

H10542

NOAA FORM 76-35A

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

DESCRIPTIVE REPORT

Type of Survey Hydrographic
Field No. AHP-10-07-94
Registry No. H-10542

LOCALITY

State Connecticut
General Locality Long Island Sound
Sublocality Cos Cob Harbor to
..... Port Chester Harbor

19 94

CHIEF OF PARTY

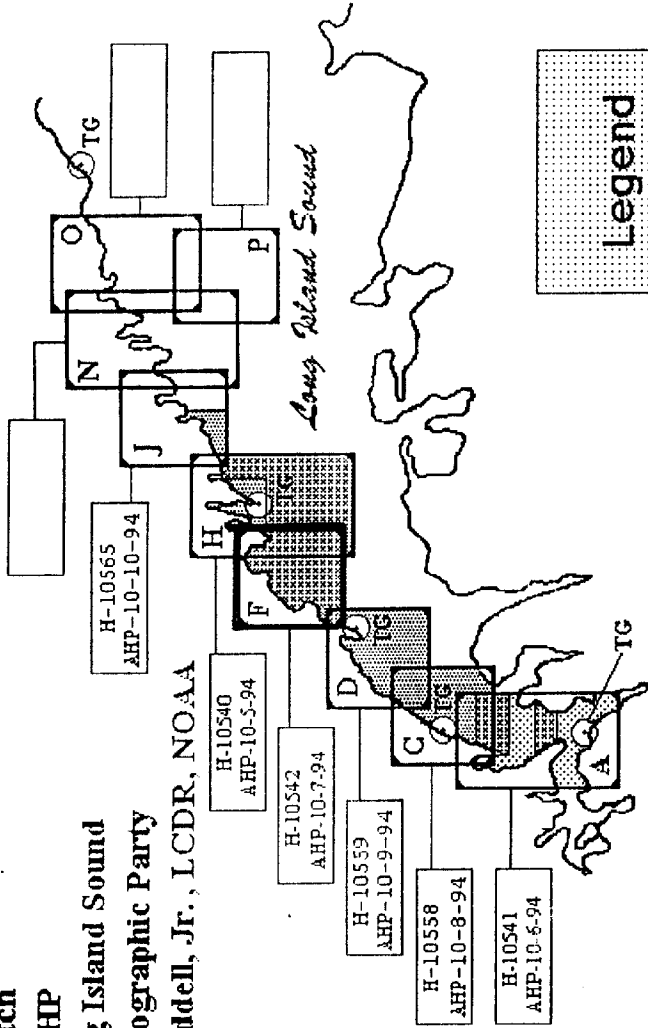
..... LCDR. J. E. Waddell, Jr.

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DATE OCT 20 1997

NOAA FORM 77-28 U.S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION HYDROGRAPHIC TITLE SHEET	REGISTER NO. H-10542
INSTRUCTIONS - 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. AHP 10-07-94
<p>State <u>Connecticut</u></p> <p>General Locality <u>Long Island Sound</u></p> <p>Locality <u>Cos Cob Harbor to Port Chester Harbor</u></p> <p>Scale <u>1:10,000</u> Date of Survey <u>May 25, 1994 - September 11, 1994</u></p> <p>Instructions Dated <u>March 2, 1994</u> Project No. <u>OPR-8285/AHP</u></p> <p>Vessel <u>NOAA Launch 0517</u></p> <p>Chief of Party <u>James E. Waddell, Jr., LCDR, NOAA</u> <u>LCDR J. E. WADDELL, JR.</u></p> <p>Surveyed By <u>Atlantic Hydrographic Party</u> <u>M. J. McMANN, HIC, J. L. BUGLONG, ST</u></p> <p>Soundings taken by <u>echo sounder, hand lead, pole echo sounder, pole</u></p> <p>Graphic record scaled by <u>MJM, JLB **</u></p> <p>Graphic record checked by <u>MJM, JLB **</u></p> <p>Protracted by <u>HDAPS</u> Automated plot by <u>ECAD NOVAJET III</u> <u>Bruning ZETA 824A</u></p> <p>Verification by <u>Atlantic Marine Center</u> <u>ATLANTIC HYDROGRAPHIC BRANCH PERSONNEL</u></p> <p>Soundings in <u>FEET</u> meters at <u>MLLW</u></p>	
<p>REMARKS: <u>** MJM - Mark J. McMann</u></p> <p><u>JLB - Jan L. Buglong</u></p> <p><u>NOTES IN THE DESCRIPTIVE REPORT WERE MADE IN RED DURING OFFICE PROCESSING.</u></p> <p><u>AWOIS/SURFV 10/16/97 SJV</u></p>	

Progress Sketch
OPR-B285-AHP
Western Long Island Sound
Atlantic Hydrographic Party
James E. Waddell, Jr., LCDR, NOAA
CMDG



SS - Side Scan
 CD - Chain Drag

Month	Lineal NM Soundings	Square NM Soundings	Lineal NM CD	SS CD	AWDIS ITEMS	DP's	Bottom Samples	Control Stations	Tide Stations	Symbol
May	—	—	—	—	8	24	16	1	5	N/A
June	172	9.3	—	—	134	166	59	—	—	[Dotted Pattern]
July	495	26.7	33.2 CD	1	235	12	12	—	—	[Cross-hatched Pattern]
August	538	29.1	32 CD	47	335	35	35	—	—	[Horizontal Line Pattern]
September										
October										
November										

Legend

DESCRIPTIVE REPORT TO ACCOMPANY
HYDROGRAPHIC SURVEY H-10542
FIELD NO. AHP-10-7-94
SCALE: 1:10,000
1994
ATLANTIC HYDROGRAPHIC PARTY
CHIEF OF PARTY: LCDR James E. Waddell, Jr.

A. PROJECT

This survey was conducted in accordance with Hydrographic Project Instructions OPR-B285-AHP, Western Long Island Sound, New York and Connecticut, dated March 2, 1994. This survey is designated as Sheet "F" on the sheet layout dated December 14, 1993.

The purpose of this project is to provide contemporary hydrography for use in proposed studies and in the construction of new charts. The area was last surveyed in the 1930's by the U. S. Coast and Geodetic Survey using lead line methods.

B. AREA SURVEYED

The area surveyed for H-10542 covers the north side of Long Island Sound from Cos Cob Harbor to Port Chester Harbor. The survey limits are as follows:

North - 41°01'40"N
South - 40°56'30"N
East - 073°35'50"W
West - 073°40'00"W

This survey was conducted from May 25, 1994 (DN 145) to September 11, 1994 (DN 254).

C. SURVEY VESSELS

Vessel 0517, a 21-foot MonArk, was the sounding vessel used to collect all survey data. There were no unusual vessel configurations nor problems encountered.

D. AUTOMATED DATA ACQUISITION AND PROCESSING *SEE E&A REPORT*

The Hydrographic Data Acquisition and Processing System (HDAPS) was used to process all hydrographic data for this survey. PC-DAS version 4.03 was used for on-line data acquisition. A listing of HDAPS programs used for data processing and their corresponding version numbers is appended to this report.

The following non-HDAPS computer programs were used:

VELOCITY (IBM PC)	Ver. 2.0 (12/18/92)
NADCON (IBM PC)	Ver. 1.01
WORDPERFECT (IBM PC)	Ver. 6.0

E. SONAR EQUIPMENT

Not Applicable.

F. SOUNDING EQUIPMENT

An Innerspace model 448 depth sounder, serial number 241, was used to collect all soundings.

A standard lead line calibrated in meters, serial number 0517, was used during this survey for comparison readings with the echo sounder. A 5-meter long wooden sounding pole, marked according to Hydrographic Survey Guideline (HSG) No. 69, was used to obtain any pole soundings.

G. CORRECTIONS TO SOUNDINGS

Soundings were recorded using the Innerspace model 448 depth sounder. It was adjusted for an assumed speed of sound through water of 1500 meters/second. Corrections for the speed of sound through water were computed from data obtained with Odom Hydrographic Systems, Inc. DIGIBAR electronic probe serial number 154. Data quality assurance tests were performed in accordance with Field Procedures Manual (FPM) 2.1.3.2, prior to each cast. Program VELOCITY, version 2.0, was used to compute speed of sound

through water corrections. Copies of the velocity tables and cast data are in the "Survey Separates." *

Correctors for the velocity of sound through water were determined from the casts listed below:

<u>Velocity Table No.</u>	<u>Cast No.</u>	<u>Actual/Ext.* Depth (m)</u>	<u>Applicable DN</u>	<u>Position</u>	<u>Cast Day</u>
1	1	34.0/41.6	143-176	40°59'41"N 073°31'32"W	159
2	2	*999.0 14.0/18.1	177-196	40°57'30"N 073°36'00"W	193
3	3	29.2/38.0	197-203	40°59'00"N 073°32'00"W	200
4	4	26.3/34.2	204-211	40°59'05"N 073°32'00"W	208
5	5	24.3/31.5	212-225	40°58'45"N 073°31'45"W	214
6	6	17.0/22.1	226-254	40°47'00"N 073°36'00"W	236
7	7	/ 22.2		41° 02' 00" N 073° 23' 00" W 250	

* Ext. - Extended

Velocity correctors were applied to the sounding data using the REAPPLY program prior to plotting.

The Innerspace model 448 depth sounder does not require adjustments for the tides, launch draft, or speed of sound. Changes to the gain and/or chart speed were noted on the echogram. Digitized soundings agreed with the analog trace within 0.1 meter. Necessary corrections were made while scanning the echogram.

Weather permitting, lead line comparisons were conducted each day in accordance with FPM 2.1.3.1. No instrument error was detected from these comparisons. The lead line comparison form can be found in the "Survey Separates." *

A static draft of 0.3 meter was applied to the on-line data. The draft was measured by subtracting the difference from a punch mark on the side of Launch 0517, 0.6 meter above the transducer, to the water surface.

Settlement and squat measurements were performed on May 20, 1994 (DN 140), at Stamford, Connecticut, using Zeiss level S/N 08754. Settlement and squat correctors and the static draft corrector were applied on-line through the offset table. Copies of the field data, the graphs of the settlement and squat correctors vs. speed, and the offset table are included in the "Survey Separates." *

The Willets Point, NY tide station, number 851-6990, served as control for datum determination. This station is also the reference station for the predicted tides which were applied to the sounding plot. This survey required one tide zone. A negative 30-minute time correction and a 1.02 range ratio were applied to the predicted tides.

The final sounding plot was plotted after reapplying the correctors to each data record using the program REAPPLY.

Approved tides were requested from the Sea and Lake Levels Branch, N/OES231, in a letter dated September 26, 1994. A copy of the letter is appended to this report. *

APPROVED TIDES AND ZONING WERE APPLIED DURING OFFICE PROCESSING.

H. CONTROL STATIONS *SEE E&A REPORT*

The horizontal control datum for this project is the North American Datum of 1983. One station, the USCG Differential GPS (DGPS) Beacon at Montauk Point, was used to control this survey. The position for the beacon is shown on the "Control Station List" appended to this report.

I. HYDROGRAPHIC POSITION CONTROL

DGPS was used as the method of positioning for all hydrographic data on this survey. The USCG Differential GPS beacon at Montauk Point, New York was used as the reference station in conjunction with beacon receiver serial number X-1086

** DATA FILED WITH ORIGINAL FIELD RECORDS.*

and antenna serial number MBA-M1039 on launch 0517. An Ashtech sensor, serial number 700417A1065 was used as the remote station on vessel 0517. This equipment met the accuracy standards for this 1:10,000 scale survey.

