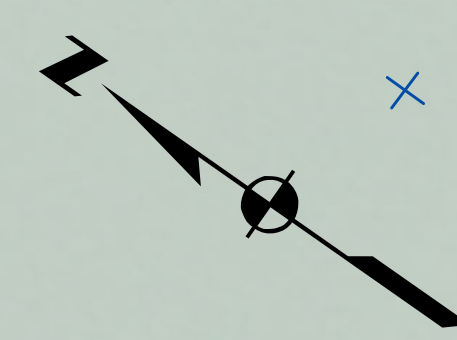
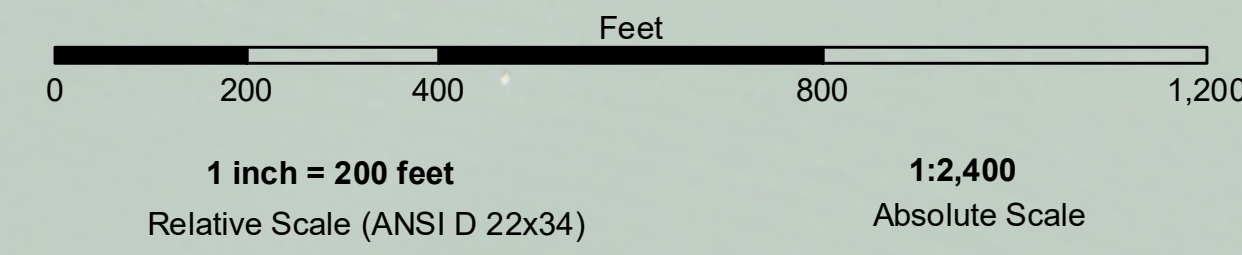
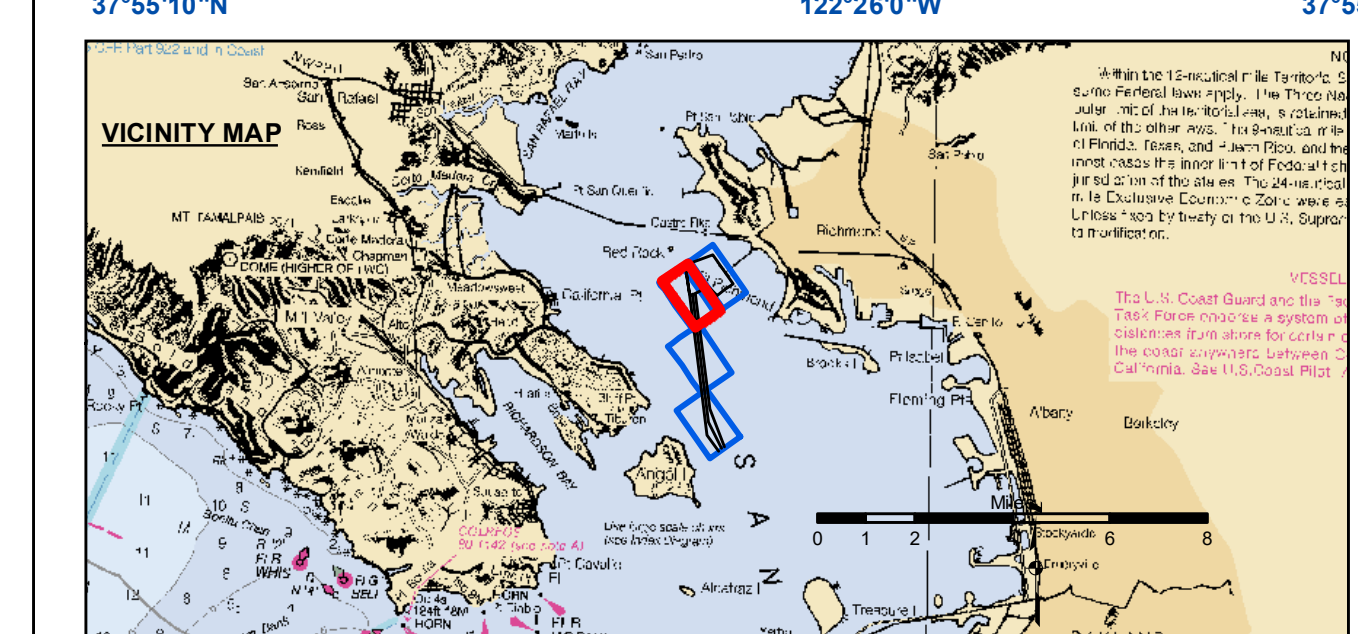


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FLOOD →  
← EBB



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

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 4863 - RICHMOND, CA  
941 4290 - SAN FRANCISCO, CA

VERTICAL CONTROL:  
(SOUTHAMPTON SHOALS & LONG WHARF MANEUVERING) BENCHMARK \*101 1937 ELEV 15.86 FT. MLLW.  
AND BENCHMARK \*111 1946 ELEV 15.47 FT. MLLW.  
TIDE GAUGE LOCATED AT TIBURON NET DEPOT.



