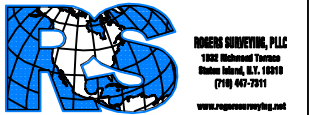


PREPARED FOR
**THE PORT AUTHORITY
OF NY & NJ**



Title
**NEW JERSEY
MARINE
TERMINAL**

**HYDROGRAPHIC
SURVEY**

No. Date Revision Approved
VERTICAL CONTROL
Mean Low Water = 2.3' Below 0.00 NGVD '29

HORIZONTAL CONTROL
ALL COORDINATES, BEARING AND DISTANCES ARE REFERENCED TO THE NEW JERSEY PLANE COORDINATE SYSTEM (N.A.D. 83) AS SET FORTH IN N.J.S.A. 51:3-7

This drawing subject to conditions in contract. All inventions, ideas, designs and methods herein are reserved to Port Authority and may not be used without it's written consent.

Rogers Surveying BW DWR
Surveyed by Drawn by Checked by
Date 12/10/12-01/17/13 Scale 1"= 80'
Contract Number Drawing Number
410-12-037 54 of 60
BERTH 86

NOTE:
THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF SURVEYS MADE ON THE DATES INDICATED AND CAN ONLY BE CONSIDERED AS INDICATING THE GENERAL CONDITIONS EXISTING AT THAT TIME. THE DATA IS REPRESENTATIVE OF A LARGER DATA SET. SOUNDINGS AND CONTOURS SHOWN ARE FROM 8'X16' GRID NEAREST TO CENTER. COORDINATES REFER TO THE NEW JERSEY MERCATOR SYSTEM (NAD 1983) SOUNDINGS REFER TO THE PLANE OF MEAN LOW WATER THE PLANE OF MEAN LOW WATER IS 2.3 FEET BELOW NGVD (1929) THE SOUNDING DATA DEPICTED ON THIS MAP WAS COLLECTED USING CLASS 2 SURVEY STANDARDS IN ACCORDANCE WITH EM 1110 2 1003.
THIS SURVEY WAS COMPLETED USING THE FOLLOWING EQUIPMENT:
• Survey Vessel "Red Rogers"
• Reson 7101 Multibeam
• TSS 320 POS/MV.
• Coastal Oceanographics "HYPACK" software

| Volume Report | | | |
|---|---------------------------|--------------------------|--------------|
| THE DATA USED FOR VOLUME CALCULATIONS IS REPRESENTATIVE OF A LARGER DATA SET. SOUNDINGS USED FOR VOLUME CALCULATIONS ARE ON A 3'X3' GRID WITH THE DEPTH NEAREST TO THE CENTER USED. | | | |
| Design Depth | Volume to Dredge Template | Volume of 2' Over dredge | Total Volume |
| 50' | 9,121 yd3 | 5,271 yd3 | 14,392 yd3 |
| TOTAL | 9,121 yd3 | 5,271 yd3 | 14,392 yd3 |

NOTE: BERTH LENGTHS, WIDTHS AND DEEP WATER BERTH DIMENSIONS FROM P.A. PORT DEPARTMENT.
Coordinates are expressed in feet and refer to the NEW JERSEY STATE PLANE (NAD 83) System.
Soundings refer to Mean Low Water as determined by U.S.A.C.E.
The Plane of Mean Low Water is 2.3 feet below Mean Sea Level (NGVD 29).
Note:
This survey does not guarantee the absence or presence of any underwater obstructions. Diver verification may be required.

NAVD88 3.42
NGVD29 2.30
MLW (N.O.A.A.) 0.67
MLW (COE) & SURVEY 0.00
I hereby certify to The Port Authority of New York and New Jersey that this map indicates the conditions existing as of the date indicated hereon to the best of my professional knowledge.
William A. Rogers, Jr., P.E., L.S.
New Jersey State # 22254
A.C.S.M. Certified Hydrographer # 151