

US Army Corps of Engineers
 San Francisco District
 450 Market Street
 San Francisco, CA 94102

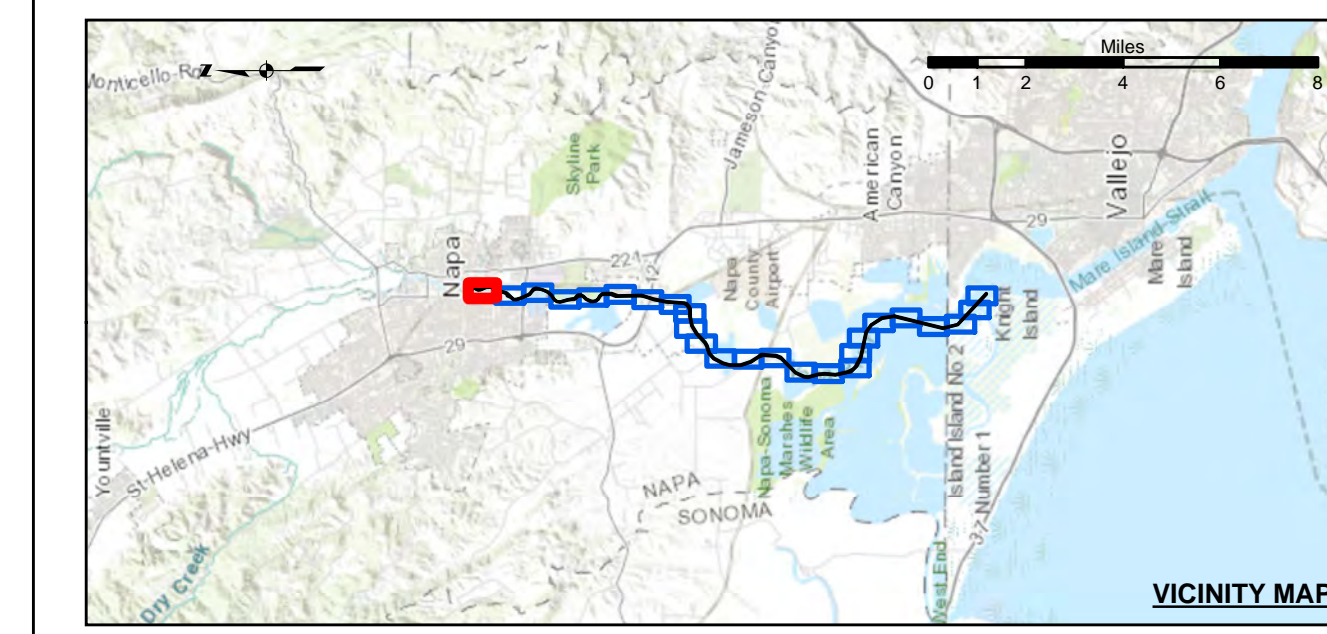
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NAD 83 CENTERLINE ANGLE POINTS

Station	X	Y	Station	X	Y
1	6049841.27	2300026.94	49	6049415.67	2285526.34
2	6049996.07	2299832.24	50	6049450.57	2285335.44
3	6050201.77	2299606.14	51	6049447.87	2284522.54
4	6050271.37	2299503.04	52	6049174.77	2283987.14
5	6050311.17	2299391.54	53	6049217.17	2283156.14
6	6050292.17	2299310.24	54	6049197.67	2282116.14
7	6050197.07	2299199.14	55	6048772.57	2279898.04
8	6050127.97	2299090.24	56	6048459.07	2278600.14
9	6050092.67	2298981.04	57	6048320.67	2277610.44
10	6050118.97	2298884.14	58	6048294.17	2276636.34
11	6050338.87	2298188.64	59	6048169.37	2276408.44
12	6050401.67	2297899.54	60	6047894.27	2276160.84
13	6050367.67	2297603.34	61	6047622.37	2275850.54
14	6049910.47	2296988.44	62	6046811.77	2276063.44
15	6049815.77	2296196.14	63	6046589.37	2275853.54
16	6049676.67	2295683.64	64	6046485.07	2275322.84
17	6049882.67	2295148.04	65	6046398.17	2274481.04
18	6049882.67	2294284.64	66	6046367.37	2274290.34
19	6049895.27	2294466.14	67	6046282.97	2274015.64
20	6049513.87	2294370.84	68	6046224.97	2273848.24
21	6049687.17	2293268.64	69	6046151.97	2271799.04
22	6049758.67	2293221.34	70	6046147.37	2270633.54
23	6050063.67	2292989.34	71	6046181.04	2269525.24
24	6050148.17	2292728.04	72	6046231.97	2268710.44
25	6050106.87	2292401.94	73	6046254.77	2268303.34
26	6050023.87	2292321.54	74	6046242.67	2267952.44
27	6049793.57	2291537.54	75	6046192.87	2266237.54
28	6049713.07	2291370.74	76	6046076.77	2264701.24
29	6049396.07	2291051.84	77	6046108.67	2263779.14
30	6049403.67	2290942.14	78	6046006.57	2263326.34
31	6048913.27	2290730.94	79	6046038.97	2262189.24
32	604897.07	2290599.04	80	6046389.57	2261457.14
33	6048984.47	2290434.04	81	6046201.67	2260382.14
34	6048460.67	2290111.14	82	6046058.77	2258826.14
35	6048688.27	2289308.54	83	6046071.47	2258575.64
36	6048944.47	2288995.24	84	6046113.77	2258117.14
37	6048961.77	2288529.34	85	6046210.77	2257586.34
38	6048265.67	2288221.44	86	6046481.27	2256990.04
39	6048301.67	2288140.84	87	6046612.07	2256415.04
40	6048313.67	2287847.84	88	6046343.47	2255244.34
41	6048319.17	2287770.94	89	6046451.47	2254386.04
42	6048221.17	2287579.74	90	6046535.37	2254800.84
43	6048313.67	2287282.24	91	6046551.07	2254701.64
44	6048666.17	2286782.04	92	6046819.87	2254329.54
45	6048637.77	2286523.44			
46	6048702.07	2286224.34			
47	6048899.87	2285997.74			
48	6049258.67	2285762.84			

