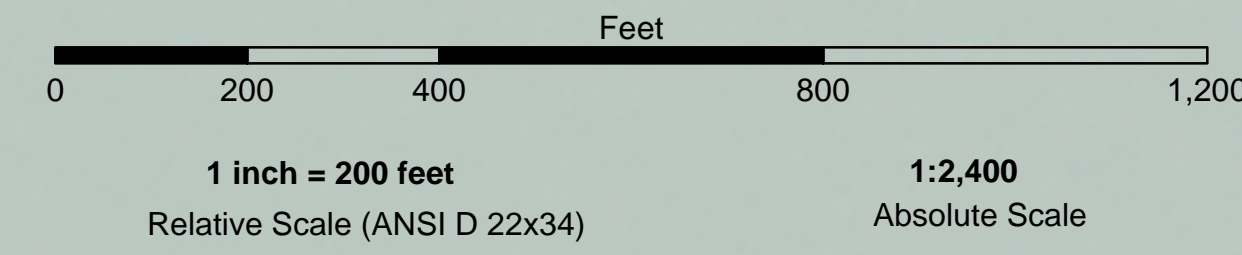


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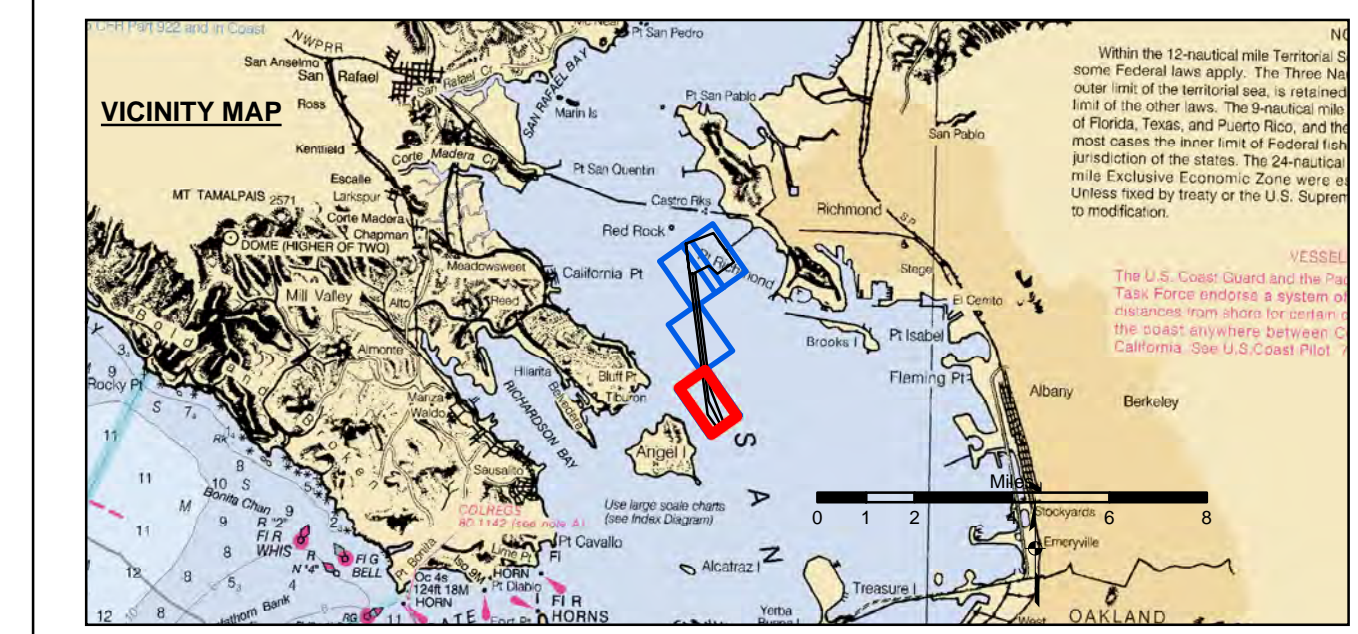
**US Army Corps of Engineers**  
San Francisco District  
450 Golden Gate Ave  
San Francisco, CA 94102

