

T-12962

ORIGINAL

T-12962

NOAA FORM 76-35

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SURVEY

DESCRIPTIVE REPORT

Type of Survey Shoreline
Job No. Map No. T-12962
Classification No. Edition No. 1
Field Edited

LOCALITY

State ... Massachusetts
General Locality ... Boston to Plum Island
Locality ... Essex Bay

1965 TO 1969

REGISTRY IN ARCHIVES

DATE

DESCRIPTIVE REPORT - DATA RECORD

T-12962

PROJECT NO. (II):

PH-6601

FIELD OFFICE (III):

None

CHIEF OF PARTY

PHOTOGRAMMETRIC OFFICE (III):

Atlantic Marine Center

OFFICER-IN-CHARGE

Alfred C. Holmes, Director, AMC

INSTRUCTIONS DATED (II) (III):

Field - August 4, 1965
Field - August 19, 1965
Office - October 8, 1965 Provisional Instructions, Aerial Photography
Office - January 27, 1966
Office - February 2, 1966 Instructions, Aerotriangulation
Office - April 28, 1966
Field - May 20, 1966 Supplement I
Office - July 11, 1966 Supplement I

METHOD OF COMPILATION (III):

Kelsh & Graphic

MANUSCRIPT SCALE (III):

1:10,000

STEREOSCOPIC PLOTTING INSTRUMENT SCALE (III):

1:6,000 Pantographed to 1:10,000

DATE RECEIVED IN WASHINGTON OFFICE (IV):

DATE REPORTED TO NAUTICAL CHART BRANCH (IV):

APPLIED TO CHART NO.

DATE:

DATE REGISTERED (IV):

SEPT. 1975

GEOGRAPHIC DATUM (III):

N.A. 1927

VERTICAL DATUM (III):

High water
MEAN ~~LOW WATER~~ EXCEPT AS FOLLOWS:

Elevations shown as (25) refer to mean high water

Elevations shown as (5) refer to sounding datum

i.e., mean low water ~~except lower low water~~

REFERENCE STATION (III):

None

LAT.:

LONG.:

☐ ADJUSTED☐ UNADJUSTED

PLANE COORDINATES (IV):

STATE

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

T-12962

FIELD INSPECTION BY (II): None		DATE:
MEAN HIGH WATER LOCATION (III) (STATE DATE AND METHOD OF LOCATION): August 24 and 25, 1965 Graphic		
PROJECTION AND GRIDS RULED BY (IV): A.E. Roundtree		DATE 4/21/66
PROJECTION AND GRIDS CHECKED BY (IV): R. Glaser		DATE 4/27/66
CONTROL PLOTTED BY (III): L.O. Neterer, Jr.		DATE 9.14/66
CONTROL CHECKED BY (III): C. Blood		DATE 9/14/66
RADIAL PLOT OR STEREOSCOPIC CONTROL EXTENSION BY (III): H.P. Eichert		DATE 11/1/67
STEREOSCOPIC INSTRUMENT COMPILATION (III):	PLANIMETRY J.S. Place	DATE 3/20/67
	CONTOURS	DATE
MANUSCRIPT DELINEATED BY (III): J.S. Place		DATE 3/21/67
SCRIBING BY (III): W. Gilbert		DATE 1/30/73
PHOTOGRAMMETRIC OFFICE REVIEW BY (III): C.H. Bishop (comp)		DATE 2/21/68
REMARKS: Field Edit by: E.W. Hartford May - June, 1969		

DESCRIPTIVE REPORT - DATA RECORD

T-12962

CAMERA (KIND OR SOURCE) (III):

Wild RC-8 "S" Camera

PHOTOGRAPHS (III)

NUMBER	DATE	TIME	SCALE	STAGE OF TIDE
65S 6956 & 6957	8/24/65	09:00	1:30,000	7.8 ft. above MLW *
65S 7120 thru 7123	8/25/65	09:43	1:15,000	8.2 ft. above MLW *
65S 7259	8/31/65	08:03	1:30,000	0.5 ft. below MLW *
65S 7281 thru 7284	8/31/65	08:20	1:15,000	0.6 ft. below MLW *
65S 7213	8/31/65	07:30	1:30,000	0.2 ft. above MLW *

TIDE (III)

