

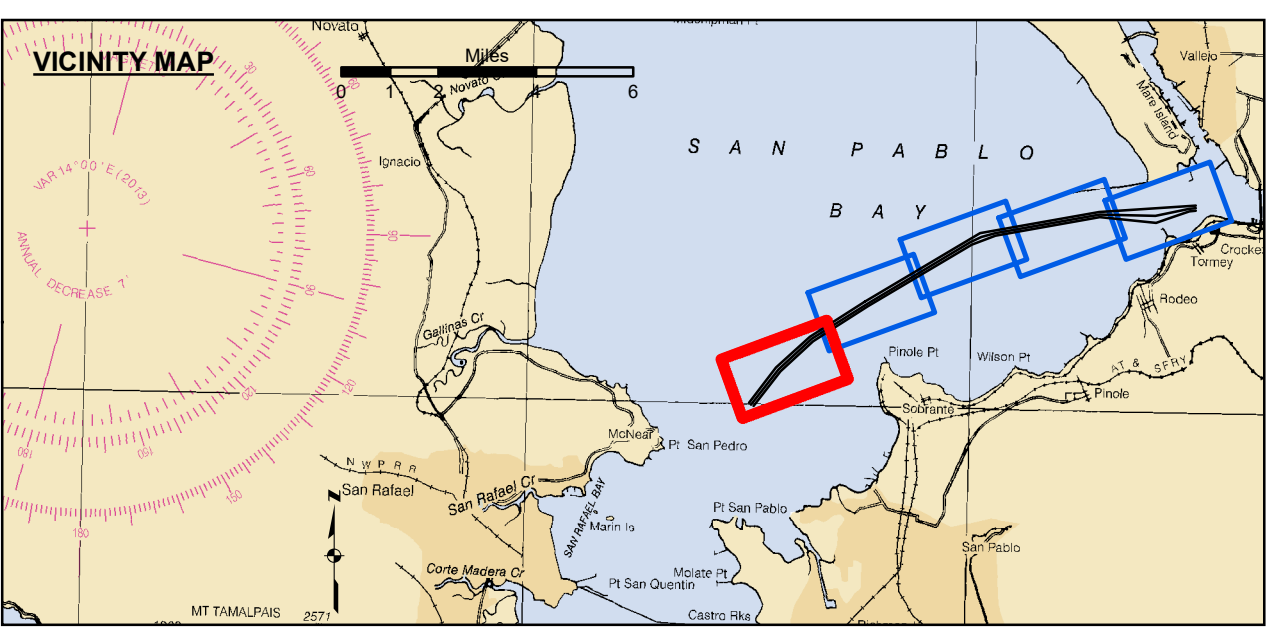
PRELIMINARY ISSUE
THIS PLAN ISSUED FOR
ADVANCE INFORMATION ONLY

AnglePoint	POINT_X	POINT_Y
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03	6016237.00	2199512.00
04	6022215.00	2203334.00
05	6034692.58	2210763.40
06	6047610.83	2213082.81
07	6058067.95	2213781.27
08	6058127.86	2213182.59
09	6057419.43	2213135.37
10	6055006.55	2212268.87
11	6053815.20	2211848.50
12	6047716.66	2210452.26
13	6036383.66	2210459.23
14	6033802.66	2209535.23
15	6022551.66	2202836.23
16	6016604.00	2199034.00
17	6013013.00	2195756.00
18	6010090.00	2191976.00
C01	6009631.93	2192304.35
C02	6012791.00	2195960.00
C03	6016421.00	2199273.00
C04	6022385.00	2203086.12
C05	6033649.18	2209793.00
C06	6034836.66	2210359.38
C07	6036340.65	2210754.51
C08	6047663.65	2212787.53
C09	6053760.51	2212668.82
C10	6057399.48	2213434.70
C11	6058107.91	2213481.93

