

	Federal Navigation Channel		Beacon, General		Contours
	Shoaling Area		Obstruction Point		-50
	Placement Area		Navigation Buoy		-49
	Anchorage Area		Navigation Buoy		-47
	Wreck Area		Shoalest Sounding*		-46
	Submerged Wreck				
	Angle Point				

NOTES:
 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 LOCATIONS REPRESENT THE POSITION OF THE SINKER ONLY.
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 SOUNDINGS ARE BASED ON THE DATUM OF MEAN LOWER LOW WATER AT THE LOCALITY. NAVD 88.
 SURVEYED BY THE CORPS OF ENGINEERS.
 BASE MAPS ARE USDA NAIP 2010.

VERTICAL CONTROL:
 PRCP: PORT 1 1836PID HT0654.
 OAKLAND INNER, REACH 4-6 DISK SET AT SOUTH END OF CLAY STREET, AT THE PORT OF OAKLAND CLAY STREET PIER.
 ELEVATION: 9.56 FEET MLLW - PUBLISHED 21 APR 2003 ON NOAA STATION 941 4764 TIDE GAUGE LOCATION IS CHISEL MARK APPROX. 10 FEET WEST ON TOP OF CONCRETE CURB; CHISEL ELEVATION 11.0 FEET MLLW.
 LCP1: 941 4777 B TIDALPID A5211, OAKLAND INNER REACH 1-3 DISK SET IN BALLARD FOUNDATION NEAR THE NORTHEAST END OF BERTH 40 OF THE OAKLAND MIDDLE HARBOR.
 ELEVATION: 13.48 FEET MLLW - DERIVED FROM WGS-84 ELLIPSOID ELEVATION, GEOID09 AND VDUTAM MODELS TIDE GAUGE LOCATION IS IN FACE OF PILING AT BERTH 37; NAEL ELEVATION 9.7 FEET MLLW.
 LCP2: OAK OUTER 1 2012NO PID, OAKLAND OUTER REACH 7-10 DISK SET IN PARKING LOT AT PIER 6 AMNAV TUG TERMINAL AT THE EDGE OF THE PIER. ELEVATION: 14.04 FEET MLLW - DERIVED FROM WGS-84 ELLIPSOID ELEVATION, GEOID09 AND DATUM MODELS TIDE GAUGE LOCATION IS IN FACE OF PILING AT BERTH 6, 10' EAST OF BENCHMARK; NAEL ELEVATION 10.1 FEET MLLW.

HORIZONTAL CONTROL:
 PRIMARY: RTK POSITIONING
 SECONDARY: COAST GURAD DGPS D-BEACON

PROJECT DEPTH OF OUTER AND INNER HARBOR IS -50 FEET.
 TIDAL CANAL PROJECT DEPTH IS 18 FEET.