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Chart Date:	Jun 25, 2019
Designed by:	PDT
Drawn by:	PDT
Checked by:	PDT
Approved:	Chief, Construction Branch

CALIFORNIA  
ALAMEDA COUNTY  
RICHMOND OUTER HARBOR  
SOUTHAMPTON SHOALS  
CONDITION SURVEY  
12 JUNE 2019

Sheet  
Reference  
Number  
**1 of 4**

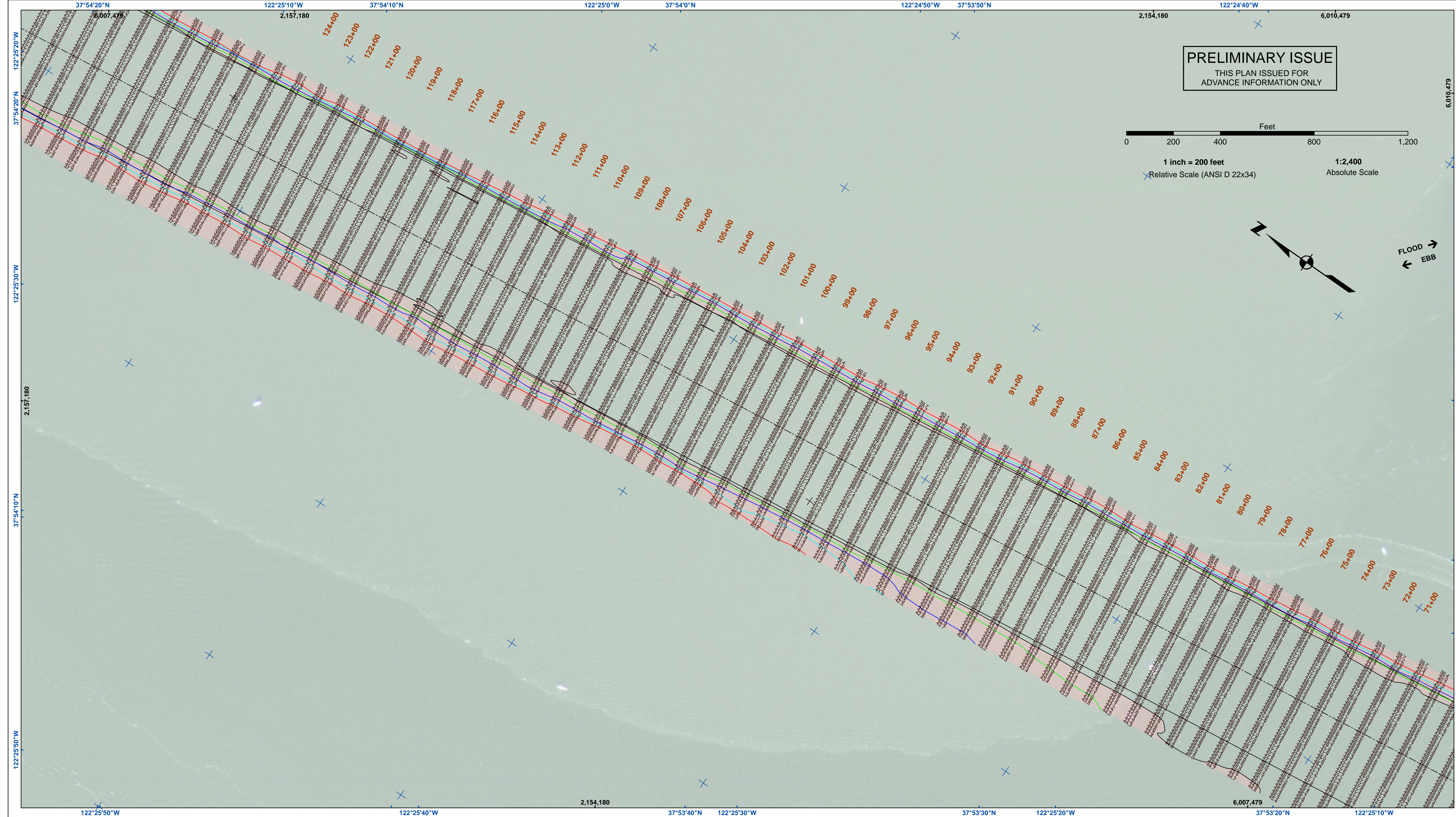


	Federal Navigation Channel		Beacon, General		Contours
	Shoaling Area		Obstruction Point		-45
	Placement Area		Navigation Buoy		-44
	Anchorage Area		Navigation Buoy		-43
	Wreck Area		Shoalest Sounding*		-42
	Submerged Wreck				-41
	Angle Point				