Performance checks were conducted daily by resting the launch alongside station CAL 2 1994. The raw record and the abstract of these checks are included in the "Survey Separates." * The calibration point was established by measuring a single GPS baseline, between a third-order, class I station and the calibration point. The computations for CAL 2 1994, are included in the "Survey Separates." *

Occasionally, a good position misplotted on the raw track plot. This problem was attributed to good DGPS data following a period of questionable DGPS data. These positions were reviewed, then edited or rejected as necessary.

J. SHORELINE *SEE E&A REPORT*

Shoreline shown on the final sounding plot was transferred by hand from TP-01267. This manuscript was compiled using NAD 1927 at 1:20,000 scale and enlarged to 1:10,000 scale for use with this survey. The only shoreline changes to the T-map were the addition of piers and pier ruins which were located by detached positions. All of these features were previously charted, but did not appear on the shoreline manuscript. They are:

<u>Position</u>	<u>Latitude</u>	<u>Longitude</u>	<u>Description</u>
1451	41°00'40.87"N	073°37'17.97"W	Pier
1894	41°00'29.22"N	073°37'29.05"W	Pier ruins
1895	41°00'37.04"N	073°37'05.00"W	Pier
1898	41°00'52.57"N	073°36'24.98"W	Pier
1899	41°00'56.84"N	073°36'15.15"W	Pier

Many rock symbols on the T-map were found to be rock islets or islands. Foul limit lines were run around these features at low water to define their size and general shape. These features are charted adequately already, and that charted information should have been used in the compilation of the T-map.

* DATA FILED WITH ORIGINAL FIELD RECORDS.

Shoreline verification was conducted using mainscheme hydrography that junctioned at shore, detached positions, or by visual inspection. Existing piers which agreed with the shoreline manuscript were given reference numbers, while piers not shown were located by detached positions.

Recommendation: The hydrographer recommends that details seaward of the HWL from this survey be used to supersede TP-01267.

CONCUR

A complete list of all detached positions by day is included in the accordion file. It lists the position of each feature or item number.

Recommendation: The hydrographer recommends that shoreline changes from this survey be used to supersede prior shoreline information.

CONCUR

K. CROSSLINES

A total of 22.0 nautical miles of crosslines were run, representing 13.7% of the mainscheme hydrography. Crossline soundings agree to within 0.5 meter of the mainscheme soundings.

1.6 FEET

L. JUNCTIONS *SEE E&A REPORT*

This survey junctions with H-10353 to the south, with H-10540 to the east, and with H-10559 to the west. H-10353 is a 1:10,000 scale survey from 1990. H-10540 and H-10559 are both 1:10,000 scale surveys from 1994. Junctions with H-10353 are fair, with differences up to ^{2.6 FT} 0.8 meter. Agreement is best inside the ^{49.2 FT} 15-meter depth curve, with soundings comparing within ^{1.3 FT} 0.4 meter. Junctions with H-10540 are good, comparing within ^{1.9 FT} 0.5 to 0.6 meter. Junctions with H-10559 are good, within ^{1.0 FT} 0.3 meter. The differences may be caused partially by the application of predicted tides.

M. COMPARISON WITH PRIOR SURVEYS SEE E&A REPORT

The prior survey comparison will be performed by AHS. The prior survey covering this area is H-5413A, 1:20,000, 1933. Two items were investigated as part of this survey, which originated from prior surveys. Item 6622 originated from prior survey H5402A/1933, while item 7536 originated from prior survey FE318SS/1988. The investigation reports are appended.

Recommendation: The hydrographer recommends that data from the present survey be used to supersede that of H-5413A within their common areas. CONCUR

N. ITEM INVESTIGATION REPORTS

Thirty AWOIS items were investigated as part of this survey. Item numbers investigated were: 6598, 6600, 6601, 6603-6617, 6619, 6622-6625, 6627, 6628, 6630, 6632-6634, and 7536. The Item Investigation Reports are appended.

O. COMPARISON WITH THE CHART SEE E&A REPORT

Comparisons were made with Chart 12367, 19th Edition, August 17, 1997.

Current soundings compared well, within 0.5 meter of charted soundings.

Sounding discrepancies with the chart are as follows:

<u>Charted Depth</u>	<u>Location</u>	<u>Survey Least Depth</u>	<u>Charting Recommendation</u>
28 6	29.8 40°57'30"N 073°39'30"W	8.7 37.4 ft 11.4 m	RETAIN Removal see Also E&A Report section M.2.
6	35 40°57'42"N 073°39'44"W	18.0 9.8 ft 5.8 m	RETAIN Survey see Also E&A soundings Report, section M.2
15	8 40°57'35"N 073°39'40"W	20.6 18.7 ft 5.7 m	RETAIN Survey see Also E&A soundings Report, section M.2

2	^{10.9} 40°58' 15 "N 073°39' ^{28.9} 25"W	3.3 ft 1.0 m	Survey soundings CONCUR - SHOW FOUL LIMITS
30	^{10.4} 40°58' 08 "N 073°38' ^{15.3} 17"W	34.7 ft 10.6 m	Removal RETAIN - See Also EEA Report, Section M.2.
17	40°58'15"N 073°39'10"W	15.7 ft 4.6 m	Survey soundings CONCUR -
14	40°58'15"N 073°38'50"W	15.4 ft 4.8 m	Survey soundings CONCUR -
10	40°58'18"N 073°38'42"W	12.8 ft 3.9 m	Remain charted CONCUR -
12	^{39.23} 40°58' 40 "N 073°37'52"W	13.1 ft 4.0 m	Remain charted CONCUR - See Also section M.2 in The EEA Report
9	^{43.5} 40°58' 43 "N 073°38' 100 "W ^{3759.1}	14.7 ft 4.5 m	Remain charted CONCUR - See Also EEA Report Section M.2.
12	40°58'50"N 073°38'05"W	13.1 ft 4.0 m	Survey soundings CONCUR -
4	40°58'45"N 073°38'32"W	3.9 ft 1.2 m	Survey soundings CONCUR -
13	40°58'26"N 073°39'03"W	14.4 ft 4.4 m	Survey soundings CONCUR -
3	[?] 40°58'37"N 073°39' 18 "W ^{17.4}	5.6 ft 1.7 m	Remain charted CONCUR - See Also EEA Report Section M.1.C.
8	^{1.25} 40°58'53"N 073°39' 08 "W ^{2.5}	10.8 ft 3.3 m	Remain charted CONCUR - see Also EEA Report Section M.2
10	^{1.24} 40°59'07"N 073°38' 36 "W ^{35.4}	14.1 ft 4.3 m	Survey soundings RETAIN - see Also EEA Report Section M.2
2	40°59'15"N 073°38'15"W	1.9 ft 0.6 m	Remain charted DO NOT CONCUR - DELETE 2 RK SHOW FOUL LIMITS

7	40°59' ⁹ 18"N 073°37' ^{7.5} 52"W	10. ² 5 ft 3.2 ¹ m	RETAIN Survey soundings See Also E&A Report, Section M.2
6	40°59' ^{1.3} 28"N 073°37' ^{32.1} 33"W	10.2 ft 3.2 ⁴ m	RETAIN Remain charted See Also E&A Report section M.2
18	40°59'51"N 073°36'15"W	18.0 ft 5.5 ⁷ m	DELETE 18 Remain charted SHOW PRESENT SURVEY DEPTHS LD 16 FT
15	40°59' ^{3.4} 54"N 073°36' ^{01.0} 02"W	18.0 ft 5.5 ⁷ m	RETAIN Remain charted See Also E&A Report section M.2
2	40°59' ^{35.15} 36"N 073°36' ^{6.8} 06"W	4.7 ft 1.5 ⁵ m	Remain charted CONCUR See Also E&A Report section M.L.C.
10	40°59'27"N 073°36'15"W	9.1 ft 2.8 ⁸ m	DELETE 10 FT Survey soundings CONCUR

A center line was run into Port Chester Harbor to verify the published controlling depths in the channel. The channel is unmarked above the entrance, but the controlling depths were shoaler than survey soundings except for one sounding where the survey launch was out of the channel due to barge traffic.

Recommendation: The channel controlling depth should remain as charted.

CONCUR

A left, right, and center line were run out of Greenwich Harbor and survey soundings support charted controlling depths for the channel.

Recommendation: The controlling depth for the Greenwich Harbor channel should remain as charted.

CONCUR

A measured nautical mile course charted at Payea Reach is no longer in existence. The markers charted on shore at Little Captain and Great Captain Islands could not be located.

Recommendation: The measured mile markers should be deleted from the chart.

CONCUR

↑ Ruins charted at 40°58'18.53"N, 073°39'34.56"W, were investigated and detached position 1892 was taken on the offshore end of a line of rocks extending to shore. This feature covers at high water and could be described as a groin.

Recommendation: A groin should be charted at 40°58'18.5²⁷~~3~~"N, 073°39'34.5⁵⁸~~6~~"W. *CONCUR*

Charted ruins at 40°58'39.77"N, 073°39'22.20"W, were searched for and nothing was found. Detached position 1893 was taken in the center of the search area. The search was conducted at low water along a very rocky shoreline.

Recommendation: The charted ruins should be deleted from the chart. *CONCUR*

Detached position 1896 was taken on the offshore end of a rocky area at 41°00'36.2¹~~1~~"N, 073°36'45.3⁸~~8~~"W. This is the charted location of pier ruins. ²⁰⁸ ³⁷⁹

↑ **Recommendation:** Remove pier ruins from chart. Position 1896 is very near shore, and therefore no rock symbol should be charted. *SHOW FOUL LIMITS* *CONCUR WITH CLARIFICATION*

Charted pier ruins at 41°00'36.44"N, 073°36'42.93"W, were investigated and an area of rocks was located by position no. 1897. No ruins were in evidence at low water.

Recommendation: The ruins should be deleted from the chart and a rock symbol should be charted at 41°00'36.44"N, 073°36'42.93"W. *SHOW FOUL LIMITS*

A small charted reef at 40°58'30"N, 073°39'28"W, was investigated by using 25-meter line spacing and a least depth of 1.0 meter was found.

Recommendation: Remove reef symbol and chart representative soundings. *SHOW FOUL LIMITS*

P. ADEQUACY OF SURVEY SEE EIA REPORT

This survey is complete and adequate to supersede all prior surveys within the common area.

Q. AIDS TO NAVIGATION

There are thirty seven aids to navigation in the survey area. Four are lights, twenty eight are buoys, and five are privately maintained spar buoys. Eight of the aids have a published position in the USCG Light List, Volume I, Atlantic Coast, 1994.