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

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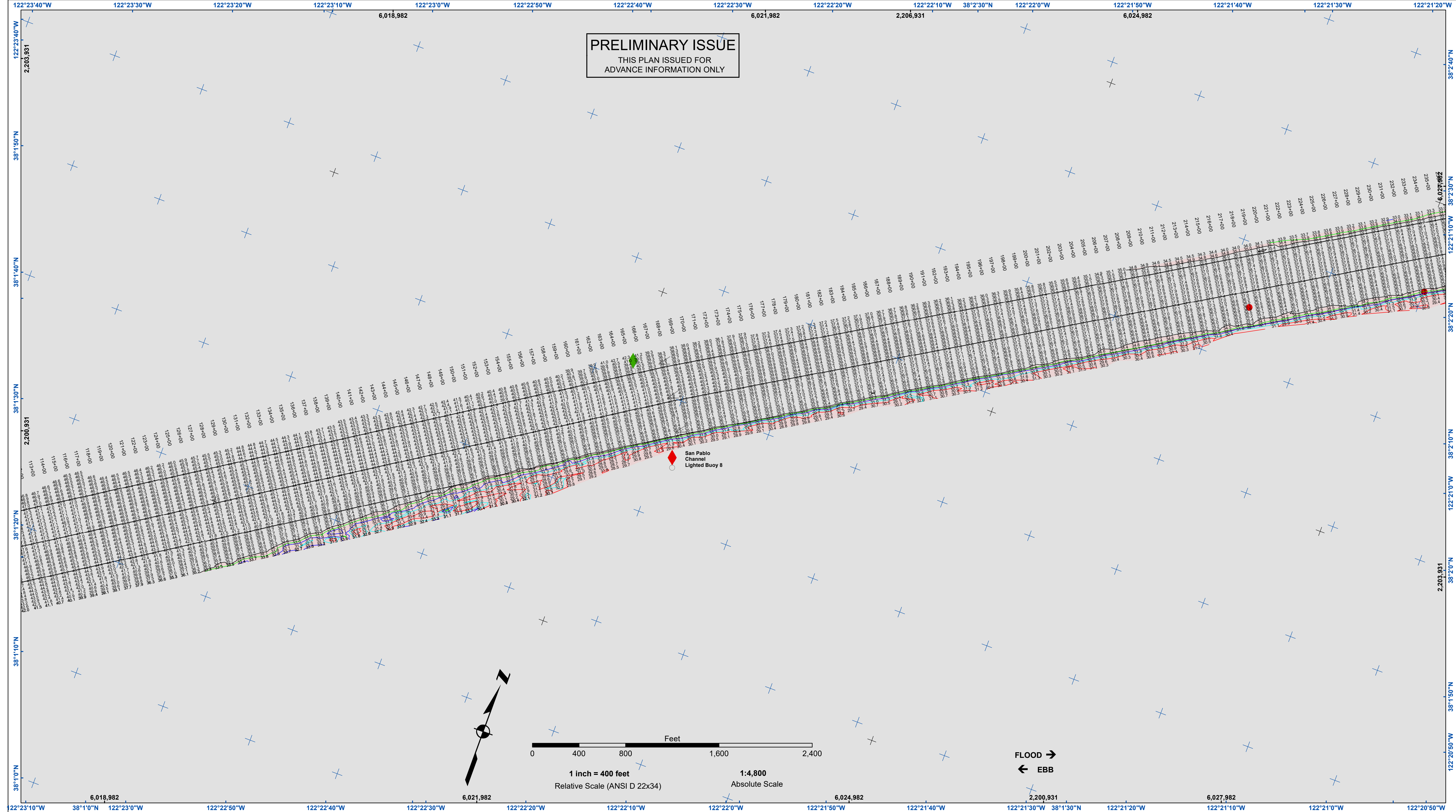
Prepared Under the Direction of TIMOTHY W. SHEBESTA LT COLONEL, C.E., DISTRICT ENGINEER	Surveyed By: PDT	Chart Date: Aug 16, 2023
Submitted: Hydro Survey Team Leader	Plotted By: PDT	Designed by: PDT
Recommended: Chief, Hydro Survey Section	Checked By: PDT	Drawn by: PDT
Approved: Chief, Construction Branch		



- 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*
- Countours
- 35
- 34
- 33
- 32
- 31