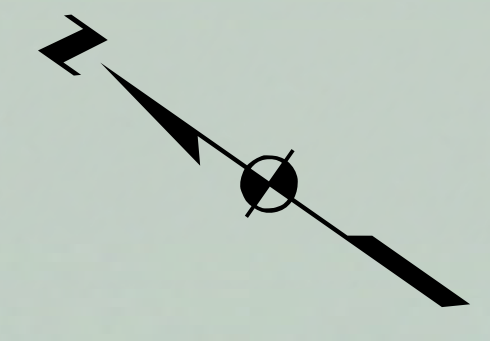
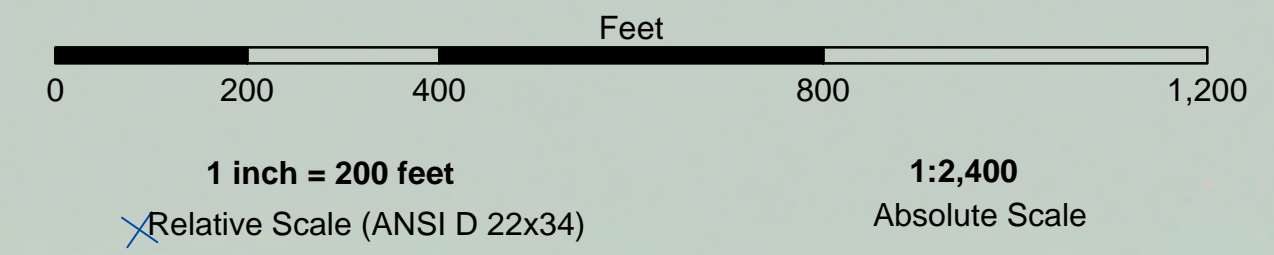
NOTES:  
HORIZONTAL COORDINATE SYSTEM:  
NORTH AMERICAN DATUM OF 1983 (NAD83), PROJECTED TO THE STATE PLANE COORDINATE SYSTEM (SPCS), CALIFORNIA ZONE III. DISTANCE UNITS IN U.S. SURVEY FEET.  
VERTICAL DATUM:  
SOUNDINGS ARE SHOWN IN FEET AND INDICATE DEPTHS BELOW MEAN LOWER LOW WATER.  
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\*SHOALEST 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 4290 - RICHMOND, CA  
941 4290 - SAN FRANCISCO, CA  
VERTICAL CONTROL:  
(SOUTHAMPTON SHOALS & LONG WHARF MANEUVERING) BENCHMARK \*11\* 1937 ELEV 15.86 FT. MLLW.  
AND BENCHMARK \*11\* 1946 ELEV 15.47 FT. MLLW.  
TIDE GAUGE LOCATED AT TIBURON NET DEPOT.





