

10497

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-10497

### LOCALITY

State Rhode Island

General locality Narragansett Bay

Locality Melville

19 54-57

### CHIEF OF PARTY

I.R. Rubottom, Chief of Field Party  
W.F. Deane, Balto. District Officer

### LIBRARY & ARCHIVES

DATE February 26, 1968

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DESCRIPTIVE REPORT - DATA RECORD

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T-10497

Ph-163

Project No. (II): *Ph-163*      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 F. Deane**

Instructions dated (II) (III):

(II) **9 April 1956**  
**13 March 1957**

Copy filed in Division of  
Photogrammetry (IV)

Method of Compilation (III): **Kelsh Plotter**

Manuscript Scale (III): **1:10,000**

Stereoscopic Plotting Instrument Scale (III): **1:6,000**  
**(Pantograph ratio 3/5)**

Scale Factor (III): **1.000**

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 low water or mean lower low water~~ **MHW**

Elevations shown as (25) refer to mean high water  
Elevations shown as (S) refer to sounding datum  
i.e., mean low water or mean lower low water

Reference Station (III): **DYER ISLAND, 1843**

Lat.: **41° 34' 56.699" (1749.2 m)**      Long.: **71° 17' 55.606" (1288.1 m)**

Adjusted

~~unadjusted~~

Plane Coordinates (IV):

State: **Rhode Island**      Zone: **---**

Y=

X=

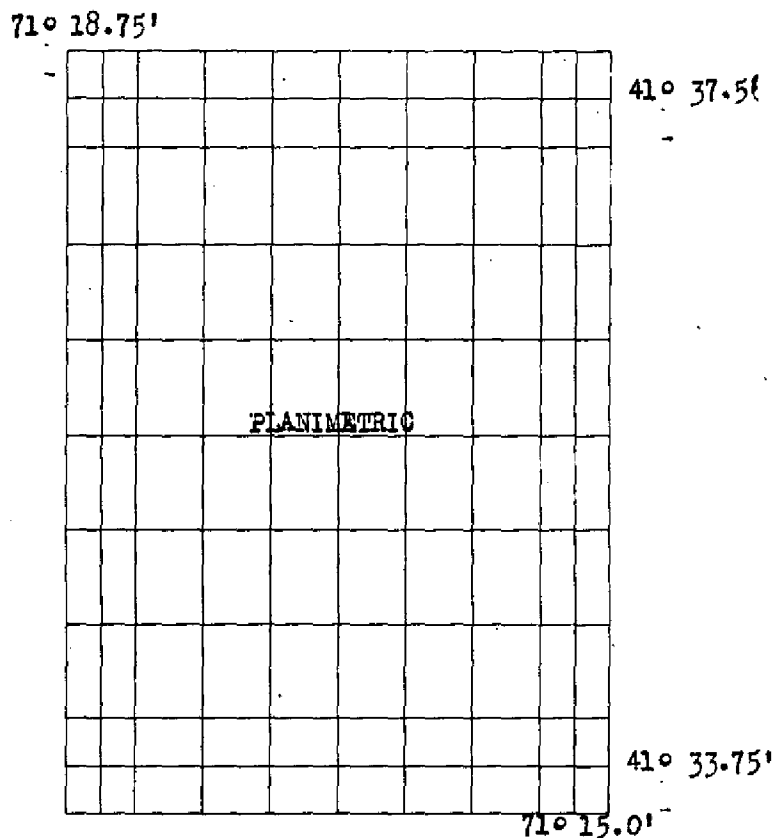
Roman numerals indicate whether the item is to be entered by (II) Field Party, (III) Photogrammetric Office,  
or (IV) Washington Office.

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

DESCRIPTIVE REPORT - DATA RECORD

U.S. DEPARTMENT OF COMMERCE  
COAST AND GEODETIC SURVEY

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

DESCRIPTIVE REPORT - DATA RECORD

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Field Inspection by (II): Mathew A. Stewart  
Leo F. Beugnet

Date: May - October 1956

Planetable contouring by (II):

Date:

Completion Surveys by (II): \* SEE FOOTNOTE

Date:

Mean High Water Location (III) (State date and method of location): 1956 date of photography  
supplemented by field inspection

Projection and Grids ruled by (IV): Joan Chaconas

Date: 3/8/57

Projection and Grids checked by (IV): H. D. Wolfe

Date: 3/8/57

Control plotted by (III): J. C. Richter

Date: 7/31/57

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

Date: 8/21/57

Radial Plot or Stereoscopic E. L. Rolle

Date: 10/18/57

Control extension by (III):

