

T-12973

T-12973

Form 504	
U. S. DEPARTMENT OF COMMERCE	
COAST AND GEODETIC SURVEY	
DESCRIPTIVE REPORT	
Type of Survey	Shoreline(Photogrammetric)
Field No.	Office No. T-12973
LOCALITY	
State	Massachusetts
General locality	Boston to Plum Island
Locality	Beverly Cove
19 65 8	
CHIEF OF PARTY	
Allen L. Powell, Director, AMC	
LIBRARY & ARCHIVES	
DATE	

DESCRIPTIVE REPORT - DATA RECORD

T-12973

PROJECT NO. (II): PH-6601		
FIELD OFFICE (II): Atlantic Marine Center		CHIEF OF PARTY Allen L. Powell, Director, AMC
PHOTOGRAMMETRIC OFFICE (III): Atlantic Marine Center		OFFICER-IN-CHARGE Allen L. Powell, Director, AMC
INSTRUCTIONS DATED (II) (III): Field - August 4, 1965 Field - August 19, 1965 Provisional insts., Aerial photo- graphy Office - October 8, 1965 Instructions, Aerotriangulation 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): Wild B-8 and graphic		
MANUSCRIPT SCALE (III): 1:5,000		STEREOSCOPIC PLOTTING INSTRUMENT SCALE (III): 1:2,5000 pantographed to 1:5,000
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): MHW MEAN SEA LEVEL 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 as measured from water
REFERENCE STATION (III): LEE (USE) 1914 ✓		
LAT.: 42° 31' 54.484" (1681.2m) ✓	LONG.: 70° 52' 29.863" (681.6m) ✓	<input checked="" type="checkbox"/> ADJUSTED <input type="checkbox"/> UNADJUSTED
PLANE COORDINATES (IV): 558,807.27 ft. ✓ x = 768,475.64 ft. ✓		STATE Massachusetts
		ZONE Mainland
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

FIELD INSPECTION BY (II):

None

DATE:

MEAN HIGH WATER LOCATION (III) (STATE DATE AND METHOD OF LOCATION):

Air Photo. Compilation
Date of Photography: August 25, 1965

PROJECTION AND GRIDS RULED BY (IV):

A. E. Roundtree

DATE

6/1/66

PROJECTION AND GRIDS CHECKED BY (IV):

R. Glaser

DATE

6/3/66

CONTROL PLOTTED BY (III):

L. Neterer

DATE

9/23/66

CONTROL CHECKED BY (III):

C. Blood

DATE

9/23/66

RADIAL PLOT OR STEREOSCOPIC CONTROL EXTENSION BY (III):

H. P. Eichert

DATE

11/1/66

STEREOSCOPIC INSTRUMENT COMPILATION (III):

Wild B-8

PLANIMETRY

B. Barnes

Rev. by: A. L. Shands

DATE

11/25/66

11/28/66

CONTOURS

Inapplicable

DATE

MANUSCRIPT DELINEATED BY (III):

B. Barnes

DATE

12/29/66

SCRIBING BY (III):

B. Barge

DATE

7/1/69

PHOTOGRAMMETRIC OFFICE REVIEW BY (III):

Compilation: C. H. Bishop
Field Edit: R. E. Smith
Scribing: R. E. Smith

DATE

1/27/67

10/10/67

10/20/69

REMARKS:

Field Edit by: E. W. Hartford

6/19/67



DESCRIPTIVE REPORT - DATA RECORD

CAMERA (KIND OR SOURCE) (III):

Wild RC-8 "S"

PHOTOGRAPHS (III)

NUMBER	DATE	TIME	SCALE	STAGE OF TIDE
65-S(c)7335 thru 65-S(c)7338	8/31/65	0858	1:15,000	0.2 below MLW*
65-S-7180R thru 65-S-7183R	8/25/65	1009	1:15,000	8.5 above MLW*
65-S-7140R and 65-S-7141R	8/25/65	0951	1:15,000	8.7 above MLW*

TIDE (III) PREDICTED

	RATIO OF RANGES	MEAN RANGE	SPRING RANGE
REFERENCE STATION: Boston		9.5	11.0
COORDINATE STATION: Beverly		9.0	10.4
SUBORDINATE STATION:			

WASHINGTON OFFICE REVIEW BY (IV):

DATE:

PROOF EDIT BY (IV):

DATE:

NUMBER OF TRIANGULATION STATIONS SEARCHED FOR (II):

11

RECOVERED:

9

IDENTIFIED:

1

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

2

RECOVERED:

1

IDENTIFIED:

0

NUMBER OF RECOVERABLE PHOTO STATIONS ESTABLISHED (III):

None

NUMBER OF TEMPORARY PHOTO HYDRO STATIONS ESTABLISHED (III):

