

United States Department of the Interior
National Park Service

AUG 6 1993

National Register of Historic Places
Registration Form

NATIONAL
REGISTER

This form is for use in nominating or requesting determinations for individual properties and districts. See instructions in *How to Complete the National Register of Historic Places Registration Form* (National Register Bulletin 16A). Complete each item by marking "x" in the appropriate box or by entering the information requested. If an item does not apply to the property being documented, enter "N/A" for "not applicable." For functions, architectural classification, materials, and areas of significance, enter only categories and subcategories from the instructions. Place additional entries and narrative items on continuation sheets (NPS Form 10-900a). Use a typewriter, word processor, or computer, to complete all items.

1. Name of Property

historic name U.S. Naval Ordnance Testing Facility Assembly Building

other names/site number _____

2. Location

street & number Intersection of Channel Blvd. and Flake Ave, two blocks west of South Anderson Blvd. (NC 50), 6.3 mi. s. jct. NC 50 and NC 210 not for publication

city or town Topsail Beach N/A vicinity

state North Carolina code NC county Pender code 141 zip code 28445

3. State/Federal Agency Certification

As the designated authority under the National Historic Preservation Act, as amended, I hereby certify that this nomination request for determination of eligibility meets the documentation standards for registering properties in the National Register of Historic Places and meets the procedural and professional requirements set forth in 36 CFR Part 60. In my opinion, the property meets does not meet the National Register criteria. I recommend that this property be considered significant nationally statewide locally. (See continuation sheet for additional comments.)

William S. P... Jr. 7-28-93
Signature of certifying official/Title Date

State of Federal agency and bureau _____

In my opinion, the property meets does not meet the National Register criteria. (See continuation sheet for additional comments.)

Signature of certifying official/Title Date

State or Federal agency and bureau _____

4. National Park Service Certification

I hereby certify that the property is:

- entered in the National Register. See continuation sheet.
- determined eligible for the National Register See continuation sheet.
- determined not eligible for the National Register.
- removed from the National Register.
- other, (explain): _____

Signature of the Keeper Carol Hull Date of Action 9-14-93

U.S. Naval Ordnance Testing Facility
Name of Property Assembly Building

Pender, N.C.
County and State

5. Classification

Ownership of Property
(Check as many boxes as apply)

- private
- public-local
- public-State
- public-Federal

Category of Property
(Check only one box)

- building(s)
- district
- site
- structure
- object

Number of Resources within Property
(Do not include previously listed resources in the count.)

Contributing	Noncontributing	
1	0	buildings
		sites
		structures
		objects
1	0	Total

Name of related multiple property listing
(Enter "N/A" if property is not part of a multiple property listing.)

U.S. Naval Ordnance Testing Facility, Topsail Island, N.C.

Number of contributing resources previously listed in the National Register

0

6. Function or Use

Historic Functions
(Enter categories from instructions)

Defense/naval facility

Current Functions
(Enter categories from instructions)

Social/meeting hall

7. Description

Architectural Classification
(Enter categories from instructions)

No style

Materials
(Enter categories from instructions)

foundation concrete

walls concrete

roof tin/asphalt

other steel

Narrative Description

(Describe the historic and current condition of the property on one or more continuation sheets.)

8. Statement of Significance

Applicable National Register Criteria

(Mark "x" in one or more boxes for the criteria qualifying the property for National Register listing.)

- A Property is associated with events that have made a significant contribution to the broad patterns of our history.
- B Property is associated with the lives of persons significant in our past.
- C Property embodies the distinctive characteristics of a type, period, or method of construction or represents the work of a master, or possesses high artistic values, or represents a significant and distinguishable entity whose components lack individual distinction.
- D Property has yielded, or is likely to yield, information important in prehistory or history.

Criteria Considerations

(Mark "x" in all the boxes that apply.)

Property is:

- A owned by a religious institution or used for religious purposes.
- B removed from its original location.
- C a birthplace or grave.
- D a cemetery.
- E a reconstructed building, object, or structure.
- F a commemorative property.
- G less than 50 years of age or achieved significance within the past 50 years.

Areas of Significance

(Enter categories from instructions)

Military

Period of Significance

1946-1948

Significant Dates

1946
1948

Significant Person

(Complete if Criterion B is marked above)

N/A

Cultural Affiliation

N/A

Architect/Builder

Kellex Corporation/George & Lynch

Narrative Statement of Significance

(Explain the significance of the property on one or more continuation sheets.)