Chart Date: Mar 25, 2020
 Designed by: [Signature]
 Plotted by: [Signature]
 Surveyed by: [Signature]
 Prepared Under the Direction of: JOHN D. CUNNINGHAM
 Lt Colonel, U.S. District Engineer
 Submitted by: [Signature]
 Recommended by: [Signature]
 Checked by: [Signature]

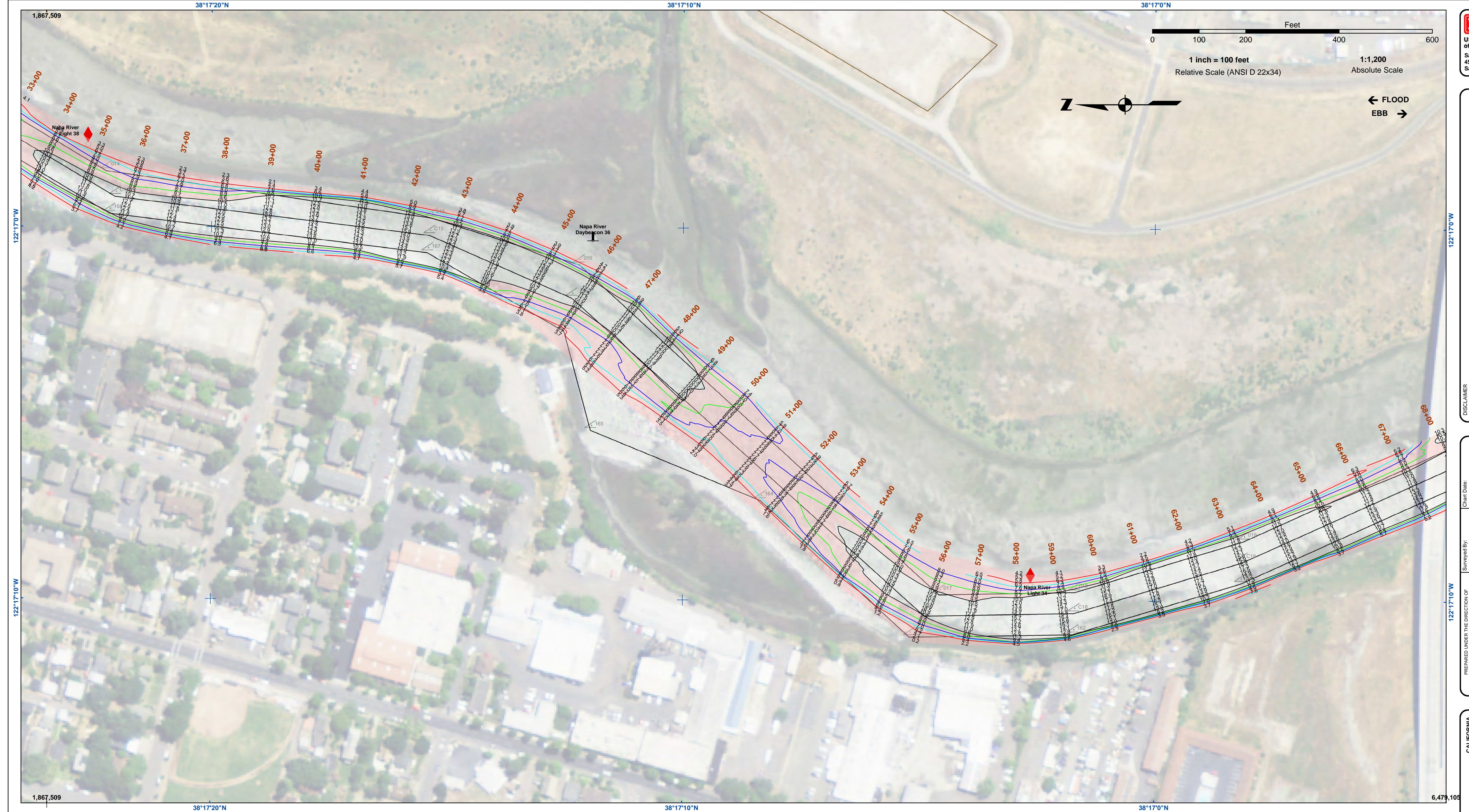
CALIFORNIA
 NAPA COUNTY
 NAPA RIVER
 UPPER CHANNEL
 CONDITION SURVEY
 5, 10-11 MARCH 2020
 Sheet Reference Number
 1 of 25



