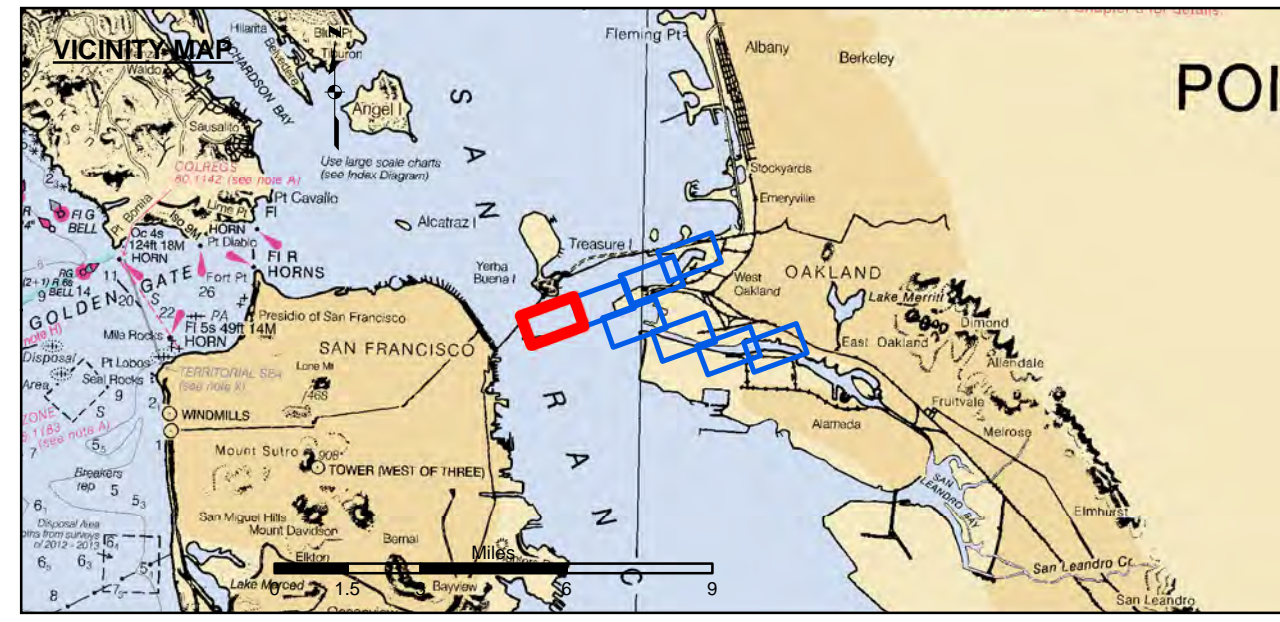


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Prepared Under the Direction of JOHN D. CUNNINGHAM LT COLONEL, C.E., DISTRICT ENGINEER	Chart Date: Dec 19, 2019
Submitted: Hydro Surveys Team Leader	Designed by:
Recommended: Navigation Technical Manager	Drawn by:
Approved: Project Manager	

CALIFORNIA
OAKLAND HARBOR
 OAKLAND INNER HARBOR
 POST-DREDGE SURVEY
 Reach 1 - 9 Oct 2019, Reach 2 - 11 Dec 2019,
 Reach 3 - 10 Dec 2019, Reach 4 - 11 Dec 2019,
 Reach 5 - 4 Dec 2019, Reach 6 - 11 Dec 2019