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 BUOY ONLY.
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DISTANCE UNITS IN U.S. SURVEY FEET. DEPTHS ARE SHOWN AS POSITIVE VALUES.
COORDINATES ARE BASED ON THE CALIFORNIA STATE PLANE COORDINATE SYSTEM (SPCS) ZONE III, LAMBERT CONFORMAL PROJECTION REFERENCED TO NAD83, AS DESCRIBED IN SPECIAL PUBLICATION NO. 23, PUBLISHED BY NATIONAL OCEAN SURVEY.
BASE MAPS ARE USDA NAD 2010.
*SHOALEST SOUNDING PER QUARTER PER REACH
SURVEYED BY THE CORPS OF ENGINEERS.
SOUNDINGS ARE BASED ON THE DATUM OF MEAN LOWER LOW WATER (MLLW) AT THE LOCALITY AND ARE SHOWN TO THE TENTHS OF A FOOT.
SOUNDING FOR THE CHANNEL MEASURED WITH MULTIBEAM ECHOSOUNDER AND ARE SHOWN TO THE NEAREST TENTH FOOT.
THE PROJECT DEPTH IS -35 FEET MLLW.
VERTICAL DATUM:
MLLW (MEAN LOWER LOW WATER)
TIDAL EPOCH 1983-2001
TIDAL DATUM CONTROL STATION(S):
- 8415056 PINOLE POINT - JUNE 2014
- 8415216 MARE ISLAND - AUG 2013
HORIZONTAL CONTROL DATUM:
NAD83(2011) EPOCH 2010.00
CONTROL:
POINT PINOLE 4 RESET | PID: J72885 | BM 5056 A | PID: BBCN55 | 9415056
OPUS 3192020
5215 L 1975 | 5216 R 2006 | 5218 R 2006 | 5219 R 2006 | 5220 VERS HW2 5-12 | IMU TYPE 42
OPUS 81112010 | 9415216
TIDE GAUGE:
NAI & BRASS DISK SET IN DOLPHIN AT 10.0 FT MLLW APPROX POSITION: 38° 04' 9.9" N, 122° 15' 4.4" W
POSITIONS AND SOUNDINGS HAVE BEEN CORRECTED USING PPK TECHNIQUES USING A CORS NETWORK BASE STATION AT OHLN.
TIDE VALUES HAVE BEEN EXTRAPOLATED USING GEODID8 AND VDATUM V4.0.1.
SURVEY VESSEL / EQUIPMENT:
SV RANDY CUMMINGS
- RESON TSS-R SINGLE-HEAD MULTIBEAM ECHOSOUNDER
- POS MV 220 VERS HW2 5-12
- IMU TYPE 42
- TRIMBLE AT1675-540TS GPS ANTENNA

CALIFORNIA
SAN PABLO BAY
PINOLE SHOAL
POST-DREDGE SURVEY
3-8 AUGUST 2023
Sheet
Reference
Number
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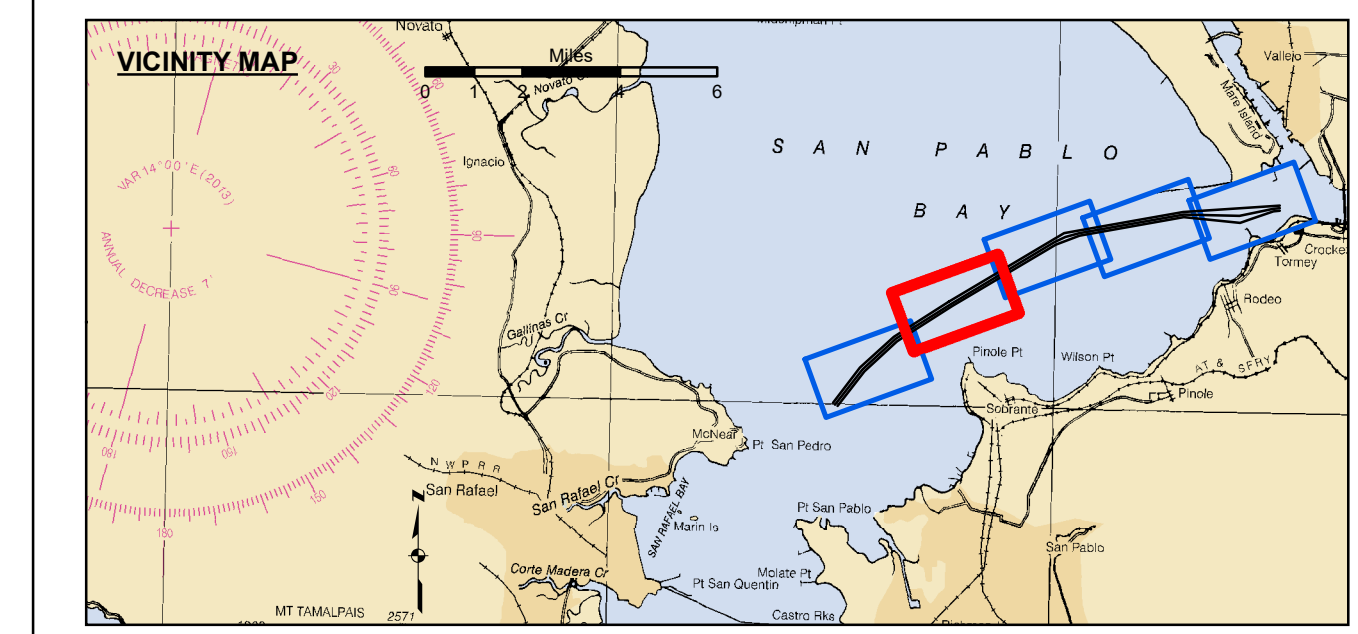
US Army Corps of Engineers
San Francisco District
450 Golden Gate Ave.
San Francisco, CA 94102

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Submitted: Hydro Survey Team Leader	Designed by: PDT
Recommended: Chief, Hydro Survey Section	Checked by: PDT
Approved: Chief, Construction Branch	Drawn by: PDT