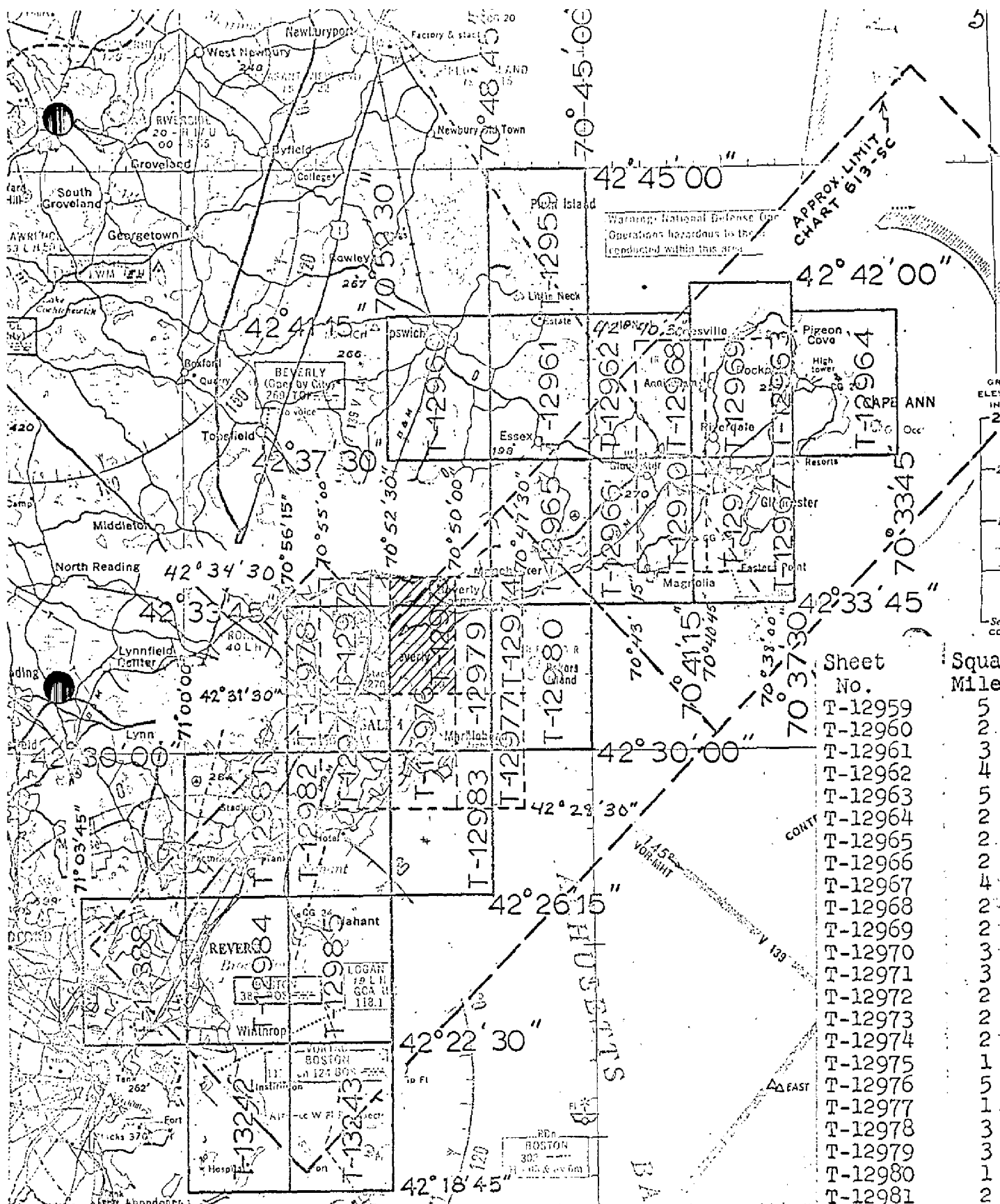
None

REMARKS:

* The stage of tide at time of photography was determined by readings on a staff at Gloucester Harbor (Ten Pound Island) at that time. See Instructions - OFFICE - dated 28 April, 1966.

T-12973

COMPILATION RECORD	COMPLETION DATE	REMARKS
Compilation complete, pending field edit	January 1967	Superseded
Field Edit applied compilation complete	October 1967	Superseded
Roads double lined	December 1968	



Sheet No.	Squa Mile
T-12959	5
T-12960	2
T-12961	3
T-12962	4
T-12963	5
T-12964	2
T-12965	2
T-12966	2
T-12967	4
T-12968	2
T-12969	2
T-12970	3
T-12971	3
T-12972	2
T-12973	2
T-12974	2
T-12975	1
T-12976	5
T-12977	1
T-12978	3
T-12979	3
T-12980	1
T-12981	2
T-12982	3
T-12983	2
T-12984	3
T-12985	2
T-12388	3
T-13242	3
T-13243	2
TOTAL	79

JOB PH-6601
BOSTON TO PLUM ISLAND
SHORELINE MAPPING AT 1:5,000 & 1:10,000 SCALE
CHART 613-SC
CHART TOPOGRAPHY AT 1:40,000 SCALE

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-12973
Boston to Plum Island
PH-6601

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.

