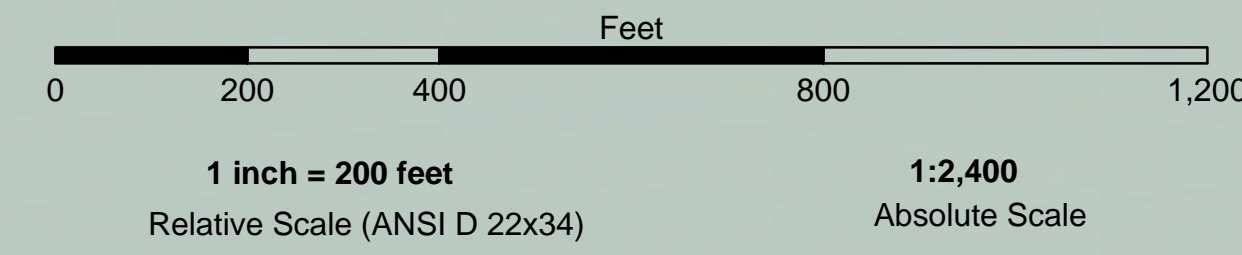


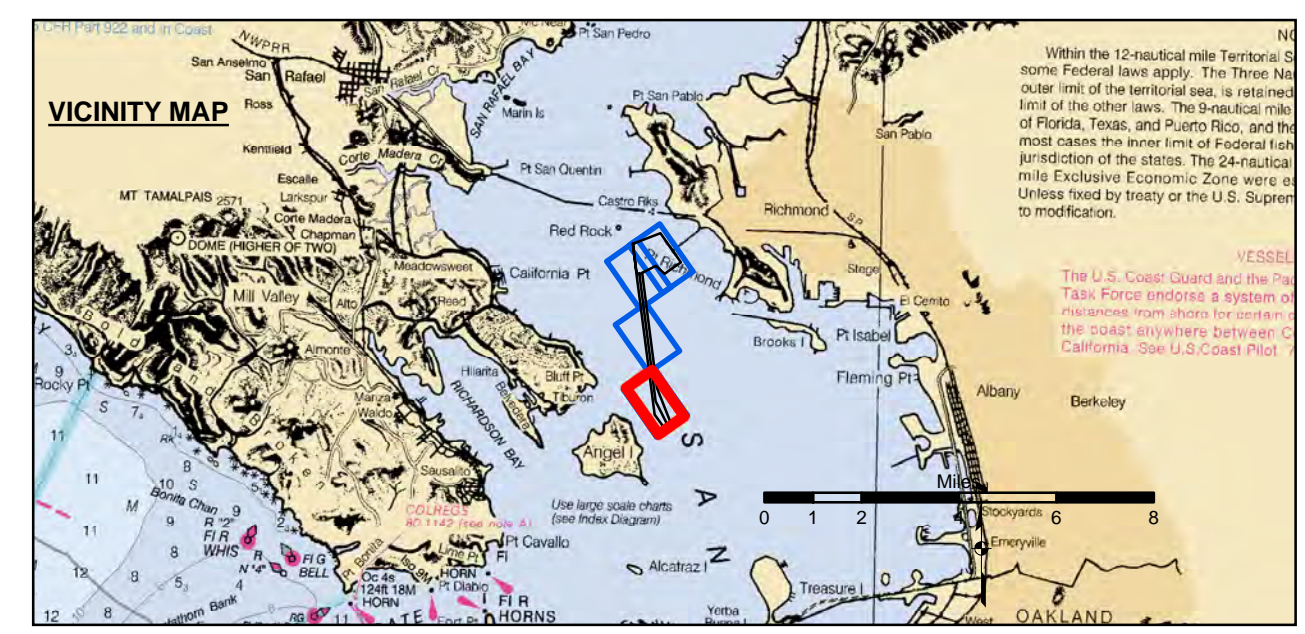
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San Francisco District  
1455 Market Street  
San Francisco, CA 94103

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Chart Date:	Jul 06, 2018
Designed by:	PDT
Drawn by:	PDT
Checked by:	PDT
Approved:	Chief, Construction Branch
Surveyed By:	Plotted By:
LT. COLONEL C.E. MORROW	PDT
Submitted:	Recommended:
Hydro Survey Team Leader	Chief, Hydro Survey Section