CALIFORNIA
SAN PABLO BAY
PINOLE SHOAL
POST-DREDGE SURVEY
3-8 AUGUST 2023

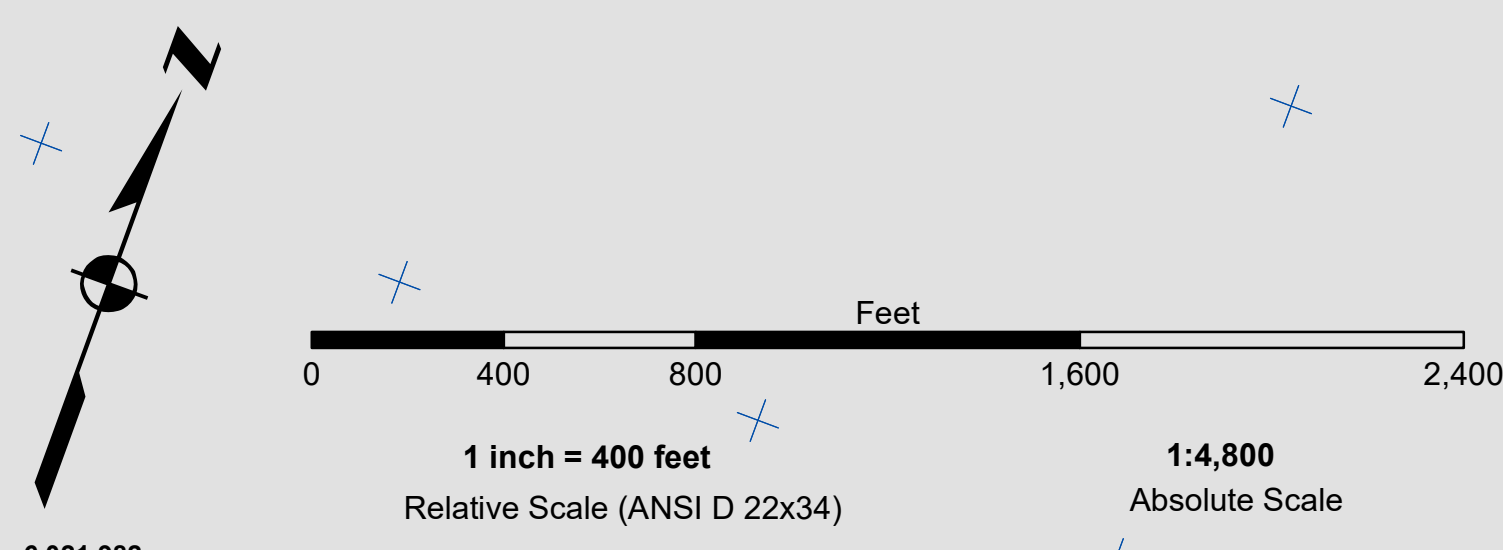
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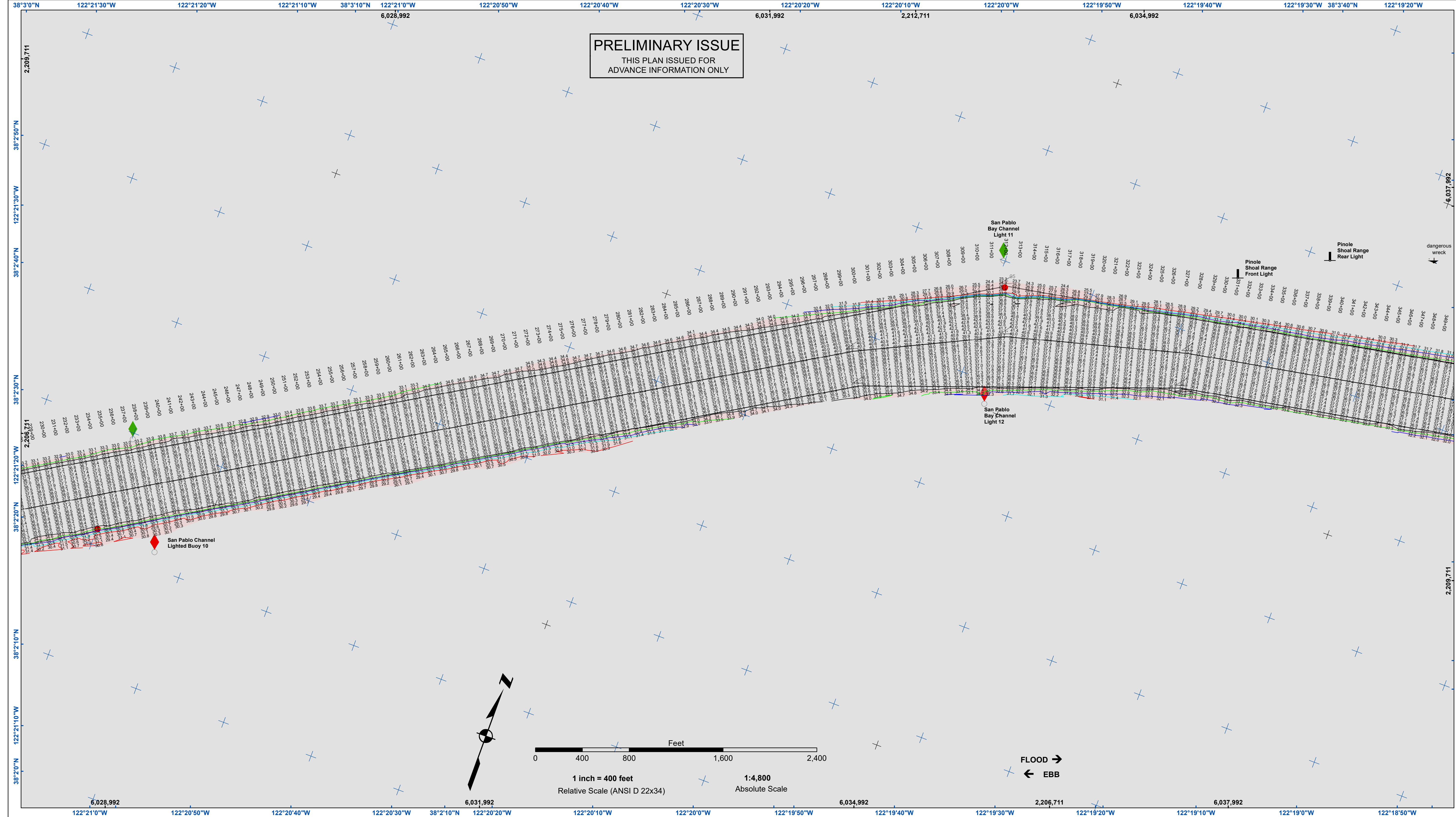