9. Major Bibliographical References

Bibliography

(Cite the books, articles, and other sources used in preparing this form on one or more continuation sheets.)

Previous documentation on file (NPS):

Primary location of additional data:

- preliminary determination of individual listing (36 CFR 67) has been requested
- previously listed in the National Register
- previously determined eligible by the National Register
- designated a National Historic Landmark
- recorded by Historic American Buildings Survey # _____
- recorded by Historic American Engineering Record # _____

- State Historic Preservation Office
- Other State agency
- Federal agency
- Local government
- University
- Other

Name of repository:

United States Department of the Interior
National Park Service

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Building, Topsail Island, Pender County, NC

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7. Description.

The Assembly Building is a one-and-a-half-story masonry structure, seventy-seven feet by eighty-two feet overall. It rests on a reinforced concrete deck that is supported on pilings driven to a depth of twenty feet. Reinforced concrete walls rise to a height of five feet above the floor. Above these, concrete block walls continue up ten feet to the eaves. From the eaves to the ridge of the low-pitched, gable-front roof, the walls are frame, faced with asbestos siding, and enclose bolted wooden trusses that support the roof. Three of the original four lightning rods are attached to the corners of the building. The specifications, prepared in 1946 by the Kellex Corporation working for the Navy Department Bureau of Ordnance, called for the building to be explosion proof, including all electrical fixtures. Four doors, two double and single, were equipped with ground straps to prevent sparks. On two sides of the exterior, ten-foot platforms with twenty-foot shed roofs were erected.(1)

The current appearance of the Assembly Building is slightly changed from its original aspect. Later alterations, made after the facility was abandoned by the Navy in 1948 and sold for private use, include a frame, shed-roofed, wraparound porch with exposed rafters, square posts, simple handrails and crisscross balustrades that extends across the front and south sides of the main block; an enclosed, shed-roofed pavilion at the west termination of the porch; a covered loading dock at the west end of the north elevation; and a small, concrete block ell at the northeast corner of the main block. The roofs are covered with an assortment of barn tin and asphalt.

The principal entrance to the building is centered on the east facade and incorporates glazed, double doors, replacing the original solid doors. Additional entrances, also with replacement doors, appear in the west and north elevations. Modern, fixed-pane and sliding sash windows occur in asymmetrical arrangement around the structure. The pavilion is lighted by fixed-pane and jalousie windows above solid frame walls.

The interior of the building consists of a large central room that opens on the south into the enclosed pavilion, on the west into a restaurant kitchen, and on the north into storage rooms. The main space retains its original, metal, conical-shade lighting fixtures.(2) A series of murals, painted in the 1970s by Thomas H. Whitfield, a local artist, depict coastal scenes and sea-going craft. The reinforced concrete floor and walls are painted. A modern stairway in the northwest corner of the storage area rises through the open ceiling to the attic. The attic is divided into bays by a series of prefabricated, wooden trusses resting on the upper works of the concrete block walls. The truss chords are bolted together, and each section retains its original painted numeration for assembly.

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U.S. Naval Ordnance Testing Facility Assembly
Building, Topsail Island, Pender County, NC

8. Significance.

Summary.

The U.S. Naval Ordnance Testing Facility Assembly Building was erected for the purpose of fabricating and storing missiles used in "Operation Bumblebee", the intensive testing of ramjet missiles from 1946 until 1948. The Assembly Building was a part of an extensive complex of buildings and proving grounds that are discussed in the multiple property documentation form "U.S. Naval Ordnance Testing Facility, Topsail Island." The architectural resources associated with the Topsail Island Testing Facility are the only such resources of three contemporaneous Atlantic coast facilities known to survive the conclusion of World War II. Although the Assembly Building is less than fifty years old, it is eligible to be listed in the National Register of Historic Places under Criterion A for its association with the massive, secret effort that began at the close of World War II to apply the theory of jet propulsion to the practical development of missile technology. "Operation Bumblebee" at Topsail Island was a forerunner of the current United States missile program and its surviving resources are essential to understanding the progress of America's missile program from its inception to the present time. The town of Topsail Beach began to develop around the Assembly Building and the associated acreage was subdivided into building tracts following the Navy's abandonment of Topsail Island in 1948. In 1988, the IBM Coastal Employees Federal Credit Union of Raleigh, North Carolina, purchased the Assembly Building. In 1992, the Topsail Beach Economic Development Corporation executed a purchase agreement with the Credit Union and plans are underway to convert the Assembly Building into a community center.