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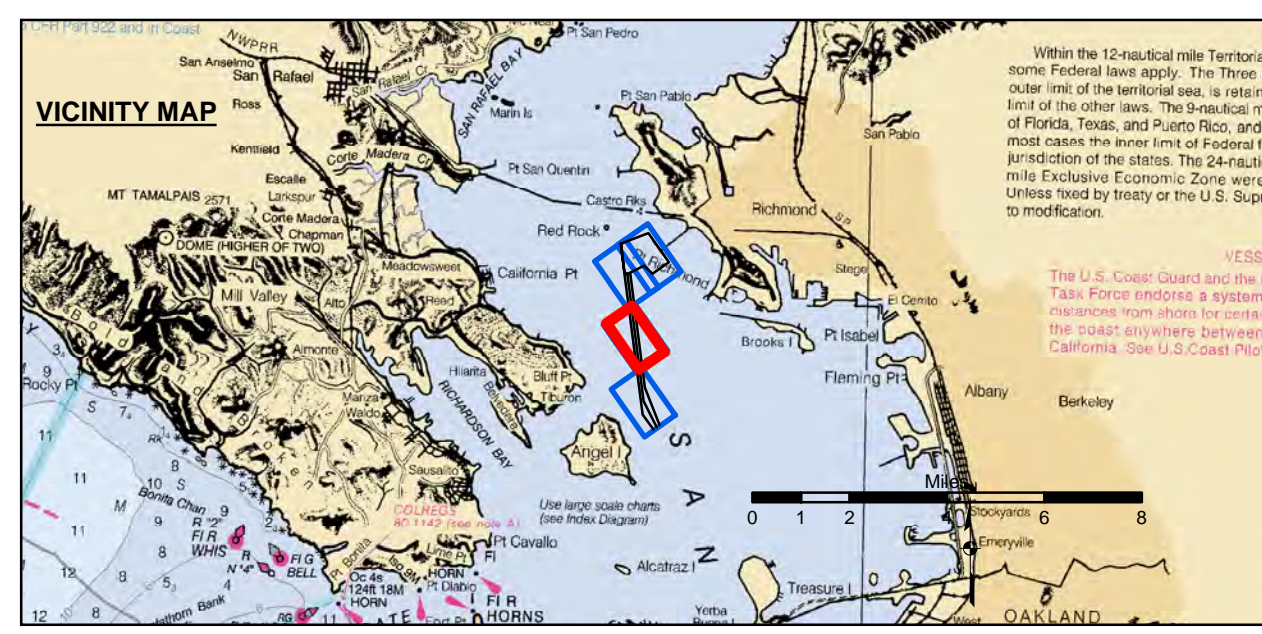
FLOOD →  
← EBB

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

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Chart Date:	Jun 25, 2019
Designed by:	PDT
Plotted by:	PDT
Checked by:	PDT
Drawn by:	PDT