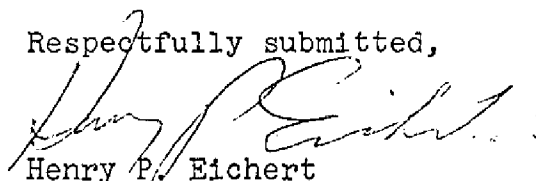
24. Supplemental Data

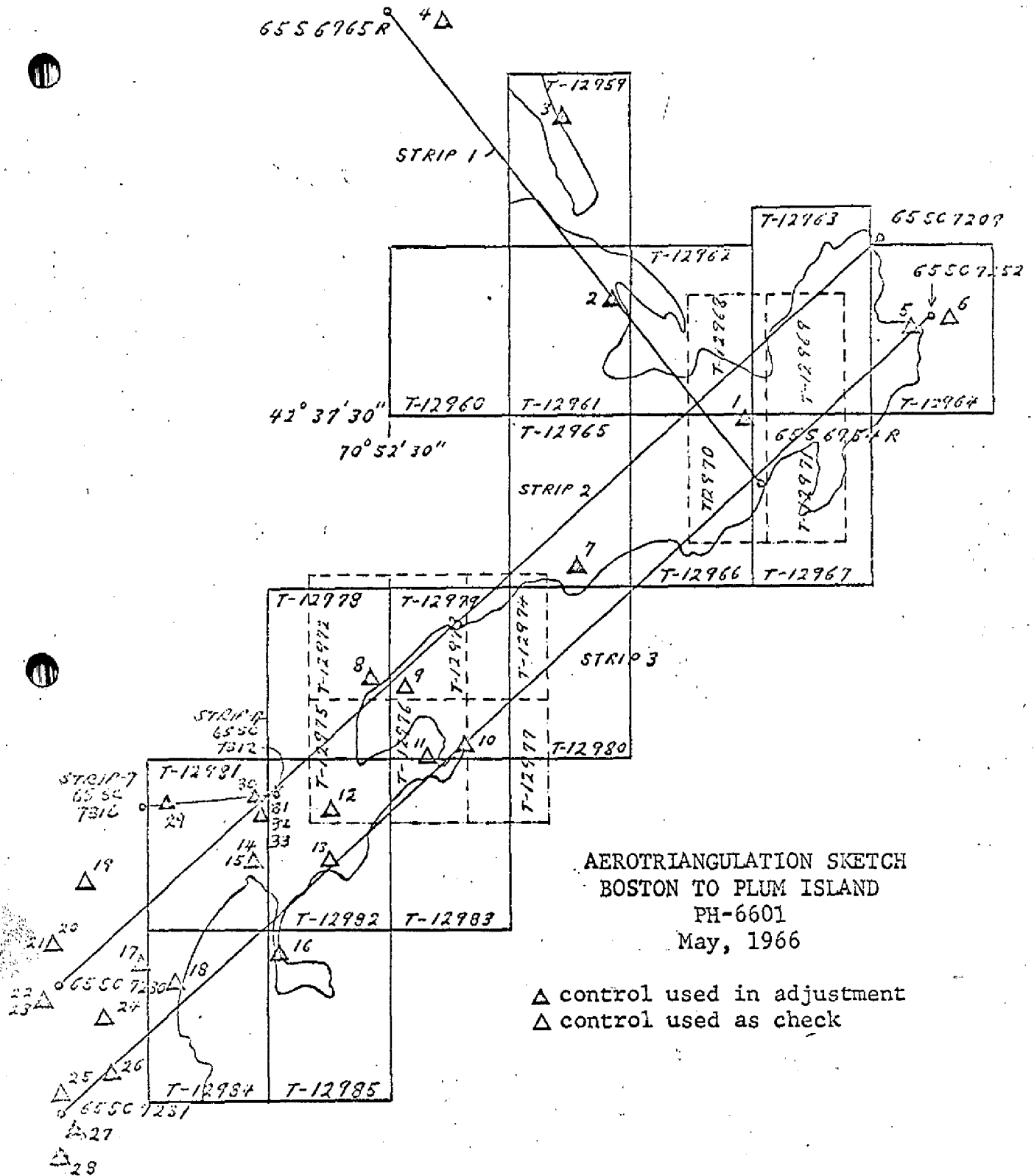
Vertical control points needed ^{as} ~~and~~ control for strip adjustments were taken from USGS quads.

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 STONEHAGEN (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

23 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)

13 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 STAND PIPE, 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 (MGS), 1934

target $(+3.8, -0.7)$

sub pt $(+6.2, -1.2)$

5 STONEHAVEN (ROCKPORT TOWN (MGS)), 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 #4

29 DANVERS, COOKE & KRAUSE 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' CUPOLA, 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)



DESCRIPTIVE REPORT CONTROL RECORD

MAP T.
12973

PROJECT NO.

PH-6601

SCALE OF MAP

1:5,000

SCALE FACTOR

[illegible]

COMPILATION REPORT
T-12973

31. DELINEATION

Compilation of all features, with the exception of mean high water line, were compiled by the WILD B-8 method using the color photography taken at mean low water. The mean high water line was compiled by the graphic method from the infra-red photography taken at mean high water.

There was no field inspection.

Photography was satisfactory.

32. CONTROL

See photogrammetric plot reported dated 11/1/66.

GREAT AQUA VITAE STONE BEACON 1848; LITTLE HASTE BEACON 1848; and LITTLE AQUA VITAE BEACON 1914, could not be held during compilation. This has been noted on the Hydro Edit ozalid (Discrepancy print). See instructions dated April 28, 1966; Paragraph 6 Compilation. 14.