	RATIO OF RANGES	MEAN RANGE	SPRING RANGE
REFERENCE STATION: Portland (Predicted)		9.0	10.4
SUBORDINATE STATION: Plum Island (South end)		8.6	9.9
SUBORDINATE STATION:			

WASHINGTON OFFICE REVIEW BY (IV):

Bernard Kurs AMC

DATE: March, 1974

PROOF EDIT BY (IV):

DATE:

NUMBER OF TRIANGULATION STATIONS SEARCHED FOR (III):

1

RECOVERED:

1

IDENTIFIED:

0

NUMBER OF BM(S) SEARCHED FOR (III):

RECOVERED:

IDENTIFIED

NUMBER OF RECOVERABLE PHOTO STATIONS ESTABLISHED (III):

NUMBER OF TEMPORARY PHOTO HYDRO STATIONS ESTABLISHED (III):

REMARKS:

*The stage of tide at time of photography was determined by readings on a staff at Merrimack River Entrance at that time. See Instructions OFFICE - dated April 28, 1966.

T-12962

COMPILATION RECORD

COMPLETION DATE

REMARKS

Compilation Complete Pending Field Edit	Feb. 21, 1968	Superseded
Field Edit applied Compilation complete	June, 1969	Superseded
Final Review	March, 1974	

SUMMARY TO ACCOMPANY

DESCRIPTIVE REPORTS PH-6601

This shoreline manuscript is one of thirty-one maps that make up this project. The primary purpose of the project is to provide contemporary shoreline for nautical chart construction. Maps were also used to provide photogrammetric hydro support data for the hydrographic surveys to be conducted in the same area.

The only field work prior to compilation was recovery and identification of horizontal control required for aerotriangulation.

Field edit was accomplished by a photogrammetric field party during the years 1967, 1968, 1969 and 1970. The field edit was adequate.

Cronaflex positives and ozalids of the manuscripts were furnished for the use of the field editor and the preparation of the hydrographers boat sheets. Accompanying these were specially prepared ratio photographs to aid in the location of hydrographic signals.

Final review was accomplished at the Atlantic Marine Center from September, 1973 to April, 1974.

A cronaflex positive and negative of each reviewed manuscript are being forwarded for record and registry.

FIELD INSPECTION REPORT

T-12962

JOB PH-6601

BOSTON TO PLUM ISLAND

There was no field inspection prior to compilation.

PHOTOGRAMMETRIC PLOT REPORT
Job PH-6601
Boston to Plum Island, Massachusetts

November 1, 1966

21. Area Covered

This report covers aerotriangulation for 1:5,000 and 1:10,000 scale surveys in an area north of Boston, Massachusetts. The 1:5,000 scale surveys are T-12968 thru T-12977; the 1:10,000 scale surveys are T-12959 thru T-12967 and T-12978 thru T-12985.

22. Method

Four strips were bridged by the analytic method. Strip 1 was at a scale of 1:30,000 using infrared photography; Strips 2 and 3 at a scale of 1:30,000 using color film; and Strip 4 using color film at a scale of 1:15,000.

The 1:30,000 scale bridges were to be used for the 1:10,000 scale compilation. The four-model 1:15,000 scale bridge was necessary to complete coverage on surveys T-12972 and T-12978.

Common points between the 1:30,000 and 1:15,000 scale photography were selected. Plane coordinate positions from our bridges were determined so that 1:15,000 scale models could be controlled to compile the 1:5,000 scale surveys. Plane coordinates are on the Massachusetts State Grid (Mainland). The attached aerotriangulation sketch shows location of strips bridged. Closures to control have been tabulated.

23. Adequacy of Control

Field identified control was supplemented by office identified horizontal control points and was adequate.