Detached positions were taken on all aids to navigation. The comparison of USCG maintained aids to navigation, between the surveyed position, light list position where applicable, and the charted location was as follows:

Hens and Chickens Buoy 1A (Light List #25335)

Light List Published Position 40°59.7'N, 073°36.3'W
Surveyed Position (No. 32) 40°59'45.10"N, 073°36'16.39"W
Surveyed position agrees with the charted¹⁰¹ position .388

Newfoundland Reef Lighted Buoy 4 (Light List #25340)

Light List Published Position 40°00.4'N, 073°36.1'W
Surveyed Position (No. 34) 41°00'21.47"N, 073°36'02.77"W
Surveyed position agrees with the charted⁴⁶⁹ position .767

Cos Cob Harbor Buoy 5 (Light List #25430)

Light List Published Position None .348 .262
Surveyed Position (No. 35) 41°00'51.35"N, 073°36'04.26"W
Surveyed position agrees with the charted position

Cos Cob Harbor Buoy 3 (Light List #25425)

Light List Published Position None .762 .776
Surveyed Position (No. 37) 41°00'46.72"N, 073°36'09.72"W
Surveyed position agrees with charted position

Cos Cob Harbor Lighted Buoy 2 (Light List #25420)

Light List Published Position 41°00.6'N, 073°36.3'W
Surveyed Position (No. 38) 41°00'37.58"N, 073°36'15.45"W
Surveyed position agrees with charted position .579 .449

Red Rock Buoy R (Light List #25345)

Light List Published Position None .132 .197
Surveyed Position (No. 40) 41°00'19.13"N, 073°36'41.20"W
Surveyed position agrees with charted position

Greenwich Harbor Channel Buoy 9 (Light List #25510)

Light List Published Position None .452 .391
Surveyed Position (No. 41) 41°00'39.45"N, 073°37'24.39"W
Surveyed position agrees with charted position

Greenwich Harbor Channel Buoy 8 (Light List #25505)

Light List Published Position None .870 .786
Surveyed Position (No. 42) 41°00'36.87"N, 073°37'21.79"W
Surveyed Position agrees with charted position

Greenwich Harbor Channel Buoy 6 (Light List #25500)

Light List Published Position None .815 .494
Surveyed Position (No. 43) 41°00'28.82"N, 073°37'20.49"W
Surveyed position agrees with charted position

Greenwich Harbor Channel Buoy 5 (Light List #25495)

Light List Published Position None .069 .437
Surveyed Position (No. 44) 41°00'27.07"N, 073°37'23.44"W
Surveyed position agrees with charted position

Greenwich Harbor Channel Buoy 4 (Light List #25490)

Light List Published Position None .461 .806
Surveyed Position (No. 47) 41°00'11.46"N, 073°37'16.81"W
Surveyed position agrees with charted position

↑
Greenwich Harbor Channel Buoy 3 (Light List #25485)

Light List Published Position None .797 .097
Surveyed Position (No. 48) 41°00'10.80"N, 073°37'21.10"W
Surveyed position agrees with charted position

Greenwich Harbor Channel Buoy 2 (Light List #25480)

Light List Published Position None .280 .302
Surveyed Position (No. 49) 40°59'54.28"N, 073°37'16.30"W
Surveyed position agrees with charted position

Byram Harbor Entrance Buoy 1 (Light List #25515)

Light List Published Position 40°59.9'N, 073°38.2'W
Surveyed Position (No. 50) 40°59'51.28"N, 073°38'09.69"W
Surveyed position agrees with charted position
54.00" 12.00"
.278 .694

Byram Harbor Entrance Lighted Buoy 2 (Light List #25520)

↑
Light List Published Position None .384 .898
Surveyed Position (No. 51) 40°59'54.38"N, 073°38'12.90"W
Surveyed position agrees with charted position

Byram Harbor Buoy 3 (Light List #25525)

Light List Published Position None .931 .374
Surveyed Position (No. 52) 40°59'58.93"N, 073°38'20.37"W
Surveyed position agrees with charted position

Byram Harbor Reef Buoy 4 (Light List #25530)

Light List Published Position None .880 .953
Surveyed Position (No. 53) 41°00'03.88"N, 073°38'16.95"W
Surveyed position agrees with charted position

Cormorant Reef Buoy 4 (Light List #25370)

↑
Light List Published Position None .764 .450
Surveyed Position (No. 54) 40°59'27.76"N, 073°37'51.95"W
Surveyed position agrees with charted position

Jones Rock Light 3 (Light List #25365)

Light List Published Position None .179 .176
Surveyed Position (No. 55) 40°59'18.18"N, 073°38'05.18"W
Surveyed position agrees with charted position

Calf Island Buoy 1 (Light List #25360)

Light List Published Position 40°59.3'N, 073°38.1'W
Surveyed Position (No. 56) 40°59'11.41"N, 073°38'12.60"W
Surveyed position agrees with charted position
18.00" 06.00"
.412 .599

Cormorant Reef Buoy 1 (Light List #25375)

Light List Published Position None .734 .048
Surveyed Position (No. 57) 40°59'08.73"N, 073°37'43.05"W
Surveyed position agrees with charted position

Great Captain Island West Reef Buoy 2 (Light List #25350)

Light List Published Position 40°58.6'N, 073°38.0'W
Surveyed Position (No. 58) 40°58'35.59"N, 073°37'56.07"W
Survey position agrees with charted position
36.00" 06.00"
.586 .067

Bluefish Shoal Bell Buoy 36 (Light List #21405)

Light List Published Position None .583 .807
Surveyed Position (No.59) 40°58'07.58"N, 073°38'46.81"W
Surveyed position is 35 meters SE of charted position

Rye Beach Lighted Bell Buoy 38 (Light List #21410)

Light List Published Position None .067 .495
Surveyed Position (No. 60) 40°57'31.08"N, 073°39'35.50"W
Surveyed position is 50 meters E of charted position

Fourfoot Rocks Buoy F (Light List #25355)

Light List Published Position None 40.191 31.182
Surveyed Position (No. 62) 40°58'37.05"N, 073°38'35.78"W
Surveyed position is 35 meters SE of charted position

↑
Great Captain Rocks Buoy 2 (Light List #25535)

Light List Published Position None $40^{\circ} 58' 54'' N$ $073^{\circ} 39' 06'' W$
Surveyed Position (No. 63) $40^{\circ} 58' 56.63'' N$, $073^{\circ} 39' 03.96'' W$
Surveyed position is 40 meters SE of charted position $^{\circ} 639$ $^{\circ} 957$

Manursing Island Reef Buoy ³ (Light List #25540)

SHOWN AS C "1" ON CHART 12364 28th Ed. 5/93 AND CHART 12367 19th Ed. 8/17/91
The light list incorrectly shows this as buoy number "3".

Light List Published Position None $^{\circ} 132$ $^{\circ} 590$
Surveyed Position (No. 64) $40^{\circ} 58' 59.13'' N$, $073^{\circ} 39' 17.59'' W$
Surveyed position is 50 meters SE of charted position

Green Buoy 3WR (Not in Light List)

Light List Published Position N/A $^{\circ} 873$ $^{\circ} 822$
Surveyed Position (No. 65) $40^{\circ} 59' 01.87'' N$, $073^{\circ} 39' 22.82'' W$
Buoy is not charted

↑
Port Chester Light 4 (LL #25545, formerly Port Chester Lt 2A)

Light List Published Position $54.00''$ $24.00''$
 $40^{\circ} 58.9' N$, $073^{\circ} 39.4' W$
Surveyed Position (No. 66) $40^{\circ} 59' 04.02'' N$, $073^{\circ} 39' 23.12'' W$
Survey position 66 agrees with the charted position of Lt 2A $^{\circ} 822$ $^{\circ} 116$

Port Chester Channel Light 5 (LL #25550, formerly Channel Lt 3)

Light List Published Position None $^{\circ} 454$ $^{\circ} 547$
Surveyed Position (No. 67) $40^{\circ} 59' 09.45'' N$, $073^{\circ} 39' 35.55'' W$
Surveyed position agrees with charted position of Lt 3

Port Chester Channel Buoy 6 (LL #25555, formerly Channel Buoy 4)

Light List Published Position None $^{\circ} 318$ $^{\circ} 612$
Surveyed Position (No. 68) $40^{\circ} 59' 16.32'' N$, $073^{\circ} 39' 34.61'' W$
Surveyed position agrees with charted position of buoy 4

↑
Great Captain Island Light (Light List #21400)

Light List Published Position $54.00''$ $24.00''$
 $40^{\circ} 58.9' N$, $73^{\circ} 37.4' W$
Surveyed Position (No. 179) $40^{\circ} 58' 57.02'' N$, $073^{\circ} 37' 22.35'' W$
Surveyed position agrees with charted position $^{\circ} 077$ $^{\circ} 348$

The aids serve their intended purpose though should be re-charted using Survey surveyed positions.

The privately maintained aids to navigation were located by detached position and are recommended for charting as follows:

<u>Position No.</u>	<u>Location</u>	<u>Description</u>
33	40°59'43. ⁶¹³ 61" 073°36'32. ¹⁵⁸ 16"	R spar buoy P
36	41°00'50. ⁸²⁶ 83" 073°36'04. ⁷⁵⁴ 75"	Wh spar "5 mph"
39	41°00'25. ²³⁷ 24" 073°36'32. ⁴⁰⁴ 40"	Or spar buoy W
45	41°00'21. ⁹⁹³ 99" 073°37'22. ⁸³⁷ 84"	Wh spar "5 mph"
46	41°00'21. ⁰⁰⁴ 01" 073°37'19. ⁷⁸² 18"	Wh spar "5 mph"

One cable crossing sign was located by detached position 2456, at 40°59'01.³⁰¹50"N, 073°37'28.¹⁸⁷19"W, on the north side of Great Captain Island. This confirms the existence of the submerged cable area charted between Great Captain Island and Manursing Island.

No bridges, overhead cables, pipelines, or ferry routes exist within the survey area.

R. STATISTICS

<u>Description</u>	<u>Quantity</u>
Total Number of Positions	1899
Total Lineal Naut. Miles of Hydrography	202.7
Square Nautical Miles of Hydrography	11.3
Days of Production	25
Detached Positions	118
Bottom Samples	29
Tide Stations	3
Velocity Casts	6

S. MISCELLANEOUS SEE E&A REPORT

No anomalous currents or tides were observed during this survey.

Twenty-nine bottom samples were taken and agreed with the charted bottom characteristics. The samples were not retained in accordance with the Project Instructions. Bottom sample positions are plotted on the overlay and are listed on the Oceanographic Log Sheet-M, NOAA Form 75-44, which may be found in the "Survey Separates." * *DATA FILED WITH ORIGINAL FIELD RECORDS.*

T. RECOMMENDATIONS

No additional field work was identified after office processing was completed. Specific recommendations are made on the Item Investigation Reports appended, and in sections J., O., and Q. of this report.

U. REFERRAL TO REPORTS

<u>Title</u>	<u>Transmittal Information</u>
Descriptive Report to Accompany H-10353	Atlantic Hydrographic Section Norfolk, VA (N/CG244) 1990
Descriptive Report to Accompany H-10540	Atlantic Hydrographic Section Norfolk, VA (N/CG244) 10/94
Descriptive Report to Accompany H-10559	Atlantic Hydrographic Section Norfolk, VA (N/CG244) 10/94
Coast Pilot for OPR-B285-AHP	Atlantic Hydrographic Section Norfolk, VA (N/CG244) 10/94
User Evaluation for OPR-B285-AHP	Atlantic Hydrographic Section Norfolk, VA (N/CG244) 10/94

Submitted by:

Mark J. McMann
Launch Hydrographer In Charge

CONTROL STATIONS as of 16 Sep 1994

No	Type	Latitude	Longitude	H	Cart	Freq	Vel Code	MM/DD/YY	Station Name
001		040:48:16.540	073:47:26.504	0	250	0.0	0.0	07/26/94	THROGS NECK LIGHT 1994
002		040:57:29.399	073:41:26.387	0	78	0.0	0.0	05/25/94	CAL 1 1994
003		041:04:02.050	071:51:38.270	0	250	0.0	0.0	08/01/94	MONTAUK USCG BEACON
004		041:01:59.164	073:32:27.296	0	78	0.0	0.0	06/01/94	CAL 2 1994

AWOIS NO: 6598

Item Description: OBSTRUCTION (PIER RUINS)

Source: UNKNOWN

AWOIS Position: 40° 58' 12.⁰⁰~~33~~"N, 73° 39' 3⁰⁰~~8~~.46"W

Required Investigation: VS, BD, DI

Charts Affected: 12367

INVESTIGATION

Date(s)/DN(s): 6-02-94 / 153 (OPR-B285-AHP2, H-10542)

Position Number: 72

Launch Number: 0517

Investigation Used: Visual Search

Position Determined By: DGPS

Investigation Summary: A visual search in the area of the AWOIS position at low water revealed a double row of piles in ruins on shore, and a 0.5 meter dia outfall pipe leading from the piles in ruins into the water. A detached position (no. 72) was taken on the offshore end of the pipe.

