



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

Reset Form

Site #8 BR02008
Field Date 5-13-2013
Form Date 7-30-2013
Recorder #

Original
Update

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) Thrust Vector Control Deservicing Bldg
Survey Project Name Survey of NASA-Owned Facilities CCAFS Ind. Area
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. 66249 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 1/4 section: NW SW SE NE Irregular-name:
Tax Parcel # N/A Landgrant
Subdivision Name Block Lot
UTM Coordinates: Zone 16 17 Easting 540229 Northing 3151250
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 1985 approximately year listed or earlier year listed or later
Original Use other From (year): 1985 To (year): 2012
Current Use Abandoned/Vacant From (year): To (year):
Other Use 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): Burns and Roe 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 Rectangular Number of Stories 1
Exterior Fabric(s) 1. Metal 2. 3.
Roof Type(s) 1. Shed 2. 3.
Roof Material(s) 1. Built-up 2. 3.
Roof secondary strucs. (dormers etc.) 1. 2.
Windows (types, materials, etc.) See continuation sheet.

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.

Table with 3 columns: DHR USE ONLY, OFFICIAL EVALUATION, DHR USE ONLY. Contains fields for NR List Date, Owner Objection, SHPO criteria, and evaluation options.

DESCRIPTION (continued) Clear Description Values

Chimney: No. ___ Chimney Material(s): 1. ___ 2. ___
Structural System(s): 1. Steel skeleton 2. ___ 3. ___
Foundation Type(s): 1. Slab 2. ___
Foundation Material(s): 1. Poured Concrete Footing 2. ___
Main Entrance (stylistic details) Single-light metal pedestrian entrance. See continuation sheet.

Porch Descriptions (types, locations, roof types, etc.) N/A

Condition (overall resource condition): [] excellent [x] good [] fair [] deteriorated [] ruinous
Narrative Description of Resource The TVC Deservicing Building is an industrial-type metal and concrete block building with a double-bay work area, storage/pump room, control area, and TVC processing area. See continuation sheet.
Archaeological Remains Not Applicable [] Check if Archaeological Form Completed

RESEARCH METHODS (check all that apply)

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

Bibliographic References (give FMSF manuscript # if relevant, use continuation sheet if needed) SRB Disassembly and Refurbishment Complex HAER Documentations FL-8-11-S and FL-8-11-S-4. See continuation sheet.

OPINION OF RESOURCE SIGNIFICANCE Clear Significance Values

Appears to meet the criteria for National Register listing individually? [] yes [x] no [] insufficient information
Appears to meet the criteria for National Register listing as part of a district? [x] yes [] no [] insufficient information
Explanation of Evaluation (required, whether significant or not; use separate sheet if needed) The TVC Deservicing Building is a contributing resource in the NRHP-eligible SRB Disassembly and Refurbishment Complex 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. Transportation 5. ___
2. Science 4. Engineering 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 File or accession #s HAER Nos. FL-8-11-S and FL-8-11-S-4

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
1 USGS 7.5' MAP WITH STRUCTURE LOCATION PINPOINTED IN RED
2 LARGE SCALE STREET, PLAT OR PARCEL MAP (available from most property appraiser web sites)
3 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.

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DESCRIPTION OF RESOURCE:

The Thrust Vector Control (TVC) Deservicing Building is an industrial-type metal and concrete block building with a double-bay work area, storage/pump room, control area, and TVC process area. Each of the building's four areas is clad in corrugated metal siding and has its own roof. The main work bay has a slightly-pitched gable roof and the other areas have shed roofs. It has a cast-in-place concrete slab floor throughout and a reinforced concrete foundation.

The first 12' of the building's high-bay work area walls are built of concrete block, the upper portion is steel frame with corrugated metal siding. The work bay is accessed by two roll-up doors on the south façade. The one-story air compressor room portion of the building lies on the east side of the building, while the control area lies on the north side of the work bays. The control room, a long room that stretches the length of the building, is where operations in the work bay are observed. North of the control area is an addition that contains the TVC parts decontamination room, an office/staging area, and a break room with rest room. This addition was not included on the original 1984 construction drawings.

In the middle of the double-bay work area is the "skirt stand," a metal work platform device specifically designed to remove the TVC from the SRB aft skirts. The stand can service two skirts at one time, one on either side. The top level of the "skirt stand" has hinged extensions that lower down onto the curved top of the aft skirts. The bay work area surrounding the "skirt stand" resembles a typical hangar or mechanical work area. The unfinished interior is composed of the exposed concrete block and steel frame structural system of the building. There are viewing windows in the north wall that allow observation by staff in the control room. Overhead is a one-ton hoist that travels the length of the room on a track.

