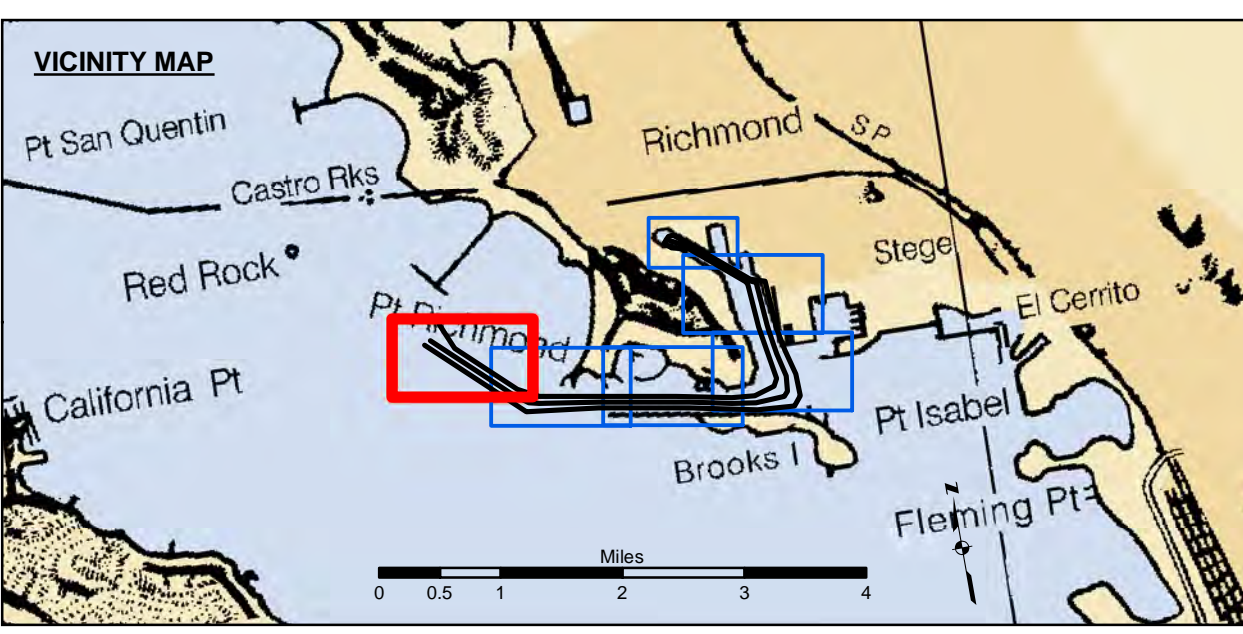


**N.A.D. 1983 FEET COORDINATES**

Channel Angle Point	Easting	Northing
01	6010230.66	2162394.62
02	6009436.76	2161650.06
03	6010702.46	2161282.52
04	6013280.69	2158029.15
05	6013071.04	2159051.01
06	6016426.10	2157649.80
07	6013946.57	2158590.79
08	6020299.03	2156972.78
09	6019811.99	2157565.50
10	6023187.74	2156366.30
11	6022179.38	2157068.47
12	6024797.57	2156256.37
13	6023175.24	2156977.58
14	6025133.92	2156630.24
15	6024071.72	2157243.76
16	6025096.44	2157620.99
17	6024244.63	2157572.06
18	6024794.33	2158699.33
19	6023863.13	2159896.61
20	6024629.99	2159700.65
21	6023718.07	2161814.06
22	6024470.69	2161806.34
23	6023659.10	2161929.33
24	6023871.49	2162011.81
25	6022130.19	2163218.69
26	6022259.11	2163371.56

**N.A.D. 1983 FEET COORDINATES**

Centerline Angle Point	Easting	Northing
C01	6009645.81	2161871.50
C02	6012865.31	2158832.66
C03	6013468.42	2158386.31
C04	6013908.41	2158274.43
C05	6023181.49	2156671.94
C06	6024434.65	2156750.07
C07	6024602.82	2156937.00
C08	6024670.54	2157596.53
C09	6024272.27	2159641.94
C10	6024094.38	2161810.20
C11	6023765.30	2161970.57
C12	6022194.65	2163295.13



Federal Navigation Channel	Beacon, General	<b>Contours</b>
Shoaling Area	Obstruction Point	-38
Placement Area	Navigation Buoy	-37
Anchorage Area	Navigation Buoy	-36
Wreck Area	Shoalest Sounding*	-35
Submerged Wreck		-34
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:  
 INNER HARBOR CHANNEL -37.5 FEET.  
 SANTE FE CHANNEL -30 FEET.  
 (INNER HARBOR CHANNEL) BENCHMARK A-558 ELEV 15.81 FT. MLLW.  
 BENCHMARK #2 (1032) USCGS DISK OLD FORD PLANT 16.025 FT. MLLW.  
 B.M. LS 2769 CITY OF RICHMOND DISK PAVEMENT 13.971 FT. MLLW.  
 TIDE GAGE LOCATION: MON B-1.  
 HORIZONTAL GPS CONTROL: COAST GUARD D-BEACON.  
 VERTICAL CONTROL: BENCHMARK, MLLW ELEV., AGENCY

