

7082

Diag'd. on Diag. Ch. No. 1257

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey Hydrographic

Field No. Ta-05145 Office No. H-7082

LOCALITY

State Florida

General locality West Coast (Tampa Bay)

Locality St. Petersburg

1945

CHIEF OF PARTY

Lieutenant Commander J. C. Bose

LIBRARY & ARCHIVES

DATE March 13, 1946

7082

HYDROGRAPHIC TITLE SHEET

FIELD NO. Ta 05145

STATE Florida ✓
GENERAL LOCALITY ~~West Coast~~ {Tampa Bay} ✓
LOCALITY St. Petersburg ✓
SCALE 1:5,000 DATE OF SURVEY December, 19 45 ✓
BOAT USED U. S. C. G. No. 25679
CHIEF OF PARTY Lieutenant Commander J. C. Bose ✓
SURVEYED BY J. C. Bose ✓
PROTRACTED BY V. F. Simmons ✓
SOUNDINGS PENCILED BY VF. Simmons ✓
INSTRUCTIONS DATED 4 May 1945 (Ref. 80-DFM), 19 45 ✓
SOUNDINGS IN Feet ✓
PLANE OF REFERENCE *** Mean Low Water ✓

~~H7082~~

H7082

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY



POST-OFFICE ADDRESS:

Washington 25

4 May 1945
Reference 80-DRM

TELEGRAPH ADDRESS:

EXPRESS ADDRESS:

To: Lieut. Comdr. J.C. Bose
U.S. Coast & Geodetic Survey
1101 E. Broadway
Tampa 5, Florida

Subject: Air Photograph, St. Petersburg, Florida; new construction at Air Station.

This office is in receipt of a letter from the Commanding Officer, Coast Guard Air Station, St. Petersburg, Florida, a copy of which is enclosed. The photograph referred to shows the new construction along the waterline at the airfield, which is believed to be completed. The photograph is numbered C 2172, taken 3 April 1945, copy being forwarded.

As soon as practicable, please call on the Commanding Officer of the Air Station and advise him that this office is preparing the prints he requested; and ascertain if he can furnish, or inform you where you can obtain, a copy of the hydrographic survey showing the condition of the water areas immediately adjacent to the new construction. If you are unable to obtain a reliable survey from the Air Station, the U.S. Engineers, or some other source, please submit an estimate for a hydrographic examination of sufficient scope to permit correcting our chart No. 587.

If facilities are available, please determine the position of a suitable point at each end of the newly filled area, for use in applying the photograph to the chart.

Enclosure

(S) G. T. Rude
Acting Director

DESCRIPTIVE REPORT TO ACCOMPANY HYDROGRAPHIC

SURVEY H-7082 (FIELD NO. Ta 05145)

ST. PETERSBURG, FLORIDA, DECEMBER, 1945

SCALE 1:5,000

J. C. Bose,
Chief of Party
TAMPA PHOTOGRAMMETRIC OFFICE

A. Project No number was assigned to this project. The survey is a small area and was made several months after the receipt of a letter from the Acting Director, dated 4 May 1945, file 80-DEM. This letter instructed Lieutenant Commander J. C. Bose to try to obtain from other sources, a copy of a survey which would serve to correct the existing chart (No. 587) of this bureau, following the changes made in the construction of the Airfield at St. Petersburg. In the absence of such a survey, estimates for a hydrographic investigation were to be submitted.

Inquiries were made of the Florida Engineering Company, the U. S. Engineers, and the Coast Guard and it was determined that no survey had been made since construction work had been undertaken. Moreover, at the time of the receipt of the letter from the Director and off and on for several months thereafter, dredging was carried on.

In the meantime, the U. S. Engineers had requested the Civil Aeronautics Authority to make a survey. The Tampa Photogrammetric Office did not immediately undertake the survey because it did not have a boat, sounding equipment, or personnel to spare. However, by December, it was apparent that no survey would be made within a reasonable time unless the Coast and Geodetic Survey personnel would make it.

Accordingly, a request for co-operation was made of the Commanding Officer of the St. Petersburg Coast Guard Group. Although the Coast Guard establishment also was short-handed, that organization furnished a twenty-five foot launch and a motor-machinist's mate. A hydrographic party was then made up of photogrammetric personnel, and the survey begun on 11 December 1945. Previously, a tide staff had been established and adequate control established by means of the planetable.

