in the east and south wings. Outside the nave, a textured wallboard finish is currently typical throughout the chapel. Exceptions include the crying room, storage, and janitor's closets that remain exposed concrete block.

Original 8" square fiberboard ceilings have been overlaid multiple times with increasingly larger suspended acoustical tile. The first overlay occurred during the early 1960s air conditioning installation. The second layer was applied during the late 1970s air handling unit updates. Spaces that did not receive dropped ceilings include toilet rooms that have gypsum wallboard ceilings, and storage and janitor's closets that retain their original fiberboard ceilings.

5. Openings:

a. Doors: As originally designed, five-panel doors were typical at the chapel interior, with variations only in what filled the panels: glass, wood, or wood louvers. The three pairs of original doors between the narthex and nave were all 5-light doors. The center remaining door opening features double hollow wood flush doors with a single light. Nave doors to the north/south side halls and chancel side doors were originally simple flush doors. Nave doors are currently hollow wood flush doors that feature a small square light. Those in the chancel are single hollow wood flush doors with four lights configured to form a crucifix with their mullions (Figure 16). All remaining interior doors were originally five-panel wood doors. All office and classroom doors are now hollow wood flush doors with a louvered vent below and a small single square light above filled with safety glass. A single hollow wood flush door with a louvered vent and no lights leads to the crying room. Single hollow wood flush doors are located at the former yeomen's office, storage closets, toilet rooms, and janitor's closets.

Figure 16. Chancel Doors With Mullions Forming a Crucifix.

b. Windows: The interior faces of window openings in Building 439 were originally designed to be unadorned exposed concrete. Most, however, have since been trimmed with simple wood surrounds and sills for a finished appearance. An interesting interior window was originally located between the offices of the southern wing. Here a wood louvered opening once punched through the upper wall to allow the passage of air to the innermost office that would otherwise be cut off from southerly breezes. This opening has since been blocked.

6. Decorative Features and Trim: The original altar rails were located at the rear of the chancel and at the front of the east chapel wing. Both rails have since been removed. Openwork brick railings also once separated the chancel from the nave. The original lectern and pulpit were extensions of these brick railings. All brick chancel features have been removed or are now covered with dark walnut veneer paneling. New matching walnut veneer lectern and pulpit with laminate tops replace the originals (Figure 17). Openwork block partial walls were located in the various chapels and auxiliary chapels to screen traffic passing through entry doors or traveling to/from the confessionals. These partial walls have since been removed.

Aside from the nave, interior spaces are quite plain and decorative finishes are minimal. A small wood cove molding originally trimmed interior spaces and can still be found in storage closets and beyond the suspended ceiling tiles in most rooms. Wood 1"x6" chair rails run the perimeter of all offices and the "Blessed Sacrament Chapel" (original north wing office) (Figures 18 and 19). Recent blue vinyl baseboards that match the blue low pile carpet are typical throughout the building, except for the toilet rooms that feature ceramic baseboards to match their ceramic floors. Vinyl baseboards have been removed from the nave, narthex, and other areas under rehabilitation.

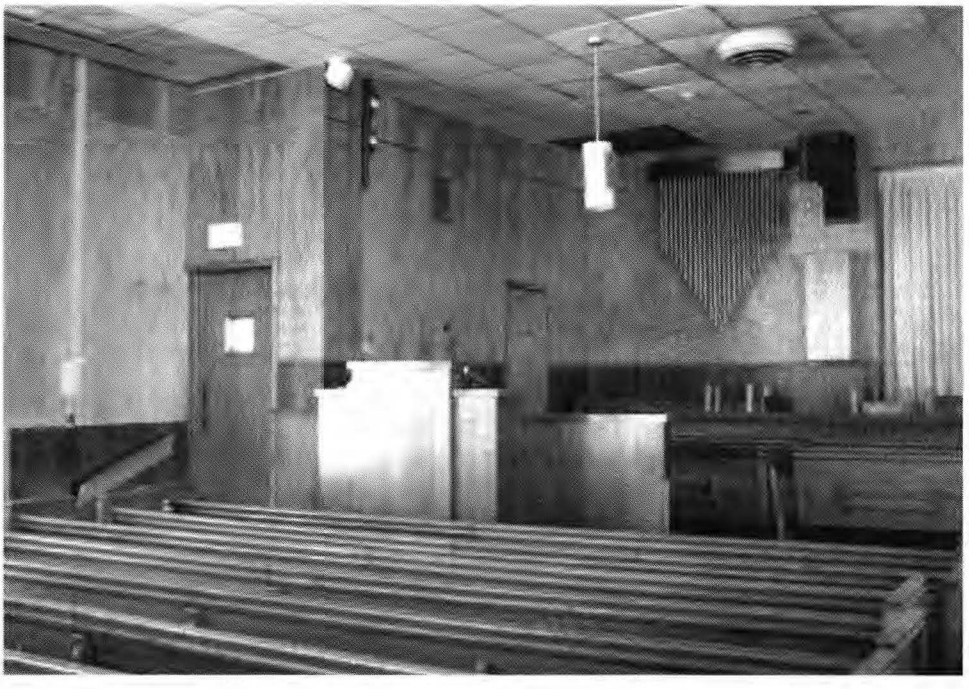

Figure 17. Replacement Walnut Veneer Lectern and Pulpit.

Figure 18. Typical Perimeter Chair Rail in Office.

Figure 19. Typical Perimeter Chair Rail in Blessed Sacrament Chapel.

7. Hardware: Building 439 has no original hardware.

8. Mechanical Equipment:

a. Heating and Air Conditioning, Ventilation: A raised cruciform clerestory sets above the main ground level. In the original design, this space provided ventilation through a continuous vent grille that ran down the centerline of the nave. A vent grille similar to that in the nave originally ran across the east chapel, coinciding with the clerestory end wall above. A third-level fan house, located above the clerestory and over the chancel, has since been removed and replaced with a larger penthouse containing modern mechanical equipment. In its original configuration however, the fan house contained two spaces, one for the fan itself and one for exhaust. The ventilating fan sat in the easternmost area of the fan house on blocking that spanned a floorless open space contained by corrugated asbestos siding. The original fan had a flexible connection that fit through an opening to the west end of the fan house. This floored space was walled by a series of stepped carriage members and louvers that provided exhaust vents for the fan (Figure 20). This venting system was once a distinctive exterior feature of the chapel. Heat to the chapel was originally provided through five freestanding unit heaters with independent thermostats. Two were located in the nave, and one each in the remaining three wings.

In the early 1960s, the chapel underwent substantial modification to update the heating and ventilating system and add air conditioning. The continuous vent grille in the nave was sealed and the entire primary gathering space received insulation and a new acoustical tile ceiling. Dropped ceilings were added over the chancel on both sides of the sanctuary opening. Two zoned air conditioning units were installed over the chancel and sanctuary, the former to service the nave and the latter to cool the three wings. Large circular ceiling diffusers directed cooled air to the nave. Exhaust fans were added to the toilet room windows, and original unit heaters were removed. The occasional window air conditioning unit was removed and the opening re-glazed. Louvers were added to existing interior doors to assist the flow of air through the innermost spaces.

Measures were taken to seal the narthex. The original six paired doors of the narthex—three to the exterior, three to the nave—were reconfigured to better contain the conditioned air. The outermost door pairs and frames to the exterior were removed, and their openings were blocked. The central opening was enlarged, and a new lintel installed to span it at a height of 8'. New flush solid core doors with walnut veneer replaced the originals. Glass block windows dropped from the new lintel on both sides of the new central door opening. Stucco was applied to the wall below the glass block. The outermost door pairs to the nave received similar treatment, but simple fixed glass panels were added rather than glass block. Additional modifications sealed the nave. The door between the nave and baptistery-turned-crying room was blocked, and double-paned fixed glass panels were added to allow viewing between the crying room and nave. The original air conditioning layout was expanded as well. Two extensions were added to cool the newly contained crying room and the office created in the auxiliary chapel after the altar was fixed in place. Hot water heating pipes and duct enclosures were added to Building 439 at the northeast inside corner of the exterior (Figure 21). These pipes also ran underground to provide service to Building 440.