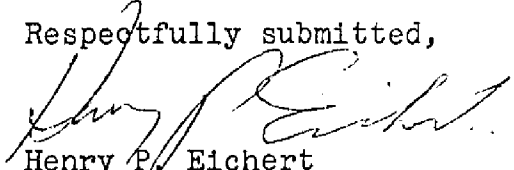
24. Supplemental Data

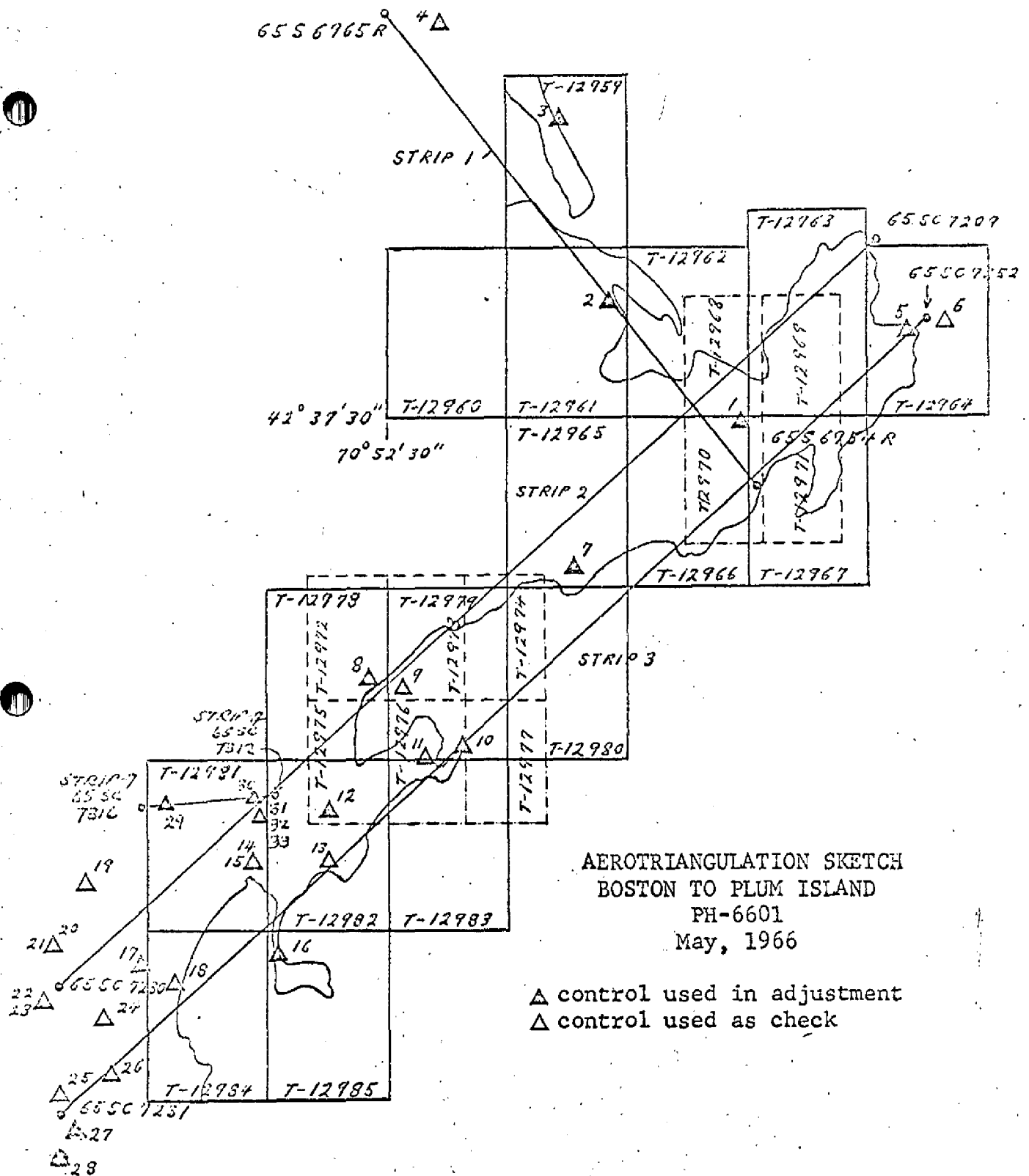
Vertical control points needed ^{as} ~~and~~ control for strip adjustments were taken from USGS quads.

25. Photography

The color photography was excellent. The infrared photography, which is not particularly suited for bridging, was adequate.