Federal Navigation Channel	Beacon, General	Countours
Shoaling Area	Obstruction Point	-35
Placement Area	Navigation Buoy	-34
Anchorage Area	Navigation Buoy	-33
Wreck Area	Shoalest Sounding*	-32
Submerged Wreck		-31
Angle Point		

NOTES:
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DISTANCE UNITS IN U.S. SURVEY FEET. DEPTHS ARE SHOWN AS POSITIVE VALUES.
COORDINATES ARE BASED ON THE CALIFORNIA STATE PLANE COORDINATE SYSTEM (SPCS) ZONE III, LAMBERT CONFORMAL PROJECTION REFERENCED TO NAD83, AS DESCRIBED IN SPECIAL PUBLICATION NO. 235, PUBLISHED BY NATIONAL OCEAN SURVEY.
BASE MAPS ARE USDA NADP 2010.
*SHOALEST SOUNDING PER QUARTER PER REACH
SURVEYED BY THE CORPS OF ENGINEERS.
SOUNDINGS ARE BASED ON THE DATUM OF MEAN LOWER LOW WATER (MLLW) AT THE LOCALITY AND ARE SHOWN TO THE TENTHS OF A FOOT.
TO THE NEAREST TENTH FOOT
SOUNDINGS FOR THE CHANNEL MEASURED WITH MULTIBEAM ECHOSOUNDER AND ARE SHOWN
THE PROJECT DEPTH IS 35 FEET MLLW.
VERTICAL DATUM:
MLLW (MEAN LOWER LOW WATER)
TIDAL EPOCH 1983-2001
TIDAL DATUM CONTROL STATION(S):
- 8415056 PINOLE POINT - JUNE 2014
- 8415216 MARE ISLAND - AUG 2013

HORIZONTAL CONTROL DATUM:
NAD83(2011) EPOCH 2010.00
CONTROL:
POINT PINOLE 4 RESET | PID: J72885 | BM 5056 A | PID: BBN555 | 9415056
OPUS 3192020
5215 L 1975 | 5216 R 2006
PID: BBN281 | PID: BBN597
OPUS 8112010 | 9415216
TIDE GAUGE:
NAI & BRASS DISK SET IN DOLPHIN AT 10.0 FT MLLW APPROX POSITION: 38° 04' 9.9" N, 122° 15' 4.4" W
POSITIONS AND SOUNDINGS HAVE BEEN CORRECTED USING PPK TECHNIQUES USING A CORS NETWORK BASE STATION AT OHLN.
TIDE VALUES HAVE BEEN EXTRAPOLATED USING GEODID8 AND VDATUM V4.0.1.
SURVEY VESSEL / EQUIPMENT:
SVY RANDY CUMMINGS
- RESON TSS-R SINGLE-HEAD MULTIBEAM ECHOSOUNDER
- POS MV 220 VERS HW2 5-12
- IMU TYPE 42
- TRIMBLE AT1675-540TS GPS ANTENNA





