



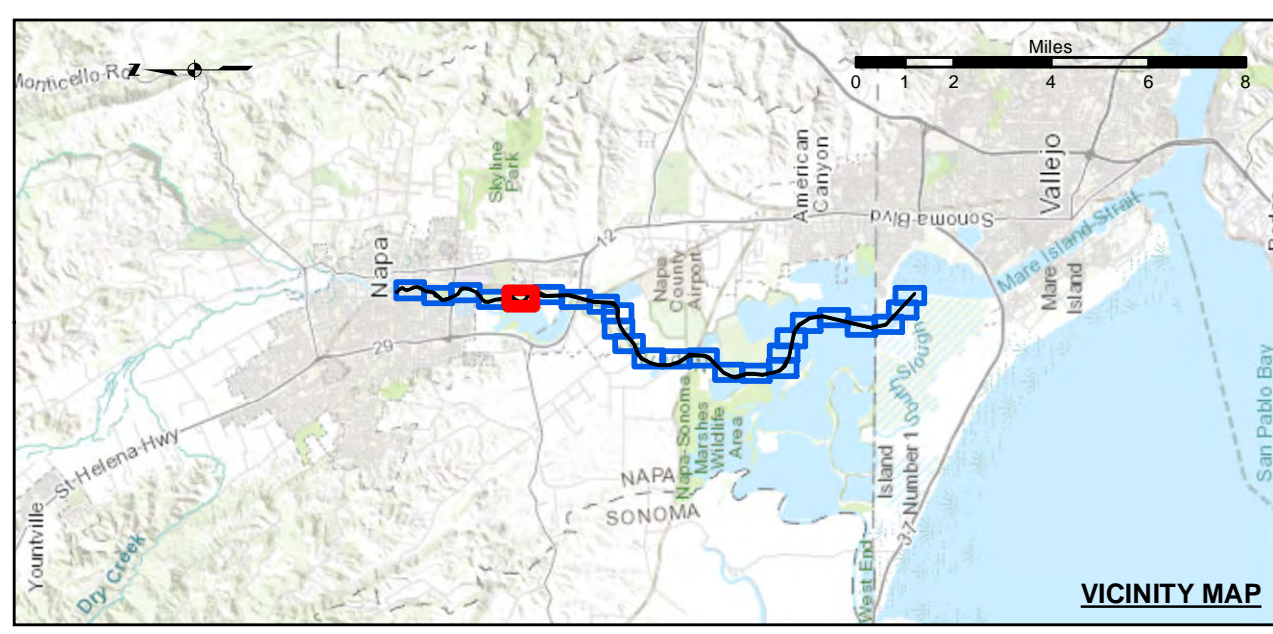
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 San Francisco District
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Prepared Under the Direction of	LT Colonel, C.E. Kevin P. Arnett	Chart Date	Jun 28, 2022
Submitted	Hydro Survey Team Leader	Plotted By	PDT
Recommended	Chief, Hydro Survey Section	Checked By	PDT
Approved	Chief, Construction Branch	Drawn by	PDT

CALIFORNIA
 NAPA COUNTY
**NAPA RIVER
 LOWER NAPA
 CONDITION SURVEY**
 14-15 JUNE 2022

**Sheet
 Reference
 Number
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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**
- 15
- 14
- 13
- 12
- 11