Respectfully submitted,


Henry P. Eichert



Fit to control
(feet)

STRIP #1

1 MEAD 2 (MGS), 1934

target (+0.1, +0.1)

sub. pt. (-0.9, +1.7)

2 CHOATE, 1849

target (-0.4, -0.2)

3 PLUM ISLAND COAST GUARD CUPOLA, 1943

target (+0.5, +0.3)

sub. pt. (-2.8, +4.5)

4 OLD TOWN, 1850

target (-0.2, -0.2)

RM #1 (-0.2, +0.3)

STRIP #2

5 STONEHAVEN (ROCKPORT TOWN (MGS)), 1939

target (+1.2, -2.6)

sub. pt. A (-0.7, -1.6)

sub. pt. B (+1.3, -3.0)

- 1 MEAD 2 (MGS), 1934

target (0.0, +3.3)

sub. pt. (+0.7, +3.6)

7 MANCHESTER CHURCH DARK SPIRE, 1848

target $(-6.0, +0.8)$

sub pt. A $(-7.1, +3.1)$

~~sub pt. B~~

8 SALEM, NEW ENGLAND POWER CO. SOUTH STACK, 1954

office identified $(+4.8, +1.9)$

9 FORT PICKERING LIGHTHOUSE, 1877

office identified $(+6.0, +1.0)$

14 HIGH ROCK 2 (MGS)

sub pt. A $(+3.2, -4.4)$

sub pt. B $(+2.0, -2.8)$

15 HIGH ROCK 3, 1943

office identified $(+1.8, -3.7)$

17 REVERE CATHOLIC CHURCH TOWER, 1934

office identified $(-4.0, -4.0)$

19 BOOTH (MGS), 1934

sub pt. A $(+3.4, -1.4)$

24 CHELSEA QUIGLEY MEM. HOSPITAL W.T., 1958

office identified $(-1.5, +2.2)$

20 MEDFORD RADIO STATION WEEI-FM TOWER, 1958

office identified $(+2.1, -1.0)$

21 MEDFORD TV STATION WNAC TOWER, 1958

office identified $(+5.3, -1.0)$

22 MEDFORD RADIO STATION WEEI NE TOWER, 1958

office identified (+1.4, +3.0)

23 MEDFORD RADIO STATION WEEI SW TOWER, 1958

office identified (+1.7, +3.1)

STRIP #3

28 BOSTON STATE HOUSE, 1934

office identified (+2.6, +5.5)

27 BOSTON CUSTOM HOUSE TOWER, 1916

office identified (+3.7, +4.7)

25 CHARLESTOWN BUNKER HILL MON., 1846

office identified (+2.2, +0.1)

26 EAST BOSTON, BOSTON AND ALBANY R.R. TANK, 1916

office identified (+1.6, +5.5)

24 CHESLEA QUIGLEY MEM. HOSPITAL W.T., 1958

office identified (+7.3, -2.0)

17 REVERE CATHOLIC CHURCH TOWER, 1934

office identified (-4.0, -5.0)

18 REVERE BEACH STACK, 1919

office identified (-4.1, -2.2)

14 HIGH ROCK #2

sub ~~pt.~~ pt. B (+2.9, +3.9)

16 NAHANT COAST GUARD CUPOLA, 1919

office identified (+3.6, +6.4)

13 SWAMPSCOTT HIGH SCHOOL FINIAL, 1940

office identified $(+0.7, +3.4)$

12 SWAMPSCOTT LARGER STANDPIPE, 1934

office identified $(+0.7, +1.8)$

11 MARBLEHEAD, ABBOT TOWER, 1919

office identified $(-0.6, +4.4)$

10 MARBLEHEAD LIGHTHOUSE, 1914

office identified $(+2.0, +5.1)$

7 MANCHESTER CHURCH PARK SPIRE, 1848

target $(-3.5, -5.8)$

sub pt A $(-4.1, -5.2)$

1 MEAD 2 (M.G.S.), 1934

target $(+3.8, -0.7)$

sub. pt. $(+6.2, -1.2)$

5 STONEHAVEN (ROCKPORT TOWN (M.G.S.)), 1939

target $(-2.1, +0.3)$

sub pt A $(-1.3, +1.6)$

sub pt B $(-2.0, +1.2)$

6 STRAITS MOUTH LIGHTHOUSE, 1902

office identified $(-3.1, -5.2)$

STRIP # 7

29 DANVERS, COOKE & ^{KRAUSE} ~~COOKE~~ CO. CHIMNEY, 1919

HOME STA (-0.78 +0.79)