Historical Background.

The U.S. Naval Ordnance Testing Facility Assembly Building and associated control and observation towers are unique survivals of an experimental missile program that had its incubation period at Topsail Island, North Carolina from 1946 to 1948. During this period the successful development of America's ramjet missile program, under the direction of the U.S. Navy and the Applied Physics Laboratory of Johns Hopkins University in Maryland, produced secret missile launching and testing experiments on the remote North Carolina beach. The missiles were assembled in the bomb-proof building on the west side of the strand and delivered on rubber-wheeled dollies to the launching platform along the ocean front. Observers were stationed in a control tower located midway between the Assembly Building and the launch site, and crews operated special monitoring equipment housed in a series of eight observation towers placed at precise intervals along the beach. The equipment was designed to measure the speed, angularity and distance of travel of the missiles after firing. "Operation Bumblebee", the code name of the project, became the "incubator" for major developments that had a sweeping impact on all later twentieth century rocket technology. In addition, all modern jet aircraft engines, especially supersonic craft, have been built upon the original ramjet design developed here. Topsail Beach was the precursor of bases at Inyokern, California, White Sands, New Mexico, and Cape Canaveral, Florida. The site, long veiled under a shroud of secrecy, is now recognized as a pioneer missile facility which preserves most of its important structures

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intact. These visible reminders of history are of inestimable value in understanding and interpreting the progress of America's missile program from its formative years to the present.(3)

With the abandonment of the facility in 1948, the property was acquired for private development in a subdivision known as New Topsail Beach.(4) The Assembly Building was purchased in November 1948 by Evelyn P. Empie and others, and sold in February of the following year to J.G. Anderson and others.(5) In 1988, the IBM Coastal Employees Federal Credit Union of Raleigh, North Carolina, purchased Lots 15, 16, 17 and 18 in Block 5 and Lots 9, 10, and 11 in Block 9 of the subdivision in October 1988.(6) On July 8, 1992, the Topsail Beach Economic Development Corporation became the owners of record of the Assembly Building through a purchase agreement executed with the Credit Union.(7)

Endnotes

1. Navy Department Bureau of Ordnance report, May 3, 1946.
2. ibid.
3. "U.S. Naval Ordnance Testing Facility, Topsail Island" multiple property documentation form.
4. Pender County Register of Deeds Office, Deed Book 260, p. 631.
5. Pender County Register of Deeds Office, Deed Book 277, p. 171; Map Book 3, p. 56.
6. Pender County Register of Deeds Office, Deed Book 728, p. 142.
7. Telephone interview with Bill Morrison, Co-President, Topsail Beach Economic Development Corporation, July 14, 1993.
9. Major Bibliographical References. "All Hands" newsletter, 1948.
Applied Physics Laboratory News, March 1947 and July 1963.
Bennett, Don. "Bumblebees flew at Island Beach", and "War effects felt in town by the sea." Toms River Observer, 5, 1991.
Brown, Dick. "Topsail Island Seedbed Of Missile Program." Fayetteville Observer and Fayetteville Times, September 24, 1978, page D-1.
Brown, Dick. "The Topsail Island Secret: Operation 'Bumblebee'." Tidewater, March 1985, pages 6-8.
"Historical Society Vote To Preserve Arsenal." Pender Sounds, June 1989, pp. 19-21.

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Military press release, May 14, 1947.

Specifications drawn by The Kellex Corporation, 1946.

Stallman, David A. "A History of Camp Davis." Privately printed, 1990.

Stallman, David A. Operation Bumblebee, 1946-1948, Topsail Island, N.C. (Privately printed, 1992). pp. 1-32.