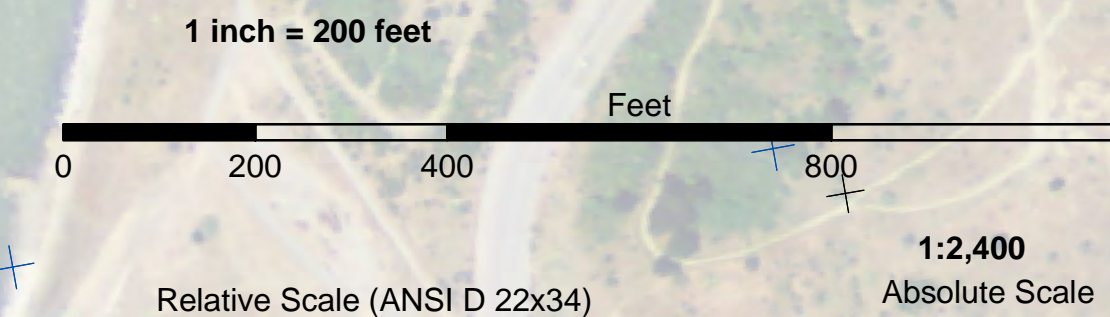
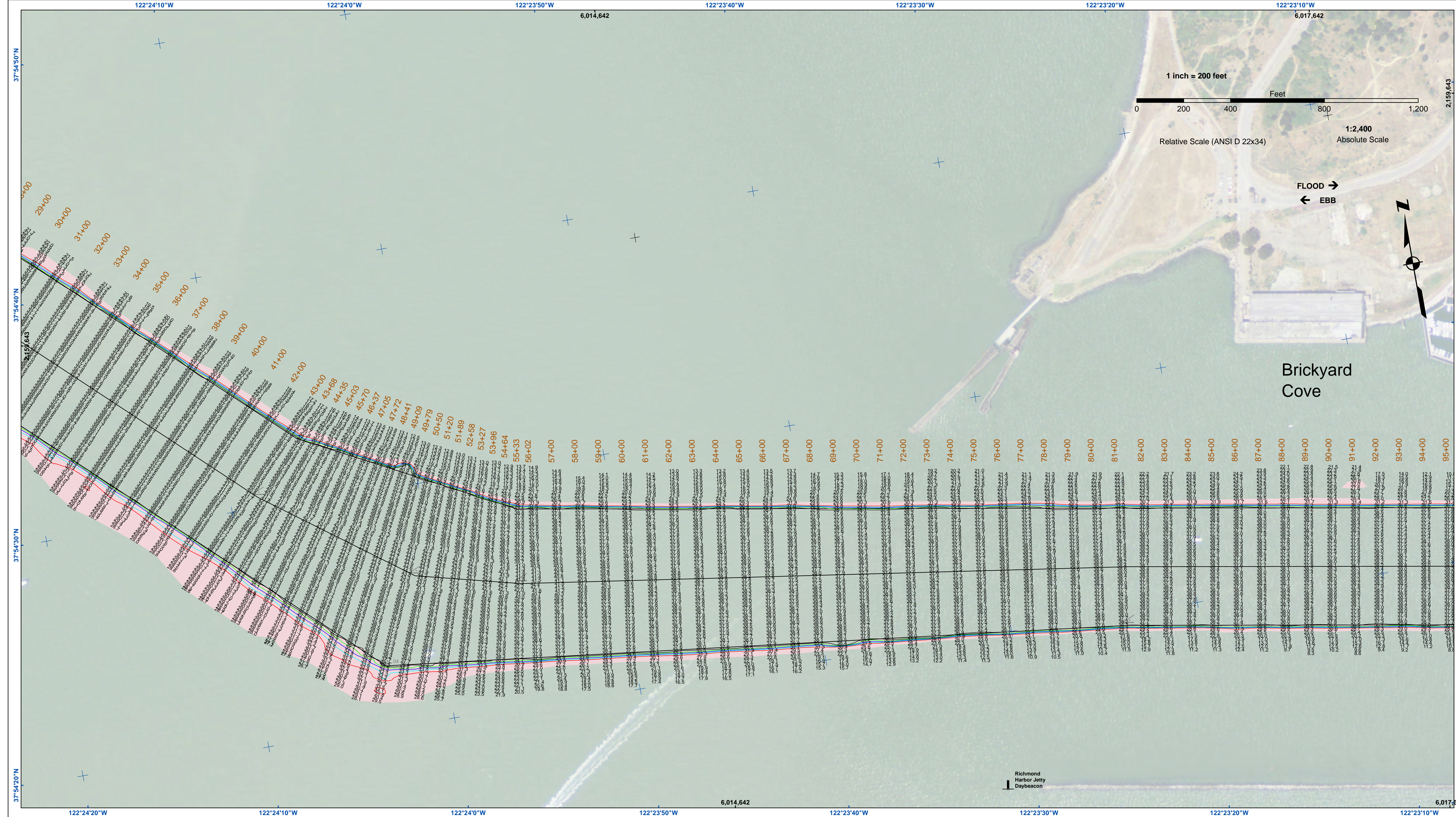


**DISCLAIMER:** The United States Government furnishes these data for your information only. It is not intended to be used for any purpose other than that for which it was prepared. The user is responsible for the results of any application of the data for other than its intended purpose. The user is responsible for the results of any application of the data for other than its intended purpose. The user is responsible for the results of any application of the data for other than its intended purpose.