SS "A" (-0.01 -0.01)

SS "B" (-1.83 +1.74)

30 BEVERLY, UNITED SHOE MFG. CO. STK., 1934

(-0.01 -0.01)

31 BEVERLY, ODD FELLOWS' COPULA, 1934

(-1.29 +1.55)

32 BEVERLY, ST. MARY'S CHURCH SPIRE, 1934

(-1.32 -1.09)

33 BEVERLY 1ST BAPTIST CHURCH, 1914

(+1.35 +1.10)

TIE POINTS

12601 (-0.28 -6.78)

12602 (-3.79 -3.20)

13601 (-2.56 -3.47)

14601 (-3.15 -1.53)

COMPILATION REPORT

T-12962

JOB PH-6601

BOSTON TO PLUM ISLAND

See Compilation Report for T-12968 for the part of T-12962 that is covered by 1:5,000 scale map T-12968.

31. DELINEATION:

Delineation was done graphically, using pass points located by the Kelsh Plotter as control. The area covered by 1:5,000 scale map T-12968 was traced from a photographic reduction of T-12968.

32. CONTROL:

See Photogrammetric Plot Report attached.

33. SUPPLEMENTAL DATA:

None.

34. CONTOURS AND DRAINAGE:

Contours are not applicable.

Drainage was compiled from office interpretation of the photographs.

35. SHORELINE AND ALONGSHORE DETAILS:

The mean high water line was delineated by office interpretation of infrared photography taken at mean high water.

The approximate mean low water line, shallow lines, and rocks, were delineated by office interpretation of photographs taken at mean low water.

All other details were compiled by office interpretation of the photographs.

36. OFFSHORE DETAILS:

No problems were encountered in compiling offshore details.

37. LANDMARKS AND AIDS:

Four landmarks and two fixed aids to navigation were compiled. Appropriate copies of Form 567 have been submitted to the Washington Office, dated Oct 8, 1969.

38. CONTROL FOR FUTURE SURVEYS:

None.

39. JUNCTIONS:

Satisfactory junctions were made with Maps T-12961 (scale 1:10,000) to the west, T-12966 (scale 1:10,000) and T-12970 (scale 1:5,000) to the south, and T-12963 (scale 1:10,000) and T-12969 (scale 1:5,000) to the east. There is no contemporary survey to the north.

40. HORIZONTAL AND VERTICAL ACCURACY:

No statement.

46. COMPARISON WITH EXISTING MAPS:

Comparison, has been made with U.S.G.S. Quadrangle GLOUCESTER, MA, scale 1:24,000, dated 1960.

47. COMPARISON WITH NAUTICAL CHARTS:

Comparison has been made with Nautical Chart 243, scale 1:20,000 Eighth edition, dated Sept. 14, 1964.

ITEMS TO BE APPLIED TO NAUTICAL CHARTS IMMEDIATELY:

None.

ITEMS TO BE CARRIED FORWARD:

None.

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Submitted:

Charles H. Bishop

Charles H. Bishop
Cartographer
2/21/68

Approved for forwarding:

Jeffrey G. Carlen

Jeffrey G. Carlen, CDR, NOAA
Chief, Coastal Mapping Division, AMC

Approved:

Alfred C. Holmes

Alfred C. Holmes, RADM NOAA
Director, Atlantic Marine Center

Sept. 24, 1973

GEOGRAPHIC NAMES

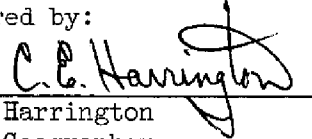
FINAL NAME SHEETS

Ph-6601 (Boston to Plum Island, Mass.)

T-12962

Annisquam River
Bald Rocks
Black Rock
Castle Neck
Castle Neck River
Coles Island
Conomo Point
Cross Island
Essex Bay
Essex River
Farm Creek
Farm Point
Great Bank
Hog Island Channel
Ipswich Bay
Jones River
Long Island
Oak Island
Pearce Island
Ram Island
Rust Island
Sleepy Hollow Lake
Tommy Island
Walker Creek
Wingaersheek Beach

Prepared by:


C. E. Harrington
Staff Geographer

T - 12962

49. NOTES FOR THE HYDROGRAPHER AND FIELD EDITOR

Separate edit ozalids have been prepared for your respective uses. These are intended to simplify your efforts and eliminate the possibility of any duplication of edit procedures.