B. Survey Limits and Dates The area surveyed lies between Latitude 27° 45' and 27° 46!5; between Longitude 82° 37' and 82° 38!2. It extends from the municipal pier southward past the Albert Whitted Airport to the Coast Guard Base.

The hydrographic survey was begun on 11 December 1945 and was completed on 28 December 1945.

The area joins or overlaps the following prior surveys:

- H-4575 (1:3000) 1926
- H-4575a (1:3000) 1927
- Bp-23181 (1:10000) 1929 (U.S.E.)
- Bp-37029 (1:1000) 1943 (U.S.E.)

C. Vessel and Equipment The boat used was a twenty-five foot launch, equipped with pilot house control, furnished by the Coast Guard. The launch carried the number 25679. The pilot house was forward, leaving a space aft free of obstructions. The launch could not be throttled down to the speed desired, so that it was necessary to tow two buckets as a drag.

The sounding equipment consisted of a mahogany wire - centered leadline having a twelve pound lead. This leadline was obtained from the "Lydonia". It was found to be well seasoned and not to vary in length.

Many of the markings were from one to three tenths of a foot in error, but they remained constant and never varied from the comparison shown on page 71, Volume 1.

Hydrographic sextants were used to take angles to determine positions by three point fixes.

D. Tide Station An old tide station of 1924 was recovered. Bench marks No. 1, 3 and 4 were recovered. A plain staff was established at the eastern extremity of the Atlantic Coast Line R. R. pier in Latitude 27° 00!2, Longitude 82° 37!4. Staff readings were recorded by an observer during the time hydrography was carried on. Observations at this staff were used for all soundings shown on the sheet.

E. Smooth Sheet The smooth sheet was plotted on standard cold pressed Whatman's paper. The projection was constructed by hand. All of the signals were transferred from the plane table sheet by the tracing paper method. The shoreline from station Abe to Station Lite, and from station Mas to station Rig was taken from aerial photograph number C-2172, pantographed to scale on tracing paper and transferred to the sheet. The remaining shoreline was transferred from the plane table sheet by the tracing paper method. The transfer of signals and shoreline has been verified.

F. Control Stations Some of the control consists of triangulation stations established at various times between 1925 and 1941.

Most of the control points were determined by means of the planetable on an aluminum mounted sheet.

A list of all signals used is attached to the inside cover of Volume No. 1.

G. Shoreline and Topography The shoreline was mostly run in on an aluminum mounted sheet by planetable methods. Some of the shoreline, especially many small docks and landings, were taken from an aerial photograph, as stated in paragraph "E".

The shoreline has been undergoing change as the result of dredging and construction. It is also possible that further changes will be made. When the construction is completed, final changes will be made on the topographic sheet, which will then be submitted. It is believed that the shoreline as shown on this hydrographic sheet will remain essentially unchanged. Most of the shoreline change has taken place at the Albert Whitted Airport.

The low water line is not defined by soundings because much of it consists of retaining walls and docks. Furthermore, because of the small range of tide, it was impossible to operate the launch over the low water line.

H. Soundings Soundings were taken with a standard leadline and a twelve pound lead. No sonic equipment was available.

I. Control of Hydrography All positions were determined by the standard method of visual sextant fixes.

J. Adequacy of Survey It is believed that the survey is adequate for the purpose for which it was intended. There are a few spots which the Chief of Party would have liked to devote a little more time; however, it was felt that the photogrammetric personnel was needed back in the Tampa Office.

One spot which was not thoroughly investigated is the eleven foot spot in Latitude 27° 45'6", Longitude 82° 37'2". The eleven foot depth shown on previous surveys was duplicated but no development was done, This shoal, however, is north of the dredged channel. ^{10 ft. on H-4565(1926)}

The water area between signals Vim and Arm was a seaplane anchorage. On account of seaplanes, mooring buoys, and connecting cables, it was not practicable to take soundings in this area.

A sounding of 6½ feet just off signal Leo was obtained between positions 81C and 82C. This area was later developed and considerable time was spent drift sounding. However, the 6½ foot depth was not obtained again. Nevertheless, it is believed that such a shoal does

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exist as the mate of a small vessel moored to the small pier said that he knew of a shoal spot in that vicinity.