Federal Navigation Channel	Beacon, General	<b>Contours</b>
Shoaling Area	Obstruction Point	
Placement Area	Navigation Buoy	
Anchorage Area	Navigation Buoy	
Wreck Area	Shoalest Sounding*	
Submerged Wreck		-45
Angle Point		-44
		-43
		-42
		-41

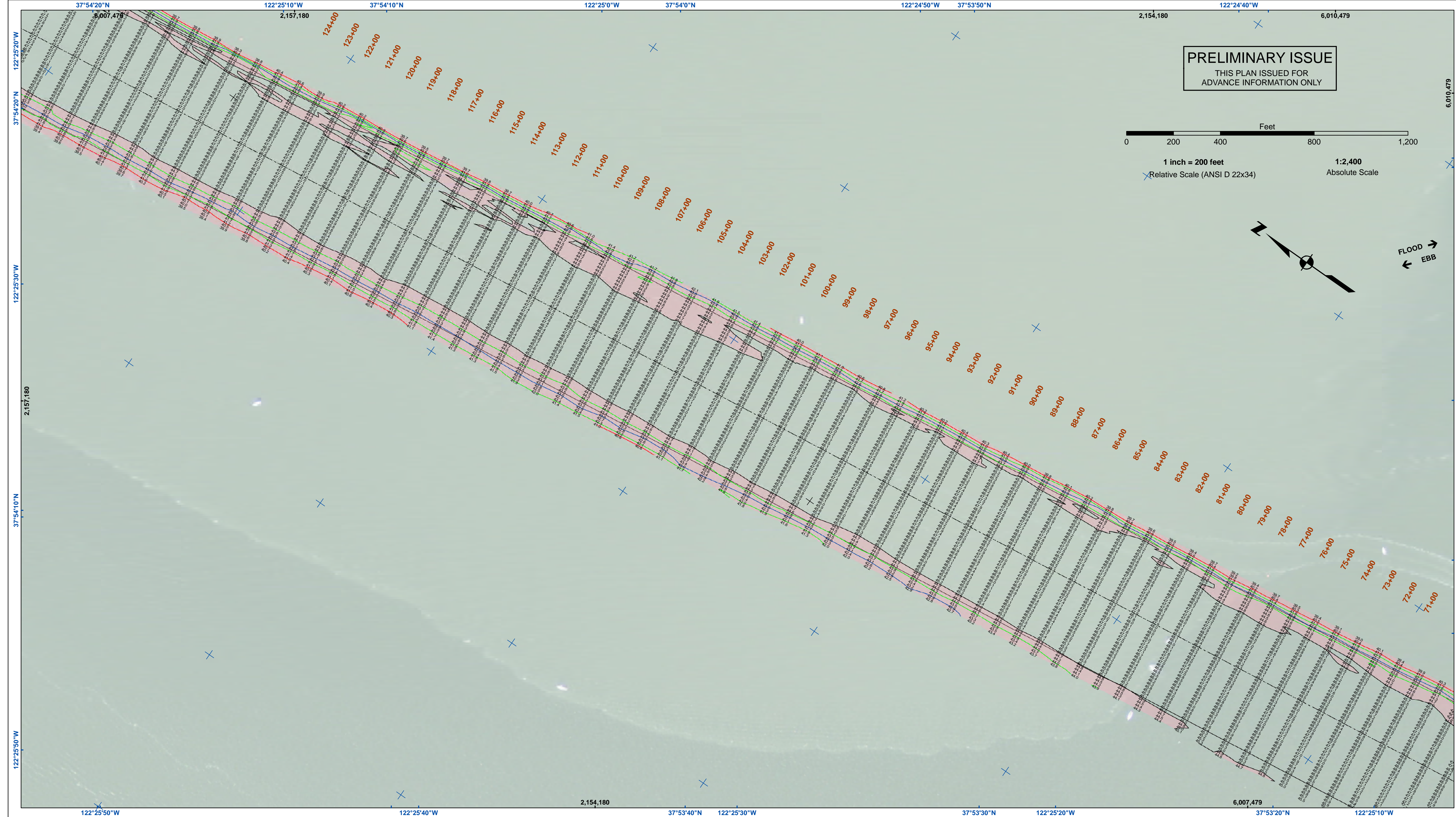
**NOTES:**  
HORIZONTAL COORDINATE SYSTEM:  
NORTH AMERICAN DATUM OF 1983 (NAD83), PROJECTED TO THE STATE PLANE COORDINATE SYSTEM (SPCS), CALIFORNIA ZONE III. DISTANCE UNITS IN U.S. SURVEY FEET.  
VERTICAL DATUM:  
SOUNDINGS ARE SHOWN IN FEET AND INDICATE DEPTHS BELOW MEAN LOWER LOW WATER.  
DRAWING NOT TO BE USED FOR NAVIGATION.  
ONLY CHANNEL CONDITION AT DATE OF SURVEY.  
THE LOCATION OF ALL NAVIGATION AIDS ARE BASED ON INFORMATION PROVIDED BY THE U.S. COAST GUARD. BUOY LOCATION REPRESENT THE POSITION OF THE SINKER ONLY.  
SURVEYED BY THE CORPS OF ENGINEERS.