33. SUPPLEMENTAL DATA

None.

34. CONTOURS AND DRAINAGE

Contours are inapplicable.

Drainage was delineated from office interpretation of the photographs.

35. SHORELINE AND ALONGSHORE DETAILS

See Item 31.

The mean low water line, shallow lines, foreshore, etc. were delineated from office interpretation of the photographs.

There was no shoreline inspection.

36. OFFSHORE DETAILS

No statement.

37. LANDMARKS AND AIDS

Appropriate copies of Form 567 for Aids have been submitted to the Washington Office under date of October 20, 1967. There are no landmarks.

38. CONTROL FOR FUTURE SURVEYS

There are no recoverable topographic stations. A sufficient number of shoreline pass points have been located to facilitate the location of photo-hydro stations.

39. JUNCTIONS

Junctions are in agreement with T-12974 (scale 1:5,000) and T-12979 (scale 1:10,000) to the east; T-12972 (scale 1:5,000) and T-12978 (scale 1:10,000) to the west; T-12976 (scale 1:5,000) and T-12979 (scale 1:10,000) to the south. There is no contemporary survey to the north.

40. HORIZONTAL AND VERTICAL ACCURACY

See Item 32.

46. COMPARISON WITH EXISTING MAPS

Comparison has been made with USGS quadrangle MARBLEHEAD NORTH, MASS., scale 1:24,000, dated 1956.

47. COMPARISON WITH NAUTICAL CHARTS

Comparison has been made with Chart 241, scale 1:10,000, 3rd edition, dated September 30, 1963.

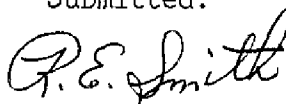
ITEMS TO BE APPLIED TO NAUTICAL CHARTS IMMEDIATELY

None.

ITEMS TO BE CARRIED FORWARD

None.

Submitted:



R. E. Smith
Cartographer
9/22/69

Approved and Forwarded:



Allen L. Powell,
Director, Atlantic Marine Center

Sept. 24, 1973

GEOGRAPHIC NAMES

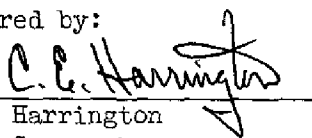
FINAL NAME SHEETS

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

T-12973

Abbot Rock
Beverly
Beverly Cove
Beverly Harbor
Black Rock
Cat Cove
Coney Island
Coney Ledge
Cove Village
Curtis Point
Fort Pickering
Great Aquavitae
Great Haste
Hospital Point
Juniper Cove
Juniper Point
Little Aquavitae
Mackerel Cove
Middle Ground
Mingo Beach
Monument Bar
Patch Beach
Prospect Hill
Salem Neck (locality)
Salem Neck
Salem Sound
Smith Point
Winter Island
Woodbury Point

Prepared by:


C. E. Harrington
Staff Geographer

T-12973

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".

FORM C&GS-1002
(9-66)U.S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY
ESSAPHOTOGRAMMETRIC OFFICE REVIEW
T-12973

1. PROJECTION AND GRIDS CHB	2. TITLE CHB	3. MANUSCRIPT NUMBERS CHB	4. MANUSCRIPT SIZE CHB
CONTROL STATIONS			
5. HORIZONTAL CONTROL STATIONS OF THIRD-ORDER OR HIGHER ACCURACY CHB & RES	6. RECOVERABLE HORIZONTAL STATIONS OF LESS THAN THIRD-ORDER ACCURACY (Topographic stations) CHB & RES		7. PHOTO HYDRO STATIONS XX
8. BENCH MARKS XX	9. PLOTTING OF SEXTANT FIXES XX	10. PHOTOGRAMMETRIC PLOT REPORT Bridge (W.O.)	11. DETAIL POINTS Wild B-8
ALONGSHORE AREAS (Nautical Chart Data)			
12. SHORELINE CHB	13. LOW-WATER LINE CHB	14. ROCKS, SHOALS, ETC. CHB	15. BRIDGES XX
16. AIDS TO NAVIGATION RES	17. LANDMARKS XX	18. OTHER ALONGSHORE PHYSICAL FEATURES CHB	19. OTHER ALONGSHORE CULTURAL FEATURES CHB
PHYSICAL FEATURES			
20. WATER FEATURES CHB	21. NATURAL GROUND COVER CHB		22. PLANETABLE CONTOURS XX
23. STEREOSCOPIC INSTRUMENT CONTOURS XX	24. CONTOURS IN GENERAL XX	25. SPOT ELEVATIONS XX	26. OTHER PHYSICAL FEATURES CHB
CULTURAL FEATURES			
27. ROADS CHB & RES	28. BUILDINGS CHB	29. RAILROADS XX	30. OTHER CULTURAL FEATURES CHB
BOUNDARIES			
31. BOUNDARY LINES 3, XX		32. PUBLIC LAND LINES XX	
MISCELLANEOUS			
33. GEOGRAPHIC NAMES CHB	34. JUNCTIONS CHB		35. LEGIBILITY OF THE MANUSCRIPT CHB
36. DISCREPANCY OVERLAY XX	37. DESCRIPTIVE REPORT RES	38. FIELD INSPECTION PHOTOGRAPHS XX	39. FORMS RES
40. REVIEWER Charles H. Bishop C. H. Bixhop 1/27/67		SUPERVISOR, REVIEW SECTION OR UNIT Albert C. Rauck, Jr. Albert C. Rauck, Jr.	
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 R. E. Smith 10/10/67 Rev. by: R. E. Smith 10/10/67		SUPERVISOR Albert C. Rauck, Jr. Albert C. Rauck, Jr.	
43. REMARKS Field Edit applied from: Field Edit ozalid, & Field Photos. Nos. 65-S-7335, 7337, 7338, 7354			