Contours
 -10
 -9
 -8
 -7
 -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*

NOTES:
 HORIZONTAL COORDINATE SYSTEM:
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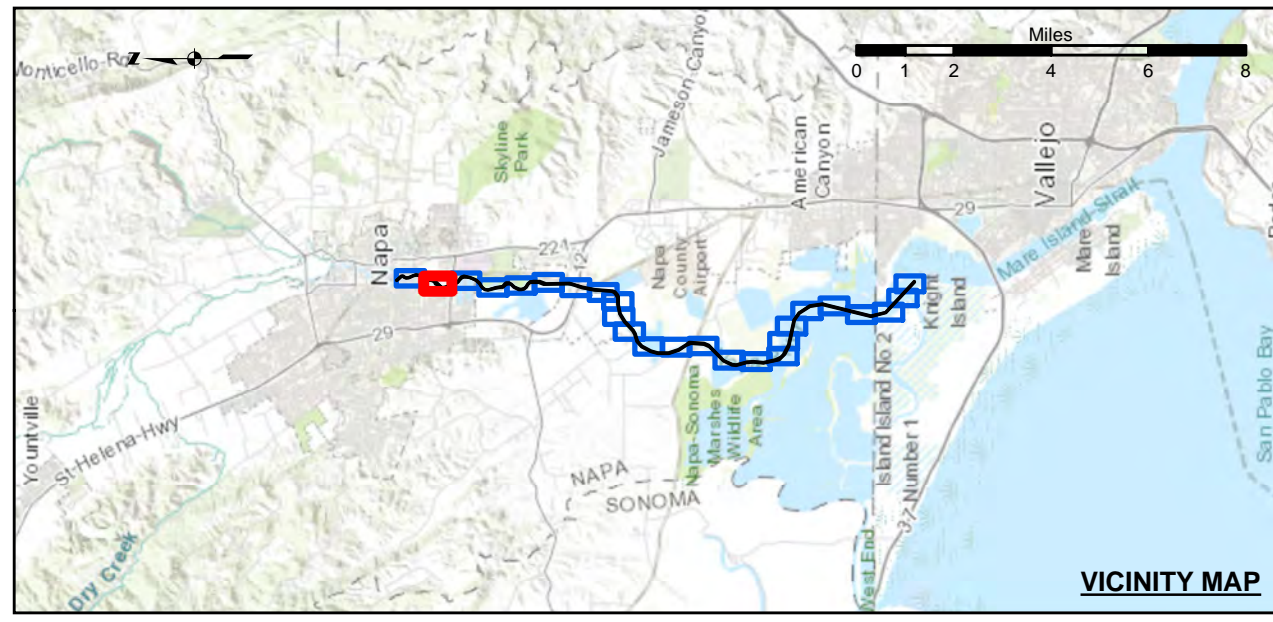
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Chart Date:	Mar 25, 2020
Designed by:	PDT
Drawn by:	PDT
Checked by:	PDT
Approved:	Chief, Construction Branch