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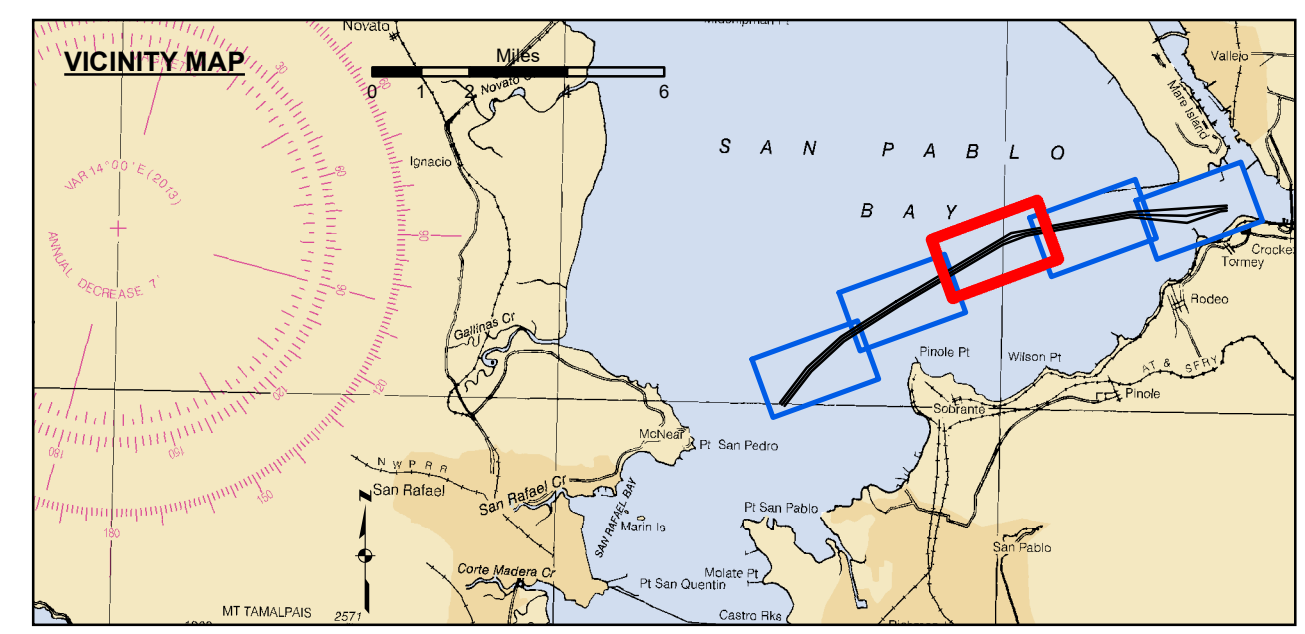
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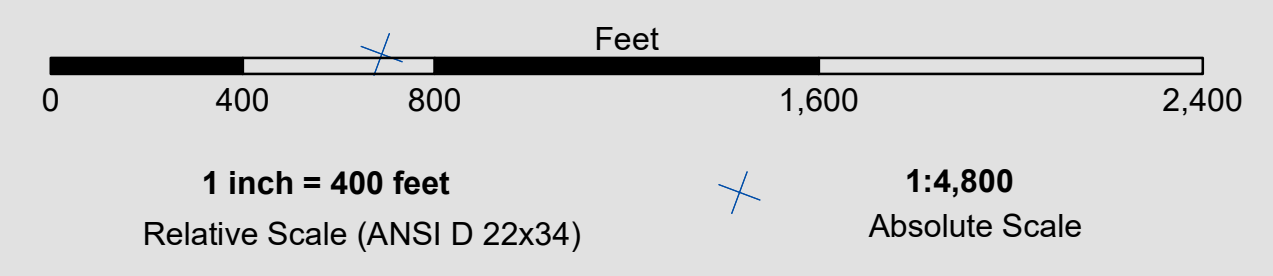
Prepared Under the Direction of TIMOTHY W. SHEBESTA LT COLONEL, C.E., DISTRICT ENGINEER	Chart Date: Aug 16, 2023
Submitted: Hydro Survey Team Leader	Designed by: PDT
Recommended: Chief, Hydro Survey Section	Checked by: PDT
Approved: Chief, Construction Branch	Drawn by: PDT

