

10491

Diag. Cht. No. 1210-2.

FORM C&GS-504

U.S. DEPARTMENT OF COMMERCE
ENVIRONMENTAL SCIENCE SERVICES ADMINISTRATION
COAST AND GEODETIC SURVEY

DESCRIPTIVE REPORT

Type of Survey Planimetric

Field No. Ph-163 Office No. T-10491

LOCALITY

State Massachusetts - Rhode Island

General locality Narragansett Bay

Locality Tiverton

1956-57

CHIEF OF PARTY

I.R. Rubottom, Chief of Field Party
W.E. Randall, Balto. District Officer

LIBRARY & ARCHIVES

DATE February 1968

USCOMM-DC 37022-P66

10491

DESCRIPTIVE REPORT - DATA RECORD

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T-10491

Ph-163

Project No. (II): ~~25APP~~ Quadrangle Name (IV):

Field Office (II): East Providence, R. I.

Chief of Party: Ira R. Rubottom

Photogrammetric Office (III): Baltimore, Maryland

Officer-in-Charge: William E. Randall

Instructions dated (II) (III):

Copy filed in Division of
Photogrammetry (IV)

(II) 9 April 1956
13 March 1957

Method of Compilation (III): Kelsh Plotter

Manuscript Scale (III): 1:10,000

Stereoscopic Plotting Instrument Scale (III): 1.6000
(Pantograph ratio 3/5)

Scale Factor (III): 1.000

OCT 11 1960

Date received in Washington Office (IV):

Date reported to Nautical Chart Branch (IV):

Applied to Chart No.

Date:

Date registered (IV):

Publication Scale (IV):

Publication date (IV):

Geographic Datum (III): N.A. 1927

Vertical Datum (III):

~~Mean Sea Level~~ MHW
Elevations shown as (25) refer to mean high water
Elevations shown as (5) refer to sounding datum
i.e., mean low water or mean lower low water

Reference Station (III): ANTHONY, 1843

Lat.: 41° 38' 45.797" (1412.9 m) Long.: 71° 13' 18.735" (433.5m)

Adjusted
~~Uncorrected~~

Plane Coordinates (IV):

State: Rhode Island Zone: ---
Massachusetts Mainland

Y=

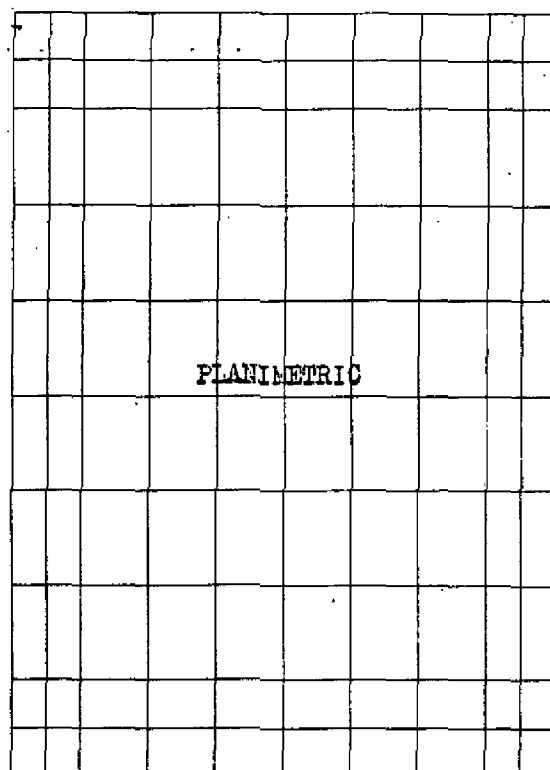
X=

Roman numerals indicate whether the item is to be entered by (II) Field Party, (III) Photogrammetric Office,
or (IV) Washington Office.

When entering names of personnel on this record give the surname and initials, not initials only.