SOUNDINGS WERE TAKEN BY FATHOMETER AND ARE SHOWN TO THE NEAREST TENTH OF A FOOT.  
SOUNDINGS ARE BASED ON THE DATUM OF MEAN LOWER LOW WATER AT THE LOCALITY, NAVD 88.  
BASE MAPS ARE USDA NAIP 2010.  
THE PROJECT DEPTHS ARE AS FOLLOWS:  
SOUTHAMPTON SHOALS CHANNEL -45 FEET.  
LONG WHARF MANEUVERING AREA -45 FEET.  
1:00 INDICATED THE NUMBER AND BEGINNING OF A LINE OF SOUNDINGS.  
HORIZONTAL CONTROL:  
HORIZONTAL POSITIONING: COAST GUARD DGPS  
VERTICAL TIDES: INTERPOLATED FROM NOAA ONLINE TIDE STATIONS:  
941 4290 - RICHMOND, CA  
941 4290 - SAN FRANCISCO, CA  
VERTICAL CONTROL:  
(SOUTHAMPTON SHOALS & LONG WHARF MANEUVERING) BENCHMARK \*10' 1937 ELEV 15.86 FT. MLLW.  
AND BENCHMARK \*11' 1946 ELEV 15.47 FT. MLLW.  
TIDE GAUGE LOCATED AT TIBURON NET DEPOT.

CALIFORNIA  
ALAMEDA COUNTY  
RICHMOND OUTER HARBOR  
SOUTHAMPTON SHOALS  
POST-DREDGE SURVEY  
25 JUNE 2018

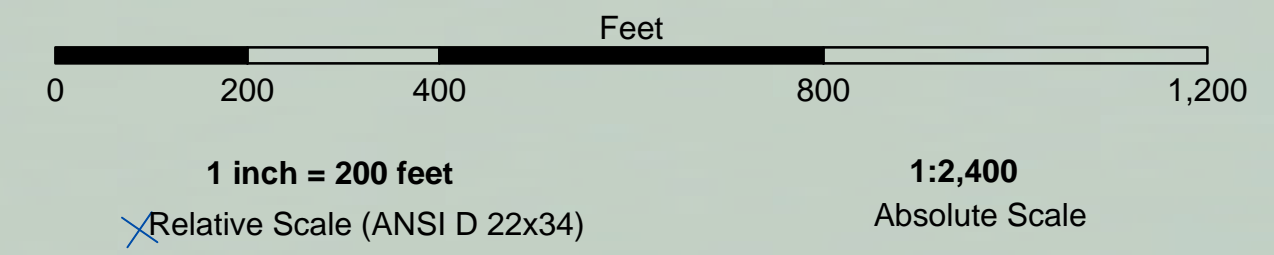
**Sheet Reference Number**  
1 of 4





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 San Francisco District  
 1455 Market Street  
 San Francisco, CA 94103