Through a pair of pedestrian doors on the east side of the bay area is the air compressor room. It has a cast concrete floor with exposed steel frame and corrugated metal walls and ceiling. Just north of the bay area is the building's control room. This room has a concrete block south wall with observation windows. The other walls are faced with drywall. The final interior part of the building is the north wing, which houses the TVC decontamination room, an office/staging area, and a break room with restroom.

EXPLANATION OF EVALUATION:

The TVC Deservicing Building was completed in 1985 to house the removal and cleaning of the TVC system from the SRB aft skirts. After the SRB aft skirts were demated in Hangar AF and the Thermal Protection System (TPS) removed through hydrolasing, the aft skirts were transferred to the TVC Deservicing Building on the northern edge of the complex. Once there, the skirts were positioned on either side of the aft skirt deservicing stand, a structure in the middle of the building's main processing bay. There the fuel was removed and the TVC components were disassembled, including the hydraulic reservoirs, APUs, hydraulic power units (HPUs), and related line replaceable units (LRUs). The TVC fuel was removed with the use of the "skirt stand's" two deservicing panels on the south side of its upper level. For their protection, technicians at the TVC Deservicing Building complete this work while wearing a SCAPE outfit: Self Contained Atmospheric Protective Ensemble.

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Once removed, the TVC system's fuel service modules, fuel isolation valves, and other fuel components were transferred to the TVC decontamination room in the rear (north) end of the building. After the aft skirts completed the TPS blasting and TVC deservicing process, they received an inspection for necessary modifications or structural repairs.

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 Space Shuttle Program (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. The Thrust Vector Control Deservicing Building, 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 SRBs.

BIBLIOGRAPHIC REFERENCES:

Photographs and Drawings

Burns and Roe Industrial Services Corporation. "Thrust Vector Control Deservicing Facility." Kennedy Space Center, Florida. Construction drawings, 1984.

Kennedy Space Center.

Photograph negative number 108-KSC-81PC-459. 1981. On file at Kennedy Space Center Archives.

Photograph negative number 116-KSC-383C-1256. 1983. On file at Kennedy Space Center Archives.

Interviews

Pappalardo, David. United Space Alliance, TVC Technician. Interview with author. October 11, 2011.

Price, David. United Space Alliance, Hangar AF Facility Manager. September 27, 2011.

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Sources

Burns and Roe. "History and Legacy." http://www.roe.com/about_legacy.htm. Accessed December 20, 2011.

Deming, Joan, and Patricia Slovinac. *NASA-Wide Survey and Evaluation of Historic Facilities in the Context of the U.S. Space Shuttle Program: Roll-Up Report*. Submitted to the National Aeronautics and Space Administration, Environmental Management Branch. Sarasota, Florida: Archaeological Consultants, Inc. February 2008, revised July 2008.

National Aeronautics and Space Administration (NASA)
NASA Facts: Solid Rocket Boosters. Kennedy Space Center, Florida. IS-2004-09-014-KSC, Revised 2006.