NOTES:
 HORIZONTAL COORDINATE SYSTEM:
 NORTH AMERICAN DATUM OF 1983 (NAD83), PROJECTED TO THE STATE PLANE COORDINATE SYSTEM (SPCS), CALIFORNIA ZONE II. DISTANCE UNITS IN U.S. SURVEY FEET.
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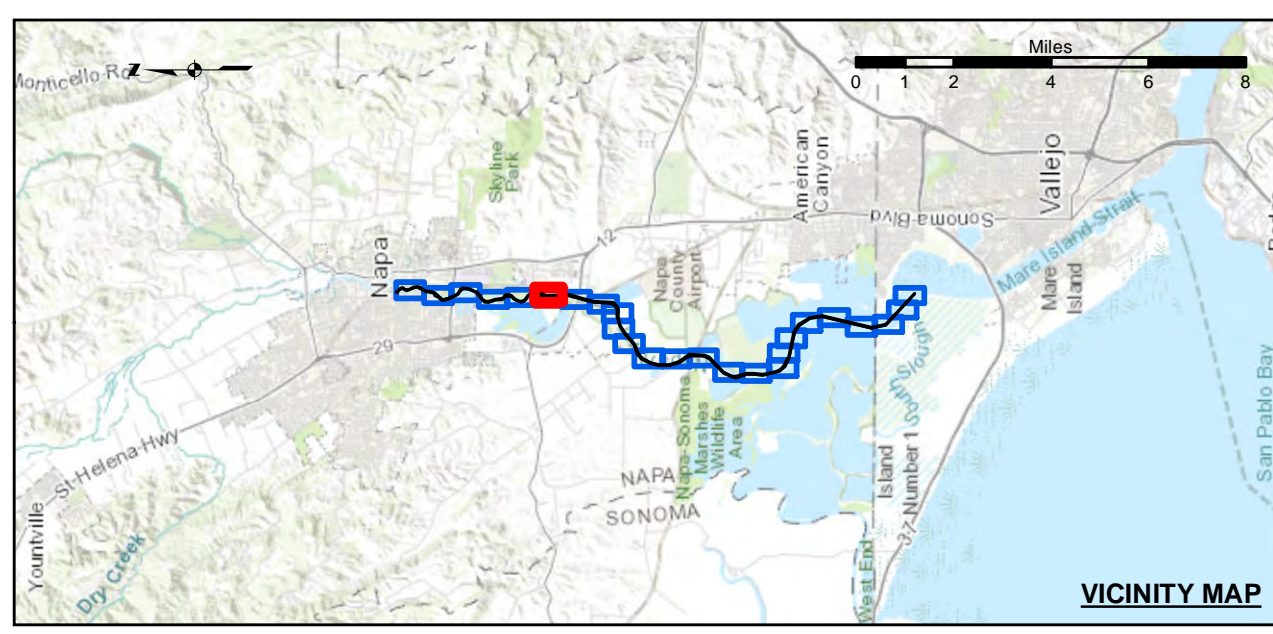
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 VERTICAL CONTROLS:
 0+00 TO 175+00 - NRFP4 - 30.54ft - USACE - RTK BASE STATION TRANSECT 11 - 6.593m MLLW - USACE - MLLW LEVELED FROM 20 AND TIDAL 5 FROM TIDE STATION 941 5623 ON 3/29/2012.
 176+00 TO 224+00 - NAPA01 - 2.652m MLLW - 29.111m WGS-84 - USACE - RTK BASE STATION WGS-84 ELEVATION FROM OPUS SOLUTION MLLW ELEV. CALCULATED FROM TRANSECT 11 AND NRFP4 USING RTK OBSERVATIONS PID PENDING.
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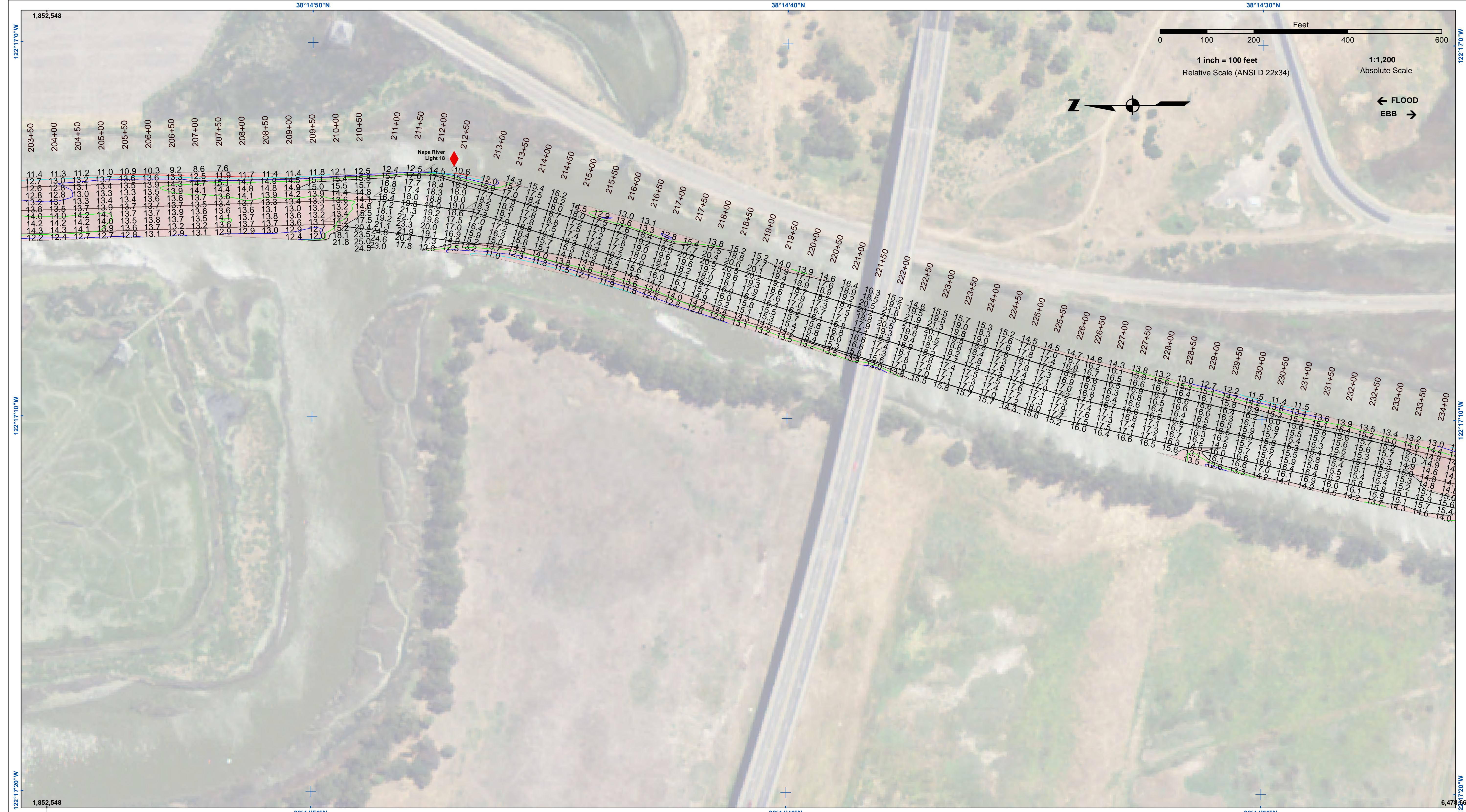
Federal Navigation Channel	Shoaling Area	Beacon, General	Contours
Placement Area	Obstruction Point	Navigation Buoy	-15
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Submerged Wreck			
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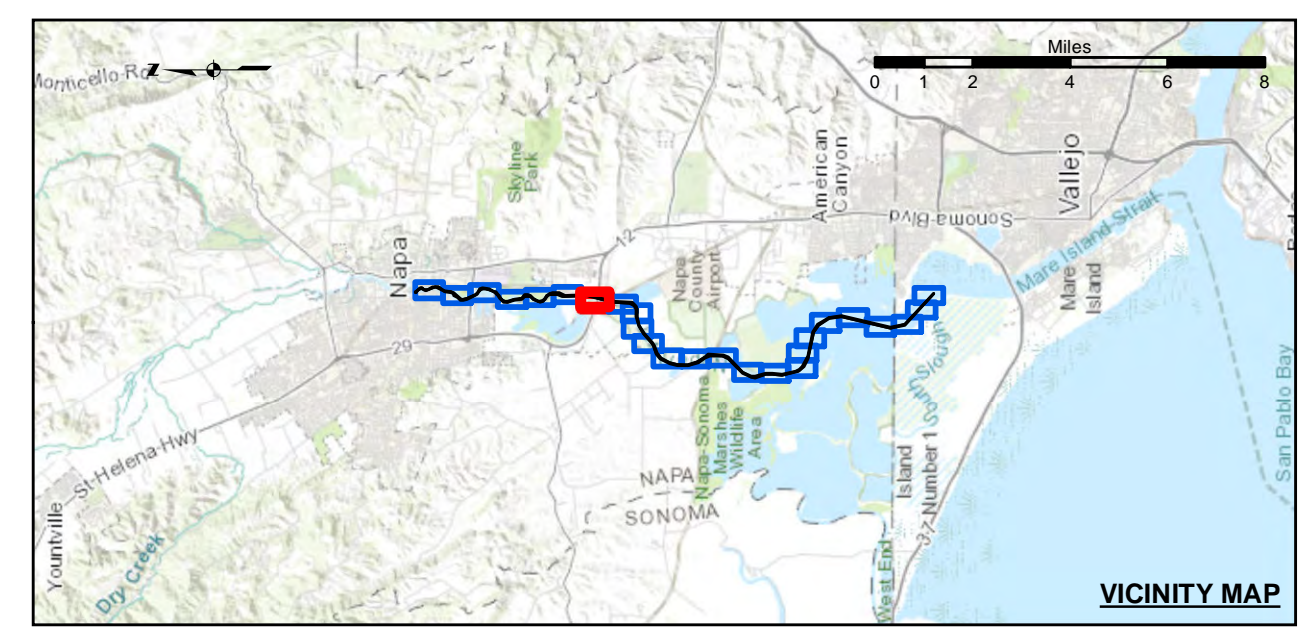
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LT COLONEL C.E. DISTRICT ENGINEER	Jun 28, 2022
Surveyed By:	Plotted By:
KEVIN P. ARNETT	PDT
Subject:	Recommended:
Hydro Survey Team Leader	Chief, Hydro Survey Section
Approved:	Chief, Construction Branch
Designed by:	Drawn by:
PDT	PDT

