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☐ Original
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HISTORICAL STRUCTURE FORM
FLORIDA MASTER SITE FILE
Version 4.0 1/07

Reset Form

Site # BR02001
Field Date 5-13-2013
Form Date 7-30-2013
Recorder #

Shaded Fields represent the minimum acceptable level of documentation.
Consult the *Guide to Historical Structure Forms* for detailed instructions.

Site Name(s) (address if none) Hangar AF — Multiple Listing (DHR only)
Survey Project Name Survey of NASA-Owned Facilities CCAFS Ind. Area — Survey # (DHR only)
National Register Category (please check one) ☒ building ☐ structure ☐ district ☐ site ☐ object
Ownership: ☐ private-profit ☐ private-nonprofit ☐ private-individual ☐ private-nonspecific ☐ city ☐ county ☐ state ☒ federal ☐ Native American ☐ foreign ☐ unknown

LOCATION & MAPPING

Clear Location Values

Street Number	Direction	Street Name	Street Type	Suffix Direction
Address: Bldg 66250		Hangar	Road	

Cross Streets (nearest / between) Industrial Bypass Road
USGS 7 5 Map Name CAPE CANAVERAL — USGS Date 1976 — Plat or Other Map
City / Town (within 3 miles) Cape Canaveral — In City Limits? ☐ yes ☐ no ☐ unknown — County Brevard
Township 23S — Range 37E — Section 13 — ¼ section: ☐ NW ☐ SW ☐ SE ☐ NE — Irregular-name:
Tax Parcel # N/A — Landgrant
Subdivision Name — Block — Lot
UTM Coordinates: Zone ☐ 16 ☒ 17 — Easting 540429 — Northing 3151131
Other Coordinates: X: — Y: — Coordinate System & Datum
Name of Public Tract (e.g., park) Cape Canaveral Air Force Station (CCAFS)

HISTORY

Clear History Values

Construction Year 1962 ☐ approximately ☐ year listed or earlier ☒ year listed or later
Original Use Other — From (year): 1962 — To (year): 1977
Current Use Other — From (year): 1977 — To (year): 2012
Other Use Saturn rocket support; SRB processing — From (year): — To (year):
Moves ☐ yes ☒ no ☐ unknown — Date: — Original address
Alterations ☐ yes ☒ no ☐ unknown — Date: — Nature
Additions ☐ yes ☒ no ☐ unknown — Date: — Nature
Architect (last name first): Bail, Horton & Assoc — Builder (last name first): unknown
Ownership History (especially original owner, dates, profession, etc.) NASA is the original and current owner.
Is the Resource Affected by a Local Preservation Ordinance? ☐ yes ☒ no ☐ unknown Describe

DESCRIPTION

Clear Description Values

Style Industrial Vernacular — Exterior Plan Irregular — Number of Stories 2
Exterior Fabric(s) 1. Concrete block — 2. Metal — 3.
Roof Type(s) 1. Gable — 2. — 3.
Roof Material(s) 1. Built-up — 2. — 3.
Roof secondary strucs. (dormers etc.) 1. — 2.
Windows (types, materials, etc.) Translucent windows in the bay doors and 1/1 metal frame windows in the north and south lean-to portions.
Distinguishing Architectural Features (exterior or interior ornaments) See continuation sheet.
Ancillary Features / Outbuildings (record outbuildings, major landscape features; use continuation sheet if needed.) See continuation sheet and the Hangar AF resource group form.

DHR USE ONLY	OFFICIAL EVALUATION	DHR USE ONLY
NR List Date ☐ Owner Objection	SHPO – Appears to meet criteria for NR listing: ☐ yes ☐ no ☐ insufficient info — Date — Init. KEEPER – Determined eligible: ☐ yes ☐ no Clear Check Boxes — Date NR Criteria for Evaluation: ☐ a ☐ b ☐ c ☐ d (see *National Register Bulletin 15*, p. 2)	

HISTORICAL STRUCTURE FORM

Site #8 BR02001

DESCRIPTION (continued)

Clear Description Values

Chimney: No. 0 Chimney Material(s): 1. _____ 2. _____

Structural System(s): 1. Steel skeleton 2. Concrete block 3. _____

Foundation Type(s): 1. Slab 2. _____

Foundation Material(s): 1. Poured Concrete Footing 2. _____

Note: you may use the last box in each field to type in an answer that does not appear in the list provided

Main Entrance (stylistic details) There are sliding high bay doors on the end elevations and double, one-light pedestrian doors throughout the building.