CALIFORNIA
 NAPA COUNTY
NAPA RIVER
UPPER CHANNEL
CONDITION SURVEY
 5, 10-11 MARCH 2020

Sheet
Reference
Number
2 of 25

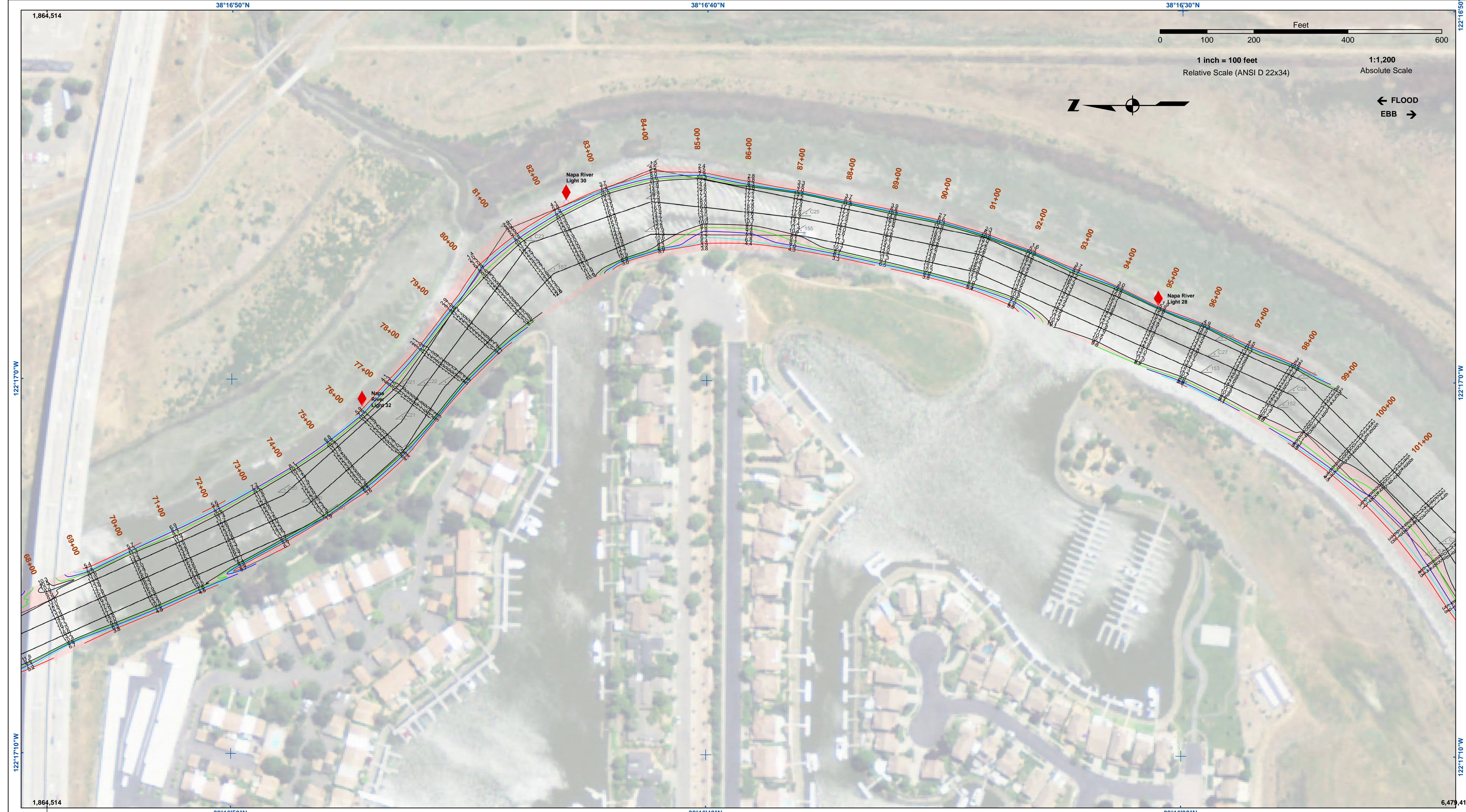


Federal Navigation Channel	Beacon, General
Shoaling Area	Obstruction Point
Placement Area	Navigation Buoy
Anchorage Area	Navigation Buoy
Wreck Area	Shoalest Sounding*
Submerged Wreck	
Angle Point	