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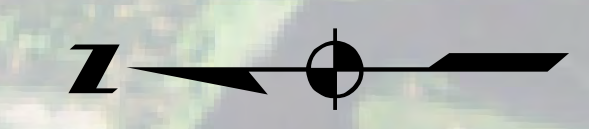
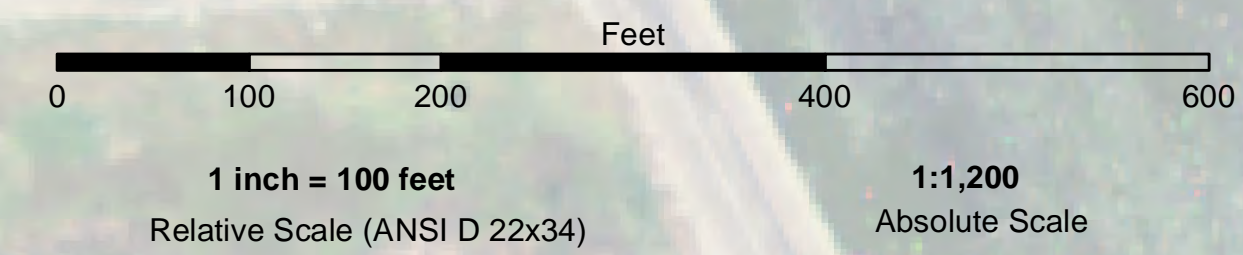
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Federal Navigation Channel	Beacon, General	Contours
Shoaling Area	Obstruction Point	-15
Placement Area	Navigation Buoy	-14
Anchorage Area	Navigation Buoy	-13
Wreck Area	Navigation Buoy	-12
Submerged Wreck	Shoalest Sounding*	-11
Angle Point		