In the late-1970s, air handling units and controls were replaced. In addition to providing more efficient cooling equipment, this modification involved the removal and replacement of various centrally located ducts. Existing ducts that reached out to the nave and three wings were reused.

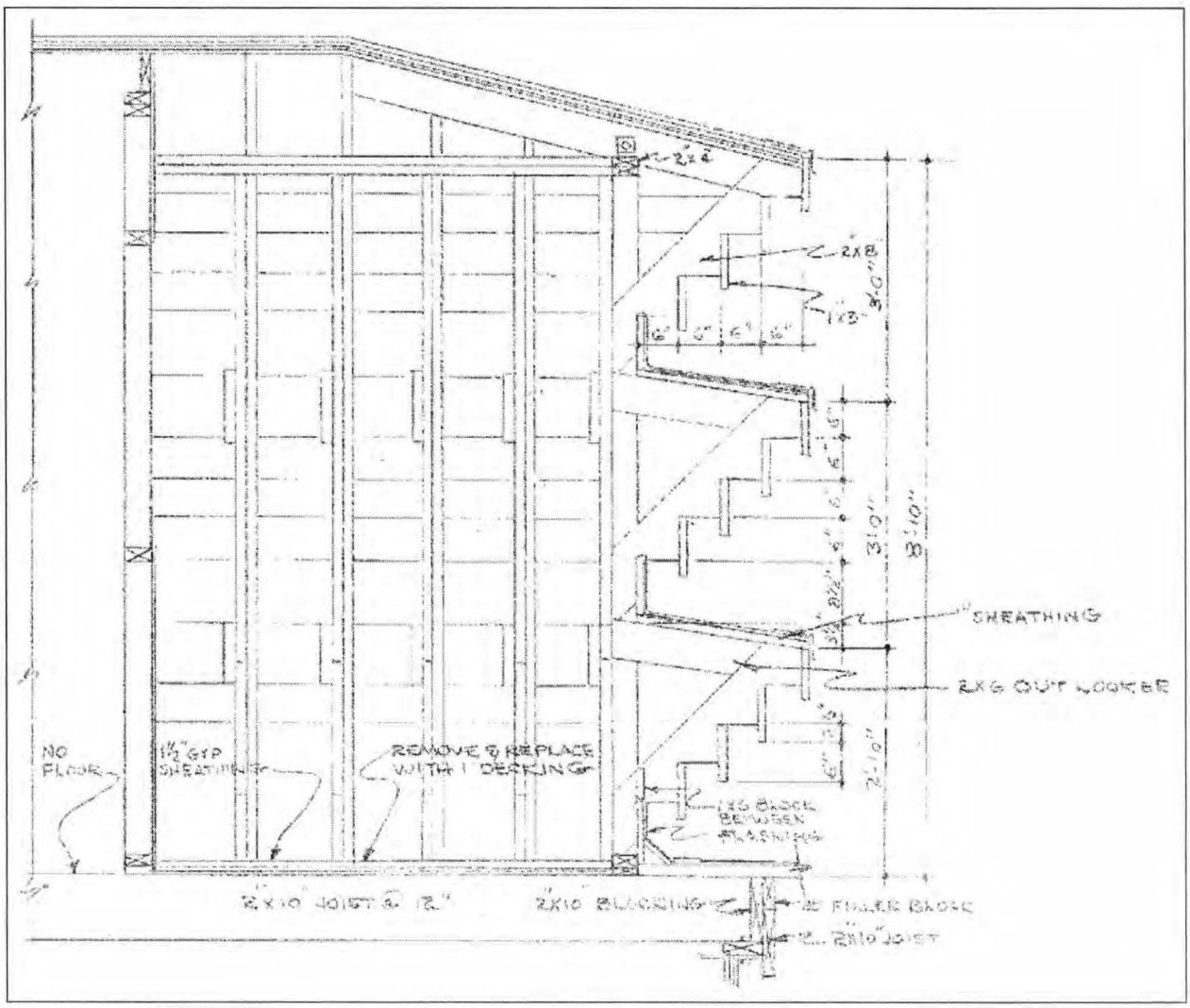

Figure 20. Cross-section of Original Fan House. (Y&D Drawing No. 325-720)

Figure 21. Hot Water Heating Pipes, Duct Enclosures, and Mechanical Penthouse.

b. Lighting and Electrical: Replacement pendant flood fixtures located at the electrical boxes of the original recessed lighting illuminate the nave. As constructed, wood surfaces near these recessed fixtures were protected with asbestos. Original wall-mounted fixtures in the primary gathering space have been removed, but their electrical boxes remain. Original special lectern fixtures, Model No. 884 by Faries Manufacturing Company, were removed with the original lecterns. Aside from the nave, most lighting is provided by recent recessed and ceiling mounted

fluorescent fixtures. Early wall-mounted incandescent bulb fixtures can be found in the storage closets. Tone cabinets once served a pipe organ in the sanctuary, but now an electrical box located behind the altar curtain serves an electric organ. Additional circuit breakers and electrical boxes for lighting are located in Closet #4.

c. Plumbing Fixtures: All toilets, faucets, and lavatories are replacements. Of special note is the north toilet room dubbed "The Presidential Bathroom." It received updates in the mid-1990s prior to a chapel visit by President Clinton who was attending the Khobar Towers memorial service. This toilet room contains a janitor's closet with a large utility sink. A recent drinking fountain was installed in the adjacent hall. A second janitor's closet with utility sink is located at the front of the chapel in the former men's toilet room off the narthex. Opposite this sink was a water fountain in the narthex. By the early 1980s, all water fountains were to be wall-mounted handicapped accessible fixtures. Except for the utility sink, all plumbing fixtures south of the narthex have been removed and their piping exposed during the ongoing rehabilitation. A sump pump is located in Closet #1. Water, sewer, steam tunnels, and other utility services for Building 439 connect into those that were already in place for the adjacent Base Auditorium (theater).

d. Conveyance Systems: None.

9. Furnishings: One of the most significant features of the chapel interior no longer exists. This was a rotating altar situated in the Sanctuary. Primarily of wood frame construction, the altar rotated on an octagonal base with a center pivot and eight casters (one per side). The altar superstructure was barbell-shaped to allow for multi-denominational altars. The larger sides provided altars for Catholic and Protestant services. The small sides featured a Jewish altar and a blank face that aligned with the closet wall of the sanctuary. The Catholic and Protestant faces of the altar were identical with the exception of a wood cross prominently displayed on the Catholic side. Common features included a "V" joint tongue and groove white pine base and cloth wall covering over gypsum wallboard backdrop. The Jewish altar featured a central oak frame around a curtained opening. Outside the frame was a grid of metal Stars of David on a gypsum wallboard backdrop. Based on cues from the original floor plan, the Protestant altar would normally face toward the main nave, the Catholic altar toward the east chapel, and the Jewish altar toward the auxiliary chapel (Figure 22).