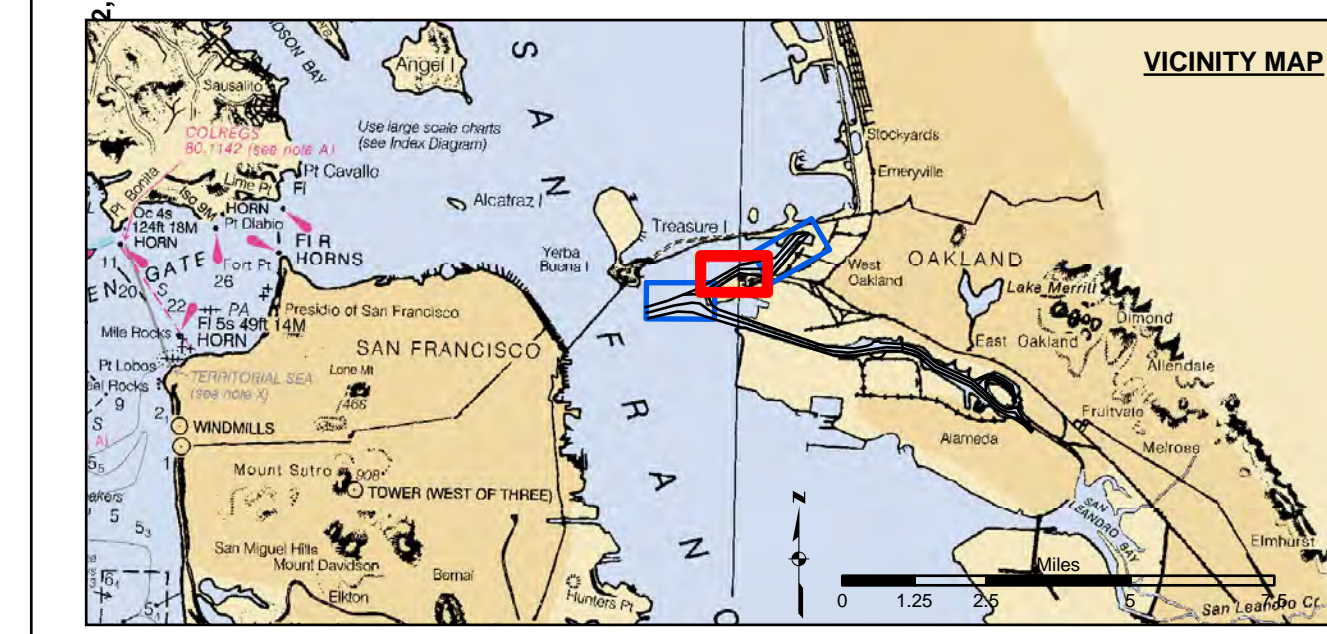
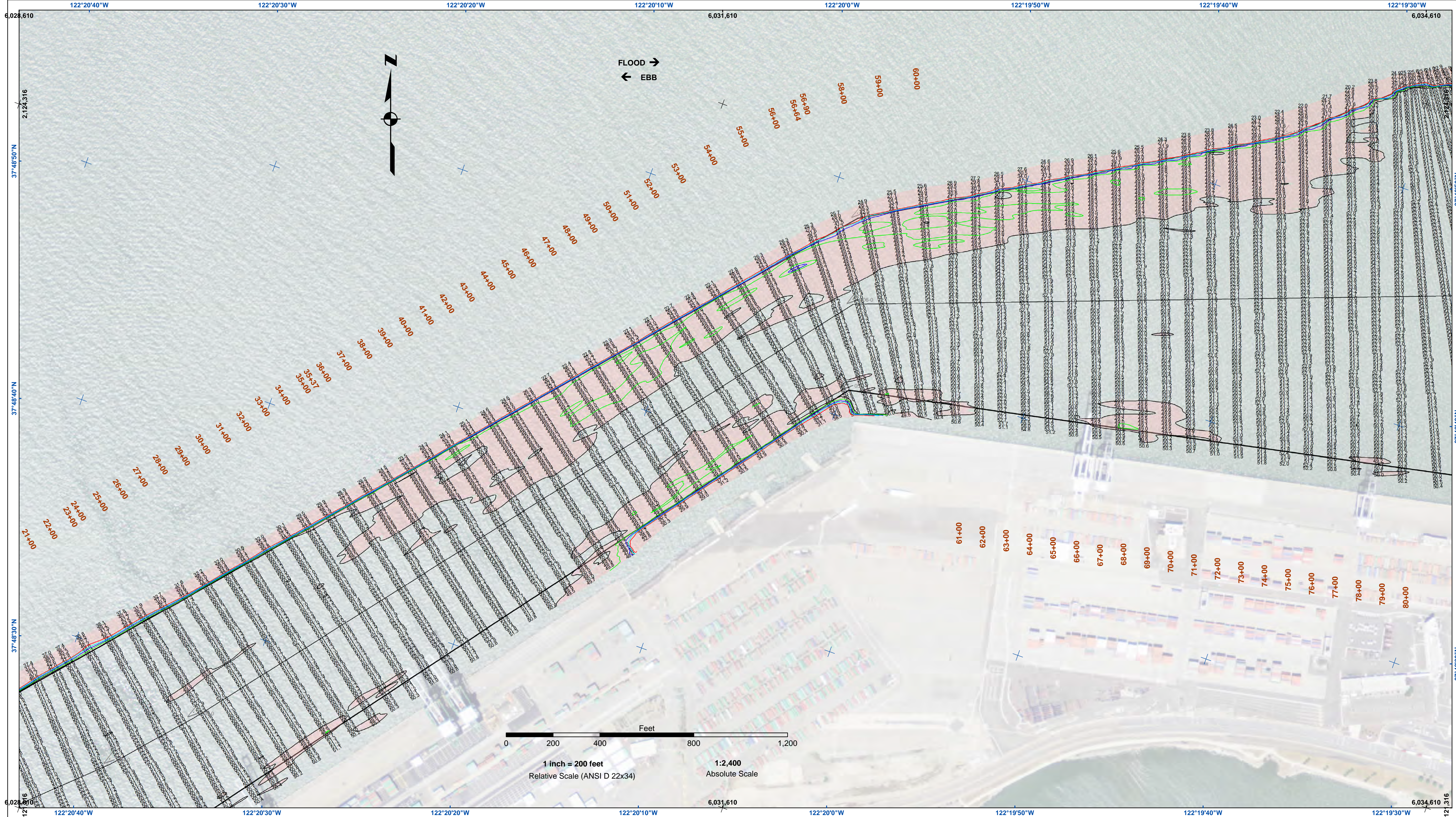
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 San Francisco, CA 94103