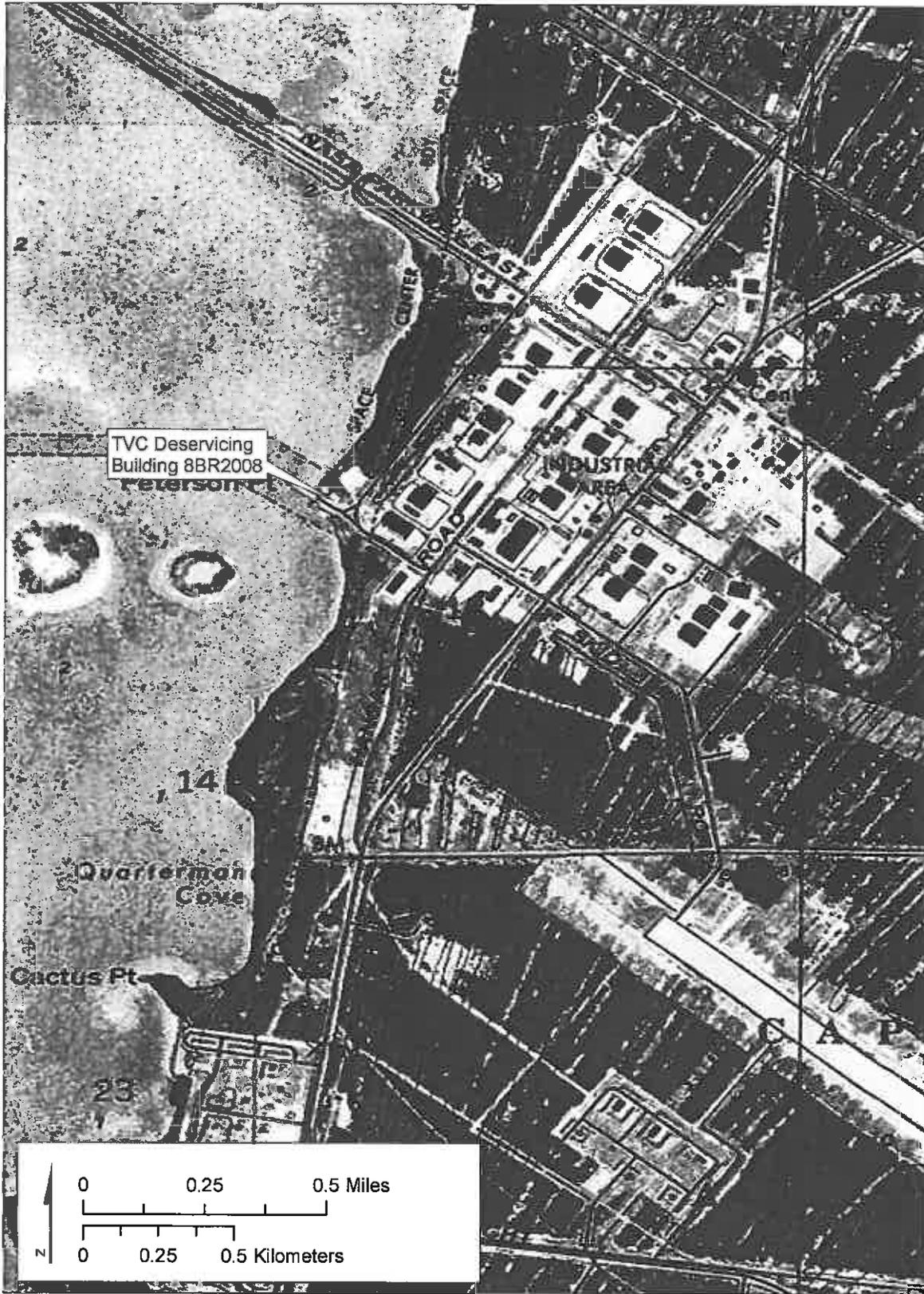
NASA Facts: Solid Rocket Boosters and Post-Launch Processing. Kennedy Space Center, Florida. FS-2004-07-012-KSC (Rev. 2006).

United Space Alliance

"Marine Operations, Revision J." (John F. Kennedy Space Center, n.d.), MO-1.

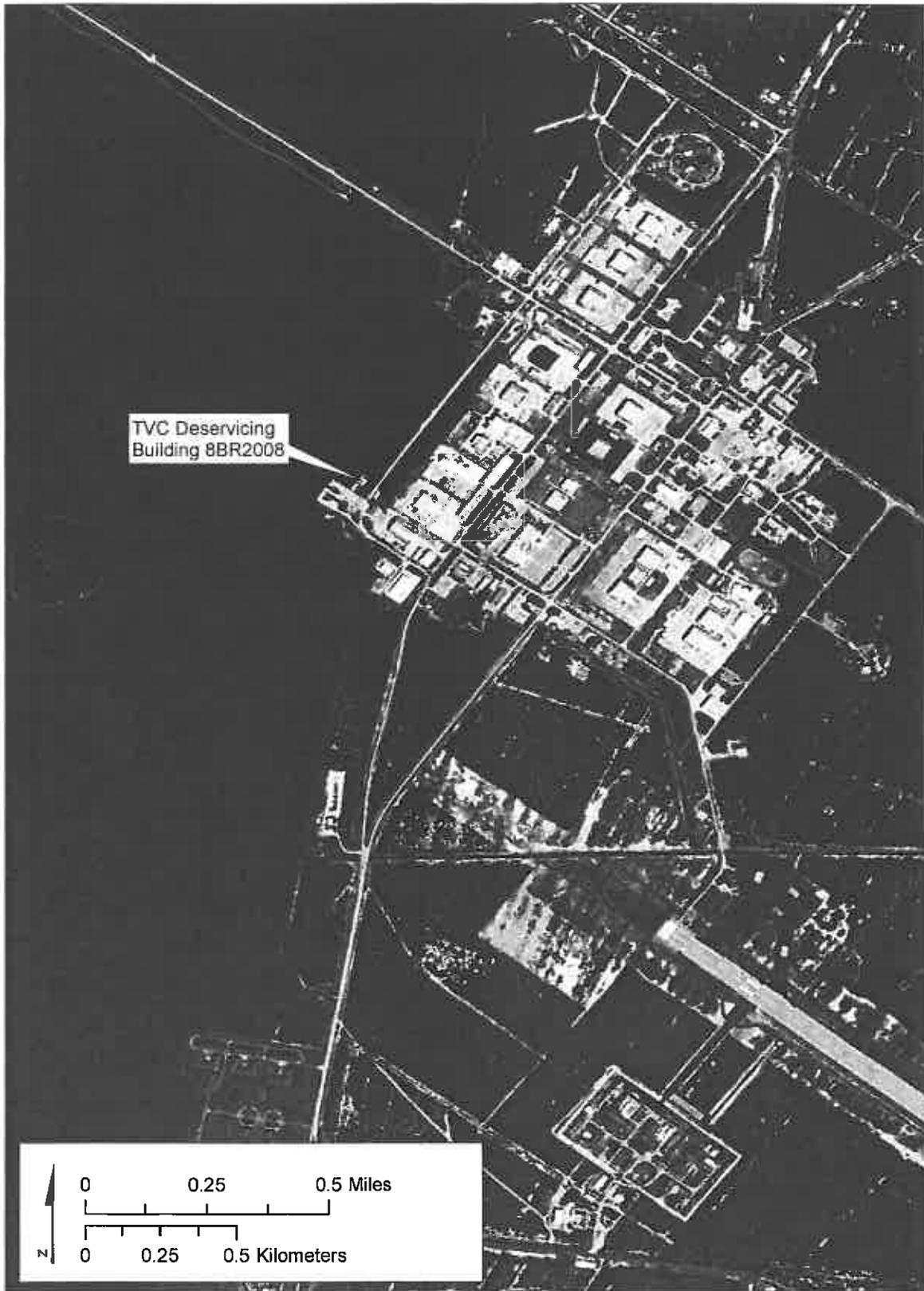
"Structures Assembly Buildup Operations, Revision J" (John F. Kennedy Space Center, n.d.).