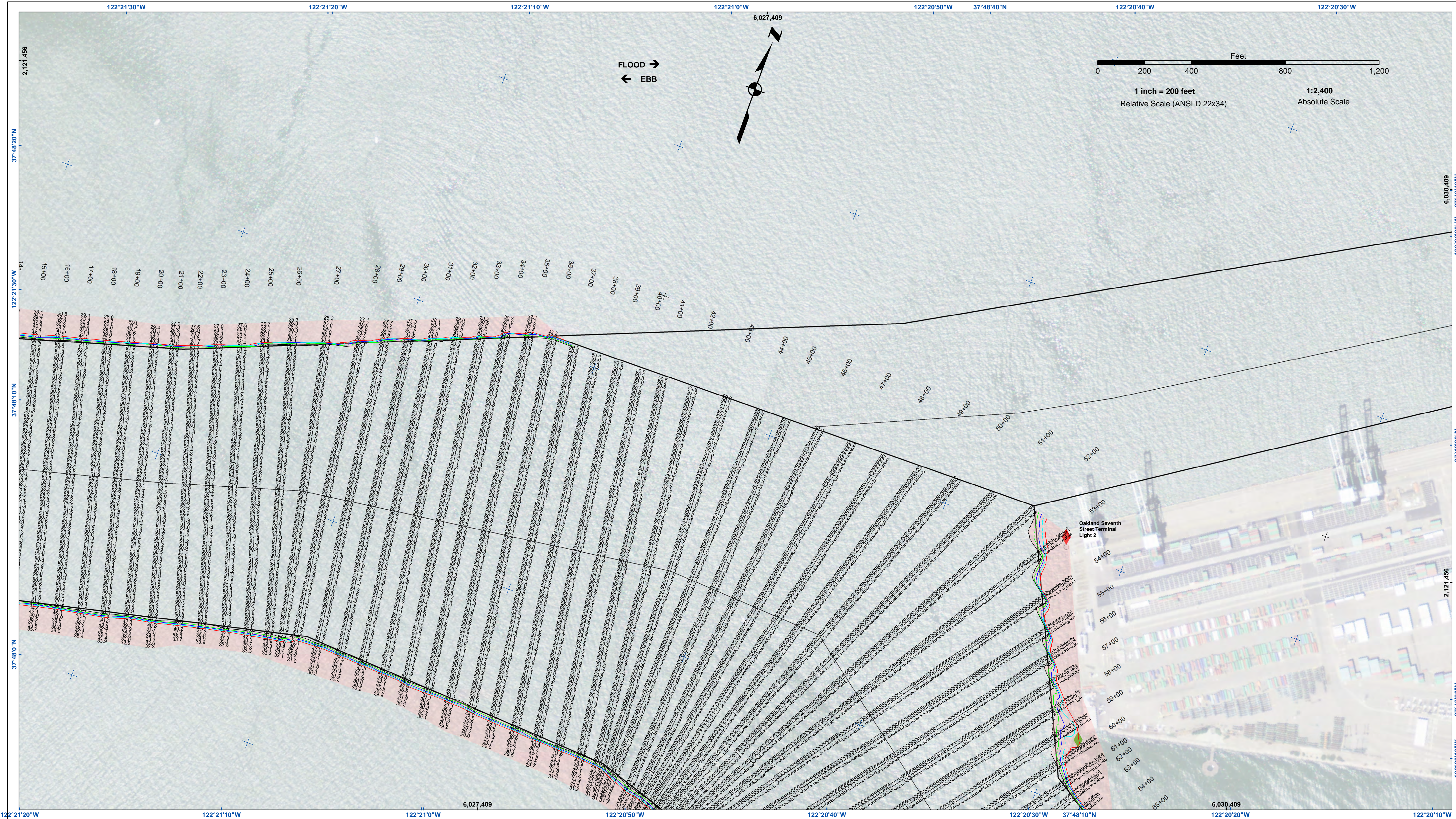
Sheet
Reference
Number
1 of 8



- 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

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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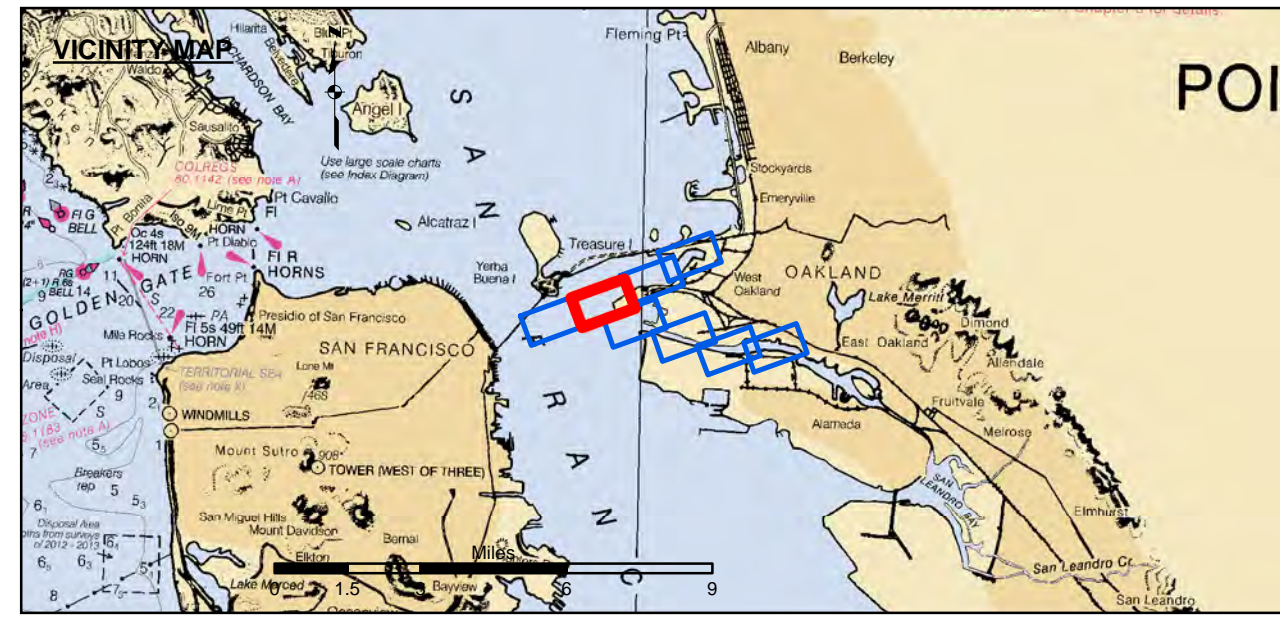
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 HORIZONTAL CONTROL:
 PRIMARY: RTK POSITIONING
 SECONDARY: COAST GUARD DGPS D-BEACON
 VERTICAL CONTROL:
 PRCP: PORT 1 1936/PID HT0854
 OAKLAND INNER REACH 4-6 DISK SET AT SOUTH END OF CLAY STREET, AT THE PORT OF OAKLAND CLAY STREET PIER. ELEVATION: 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.
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Prepared Under the Direction of JOHN D. CUNNINGHAM LT COLONEL, C.E. DISTRICT ENGINEER	Chart Date: Dec 19, 2019
Subject: Hydro Surveys, Team Leader	Designed by:
Recommended: Navigation, Technical Manager	Plotted by:
Approved: Project Manager	Checked by:
	Drawn by:

CALIFORNIA
OAKLAND HARBOR
 OAKLAND INNER HARBOR
 POST-DREDGE SURVEY
 Reach 1 - 9 Oct 2019, Reach 2 - 11 Dec 2019,
 Reach 3 - 10 Dec 2019, Reach 4 - 11 Dec 2019,
 Reach 5 - 4 Dec 2019, Reach 6 - 11 Dec 2019