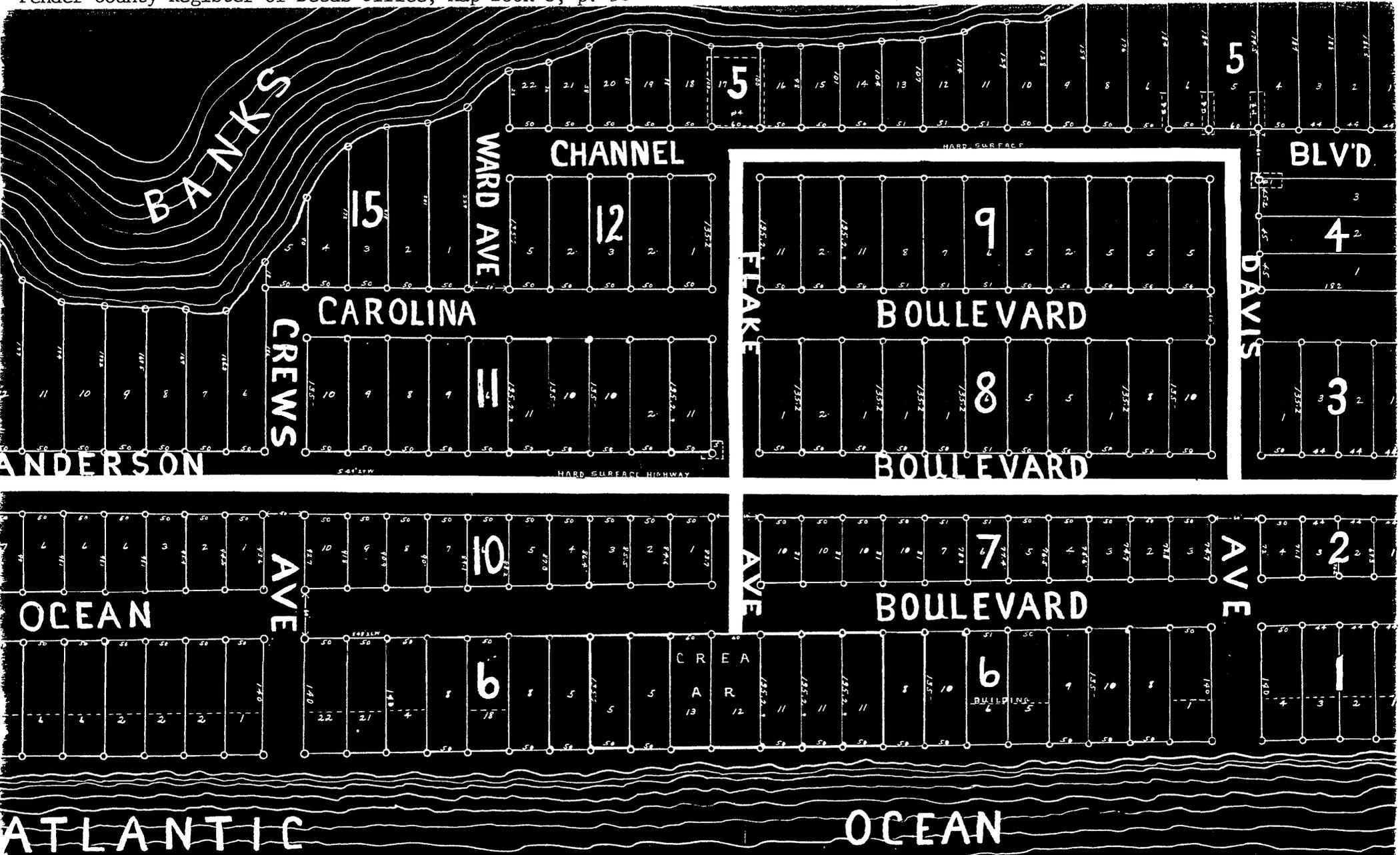
Stallman, David A. "Tad Stanwick." Privately printed, 1989.

Stallman, David A. "Topsail Beach Historical Tour." Privately printed, 1990.

Unger, Steve. "Is the Arsenal Worth Saving?" Pender Sounds, June 1989, p. 5.

10. Geographical Data - - Verbal Boundary Description and Justification

The boundaries of the nominated property encompass all the land both historically and currently associated with the built resource, comprising Lots 15, 16, 17 and 18 of Block 5 in New Topsail Beach, North Carolina, as shown on the accompanying Tax Map and plat drawn February 1949 (Pender County Register of Deeds Office, Map Book 3, p. 56).