22

Field Edit Report
Job- PH- 660I
Boston to Plum Island
T- I2973 T- I2974

General Notes

The area was field-edited during the period of 16 May through 9 of June 1967. Corrections and additions have been inked on the photographs in black except, Phot pts, nautical aids, and MHWL measurements and notes, which are in red and referenced on the discrepancy print in blue.

Rock and ledge areas were investigated at or near low water. The compilation of ledges, rock hts and location of these two features was found to be very good. Rocks verified and new ones are inked on the Photos.

All landmarks and fixed aids were inspected and are submitted on form 567 in accordance with recent field instructions.

There are no Naut landmarks recommended for Sheets T-I2973 and T-I2974. One Beacon is recommended for charts, this beacon is just northwest of Chubb Island. It was identified on Photograph 65-s-7358.

All bluffs were investigated offshore and bluffs recommended for charts are noted on the discrepancy print and referenced to photographs.

Landmark buildings were inspected from offshore and ones recommended for charting are circled on the discrepancy print and referenced to photographs.

Compilation of roads was found to be very good. Two roads recommended for charting are noted on the discrepancy print and referenced to photographs.

All piers in question were investigated and noted on the discrepancy print.

Public buildings are shown on Photos 65-s-7334, 7335, and 7337.

One submerged wreck was located near Little Misery Island and shown on photograph 65-S-7356. The submerged wreck in question near the eastern end of West Beach was not found. This area was thoroughly searched at mean low water.

All marine railways in question are noted on the discrepancy print and referenced to the photograph. There were no boat ramps found in the area of these two T- sheets.

One pipeline in question was investigated and noted on the discrepancy print and referenced to photograph.

A diagram of Salem Harbor was obtained showing the location of this pipeline. Your attention is brought to the outlet area of this pipe, this is not a shoal but the sewerage from this pipeline.

The mean high water line was investigated at several areas other than ones in question, and found to be compiled quite adequate.

Field Edit notations are inked on the following photographs:

65-7334, 7335, 7337, 7338, 7354, 7356, 7357, and 7358

Submitted by,
E.W. Hartford
E.W.hartford

19 June 1967

cc: CofP 62, CFE/ Rasure

* Field Editor submitted Form 567 stating method of location as Triangulation; but verified on the Field Photo. that it did not hold the triangulation position. It is now submitted as Photogrammetrically located.

** Field Editor did not submit Form 567, but verified on Field Photo. Photogrammetric position does not agree with Triangulation position.

*** Field Editor submitted Form 567 stating method of location as Photo., but it appears he copied position from triangulation data and also has a typographical error in the D.P. meters value in longitude.

TO BE CHARTED
NO BE REVISSED
NO BE DELETED

STRIKE OUT TWO

NONFLOATING AIDS OR LANDMARKS FOR CHARTS

Atlantic Marine Center October 20, 1967

I recommend that the following objects which have *(been removed)* 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

G. E. Smith
R. E. Smith

J. Bull, RADM, USESSA

Director, ANC

Chief of Party

STATE	MASSACHUSETTS			POSITION						METHOD OF LOCATION AND SURVEY NO.	DATE OF LOCATION	HARBOR CHART	INSHORE CHART	OFFSHORE CHART	CHARTS AFFECTED	
	CHARTING NAME	DESCRIPTION	SIGNAL NAME	LATITUDE		LONGITUDE		DATUM								
				°	'	"	D.P. METERS		°							'
		SALEM HARBOR APPROACHES														
		MAIN CHANNEL														
	LIGHT	Hospital Point Range Front Light (Hospital Point Lighthouse 1877)		42 32	47.026	70 51	23.304	N.A.	Triang. Verifi. T-12973 5/9/67	X	X				240, 241 1207	
	* DAYBEACON	Little Haste Daybeacon		42 32	07.2	70 50	35.8	N.A.	Photo. T-12973 5/9/67	X	X				240, 241 1207	
	DAYBEACON	Abbott Rock Daybeacon (Abbott Rock Stone Beacon 1848)		42 31	48.907	70 51	45.357	N.A.	Triang. T-12973 5/9/67	X	X				240, 241 1207	
	LIGHT	Fort Pickering Light (Fort Pickering Lighthouse 1877)		42 31	34.99	70 52	01.09	N.A.	Triang. T-12973 5/9/67	X	X				240, 241 1207	
	**DAYBEACON	Great Aquavitae Daybeacon		42 31	34.3	70 51	27.8	N.A.	Photo. T-12973 5/9/67	X	X				240, 241 1207	
		SALEM SOUTH CHANNEL														
	***DAYBEACON	Little Aquavitae Daybeacon		42 31	34.3	70 51	13.1	N.A.	Photo. T-12973 5/9/67	X	X				240, 241 1207	
		RAMS HORN CHANNEL														
	DAYBEACON	Monument Bar Daybeacon (Monument Bar Beacon 1916)		42 32	22.924	70 52	25.555	N.A.	Triang. Verifi. T-12973 5/9/67	X	X				240, 241 1207	