- Federal Navigation Channel
- Shoaling Area
- Placement Area
- Anchorage Area
- Wreck Area
- Submerged Wreck
- Angle Point
- Beacon, General
- Obstruction Point
- Navigation Buoy
- Navigation Buoy
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- Contours**
- 50
- 49
- 48
- 47
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NOTES:
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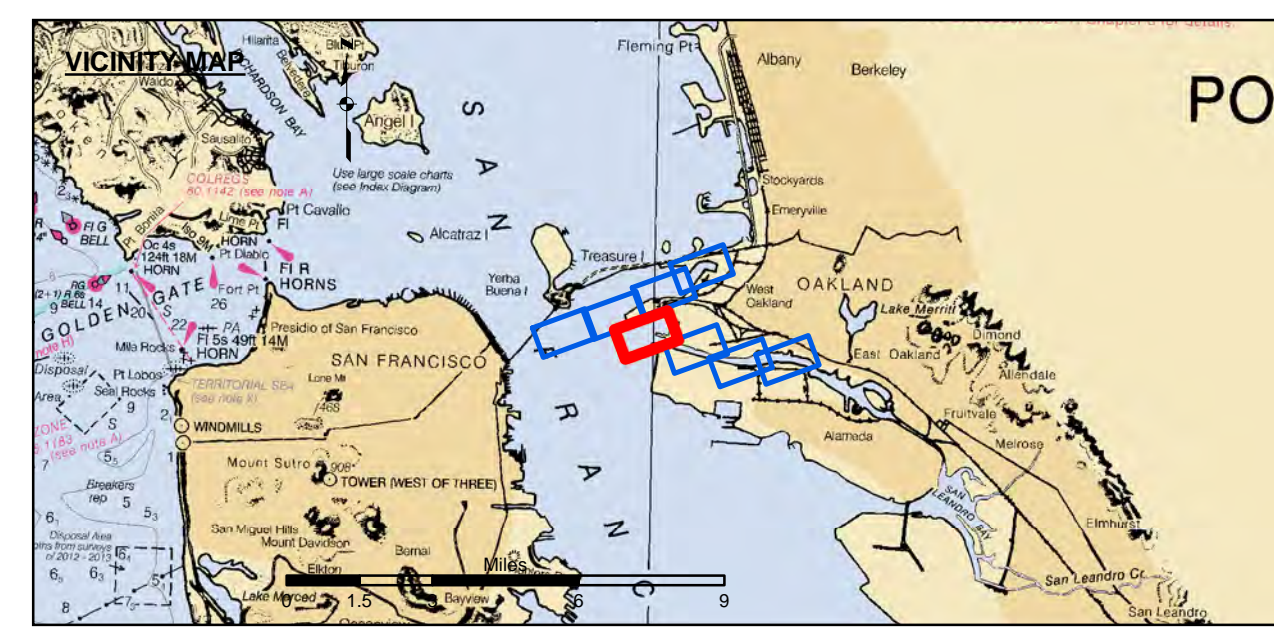
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Prepared Under the Direction of JOHN D. CUNNINGHAM LT COLONEL, C.E., DISTRICT ENGINEER	Chart Date: Dec 19, 2019
Subject: Hydro Survey Team Leader	Designed by:
Recommendation: Navigation Technical Manager	Plotted by:
Approved: Project Manager	Checked by:
	Drawn by:

CALIFORNIA
OAKLAND HARBOR
OAKLAND INNER HARBOR
POST-DREDGE SURVEY
 Reach 1 - 9 Oct 2019, Reach 2 - 11 Dec 2019,
 Reach 3 - 10 Dec 2019, Reach 4 - 11 Dec 2019,
 Reach 5 - 4 Dec 2019, Reach 6 - 11 Dec 2019

Sheet Reference Number
5 of 8



Federal Navigation Channel	Beacon, General	Contours
Shoaling Area	Obstruction Point	-50
Placement Area	Navigation Buoy	-49
Anchorage Area	Navigation Buoy	-48
Wreck Area	Shoalest Sounding*	-47
Submerged Wreck		-46
Angle Point		

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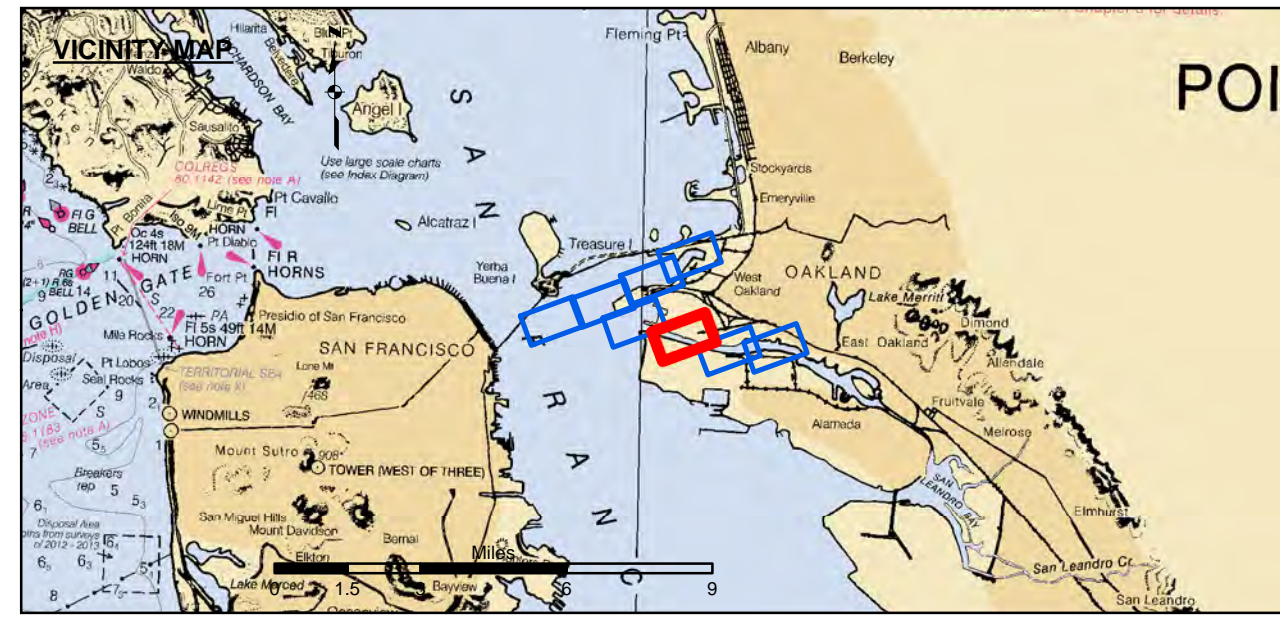
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Prepared Under the Direction of	Chart Date:
JOHN D. CUNNINGHAM	Dec 19, 2019
LT Colonel, C.E. District Engineer	Designed by:
Submitted:	Hydro Survey Team Leader
Recommended:	Navigation Technical Manager
Approved:	Project Manager
Surveyed By:	Plotted By:
Checked By:	Drawn by:

CALIFORNIA
OAKLAND HARBOR
 OAKLAND INNER HARBOR
 POST-DREDGE SURVEY
 Reach 1 - 9 Oct 2019, Reach 2 - 11 Dec 2019,
 Reach 3 - 10 Dec 2019, Reach 4 - 11 Dec 2019,
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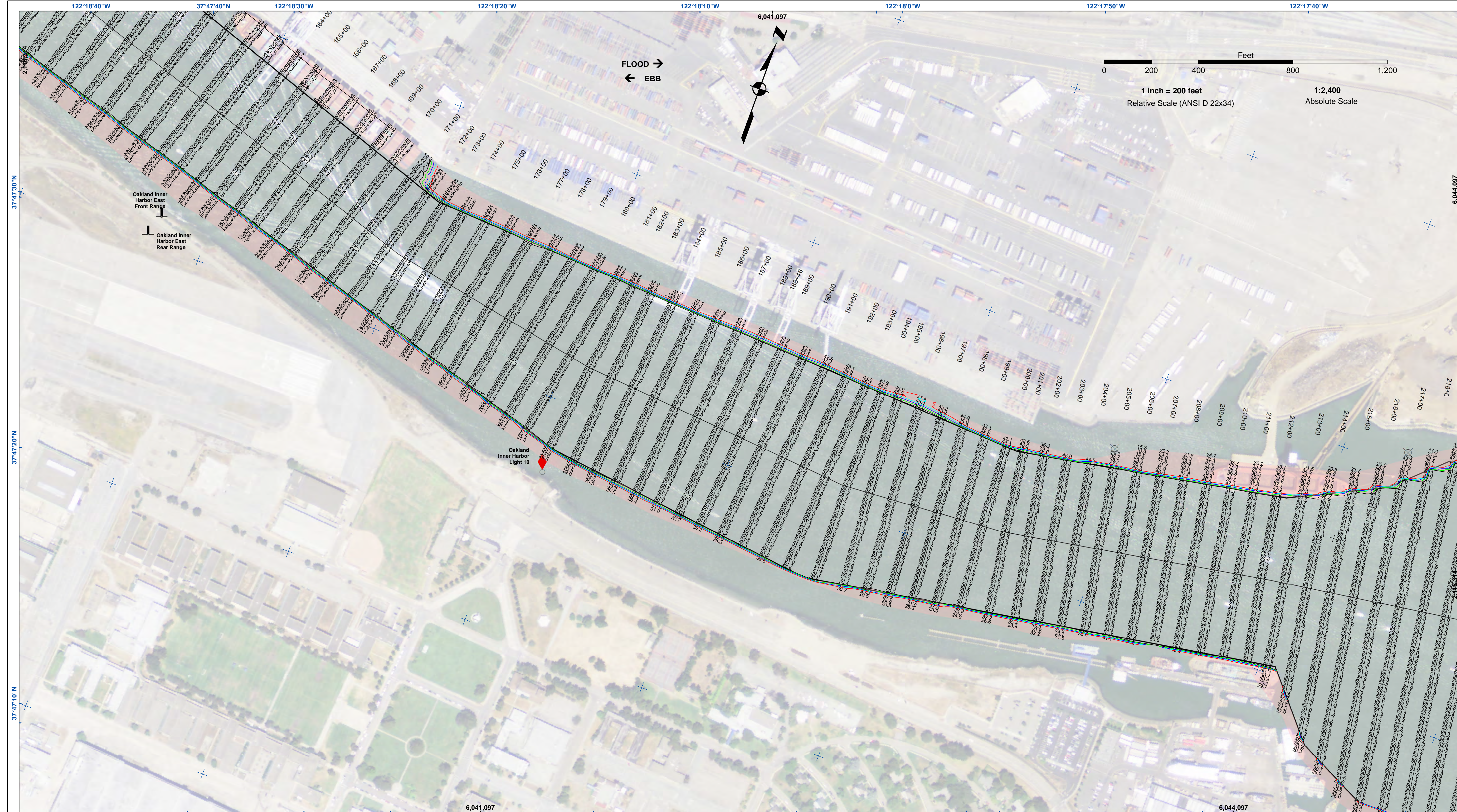
Sheet Reference Number
 6 of 8



