



- Federal Navigation Channel
- Shoaling Area
- Placement Area
- Anchorage Area
- Wreck Area
- Submerged Wreck
- Angle Point
- Beacon, General
- Obstruction Point
- Navigation Buoy
- Navigation Buoy
- Shoalest Sounding\*
- Contours
- 45
- 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.  
 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. 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 DETAILS ARE AS FOLLOWS:  
 SOUTHAMPTON SHOALS AREA - 45 FEET.  
 LONG WHARF MANEUVERING AREA - 45 FEET.  
 TIDE GAUGE LOCATED AT TIBRON NET DEPOT.  
 VERTICAL CONTROL:  
 HORIZONTAL POSITIONING: COAST GUARD DGPS  
 VERTICAL TIDES: INTERPOLATED FROM NOAA ONLINE TIDE STATIONS:  
 9414863 - RICHMOND, CA  
 9414290 - SAN FRANCISCO, CA  
**PRELIMINARY ISSUE**  
 THIS PLAN ISSUED FOR  
 ADVANCE INFORMATION ONLY

**US Army Corps of Engineers**  
 San Francisco District  
 1455 Market Street  
 San Francisco, CA 94103

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Chart Date:	Jul 09, 2014
Designed by:	PDT
Submittal:	Hydro Survey Team Leader
Recommended:	Chief, Hydro Survey Section
Approved:	Chief, Construction Branch
Surveyed By:	PDT
Plotted By:	PDT
Checked By:	PDT
Drawn by:	PDT

CALIFORNIA  
 ALAMEDA COUNTY  
**RICHMOND OUTER HARBOR  
 LONG WHARF  
 PREDREDGE SURVEY**  
 26-27 JUNE 2014  
**Sheet  
 Reference  
 Number  
 4 of 4**