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

USCOMM-DC 36485-2

24

REVIEW REPORT T-12973

SHORELINE

December, 1973

61. GENERAL STATEMENT:

See summary which is page 6 of the Descriptive Report.

62. COMPARISON WITH REGISTERED TOPOGRAPHIC SURVEYS:

A visual comparison was made with Registered Survey Number 3765, 1919 at 1:10,000 scale. There is only a general agreement because of time and datum difference between the two surveys.

This survey superseded the prior listed survey for nautical chart construction purposes.

63. COMPARISON WITH MAPS OF OTHER AGENCIES:

A comparison was made with USGS Quadrangle Marblehead North, MASS., 1956 at 1:24,000 scale. There is good general agreement between the two surveys.

64. COMPARISON WITH CONTEMPORARY HYDROGRAPHIC SURVEYS:

Comparison was made with Boat Sheets H-9009, 9010 and 9046, all dated 1968 at 1:5,000 scale. There is good general agreement.

65. COMPARISON WITH NAUTICAL CHARTS:

Comparison was made with Chart 240 dated July 29, 1972, at 1:10,000 scale. There are some differences in shoreline and rocks not shown on this survey. These are noted on the discrepancy overlay.

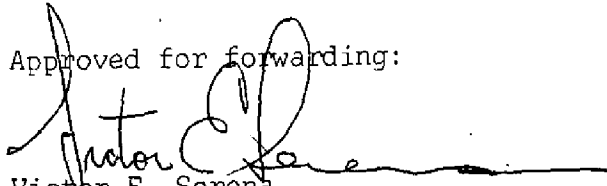
66. ADEQUACY OF RESULTS AND FUTURE SURVEYS:

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

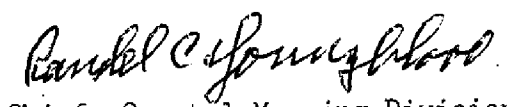
Reviewed by:

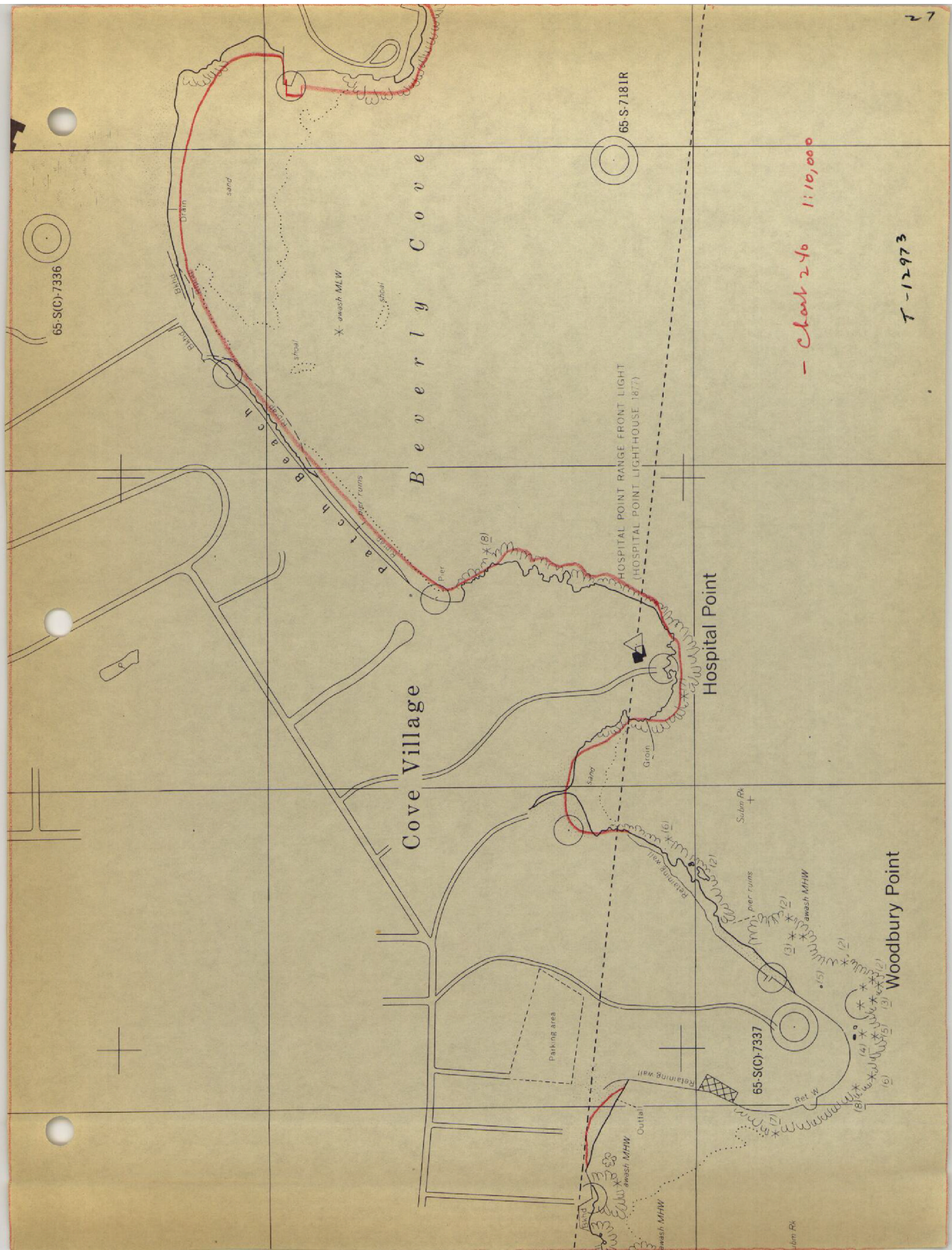
Bernard Kurs
Bernard Kurs
Cartographer

Approved for forwarding:


Victor E. Serena
Chief, Photogrammetric Branch, AMC

Approved:


Chief, Photogrammetric Branch *for* Chief, Coastal Mapping Division



- Chart 240 1110,000

T-12973

y = 566.000 FT.

Central Cemetery

- Chart 240
1:10,000

T-12973

33'

62

62

127

y = 564.000 FT.

32'45"

127

O Pile

Sea wall sand

Groin

* 101

Outfall

Outfall

Mackerel
Cove

Retaining wall

+ 5

Beverly

32'30"

Harbor

x = 562.000 FT.

65 S 7180R

33'15"

1/2" = 566,000 FT.

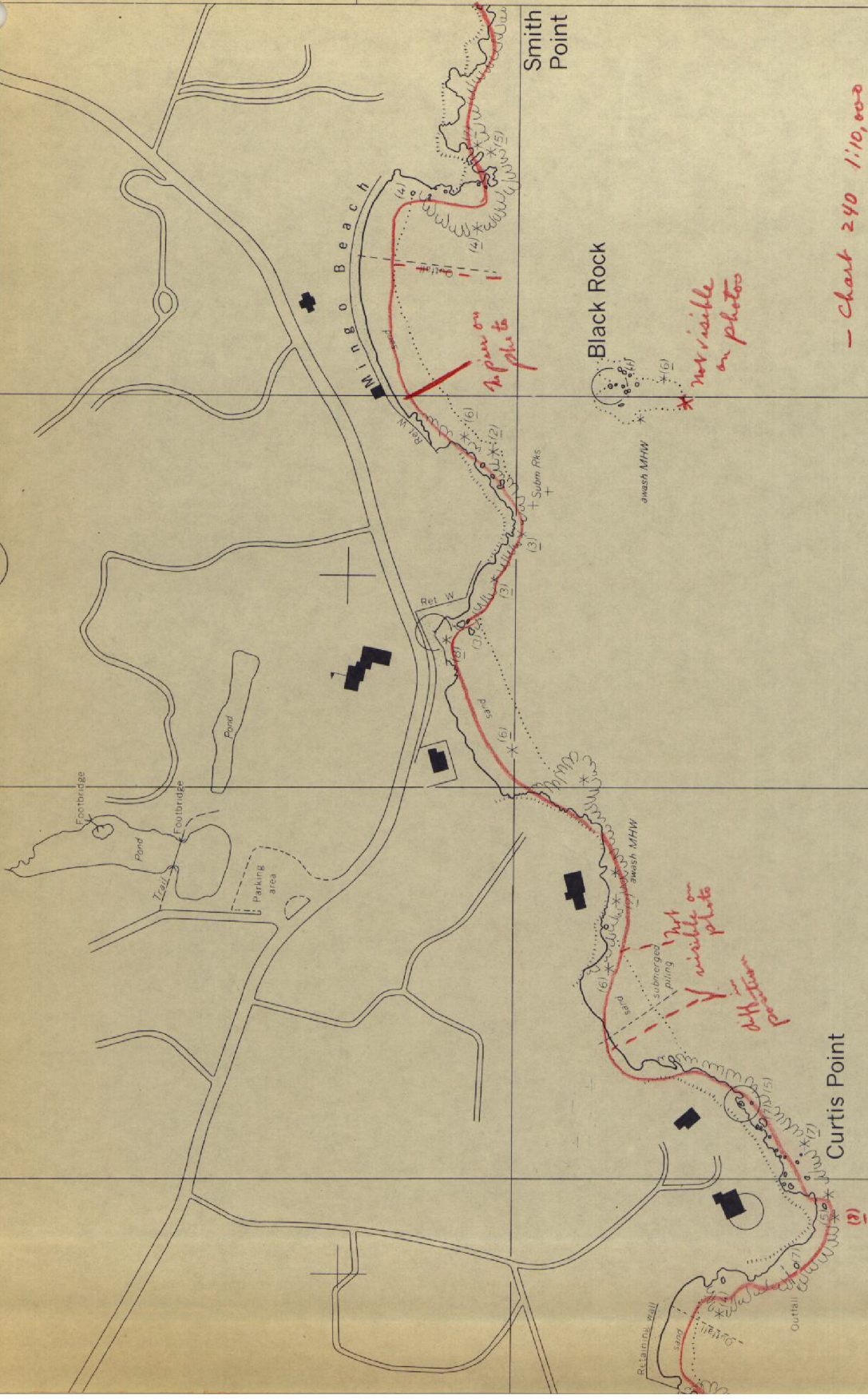
33'

