



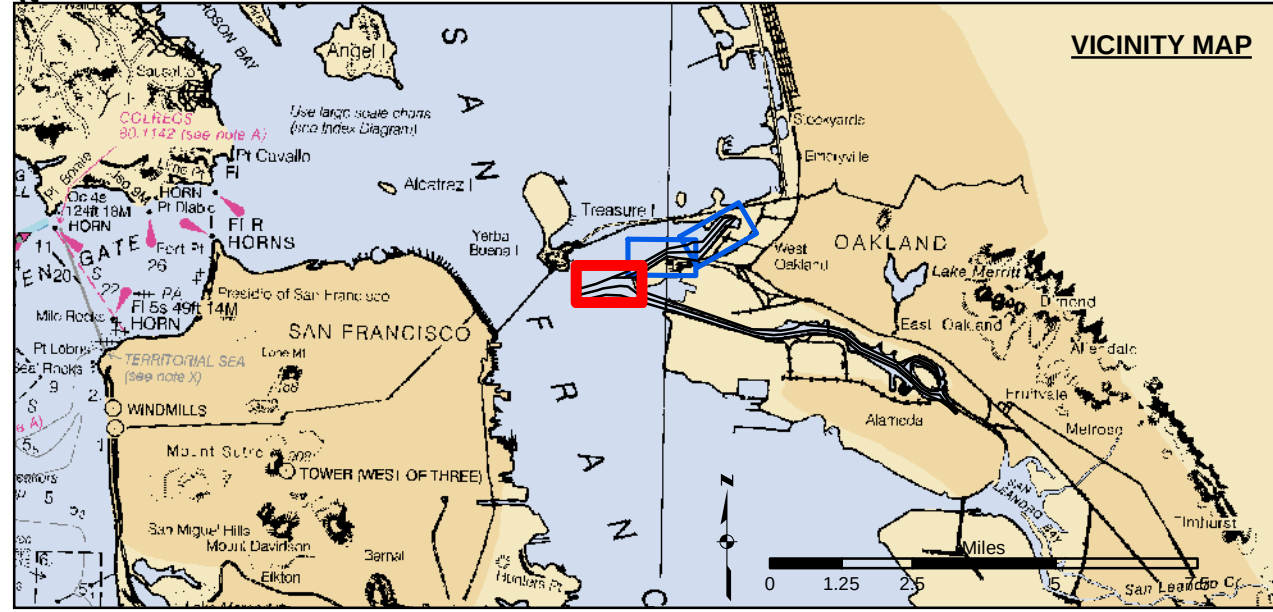
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Submitted: _____ Hydro Survey Team Leader	Plotted by: _____	Designed by: _____	Chart Date: Mar 12, 2024
Recommended: _____ Non-Station Technical Manager	Checked By: _____	Drawn by: _____	
Approved: _____ Project Manager			

ALAMEDA COUNTY CALIFORNIA

OAKLAND HARBOR
OUTER HARBOR
CONDITION SURVEY
08 MARCH 2024

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

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.

SOUNDING FOR THE CHANNEL MEASURED WITH MULTIBEAM ECHOSOUNDER AND ARE SHOWN
TO THE NEAREST TENTH FOOT.

SOUNDINGS ARE BASED ON THE DATUM OF MEAN LOWER LOW WATER AT THE LOCALITY.

SURVEYED BY THE CORPS OF ENGINEERS.
BASE MAPS ARE USDA NAIP 2010.

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.