Repairs were made to the rotating altar after the casters began to dig an impression into the concrete floor on which it rotated. A new ¼" steel plate was laid over the concrete to bridge the groove and new casters were installed. In the early 1960s, the altar was reconfigured to serve a single congregation. The modified altar had a single backdrop with two angled sidewalls. In this configuration, the altar no longer rotated but rather was fixed in place facing the nave. While original steps up to the rotating altar remain, the modified altar has since been removed. Vacated

space is currently used as the vestry. Birch veneer vestment case cabinetry here replaces the original built-in furnishings. The original sacristy/vestry cases may have been located in the east wing near the confessionals and later moved to the north office during reconfiguration of the east wing and sanctuary.[8]

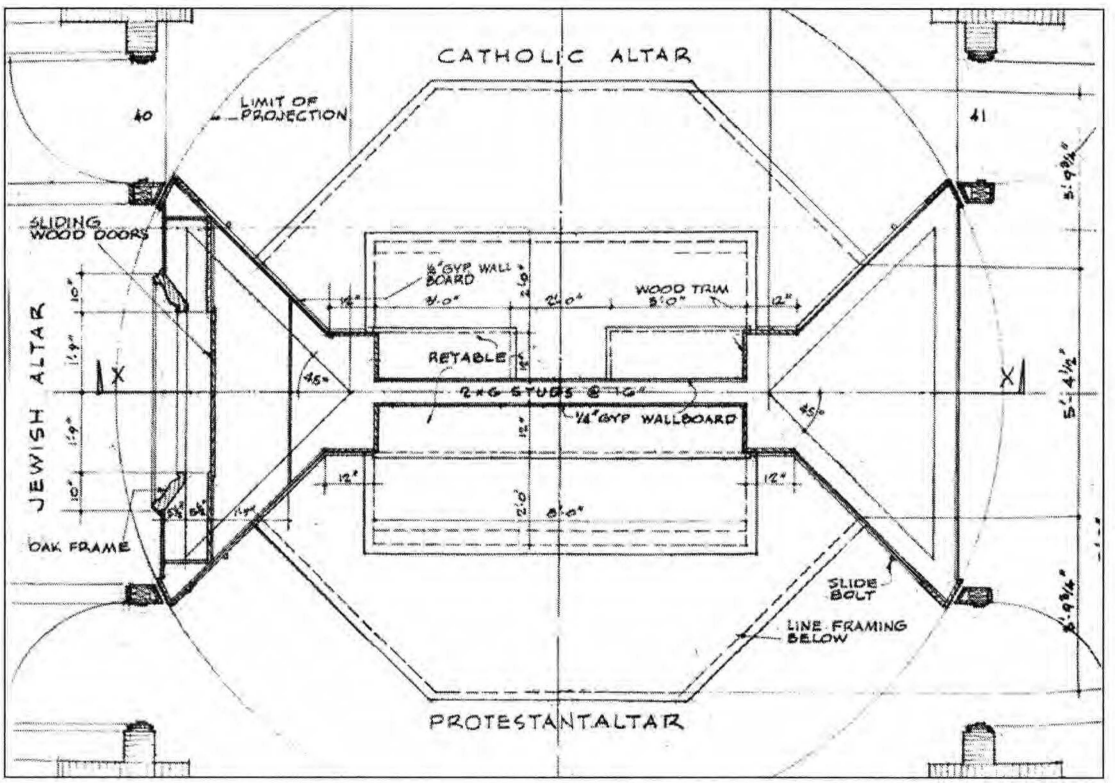

Figure 22. Plan of Original Rotating Altar. (Y&D Drawing No. 325-721)

Additional liturgical furnishings include the following. Wood confessionals were originally located in the southeast corner of the east wing, but were removed during prior reconfigurations. As originally designed, the three bays accommodated two parishioners and one priest. The structure featured a clergy seat, shelves, sliding wood panels with fixed screens, kneeling steps, screened openings atop each bay for air circulation, and curtains across the front for privacy. Wood replacement pews dating from the early-1970s are currently located in the main nave, but not positioned for worship due to ongoing renovations. In the primary assembly space, alms

[8] Ibid.

boxes were originally mounted to the west wall, flanking the interior narthex entry doors. They have since been removed. It is likely the original wood baptistery font was removed from the baptistery when the space was converted to the crying room. Wood shelving is found in Closets #2 and #3, the former retaining a pair of early units and the latter having recent plywood shelving. A recent oak laminate vanity supports the lavatory in the north toilet room.

D. Site:

1. General Setting and Orientation: Building 439 faces west onto Titan Road (formerly Lycoming Avenue), and shares its centerline with that of Edward H. White II Street (formerly Curtiss Street) which runs perpendicular to and intersects Titan directly in front of the chapel Building 439 is the middle of three morale, welfare, and recreation (MWR) facilities that back up to the eastern boundary of Patrick Air Force Base. The Atlantic Ocean is located to the east, directly across Highway A1A. Building 423 (45th Space Command and 920th Rescue Wing Headquarters) and "Memorial Plaza" are to the west across Titan Road (Figure 23). Due to security protocols, vehicular access to the chapel is now restricted to Titan Road. A service road runs between the chapel and Building 431 to the south, and various parking areas are located to the east (Figure 24).

Figure 23. General Setting View Showing Building 423 and Memorial Plaza to the West.

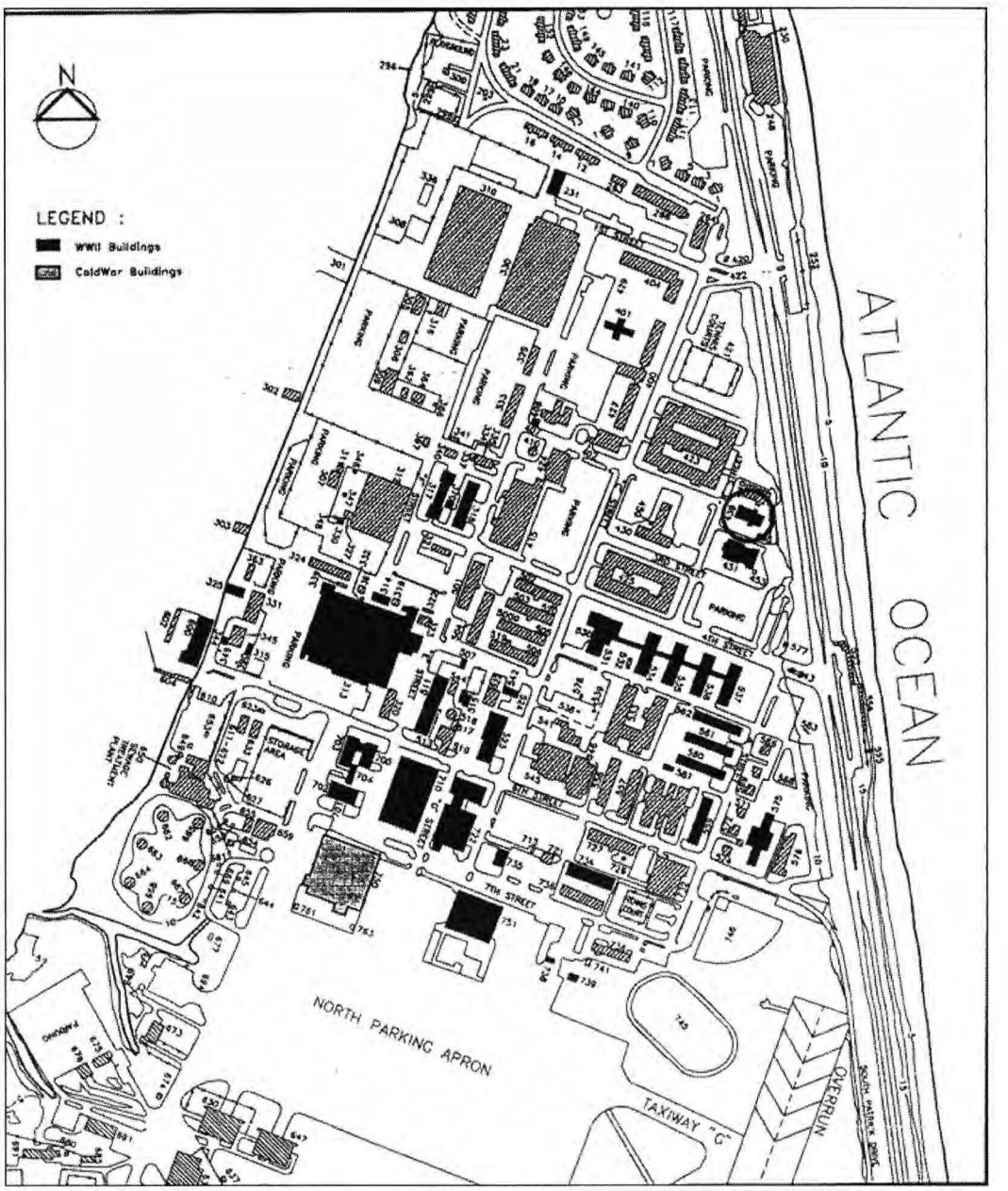

Figure 24. Location Map for Building 439. (CERL, 2004)

2. Historic Landscape Design: No historic landscape plan was found. The original plot plan shows perimeter concrete walks encircling the entire building. Walks are currently located in those same locations, with the addition of a walk between the east wing of the chapel and the east parking lot. This walk was added in the mid 1990s for President Clinton's visit.[9] Missing from the site, however, are pre-cast concrete flagstone walks that originally flanked both sides of the nave at the splayed sidewalls. The 1'-10" square flagstones were laid in a grid, five stones wide. These walks have since been removed and replaced with grass and hedge. Palm trees are placed informally about the lawn, while hedges, bushes, and foundation plantings are situated near the chapel perimeter. Four bollard lights illuminate the walk to the main entry portico.