- | | | |
|----------------------------|--------------------|-----------------|
| Federal Navigation Channel | Beacon, General | Contours |
| Shoaling Area | Obstruction Point | -50 |
| Placement Area | Navigation Buoy | -49 |
| Anchorage Area | Navigation Buoy | -48 |
| Wreck Area | Shoalest Sounding* | -47 |
| Submerged Wreck | | -46 |
| Angle Point | | |

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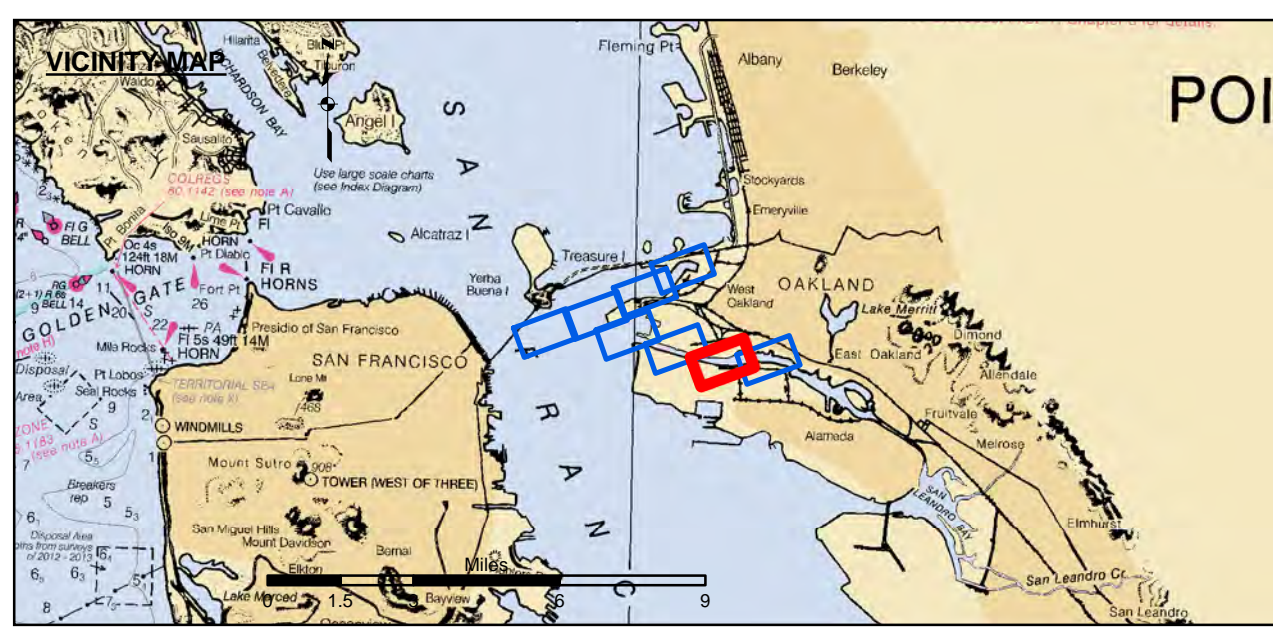
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Prepared Under the Direction of	John D. Cunningham
Subproject	Hydro Survey / Team Leader
Recommendation	Navigation Technical Manager
Approved	Project Manager
Chart Date	Dec 19, 2019
Designed by	
Plotted by	
Checked by	
Drawn by	