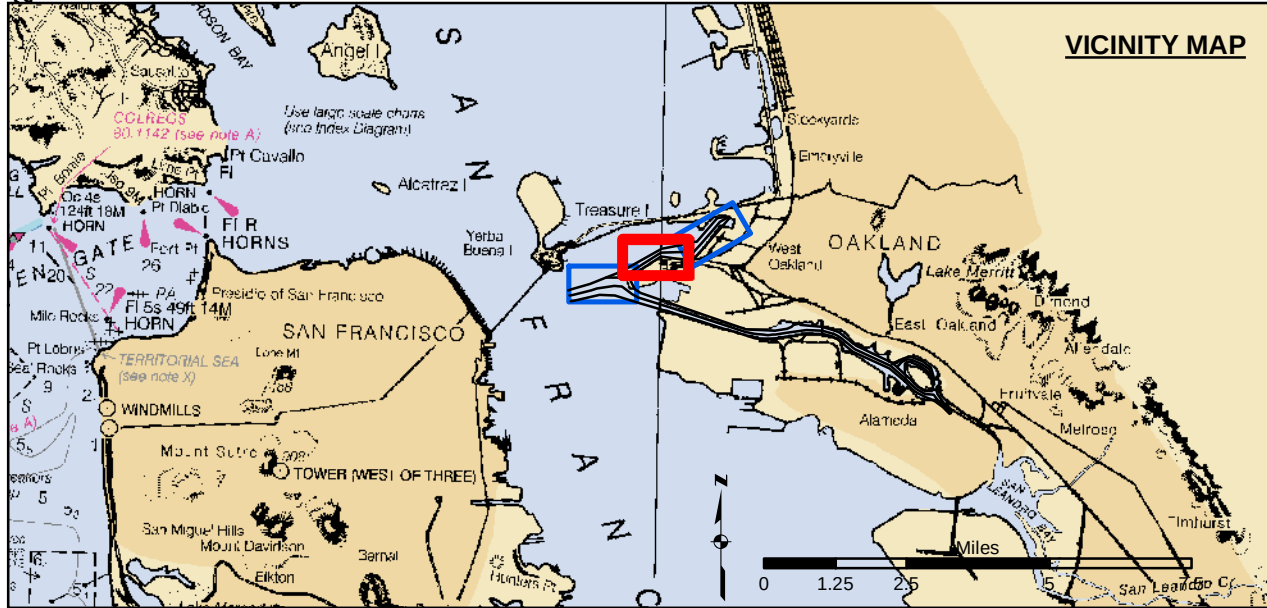
PROJECT DEPTH FROM INNER HARBOR TURNING BASIN TO PARK STREET BRIDGE IS 35 FEET.
TIDAL CANAL PROJECT DEPTH IS 18 FEET.

VERTICAL CONTROL:
PPCP: PORT 1 1936/PID T0654.
OAKLAND INNER REACH 4.5 DISK SET AT SOUTH END OF CLAY STREET, AT THE PORT OF OAKLAND CLAY STREET PIER.
ELEVATION: 9.56 FEET MLW - PUBLISHED 21 APR 2003 ON NOAA STATION 414 9764 TIDE GAUGE LOCATION IS CHISEL MARK
APPROX. 10 FEET WEST ON TOP OF CONCRETE CURB; CHISEL ELEVATION 11.0 FEET MLW.

LCPC 1: 941 4777 B TIDAL/PIEA5211, OAKLAND INNER REACH 1.3 DISK SET IN BALLARD FOUNDATION NEAR THE NORTHEAST END OF BERTH 40 OF THE OAKLAND MILLWATER HARBOR.
ELEVATION: 13.46 FEET MLW - DERIVED FROM WGS-84 ELLIPSOID ELEVATION, GEOID90N AND VDATUM MODELS
TIDE GAUGE LOCATION IS IN FACE OF PILING AT BERTH 37; NAL ELEVATION 9.7 FEET MLW.

LCPC 2: OAK OUTLET 1 2012/PID OAK, OAKLAND OUTER REACH 7-10 DISK SET IN PARKING LOT AT PIER 6 ANNAN TUG TERMINAL AT THE EDGE OF THE PIER, ELEVATION: 14.04 FEET MLW - DERIVED FROM WGS-84 ELLIPSOID ELEVATION, GEOID90N AND DATUM MODELS
TIDE GAUGE LOCATION IS IN FACE OF PILING AT PIER 6, 10' EAST OF BENCHMARK; NAL ELEVATION 10.1 FEET MLW.

HORIZONTAL CONTROL:
PRIMARY RTK POSITIONING
SECONDARY: COAST GUARD DGPS DEBEACON



- 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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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:
PPCP: PORT 1 1936/PID 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.
LPCC 1: 941 4777 B TIDAL/PID AE5211, 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, GEODID9S AND VDUTUM MODELS
TIDE GAUGE LOCATION IS IN FACE OF PILING AT BERTH 37; NAIL ELEVATION 9.7 FEET MLLW.
LPCC 2: OAK OUTER 1 2012/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,
GEODID9S AND DATUM MODELS TIDE GAUGE LOCATION IS IN FACE OF PILING AT PIER 6, 10' EAST OF BENCHMARK;
NAIL ELEVATION 10.1 FEET MLLW.
HORIZONTAL CONTROL:
PRIMARY: RTK POSITIONING
SECONDARY: COAST GUARD DGPS D-BEACON


**US Army Corps
of Engineers**
San Francisco District
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of any of the application of the data for other than its intended purpose.

Prepared Under the Direction of TIMOTHY W. SHEBESTA LT COLONEL, C.E. DISTRICT ENGINEER	Surveyed By:	Chart Date:
Submitted: Hydro Survey Team Leader	Plotted By:	Mar 12, 2024
Recommended: Navigation Technical Manager	Checked By:	Designed by:
Approved: Project Manager		Drawn by:

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ALAMEDA COUNTY
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