Shoreline: E. L. Williams  
Planimetry J. C. Richter

Date: 5/20/58  
1/14/59

Stereoscopic Instrument compilation (III):

~~XXXXXXXX~~

Date:

Manuscript delineated by (III): R. J. Ryan  
(Scribed)

Date: 6/16/59

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

Date: 4/6/59

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

Date:

\* FIELD EDIT -

LIMITED FIELD EDIT WAS ACCOMPLISHED  
BY HYDROGRAPHIC SURVEY PARTY H-8395

DATE 1957

NO DISCREPANCY PRINT WAS SUBMITTED



DESCRIPTIVE REPORT - DATA RECORD

Camera (kind or source) (III): U.S.C. & G. S. "W" - 6" focal length.

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PHOTOGRAPHS (III)

Number	Date	Time	Scale	Stage of Tide
54-W-1149 thru 1152	4/22/54	1324	1:10,000	1.7 above MLW
56-W-240 thru 242	5/1/56	0930	"	2.5 above MLW
56-W-470 thru 471	"	1148	"	2.6 above MLW

Tide (III)  
(from predicted tables)

Reference Station: Newport, R. I.  
Subordinate Station: Prudence Island, Sandy Point  
Subordinate Station:

Ratio of Ranges	Mean Range	Spring Range
	3.5	4.4
	3.9	4.9

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

Date: DEC. 1966

Final Drafting by (IV):

Date:

Drafting verified for reproduction by (IV):

Date:

Proof Edit by (IV):

Date:

Land Area (Sq. Statute Miles) (III): 8.5 sq. mi.  
Shoreline (More than 200 meters to opposite shore) (III): 7.5 miles  
Shoreline (Less than 200 meters to opposite shore) (III): 0.5 "

Control Leveling - Miles (II):

Number of Triangulation Stations searched for (II):	29	Recovered:	15	Identified:	6
Number of BMs searched for (II):	4	Recovered:	4	Identified:	1

Number of Recoverable Photo Stations established (III):

Number of Temporary Photo Hydro Stations established (III): see paragraph 38

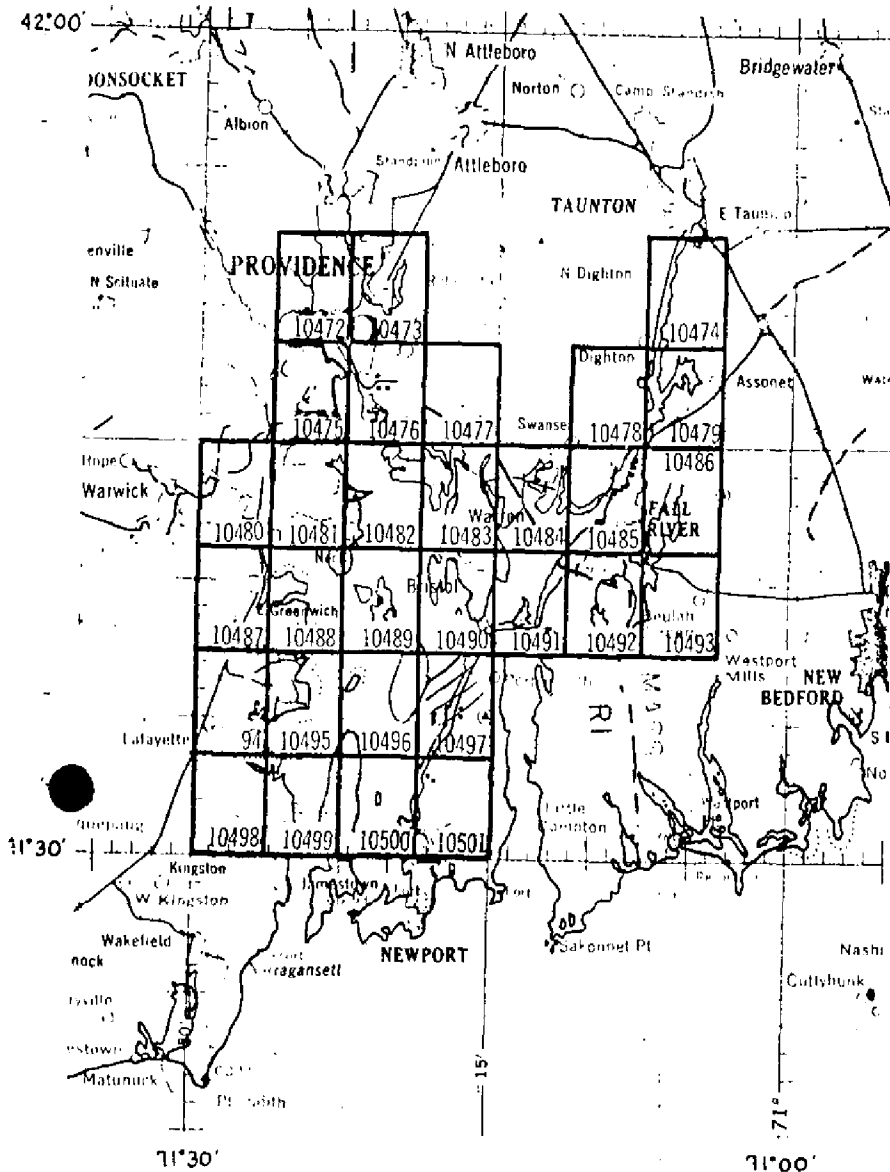
Remarks:

All bench marks searched for are Tidal Bench Marks.

# PLANIMETRIC MAPPING PROJECT PH - 163

Narragansett Bay, Mass. - Rhode Island

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OFFICIAL MILEAGE FOR COST ACCO		
SHEET NO.	lin. Mi. SHORELINE	sq. ft.
10472	10	12
10473	7	12
10474	- 0 -	10
10475	8	10
10476	6	11
10477	2	13
10478	1	13
10479	7	12
10480	2	13
10481	4	13
10482	9	14
10483	6	11
10484	9	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 -	10
10499	10	7
10500	6	11
10501	2	13
TOTALS	158	294

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SUMMARY TO ACCOMPANY DESCRIPTIVE REPORT  
T-10497

Job PH-163, comprised of thirty planimetric surveys, covers Narragansett Bay, Rhode Island-Massachusetts.

A complete field inspection preceded compilation. Limited field edit was accomplished in conjunction with contemporary hydrographic survey H-8395. The project was bridged by multiplex and compiled by Kelsh plotter.

The accompanying addendum to this Summary includes information concerning the adequacy and accuracy of project maps. The review report includes additional information concerning the subject map.



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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



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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). sgs

FIELD INSPECTION REPORT  
Project 25120  
Map T-10497

Please refer to the Field Inspection Report for Map T-10494  
for all data pertaining to this map.

*Martin C. Moody*  
Martin C. Moody  
Cartographic Survey Aid

Approved:

*Ira R. Rubottom*

Ira R. Rubottom  
Chief of Party

FIELD INSPECTION ~~REPORT~~  
PHOTOGRAPHS -

56W 229, 240, 241, 242,  
471

54W 1148, 1149, 1150, 1151  
1194

PHOTOGRAPHS 56W 471, 54W 1194  
WERE MISSING AT THE TIME OF  
FINAL REVIEW - APPARENTLY  
LOST.



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

MAP T. 10497

PROJECT NO. Ph-163

SCALE OF MAP 1:10,000

SCALE FACTOR 1.000

STATION	SOURCE OF INFORMATION (INDEX)	DATUM	LATITUDE OR $\mu$ -COORDINATE LONGITUDE OR $x$ -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
PRUDENCE ISLAND LIGHTHOUSE, 1912	G-4740 p. 65	N.A. 1927	41 36 20.798 71 18 14.587	FORWARD 641.6 BACK 1209.4			
DYER ISLAND, 1843	p. 57	"	41 34 56.699 71 17 55.606	FORWARD 337.8 BACK 1051.6			
BLACK TANK, 1932	p. 66	"	41 37 26.35 71 15 43.38	FORWARD 1749.2 BACK 101.8			
PORTSMOUTH BELFRY 1869	G-6522 p. 145	"	41 36 12.79 71 14 53.78	FORWARD 1288.1 BACK 101.8			
MCCURRY'S PT, 1917	G-6242 p. 99	"	41 34 32.648 71 14 13.000	FORWARD 812.9 BACK 1038.1			
FOUR CORNERS BELFRY, 1869	G-6522 p. 146	"	41 34 30.97 71 11 22.52	FORWARD 394.6 BACK 1456.4			
QUAKER 3, 1932	G-1246 p. 3	"	41 35 02.100 71 15 18.249	FORWARD 1245.4 BACK 144.0			
SCHLEGEL FARM WHITE SILO, 1917	G-6242 p. 102	"	41 35 48.026 71 11 56.986	FORWARD 1007.2 BACK 843.8			
WHITE CONCRETE STACK, 1932	G-4740 p. 66	"	41 37 29.489 71 15 55.185	FORWARD 301.2 BACK 1088.8			
SMITH STONE BOAT- HOUSE CUPOLA, 1912	G-6522 p. 143	"	41 36 14.72 71 16 31.26	FORWARD 955.5 BACK 895.5			
FLAGSTAFF, 1913	p. 140	"	41 36 12.746 71 16 24.891	FORWARD 521.7 BACK 868.3			
MELVILLE GREY TANK, 1932	G-4740 p. 65	"	41 35 25.547 71 17 12.733	FORWARD 64.8 BACK 1786.2			

