

7724

Diag. Cht. No. 1207-2

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey HYDROGRAPHIC

Field No. Wa-Hi-025148 Office No. H-7724

LOCALITY

State Massachusetts

General locality Docks Of

Locality Boston Harbor

1948

CHIEF OF PARTY

W.F. Malnate

LIBRARY & ARCHIVES

DATE Sept. 23, 1949

7724

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

REG. NO. H-7724

HYDROGRAPHIC TITLE SHEET

The Hydrographic Sheet should be accompanied by this form, filled in as completely as possible, when the sheet is forwarded to the Office.

Field No. Wa-H1 025148

REGISTER NO. H-7724

State MASSACHUSETTS

General locality ~~BOSTON INNER HARBOR~~

Locality HARBOR
~~DOCKS OF BOSTON, EAST BOSTON, CHASE BOSTON AND CHELSEA~~

Scale 1:2500 Date of survey 17-24 JUNE, 1948

Vessel WAINWRIGHT & HILGARD

Chief of Party W.F. MALNATE

Surveyed by W.J. CHOVAN

Protracted by P.E. JONES

Soundings penciled by P.E. JONES

Soundings in ~~DELUSSES~~ feet

Plane of reference MLW

Subdivision of wire dragged areas by

Inked by

Verified by

Instructions dated 15 FEB. 1940 and 15 MAR., 1948

Remarks:

DESCRIPTIVE REPORT

to accompany H-7724

HYDROGRAPHIC SURVEY NUMBER H-~~6995a~~ additional work
7724

Dock Surveys, consisting of three partial sheets Nos.
H-6995b, 7063 & 501.

Scale 1:2500

17 - 24 June 1948

Ships WAINWRIGHT & HILGARD - W.F. Malnate, Chief of Party
Surveyed by Walettr J. Chovan, Lt. Comdr. C&GS

A. PROJECT.- Project Cs-246; original instructions dated 15 February 1940 (Oceanographer); supplemental instructions dated 15 March 1948 (WAINWRIGHT & HILGARD).

B. SURVEY LIMITS AND DATES.- This survey covers the additional work in the slips of the dock area of Boston, South Boston, East Boston and Charlestown, that were not surveyed in previous years. These surveys were done on a scale of 1:2500 and all are in the limits of Survey H-6995a; 1940⁴ Scale 1:5000.

Five days fieldwork was done between 17 June to 24 June 1948.

This field work was done while negotiations were in progress in obtaining two launches from either the U.S. Navy or the U.S. Coast Guard and while preparing boat sheets for additional work in Boston Harbor.

C. VESSELS & EQUIPMENT.- The Army Mine Yawl No. M-306 operating from the Ships WAINWRIGHT and HILGARD was used in the survey.

Model 808A portable fathometer No. 63 was used in taking the sounding. The transmitting and receiving elements were placed inside the hull of the launch just aft of the engine and held in place with pitch.

D. TIDE & CURRENTS STATIONS.- The Washington Office furnished the necessary tidal data from the primary tide station, Boston Mass. for the reduction of soundings. No time or range corrections were applied to the tidal data in reducing the soundings.

The tidal data furnished was on 75th meridian time and 60th meridian time was used in the field.

No current observation were made.

F. CONTROL STATIONS.- The control used were signals located by pricking from inspection of Adjacent Topographic detail on the planimetric map which was compiled from air photographs, supplemented by direct tape measurements from such signals located to furnished additional control.

In general the length of the slip side of the dock was measured, using the outer corner as a signal and starting point and taping in two or more signals along this dock face, as measurement progressed.

(1942)

G. SHORELINE & TOPOGRAPHY.- The blown up sections of the topographic map No. T-5771 were obtained from the Boston Field Station and were used as Boat Sheets in making these surveys. These sections have been given a number a previous year, therefore these numbers were retained and are as follows; 7063, 6995b and 501.