CHARTING RECOMMENDATION

The hydrographer recommends charting the outfall pipe and piles in ruins at the recommended position. *CONCUR W/CLARIFICATION CHART OUTFALL*

Recommended Position: Lat - 40°58'13.³⁸¹~~38~~"N, 073°39'33.⁴⁴⁷~~45~~"W

Recommended Least Depth: ⁰2.6 meters below at MLLW (^{APPROVED}~~predicted~~ tides).
2.0 FT

COMPILATION NOTES

Chart

Applied As

AWOIS NO: 6600

Item Description: UNKNOWN (SUBMERGED WRECK)

Source: CL944/66

AWOIS Position: 40° 58' 53.^{.00}~~35~~"N, 73° 39' ^{13.00}~~11.45~~"W

Required Investigation: VS, BD, DI

Charts Affected: 12367

INVESTIGATION

Date(s)/DN(s): 7-05-94 / 186 (OPR-B285-AHP2, H-10542)

Position Numbers: 175 Launch Number: 0517

Investigation Used: Echo Sounder

Position Determined By: DGPS

Investigation Summary: The location of this wreck made chain dragging difficult. Discussions with a local lobsterman revealed first hand knowledge of the wreck, which he described as a steel barge approximately 30 feet long. He also stated the wreck has been a popular dive site, and that he had taken divers there previously. He then led us to the wreck, which he was able to locate on his depth finder. An echo sounder search of the area found a least depth of 3.6 meters over the wreck.

11.8 FT

CHARTING RECOMMENDATION

The hydrographer recommends charting the wreck at the recommended position below. *CONCUR W/CLARIFICATION CHART 12 WK*

Recommended Position: Lat - 40°58'55.^{.506}~~51~~"N, 073°39'07.^{.609}~~61~~"W

Recommended Least Depth: ^{OK}~~3.6~~ meters below at MLLW (*APPROVED* ~~predicted~~ tides). *11.8 FT*

COMPILATION NOTES

Chart

Applied As

AWOIS NO: 6601

Item Description: UNKNOWN (VISIBLE WRECK)

Source: LNM19/92--5/21/92, 8TH CGD

AWOIS Position: 40° 59' 03.^{.00}~~35~~"N, 73° 37' ^{45.00}~~43.45~~"W

Required Investigation: VS, BD, DI

Charts Affected: 12367,12363

INVESTIGATION

Date(s)/DN(s): 6-29-94 / 180 (OPR-B285-AHP2, H-10542)

Position Numbers: 120

Launch Number: 0517

Investigation Used: Visual Search

Position Determined By: DGPS

Investigation Summary: A visual search at low water revealed the remains of an engine exposed and an echo sounder search of the immediate area showed scattered low wreckage adjacent to the engine.

CHARTING RECOMMENDATION

The hydrographer recommends charting an exposed wreck at the recommended position below. *CONCUR*

Recommended Position: 40°59'03.^{.265}"N, 073°37'42.^{.759}"W

Recommended Least Depth: ^{1.3}~~0.3~~ meter above at MLLW (^{APPROVED}~~predicted~~ tides).
^{4.3 FT}

COMPILATION NOTES

Chart

Applied As

AWOIS NO: 6603

Item Description: UNKNOWN (SUBMERGED WRECK)

Source: NM1/65--3RD USCGD

AWOIS Position: 40° 59' 13.35^{.00}"N, 73° 38' 55.45^{57.00}"W

Required Investigation: VS, BD, DI

Charts Affected: 12367

INVESTIGATION

Date(s)/DN(s): 7-01-94 / 182 (OPR-B285-AHP2, H-10542)

Position Numbers: 126-142 Launch Number: 0517

Investigation Used: Chain Drag

Position Determined By: DGPS

Investigation Summary: A chain drag using 50 feet of line and 60 feet of chain at 10-meter line spacing was conducted in the area of the charted wreck. Water depths in the area were from 4 to 5 meters. A hang was encountered and an echo sounder search was performed in the area of the hang to find the least depth. No significant rises in the bottom trace were found. All wreckage visible on the echogram was less than 1 meter shoaler than the surrounding area. Detached position 142 was taken over the center of the wreckage.

CHARTING RECOMMENDATION

The hydrographer recommends charting a submerged wreck at the position below. *CONCUR W/CLARIFICATION CHART 11 WK*

Recommended Position: 40°59'17.08"N, 073°38'58.23"W

Recommended Least Depth: ^{3.4}~~4.0~~ meters below at MLLW (^{APPROVED}~~predicted~~ tides).
11.2 FT

COMPILATION NOTES

Chart

Applied As

AWOIS NO: 6604

Item Description: OBSTRUCTION

Source: CL1521/75--CITIZEN

AWOIS Position: 40° 59' 14.⁰⁰~~35~~"N, 73° 37' 33.⁰⁰~~45~~"W

Required Investigation: ES, BD, DI

Charts Affected: 12367

INVESTIGATION

Date(s)/DN(s): 3-29-94 / 088 (OPR-B285-AHP2, H-10542)

Position Numbers: 1827-1848 *1645-1650* **Launch Number:** 0517

Investigation Used: Echo Sounder

Position Determined By: DGPS

Investigation Summary: A chain drag could not be performed in the area of the item. Numerous lobster pots in the search area, as well as the close proximity of Cormorant Reef made dragging impossible. Discussions with local lobsterman (Joe Baglieri 914/939-8758) indicate no knowledge of any obstructions in this area, despite many years of lobstering and diving on the east side of the reef where the obstruction is charted.

CHARTING RECOMMENDATION

The hydrographer recommends removing the Obstruction Rep PA note from the chart. *CONCUR W/CLARIFICATION CHART 4RK*

Recommended Position: *AT LAT. 40 59 08.23*
LON 073 37 38.53

Recommended Least Depth:

COMPILATION NOTES

Chart

Applied As

AWOIS NO: 6605

Item Description: OBSTRUCTION (ROCK AWASH)

Source: BP44390/1948--USE

AWOIS Position: 40° 59' 17.35"N, 73° 39' 42.46"W

Required Investigation: VS, BD, DI

Charts Affected: 12367

INVESTIGATION

left off here

Date(s)/DN(s): 6-29-94 / 180 (OPR-B285-AHP2, H-10542)

Position Numbers: 121

Launch Number: 0517

Investigation Used: Visual Search

Position Determined By: DGPS

Investigation Summary: Because of shallow water and proximity to shore, a chain drag was impractical. A 50-meter radius visual search was conducted in water from 0 to 1 meter deep. Nothing was found. Water visibility varied from 0.5 to 1 meter, which would have allowed the hydrographer to see any significant obstructions in the area. None were found. Time spent searching was approximately 15 minutes.

CHARTING RECOMMENDATION

The hydrographer recommends removing the rock symbol from the chart. *CONCUR*

Recommended Position:

Recommended Least Depth:

COMPILATION NOTES

Chart

Applied As

AWOIS NO: 6606

Item Description: OBSTRUCTION (PIER)

Source: BP44399/1948--USE

AWOIS Position: 40° 59' 18.35"N 073° 39' 42.46"W

Required Investigation: VS, BD, DI

Charts Affected: 12367

INVESTIGATION

Date(s)/DN(s): 6-22-94 / 173 (OPR-B285-AHP2, H-10542)

Position Numbers: 118

Launch Number: 0517

Investigation Used: Visual Search

Position Determined By: DGPS

Investigation Summary: While searching the area around the AWOIS position a concrete walk with brackets for a floating pier was located. The floating pier was not yet installed. Detached position number 118 was taken on the offshore end of the walk.

CHARTING RECOMMENDATION

The hydrographer recommends charting a pier at the recommended position below (offshore end). *CONCUR*

Recommended Position: 40°59'18.¹¹⁶2"N, 073°39'42.⁷²²72"W

Recommended Least Depth: ^{4.0}~~3.8~~ meters above MLLW.

13.1 FT

COMPILATION NOTES

Chart

Applied As

AWOIS NO: 6607

Item Description: OBSTRUCTION (ROCK AWASH)

Source: BP44399/1948--USE

AWOIS Position: 40° 59' 18.35"N 073° 39' 39.46"W

Required Investigation: VS, BD, DI

Charts Affected: 12367

INVESTIGATION

Date(s)/DN(s): 6-29-94 / 180 (OPR-B285-AHP2, H-10542)

Position Numbers: 122

Launch Number: 0517

Investigation Used: Visual Search

Position Determined By: DGPS

Investigation Summary: A 50-meter radius visual search was conducted around the charted location. Depths ranged from 0.5 meters near the charted location, up to 2.8 meters as you approach the nearby channel, which is well beyond the charted position. Water visibility was 0.5 meter. Nothing was found by the visual search. The rock is charted in an area which uncovers. This area has been observed many times uncovered by several area residents the hydrographer talked with, including Mr. Joe Baglieri, a local lobsterman with over 20 years of experience in this harbor (phone 914/939-8758). None of the residents have seen rocks in this area. Time spent searching was 10 minutes.

CHARTING RECOMMENDATION

The hydrographer recommends removing the rock symbol from the chart. *CONCUR*

Recommended Position:

Recommended Least Depth:

COMPILATION NOTES

Chart

Applied As

AWOIS NO: 6608

Item Description: OBSTRUCTION (ROCK AWASH)

Source: BP44399/1948--USE

AWOIS Position: 40° 59' 18.35"N 073° 39' 38.46"W

Required Investigation: VS, BD, DI

Charts Affected: 12367

INVESTIGATION

Date(s)/DN(s): 6-29-94 / 180 (OPR-B285-AHP2, H-10542)

Position Numbers: 123

Launch Number: 0517

Investigation Used: Visual Search

Position Determined By: DGPS

Investigation Summary: A 50-meter radius visual search was conducted around the charted location. Depths ranged from 0.5 meters near the charted location, up to 2.8 meters as you approach the nearby channel, which is well beyond the charted position. Water visibility was 0.5 meter. Nothing was found by the visual search. The rock is charted in an area which uncovers. This area has been observed many times uncovered by several area residents the hydrographer talked with, including Mr. Joe Baglieri, a local lobsterman with over 20 years of experience in this harbor (phone 914/939-8758). None of the residents have seen rocks in this area. Time spent searching was 10 minutes.