1 FT. = 3048006 METER

COMPUTED BY J. C. Richter

DATE 23 July 1957

CHECKED BY: Henry P. Eichert

DATE 24 July 1957

COMM-DC-57843



MAP T-10497

PROJECT NO. Ph-163

SCALE OF MAP 1:10,000

SCALE FACTOR 1.000

[illegible]

1 FT. = 3048006 METER

COMPUTED BY: J. C. Richter

DATE.....23 July 1957

CHECKED BY: Henry P. Eichert

DATE 24 July 1957

COMM-DC-57843



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COMPILATION REPORT

Ph-163

T-10497

The photogrammetric plot report for this survey is part of the descriptive report for Survey T-10472.

31. DELINEATION

The kelsh plotter was used for delineation. Shoreline and photo-hydro points were delineated separately from the planimetry.

32. CONTROL

Horizontal control was adequate. Vertical control is inapplicable.

33. SUPPLEMENTAL DATA

Final name standard, dated 5 March 1957.

Planetable Sheet Ph-I-J-56.

U. S. Naval station Newport, R. I., Map showing government property, Melville to Long Wharf, 2/6/56.

34. CONTOURS AND DRAINAGE

Drainage is complete.

Contours are inapplicable.

35. SHORELINE AND ALONGSHORE DETAILS

All shore line detail is from field inspection which was thorough.

Low water and shoal lines are shown as indicated by field photos.

36. OFFSHORE DETAIL

Refer to paragraph 8 of the field report.

37. LANDMARKS AND AIDS

Forms 567 have been submitted for seven landmarks and three aids to be charted and two landmarks to be deleted.

The radar reflector identified on photograph 54-W-1151 was located by graphic methods.

38. CONTROL FOR FUTURE SURVEYS

No topographic stations were established.

Twenty-five photo-hydro stations fall within the limits of this manuscript and were located on planetable sheet No. Ph-I-J-56.

Refer to the "Descriptive Report to Accompany Graphic Control Survey Sheets Ph-I-A-56 through Ph-I-N-56" submitted for this project.

Refer also to letter 711/rab dated 7 August 1958, subject: "Smooth Sheet H-8395, Project CS-13870 (PH-163) Narragansett Bay", copy of which is attached to report for T-10489.

39. JUNCTIONS

Junctions have been made as follows:

To the north with T-10490.

To the east with T-11428 (Ph-142)

To the south with T-10501.

To the west with T-10496.

40. HORIZONTAL AND VERTICAL ACCURACY

No comment.

41. through 45.

Inapplicable.

46. COMPARISON WITH EXISTING MAPS

U.S.G.S. 7½ min. quad. Prudence Island, R. I., scale 1:24,000 edition of 1955.

Bureau Survey No. T-5751 (1944) scale 1:20,000 date of issue June 1949.

47. COMPARISON WITH NAUTICAL CHARTS

Chart No. 236, scale 1:20,000, 9th edition, published February 17, 1958, revised 9/22/58.

Items to be applied to Nautical Charts immediately: None.

Items to be carried forward: None.

Respectfully submitted  
January 14, 1959

*John C. Richter*  
John C. Richter  
Carto. (Photo.)