ALAMEDA COUNTY  
**RICHMOND OUTER HARBOR  
SOUTHAMPTON SHOALS  
CONDITION SURVEY**  
12 JUNE 2019



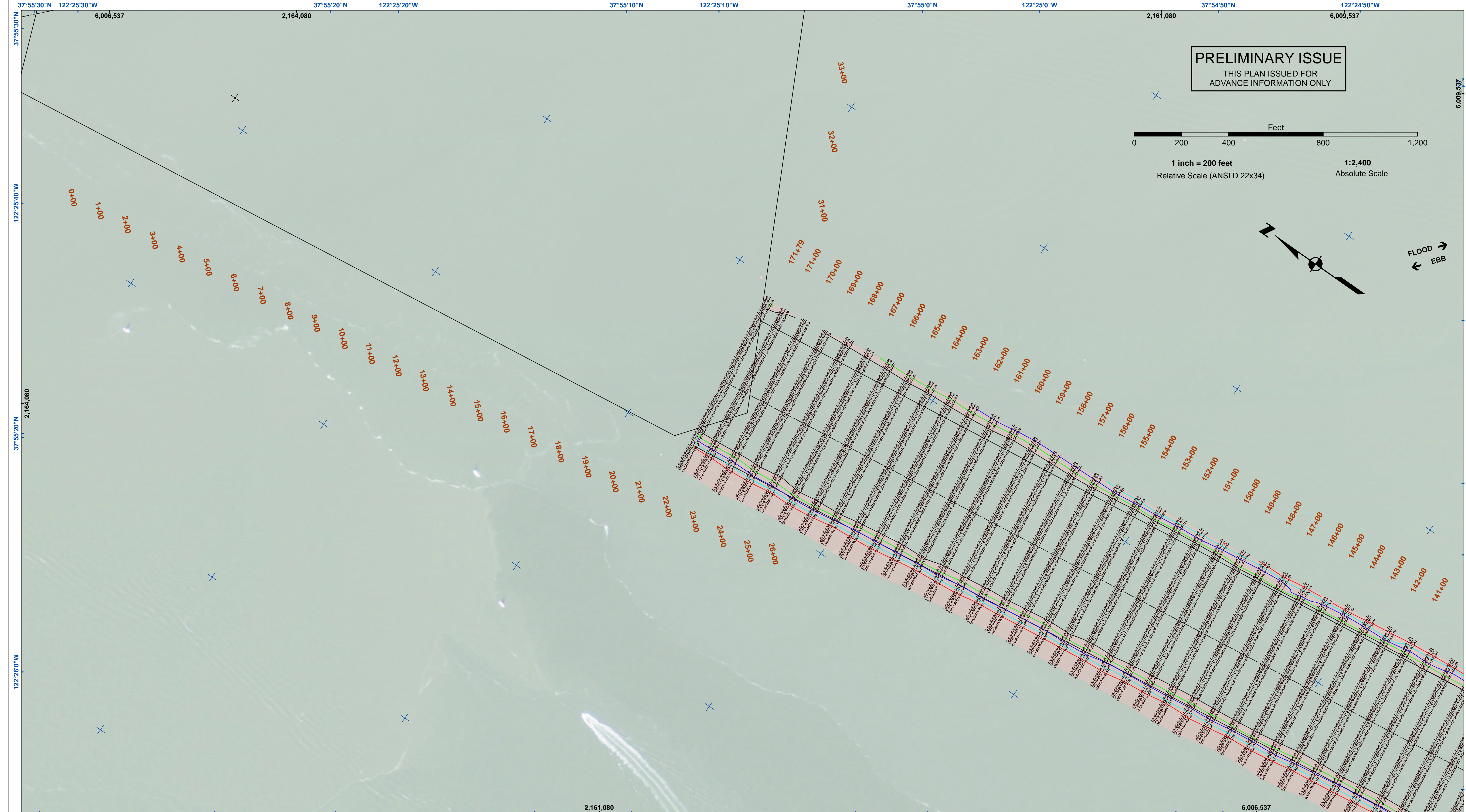
Federal Navigation Channel	Beacon, General	<b>Contours</b>
Shoaling Area	Obstruction Point	-45
Placement Area	Navigation Buoy	-44
Anchorage Area	Navigation Buoy	-43
Wreck Area	Shoalest Sounding*	-42
Submerged Wreck		-41
Angle Point		

**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.  
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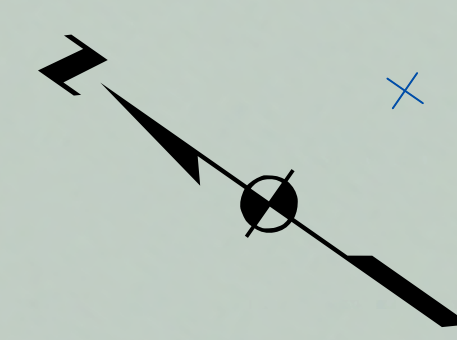
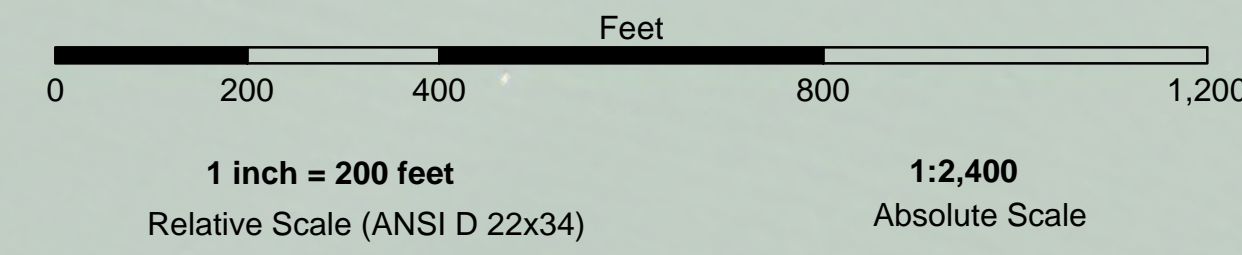
SOUNDINGS WERE TAKEN BY FATHOMETER AND ARE SHOWN TO THE NEAREST TENTH OF A FOOT.  
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LONG WHARF MANEUVERING AREA -45 FEET.  
1:00 INDICATED THE NUMBER AND BEGINNING OF A LINE OF SOUNDINGS.  
HORIZONTAL CONTROL:  
HORIZONTAL POSITIONING: COAST GUARD DGPS  
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 '10' 1937 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**