3. Outbuildings: The base chapel has an annex, Building 440, located to the north and connected to Building 439 by two covered exterior walkways. Initially, Building 440 served as the chapel educational wing. The annex currently houses the main chapel office and various clergy offices.

[9] Ibid.

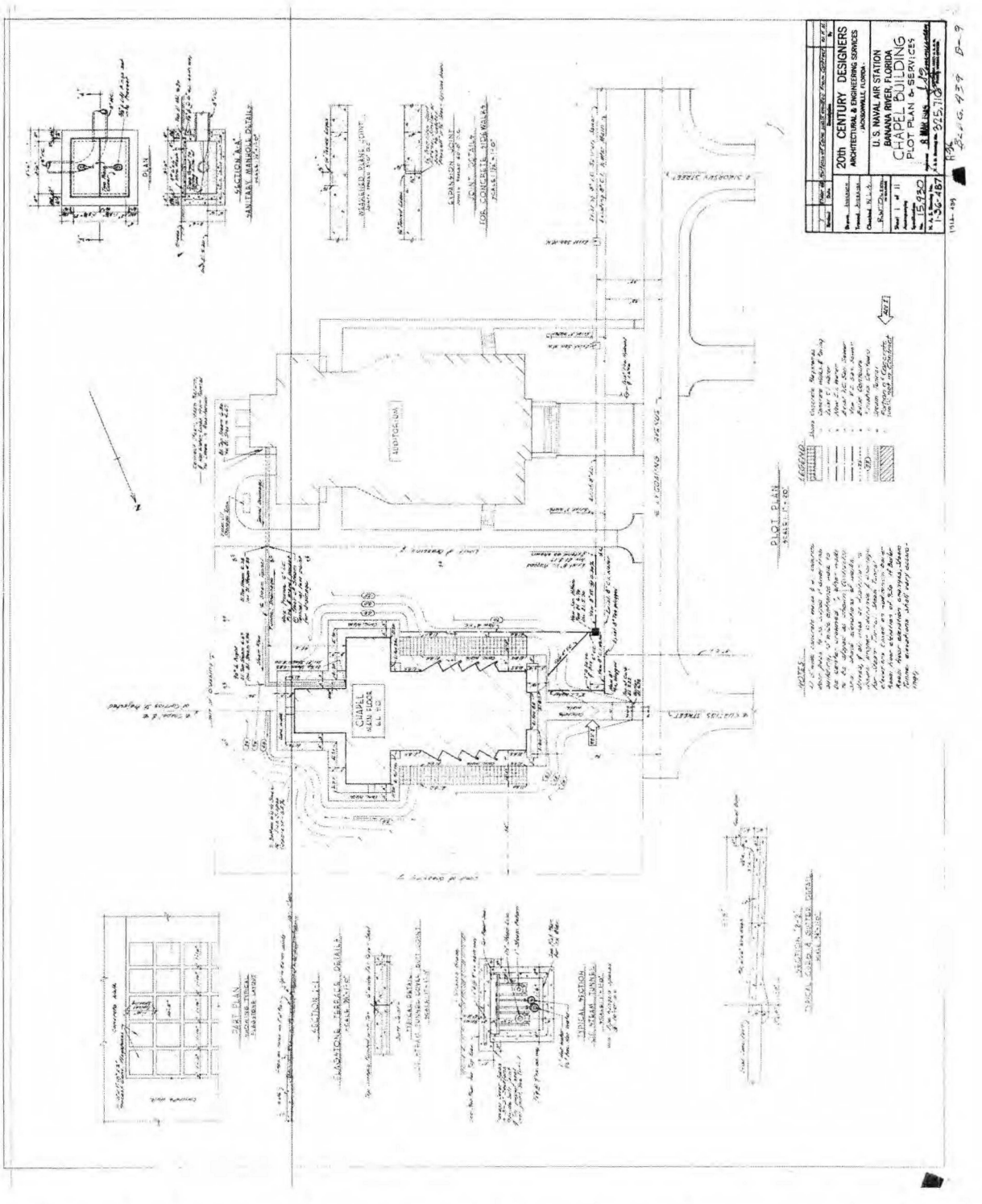

Figure 25. Plot Plan and Services, Chapel Building, U.S. Naval Air Station Banana River, Florida, 8 March 1945.