CALIFORNIA
OAKLAND HARBOR
 OAKLAND INNER HARBOR
 POST-DREDGE SURVEY
 Reach 1 - 9 Oct 2019, Reach 2 - 11 Dec 2019
 Reach 3 - 10 Dec 2019, Reach 4 - 11 Dec 2019
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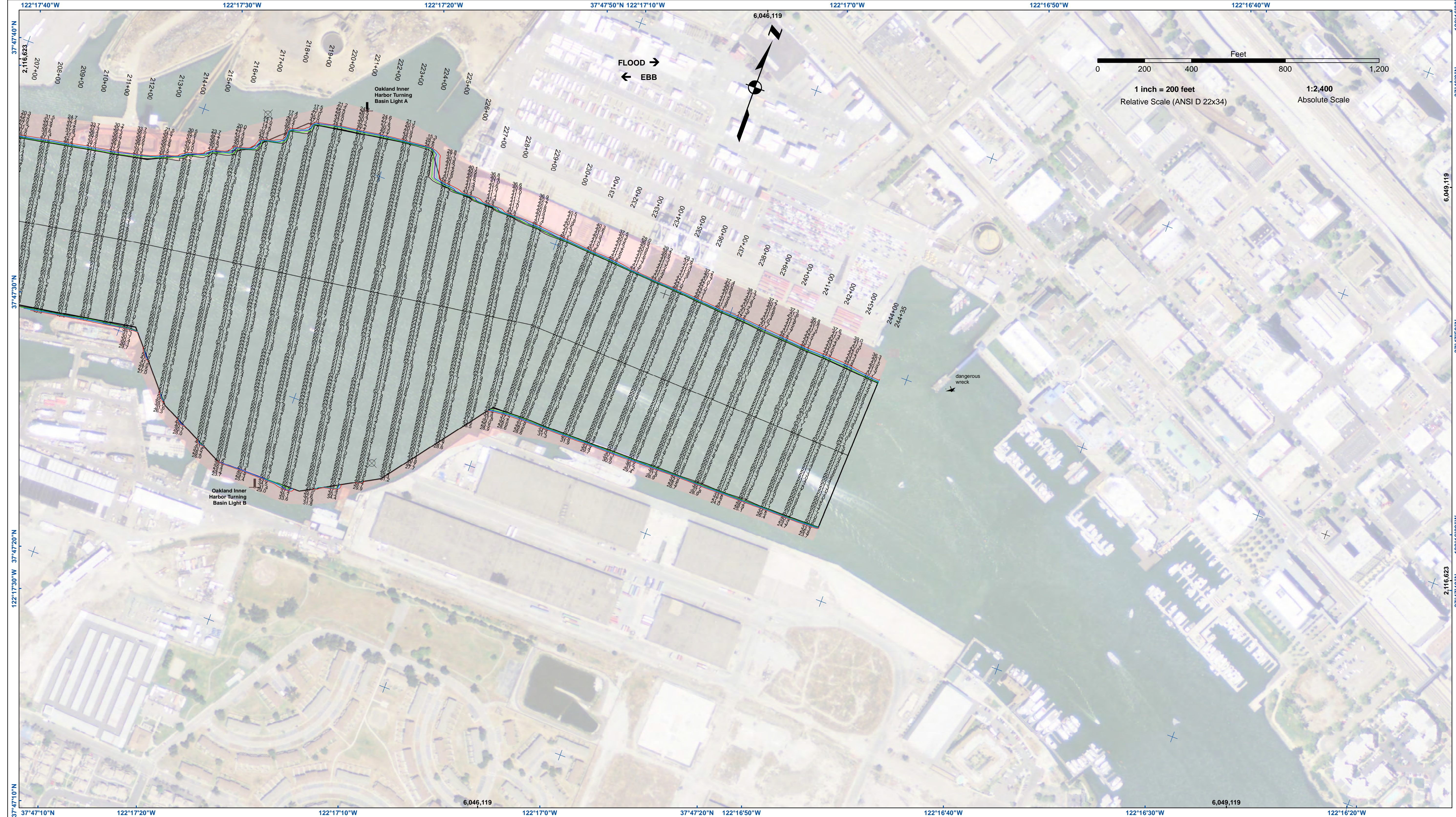
Sheet
Reference
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7 of 8