Porch Descriptions (types, locations, roof types, etc.) n/a

Condition (overall resource condition): ☐excellent ☒good ☐fair ☐deteriorated ☐ruinous

Narrative Description of Resource Hangar AF features a typical aeronautic hangar design that is similar to the other hangars in the CCAFS Industrial Area. It has a central hangar bay with a gable roof and two-story, concrete-block "lean-to" sections, 66,170 sq.ft. See continuation sheet.

Archaeological Remains Not applicable ☐Check if Archaeological Form Completed

RESEARCH METHODS (check all that apply)

☒FMSF record search (sites/surveys)	☒library research	☐building permits	☐Sanborn maps
☐FL State Archives/photo collection	☐city directory	☒occupant/owner interview	☐plat maps
☐property appraiser / tax records	☒newspaper files	☐neighbor interview	☐Public Lands Survey (DEP)
☒cultural resource survey (CRAS)	☒historic photos	☒interior inspection	☒HABS/HAER record search

☐other methods (describe) _____

Bibliographic References (give FMSF manuscript # if relevant, use continuation sheet if needed) Solid Rocket Booster Disassembly and Refurbishment Complex HAER Documentations: FL-8-11-S and FL-8-11-S-1. See continuation sheet.

OPINION OF RESOURCE SIGNIFICANCE

Clear Significance Values

Appears to meet the criteria for National Register listing individually? ☐yes ☒no ☐insufficient information

Appears to meet the criteria for National Register listing as part of a district? ☒yes ☐no ☐insufficient information

Explanation of Evaluation (required, whether significant or not; use separate sheet if needed) Hangar AF is a contributing resource in the NRHP-eligible SRB Disassembly and Refurbishment Historic District, and also contributes to the larger NASA-owned CCAFS Industrial Area Historic District. See continuation sheet.

Area(s) of Historical Significance (see *National Register Bulletin 15*, p. 8 for categories: e.g. "architecture", "ethnic heritage", "community planning & development", etc.)

1. Other 3. Engineering 5. _____
2. Science 4. Transportation 6. _____

DOCUMENTATION

Clear Documentation Values

Accessible Documentation Not Filed with the Site File - including field notes, analysis notes, photos, plans and other important documents

1) Document type Photographs Maintaining organization National Aeronautics and Space Administration
Document description HAER Photography and Narrative Context File or accession #'s http://mediaarchive.ksc.nasa.gov/search

2) Document type Photographs Maintaining organization National Park Service, Region One
Document description Hangar AF Complex File or accession #'s HAER No. FL-8-11-S; HAER No. FL-8-11-S-1

RECORDER INFORMATION

Recorder Name David L. Price Affiliation New South Associates

Recorder Contact Information 118 S. 11th St. Nashville, TN 37206; dprice@newsouthassoc.com; 615-262-4326
(address / phone / fax / e-mail)

Required Attachments

❶ USGS 7.5' MAP WITH STRUCTURE LOCATION PINPOINTED IN RED

❷ LARGE SCALE STREET, PLAT OR PARCEL MAP (available from most property appraiser web sites)

❸ PHOTO OF MAIN FACADE, ARCHIVAL B&W PRINT OR DIGITAL IMAGE FILE
If submitting an image file, it must be included on disk or CD AND in hard copy format (plain paper is acceptable). Digital image must be at least 1600 x 1200 pixels, 24-bit color, jpeg or tiff.