CHARTING RECOMMENDATION

The hydrographer recommends removing the rock symbol from the chart. *CONCUR*

Recommended Position:

Recommended Least Depth:

COMPILATION NOTES

Chart

Applied As

AWOIS NO: 6609

Item Description: OBSTRUCTION (ROCK AWASH)

Source: BP44399/1948--USE

AWOIS Position: 40° 59' 19.35"N 073° 39' 39.46"W

Required Investigation: VS, BD, DI

Charts Affected: 12367

INVESTIGATION

Date(s)/DN(s): 6-29-94 / 180 (OPR-B285-AHP2, H-10542)

Position Numbers: 124

Launch Number: 0517

Investigation Used: Visual Search

Position Determined By: DGPS

Investigation Summary: A 50-meter radius visual search was conducted around the AWOIS position in water depths from 0.3 to 0.5 meters. The bottom was clearly visible. Nothing was found. The rock is charted in an area which uncovers. This area has been observed many times uncovered by several area residents the hydrographer talked with, including Mr. Joe Baglieri, a local lobsterman with over 20 years of experience in this harbor (phone 914/939-8758). None of the residents have seen rocks in this area.

CHARTING RECOMMENDATION

The hydrographer recommends removing the rock symbol from the chart. *CONCUR*

Recommended Position:

Recommended Least Depth:

COMPILATION NOTES

Chart

Applied As

AWOIS NO: 6610

Item Description: OBSTRUCTION (ROCK AWASH)

Source: BP44399/1948--USE

AWOIS Position: 40° 59' 21.⁶⁰~~35~~"N 073° 39' 37.46"W

Required Investigation: VS, BD, DI

Charts Affected: 12367

INVESTIGATION

Date(s)/DN(s): 6-29-94 / 180 (OPR-B285-AHP2, H-10542)

Position Numbers: 125

Launch Number: 0517

Investigation Used: Echo sounder

Position Determined By: DGPS

Investigation Summary: A 50-meter radius visual search was conducted around the AWOIS position, in water from 0.3 to 0.5 meters deep. The bottom was clearly visible. Nothing was found. The rock is charted in an area which uncovers. This area has been observed many times uncovered by several area residents the hydrographer talked with, including Mr. Joe Baglieri, a local lobsterman with over 20 years of experience in this harbor (phone 914/939-8758). None of the residents have seen rocks in this area.

CHARTING RECOMMENDATION

The hydrographer recommends removing the rock symbol from the chart. *CONCUR*

Recommended Position:

Recommended Least Depth:

COMPILATION NOTES

Chart

Applied As

AWOIS NO: 6611

Item Description: OBSTRUCTION (PIER)

Source: BP44399/1948--USE

AWOIS Position: 40° 59' 22.⁰⁰~~35~~"N 073° 39' ^{40.00}~~38.45~~"W

Required Investigation: VS, BD, DI

Charts Affected: 12367

INVESTIGATION

Date(s)/DN(s): 6-06-94 / 157 (OPR-B285-AHP2, H-10542)

Position Numbers: 83

Launch Number: 0517

Investigation Used: Visual Search

Position Determined By: DGPS

Investigation Summary: A visual search in the area of the charted pier at low water revealed a floating pier, approximately 10-meters long by 4-meters wide.

CHARTING RECOMMENDATION

The hydrographer recommends charting the floating pier at the position below. *CONCUR*

Recommended Position: 40°59'22.⁰⁹⁸~~10~~"N, 073°39'38.¹⁵⁵~~15~~"W

Recommended Least Depth: (floating)

COMPILATION NOTES

Chart

Applied As

AWOIS NO: 6612

Item Description: OBSTRUCTION (3 PILES)

Source: BP44399/1948--USE

AWOIS Position: 40° 59' 23.^{.60}~~35~~"N 073° 39' 32.^{34.00}~~45~~"W

Required Investigation: VS, BD, DI

Charts Affected: 12367

INVESTIGATION

Date(s)/DN(s): 6-02-94 / 153 (OPR-B285-AHP2, H-10542)

Position Numbers: 71

Launch Number: 0517

Investigation Used: Visual Search

Position Determined By: DGPS

Investigation Summary: A visual search was conducted in the area of the piles at low water and a marine ways with a 0.3 meter diameter pile on each side of the marine ways was located by detached position number 71.

CHARTING RECOMMENDATION

The hydrographer recommends charting the piles and the marine ways as located below. *CONCUR*

Recommended Position: 40°59'23.^{.302}~~30~~"N, 073°39'32.^{.805}~~80~~"W

Recommended Least Depth: ^{4.2}~~4.3~~ meters above MLLW (^{APPROVED}~~predicted~~ tides)
13.78 FT

COMPILATION NOTES

Chart

Applied As

AWOIS NO: 6613

Item Description: OBSTRUCTION (SUBMERGED ROCK)

Source: CL654/71--3RD USCGD

AWOIS Position: 40° 59' 55.⁵⁰~~35~~"N 073° 36' 12.⁵⁰~~95~~"W

Required Investigation: VS, BD, DI

Charts Affected: 12367

INVESTIGATION

Date(s)/DN(s): 7-01-94 / 182 (OPR-B285-AHP2, H-10542)

Position Numbers: 143-171 Launch Number: 0517

Investigation Used: Echo sounder

Position Determined By: DGPS

Investigation Summary: An echo sounder search was conducted in the area of the charted rock. A significant spike was discovered and investigated visually. Detached position number 171 was taken on a rock ^{0.4}~~0.3~~ meter below the surface. This area was foul with rocks north to ^{1.3 FT} Otter Rocks.

CHARTING RECOMMENDATION

The hydrographer recommends charting the rock as located below. *RETAIN*
DO NOT CONCUR
SEE E&A REPORT
Recommended Position: 40°59'58.⁶²²"N, 073°38'11.⁸²⁵"W

Recommended Least Depth: ^{0.4}~~0.2~~ meter below at MLLW (*APPROVED* predicted tides).
1.3 FT

COMPILATION NOTES

Chart

Applied As

AWOIS NO: 6614

Item Description: UNKNOWN (SUBMERGED WRECK)

Source: BP44399/1948--USE

AWOIS Position: 41° 00' 01.⁰⁰~~35~~"N 073° 39' ^{39.37}~~35.45~~"W

Required Investigation: VS, BD, DI

Charts Affected: 12367

INVESTIGATION

Date(s)/DN(s): 6-02-94 / 153 (OPR-B285-AHP2, H-10542)

Position Numbers: 70

Launch Number: 0517

Investigation Used: Visual Search

Position Determined By: DGPS

Investigation Summary: A visual search conducted in the area at low water revealed two 20-foot long wrecks resting on the bottom and exposed ^{1.5}~~1.5~~ meters. Detached position number 70 was taken at the center of the two wrecks. A photograph of the wrecks was taken and is included in the appendix of the descriptive report.

CHARTING RECOMMENDATION

The hydrographer recommends charting the visible wrecks as located below. *CONCUR*

Recommended Position: 41°00'01.⁹¹"N, 073°39'36.¹⁸"W

Recommended Least Depth: ^{1.7}~~1.8~~ meters above MLLW (^{APPROVED}~~predicted~~ tides)
5.58 FT

COMPILATION NOTES

Chart

Applied As

AWOIS NO: 6615

Item Description: OBSTRUCTION (DOLPHIN)

Source: CL276/75--USPS

AWOIS Position: 41° 00' 02.⁰⁰~~35~~"N 073° 39' ^{37.00}~~35.45~~"W

Required Investigation: VS, BD, DI

Charts Affected: 12367

INVESTIGATION

Date(s)/DN(s): 6-02-94 / 153 (OPR-B285-AHP2, H-10542)

Position Numbers: 69 Launch Number: 0517

Investigation Used: Visual Search

Position Determined By: DGPS

Investigation Summary: A dolphin was located visually at the AWOIS position and detached position number 69 was taken.

CHARTING RECOMMENDATION

The hydrographer recommends charting the dolphin as located below.

Recommended Position: 41°00'02.⁷⁵⁴"N, 073°39'35.⁹⁸⁰"W CONCUR

Recommended Least Depth: ^{4.2}~~4.3~~ meters above MLLW (^{APPROVED}~~predicted~~ tides)
^{13.78 FT}

COMPILATION NOTES

Chart

Applied As

AWOIS NO: 6616

Item Description: OBSTRUCTION (2 PIERS)

Source: UNKNOWN

AWOIS Position: 41° 00' 03.⁰⁰~~35~~"N 073° 38' ^{48.00}~~46.45~~"W

Required Investigation: VS, BD, DI

Charts Affected: 12367

INVESTIGATION

Date(s)/DN(s): 6-31-94 / 151 (OPR-B285-AHP2, H-10542)

Position Numbers: 30

Launch Number: 0517

Investigation Used: Visual Search

Position Determined By: DGPS

Investigation Summary: A visual search was performed in the area of the AWOIS position at low water and nothing was found. Water depth was less than 1.0 meter and search time was 15 minutes. The bottom was clearly visible. A stairway was located at detached position number 30. It was the only structure in the area. A photograph of the feature was taken and is located in the appendix of the descriptive report.

CHARTING RECOMMENDATION

The hydrographer recommends removing the piers from the chart and charting the stairway. *CONCUR W/CLARIFICATION DO NOT CHART*

Recommended Position: 41°00'03.³⁵³"N, 073°38'46.⁴⁹⁰"W *STAIRWAY*

Recommended Least Depth: ^{2.7}~~3.0~~ meters above MLLW (*APPROVED tides*)
~~(predicted tides)~~
8.8 FT

COMPILATION NOTES

Chart

Applied As

AWOIS NO: 6617

Item Description: OBSTRUCTION (PIER RUINS)

Source: UNKNOWN

AWOIS Position: 41° 00' 05.⁰⁰~~35~~"N 073° 38' ^{47.00}~~45.45~~"W

Required Investigation: VS, BD, DI

Charts Affected: 12367

INVESTIGATION

Date(s)/DN(s): 5-31-94 / 151 (OPR-B285-AHP2, H-10542)

Position Numbers: 31

Launch Number: 0517

Investigation Used: Visual Search

Position Determined By: DGPS

Investigation Summary: A 25-meter radius visual search was conducted in the area of the AWOIS position at low water and nothing was found. Water depth was less than 1.0 meter and the bottom was clearly visible. Fifteen minutes was spent on the search.

CHARTING RECOMMENDATION

The hydrographer recommends removing the pier ruins from the chart.

Recommended Position:

CONCUR

Recommended Least Depth:

COMPILATION NOTES

Chart

Applied As

AWOIS NO: 6619

Item Description: SOUNDING (6 FT)

Source: CL1413/69--COE PERMIT

AWOIS Position: 41° 00' 10.⁰⁰~~35~~"N 073° 38' ^{45.00}~~43.45~~"W

Required Investigation: ES

Charts Affected: 12367

INVESTIGATION

Date(s)/DN(s): 8-22-94 / 234 (OPR-B285-AHP2, H-10542)

Position Numbers: 1671-1672 **Launch Number:** 0517

Investigation Used: Echo sounder

Position Determined By: DGPS

Investigation Summary: A "6 ft reported" note was investigated by running a sounding line into the marina where the note is charted. There are no bouys marking the entrance to the marina. The only access is between an island and a point of land. Depths in the unmarked channel were less than 1.0 meter.