- | | | |
|----------------------------|--------------------|-----------------|
| Federal Navigation Channel | Beacon, General | Contours |
| Shoaling Area | Obstruction Point | -50 |
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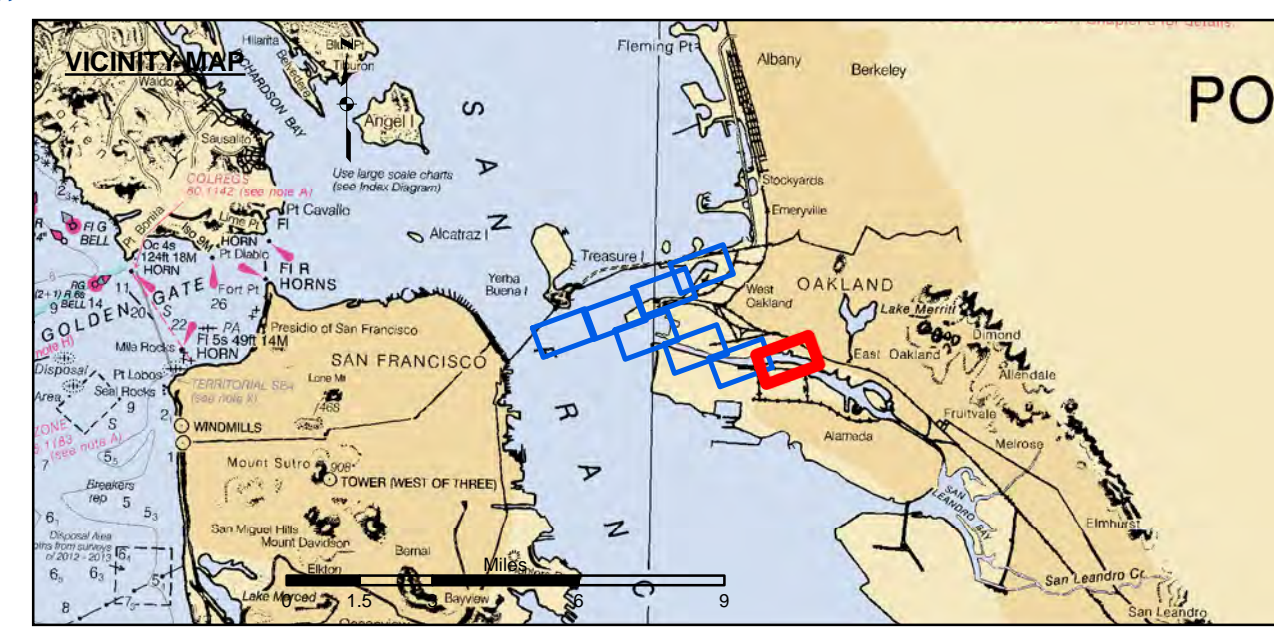


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Chart Date:	Dec 19, 2019
Designed by:	
Drawn by:	
Checked by:	
Project Manager:	

CALIFORNIA
OAKLAND HARBOR
 OAKLAND INNER HARBOR
 POST-DREDGE SURVEY
 Reach 1 - 9 Oct 2019, Reach 2 - 11 Dec 2019,
 Reach 3 - 10 Dec 2019, Reach 4 - 11 Dec 2019,
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Federal Navigation Channel	Beacon, General	Contours
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Angle Point		

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 HORIZONTAL CONTROL:
 PRIMARY: RTK POSITIONING
 SECONDARY: COAST GUARD DGPS D-BEACON
 VERTICAL CONTROL:
 PRCP: PORT 1 1936PID HT0854
 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.
 LPOP 1: 941 4777 B TIDAL P/D A62211, 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 VDATUM MODELS
 TIDE GAUGE LOCATION IS IN FACE OF PILING AT BERTH 37; NAIL ELEVATION 9.7 FEET MLLW.
 LPOP 2: OAK OUTER 1 2012ND 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 VDATUM MODELS TIDE GAUGE LOCATION IS IN FACE OF PILING AT PIER 6, 10' EAST OF BENCHMARK; NAIL ELEVATION 10.1 FEET MLLW.

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Reference
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