CALIFORNIA
SAN PABLO BAY
PINOLE SHOAL
POST-DREDGE SURVEY
3-8 AUGUST 2023

Sheet
Reference
Number
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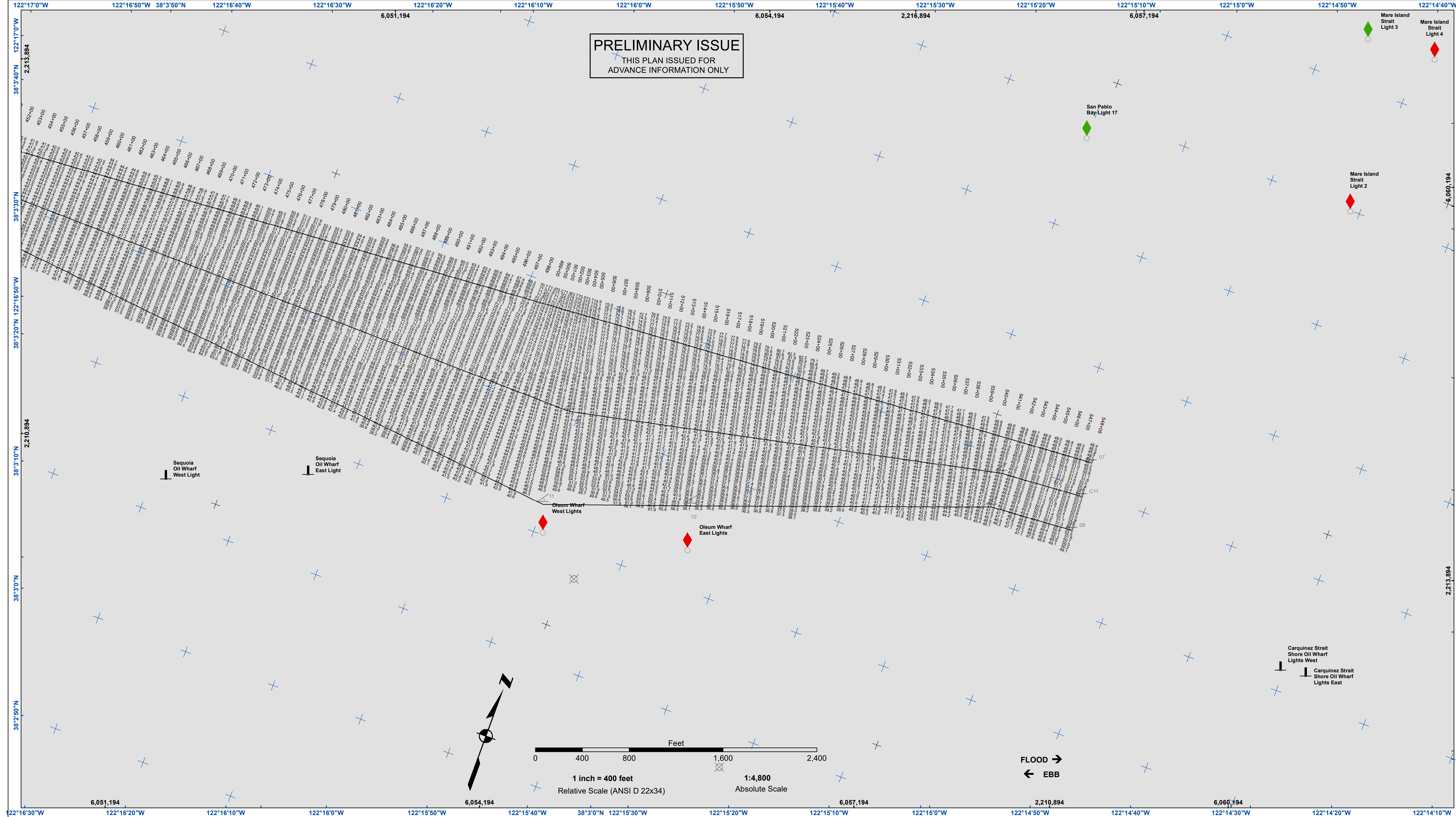


- | | | |
|----------------------------|--------------------|-----------|
| Federal Navigation Channel | Beacon, General | Countours |
| Shoaling Area | Obstruction Point | -35 |
| Placement Area | Navigation Buoy | -34 |
| Anchorage Area | Navigation Buoy | -33 |
| Wreck Area | Shoalest Sounding* | -32 |
| Submerged Wreck | | -31 |
| Angle Point | | |