On each are noted pertinent remarks concerning doubtful interpretations or items of compilation requiring additional clarification and/or verification.

For the field editor, notes include all items inshore from the approximate M.L.W.L. All offshore items are noted for the Hydrographer's attention.

Among these items requiring edit by both parties, are "Landmarks and Aids". These are indicated by a numeral. The following key is an explanation of the attention they may require:

1. Object not visible on photos. Verify by edit.
2. Object visible, position verified.(by compiler)
3. Object visible, position re-determined. Verify by edit.
4. Object which may be a landmark or new aid. Verify by edit.

Forms 567 should be submitted for all "Landmarks and Aids".

PHOTOGRAMMETRIC OFFICE REVIEW

T. 12962

1. PROJECTION AND GRIDS CHB	2. TITLE CHB	3. MANUSCRIPT NUMBERS CHB	4. MANUSCRIPT SIZE
CONTROL STATIONS			
5. HORIZONTAL CONTROL STATIONS OF THIRD-ORDER OF HIGHER ACCURACY CHB	6. RECOVERABLE HORIZONTAL STATIONS OF LESS THAN THIRD-ORDER ACCURACY (Topographic stations) X		7. PHOTO HYDRO STATIONS X
8. BENCH MARKS X	9. PLOTTING OF SEXTANT FIXES	10. PHOTOGRAMMETRIC PLOT REPORT	11. DETAIL POINTS CHB
ALONGSHORE AREAS (Nautical Chart Data)			
12. SHORELINE	13. LOW-WATER LINE CHB	14. ROCKS, SHOALS, ETC. CHB	15. BRIDGES X
16. AIDS TO NAVIGATION CHB	17. LANDMARKS CHB	18. OTHER ALONGSHORE PHYSICAL FEATURES CHB	19. OTHER ALONGSHORE CULTURAL FEATURES CHB
PHYSICAL FEATURES			
20. WATER FEATURES CHB	21. NATURAL GROUND COVER X		22. PLANETABLE CONTOURS X
23. STEREOSCOPIC INSTRUMENT CONTOURS X	24. CONTOURS IN GENERAL X	25. SPOT ELEVATIONS X	26. OTHER PHYSICAL FEATURES X
CULTURAL FEATURES			
27. ROADS CHB	28. BUILDINGS CHB	29. RAILROADS X	30. OTHER CULTURAL FEATURES X
BOUNDARIES			
31. BOUNDARY LINES X		32. PUBLIC LAND LINES X	
MISCELLANEOUS			
33. GEOGRAPHIC NAMES CHB	34. JUNCTIONS CHB		35. LEGIBILITY OF THE MANUSCRIPT CHB
36. DISCREPANCY OVERLAY CHB	37. DESCRIPTIVE REPORT CHB	38. FIELD INSPECTION PHOTOGRAPHS X	39. FORMS CHB
40. REVIEWER Charles H. Bishop C.H. Bishop		SUPERVISOR REVIEW SECTION OR UNIT Albert C. Rauck Jr. A.C.R.	
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.			
COMPILER C.H. Bishop Reviewer: A.L. Shands		SUPERVISOR Albert C. Rauck Jr.	
43. REMARKS (1) T-12968 was photo reduced and transferred to T-12962. (2) Field Edit Applied From: Field edit Ozalid (1968), Matte ratio prints 65 S 7213, 7259 and 7960, Form 567(FIELD)			

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FIELD EDIT REPORT
JOB PH-8601
Map T-12962
Massachusetts

This map was field-edited during the latter part of May and first of June 1969. The map was compiled without field inspection prior to compilation, therefore, a complete and thorough field-edit was done. All field notes were made in violet ink on the ratio prints and referenced from the field-edit sheet.

52. ADEQUACY OF COMPILATION

The adequacy of the compilation was generally good. The low-water line around ledges was especially good.

54. RECOMMENDATIONS

To avoid duplication. This can be resolved by closer cooperation between both field employees and office employees. Often one group is not informed of what the other is doing.