Contours
-10
-9
-8
-7
-6

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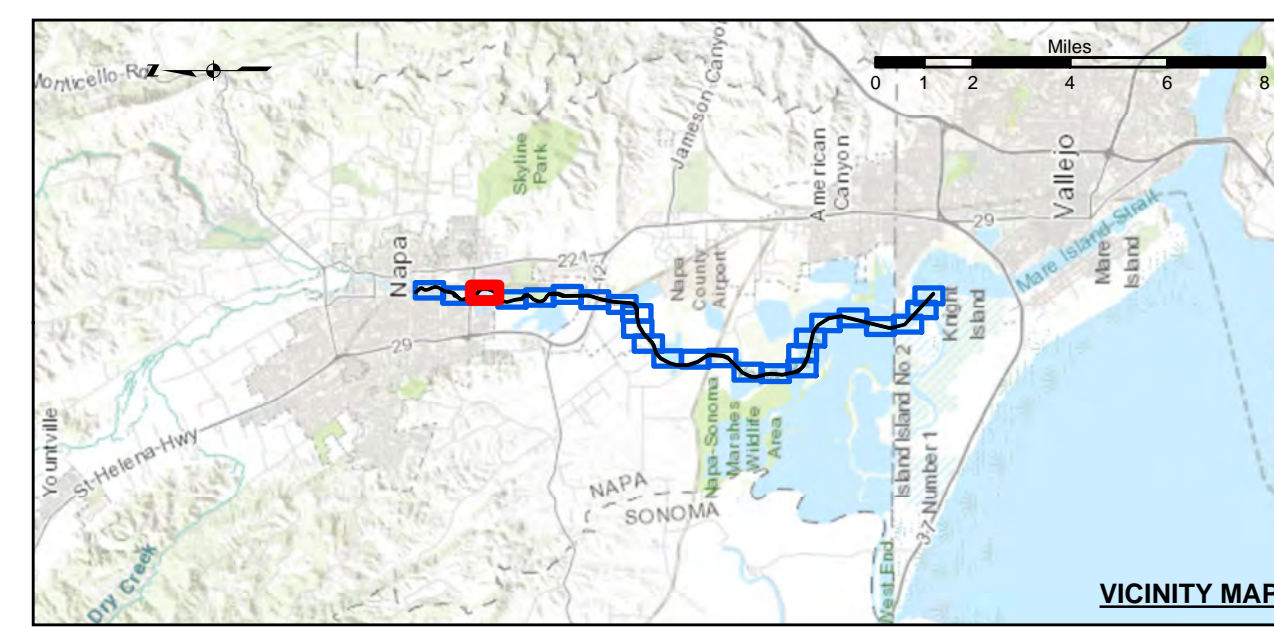


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Submitted: Hydro Survey Team Leader	Designed by: PDT
Recommended: Chief, Hydro Survey Section	Plotted by: PDT
Approved: Chief, Construction Branch	Checked by: PDT
	Drawn by: PDT