DESCRIPTIVE REPORT - DATA RECORD

71° 15.0'



41° 41.25'

41° 37.5'

71° 11.25'

Areas contoured by various personnel
(Show name within area)
(II) (III)

DESCRIPTIVE REPORT - DATA RECORD

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Field Inspection by (II): S. G. Blankenbaker
Leo F. Beugnet

Date: May - October 1956

Planetable contouring by (II):

Date:

Completion Surveys by (II): Limited field edit (shoreline and
alongshore features) accomplished during hydro-
graphy (H-8396)

Date: 1957

Mean High Water Location (III) (State date and method of location):

1 May 1956 - Photogrammetric

Projection and Grids ruled by (IV): J. R. Haskins

Date: 6/16/57

Projection and Grids checked by (IV): I. Y. Fitzgerald

Date: 6/16/57

Control plotted by (III): E. L. Rolle

Date: 8/28/57

Control checked by (III): B. Kurs

Date: 9/5/57

~~Stereoscopic~~ Stereoscopic

E. L. Rolle

Date: 3/13/58

Control extension by (III):

Planimetry J. C. Richter

Date: 1/22/59

Stereoscopic Instrument compilation (III):

Contours

Date: --

Manuscript delineated by (III): Matthew S. Cunningham
(Scribed)

Date: 2/5/60

Photogrammetric Office Review by (III): Joseph W. Vonasek

Date: 1/15/60

Elevations on Manuscript
checked by (II) (III):

Date: ---

DESCRIPTIVE REPORT - DATA RECORD

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Camera (kind or source) (III): C&GS Camera W, 6" focal length

Number	Date	PHOTOGRAPHS (III)		Scale	Stage of Tide
		Time (EST)			
56-W-242 thru 245	5/1/56	9:31		1:30,000	2.5' above MLW
260 " 263	"	9:46		"	2.6' " "

Table of Predicted Tides

Tide (III)

Reference Station: Newport, R. I.
Subordinate Station: Tiverton
Subordinate Station:

Ratio of Ranges	Mean Range	Spring Range
	3.5	4.4
	3.8	4.7

Washington Office Review by (IV): S.G. Blankenbaker

Date: Jan. 1968

Final Drafting by (IV):

Date:

Drafting verified for reproduction by (IV):

Date:

Proof Edit by (IV):

Date:

Land Area (Sq. Statute Miles) (III): 6

Shoreline (More than 200 meters to opposite shore) (III): 16.2 mi

Shoreline (Less than 200 meters to opposite shore) (III): 2

Control Leveling - Miles (II):

Number of Triangulation Stations searched for (II): 18

Recovered: 13

Identified: 9

Number of BMs searched for (II):

Recovered:

Identified:

Number of Recoverable Photo Stations established (III):

None

Number of Temporary Photo Hydro Stations established (III):

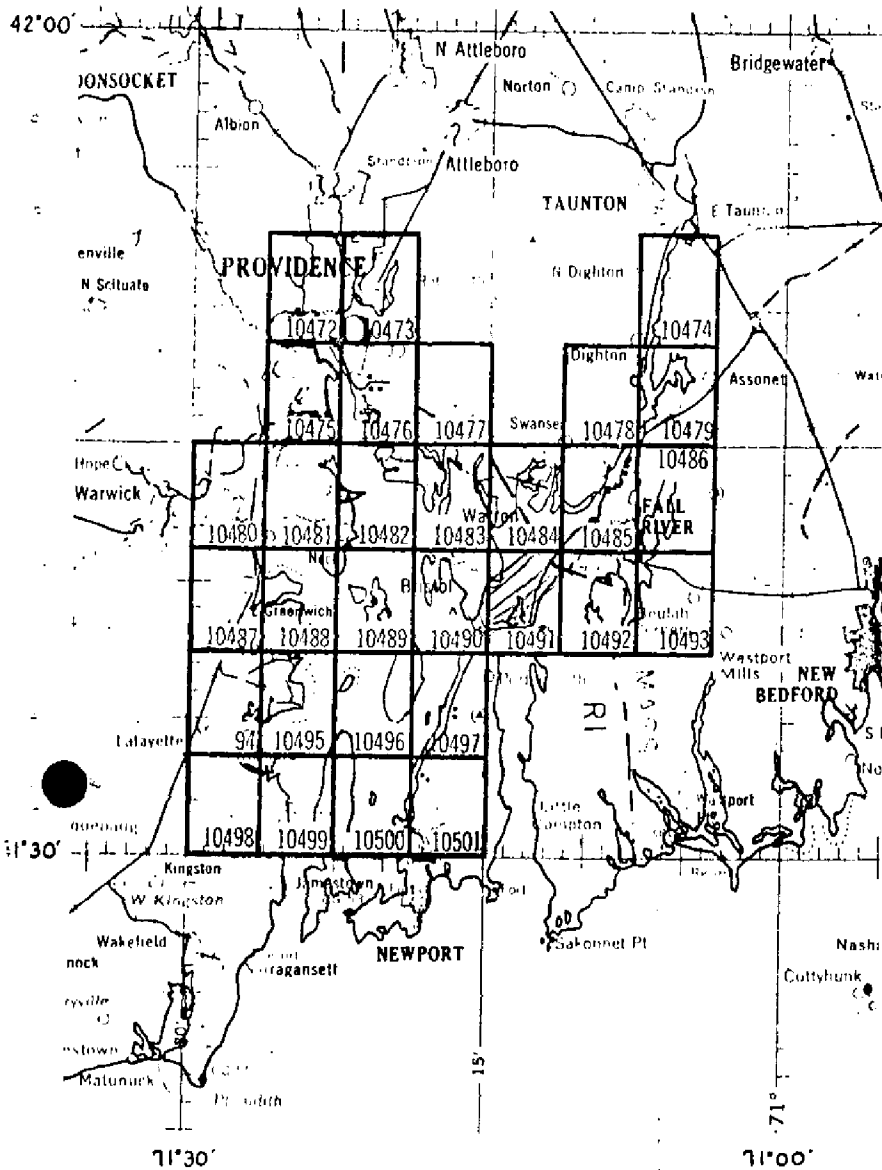
See paragraph 38.