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Prepared Under the Direction of:	Chart Date:
LT COLONEL C.E. DISTRICT ENGINEER	May 18, 2018
Submittal:	Designed by:
Hydro Survey Team Leader	
Recommendation:	Checked by:
Navigation Technical Manager	
Approval:	Drawn by:
Project Manager	

ALAMEDA COUNTY
OAKLAND OUTER HARBOR
 CONDITION SURVEY
 25 APRIL 2018

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- 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
- 50
- 49
- 48
- 47
- 46

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 SURVEYED BY THE CORPS OF ENGINEERS.
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PLANE GRID AND COORDINATES ARE BASED ON LAMBERT PROJECTION, NAD 83, ZONE III CALIFORNIA AS DESCRIBED IN SPECIAL PUBLICATION NO. 235, PUBLISHED BY THE NATIONAL OCEAN SURVEY.

PROJECT DEPTH OF OUTER AND INNER HARBOR IS -50 FEET.
 PROJECT DEPTH FROM INNER HARBOR TURNING BASIN TO PARK STREET BRIDGE IS 35 FEET.
 TIDAL CANAL PROJECT DEPTH IS 18 FEET.

VERTICAL CONTROL:
 FPCP: PORT 1 1836PID HT0654.
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 LCP2: OAK OUTER 1 2012NO PID, OAKLAND OUTER REACH 7-10 DISK SET IN PARKING LOT AT PIER 6 AMNAV TUG TERMINAL AT THE EDGE OF THE PIER. ELEVATION: 14.04 FEET MLLV - DERIVED FROM WGS-84 ELLIPSOID ELEVATION, GEOID09 AND DATUM MODELS TIDE GAUGE LOCATION IS IN FACE OF PILING AT BERTH 6, 10' EAST OF BENCHMARK; NAEL ELEVATION 10.1 FEET MLLV.