Prepared Under the Direction of	JOHN D. CUNNINGHAM	Chart Date:	Oct 07, 2019
Submitted:	Hydro Survey Team Leader	Designed by:	PDT
Recommended:	Chief, Hydro Survey Section	Drawn by:	PDT
Approved:	Chief, Construction Branch		

**CALIFORNIA**  
**RICHMOND INNER HARBOR**  
**POST-DREDGE SURVEY**  
 16, 22 & 31 JULY  
 5, 12 & 16 AUGUST  
 5, 11, 14, 18, 20 & 21 SEPTEMBER 2019

**Sheet Reference Number**  
**1 of 6**

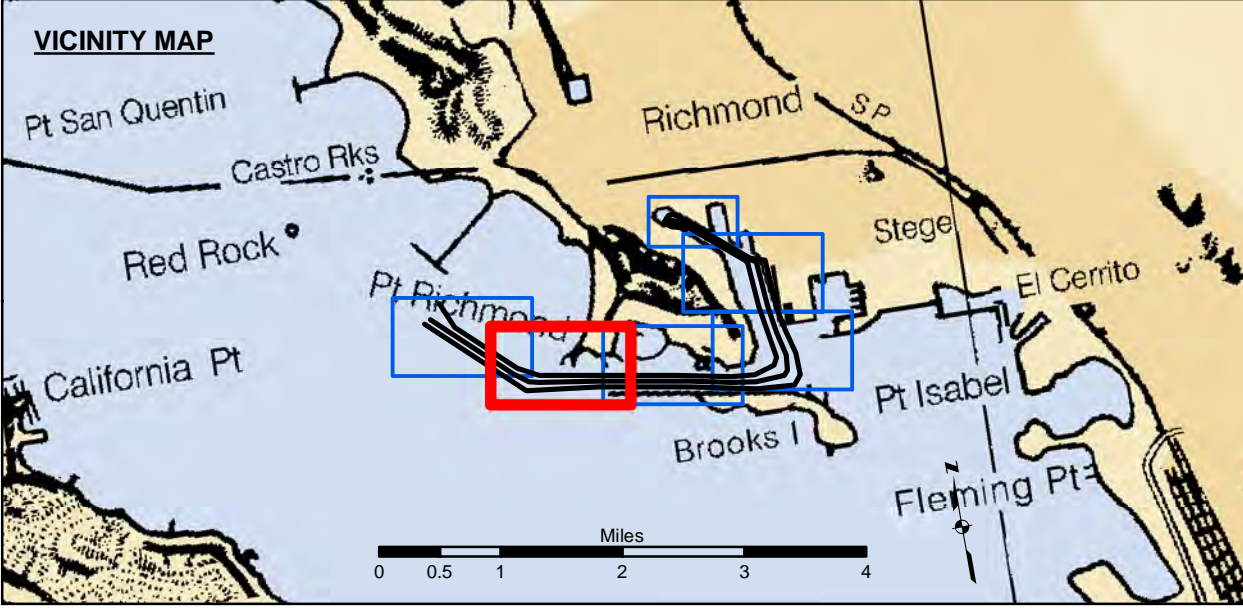


**US Army Corps of Engineers**  
 San Francisco District  
 450 Golden Gate Ave  
 San Francisco, CA 94102

**DISCLAIMER**  
 The United States Government makes no warranty, expressed or implied, concerning the accuracy, completeness, or reliability of this information. The user is responsible for the results of any application of this data for other than its intended purpose. These data belong to the Government. Therefore the recipient may not transfer these data to others without also transferring the Disclaimer.

Chart Date:	Oct 07, 2019
Designed by:	PDT
Plotted By:	PDT
Checked By:	PDT
Drawn by:	PDT

ALAMEDA COUNTY  
**RICHMOND INNER HARBOR**  
 POST-DREDGE SURVEY  
 16, 22 & 31 JULY  
 5, 12 & 16 AUGUST  
 5, 11, 14, 18, 20 & 21 SEPTEMBER 2019