Remarks:

PLANIMETRIC MAPPING PROJECT PH - 163

Narragansett Bay, Mass. - Rhode Island

6-



OFFICIAL MILEAGE FOR COST ACCO		
SHEET NO.	Lin. Mi. SHORELINE	SQ. F AREA
10472	10	15
10473	7	13
10474	- 0 -	14
10475	8	10
10476	6	11
10477	2	13
10478	1	13
10479	7	12
10480	2	13
10481	4	13
10482	8	4
10483	6	11
10484	8	8
10485	8	10
10486	7	10
10487	3	13
10488	6	6
10489	7	3
10490	8	7
10491	8	6
10492	1	11
10493	3	13
10494	2	13
10495	5	6
10496	5	4
10497	5	7
10498	- 0 -	14
10499	10	7
10500	6	4
10501	2	13
TOTALS	158	294

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SUMMARY TO ACCOMPANY DESCRIPTIVE REPORT

T-10491

T-10491 is one of 30 planimetric maps comprising Project PH-163. Project maps cover the Narragansett Bay, Rhode Island, Massachusetts, area.

Field inspection preceded compilation. Limited field edit (shoreline and alongshore features) was accomplished by the hydrographic party.

The project area was bridged by multiplex and compiled by a Kelsh Plotter.

The addendum to this Summary includes a discussion of map accuracy and adequacy.

A cronaflex copy of the map will be registered.

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ADDENDUM TO SUMMARIES TO ACCOMPANY
JOB PH-163 MAPS T-10472 through T-10501
(ACCURACY AND FUTURE SURVEYS)

Most of the project maps were used in contemporary hydrographic survey operations. Four hydrographic surveys accomplished in the period of time between 1943 and 1955 cover the project area outside the areas of contemporary surveys.

The contemporary hydrographic surveys have been registered. With one exception they are classified "basic". Survey H-8367 is classified as "basic for charting only".

Considerable difficulty was experienced during smooth plotting and verification of some hydrographic surveys in using signals located by plane table methods. Many of the objects were identified on field photographs by the plane table party. Field identification of these objects was re-examined in the Baltimore Office, Compilation Unit. Some of the objects were relocated photogrammetrically and this revised information was furnished for use in smooth plotting.

The Norfolk Processing Office Addendum to Accompany Survey H-8316 mentions difficulties experienced when plotting sextant angles locating piles, piers, shoreline changes, etc. -- they were seldom in agreement with photogrammetric manuscript positions. The Washington office verifier was unable to adjust the subject information using the available hydrographic data. To assist in resolving the discrepancies, the Photogrammetry Division (Washington Office Review Group) rechecked signal locations on Maps T-10472, T-10473, T-10475 and T-10476. Fifty-seven signal locations and random portions of shoreline were revised by graphic methods using available field photographs that included field identified primary control and signals. This additional work is subject to error due to the condition of the photographs and the more limited use of project control; many discrepancies between the surveys, however, were resolved by using the revised information. No requests for similar rechecks were made by verifiers of other hydrographic surveys.