56. LANDMARKS AND AIDS

Form 567 is submitted for all landmarks and aids within the limits of this map. The field editor has checked the location by the compiler of all landmarks and aids. Only those cases where a discrepancy was noted in identification has he made a comment on the field-edit sheet. Some duplication of effort has been made concerning Form 567. The field editor made an investigation of small craft facilities in this area in August 1967. At that time he recommended on Form 567 any additions or deletions. In the summer of 1967, it is believed that the hydrographic party submitted 567. This party was not associated with the photogrammetrist. During the 1968 and 1969 seasons, this duplication has been resolved.

Your attention is invited to the beacons on the rock ledges. In all cases, there seems to be no change in their positions. This is determined from local fisherman and observation by the editor. Most of the beacons mark tops of rocks or ledges which are usually covered at mean high-water. Generally the beacons consist of spindles erected in a 6 inch drill hole in the highest point of the rock. When one rusts away or is destroyed, it is usually replaced in the same drill hole. The rocks or ledges marked by these beacons are usually very small, therefore, its position would vary very little.

57. ROCKS AND ROCK LEDGES

Rocks in question and rock changes have been shown on the photographs and referenced from the field-edit ozalid. Three rocks compiled in the area of Conomo Pt. were found to be rather marsh islets or grass in water. The hydrographic party in 1967 edited a portion of this map for rocks. This field editor, to avoid duplication, only edited the portions not resolved previously.

Your special attention is invited to the fact that the shoreline and alongshore features were field-edited at or near low-water. This is brought to the compilers attention because in an area of the New England shoreline which has a tide range of 8 or 9 feet, this is the only proper time to adequately inspect these features.

58. MISCELLANEOUS

A portion of Map T-12968 falls within the limits of this map. Since this is a 1:5000 sheet located within a 1:10,000 sheet, no attempt has been made to singularly field-edit T-12968. All field-edit data for T-12968 will be included with Maps T-12962 and T-12963.

Field-edit corrections have been shown on the following 1:10,000 scale ratio prints:

65-S-7213

65-S-7259

65-S-7260

Submitted By:

Erwest W. Hartford

Erwest W. Hartford

Surveying Technician

June 11, 1969

TO BE CHARTED

STRIKE OUT TWO

NONFLOATING AIDS OR LANDMARKS FOR CHARTS

Atlantic Marine Center, Norfolk, VA June 20, 1969

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

The positions given have been checked after listing by

C.H. Bishop

Alfred C. Holmes

Director, AMC

Chief of Party

STATE	CHARTING NAME	DESCRIPTION	SIGNAL NAME	POSITION										METHOD OF LOCATION AND SURVEY No.	DATE OF LOCATION	HARBOR CHART	INSHORE CHART	OFFSHORE CHART	CHARTS AFFECTED
				LATITUDE *			LONGITUDE *			DATUM									
				°	'	D.M. METERS	°	'	D.P. METERS										
Massachusetts		IPSWICH BAY																	
	TOWER	Wooden observation tower on house (Conical) ht=48(73)		42	39	44.07 1360	70	43	06.45 147	NA 1927	6/10/69 X						243		
	CHIMNEY	Tallest and largest brick chimney on house (Square) ht=53(78)		42	39	43.13 1331	70	43	06.05 138	NA 1927	6/10/69 X						243		
		ESSEX BAY																	
*CHIMNEY		Lone chimney at house ruins (Stone) ht=30(40)		42	39	09.11 281	70	44	43.20 984	NA 1927	6/10/69 X						243		
	TOWER	Observation tower on house (Wood) ht=45(65)		42	38	59.63 1840	70	44	42.28 963	NA 1927	6/10/69 X						243		
		*New nautical landmark.	NOTE: Those landmarks and nonfloating aids east of longitude 70° 43' 15" and south of latitude 42° 49' 30" are submitted with T-12962																

This form shall be prepared in accordance with Hydrographic Manual, Publication 20.2, Sec. 1-35, 2-39, 6-36, 7-18 to 22 inclusive, and Fig. 79. 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

STRIKE OUT TWO

Ipswich, MA

June 10, 1969

MONTHLY FINANCIAL LANDMARKS FOR CHARTS

I recommend that the following objects which have (~~been~~^{have}) been inspected from seaward to determine their value as landmarks be charted on (~~attached forms~~^{attached forms}) the charts indicated.