The topography at the Coast Guard Base, Constitution Wharf as shown on sheet 7063 is changed. The correct topography is as shown on *US Coast Guard* drawing No. 4256 and is submitted with this survey.
Op 45528 (1946)

The dock, as shown on sheet 7063, on the North East side of the Charlestown Bridge has been removed. The brick wall between signals ICE and JAP is the only part of the building remaining. The area to the east has been dredged and a new dock is now under construction. The shore line as it now exists, was located by sextant fixes, and has been drawn on the sheet in red. It is estimated that about 75% of the piles were driven at the time of this survey. *USN Survey of 1945 (Op. 45527)*

The topography of the Navy Yard, Boston Sheet 7063 is as shown on *U.S.N.* P.W. drawings No. 455 - 368 and 455 - 381.
(Op 45526 (1947) (Op 45525 (1948))

There is a small change in the dock area at the coal wharf East Boston. Signal EMO was located by a sextant fix and measurements and Azimuths of the dock were taken with a 30 meter tape and sextant. The measurements and fix are recorded in the sounding volumes. *(Vol. 3, pg. 27)*

The topography of the docks as shown on sheet 501, west of the Meridian Bridge, in Chelsea is changed. There is submitted with this *U.S.N.* survey, P.W. Drawing No. 623-455-3 showing the correct layout of these docks.
Op 45527 (1945)

H. SOUNDINGS.- The portable fathometer, type 808A, No. 63 was used in obtaining soundings for this survey.

FATHOMETER CORRECTIONS

No Serial Temperature and Salinity Observation were taken on this survey, since all depths could be controlled for corrections by Bar Check Observations.

Settlement and squat were found to be negligible for M-306.

All bar check readings for the various depths were tabulated separately. Mean values for all depths were obtained and correction curves were constructed. A tabulation of corrections was taken from the curve.

The Bar Check, on two half days, 21 June, "C" day PM, and 22 June, "d" day PM, corrections were considerably larger. The correction for the soundings during the period noted were taken direct from the Bar Check for that period. It was noted that the surveys were at the lower end of the Bay and at high tide in both cases which probably accounted for the much larger correction.

The tabulations and correction curves are attached to this report.

No hydrography could be done in the dock area at the Navy Yard, South Boston as part of the Mothball Fleet is secured in the docks. There is submitted P.W. Drawing No. 981-455-16, Hydrographic Surveys of this area made by the U.S. Navy. *Sp. 38322 (1943)*

The drawings furnished by other agencies as mentioned under "G" are also Hydrographic Surveys.

I. CONTROL OF HYDROGRAPHY.- The sounding lines were controlled by sextant angle fixes to shore objects. In numerous instances estimated distance and bearings to shore objects were used.

J. ADEQUACY OF SURVEY.- The individual slips surveyed are complete, but survey of all slips called for could not be accomplished, due to ships occupying the docks.

Respectfully submitted

Walter J. Chovan
Walter J. Chovan
Lt. Comdr. C&GS

Approved and Forwarded

W.F. Malnate
W.F. Malnate
Chief of Party, C&GS

LIST OF SIGNALS

H-7724

Signals pricked from Air-Photo Compilation T-5771:

ADD	BUS	CUR	FEN	ION	KID	LOW	NA	PAB	SU
AGE	BOB	DIM	FUN	ICE	KIM	LES	NOR	PO	SIL
ABE	CAT	ERG	FOUR	JO	LT	MAG	OAK	RE	TAP
ALP	CLU	EGO	HAR	JAW	LIP	NIT	OIL	RAG	TWO

Signals taped from pricked stations:

AT	CAB	*EMO	GUM	IN	KED	MAL	PEN	STY	USE	YEA
BOX	COO	EEL	HO	IRK	LAX	NIL	PIN	SAP	VAL	YEL
BO	DAY	FI	HUM	ION	LO	NOD	PAL	SAN	WAS	YES
BIG	DER	FEN	HUG	JOE	LAD	NIG	QUO	SIGN	WHY	ZOO
BAG	DIX	FED	IRA	JAP	LEO	OUT	RIM	SIC	WAL	
CAR	EN	GAS	INK	KEY	MID	ORA	ROT	TAN	WAD	

Located by sextant cuts on pricked stations:

HER
ABE

* See Note - Vol. #³2, page 27.