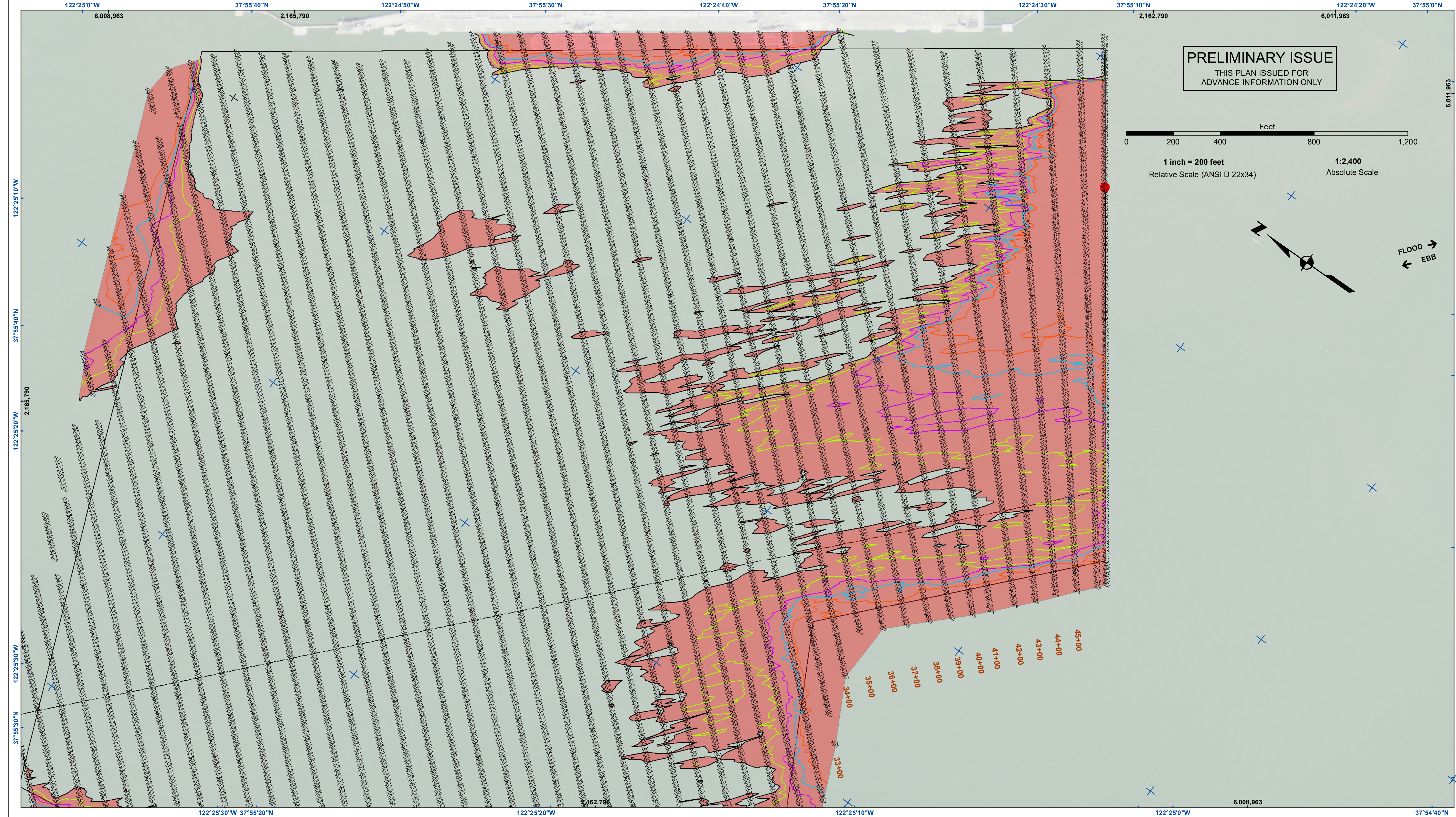
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Prepared Under the Direction of	Chart Date
KEVIN P. ARNETT	Nov 01, 2022
LT Colonel, C.E., District Engineer	Designed by:
Hydro Survey Team Leader	PDT
Chief, Hydro Survey Station	Checked by:
Chief, Construction Branch	PDT
	Drawn by:
	PDT