The area south of signal Jug was not sounded out because on D-day a dredge was operating west of signal Lop and it was assumed the depths were subject to change. Also, suction lines presented obstacles in that area.

K. Crosslines Inasmuch as soundings seemed to agree well with old soundings except in newly dredged areas, few cross lines were believed necessary. Such as were run were in good agreement with the main lines.

L. Comparison with Prior Surveys Junctions and overlaps were made with the prior Coast and Geodetic Survey and U. S. Engineers surveys enumerated in paragraph B. It is believed that this and prior surveys are in good agreement except for the areas which were subject to structural changes.

M. Comparison with Chart A comparison with Chart No. 587, having the print date 30 June 1945 shows satisfactory agreement except for artificial shoreline changes and the recent dredging.

See Rev.,
par. 6a

N. Dangers and Shoals A sounding of $6\frac{1}{2}$ feet was obtained in Latitude $27^{\circ} 45' 1163.4$ meters, Longitude $82^{\circ} 38' 116.0$ meters; southwest of signal Leo. See the fifth sounding following 81C, Volume 1, page 58.

P. Aids to Navigation Shortly after the completion of this hydrographic survey, several changes were made in the aids to navigation marking the ship channel. Aids which were removed and new aids established have been reported on Form 567. Additional information will be submitted with the planetable sheet.

Q. Landmarks for Charts. No new landmarks need be charted.

R. Geographic Names No new geographic names are applicable.

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J. C. Bose

J. C. Bose,
Chief of Party.

NON-FLOATING AIDS

DESCRIPTION	SIGNAL NAME	DEPTH AT AID	POSITION	METHOD OF LOCATION	DATE
St. Petersburg Channel Light No. 3	Tre	18.5'	Lat 27° 45' 911.2(935.7) Lon 82° 36' 1563.7(79.4)	Planetable	12/7/45
St. Petersburg Channel Beacon No. 6	Lam	10.0'	Lat 27° 45' 1020.9(825.9) Lon 82° 37' 914.5(728.5)	"	"
St. Petersburg Channel Light No. 7 *			Lat 27° 45' 911.7 Lon 82° 37' 948.8	"	1/9/46
St. Petersburg Channel Light No. 9 **			Lat 27° 45' 912.7 Lon 82° 37' 1624.2	"	1/30/46

FLOATING AIDS

St. Petersburg Channel Lighted Buoy No. 1		23.5'	Lat 27° 45' 770.7(1076.1) Lon 82° 36' 1210.0(433.0)	Sextant	12/13/45
St. Petersburg Channel Lighted Buoy No. 2		20.5'	Lat 27° 45' 1070.0(776.8) Lon 82° 36' 1547.6(95.5)	Planetable	1/30/46
St. Petersburg Channel Black Buoy No. 4			Lat 27° 45' 1036.3(810.5) Lon 82° 37' 462.5(1180.6)	"	12/7/45
St. Petersburg Channel Red Buoy No. 5			Lat 27° 45' 903.0(943.8) Lon 82° 37' 402.6(1240.5)	"	"

NON-FLOATING AIDS REMOVED

St. Petersburg Channel Front Range	Wat			(These two range markers were removed at the time Lights 7 and 9 were built)	
St. Petersburg Channel Rear Range	Obi				

* Light was submitted on Form 567 January 11, 1946
 * Light was submitted on Form 567 February 1, 1946.

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STATISTICS FOR HYDROGRAPHIC SURVEY H- (1945)

LAUNCH C. G. 25679 T_a-05145

DATE 1945	DAY LETTER	VOL. NO.	SOUNDINGS	NO. POSITIONS	SOUNDINGS STATUTE MILES
Dec. 11	a	1	265	74	6.7
Dec. 12	b	1	582	131	13.2
Dec. 13	c	1	414	96	6.5
Dec. 14	d	1 and 2	514	108	8.2
Dec. 20	e	2	395	115	5.5
Dec. 21	f	2	165	165	2.5
Dec. 28	g	2	157	157	2.7
TOTALS			2492	846	45.3

TIDE NOTE

A fixed tide staff was maintained at the eastern end of the Atlantic Coast Line Railroad pier, Latitude $27^{\circ} 46' 372.0$ m., Longitude $82^{\circ} 37' 743.5$ m.

The staff was connected by wye levels to bench marks established in 1924 and 1925.