Hydrographic Surveys (Chart Division)

HYDROGRAPHIC SURVEY NO. *H-7724*

Records accompanying survey:

Boat sheets *.4*.; sounding vols. *.4*.; wire drag vols.;
 bomb vols.; graphic recorder rolls *1* envel.
 special reports, etc. *Tides: Hourly Heights*.....

The following statistics will be submitted with the cartographer's report on the sheet:

Number of positions on sheet		<i>515</i>
Number of positions checked		<i>337</i>
Number of positions revised		<i>2</i>
Number of soundings revised (refers to depth only)		<i>53</i>
Number of soundings erroneously spaced		<i>3</i>
Number of signals erroneously plotted or transferred		<i>0</i>
Topographic details	Time	<i>16 hrs</i>
Junctions	Time	<i>26 hrs</i>
Verification of soundings from graphic record	Time	<i>23 hrs</i>

Verification by *Poland E. d'atta* Total time *105 hrs* Date *11-25-49*

Reviewed by *Luiz Jeskeind* Time *12* Date *3-13-50*

STATISTICS

H-7724

<u>Date</u>	<u>Day Letter</u>	<u>Vol. No.</u>	<u>Stat. Mi. Sdg.</u>	<u>No. Positions</u>	<u>Launch</u>
6-17-48	a (Red)	1	2.9	94	M-306
6-18-48	b (Red)	1	0.1	7	M-306
6-21-48	c (Red)	1	3.7	83	M-306
6-22-48	d (Red)	1	1.0	40	M-306
6-24-48	e (Red)	1	0.2	15	M-306
6-22-48	a (Green)	2	.3	18	M-306
6-18-48	a (Blue)	3	3.9	128	M-306
6-21-48	b (Blue)	3	3.1	121	M-306
6-24-48	c (Blue)	4	.3	9	M-306
		Totals	15.5	515	

ADDENDUM

To Accompany

HYDROGRAPHIC SURVEY H-7724 (Field No. Wa.Hi.-025148)

H-7724 is a composite of three boat sheets. In the field, these were treated as separate surveys resulting in a duplication of day letter colors. Different colors were used to distinguish the separate surveys rather than the launches used. The entire survey was done with Launch M-306.

Respectfully submitted,

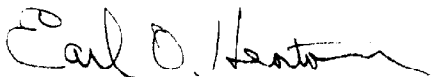


Hugh L. Proffitt
Cartographer

Norfolk, Virginia

16 September 1949

Approved and forwarded.



Earl O. Heaton
Supervisor, SE Dist.

GEOGRAPHIC NAMES

Survey No. H-7724

Name on Survey	Source										
	A	B	C	D	E	F	G	H	K		
Massachusetts			(for title)							USGB	1
Boston Harbor			" "								2
											3
East Boston											4
Chelsea River											5
Charlestown											6
Little Mystic Channel										USGB	7
											8
Charles River											9
Boston										USGB	10
Mystic River											11
											12
											13
											14
											15
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											18
											19
											20
											21
											22
											23
											24
											25
											26
											27

Names underlined
in red are
approved. 7-29-49
L. Heck

If desired, names of
individual wharves
can be added. L.H.

DIVISION OF CHARTS

REVIEW SECTION - NAUTICAL CHART BRANCH

REVIEW OF HYDROGRAPHIC SURVEY

REGISTRY NO. H-7724

FIELD NO. WA-HI-025148

Massachusetts, Docks of Boston Harbor
Surveyed in June, 1948 Scale 1:2,500
Project No. CS-246

Soundings:

Control:

808-A Fathometer

Sextant fixes on shore signals

Chief of Party - W. F. Malnate
Surveyed by - W. J. Chovan
Protracted by - P. E. Jones
Soundings plotted by - P. E. Jones
Verified and inked by - R. E. Latta
Reviewed by - I. M. Zeskind, 12 March 1950
Inspected by - R. H. Carstens

1. Shoreline and Signals

The shoreline originates with air-photographic survey T-5771 (1942). Shoreline revisions shown in red are from the present survey. The piling shown on T-5771 in lat. 42° 22' 46.5", long. 71° 02' 32.3", were not found during the present survey.