Approved and forwarded

*William F. Deane*  
William F. Deane,  
CDR, C&GS  
Baltimore District Officer

PHOTOGRAMMETRIC OFFICE REVIEW

T. 10497

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

5a. 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. Borasek  
Reviewer

Henry J. Eichel  
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. BLANKENBAKER  
Compiler

Henry J. Eichel  
Supervisor

43. Remarks: Dec. 1966

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REVIEW REPORT  
T-10497  
December 1966

61. General Statement

The greater part of this map has been used for hydrographic survey support purposes -- survey H-8395, dated 1957. The remainder of the mapped area is covered by survey H-6859, dated 1943. A considerable amount of alongshore details (rocks, piles, etc.) shown on both hydrographic surveys and nautical charts was not mapped on this survey. This resulted from incomplete field inspection and photography that was poor for the purpose of interpreting the subject details.

62. Comparison with Registered Topographic Surveys

T-5751	1:20,000	1944
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T-10497 supersedes the prior survey for nautical charting purposes in the common area.

63. Comparison with Maps of Other Agencies

USGS quad, Prudence Island	1955
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No significant differences were noted.

64. Comparison with Contemporary Hydrographic Surveys

H-8395	1:10,000	1957
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H-8395 has been reviewed and registered. The few corrections in photogrammetric survey details, shown in red on the smooth sheet, were applied to T-10497 during this review. Prior to smooth sheet plotting, the positions of some hydro signals established by plane table were redetermined by photogrammetric methods in the Baltimore office.

65. Comparison with Nautical Charts

No. 263	1:20,000	July 1966
No. 353	1:40,000	Jan. 1966

The charts contain information from sources more recent than the subject survey.



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66. Adequacy of Results and Future Surveys

Except as qualified under side heading 61, this survey meets Bureau requirements. The Addendum to the Summary contains information pertaining to the adequacy and accuracy of project maps. The maps will be registered; remapping, however, is recommended for future hydrographic survey support purposes.

Reviewed by:

S. G. Blankenbaker  
S. G. Blankenbaker

Approved by:

Charles L. Heinn  
Chief, Photogrammetric Branch

J. Ralph Sobieniski FEB 09 1968  
Chief, Photogrammetry Division

John P. Boyer 2/25/68  
Chief, Marine Chart Division

1-9-68

GEOGRAPHIC NAMES

FINAL NAME SHEET

PH-163 (Rhode Island)

T-10497

✓Almy Hill

✓Arnold Point

✓Barker Brook

✓Bullocks Wharf

✓Butts Hill

✓Carr Point

✓Coggeshall Point

✓Dyer Island

✓East Passage

✓Homestead

✓Lawton Valley

✓Lehigh Hill

✓Melville

✓Narragansett Bay

✓Newport Station

✓Portsmouth

✓Portsmouth Station

✓Prudence Island

✓Quaker Hill

✓Rhode Island

✓Sandy Point

✓Turkey Hill

✓Weaver Cove

Approved by:

*A. Joseph Wraight*  
A. Joseph Wraight  
Chief Geographer

Prepared by:

*Frank W. Pickett*  
Frank W. Pickett  
Cartographic Technician



TO BE CHARTED  
TO BE DELETED

## STRIKE OUT ONE

## NONLOADING/AIDS/OR LANDMARKS FOR CHARTS

**Baltimore, Maryland**

**January 20 1959**

I recommend that the following objects which have ~~been~~ been inspected from seaward to determine their value as landmarks be charted on ~~charts~~ the charts indicated.

The positions given have been checked after listing by

**समाप्त • श्री लक्ष्मीबाई**

**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. 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

Comm-DC 28356



**TO BE CHARTED  
TQ/PB/PALLET**

**STRIKE OUT ONE**

## NONFLOATING AIDS OR LANDMARKS FOR CHARTS

Baltimore, Maryland

January 20, 1959

I recommend that the following objects which have (*Hoggs/ Hpts*) been inspected from seaward to determine their value as landmarks be charted on (*Altitude/ Hords*) the charts indicated.

The positions given have been checked after listing by John C. Richter

**William F. Deane**  
*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. 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

COMM-DC 28356

~~TO BE DELETED~~

### NONFLOATING AIDS/OR LANDMARKS FOR CHARTS

**STRIKE OUT ONE**

**Morgan City, La.**

5 Feb. 1957

I recommend that the following objects which have ~~(Hatch/dots)~~ been inspected from seaward to determine their value as landmarks be ~~deleted/obj (deleted from)~~ the charts indicated.

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

/s/ 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. 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