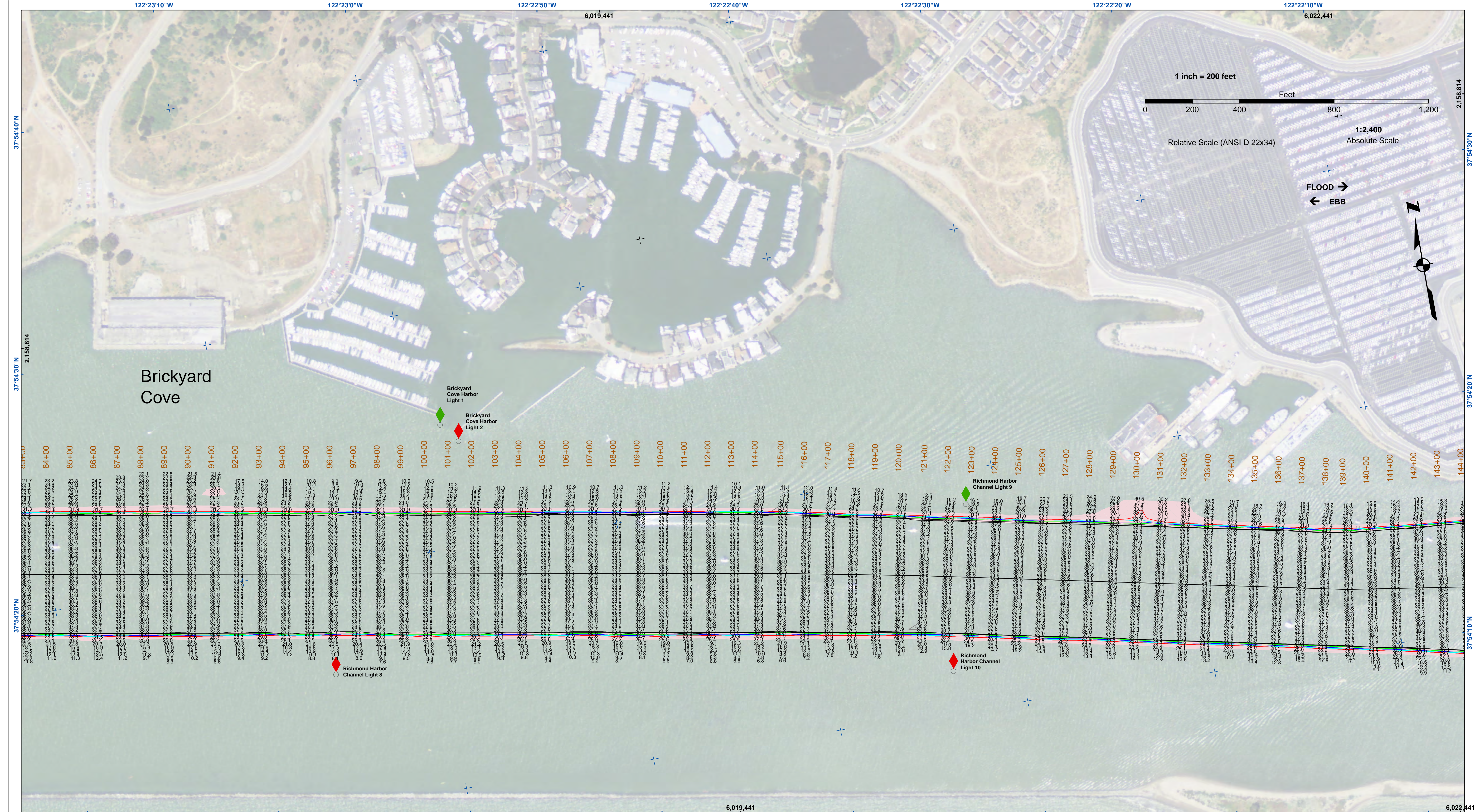


Federal Navigation Channel	Beacon, General	<b>Contours</b>
Shoaling Area	Obstruction Point	-38
Placement Area	Navigation Buoy	-37
Anchorage Area	Navigation Buoy	-36
Wreck Area	Shoalest Sounding*	-35
Submerged Wreck		-34
Angle Point		

**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:  
 INNER HARBOR CHANNEL -37.5 FEET.  
 SANTE FE CHANNEL -30 FEET.  
 (INNER HARBOR CHANNEL) BENCHMARK A-558 ELEV 15.81 FT. MLLW.  
 BENCHMARK #2 (1032) USCGS DISK OLD FORD PLANT 16.025 FT. MLLW.  
 B.M. LS 2769 CITY OF RICHMOND DISK PAVEMENT 13.971 FT. MLLW.  
 TIDE GAGE LOCATION: MON B-1.  
 HORIZONTAL GPS CONTROL: COAST GUARD D-BEACON.  
 VERTICAL CONTROL: BENCHMARK, MLLW ELEV., AGENCY