The source of the control is adequately described in the Descriptive Report.

2. Sounding Line Crossings

Depths at crossings are in adequate agreement.

3. Depth Curves and Bottom Configuration

The usual depth curves are adequately shown except where ships were moored.

This is a survey of several berthing areas in Boston Harbor.

4. Junctions with Contemporary Surveys

Adequate junctions were effected with H-7061 (1945) on the north, H-6995b (1944) on the southeast and H-6995a (1944) on the intervening area.

5. Comparison with Prior Surveys

H-178 (1846) 1:5,000
H-850 (1861) 1:10,000
H-1960 (1817-46-53) 1:20,000
H-1961 (1817-46-53) 1:20,000
H-2141 (1892) 1:2,500
H-2156 (1892-93) 1:10,000

A comparison between the prior surveys and the present survey reveals many changes in dock facilities. A number of new piers have been constructed and old piers have been altered. Appreciable changes in bottom are also noted in the dock areas.

The present survey is adequate to supersede the prior surveys within the common area.

6. Comparison with Chart 246 (Latest print date 9/12/49)
Chart 248 (Latest print date 12/20/48)

A. Hydrography

The charted hydrography originates principally with the previously discussed surveys which need no further consideration.

- (1) The wreck charted in lat. $42^{\circ} 22.48'$, long. $71^{\circ} 02.58'$, originating with H-6995a (1944-46), falls in present depths of 15-25 ft. Close development of this area on the present survey disproves the existence of this wreck. The wreck symbol should, therefore, be deleted from the chart.
- (2) The wreck charted in lat. $42^{\circ} 22.77'$, long. $71^{\circ} 02.59'$, originates with T-5771 (1942). The wreck has been removed (Chart Letter 214, 1950) and the symbol should, therefore, be deleted from the chart.

The present survey is adequate to supersede the charted information.

B. Aids to Navigation

There are no aids to navigation within the limits of the present survey.

7. Condition of Survey

- a. The field plotting was accurately done.
- b. The sounding records and Descriptive Report are complete and comprehensive.


8. Compliance with Project Instructions

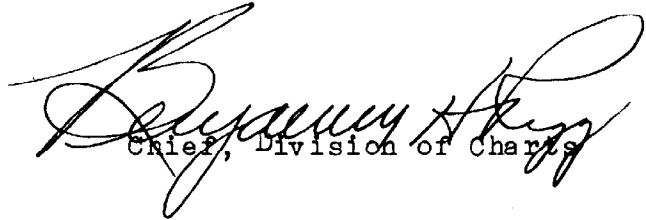
The survey adequately complies with the Project Instructions, except as noted in paragraph 9, below.

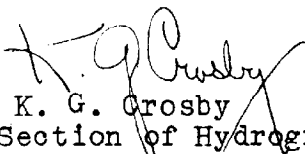
9. Additional Field Work Recommended


This is an adequate survey of the dock area. However, as noted in the Descriptive Report, a survey of all the slips called for in the Project Instructions could not be accomplished because ships were moored in the slips during the time of the survey.

Examined and approved:


H. R. Edmonston
Chief, Nautical Chart Branch


Chief, Division of Charts


K. G. Crosby
Chief, Section of Hydrography


W. M. Scaife
Chief, Division of Coastal Surveys

RHC

TIDE NOTE FOR HYDROGRAPHIC SHEET

5 October 1949

~~Division of Hydrography and Topography:~~

Division of Charts: R. H. Carstens

Plane of reference approved in
4 volumes of sounding records for

HYDROGRAPHIC SHEET 7724

Locality Boston Inner Harbor, Boston, Mass.

Chief of Party: W. F. Malnate in 1948
Plane of reference is mean low water, reading
3.3 ft. on tide staff at Boston (Appraisers Wharf)
16.3 ft. below B. M. 13 (1939)

Heights of mean high water above plane of reference is 9.5 feet.