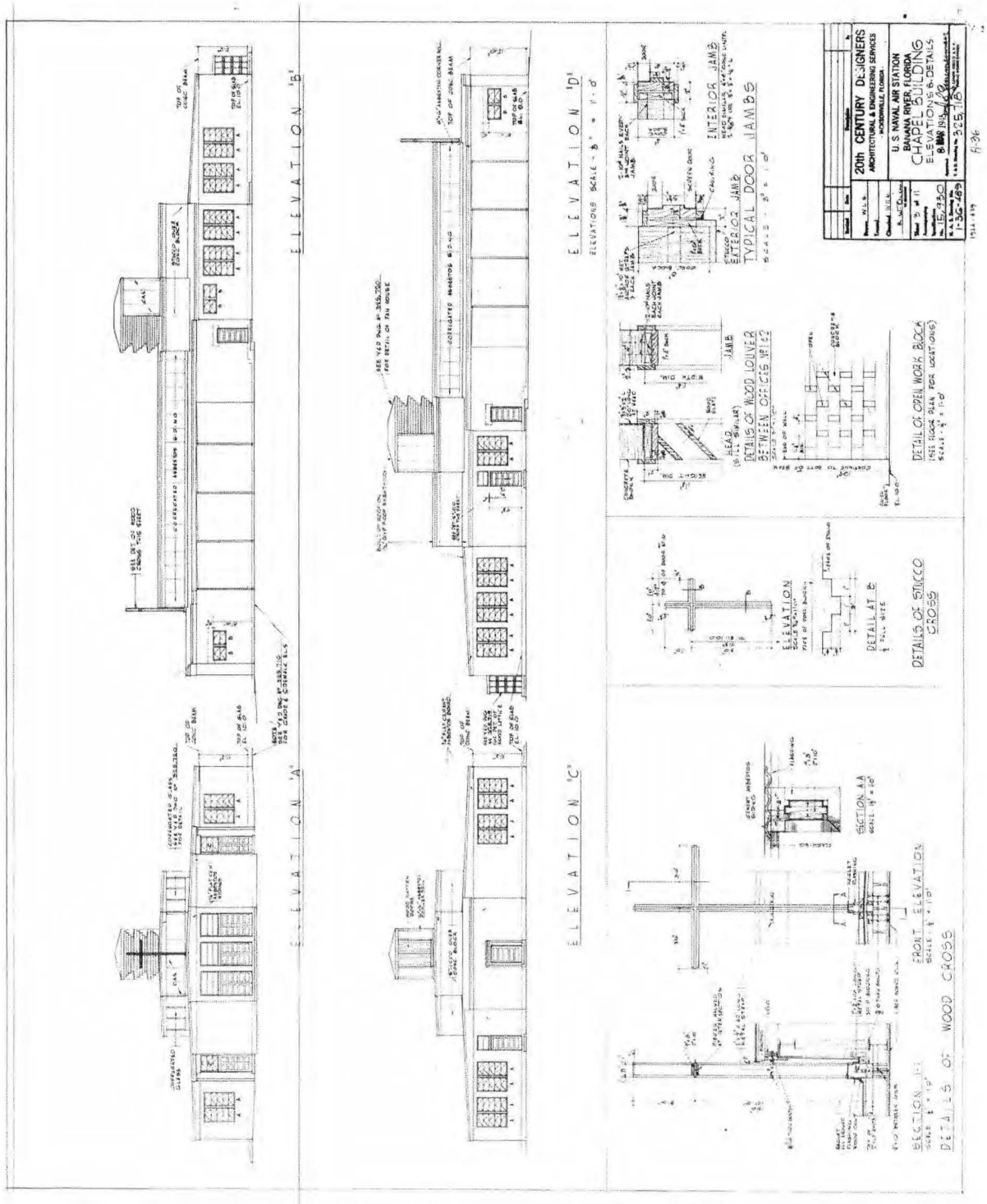

Figure 26. Elevations and Details, Chapel Building, U.S. Naval Air Station Banana River, Florida, 8 March 1945.

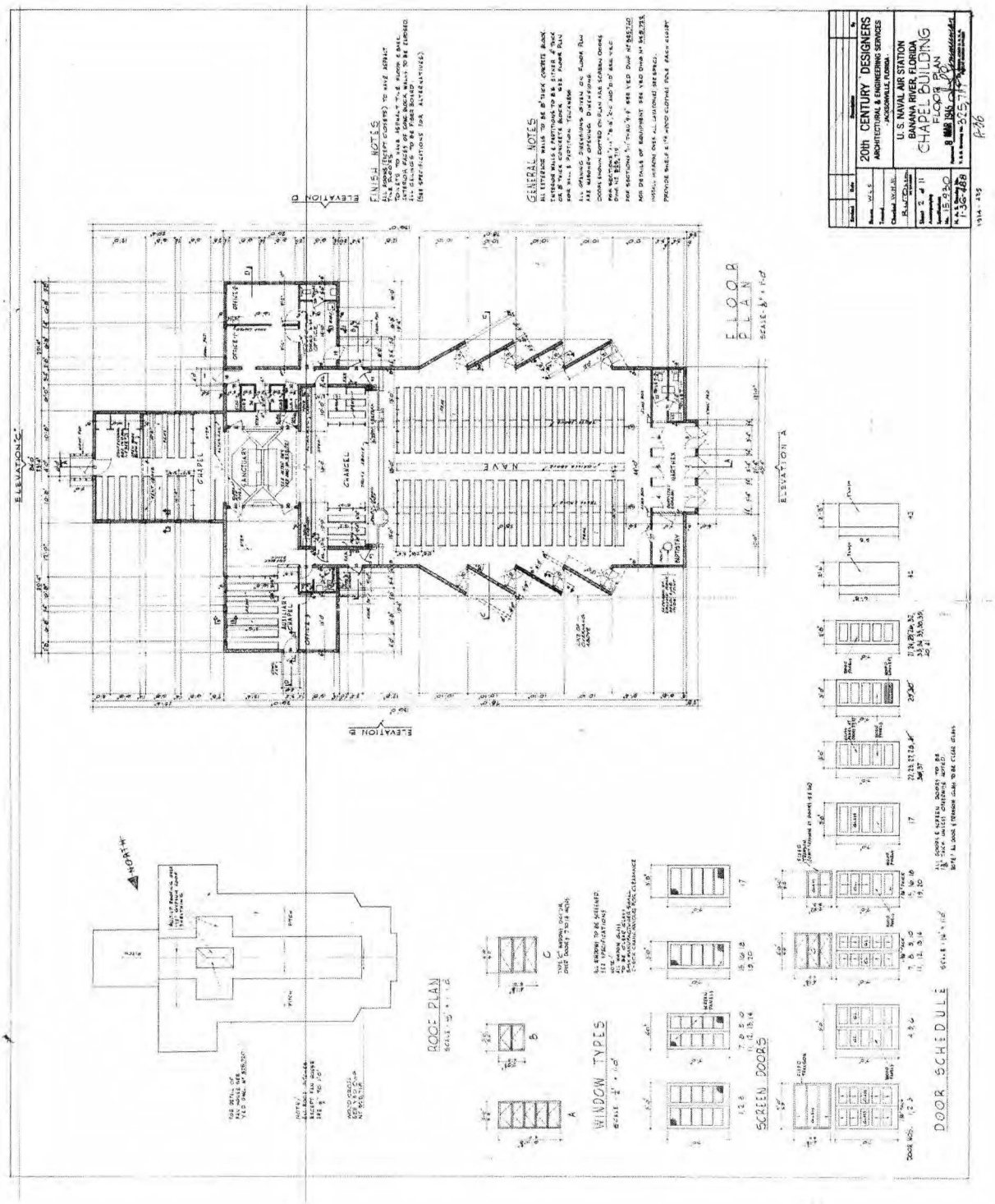

Figure 27. Floor Plan, Chapel Building, U.S. Naval Air Station Banana River, Florida, 8 March 1945.