Plane of mean low water corresponds to a reading of 6.53 on the staff.

All soundings on the sheet were reduced by observations on this staff. No time or height corrections were applied to the observations.

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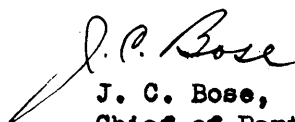
APPROVAL SHEET

The field work for this hydrographic revision, including the plotting of the boat sheet, was done under my immediate supervision. ✓

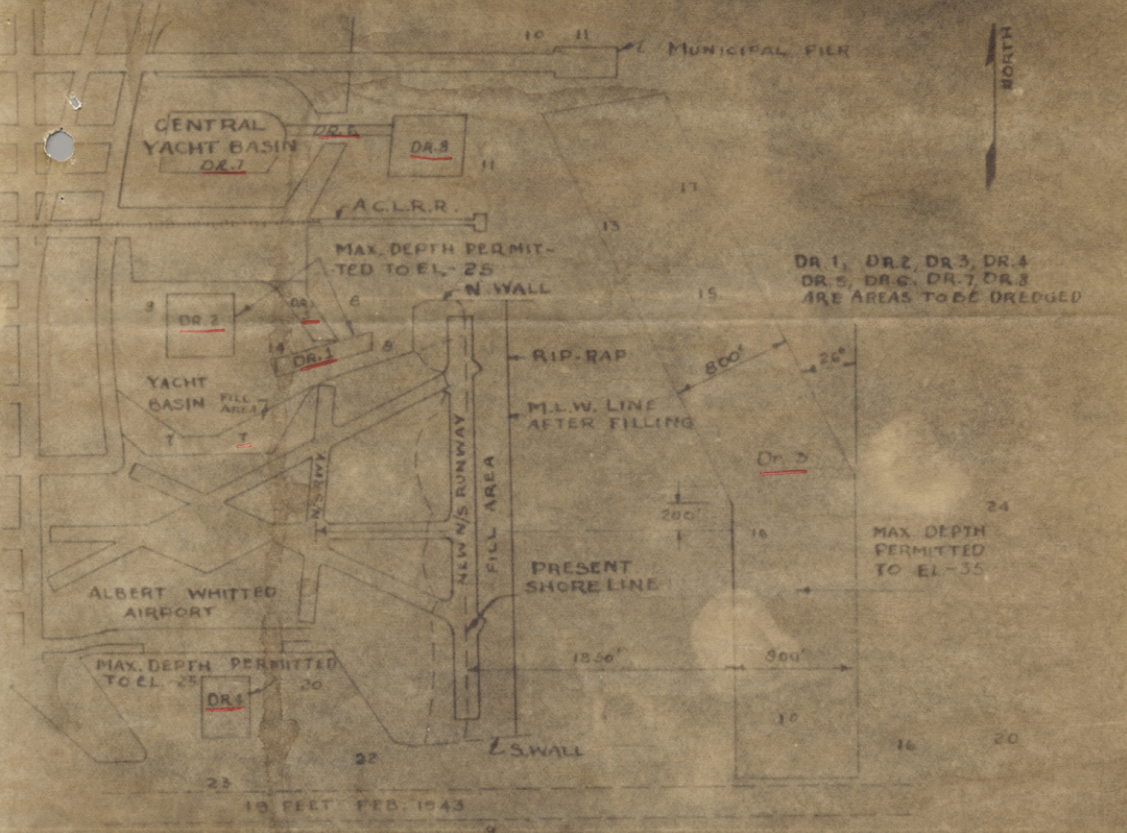
Moderate supervision was exercised over the plotting of the smooth sheet but a thorough review was not made. The sheet and the records are herewith approved. ✓

I believe that the survey is adequate.

Because of development and probable future construction changes, a new survey may be indicated in two or three years. Part of the area will no doubt be surveyed from time to time by the U. S. Engineers. ✓


J. C. Bose,
Chief of Party.

ST. PETERSBURG, FLA.