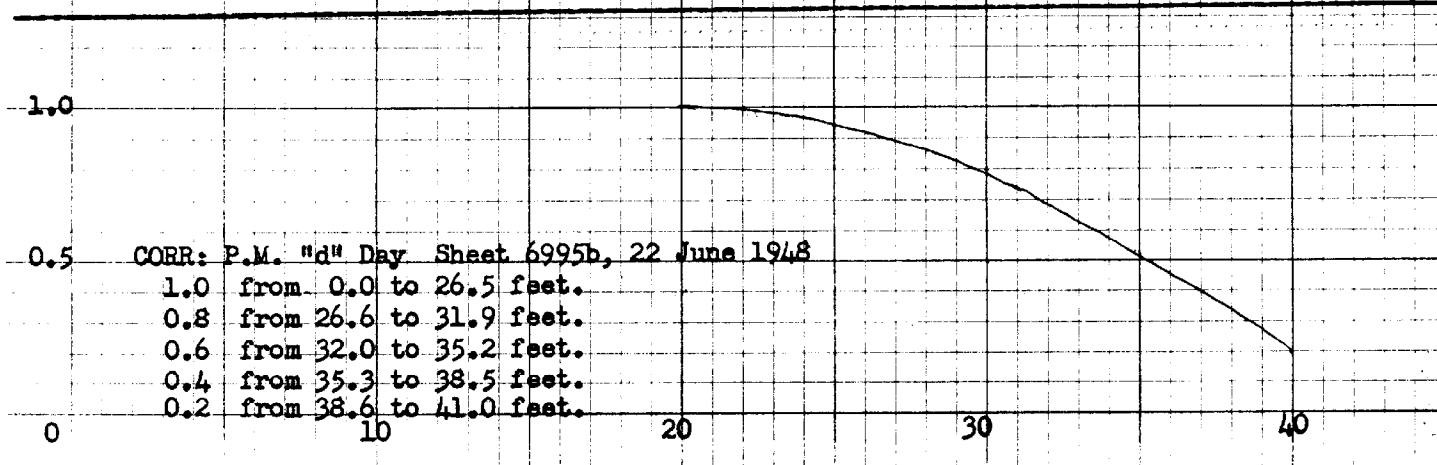
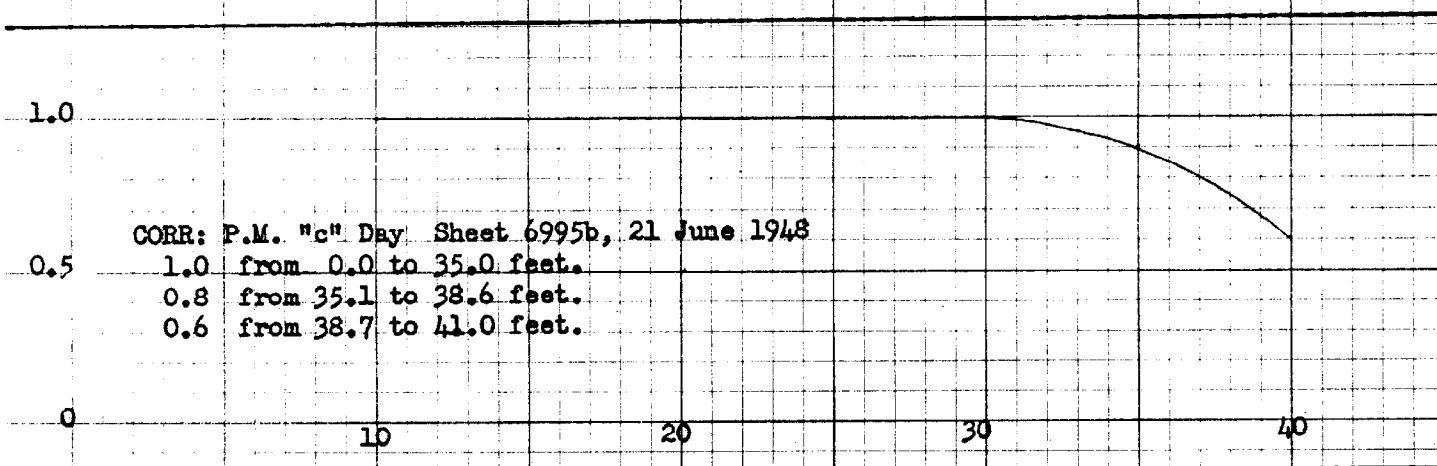
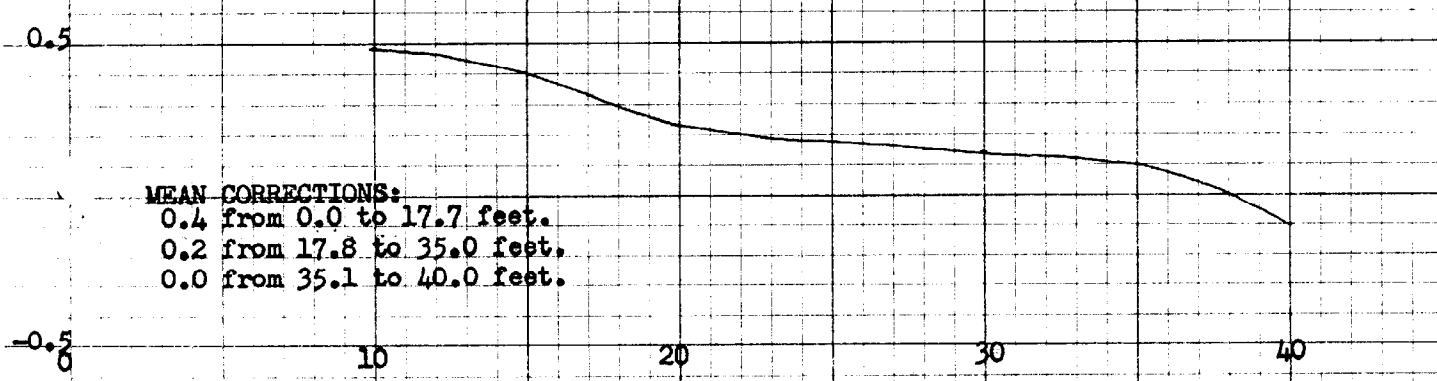
NOTE: Tide reducers for e day in Volume 1, have been corrected in red,
these corrections have been verified.