FLOOD →
← EBB

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BASE MAPS ARE USDA NAD 2010.
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VERTICAL DATUM:
MLLW (MEAN LOWER LOW WATER)
TIDAL EPOCH 1983-2001
TIDAL DATUM CONTROL STATION(S):
- 8415056 PINOLE POINT - JUNE 2014
- 8415216 MARE ISLAND - AUG 2013
HORIZONTAL CONTROL DATUM:
NAD83(2011) EPOCH 2010.00
CONTROL:
POINT PINOLE 4 RESET | PID: JT2885 | BM 5056 A | PID: BBN55 | 9415056
OPUS 3192020
5215 L 1975 | 5216 R 2006 | 5216 R 2006 | PID: BBN57 | 9415056
PID: BBN281 | OPUS 81112010 | 9415216
TIDE GAUGE:
NAI & BRASS DISK SET IN DOLPHIN AT 10.0 FT MLLW APPROX POSITION: 38° 04' 9" N, 122° 15' 4" W
BASE STATION AT OHLN.
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TIDE VALUES HAVE BEEN EXTRAPOLATED USING GEODID18 AND VDATUM V4.0.1.
SURVEY VESSEL / EQUIPMENT:
S/V RANDY CUMMINGS
- RESON TSS-R SINGLE-HEAD MULTIBEAM ECHOSOUNDER
- POS MV 220 VERS HW2 5-12
- IMU TYPE 42
- TRIMBLE AT1675-540TS GPS ANTENNA



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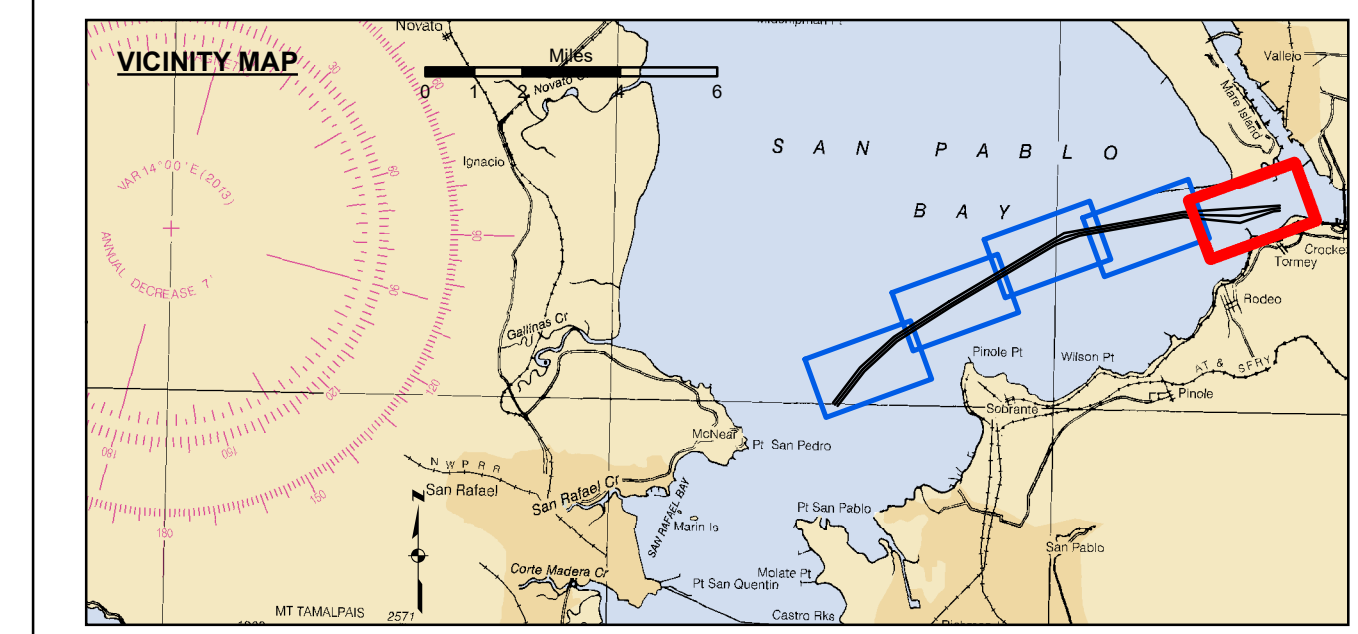
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Submitted by: Hydro Survey Team Leader	Designed by: PDT
Recommended by: Chief, Hydro Survey Section	Checked by: PDT
Approved by: Chief, Construction Branch	Drawn by: PDT

CALIFORNIA
SAN PABLO BAY
PINOLE SHOAL
POST-DREDGE SURVEY
3-8 AUGUST 2023

Sheet
Reference
Number
5 of 5



- Federal Navigation Channel
- Shoaling Area
- Placement Area
- Anchorage Area
- Wreck Area
- Submerged Wreck
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OPUS 3192020
5215 L 1975 | 5216 R 2006
PID: BBR281 | PID: BBCN97
OPUS 81112010 | 9415216 | OPUS 100312011 | 9415216
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