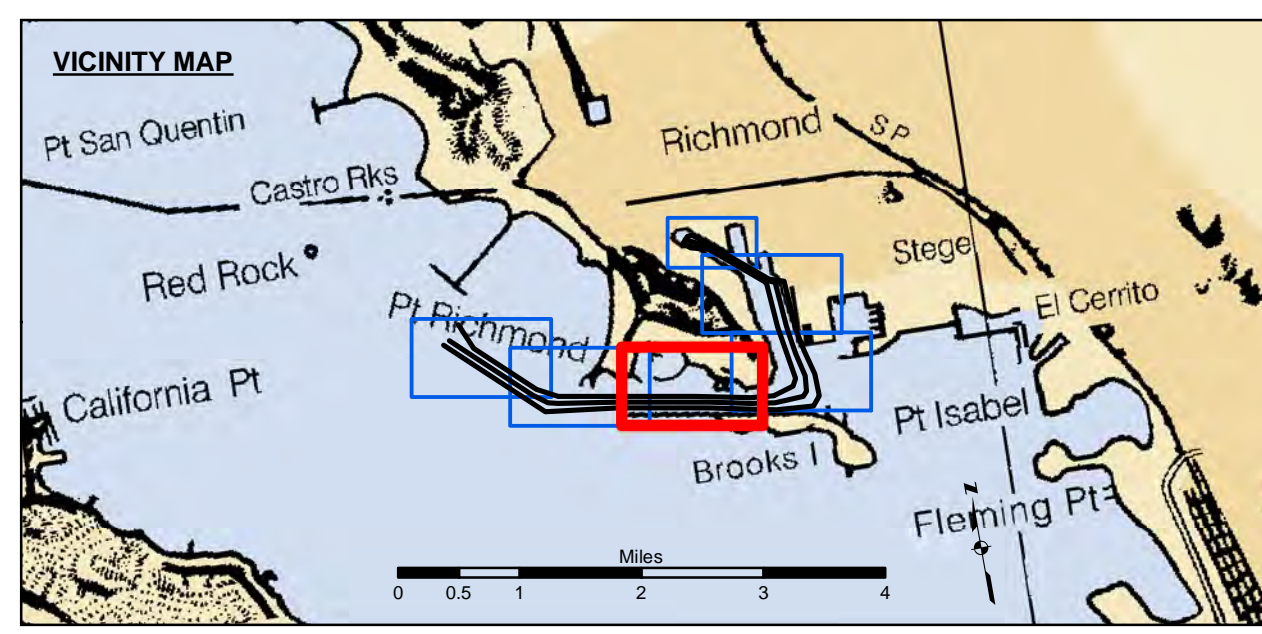


**US Army Corps of Engineers**  
 San Francisco District  
 450 Golden Gate Ave  
 San Francisco, CA 94102

**DISCLAIMER**  
 The United States Government furnishes this information as a service to the public and does not warrant, express or implied, the accuracy, completeness, or reliability of the information. The user is responsible for the results of any application of the data for other than its intended purpose. The user may not transfer these data to others without also transferring the Disclaimer.

Prepared Under the Direction of <b>JOHN D. CUNNINGHAM</b> LT COLONEL, C.E. DISTRICT ENGINEER	Chart Date: Oct 07, 2019
Submitted: Hydro Survey Team Leader	Designed by: PDT
Recommended: Chief, Hydro Survey Section	Checked by: PDT
Approved: Chief, Construction Branch	Drawn by: PDT

ALAMEDA COUNTY  
**RICHMOND INNER HARBOR**  
 POST-DREDGE SURVEY  
 16, 22 & 31 JULY  
 5, 12 & 16 AUGUST  
 18, 20 & 21 SEPTEMBER 2019



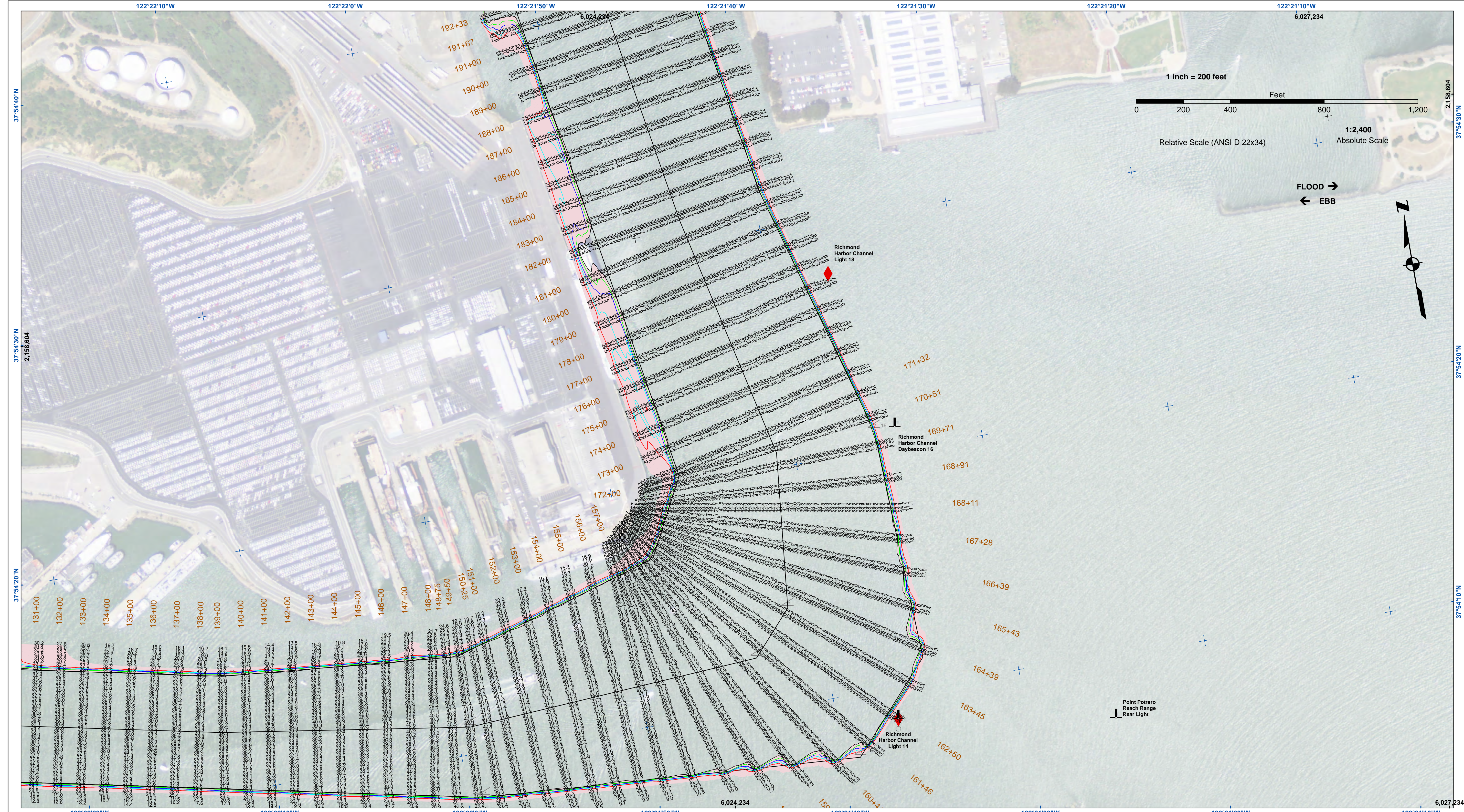
Federal Navigation Channel	Beacon, General	<b>Contours</b>
Shoaling Area	Obstruction Point	-38
Placement Area	Navigation Buoy	-37
Anchorage Area	Navigation Buoy	-36
Wreck Area	Shoalest Sounding*	-35
Submerged Wreck		-34
Angle Point		