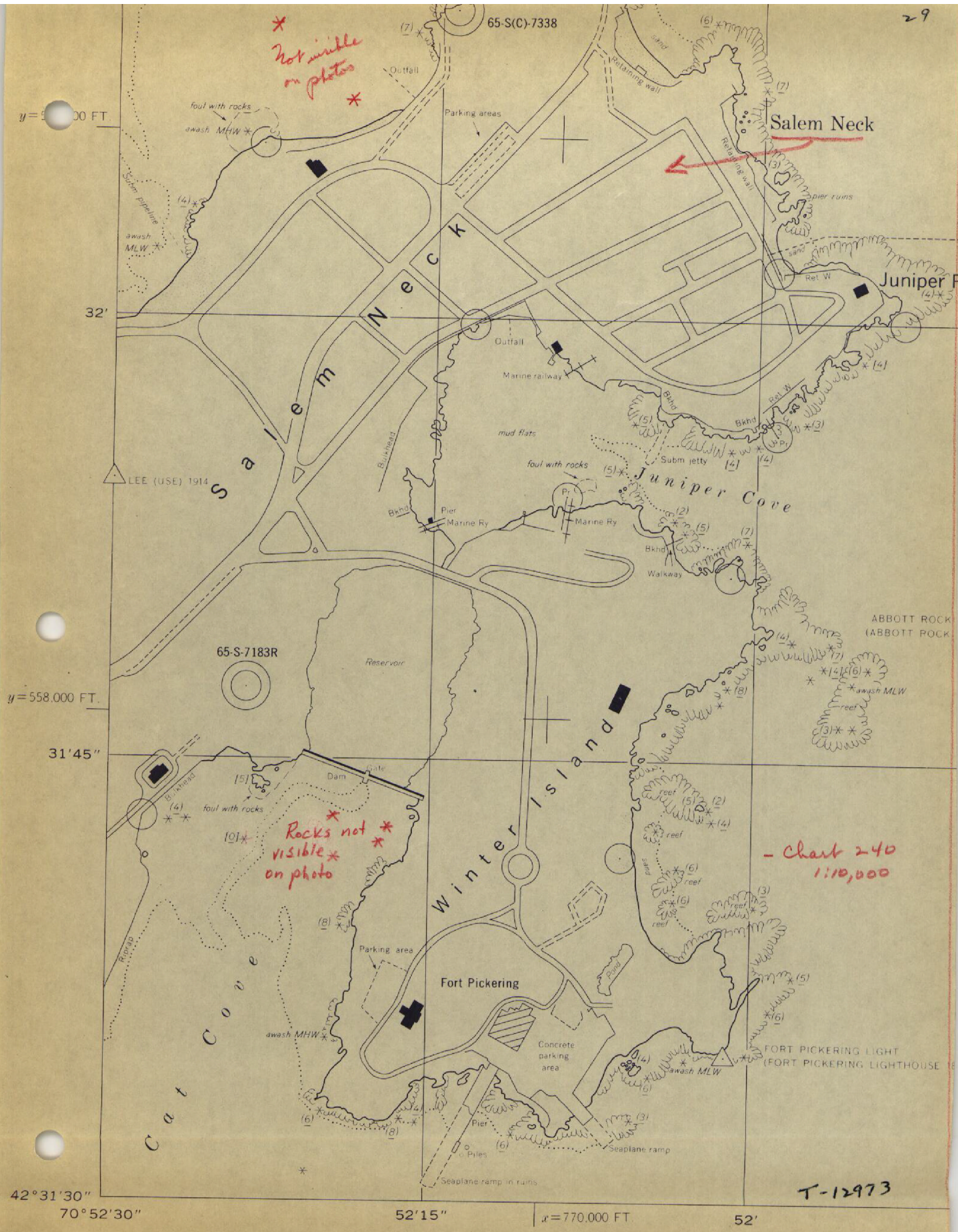
32'45"

1/2" = 564,000 FT.

T-12973

- Chart 240 1/10,000





*
not visible
on photos
*

Salem Neck

Juniper F

Juniper Cove

ABBOTT ROCK
(ABBOTT ROCK)

Winter Island

Fort Pickering

- Chart 240
1:10,000

FORT PICKERING LIGHT
(FORT PICKERING LIGHTHOUSE)

T-12973

y = 558,000 FT.

y = 558,000 FT.

42°31'30"

70°52'30"

52°15"

x = 770,000 FT.

52'