Condition of records satisfactory except as noted below:

E.C. McKay
Section
Chief, ~~Division of Tides and Currents.~~

BAR CHECK CORRECTIONS

PROJECT NO. CS 246			FATHOMETER NO. 63						
DATE	DAY LTR.	SHEET NO.	BAR DEPTH CORRECTIONS						
JUNE 1948			10'	15'	20'	30'	35'	40'	50'
17	a	6995b	0.5	0.4	0.1	-0.05		-0.2	
18	b	6995b	0.6		0.2	0.0			
18	a	7063	0.55		0.3	0.2	0.0		
21	b	7063	0.55		0.4	0.2			
21	c	6995b	1.0		1.0	1.0	0.9	0.6	Use individually
22	d	6995b	1.0		1.0	0.8		0.2	" "
22	a	501	0.5		0.2	0.4	0.2		
24	e	6995b	0.4		0.2	0.2	0.5R		
24	c	7063	0.35		0.2	0.0		0.0	
TOTALS			3.45	0.4	1.6	0.95	.2	-0.2	
MEAN CORRECTIONS			0.49	0.4	0.23	0.14	.1	-0.1	



H-7724

U. S. COAST & GEODETIC SURVEY

LIBRARY

SEP 20 1913

ACC. No. S-2679

NAUTICAL CHARTS BRANCH

SURVEY NO. H-7724

Record of Application to Charts

DATE	CHART	CARTOGRAPHER	REMARKS
7/27/50	248	<i>[Signature]</i>	Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
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			Before After Verification and Review

M-2168-1

A basic hydrographic or topographic survey supersedes all information of like nature on the uncorrected chart. Give reasons for deviations, if any, from recommendations made under "Comparison with Charts" in the Review.