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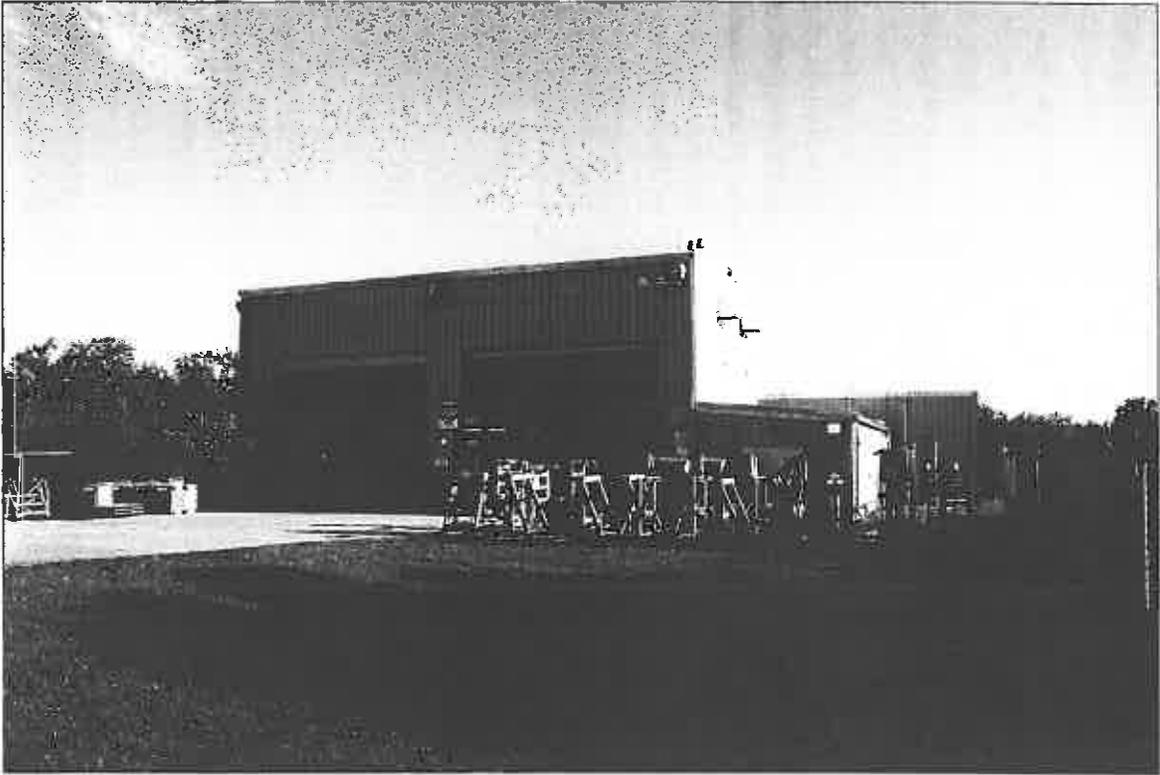
Source: USGS 7.5 Minute Topographic Quadrangle Map, Orsino, FL (1976)

**Historic Structure Form
Continuation Sheets**



Source: ESRI Resource Data, Imagery Layer

**Historic Structure Form
Continuation Sheets**



TVC Deservicing Building, Exterior