In part, the problems encountered in survey H-8316 (and H-8394) during hydrography and by verifiers can be attributed to the enlargement of these photogrammetric maps from 1:10,000 to 1:5,000 scale for use in hydro support. Similar problems on

other hydrographic surveys were attributed, in part, to incorrect transfer of signals, substandard plotting and use of weak sextant fixes.

Control for project bridging (multiplex) was classified "over abundant" (150 stations). While 25% of the stations were "difficult to see", only two stations were not held. Pass points between strips were averaged-adjustment less than 0.5 mm.

In addition to the previously mentioned supplemental work (relocation of signals and shoreline), two stereoplanigraph models were set to test horizontal map accuracy. The models covered parts of maps T-10472 and T-10473. A datum difference was found to exist between Bureau control and MGS and USGS control. Adjustment of these difference produced no appreciable shift in map details.

Rock information mapped on some of the photogrammetric surveys was incomplete as the result of poor photography inadequately supplemented by field inspection. The hydrographer located many rocks missed on the photogrammetric survey; and, in addition, the hydrographic survey reviewers found it necessary to bring forward considerable rock information without the benefit of verification by either the photogrammetric surveys or the contemporary hydrographic surveys.

These surveys have been used, in part, for nautical charting through both direct application of details and indirectly through contemporary hydrographic surveys. As previously mentioned, all but one of the contemporary hydrographic surveys have been registered as "basic surveys". Registration of these maps is recommended. Future use of the maps for hydro support purposes is not recommended due to the previously discussed problems that were encountered. Re-bridging by analytic aerotriangulation and new mapping with new color and infrared photography is recommended.

S. G. Blankenbaker
S. G. Blankenbaker

NOTE: POLITICAL BOUNDARIES - With the exception of the Mass. - Rhode Island state line, none of the numerous mapped political boundaries are shown on modern charts. In consideration of the loss of some field photographs, and requests by photogrammetric office reviewers for field verification of boundaries, it is recommended that the project maps not be considered sources for political boundaries (with the exception of the state line). see

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FIELD INSPECTION REPORT
Project 25120
Map T-10491

Please refer to the Field Inspection Report for Map T-10474
for all data pertaining to this map.

Mart C. Moody
Martin C. Moody
Cartographic Survey Aid.

Approved:

Ira R. Rubottom
for
Ira R. Rubottom
Chief of Party

FIELD INSPECTION PHOTOGRAPHS -
56W 242, 243, 244, 260, 261,
262, 263, 264

54W 1196

(and 260)
PHOTOGRAPH 56W 264 WAS MISSING
AT THE TIME OF FINAL REVIEW -
APPARENTLY LOST.

U.S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY
DESCRIPTIVE REPORT
CONTROL RECORD