The positions given have been checked after listing by

E. W. Hartford

Joseph K. Wilson
Chief of Party.

[illegible]

This form shall be prepared in accordance with Hydrographic Manual, Publication 20.2, Sec. 1-55, 2-39, 6-36, 7-18 to 22 inclusive, and Fig. 79. 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

U.S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

NON-TRADING AREAS OR LANDMARKS FOR CHARTS

~~TO BE DELETED~~
~~TO BE DELETED~~
~~TO BE DELETED~~

STRIKE OUT TWO

June 10, 1969

I recommend that the following objects which have ~~(been removed)~~ been inspected from seaward to determine their value as landmarks be ~~checked~~ *deleted from* the charts indicated.

The positions given have been checked after listing by

E.W. Hartford

Joseph K. Wilson	Chief of Party.
------------------	-----------------

[illegible]

This form shall be prepared in accordance with Hydrographic Manual, Publication 20.2, Sec. 1-55, 2-39, 6-36, 7-18 to 22 inclusive, and Fig. 79. 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

NONFLOATING AIDS GOVERNMENT MARKS FOR CHARTERS

Ipswich, MA

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

E.W. Hartford

Joseph K. Wilson *Chief of Party.*

son

This form shall be prepared in accordance with Hydrographic Manual, Publication 20.2, Sec. 1-55, 2-39, 6-36, 7-18 to 22 inclusive, and Fig. 79. 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

REVIEW REPORT T-12962

SHORELINE

MARCH, 1974

61. GENERAL STATEMENT:

See Summary which is p. 6 of the Descriptive Report.

Particular attention is called to remarks under item 65 of this report.

62. COMPARISON WITH REGISTERED TOPOGRAPHIC SURVEYS:

Comparison was made with T-11155 at 1:10,000 scale with field inspection and photography of 1955. There is good general agreement. The only differences are the interpretation of grass in water and marsh limits. Natural changes have occurred along sandy beach areas.

This survey supersedes all prior surveys for nautical chart construction purposes.

63. COMPARISON WITH MAPS OF OTHER AGENCIES:

Comparison was made with U.S.G.S. Quadrangle Gloucester, MA, 1960 at 1:24,000. Agreement is only in the most general sense. The Essex Bay area and its tributaries consists mainly of a changing type shoreline and time has changed it considerably. It would be pointless to make a discrepancy comparison as it would mean redrawing the shoreline.

64. COMPARISON WITH CONTEMPORARY HYDROGRAPHIC SURVEYS:

Comparison was made with smooth Boat Sheet H-8939, 1:10,000 scale dated 1967. There is a very good agreement of the two surveys.

65. COMPARISON WITH NAUTICAL CHARTS:

Comparison was made with chart 243, 1:20,000 scale dated Nov. 4, 1972. There are very few points of shoreline exactly in agreement.

It is strongly recommended that the Essex Bay area and its tributaries be redelineated on the Chart. The shoreline of this area is nebulous and subject to change after each storm. Time, tide and storms have made these changes.

66. ADEQUACY OF RESULTS AND FUTURE SURVEYS:

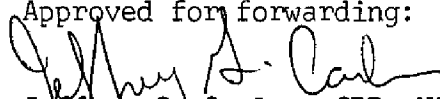
This survey meets with project instructions and the National Standards of Map Accuracy.

Reviewed by:



Bernard Kurs
Cartographer

Approved for forwarding:


Jeffrey G. Carlen, CDR, NOAA
Chief, Coastal Mapping Division, AMC

Approved:


Alfred C. Holmes, AADM, NOAA
Director, Atlantic Marine Center

Approved:

Chief, Photogrammetric Branch


for Chief, Coastal Mapping Division

40'

Hog Island Channel

ESSEX RIVER

T-12962

Great Bank

39'30"
y=605,000 FT

Cross Island

ESSEX BAY

CHIMNEY 1969 ht = 50 (40)

Essex River

42° 39'

Conomo Point

Tommy Island

TOWER 1969
(Conical) ht = 45 (65)

Ma islet

Ma islet

65-S-6957

y=600,000 FT

70° 45'

- chart 243

Awash MLW

chart

Black Rock

44' 30"

44'