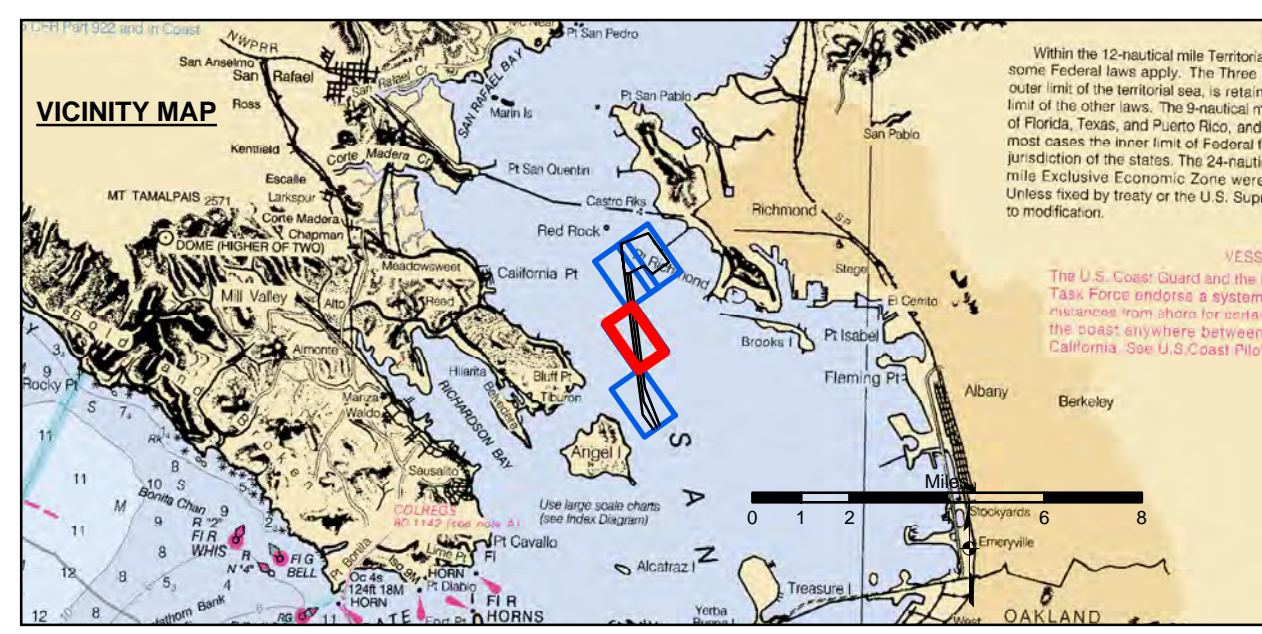
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Chart Date:	Jul 06, 2018
Designed by:	PDT
Plotted by:	PDT
Checked by:	PDT
Drawn by:	PDT

ALAMEDA COUNTY  
 CALIFORNIA  
**RICHMOND OUTER HARBOR**  
**SOUTHAMPTON SHOALS**  
**POST-DREDGE SURVEY**  
 25 JUNE 2018



Federal Navigation Channel	Beacon, General	<b>Contours</b>
Shoaling Area	Obstruction Point	-45
Placement Area	Navigation Buoy	-44
Anchorage Area	Navigation Buoy	-43
Wreck Area	Shoalest Sounding*	-42
Submerged Wreck		-41
Angle Point		

**NOTES:**  
 HORIZONTAL COORDINATE SYSTEM:  
 NORTH AMERICAN DATUM OF 1983 (NAD83), PROJECTED TO THE STATE PLANE COORDINATE SYSTEM (SPCS), CALIFORNIA ZONE III. DISTANCE UNITS IN U.S. SURVEY FEET.

VERTICAL DATUM:  
 SOUNDINGS ARE SHOWN IN FEET AND INDICATE DEPTHS BELOW MEAN LOWER LOW WATER.

THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF A SURVEY CONDUCTED ON THE DATE INDICATED AND CAN ONLY BE CONSIDERED TO REPRESENT THE GENERAL CONDITION EXISTING AT THAT TIME.

\*SHOALEST SOUNDING PER QUARTER PER REACH  
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BASE MAPS ARE USDA NAIP 2010.

THE PROJECT DEPTHS ARE AS FOLLOWS:  
 SOUTHAMPTON SHOALS CHANNEL -45 FEET.  
 LONG WHARF MANEUVERING AREA -45 FEET.