MAP T. 10491

PROJECT NO. Ph-163

SCALE OF MAP 1:10,000

SCALE FACTOR 1.000

STATION	SOURCE OF INFORMATION (INDEX)	DATUM	LATITUDE OR ψ -COORDINATE LONGITUDE OR α -COORDINATE		DISTANCE FROM GRID IN FEET. OR PROJECTION LINE IN METERS		DATUM CORRECTION	N.A. 1927 - DATUM DISTANCE FROM GRID OR PROJECTION LINE IN METERS		FACTOR DISTANCE FROM GRID OR PROJECTION LINE IN METERS	
					FORWARD	(BACK)		FORWARD	(BACK)	FORWARD	(BACK)
HUMMOCK 2, 1953	GP LIST p. 99	N.A. 1927	41 38	13.190	406.9	1444.2					
			71 13	11.574	267.9	1120.8					
TIVERTON, 1917	"	"	41 37	40.022	1234.7	616.4					
			71 12	23.986	555.2	833.8					
ANTHONY, 1843	p. 98	"	41 38	45.797	1412.9	438.2					
			71 13	18.735	433.5	955.0					
BLACK TANK, 1932	p. 325	"	41 41	09.186	283.4	1567.7					
			71 11	16.210	374.9	1012.8					
MOUNT HOPE BAY EAST BDY, 1887	p. 621	"	41 40	29.089	897.4	953.7					
			71 11	40.783	943.4	444.6					
MOUNT HOPE 2, 1874	p. 22	"	41 40	25.969	801.2	1049.9					
			71 14	26.192	605.8	782.2					
BAPTIST CHURCH SPIRE, 1917	p. 103	"	41 37	59.238	1827.6	23.5					
			71 12	29.466	682.0	706.8					
POCASSET 3, 1904	p. 143	"	41 39	12.30	379.5	1471.6					
			71 11	27.35	632.9	755.4					
FALL RIVER-TIVERTON No. 1 (MOS) 1934	p. 771	"	41 40	30.044	926.9	924.2					
			71 11	46.012	1064.3	323.6					
FLAG ON POINT, 1917	p. 103	"	41 37	41.561	1282.2	568.9					
			71 13	09.696	224.4	1164.5					
POCASSET, 1843	p. 10	"	41 39	08.867	2273.6	1577.5					
			71 11	32.473	751.4	637.0					
LOST, 1955	p. 892	"	41 40	48.176	1486.3	364.8					
			71 11	42.529	983.7	1404.1					

1 FT. = 3048006 METER
COMPUTED BY: A. K. Heywood

DATE

3/22/57

CHECKED BY: S. Blankenbaker

DATE

3/22/57

COMM-DC-57843

1.000

1 FT = 3048006 METER

COMPUTED BY: A. K. Heywood

DATE 3/22/57

CHECKED BY: S. Blankenbaker

DATE:

3/22/57

COMPILATION REPORT
T-10491

The photogrammetric plot report for this survey is part of the descriptive report for survey No. T-10472.

31. DELINEATION

The Kelsh plotter was used for delineation.

32. CONTROL

Horizontal control was adequate. Vertical control is inapplicable.

33. SUPPLEMENTAL DATA

Geographic name standard dated 5 March 1957.

34. CONTOURS AND DRAINAGE

Drainage is complete.
Contours are inapplicable.

35. SHORELINE AND ALONGSHORE DETAILS

All shoreline detail is from field inspection which was thorough.
Low-water lines are delineated as indicated by the field inspection.

36. OFFSHORE DETAIL

Refer to paragraph 8 of the field report.

37. LANDMARKS AND AIDS

Forms 567 have been submitted for three landmarks to be charted and one to be deleted.

38. CONTROL FOR FUTURE SURVEYS

The shoreline, shoreline pass points and ratio photographs were prepared for the use of the hydrographic party. The signals located by the Photo-Hydro Support party in the 1957 season in this area were considered final (ltr 73/44j, 2 December 1957, to East Coast Field Party).

No topographic stations were located.

39. JUNCTIONS

Junctions have been made as follows:

- To the north with T-10484.
- To the east with T-10492.
- To the south with T-11428 (Ph-142).
- To the west with T-10490.

40. HORIZONTAL AND VERTICAL ACCURACY

No comment.

41. BOUNDARIES

The boundaries shown were delineated from the quadrangle in the vertical projector. The Massachusetts-Rhode Island State Boundary was delineated between triangulation stations.

42. thru 45. Inapplicable.

46. COMPARISON WITH EXISTING MAPS

USCGS 7 $\frac{1}{2}$ minute quad., Fall River, Mass.-R.I., scale 31,680, edition of 1944, reprinted 1950 with corrections.

Bureau Survey No. T-5750 (1944), scale 1:20,000, date of issue June 1949.

47. COMPARISON WITH NAUTICAL CHARTS

Chart No. 353, scale 1:40,000 19th edition published 10 March 1958, revised 6/29/59.

Items to be applied to nautical charts immediately: None.

Items to be carried forward: None.

Approved and forwarded

William E. Randall

William E. Randall
LCDR, C&GS
Baltimore District Officer

Respectfully submitted
15 January 1960

Joseph W. Vonasek
Joseph W. Vonasek
Garto. (Photo.)