SOUNDINGS FROM U.S.C. & G. CHART No. 587

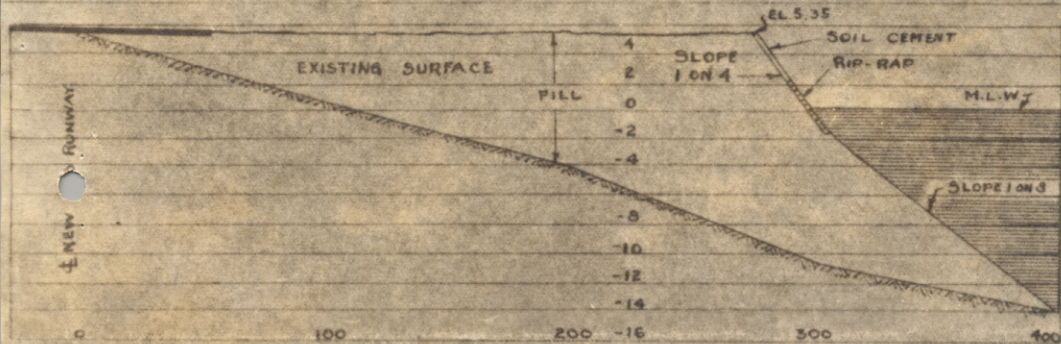
SCALE 1 IN. = 100 FT.

MEAN LOW WATER 70.0 ELEV.
MEAN HIGH " " " 71.5 "

PROPOSED DREDGING & FILL
IN TAMPA BAY AT
ST. PETERSBURG, FLA.

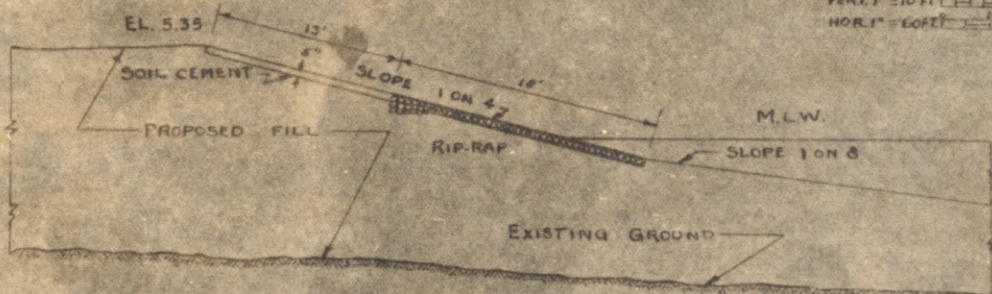
APPLICATION BY
CITY OF ST. PETERSBURG, FLA.
Date: Aug. 20 1944. REVISED Aug. 16 1945.

SHEET 1 OF 3 SHEETS



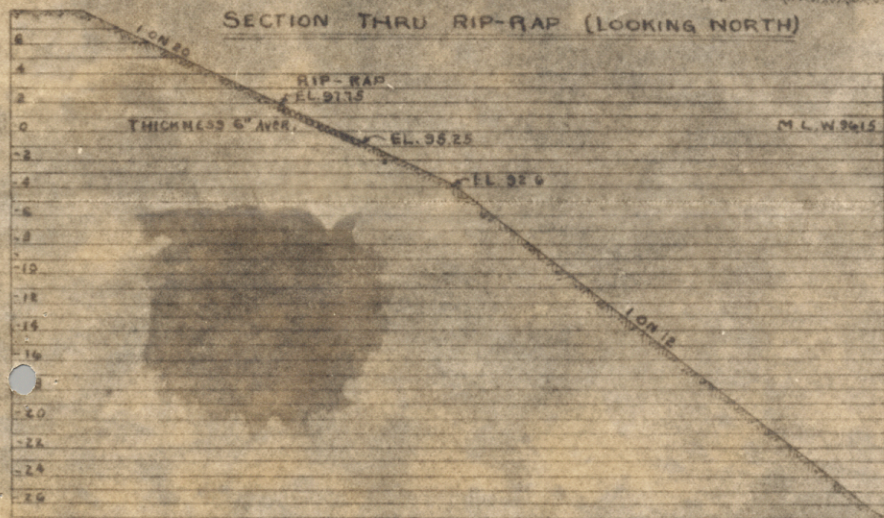
TYPICAL SECTION THRU FILL (LOOKING NORTH)

VERT. 1" = 10 FT.
HOR. 1" = 60 FT.