**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:  
 INNER HARBOR CHANNEL -37.5 FEET.  
 SANTE FE CHANNEL -30 FEET.

(INNER HARBOR CHANNEL) BENCHMARK A-558 ELEV 15.81 FT. MLLW.  
 BENCHMARK #2 (1032) USCGS DISK OLD FORD PLANT 16.025 FT. MLLW.  
 B.M. LS 2769 CITY OF RICHMOND DISK PAVEMENT 13.971 FT. MLLW.  
 TIDE GAGE LOCATION: MON B-1.  
 HORIZONTAL GPS CONTROL: COAST GUARD D-BEACON.  
 VERTICAL CONTROL: BENCHMARK, MLLW ELEV., AGENCY



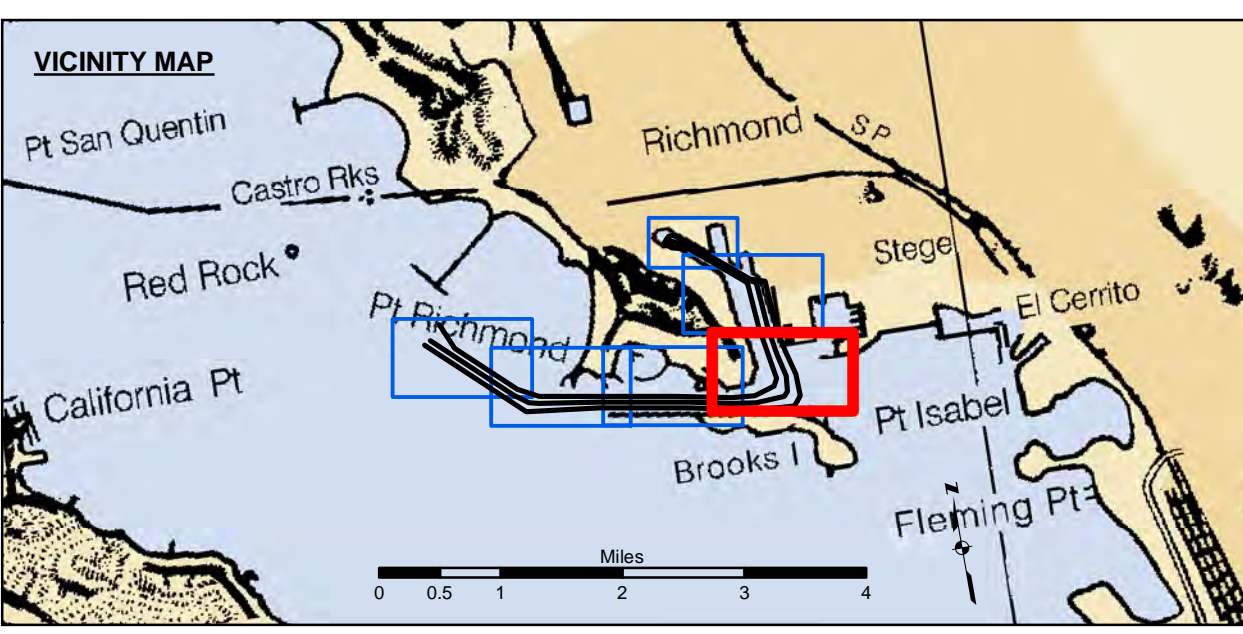
**US Army Corps of Engineers**  
 San Francisco District  
 450 Golden Gate Ave  
 San Francisco, CA 94102

**DISCLAIMER**  
 The United States Government furnishes this information as a service to the public. It is not intended to be used for any purpose other than that for which it was prepared. The user is responsible for the results of any application of the data for other than its intended purpose. The user is responsible for the results of any application of the data for other than its intended purpose. The user is responsible for the results of any application of the data for other than its intended purpose.