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PHOTOGRAMMETRIC OFFICE REVIEW

T. 10491

1. Projection and grids ☒ 2. Title ☒ 3. Manuscript numbers ☒ 4. Manuscript size ☒

4a. Classification label ☒

CONTROL STATIONS

5. Horizontal control stations of third-order or higher accuracy ☒ 6. Recoverable horizontal stations of less than third-order accuracy (topographic stations) ☒ 7. Photo hydro stations ☒ 8. Bench marks ☒ 9. Plotting of sextant fixes ☒ 10. Photogrammetric plot report ☒ 11. Detail points ☒

ALONGSHORE AREAS

(Nautical Chart Data)

12. Shoreline ☒ 13. Low-water line ☒ 14. Rocks, shoals, etc. ☒ 15. Bridges ☒ 16. Aids to navigation ☒ 17. Landmarks ☒ 18. Other alongshore physical features ☒ 19. Other along-shore cultural features ☒

PHYSICAL FEATURES

20. Water features ☒ 21. Natural ground cover ☒ 22. Planetable contours ☒ 23. Stereoscopic instrument contours ☒ 24. Contours in general ☒ 25. Spot elevations ☒ 26. Other physical features ☒

CULTURAL FEATURES

27. Roads ☒ 28. Buildings ☒ 29. Railroads ☒ 30. Other cultural features ☒

BOUNDARIES

31. Boundary lines ☒ 32. Public land lines ☒

MISCELLANEOUS

33. Geographic names ☒ 34. Junctions ☒ 35. Legibility of the manuscript ☒ 36. Discrepancy overlay ☒ 37. Descriptive Report ☒ 38. Field inspection photographs ☒ 39. Forms ☒

40. Joseph W. Vonnack
Reviewer

Joseph Steinberg
Supervisor, Review Section or Unit

41. Remarks (see attached sheet)

FIELD COMPLETION ADDITIONS AND CORRECTIONS TO THE MANUSCRIPT

42. Additions and corrections furnished by the field completion survey have been applied to the manuscript. The manuscript is now complete except as noted under item 43.

S.G. BLANKENBARKER

JAN. 1968

Compiler Reviewer

Supervisor

43. Remarks:

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Review Report
T-10491
Jan. 1968

62. Comparison with Registered Topographic Surveys

5750 1944 1:20,000

T-10491 supersedes the prior survey for nautical charting purposes in the common area except for some rock information carried forward to hydrographic survey H-8396 (refer to heading 64).

63. Comparison with Maps of Other Agencies

USGS Fall River, Mass.-R.I. 1949 1:24,000

No significant differences were noted.

64. Comparison with Contemporary Hydrographic Surveys

H-8396 1957 1:10,000

The surveys were compared during review of the hydrographic survey. Discrepancies noted during the review were resolved during this review of T-10491. The surveys are in agreement.

65. Comparison with Nautical Charts

353 1:40,000 1/17/66

No significant differences were noted.

66. Adequacy of Results and Future Surveys

Project photography was poor for the purpose of interpreting alongshore details (rocks, piles, etc.); and, in addition, field inspection of these features were incomplete.


In view of the amount and distribution of control this survey should meet the required accuracy standards. The addendum to the "Summary" for this survey includes a discussion of project map accuracy and adequacy. Registration of project maps is recommended; remapping, however, is recommended for future hydrographic survey support purposes.

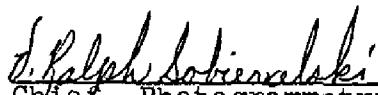
Reviewed by

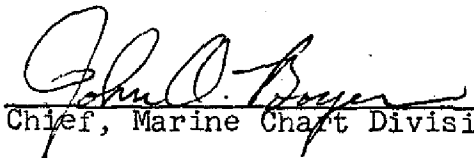
S. G. Blankenbaker
S. G. Blankenbaker

a-17-

Approved by


Chief, Photogrammetric Branch

 MAR 26 1968
Chief, Photogrammetry Division


Chief, Marine Chart Division

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GEOGRAPHIC NAMES

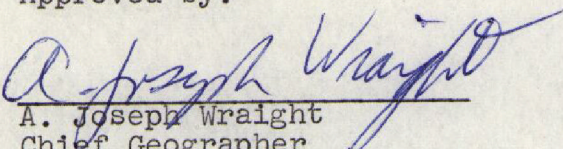
FINAL NAME SHEET

PH-163 (Mass. & R. I.)