CHARTING RECOMMENDATION

The hydrographer recommends removing the "6 ft rep" note from the chart and showing representative soundings from this survey in the area. *CONCUR*

Recommended Position:

Recommended Least Depth:

COMPILATION NOTES

Chart

Applied As

AWOIS NO: 6622

Item Description: Wreck (S.E. SPRING)

Source: H5402A(1933)-NOS

AWOIS Position: 41° 00' 31.^{.00}35"N 073° 36' 49.^{51.00}45"W

Required Investigation: VS, BD, DI

Charts Affected: 12367

INVESTIGATION

Date(s)/DN(s): 7-01-94 / 182 (OPR-B285-AHP2, H-10542)

Position Numbers: 173

Launch Number: 0517

Investigation Used: Echo sounder

Position Determined By: DGPS

Investigation Summary: An echo sounder search was conducted in the area of the charted wreck, which is less than 50 meters from a rocky shoreline that made a chain drag impossible. A large spike was found. Probing with the sounding pole revealed the area to be very small. This may be the remains of a boiler or other dense metal structure from the wreck. No other wreckage was found.

CHARTING RECOMMENDATION

The hydrographer recommends charting the wreck as located below.

Recommended Position: 41°00'31.^{.683}68"N, 073°36'49.^{.813}81"W *CONCUR*

Recommended Least Depth: ^{OK}1.0 meter below at MLLW (~~predicted~~ ^{APPROVED} tides).
3.3 FT

COMPILATION NOTES

Chart

Applied As

AWOIS NO: 6623

Item Description: OBSTRUCTION (PIER)

Source: UNKNOWN

AWOIS Position: 41° 00' ^{44.00}~~40.75~~"N 073° 36' ^{40.00}~~38.45~~"W

Required Investigation: VS, BD, DI

Charts Affected: 12367

INVESTIGATION

Date(s)/DN(s): 6-22-94 / 173 (OPR-B285-AHP2, H-10542)

Position Numbers: 85

Launch Number: 0517

Investigation Used: Echo sounder

Position Determined By: DGPS

Investigation Summary: A visual search at the offshore end of a large rock formation at the listed AWOIS position determined the end of the feature. Detached position number 85 was taken. The rock formation is approximately 5-meters wide by 50-meters long, and runs toward shore on a heading of 0°. The feature was awash at the time of the investigation.

CHARTING RECOMMENDATION

The hydrographer recommends charting the rock formation as located below. *CONCUR W/CLARIFICATION ALSO RETAIN PIER AS CHARTED*

Recommended Position: 41°00'38.⁹¹¹~~91~~"N, 073°36'38.²³⁴~~23~~"W

Recommended Least Depth: ^{2.2}~~1.9~~ meters above MLLW (*APPROVED* predicted tides)
7.2 FT

COMPILATION NOTES

Chart

Applied As

AWOIS NO: 6624

Item Description: OBSTRUCTION (3 PIERS)

Source: CL1074/70--COE PERMIT

AWOIS Position: 41° 00' 47.35^{.00}"N 073° 37' 43.45^{45.00}"W

Required Investigation: VS, BD, DI

Charts Affected: 12367

INVESTIGATION

Date(s)/DN(s): 6-6-94 / 157 (OPR-B285-AHP2, H-10542)

Position Numbers: 78-80 Launch Number: 0517

Investigation Used: Visual Search

Position Determined By: DGPS

Investigation Summary: A visual search conducted in the area of the AWOIS item revealed 2 piers and 1 marine ways with a short floating pier alongside. Detached position number 78 was taken on the center of the ways with the floating pier; position number 79 was taken on a floating pier, and position number 80 was taken on a third floating pier. A discussion with the homeowner at the site revealed no other piers or ruins in the vicinity.

CHARTING RECOMMENDATION

The hydrographer recommends charting the piers and marine ways as located below. *CONCUR*

Recommended Position: Pos. 78 41°00'49.^{.859}85"N, 073°37'45.^{.261}26"W *WAYS*
Pos. 79 41°00'49.^{.221}22"N, 073°37'44.^{.104}10"W *FLOATING PIER*
Pos. 80 41°00'48.^{.071}07"N, 073°37'41.^{.776}80"W *FLOATING PIER*

Recommended Least Depth: ^{5.1}~~5.2~~ meters above MLLW (*APPROVED* predicted tides)
16.73 FT

COMPILATION NOTES

Chart

Applied As

AWOIS NO: 6625

Item Description: OBSTRUCTION (PIER)

Source: BP98354/1962 (AIR PHOTO REVISION)

AWOIS Position: 41° 00' 49.⁰⁰~~35~~"N 073° 36' ^{29.00}~~27.45~~"W

Required Investigation: VS, BD, DI

Charts Affected: 12367

INVESTIGATION

Date(s)/DN(s): 6-22-94 / 173 (OPR-B285-AHP2, H-10542)

Position Numbers: 84

Launch Number: 0517

Investigation Used: Visual Search

Position Determined By: DGPS

Investigation Summary: A visual search in the area of the item revealed a 10-meter long by 2-meter wide rock groin with a concrete cap. The groin sloped down into and below the surface of the water from shore.

CHARTING RECOMMENDATION

The hydrographer recommends charting the groin as located below.

Recommended Position: 41°00'49.⁰⁰~~22~~"N, 073°36'27.²⁸~~28~~"W *CONCUR*

Recommended Least Depth: ^{OK} ~~1.3~~ meters above to ^{MLLW 0.95} ~~0.3~~ meter below MLLW *MHW*
(PREDICTED TIDES) ^{4.3 FT} ~~4.3~~ ^{3+13 FT}

APPROVED

NOTE: Entire length of groin plotted above
MLLW on smooth sheet.

COMPILATION NOTES

Chart

Applied As (MLLW line from prior survey is charted MLLW line).

SSV 10/16/97

AWOIS NO: 6627 and 6628

Item Description: OBSTRUCTION (DOLPHINS)

Source: CL158/76--DEPT OF ARMY PERMIT

AWOIS Position: 6627-41° 00' 52.⁰⁰~~35~~"N 073° 37' ^{31.00}~~39.45~~"W
 6628-41° 00' 58.⁰⁰~~35~~"N 073° 37' ^{35.00}~~33.45~~"W

Required Investigation: VS, BD, DI

Charts Affected: 12367

INVESTIGATION

Date(s)/DN(s): 6-6-94 / 157 (OPR-B285-AHP2, H-10542)

Position Numbers: 81-82 Launch Number: 0517

Investigation Used: Visual Search

Position Determined By: DGPS

Investigation Summary: During the course of the visual inspection of the AWOIS area, item numbers 6627 and 6628 were determined to be dolphins related to the same floating docks, which make up the docking facilities on the east side of Grass Island Yacht Club. A detached position was taken on the north and south ends of the row of dolphins that the floating docks are attached to.

CHARTING RECOMMENDATION

The hydrographer recommends charting the row of dolphins as located below. *CONCUR W/ CLARIFICATION RETAIN AS CHARTED*

Recommended Position: North End - 41°00'59.^{.851}~~85~~"N, 073°37'37.^{.234}~~23~~"W
 South End - 41°00'56.^{.781}~~78~~"N, 073°37'32.^{.086}~~09~~"W

Recommended Least Depth: ^{5.0}~~5.1~~ meters above MLLW (^{APPROVED}~~predicted~~ tides)
^{16.4 FT}

COMPILATION NOTES

Chart

Applied As

AWOIS NO: 6630

Item Description: SOUNDING (4 FT REP)

Source: CL1526/81--USPS

AWOIS Position: 41° 01' 00.^{.00}35"N 073° 36'³⁷~~58.45~~^{00.00}"W

Required Investigation: VS, BD, DI

Charts Affected: 12367

INVESTIGATION

Date(s)/DN(s): 8-22-94 / 234 (OPR-B285-AHP2, H-10542)

Position Numbers: 1673-1682 **Launch Number:** 0517

Investigation Used: Echo sounder

Position Determined By: DGPS

Investigation Summary: Main scheme hydrography was split to 50 meters in Indian Harbor. Soundings in the harbor range from negative 0.9 to 3.6 meters. Soundings indicate a natural channel along the east side of the harbor, with extensive shallow flats located on the west side of the harbor. The channel is unmarked. The "4 ft reported 1981" note is not specific as to the location of the sounding.

CHARTING RECOMMENDATION

The hydrographer recommends removing the "4 ft reported 1981" note and charting representative soundings from the current survey.

Recommended Position:

CONCUR

Recommended Least Depth:

COMPILATION NOTES

Chart

Applied As

AWOIS NO: 6632

Item Description: OBSTRUCTION (PIER)

Source: CL186/68--USC&GS

AWOIS Position: 41° 01' 06.^{.00}35"N 073° 36' ^{59.00}~~57.45~~"W

Required Investigation: VS, BD, DI

Charts Affected: 12367

INVESTIGATION

Date(s)/DN(s): 6-6-94 / 157 (OPR-B285-AHP2, H-10542)

Position Numbers: 74

Launch Number: 0517

Investigation Used: Visual Search

Position Determined By: DGPS

Investigation Summary: A floating pier and gangway in ruins were located visually at the AWOIS position. Detached position 74 was taken on the offshore end of the pier, and a photograph of the feature was taken and is included in the appendix of the descriptive report.

CHARTING RECOMMENDATION

The hydrographer recommends charting pier ruins at the location below, which is the offshore end. *CONCUR*

Recommended Position: 41°01'10.^{05.789}58"N, 073°36'45.⁵²⁹85"W

Recommended Least Depth: ^{3.5}~~3.6~~ meters above MLLW (^{APPROVED}~~predicted~~ tides)
11.48 FT

COMPILATION NOTES

Chart

Applied As

AWOIS NO: 6633

Item Description: OBSTRUCTION (PIER)

Source: UNKNOWN

AWOIS Position: 41° 01' ^{.00}11.~~35~~"N 073° 36' ^{47.00}~~45.45~~"W

Required Investigation: VS, BD, DI

Charts Affected: 12367

INVESTIGATION

Date(s)/DN(s): 6-6-94 / 157 (OPR-B285-AHP2, H-10542)

Position Numbers: 75

Launch Number: 0517

Investigation Used: Visual Search

Position Determined By: DGPS

Investigation Summary: A visual inspection of the AWOIS search area revealed the location of a floating pier mooring system on a bulkhead. The pier was not yet installed, and was sitting on top of the bulkhead. Detached position number 75 was taken at the site of the pier attachment and a photograph was taken. The photo is included in the appendix to the descriptive report.

CHARTING RECOMMENDATION

The hydrographer recommends charting the pier at the location below. *CONCUR W/CLARIFICATION RETAIN AS CHARTED*

Recommended Position: 41°01' ^{10.580}~~05.79~~"N, 073°36' ^{45.853}~~57.53~~"W

Recommended Least Depth: None. Floating Pier.

COMPILATION NOTES

Chart

Applied As

AWOIS NO: 6634

Item Description: OBSTRUCTION (PIER RUINS)

Source: CL186/68--USC&GS

AWOIS Position: 41° 01' 13.⁰⁰35"N 073° 36' 50.⁰⁰45"W

Required Investigation: VS, BD, DI

Charts Affected: 12367

INVESTIGATION

Date(s)/DN(s): 6-6-94 / 157 (OPR-B285-AHP2, H-10542)

Position Numbers: 76

Launch Number: 0517

Investigation Used: Visual Search

Position Determined By: DGPS

Investigation Summary: A visual search was conducted in the area of the charted ruins and nothing was found. Discussions with a resident in the area disclosed that at low tide the entire area is exposed and no evidence of the ruins exist.