SECTION THRU RIP-RAP (LOOKING NORTH)

1 IN. = 10 FT.



SECTION THRU NEW FILL AND RIP-RAP

1 IN. = 10 FT. VERT.
1 IN. = 100 FT. HOR.

APPLICATION BY
CITY OF ST. PETERSBURG, FLA.
DATE - AUG. 30 - 1944
REVISED - APRIL 13 - 1945,

PROPOSED DREDGING & FILL
IN TAMPA BAY AT
ST. PETERSBURG, FLA.

SHEET 2 OF 3 SHEETS

HW

TIDE NOTE FOR HYDROGRAPHIC SHEET

April 2, 1946

~~Division of Hydrography and Topography~~

Division of Charts: H. W. MURRAY

Plane of reference approved in
2 volumes of sounding records for

HYDROGRAPHIC SHEET 7082

Locality St. Petersburg, West Coast of Florida

Chief of Party: J. C. Bose in 1945
Plane of reference is mean low water, reading
6.5 ft. on tide staff at St. Petersburg
5.4 ft. below B. M. 1

Height of mean high water above plane of reference is 1.5 feet.

Condition of records satisfactory except as noted below:

E. K. Green
Chief, Division of Tides and Currents.

GEOGRAPHIC NAMES

Survey No. **H7082**

Name on Survey	Source										
	A	B	C	D	E	F	G	H	K		
	On Chart No.	On previous survey No.	On U. S. quadrangle Maps	From local information	On local Maps	P. O. Guide or Map	Rand McNally Atlas	U. S. Light List			
<u>St. Petersburg</u>			(location of tide staff)						U.S.G.B.	1	
<u>Bayboro Harbor</u>										2	
<u>Florida</u>			(for title)						U.S.G.B.	3	
<u>Tampa Bay</u>			" "							4	
										5	
										6	
										7	
										8	
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										23	
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										25	
										26	
										27	

Names underlined in red approved
by L. Heck on 10/17/46

Hydrographic Surveys (Chart Division)

HYDROGRAPHIC SURVEY NO. **H7082**

Records accompanying survey:

Boat sheets .1...; sounding vols. .2...; wire drag vols.;
 bomb vols.; graphic recorder rolls;
 special reports, etc.

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

Number of positions on sheet	.....	864.
Number of positions checked	.....	310.
Number of positions revised	.....	13.
Number of soundings revised (refers to depth only)	.....	14
Number of soundings erroneously spaced	.....	39.
Number of signals erroneously plotted or transferred	.....	0.
Topographic details	Time	20 hrs
Junctions	Time	None
Verification of soundings from graphic record hand lead	Time	63 hrs

Verification by... *James H. Bell* Total time *83 hrs* Date *15 Aug 1946*

Reviewed by... *J. F. Jordan* Time *16* Date *Aug. 21, 1946*

DIVISION OF CHARTS

REVIEW SECTION - NAUTICAL CHART BRANCH

REVIEW OF HYDROGRAPHIC SURVEY

REGISTRY NO. 7082

FIELD NO. TA 05145

Florida, Tampa Bay, St. Petersburg
Surveyed in December, 1945 Scale 1:5,000
Project No.---

Soundings:

Control:

Hand lead

Three-point fixes on shore
signals

Chief of Party - J. C. Bose
Surveyed by - J. C. Bose
Protracted by - V. F. Simmons
Soundings plotted by - V. F. Simmons
Verified and inked by - F. H. Bell
Reviewed by - G. F. Jordan, August 20, 1946
Inspected by - R. H. Carstens

1. Shoreline and Control

Shoreline is from planetable survey T-7020 (1945) supplemented by minor detail from T-8387.

Control is from prior triangulation and from T-7020.

2. Sounding Line Crossings

Satisfactory.

3. Bottom Configuration

The bottom is smooth except in dredged areas.

4. Adjoining Surveys

This is a special survey and no adjoining surveys are anticipated.

5. Comparison with Prior Surveys

H-1235b (1874) 1:20,000; H-1235c (1925) 1:5,000; H-4565 (1926) 1:20,000; H-4575 (1926) 1:3,000; H-4575a (1927) 1:3,000

Depths on these prior surveys agree with depths on the present survey except in areas which have been dredged or filled.