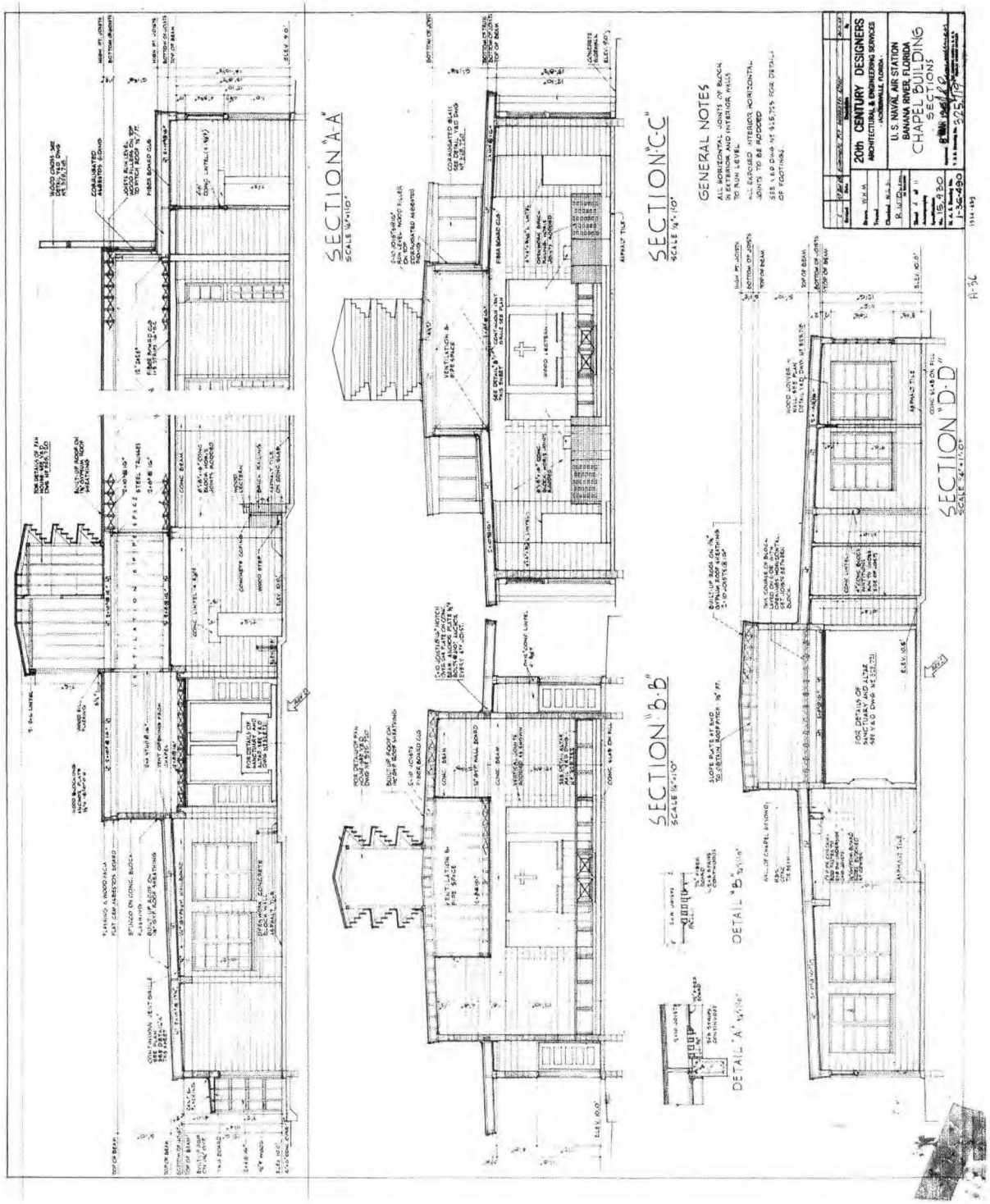

Figure 28. Sections, Chapel Building, U.S. Naval Air Station Banana River, Florida, 8 March 1945.

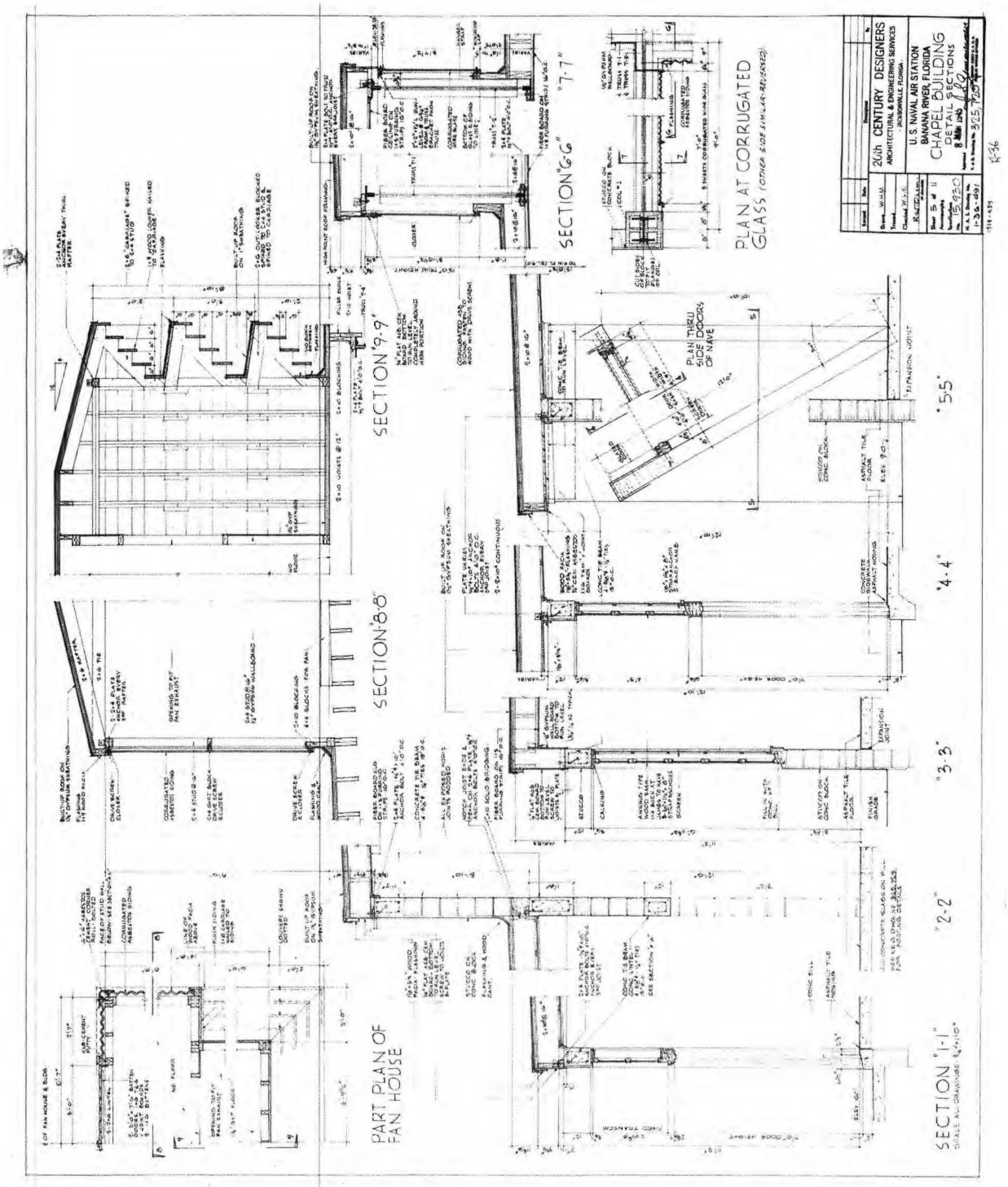

Figure 29. Detail Sections, Chapel Building, U.S. Naval Air Station Banana River, Florida, 8 March 1945.