Chart Date:	Oct 07, 2019
Designed by:	PDT
Plotted by:	PDT
Checked by:	PDT
Drawn by:	PDT

ALAMEDA COUNTY  
**RICHMOND INNER HARBOR**  
 POST-DREDGE SURVEY  
 16, 22 & 31 JULY  
 5, 12 & 16 AUGUST  
 5, 11, 14, 18, 20 & 21 SEPTEMBER 2019

**Sheet Reference Number**  
 4 of 6



- 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**
- 38
- 37
- 36
- 35
- 34

**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.

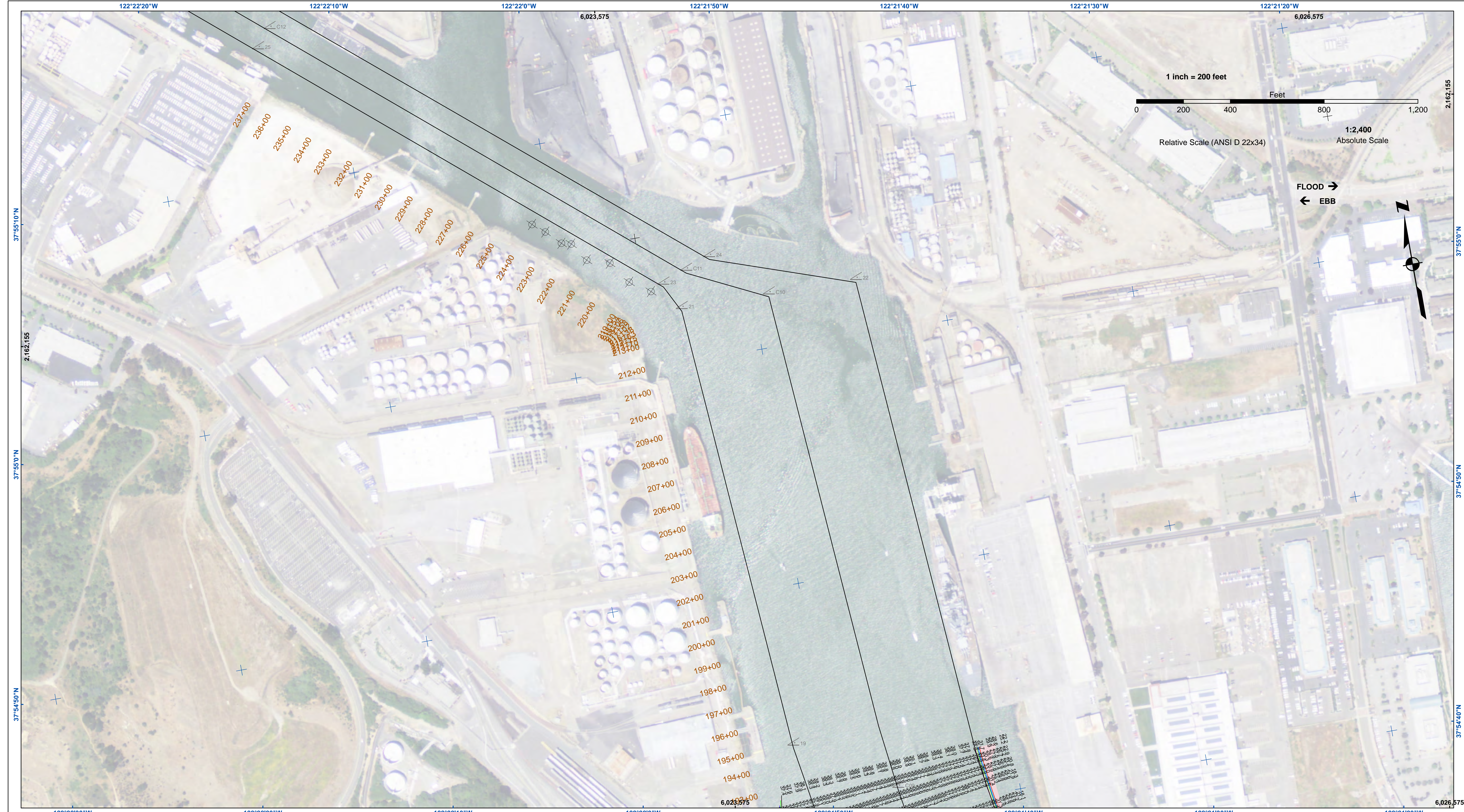
SOUNDINGS WERE TAKEN BY FATHOMETER AND ARE SHOWN TO THE NEAREST TENTH OF A FOOT. SOUNDINGS ARE BASED ON THE DATUM OF MEAN LOWER LOW WATER AT THE LOCALITY.

BASE MAPS ARE USDA NAIP 2010.

THE PROJECT DEPTHS ARE AS FOLLOWS:  
 INNER HARBOR CHANNEL: 37.5 FEET.  
 SANTE FE CHANNEL: 30 FEET.