ATLANTIC OCEAN

FIRST EDITION OF

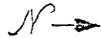
NEW TOPSAIL BEACH, N.C.

J.G. ANDERSON & J.G. ANDERSON, JR. DEVELOPERS.

BROKEN LINES ENCLOSING NO. 11, 7, 5, 6
 BUILDINGS AND TOWERS ON LOTS AND STREETS
 BEGINNING POINT BEING AN IRON PIPE LINED
 5" DIA. 3 1/4" FROM U.S. CO. MARKER
 "CAMERA" AND N70°15' E 912.5' FROM U.S. CO.
 MARKER "CENTRAL" ENGINEERING AND
 PLOTTING BY J. J. STELLER, C.E. FEB. 1949
 SCALE 1" = 50'

J. J. Steller
 Feb 26 1949
J. J. Steller
 Feb 26 1949

U.S. Naval Ordnance Testing Facility, Topsail Island, Pender County, NC



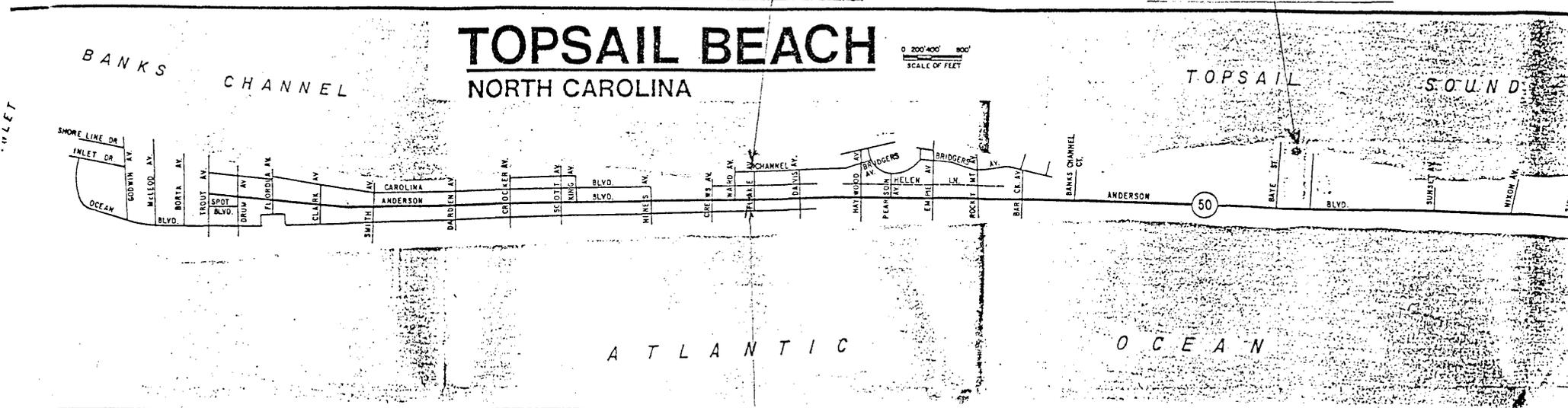
ASSEMBLY BLDG

OBSERVATION TWR #2

TOPSAIL BEACH

NORTH CAROLINA

0 200' 400' 800'
SCALE OF FEET



A T L A N T I C

O C E A N

CONTROL TWR

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SUPPLEMENTARY LISTING RECORD

NRIS Reference Number: 93000910

Date Listed: 9/14/93

US Naval Ordnance Testing Facility

Assembly Building

Property Name

Pender

County

NC

State

US Naval Ordnance Testing Facilities, Topsail Island MPS

Multiple Name

This property is listed in the National Register of Historic Places in accordance with the attached nomination documentation subject to the following exceptions, exclusions, or amendments, notwithstanding the National Park Service certification included in the nomination documentation.

Patrick Andrews
Signature of the Keeper

9/14/93
Date of Action

=====
Amended Items in Nomination:

Historic Function:

Add Defense/Air Facility to historic functions to note the facility's use as a missile launching site. [NR Bulletin 16A p. 22]

This item is not considered an error by the SHPO, but reflects a NPS recommendation to aid in later resource identification and classification.

DISTRIBUTION:

National Register property file
Nominating Authority (without nomination attachment)