DESCRIPTION OF RESOURCE:

Hangar AF is the central building of the Hangar AF Complex. It features a typical aeronautic hangar design that is similar to the other hangars in the Cape Canaveral Air Force Station (CCAFS) Industrial Area. The building has three primary sections, including the central hangar bay with an aluminum gable roof and two-story "lean-to" sections on the hangar's north and south elevations. The hangar bay contains the building's open solid rocket booster (SRB) disassembly area, and the "lean-to" sections contain the small parts processing area, storage rooms, offices, and other support spaces.

The exterior of the hangar bay is clad in 4″ ribbed embossed aluminum siding, while the north and south "lean-to" sections have concrete block exteriors. The sliding hangar doors on the east and west elevations are made of 1/4″ steel plates with translucent ribbed plastic sheets used as window lights. The hangar bay has a load-bearing steel truss wall structure with a steel truss gable roof structure. The two-story "lean-to" sections have load-bearing concrete block walls with steel-truss shed roof structures.

Hangar AF has four horizontal sliding bay doors with a steel frame structure with translucent ribbed plastic cover sheets in a pastel green color on the west and east sides of the building. Each door has two moving sections that roll on rubber drive wheels to collapse into concrete block pocket structures on either side of the bay. Within each bay door is a standard size pedestrian entrance door for worker access. There are secondary exterior pedestrian entrance doors on the north and south elevations of the hangar.

The hangar bay has clerestory windows along the north and south elevations. The windows are arranged in eleven bays, each of which contains eighteen fixed lights. There are additional secondary one-over-one double-hung windows along the exterior ground floor of the "lean-to" sections, with two square one-over-one windows in the stair corridors.

The Hangar AF bay has an aluminum gable roof with a steel truss structure. This roof structure provides a clear, uninterrupted workspace in the bay and room for the building's bridge crane to move back and forth along the bay, as needed. The "lean-to" sections of the hangar have built-up roof systems on an aluminum base. Hangar AF has no cornice. It has aluminum boxed eaves with aluminum gutters.

The interior of Hangar AF is composed of the main assembly area found in the hangar bay, which is flanked on the north and south by two-story "lean-to" sections that contain offices, storage rooms, the small parts processing area, and other work areas. The concrete slab floor of the hangar includes a grid system of covered trenches that contain electrical cables, mechanical lines, compressed air, and grounding cables that serve the building's various equipment and work stations. There are also stairwells leading to the second floor at each of the building's four corners.

Notable machinery in Hangar AF includes the building's bridge crane, the decoupling rings, and the two EDOP devices. The bridge crane has a 40-ton lift capacity with a 10-ton auxiliary outrigger hoist. The crane was used to maneuver the six different decoupling rings into place, as

well as to move SRB segments and other heavy equipment. The decoupling rings are hydraulic clamps placed over the SRB segment joints, one on either side of each joint, and used to disassemble the boosters in a process called "segment demate." The EDOPs are used in the SRB marine recovery process.

Detailed building descriptions and context are included in HAER No. FL-8-11-S and HAER No. FL-8-11-S-1.

EXPLANATION OF EVALUATION:

Hangar AF was built in 1962 and was used for staff headquarters and administrative support offices of the Saturn IB and Saturn V rockets during the Apollo program. The advent of the SSP in the 1970s initiated the second phase in the construction history of the Hangar AF Complex. Under the SSP (Space Shuttle Program), NASA planned to use Hangar AF for the disassembly and refurbishment of the shuttle's re-usable SRBs. The hangar location on the Banana River made it ideal for receiving the boosters from specially-designed ships that towed them in from sea. Hangar AF remained largely unchanged for the Shuttle Program, but its surrounding site received extensive modifications from 1977-1979, including new paving and infrastructure, the construction of the SRB Recovery Slip, the railways, the First Wash Building, and the High Pressure Wash Building.