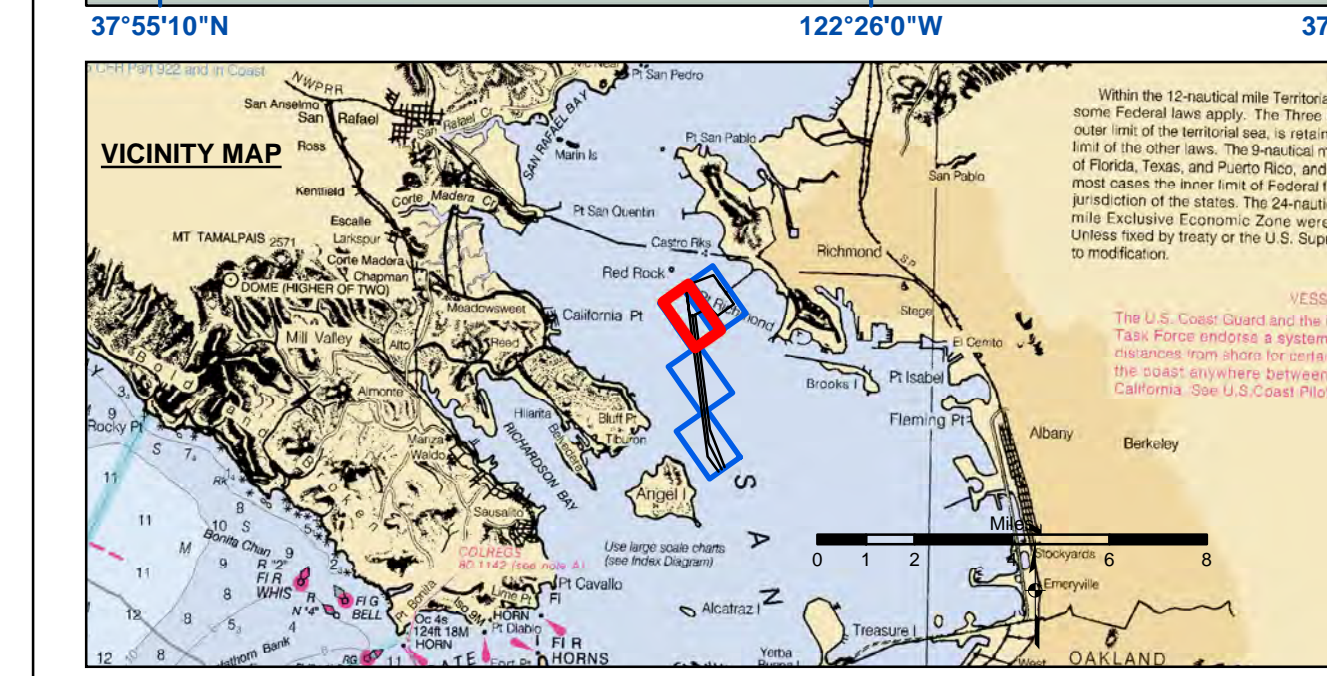




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FLOOD →  
← EBB



- 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.

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Prepared Under the Direction of	LT COLONEL C.E. DISTRICT ENGINEER	Chart Date	Jun 25, 2019
Surveyed By	TRAVIS J. RAYFIELD	Designed by	PDT
Plotted By	PDT	Drawn by	PDT
Recommended	Chief, Hydro Survey Section	Checked By	PDT
Approved	Chief, Construction Branch		

ALAMEDA COUNTY  
CALIFORNIA  
RICHMOND OUTER HARBOR  
SOUTHAMPTON SHOALS  
CONDITION SURVEY  
12 JUNE 2019

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**3 of 4**