(INNER HARBOR CHANNEL) BENCHMARK A-558 ELEV 15.81 FT. MLLW.  
 BENCHMARK #2 (1032) USCGS DISK OLD FORD PLANT 16.025 FT. MLLW.  
 B.M. LS 2769 CITY OF RICHMOND DISK PAVEMENT 13.971 FT. MLLW.

TIDE GAGE LOCATION: MON B-1.  
 HORIZONTAL GPS CONTROL: COAST GUARD D-BEACON.  
 VERTICAL CONTROL: BENCHMARK, MLLW ELEV., AGENCY



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

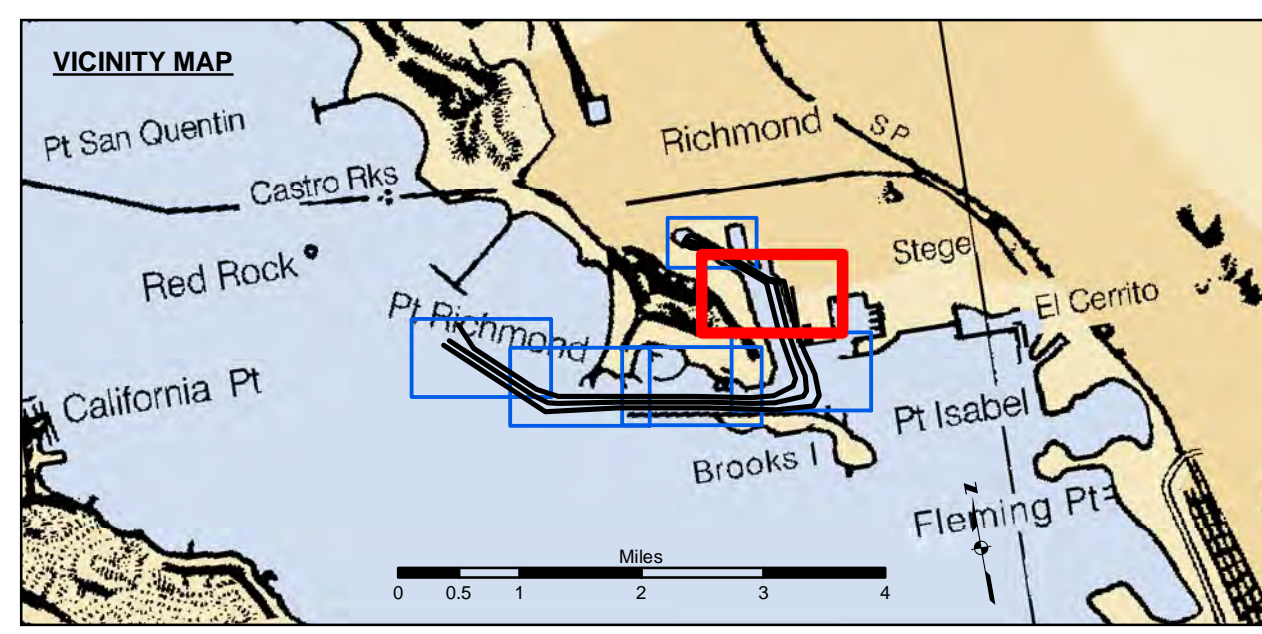
**1 inch = 200 feet**  
 0 200 400 800 1,200 Feet  
 Relative Scale (ANSI D 22x34) 1:2,400  
 Absolute Scale

**FLOOD →**  
**← EBB**

**DISCLAIMER**  
 The United States Government furnishes this information for the general public and does not warrant, express or implied, the accuracy, completeness, or reliability of the information. The user is responsible for the results of any application of the data for other than its intended purpose. The user is responsible for the results of any application of the data for other than its intended purpose. These data belong to the Government. Therefore the user is not to disseminate or transfer these data to others without also transferring the Disclaimer.

Chart Date:	Oct 07, 2019
Designed by:	PDT
Plotted by:	PDT
Checked by:	PDT
Drawn by:	PDT

ALAMEDA COUNTY  
**RICHMOND INNER HARBOR**  
 POST-DREDGE SURVEY  
 16, 22 & 31 JULY  
 5, 12 & 16 AUGUST  
 5, 11, 14, 18, 20 & 21 SEPTEMBER 2019



Federal Navigation Channel	Beacon, General	<b>Contours</b>
Shoaling Area	Obstruction Point	-38
Placement Area	Navigation Buoy	-37
Anchorage Area	Navigation Buoy	-36
Wreck Area	Shoalest Sounding*	-35
Submerged Wreck		-34
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:  
 INNER HARBOR CHANNEL: 37.5 FEET.  
 SANTE FE CHANNEL: 30 FEET.  
 (INNER HARBOR CHANNEL) BENCHMARK A-558 ELEV 15.81 FT. MLLW.  
 BENCHMARK #2 (1032) USCGS DISK OLD FORD PLANT 16.025 FT. MLLW.  
 B.M. LS 2769 CITY OF RICHMOND DISK PAVEMENT 13.971 FT. MLLW.  
 TIDE GAGE LOCATION: MON B-1.  
 HORIZONTAL GPS CONTROL: COAST GUARD D-BEACON.  
 VERTICAL CONTROL: BENCHMARK, MLLW ELEV., AGENCY