HORIZONTAL CONTROL:
 PRIMARY: RTK POSITIONING
 SECONDARY: COAST GURAD DGPS D-BEACON

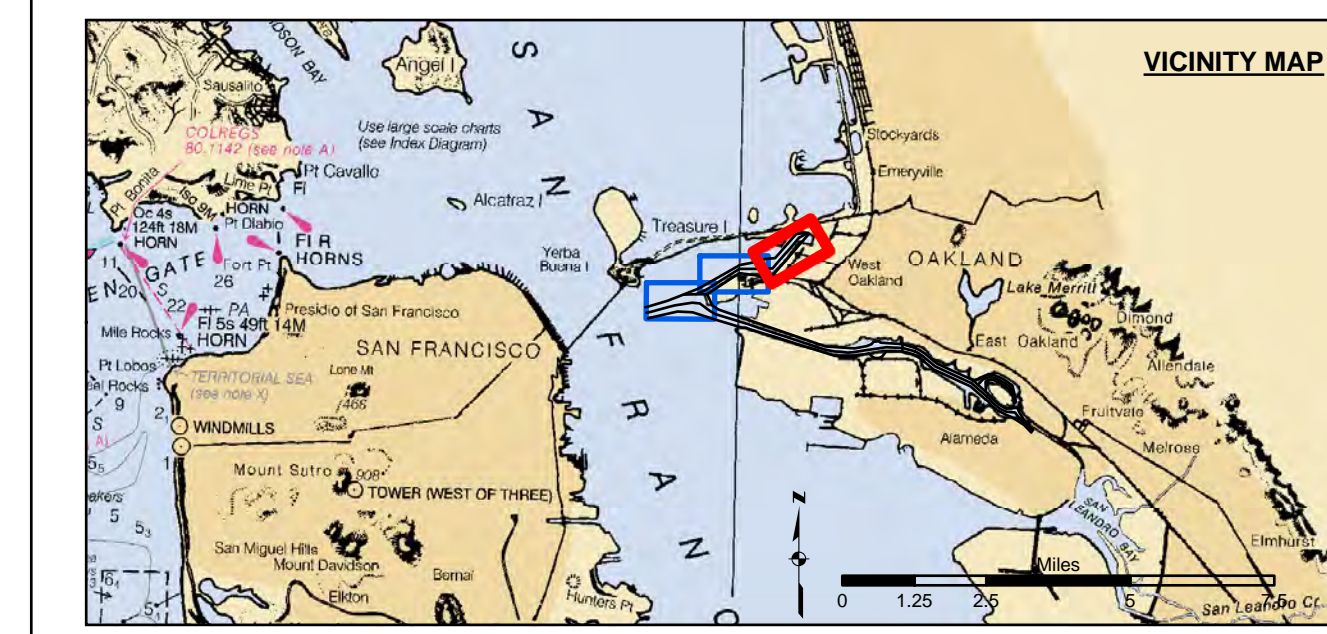
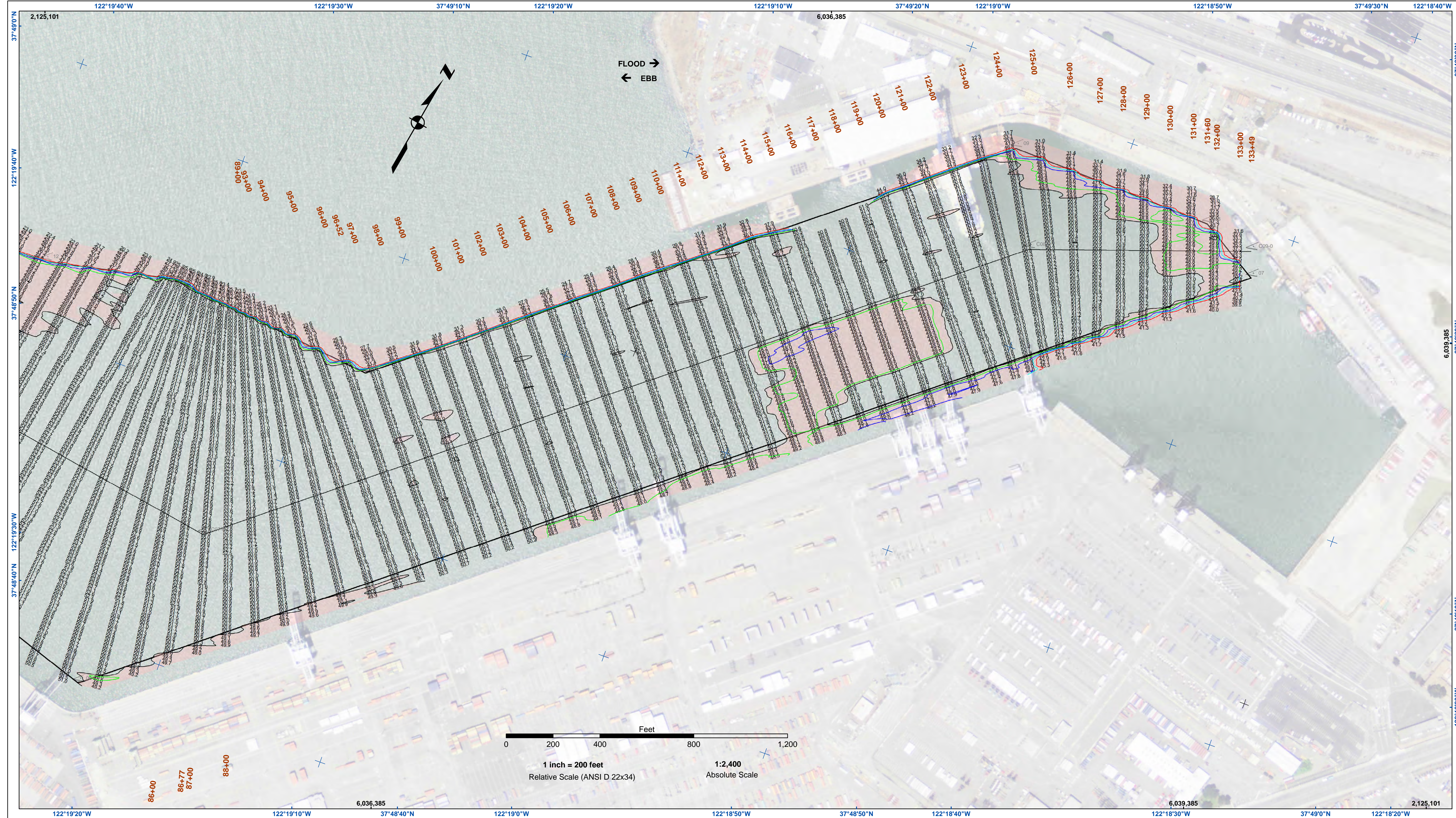
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Prepared Under the Direction of:	Chart Date:
TRAVIS J. RAYFIELD	May 18, 2018
Submittal:	Designed by:
Hydro Survey Team Leader	
Recommended:	Checked by:
Navigation Technical Manager	
Approved:	Drawn by:
Project Manager	

ALAMEDA COUNTY
 CALIFORNIA
OAKLAND OUTER HARBOR
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 25 APRIL 2018

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Federal Navigation Channel	Beacon, General	Contours
Shoaling Area	Obstruction Point	-50
Placement Area	Navigation Buoy	-49
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Wreck Area	Shoalest Sounding*	-47
Submerged Wreck		-46
Angle Point		

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Prepared Under the Direction of TRAVIS J. RAYFIELD LT COLONEL, C.E., DISTRICT ENGINEER	Chart Date: May 18, 2018
Subproject: Hydro Survey Team Leader	Designed by:
Recommendation: Navigation Technical Manager	Drawn by:
Approved: Project Manager	Checked by:

ALAMEDA COUNTY
OAKLAND OUTER HARBOR
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25 APRIL 2018

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