CHARTING RECOMMENDATION

The hydrographer recommends removing the pier ruins from the chart.

Recommended Position:

CONCUR

Recommended Least Depth:

COMPILATION NOTES

Chart

Applied As

AWOIS NO: 7536

Item Description: OBSTRUCTION (ROCK)

Source: FE318SS/88

AWOIS Position: 40° 58' 33.08"N 073° 38' 02.56"W

Required Investigation: S2, DI, ES

Charts Affected: 12367

INVESTIGATION

Date(s)/DN(s): 6-29-94 / 180 (OPR-B285-AHP2, H-10542)

Position Numbers: 119

Launch Number: 0517

Investigation Used: Echo sounder

Position Determined By: DGPS

Investigation Summary: An echo sounder search was conducted and a spike was found. A least depth was scaled from the echogram. A detached position was taken over the spike.

CHARTING RECOMMENDATION

The hydrographer recommends charting the obstruction (rock) at the location below. *CONCUR*

Recommended Position: 40°58'33.⁻³²⁹~~33~~"N, 073°38'02.⁻²⁰⁷~~21~~"W

Recommended Least Depth: ^{7.7}~~7.5~~ meters below at MLLW (*APPROVED* predicted tides). ^{25.3 FT}

COMPILATION NOTES

Chart

Applied As

09/02/97

HYDROGRAPHIC SURVEY STATISTICS
REGISTRY NUMBER: H-10542

NUMBER OF CONTROL STATIONS	2
NUMBER OF POSITIONS	1899
NUMBER OF SOUNDINGS	10330

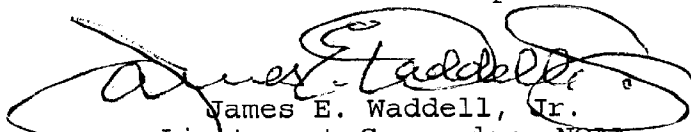
	TIME-HOURS	DATE COMPLETED
PREPROCESSING EXAMINATION	16	02/07/97
VERIFICATION OF FIELD DATA	571	07/09/97
QUALITY CONTROL CHECKS	46	
EVALUATION AND ANALYSIS	366.50	
FINAL INSPECTION	15	07/16/97
COMPILATION	102	08/29/97
TOTAL TIME	1117	
ATLANTIC HYDROGRAPHIC BRANCH APPROVAL		07/31/97

APPROVAL SHEET

BASIC HYDROGRAPHIC SURVEY
OPR-B285-AHP
AHP-10-7-94
H-10542
1994

This basic hydrographic survey was conducted in accordance with the project instructions for OPR-B285-AHP, the Hydrographic Manual, the Hydrographic Survey Guidelines, and the Field Procedures Manual. All reports were reviewed by Mr. Brian Link, Assistant Chief of Party. The descriptive report was reviewed and approved by LCDR James E. Waddell, Jr., Chief of Party. All supporting data and records were approved through Team Processing with Atlantic Hydrographic Section in Norfolk, Virginia.

This survey is a complete basic hydrographic survey for the area described in Section B of this report.


James E. Waddell, Jr.
Lieutenant Commander, NOAA
Chief, Atlantic Hydrographic Party



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SERVICE
Office of Ocean and Earth Sciences
Silver Spring, Maryland 20910

TIDE NOTE FOR HYDROGRAPHIC SURVEY

DATE: March 30, 1995

HYDROGRAPHIC SECTION: Atlantic

HYDROGRAPHIC PROJECT: OPR-B285

HYDROGRAPHIC SHEET: H-10542

LOCALITY: Connecticut, Long Island Sound, Cos Cob Harbor to
Port Chester Harbor

TIME PERIOD: May 25 - September 11, 1994

TIDE STATION USED: 846-8799 Long Neck Point, Ct.
Lat. $41^{\circ} 2.3'N$ Lon. $73^{\circ} 28.8'W$

PLANE OF REFERENCE (MEAN LOWER LOW WATER): 2.64 ft.

HEIGHT OF HIGH WATER ABOVE PLANE OF REFERENCE: 7.4 ft.

REMARKS: RECOMMENDED ZONING

Apply a +6 minute time correction and a X1.02 range ratio to heights using Long Neck Point, Ct. (846-8799).

Note: Times are tabulated in Greenwich Mean Time.


CHIEF, DATUMS SECTION



GEOGRAPHIC NAMES

H-10542

Name on Survey	12367										
	A	B	C	D	E	F	G	H	K		
Page 1 of 2	ON CHART NO. 12367 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										
BLUEFISH SHOAL	X										1
BLUFF ISLAND	X										2
BOWERS ISLAND	X										3
BRUSH ISLAND	X										4
BYRAM (pp1)	X										5
BYRAM HARBOR	X										6
BYRAM POINT	X										7
CALF ISLANDS	X										8
CAPTAIN HARBOR	X										9
CHANNEL ROCK	X										10
CONNECTICUT (title)	X										11
CORMORANT REEF	X										12
COS COB HARBOR (title)	X										13
DIVING ISLAND	X										14
FARWELLS ISLAND		(will be added to chart at next edition)									15
FIELD POINT	X										16
GAME COCK ISLAND		(will be added to chart at next edition)									17
GLOVER REEF	X										18
GOOSE ISLAND	X										19
GRASS ISLAND	X										20
GRASSY ROCK (island)	X										21
GREAT CAPTAIN ISLAND	X										22
GREAT CAPTAIN ROCKS	X										23
GREENWICH HARBOR	X										24
HENS AND CHICKENS	X										25

GEOGRAPHIC NAMES

H-10542

Name on Survey

Page 2 of 2

A ON CHART NO. 12367
B ON PREVIOUS SURVEY NO.
C ON U.S. QUADRANGLE MAPS
D FROM LOCAL INFORMATION
E ON LOCAL MAPS
F P.O. GUIDE OR MAP
G RAND McNALLY ATLAS
H U.S. LIGHT LIST
K

Name on Survey	A	B	C	D	E	F	G	H	K
HITCHCOCK ROCK	X								1
HORSE ISLAND	X								2
INDIAN HARBOR	X								3
JONES ROCKS	X								4
LITTLE CAPTAIN ISLAND	X								5
LONG ISLAND SOUND (title)	X								6
MANURSING ISLAND	X								7
MANURSING ISLAND REEF	X								8
NEWFOUNDLAND REEF	X								9
NEW YORK (title)	X								10
NORTH MANURSING	X								11
OTTER ROCKS	X								12
PECKS ROCK	X								13
PORT CHESTER HARBOR	X								14
(title)									15
RED ROCK (island)	X								16
RICH ISLAND				(will be added to chart at next edition)					17
ROUND ISLAND	X								18
SAW ISLAND	X								19
SHORE ISLAND	X								20
SMITH COVE	X								21
TRANSPORT ROCK	X								22
TWEED ISLAND	X								23
WEE CAPTAIN ISLAND	X								24
WILSON HEAD (island)	X								25

Approved

Charles C. Joy
Chief Geographer

APR 17 1995

LETTER TRANSMITTING DATA

N/CS33-46-97

DATA AS LISTED BELOW WERE FORWARDED TO YOU BY
(Check):

ORDINARY MAIL AIR MAIL

REGISTERED MAIL EXPRESS

GBL (Give number) _____

TO:

Chief, Data Control Group, N/CS3x1
NOAA/National Ocean Service
Station 6815, SSMC3
1315 East-West Highway
Silver Spring, Maryland 20910-3282

DATE FORWARDED

29 AUG 1997

NUMBER OF PACKAGES

ONE TUBE & ONE BOX

NOTE: A separate transmittal letter is to be used for each type of data, as tidal data, seismology, geomagnetism, etc. State the number of packages and include an executed copy of the transmittal letter in each package. In addition the original and one copy of the letter should be sent under separate cover. The copy will be returned as a receipt. This form should not be used for correspondence or transmitting accounting documents.

H-10542

CONNECTICUT, LONG ISLAND SOUND, COS COB TO PORT CHESTER HARBOR

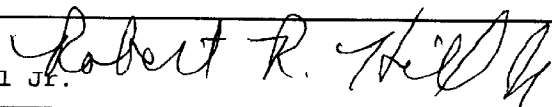
1 (ONE) Tube containing the following:

- 1 SMOOTH SHEET (H-10542)
- 1 Composite Drawing for chart #12367
- 1 H-Drawing for chart #12367

1 ONE) BOX containing Descriptive Report for H-10542

**** NOTE:** The Drawing History Form #76-71 for chart #12367 (H-10542) WILL BE FORWARDED 9/2/97

FROM: (Signature)



Robert R. Hill Jr.

RECEIVED THE ABOVE

(Name, Division, Date)

Return receipted copy to:

Atlantic Hydrographic Branch
N/CS33
439 West York Street
Norfolk, VA 23510-1114

**ATLANTIC HYDROGRAPHIC SECTION
EVALUATION REPORT FOR H-10542 (1994)**

This Evaluation Report has been written to supplement and/or clarify the original Descriptive Report. Sections in this report refer to the corresponding sections of the Descriptive Report.

D. AUTOMATED DATA ACQUISITION AND PROCESSING

The following software was used to process data at the Atlantic Hydrographic Branch:

Hydrographic Processing System
AutoCAD, Release 12
NADCON, version 2.10
QUICKSURF, version 5.1
MicroStation, version 5.05
I/RAS-B, version 5.01

The smooth sheet was plotted using an ENCAD NovaJet III plotter.

H. CONTROL STATIONS

Horizontal control used for this survey during data acquisition is based upon the North American Datum of 1983 (NAD 83). The smooth sheet has been annotated with ticks showing the computed mean shift between the North American Datum of 1983 (NAD 83) and the North American Datum of 1927 (NAD 27).

To place the smooth plots on the NAD 27 datum, move the projection lines 0.35 seconds (10.851 meters or 1.08 mm at the scale of the survey) north in latitude and 1.544 seconds (36.101 meters or 3.61 mm at the scale of the survey) east in longitude.

All geographic positions listed in this report are on the NAD 83 unless stated otherwise.

J. SHORELINE

The shoreline originates with photogrammetric manuscript TP-01267 (1984-1987). The manuscript was digitized by Atlantic Hydrographic Branch personnel. The digitized file has been inserted into the smooth sheet drawing file. Shoreline revisions originating with the present survey are shown in red on the smooth sheet.

The zero depth contour was not completely delineated on this survey due to the hazardous foul areas along the shoreline.

L. JUNCTIONS

H-10353 (1990)	1:10,000	to the south
H-10540 (1994)	1:10,000	to the east
<u>H-10559 (1994)</u>	<u>1:10,000</u>	<u>to the west</u>

Standard junctions were effected with the present survey and surveys H-10540 (1994) and H-10559 (1994).

A standard junction could not be effected between the present survey and H-10353 (1990). The junctional survey is archived at National Ocean Service (NOS) headquarters, Silver Spring, Maryland. In this case, the note "ADJOINS" is shown on the present survey. Any adjustments to the depth curves will have to be made during chart compilation.