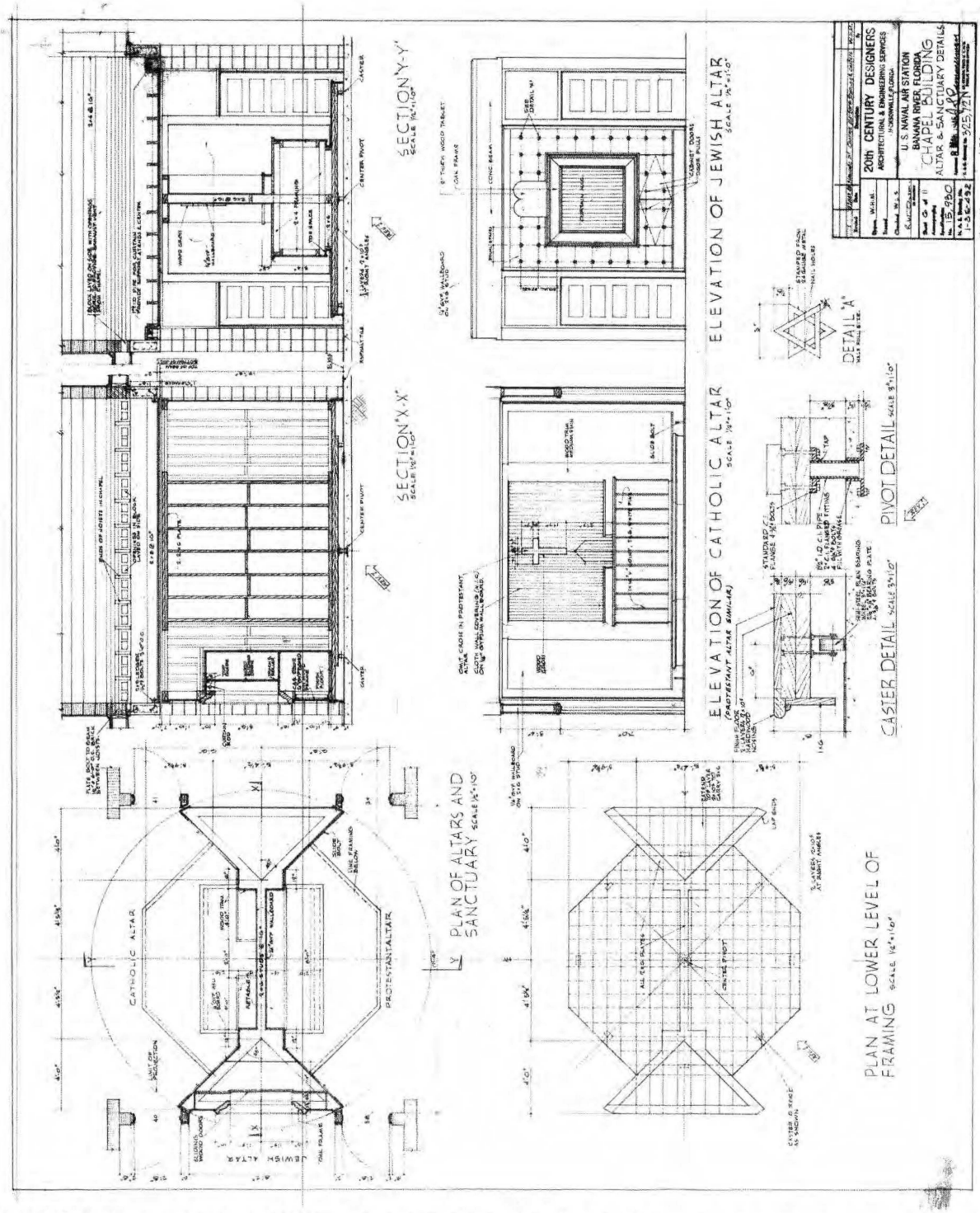

Figure 30. Altar and Sanctuary Details, Chapel Building, U.S. Naval Air Station Banana River, Florida, 8 March 1945.

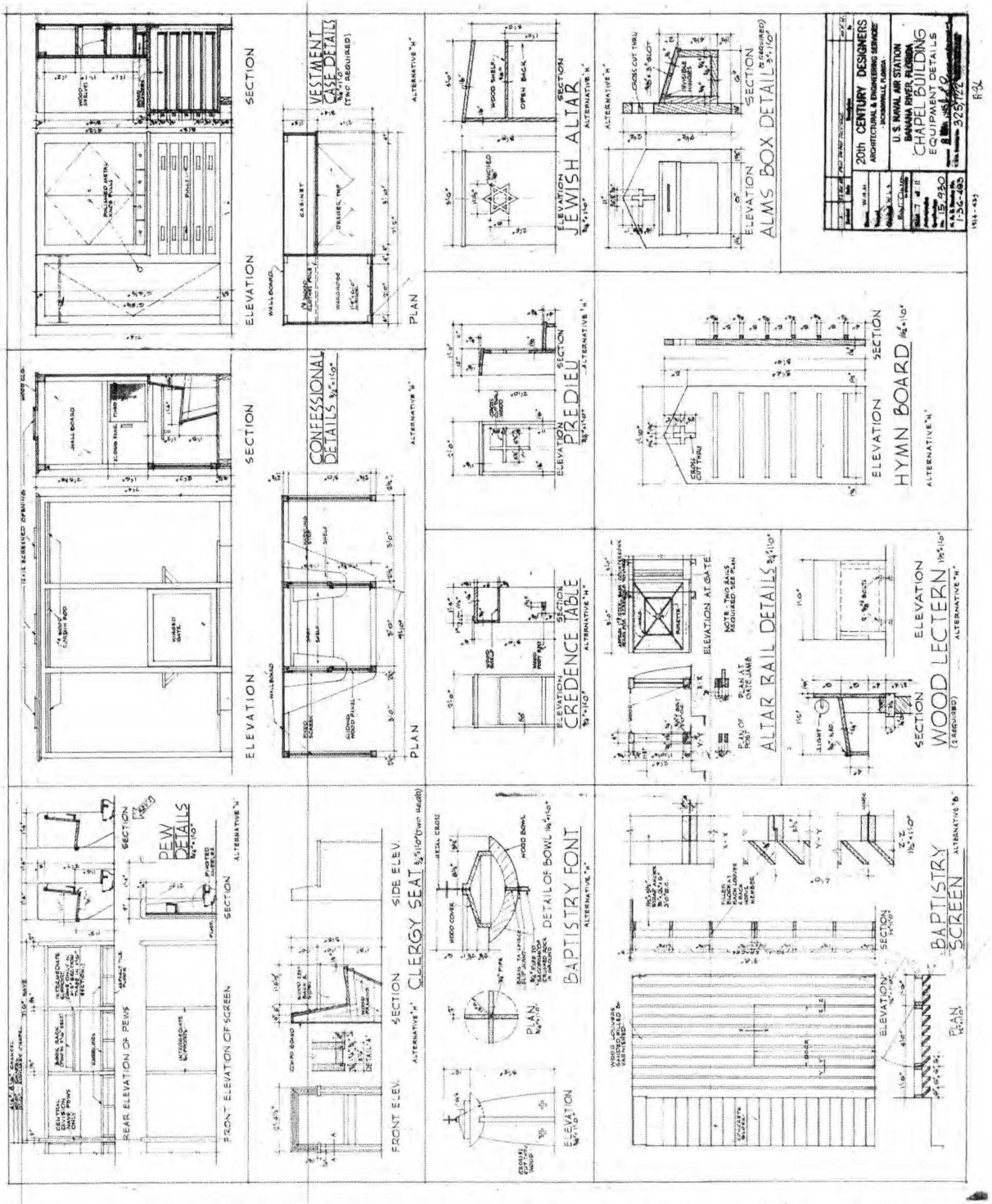

Figure 31. Equipment Details, Chapel Building, U.S. Naval Air Station Banana River, Florida, 8 March 1945.

HISTORIC AMERICAN BUILDINGS SURVEY

INDEX TO PHOTOGRAPHS

PATRICK AIR FORCE BASE, SEASIDE CHAPEL HABS No. FL-
(Patrick Air Force Base, Building 439)
Intersection of Edward H. White Road and Titan Road
Melbourne Vicinity
Brevard County
Florida

Martin Stupich, Photographer, February 2004
See photo key on page 2.

PAFB 439 -1 GENERAL VIEW FROM STREET, BUILDINGS IN CONTEXT, INCLUDING THEATER (BACKGROUND), VIEW TO SE

PAFB 439 - 2 WEST ELEVATION TO E

PAFB 439 - 3 NORTH SIDE, SHOWING STAGGERED WINDOW BAYS; VIEW TO SE

PAFB 439 - 4 DETAIL OF COURTYARD CONNECTION TO OFFICE SUITES AT N SIDE OF COMPLEX; VIEW TO E

PAFB 439 - 5 GENERAL VIEW OF NORTH SIDE OF EAST OFFICE WIONG; VIEW TO N FROM OFFICE COURTYARD

PAFB 439 - 6 OBLIQUE VIEW OF EAST END SHOWING MASSING ABOVE ALTAR; VIEW TO SW

PAFB 439 - 7 GENERAL VIEW, EAST ELEVATION; VIEW TO W

PAFB 439 - 8 GENERAL VIEW OF SOUTH SIDE; VIEW TO N

PAFB 439 - 9 GENERAL OBLIQUE VIEW OF SOUTH SIDE WITH SHADOWS ARTICULATING STAGGERED WINDOW PLAN; VIEW TO NE

PAFB 439 - 10 OBLIQUE VIEW OF WEST END SHOWING RELATIONSHIP OF PORTICO TO MAIN BUILDING MASSING; VIEW TO NE

PAFB 439 - 11 DETAIL OF NORTH SIDE SHOWING WINDOW PLANE RECESSED AT FIN-WALLS; INTACT COPPER GUTTER/DOWNSPOUT PATTERN EMPHASIZES SIMPLE PLANES AND ANGLES; VIEW TO SE