6. Comparison with Chart 587 (Latest print of March 16, 1946)a. Hydrography

Charted hydrography is from the aforementioned prior surveys which have been partially superseded by after-dredging surveys submitted by the U. S. Engineers. Charted soundings and detail to be noted are as follows:

- (1) The charted 16-ft. sounding at lat. $27^{\circ} 45.53'$, long. $82^{\circ} 37.87'$, was not investigated on the present survey. However, a note on Chart Standard 587 now authorizes the deletion of the 16 per authority of Bp. 37029 (1943). out
- (2) The charted 21-ft. sounding at lat. $27^{\circ} 45.64'$, long. $82^{\circ} 37.80'$, was not investigated on the present survey. However, this shoal spot in 24-ft. depths was apparently removed, according to after-dredging survey Bp. 37029 (1943), and should be deleted from the chart. out
- (3) The charted 6-ft. sounding falling in present 14-ft. depths at lat. $27^{\circ} 45.57'$, long. $82^{\circ} 38.0'$, should be retained. According to the Chart Standard this sounding was charted from ¹⁹²⁸ Bp. 22222. This blueprint is temporarily misplaced and cannot be located at this time. Present hydrography makes the sounding appear questionable but no specific investigation was made. in
- (4) The pile cluster at lat. $27^{\circ} 45.8'$, long. $82^{\circ} 37.45'$, and the row of piles at lat. $27^{\circ} 46.05'$, long. $82^{\circ} 37.7'$, originate with Bp. 40480 (1940). Verbal information received in this office from the Chief of Party states that these piles have been subsequently removed. out
- (5) The 10-ft. sounding at lat. $27^{\circ} 45.65'$, long. $82^{\circ} 37.2'$, apparently originates with Bp. 22222, which blueprint cannot be readily located at this time. The 10 falls in 14 feet on the present survey, but for charting purposes retention is not considered necessary because of the proximity of another 10 carried forward from H-4565 (1926) 130 meters south-east. out

b. Aids to Navigation

Charted aids to navigation agree with aids shown on the present survey. The following uncharted aids shown on the survey were subsequently removed and two were replaced by aids shown nearby (verbal information from Chief of Party):

A beacon, signal GO, at lat. $27^{\circ} 45.48'$, long. $82^{\circ} 37.56'$, was replaced by a beacon 40 meters northwest.

A beacon, signal WAT, at lat. $27^{\circ} 45.52'$, long. $82^{\circ} 37.97'$, was replaced by a beacon 55 meters southwest.

A beacon, signal OBI, at lat. $27^{\circ} 45.52'$, long. $82^{\circ} 38.20'$, was removed.

The aids to navigation satisfactorily mark the features intended.

c. Dredged Channels

Depths on the present survey are slightly deeper than the charted 19-ft. depth noted for the channel at lat. $27^{\circ} 45.5'$. ^{Project depth}

7. Condition of Survey

- a. Sounding Records and the Descriptive Report are complete in all detail.
- b. The smooth-plotting was satisfactory.

8. Compliance with Project Instructions

Standard project instructions were not issued for this special survey. The survey satisfactorily complies with a request for an after-construction and after-dredging survey.

9. Additional Field Work

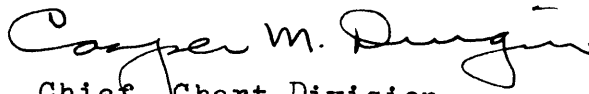
- a. Investigation of the following soundings and areas is desirable:
 - (1) Lat. $27^{\circ} 45.57'$, long. $82^{\circ} 38.01'$ - charted 6 ft. discussed in foregoing paragraph 6a (3).
 - (2) Lat. $27^{\circ} 45.63'$, long. $82^{\circ} 38.07'$ -present 6 ft. discussed in the descriptive report, page 3, last paragraph.

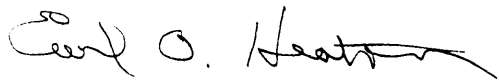
see I 255 (1948) Sheet 5


- (3) In the yacht basin at lat. $27^{\circ} 46'$, long. $82^{\circ} 37.8'$, complete hydrography was prevented by dredging operations.
- b. Blueprint 37029 (1943) furnishes adequate hydrography in the present unsurveyed port area in lat. $27^{\circ} 45.65'$, long. $82^{\circ} 37.67'$.

Examined and approved:


Asst. Chief, Nautical Chart Branch


Chief, Chart Division


Chief, Section of Hydrography


Chief, Division of Coastal Surveys