M. COMPARISON WITH PRIOR SURVEYS

1. Hydrographic

H-1699	(1894)	1:10,000
H-1699b	(1914)	1:10,000
H-5402a	(1933)	1:10,000
<u>H-5402b</u>	<u>(1933)</u>	<u>1:5,000</u>

The prior surveys listed above cover the present survey area in its entirety.

a. Prior survey H-1699 (1894) covers the northern portion of the present survey in depths less than 40 feet (12² m). The prior survey is in good general agreement with the present survey, with prior soundings differing plus or minus \pm 2 feet (0⁶ meter). The differences between the present and prior survey can be attributed to natural changes in the bottom configuration, cultural changes, and/or improved hydrographic surveying methods. Attention is directed to the following:

The following charted depths were neither investigated nor addressed by the hydrographer:

<u>DEPTHS (ft/m)</u>	<u>LATITUDE (N)</u>	<u>LONGITUDE (W)</u>
25/7 ⁶	40°57'30.2"	73°39'51.25"
14/4 ³	40°57'24.5"	73°39'47.69"
6/1 ⁸	40°59'21.9"	73°38'10.7"
5/1 ⁵	40°59'31.35"	73°39'07.5"
3/0 ⁹	40°59'51.1"	73°38'43.7"

These depths were brought forward from the prior survey to supplement the present survey. It is recommended that these depths be retained as charted.

b. Prior survey H-1699b (1914) covers the northern portion of the present survey in depths less than 40 feet (12² m). The prior survey is in good general agreement with the present survey, with prior soundings differing plus or minus \pm 2 feet (0⁶ meter). The differences between the present and prior survey can be attributed to natural changes in the bottom configuration, cultural changes, and/or improved hydrographic surveying methods. Attention is directed to the following:

The following charted depths were neither investigated nor addressed by the hydrographer:

<u>DEPTHS (ft/m)</u>	<u>LATITUDE (N)</u>	<u>LONGITUDE (W)</u>
4/1 ²	40°59'53.6"	73°38'47.65"
4/1 ²	40°59'49.25"	73°38'45.2"
2/0 ⁶	41°00'09.9"	73°37'58.2"
3/0 ⁹	40°59'20.1"	73°38'21.2"

These depths were brought forward from the prior survey to supplement the present survey. It is recommended that these depths be retained as charted.

c. Prior survey H-5402a (1933) covers the area surveyed in its entirety. The prior survey is in good general agreement with the present survey, with prior soundings differing plus or minus \pm 2 feet (0⁶ meter). The differences between the present and prior survey can be attributed to natural changes in the bottom configuration, cultural changes, and/or improved hydrographic surveying methods. Attention is directed to the following:

The following charted depths and features were neither investigated nor addressed by the hydrographer:

<u>DEPTHS/FEATURES</u> <u>(ft/m)</u>	<u>LATITUDE (N)</u>	<u>LONGITUDE (W)</u>
2/0 ⁶ Rk	40°59'35.75"	73°36'06.8"
15/4 ⁶	40°57'55.95"	73°39'23.4"
8/2 ⁴	40°58'06.35"	73°39'19.8"
8/2 ⁴	40°58'06.75"	73°39'27.8"
18/5 ⁵	40°58'11.9"	73°38'48.5"
10/3 Rk	40°58'18.5"	73°38'41.15"
3/0 ⁹ Rk	40°58'37.3"	73°39'17.4"
3/0 ⁹ Rk	40°58'24.8"	73°39'28.95"
2/0 ⁶ Rk	40°59'06.8"	73°39'17.8"
Rk awash	40°59'06.2"	73°39'12.97"
3/0 ⁹	40°59'06.9"	73°36'53.5"
Rk awash	40°59'15.75"	73°38'14.45"
Rk awash	40°59'17.55"	73°38'13.5"
Rk awash	41°00'01.65"	73°38'30.4"
Rk awash	41°00'14.55"	73°37'53.55"
5/1 ⁵	41°00'24.0"	73°36'44.65"
Rk awash	41°00'49.5"	73°36'22.5"
5/1 ⁵	41°00'41.7"	73°37'00.5"
3/0 ⁹	41°00'36.2"	73°37'12.8"
3/0 ⁹	41°00'34.6"	73°37'19.9"
8/2 ⁴ Rk	40°59'19.1"	73°38'10.6"

These depths and features were brought forward from the prior survey to supplement the present survey and it is recommended that they be retained as charted.

d. Prior survey H-5402b (1933) is common to the present survey only in the vicinities of the northern portion of Greenwich Harbor, in Latitude 41°00'50"N, Longitude 73°37'30"W and the Byram River, in Latitude 40°59'30"N, Longitude 73°39'30"W. The prior survey is in good general agreement with the present survey, with prior soundings differing plus or minus ± 2 feet (0⁶ meter). The differences between the present and prior survey can be attributed to natural changes in the bottom configuration, cultural changes, and/or improved hydrographic surveying methods. In the vicinity of Latitude 41°00'45.85"N, Longitude 73°37'30"W, significant changes in the bottom configuration were noted with present survey depths being 4 to 6 feet (1² to 1⁸ m) deeper. These differences can be attributed to cultural changes in the area.

2. Prior Wire Drag Surveys

H-5142WD	(1931)	1:20,000
<u>H-5402c WD</u>	<u>(1933)</u>	<u>1:10,000</u>

The above noted prior surveys covers the present survey except in the inshore areas where wire drag could not be accomplished. There are no conflicts between the present survey depths and the prior surveys effective clearance depths. Attention is directed to the following:

The following charted depths and features originate with the prior survey H-5142WD (1931) and are not considered disproved by the present survey:

<u>DEPTH/FEATURE</u> (ft/m)	<u>LATITUDE (N)</u>	<u>LONGITUDE (W)</u>
26/7 ⁹	40°57'29.8"	73°39'31.9"
14/4 ³	40°57'37.0"	73°39'37.5"
16/4 ⁹	40°57'36.9"	73°39'52.25"
6/1 ⁸	40°57'33.6"	73°39'42.0"
15/4 ⁶	40°57'38.3"	73°39'46.6"
7/2 ¹ Rk	40°59'19.0"	73°37'52.75"
6/1 ⁸ Rk	40°59'21.3"	73°37'32.1"
15/4 ⁶	40°59'53.4"	73°36'01.0"
7/2 ¹ Rk	40°59'28.65"	73°37'47.2"
8/2 ⁴	40°59'15.25"	73°37'53.0"
10/3	40°59'07.4"	73°38'35.8"
30/9 ¹	40°58'10.4"	73°38'15.3"
8/2 ⁴	40°58'53.25"	73°39'07.5"
10/3	40°58'55.15"	73°39'01.3"
9/2 ⁷ Rk	40°58'43.5"	73°37'59.1"
12/3 ⁷ Rk	40°58'39.23"	73°37'52.02"
12/3 ⁷	40°59'22.0"	73°38'03.5"

These depths and features were brought forward from the prior survey to supplement the present survey. It is recommended that these features be retained as charted.

The present survey is considered adequate to supersede the prior surveys within the common area, except as noted in this report.

O. COMPARISON WITH CHARTS 12364 (29th Edition, Jul 23/94
12367 (20th Edition, Feb 18/95)

Hydrography

The charted hydrography within the common area originates with the previously addressed prior surveys and from sources not readily available. The previously addressed prior surveys require no further consideration. Attention is directed to the following:

1. Automated Wreck and Obstruction Information System (AWOIS) Item #6613, a charted rock awash, with danger curve, in Latitude 40°59'55.85"N, Longitude 73°38'13.0"W, originates with Chart Letter 654/1971 (CL654/71). The investigation of this AWOIS item by the field unit is not considered adequate for disproval. It is recommended that this feature be retained as charted.

2. The following charted depths and features originate with unknown sources and were neither investigated nor addressed by the hydrographer.

<u>DEPTH/FEATURE</u> <u>(ft/m)</u>	<u>LATITUDE (N)</u>	<u>LONGITUDE (W)</u>
24/7 ³ Rk	40°58'08.6"	73°38'45.8"
10/3	40°58'44.35"	73°38'30.4"
16/4 ⁹	40°59'06.9"	73°36'45.1"
3/0 ⁹	41°00'49.6"	73°36'24.9"
Subm Rk	40°58'36.49"	73°38'01.39"
Subm Rk	40°59'12.6"	73°38'13.5"
4 piles	40°59'42.1"	73°39'35.8"
Groin	41°00'34.0"	73°37'01.7"
1/0 ³	41°00'12.8"	73°37'59.3"
Rk awash	41°00'37.8"	73°37'11.05"
6/1 ⁸	41°00'17.0"	73°37'25.8"
2/1 ⁸	41°00'39.6"	73°37'30.7"

It is recommended that these depths and features be retained as charted.

3. A charted rock islet in Latitude 40°58'59.65"N, Longitude 73°39'31.85"W, originates with an unknown source and is shown on NOS chart 12367. This feature was neither investigated nor addressed by the hydrographer. It is

recommended that this charted feature be retained and revised to a submerged rock with a danger curve.

The present survey is adequate to supersede the charted hydrography in the common area, except as noted in this report.

P. ADEQUACY OF SURVEY

This is an adequate hydrographic survey and should supersede all prior surveys within the common area with the exception of those items noted above.

S. MISCELLANEOUS

Chart compilation using the present survey data was done by Atlantic Hydrographic Branch personnel in Norfolk, Virginia. Compiled data will be forwarded to Nautical Chart Division, Silver Springs, Maryland upon completion of the PROJECT.

RUDE Processing Team

Richard W. Blevins
Richard W. Blevins
Cartographic Technician
Verification of Field Data
Evaluation and Analysis

**APPROVAL SHEET
H-10542**

Initial Approvals:

The completed survey has been inspected with regard to survey coverage, delineation of depth curves, development of critical depths, cartographic symbolization, and verification or disapproval of charted data. The digital data have been completed and all revisions and additions made to the smooth sheet during survey processing have been entered in the digital data for this survey. The survey records and digital data comply with NOS requirements except where noted in the Evaluation Report.

Robert R. Hill Jr. Date: 7-25-97
Robert R. Hill Jr.
Cartographer
Atlantic Hydrographic Branch

I have reviewed the smooth sheet, accompanying data, and reports. This survey and accompanying digital data meet or exceed NOS requirements and standards for products in support of nautical charting except where noted in the Evaluation Report.

Nicholas E. Perugini Date: July 31, 1997
Nicholas E. Perugini,
Commander, NOAA
Chief, Atlantic Hydrographic Branch

Final Approval:

Approved: Andrew A. Armstrong, III Dated: Oct. 21, 1997
Andrew A. Armstrong, III
Captain, NOAA
Chief, Hydrographic Surveys Division

MARINE CHART BRANCH
RECORD OF APPLICATION TO CHARTS

FILE WITH DESCRIPTIVE REPORT OF SURVEY NO. H-10542

INSTRUCTIONS

A basic hydrographic or topographic survey supersedes all information of like nature on the uncorrected chart.

1. Letter all information.
2. In "Remarks" column cross out words that do not apply.
3. Give reasons for deviations, if any, from recommendations made under "Comparison with Charts" in the Review.

CHART	DATE	CARTOGRAPHER	REMARKS
12367	8/26/97	Robert R. [Signature]	Full Part Before After Marine Center Approval Signed Via Drawing No.
12364 D,E,G	4/23/98	John Bark [Signature]	Full Part Before After Marine Center Approval Signed Via Drawing No. 31 APP'd thru chrt 12367
12363	4/24/98	John Bark [Signature]	Full Part Before After Marine Center Approval Signed Via Drawing No. 56 APP'd thru chrt 12364
			Full Part Before After Marine Center Approval Signed Via Drawing No.
			Full Part Before After Marine Center Approval Signed Via Drawing No.
			Full Part Before After Marine Center Approval Signed Via Drawing No.
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