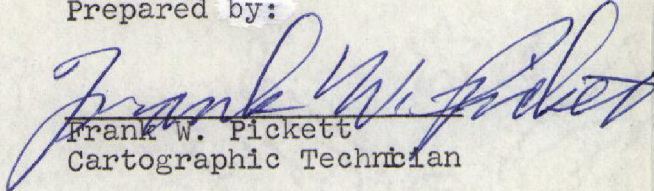
T-10491

- | | |
|--|---|
| ✓Almy Point | ✓Mount Hope Bay |
| ✓Anthony Point | ✓Mount Hope Point |
| ✓Anthony Road | ✓Newport County |
| ✓Bay Street | ✓New York, New Haven and Hartford |
| ✓Bayside City Home and Infirmary | ✓North Tiverton |
| Blue Hill Cove Blue Bill Cove * | ✓Old Orchard Cove |
| ✓Boyd Lane | ✓Pocasset Cemetery |
| ✓Bristol (town) | ✓Pocasset Hill |
| ✓Bristol County (Mass.) | ✓Portsmouth |
| ✓Bristol County (R. I.) | Rhode Island (island) See note |
| ✓Bristol Neck | ✓Rhode Island (state) |
| ✓Cedar Island Pond | ✓Saint Christopher Church |
| ✓Church Cove | ✓Sakonnet River |
| ✓Common Fence Point | ✓Seal Island |
| ✓Cook Hill | ✓Seal Rock |
| ✓Creamer Pond | ✓Sherman Island |
| ✓Essex Public Library | ✓Sin and Flesh Brook |
| ✓Fall River | ✓Spectacle Island |
| ✓Fall River Sewage Disposal Plant | ✓State Avenue |
| ✓Fish Road | ✓Stone Bridge |
| ✓Fort Barton School | ✓Temple Chapel |
| ✓Founders Brook | ✓The Cove |
| ✓Hen Island | ✓The Hummocks |
| ✓Highland Road | ✓Tiverton (township) |
| ✓Hummock Point | ✓Tiverton (village) |
| ✓Island Park | ✓Tommy Island |
| ✓King Philips Chair | ✓Town Pond |
| ✓Long Neck Cove | ✓U. S. Air Force Tiverton Fuel |
| ✓Main Road | Storage Station |
| ✓Massachusetts | ✓William R. Souza Road |
| ✓Mount Hope | ✓Woodman Street |
| | ✓Aquidneck Island * See note |

Approved by:


A. Joseph Wraight
Chief Geographer

Prepared by:


Frank W. Pickett
Cartographic Technician

* This name was changed to "Rhode Island" in 1964 - Date
this map, 1957

* checked by F.W. Pickett Nov 26, 1968

STRIKE OUT TWO

NONFLUENT/AND/OR LANDMARKS FOR CHARTS

Morgan City, Louisiana

5 Feb. 1957

I recommend that the following objects which have *(have-not)* been inspected from seaward to determine their value as landmarks be charted on *(deleted=from)* the charts indicated.

The positions given have been checked after listing by Isaiah Y. Fitzgerald

I. R. Rubottom

Chief of Party.

[illegible]

This form shall be prepared in accordance with Hydrographic Manual, pages 800 to 804. Positions of charted landmarks and *nonfloating* aids to navigation, if redetermined, shall be reported on this form. Revisions shall show both the old and new positions. The data should be considered for the charts of the area and not by individual field survey sheets. Information under each column heading should be given.

**** TABULATE SECONDS AND METERS**

NONFLUENT/ AIDES/ OR/ LANDMARKS FOR CHARTS

STRIKE OUT TWO

~~TOP SECRET~~
~~TOP SECRET~~
~~TOP SECRET~~

I recommend that the following objects which have ~~(not been)~~ been inspected from seaward to determine their value as landmarks be ~~deleted from~~ the charts indicated.

The positions given have been checked after listing by Isaiah Y. Fitzgerald

I. R. Rubottom

Chief of Party.

[illegible]

This form shall be prepared in accordance with Hydrographic Manual, pages 800 to 804. Positions of charted landmarks and *nonfloating aids* to navigation, if redetermined, shall be reported on this form. Revisions shall show both the old and new positions. The data should be considered for the charts of the area and not by individual field survey sheets. Information under each column heading should be given.

* TABULATE SECONDS AND METERS

USCOMM-DC 27128