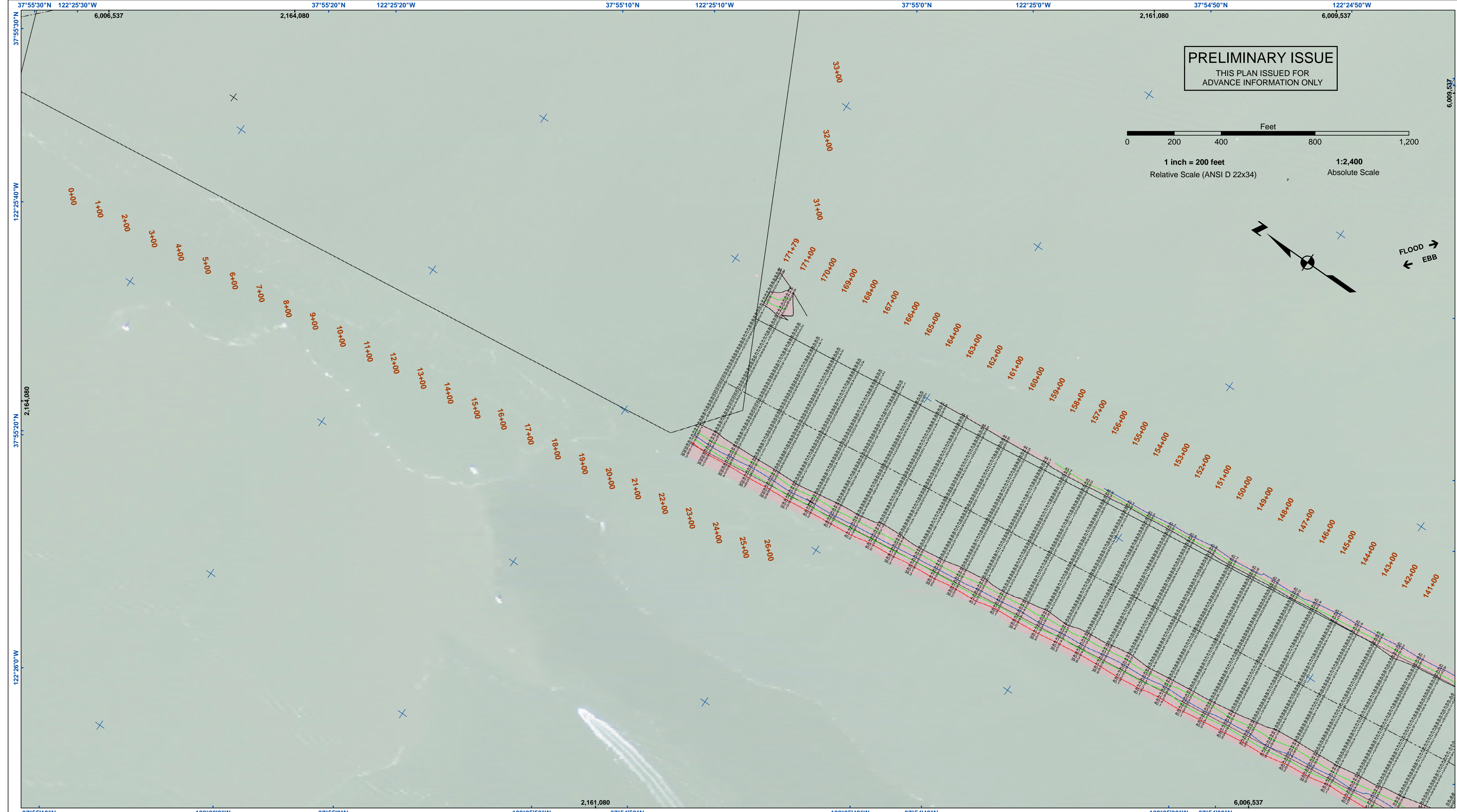
1:00 INDICATED THE NUMBER AND BEGINNING OF A LINE OF SOUNDINGS.

HORIZONTAL CONTROL:  
 HORIZONTAL POSITIONING: COAST GUARD DGPS  
 VERTICAL CONTROL:  
 VERTICAL DATUMS: INTERPOLATED FROM NOAA ONLINE TIDE STATIONS:  
 941 4290 - RICHMOND, CA  
 941 4290 - SAN FRANCISCO, CA

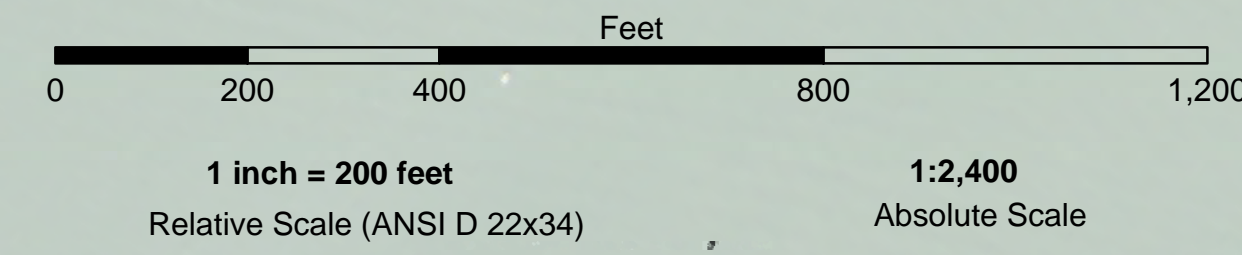
VERTICAL CONTROL:  
 (SOUTHAMPTON SHOALS & LONG WHARF MANEUVERING) BENCHMARK \*11\* 1946 ELEV 15.86 FT. MLLW.  
 AND BENCHMARK \*11\* 1946 ELEV 15.47 FT. MLLW.  
 TIDE GAUGE LOCATED AT TIBURON NET DEPOT.