CALIFORNIA
NAPA RIVER
 UPPER CHANNEL
 CONDITION SURVEY
 5, 10-11 MARCH 2020

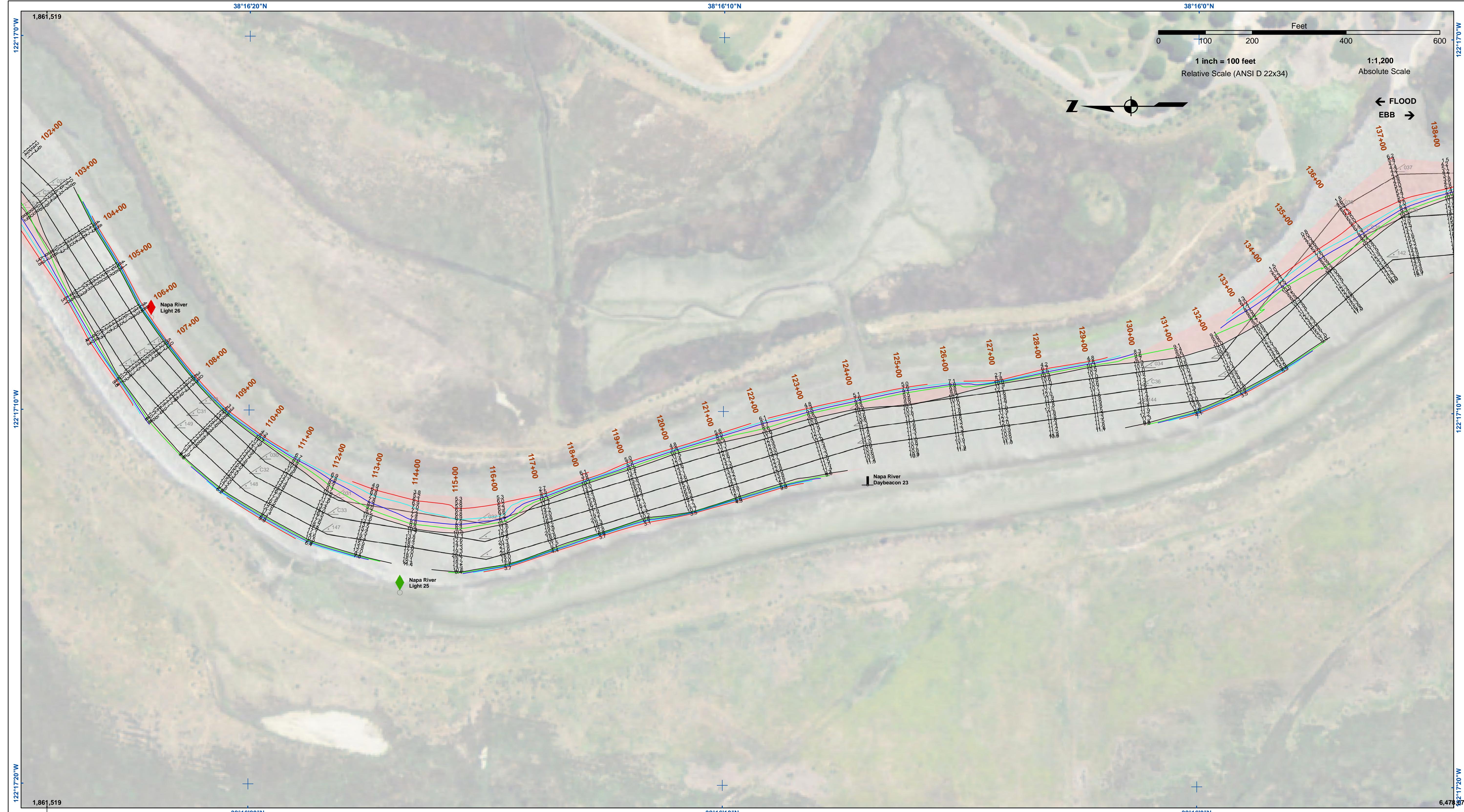


Federal Navigation Channel	Beacon, General	Contours
Shoaling Area	Obstruction Point	
Placement Area	Navigation Buoy	
Anchorage Area	Navigation Buoy	
Wreck Area	Shoalest Sounding*	
Submerged Wreck		
Angle Point		-10
		-9
		-8
		-7
		-6

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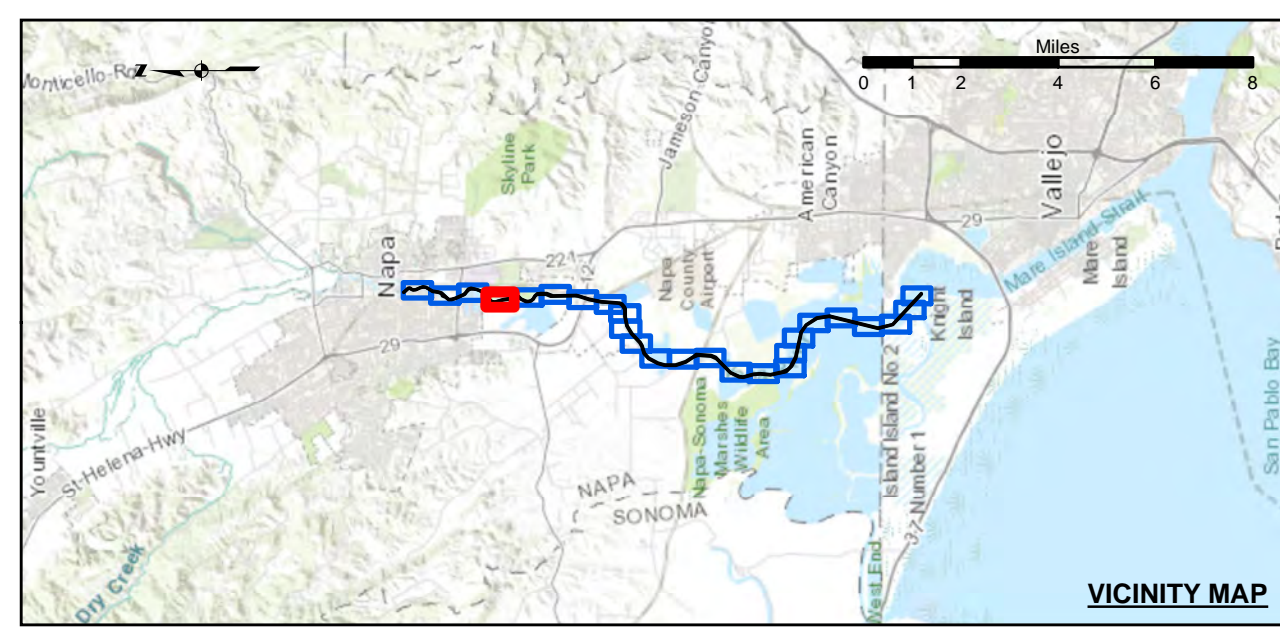
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Prepared Under the Direction of JOHN D. CUNNINGHAM LT Colonel, C.E., District Engineer	Chart Date: Mar 25, 2020
Submitted by: Hydro Survey Team Leader	Designed by: PDT
Recommended by: Chief, Hydro Survey Section	Drawn by: PDT
Approved by: Chief, Construction Branch	