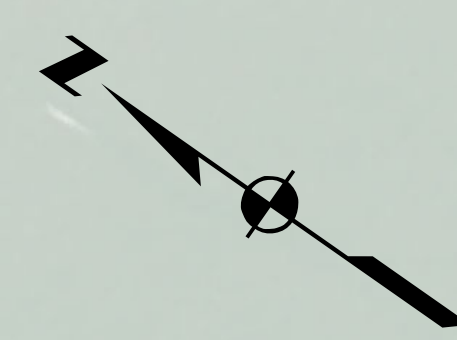
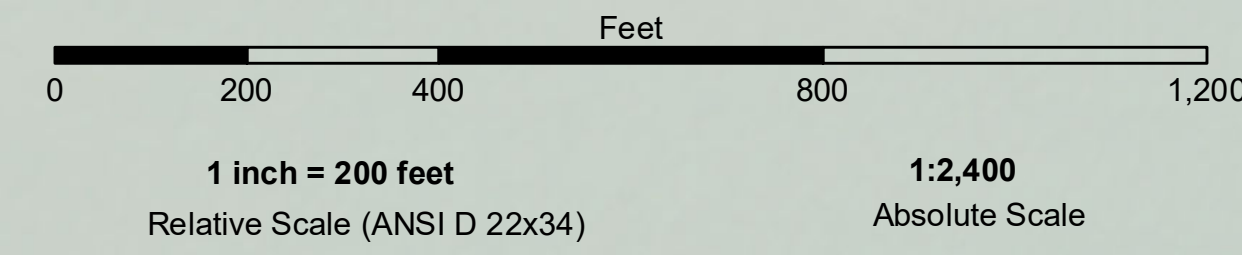
ALAMEDA COUNTY  
RICHMOND OUTER HARBOR  
CONDITION/PRE-DREDGE  
POST-DREDGE SURVEY  
SURVEY DATE:

Sheet  
Number  
3 of 4





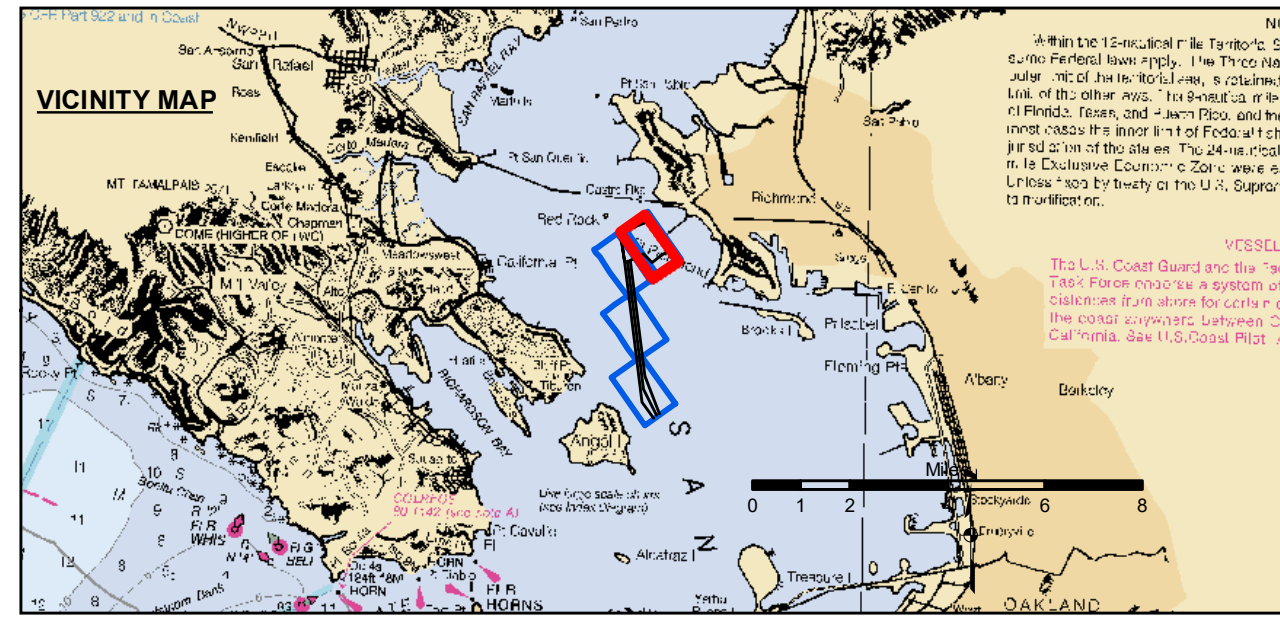
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**US Army Corps of Engineers**  
San Francisco District  
450 Golden Gate Ave  
San Francisco, CA 94102

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Prepared Under the Direction of:	Chart Date:
LT COLONEL P. ARNETT	Nov 01, 2022
Submitted:	Designed by:
Hydro Survey Team Leader	PDT
Recommended:	Checked by:
Chief, Hydro Survey Section	PDT
Approved:	Drawn by:
Chief, Construction Branch	PDT



Federal Navigation Channel	Beacon, General	Contours
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ALAMEDA COUNTY  
RICHMOND OUTER HARBOR  
CONDITION/PRE-DREDGE  
POST-DREDGE SURVEY  
SURVEY DATE:

**Sheet Number**  
4 of 4