The entire Hangar AF Complex (SRB Disassembly and Refurbishment Historic District) functioned as a one-of-a-kind facility that is considered eligible for listing in the National Register of Historic Places (NRHP) in the context of the SSP (1969-2011) under Criterion A in the area of Space Exploration. The complex is a significant historic property for its association with the Space Transportation System (STS), commonly known as the "space shuttle." The STS was a unique breakthrough in the history of the U.S. Space Program, because it was based on a design that made most of its major components re-usable, a model that decreased program costs, and helped make orbital space flight a routine endeavor. Along with the orbiter spacecraft, the SRBs were two of the shuttle's primary re-usable elements. The SRBs' re-usability was made possible by a number of facilities at Kennedy Space Center (KSC) and CCAFS, including the SRB Disassembly and Refurbishment Complex. The complex is the first place to which the SRBs were brought after their recovery from sea and where they were disassembled, cleaned, and processed before they were moved to other KSC facilities for buildup and assembly. Because it achieved significance within the past 50 years, Criteria Consideration G also applies. Hangar AF, as one component of this complex, is considered a contributing resource to the SRB Disassembly and Refurbishment Historic District as it played an essential role in the re-usability of the Space Shuttle orbiter and SRBs.

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Photographs and Drawings

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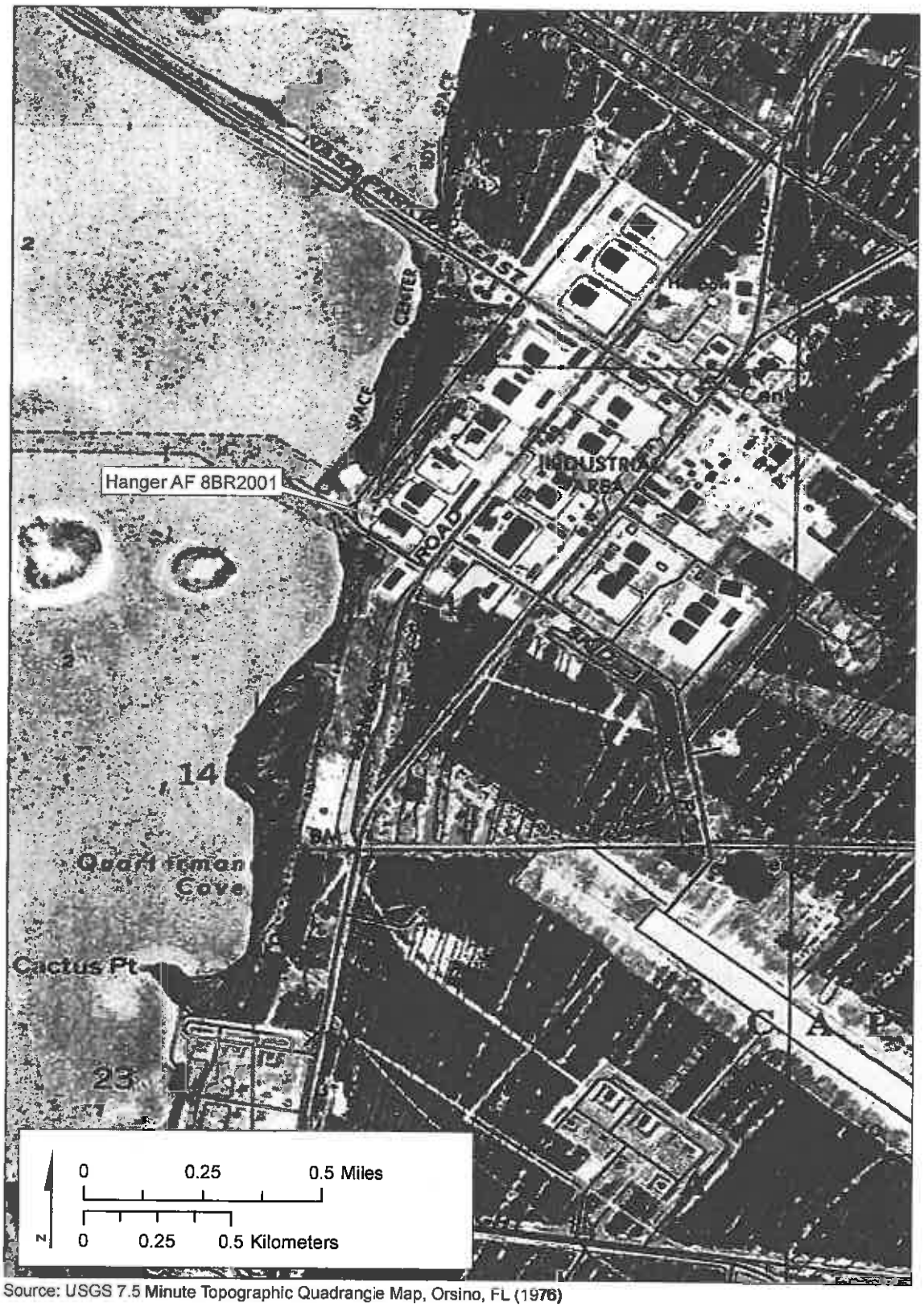
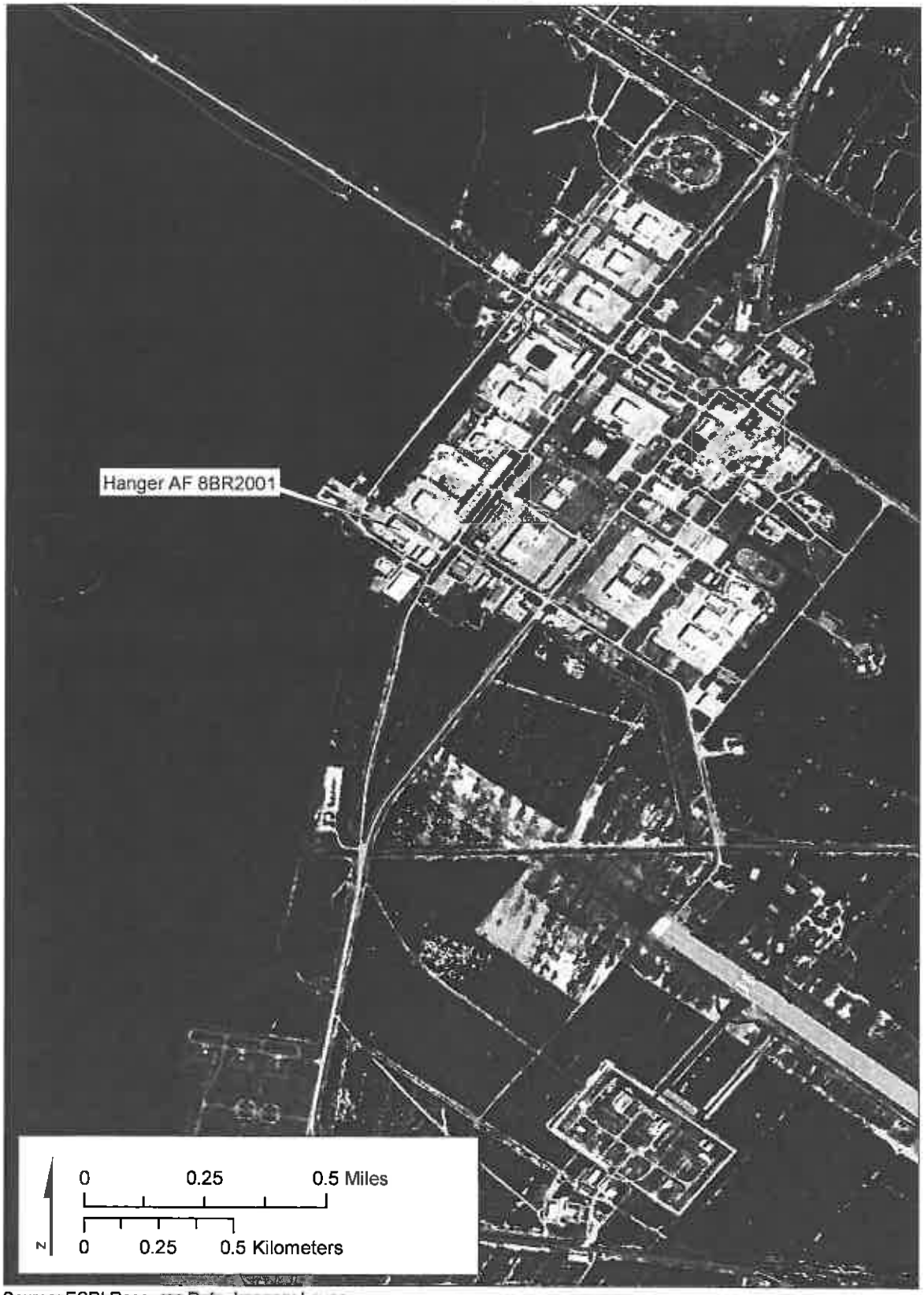
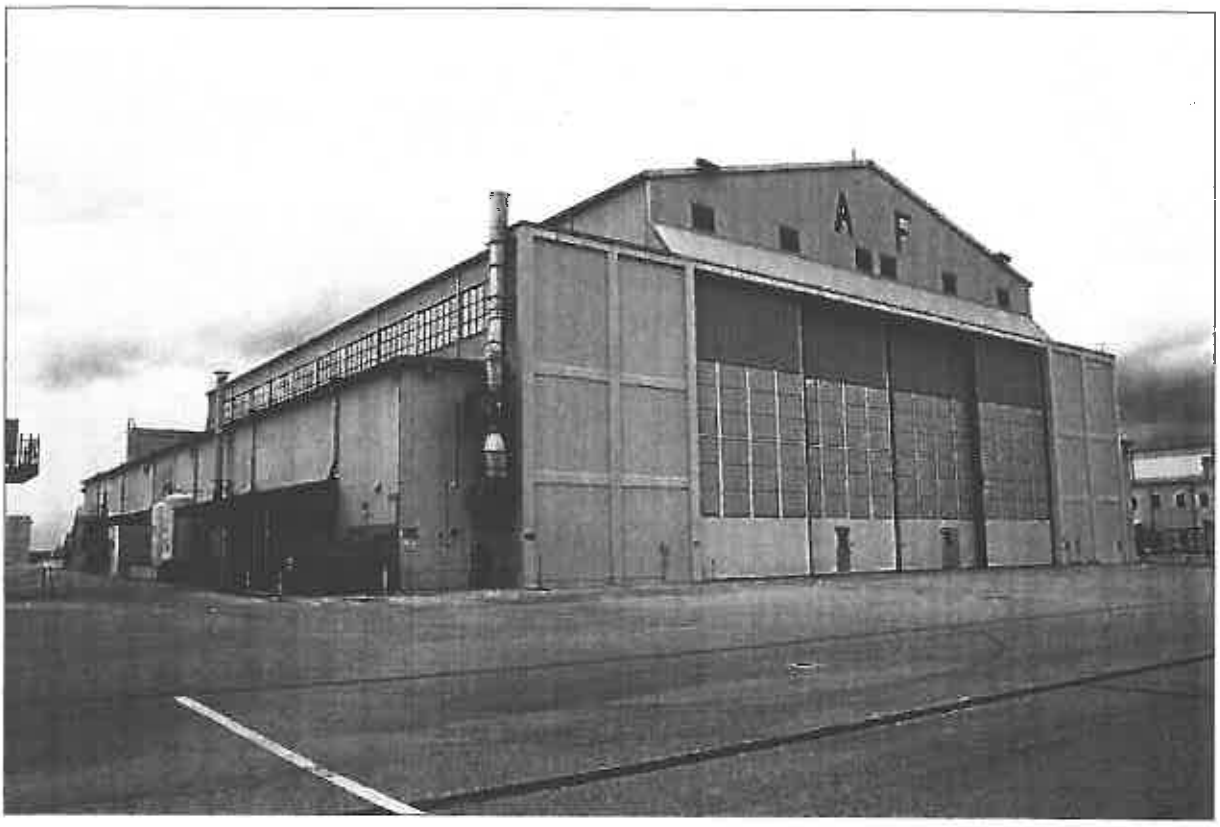


Source: USGS 7.5 Minute Topographic Quadrangle Map, Orsino, FL (1976)



Source: ESRI Resource Data, Imagery Layer



Hangar AF, Exterior