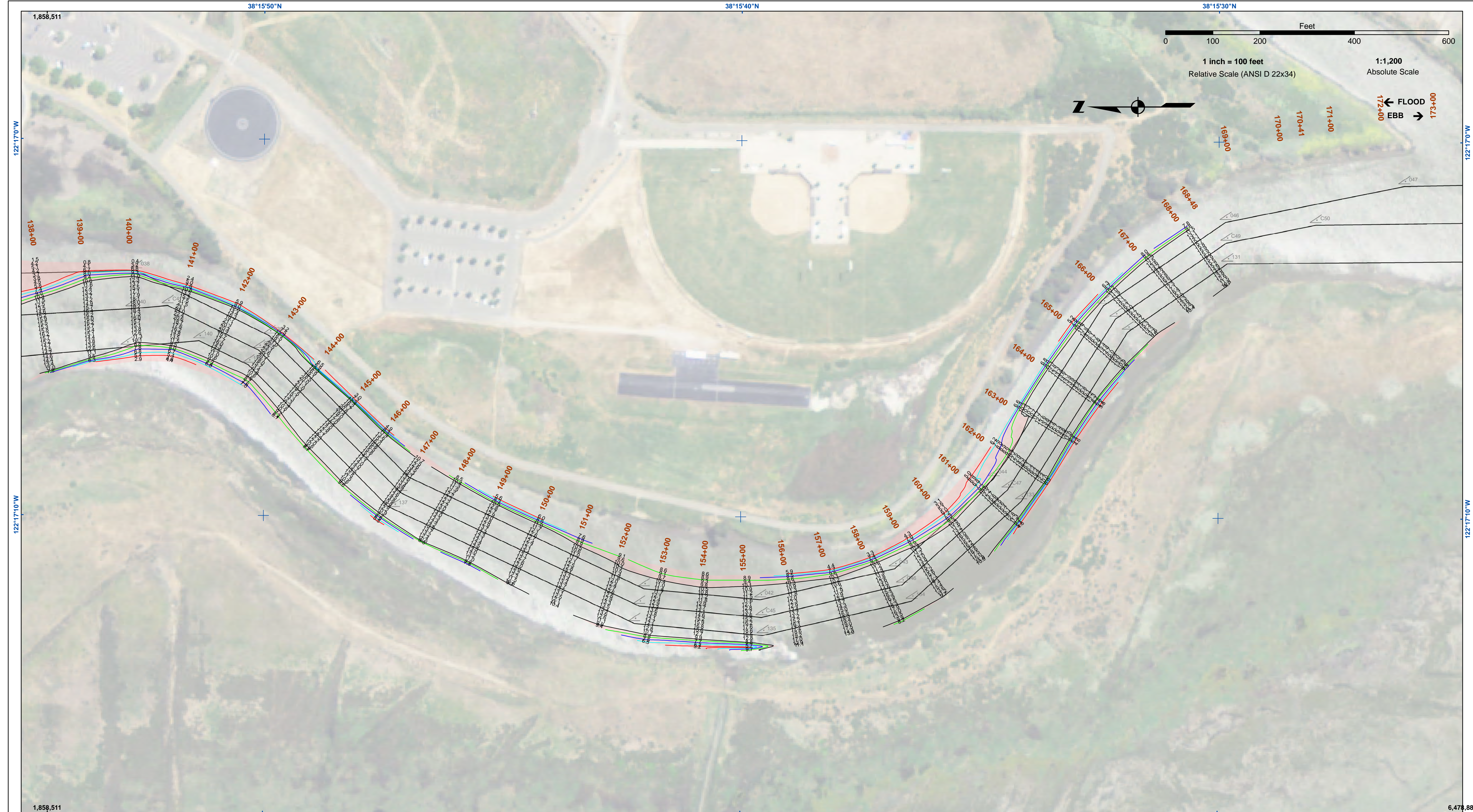
Federal Navigation Channel	Beacon, General	Contours
Shoaling Area	Obstruction Point	
Placement Area	Navigation Buoy	
Anchorage Area	Navigation Buoy	
Wreck Area	Shoalest Sounding*	
Submerged Wreck		
Angle Point		-10
		-9
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CALIFORNIA
NAPA RIVER
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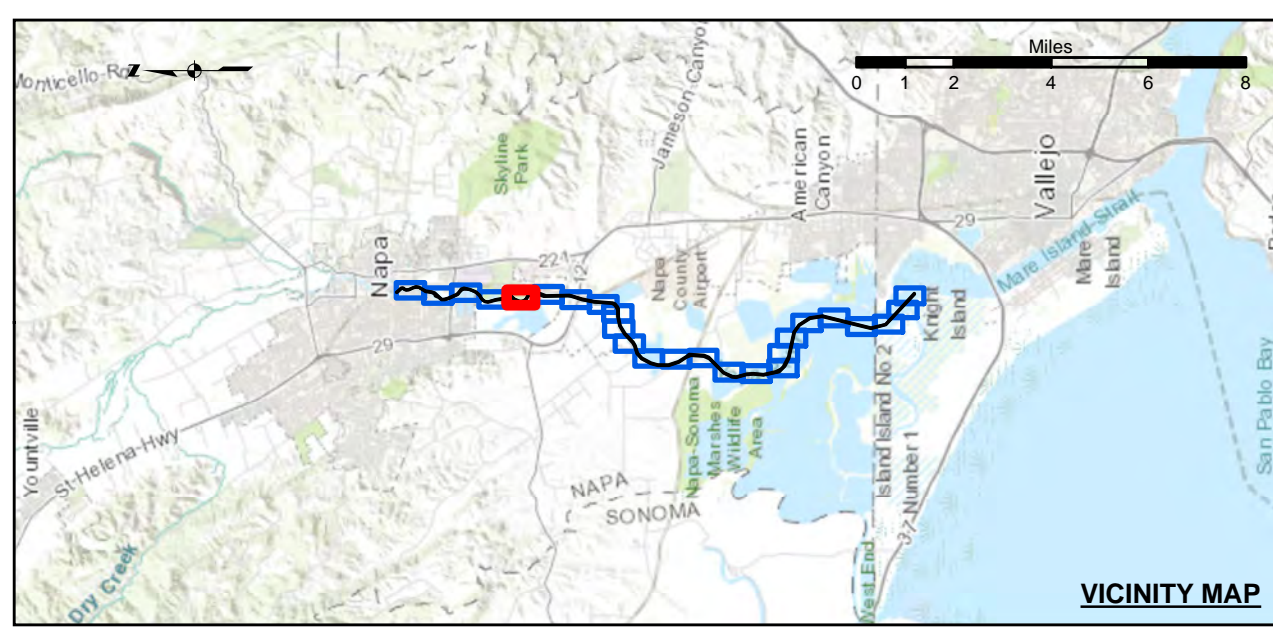
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Prepared Under the Direction of	Chart Date:
LT COLONEL C.E. DISTRICT ENGINEER	Mar 25, 2020
Subject:	Plotted By:
Hydro Survey Team Leader	PDT
Recommended:	Checked By:
Chief, Hydro Survey Section	PDT
Approved:	Drawn by:
Chief, Construction Branch	PDT