**Sheet**  
**Reference**  
**Number**  
**2 of 4**





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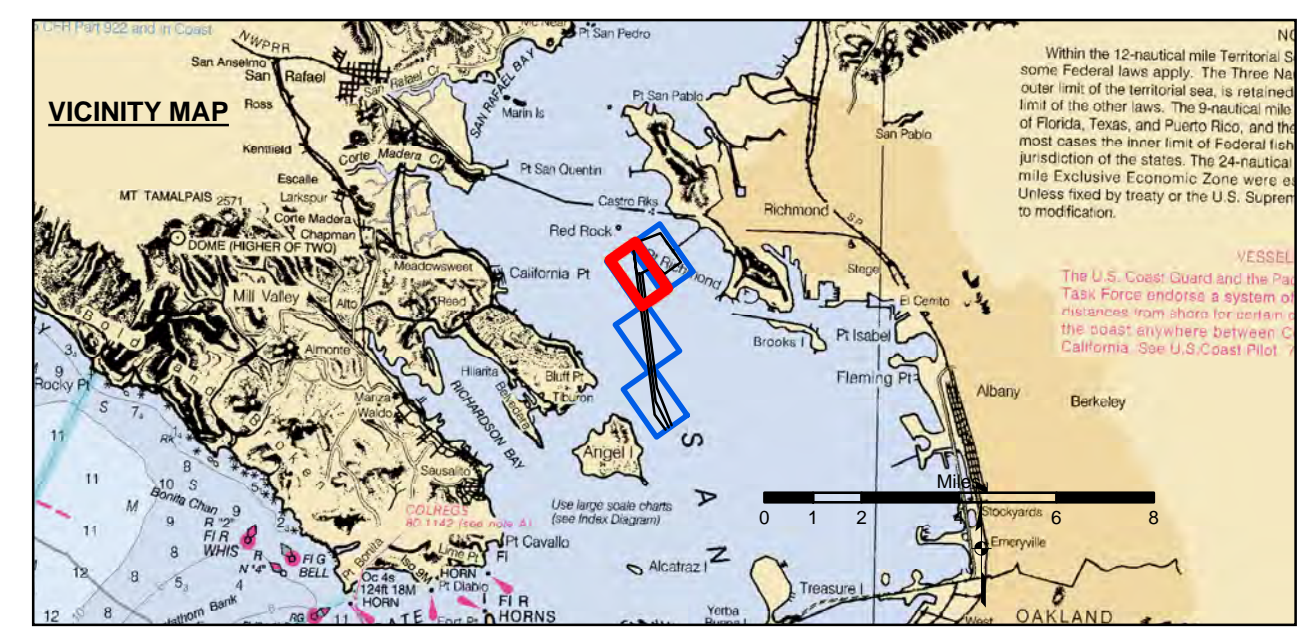
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Prepared Under the Direction of <b>JOHN C. MORROW</b> LT. COLONEL, C.E., DISTRICT ENGINEER	Chart Date: Jul 06, 2018
Submitted: Hydro Survey Team Leader	Designed by: PDT
Recommended: Chief, Hydro Survey Section	Drawn by: PDT
Approved: Chief, Construction Branch	PDT

ALAMEDA COUNTY  
**RICHMOND OUTER HARBOR**  
**SOUTHAMPTON SHOALS**  
**POST-DREDGE SURVEY**  
25 JUNE 2018

**Sheet**  
**Reference**  
**Number**  
**3 of 4**



Federal Navigation Channel	Beacon, General	<b>Contours</b>
Shoaling Area	Obstruction Point	-44
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Submerged Wreck		
Angle Point		

**NOTES:**  
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