PAFB 439 - 12 NORTH WALL, SHOWING DIFFUSION OF ILLUMINATION AT STAGGERED WINDOW BAYS; VIEW TO NE

PAFB 439 - 13 GENERAL VIEW OF MAIN SPACE TOWARD SANCTUARY; VIEW TO SE

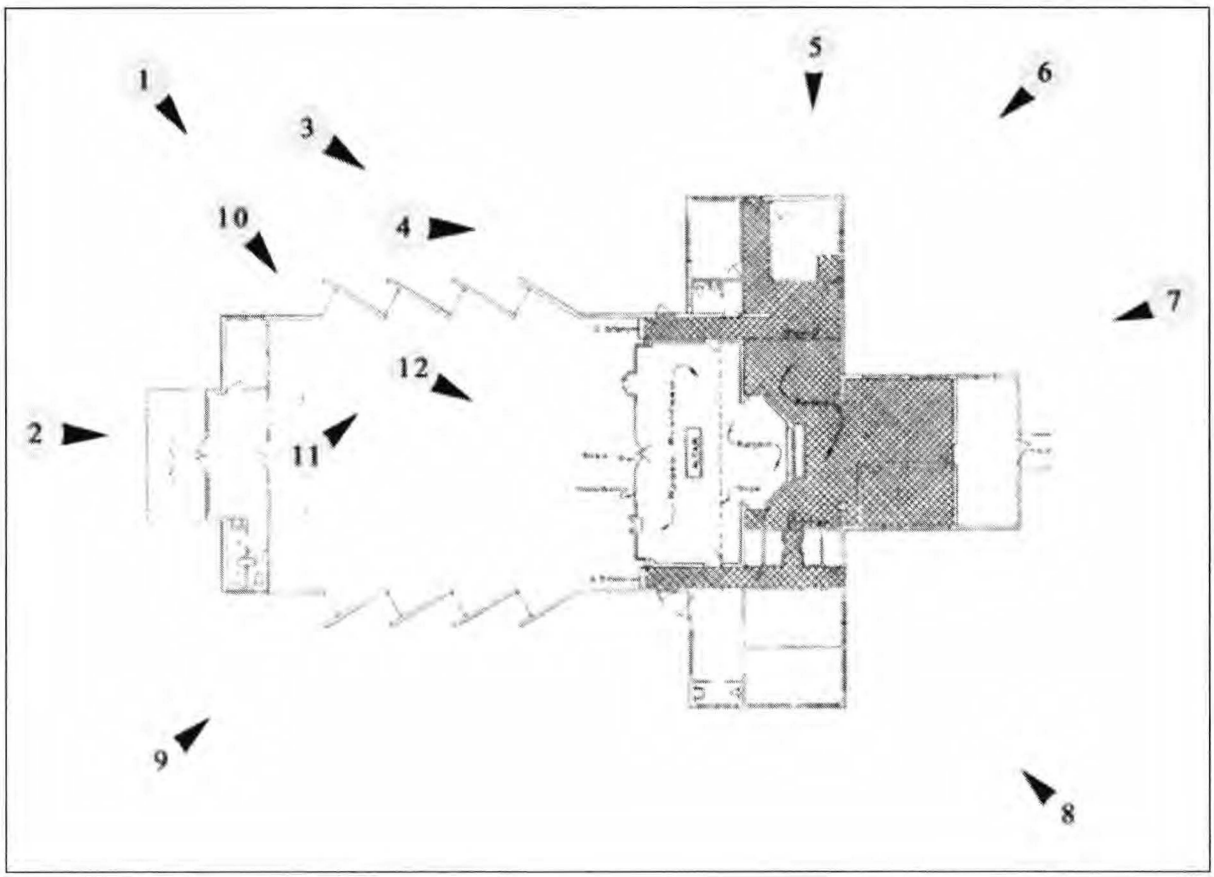

Photo Key for Building 439, Seaside Chapel, Patrick Air Force Base. Historic American Buildings Survey.

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SEE INDEX TO PHOTOGRAPHS FOR CAPTION
HABS No. FL-

PAFB 439-1

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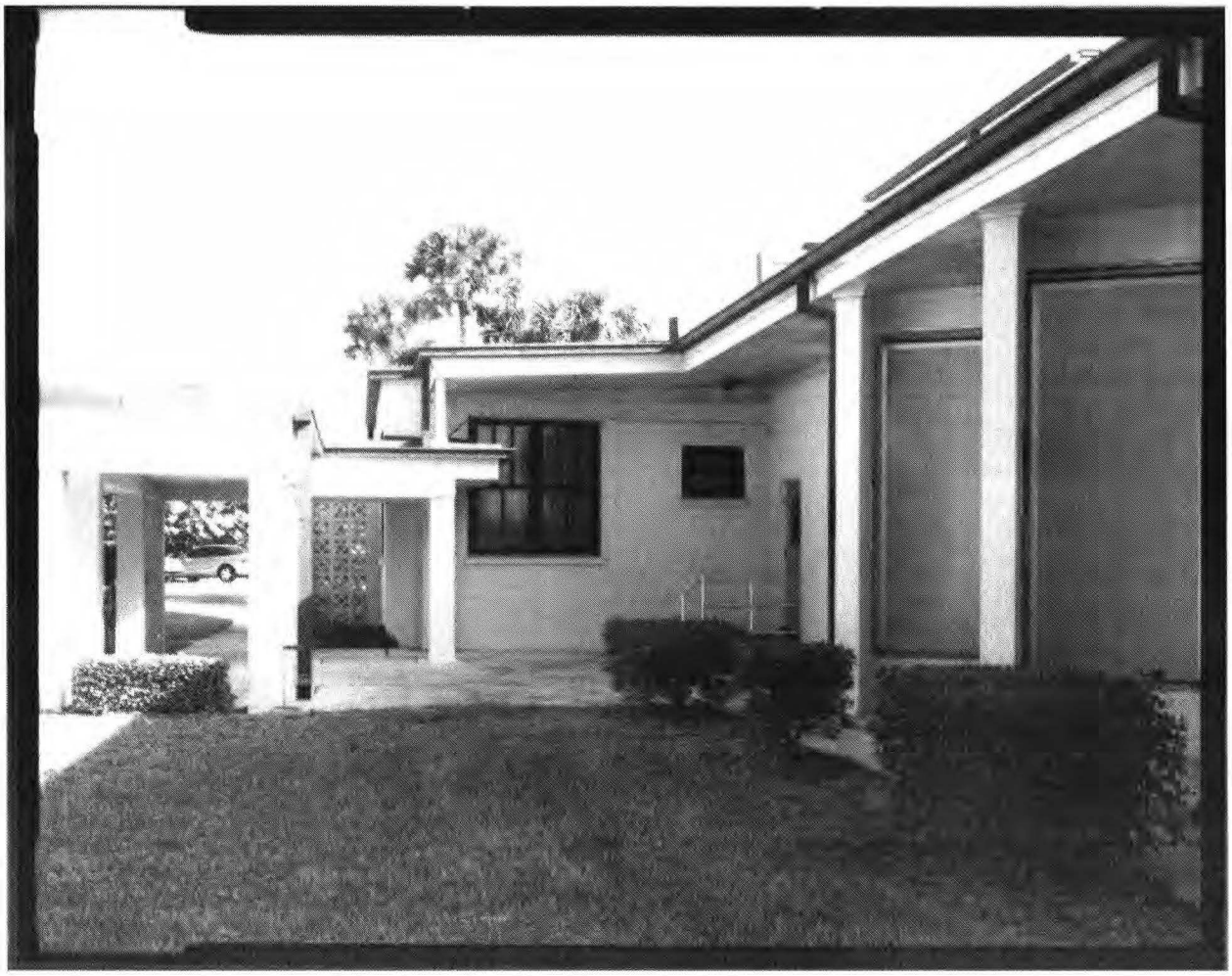
SEE INDEX TO PHOTOGRAPHS FOR CAPTION
HABS No. FL-

PAFB 439-4



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14. ABSTRACT

This report presents Historic American Buildings Survey (HABS) Level II documentation of the Theater, Building 431, and the Seaside Chapel, Building 439, at Patrick Air Force Base, Florida.

15. SUBJECT TERMS

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