CALIFORNIA
 NAPA COUNTY
NAPA RIVER
UPPER CHANNEL
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Sheet
Number
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Federal Navigation Channel	Beacon, General	Contours
Shoaling Area	Obstruction Point	
Placement Area	Navigation Buoy	
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 176+00 TO 224+00 - NAPAR01 - 2.652m MLLW, -29.111m WGS-84 - USACE - RTK BASE STATION WGS-84 ELEVATION FROM OPUS SOLUTION MLLW ELEV. CALCULATED FROM TRANSECT 11 AND NRFP4 USING RTK OBSERVATIONS PID PENDING.
 225+00 TO 640+00 - NAPAR02 - 3.653m MLLW -28.241m WGS-84 - USACE - RTK BASE STATION WGS-84 ELEVATION FROM OPUS SOLUTION MLLW ELEV. CALCULATED BY INTERPOLATING ELEVATIONS BETWEEN NOAA TIDE STATIONS 941 5623 AND 941 5218 PID PENDING.
 641+00 TO 692+00 - NAPAR03 - 3.553m MLLW -28.416m WGS-84 - USACE - RTK BASE STATION WGS-84 ELEVATION FROM OPUS SOLUTION MLLW ELEV. TRANSFERRED FROM BM 5218 J 1976 VIA RTK ON 4/10/2012 PID PENDING.