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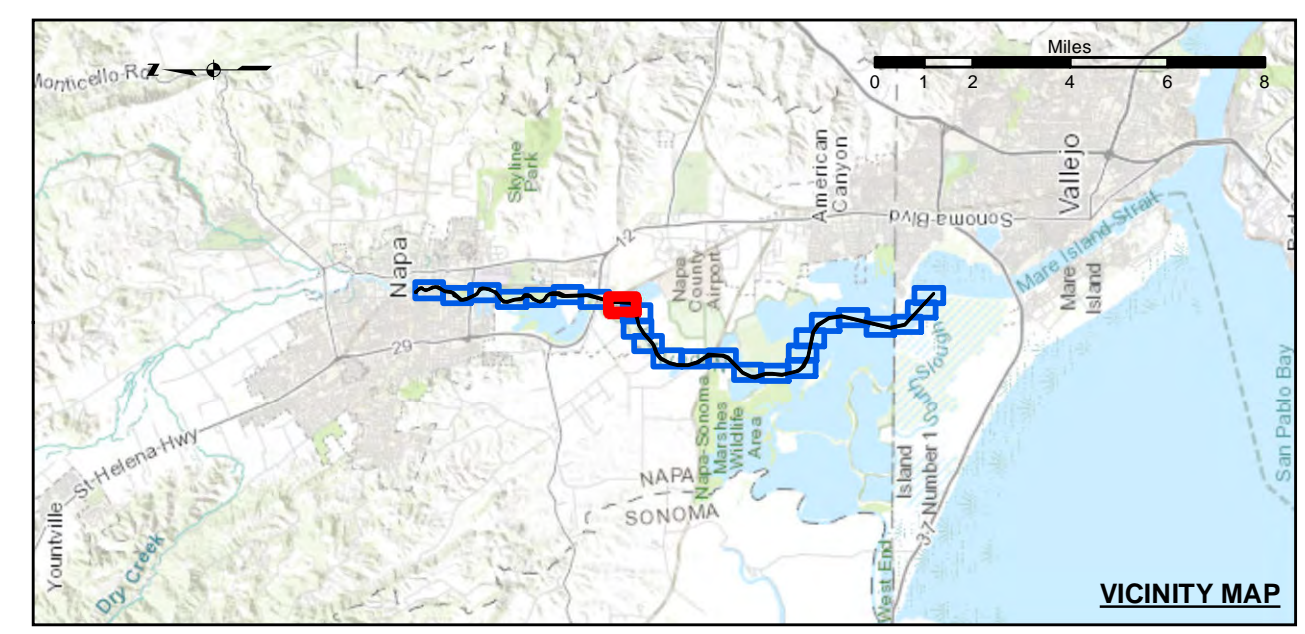


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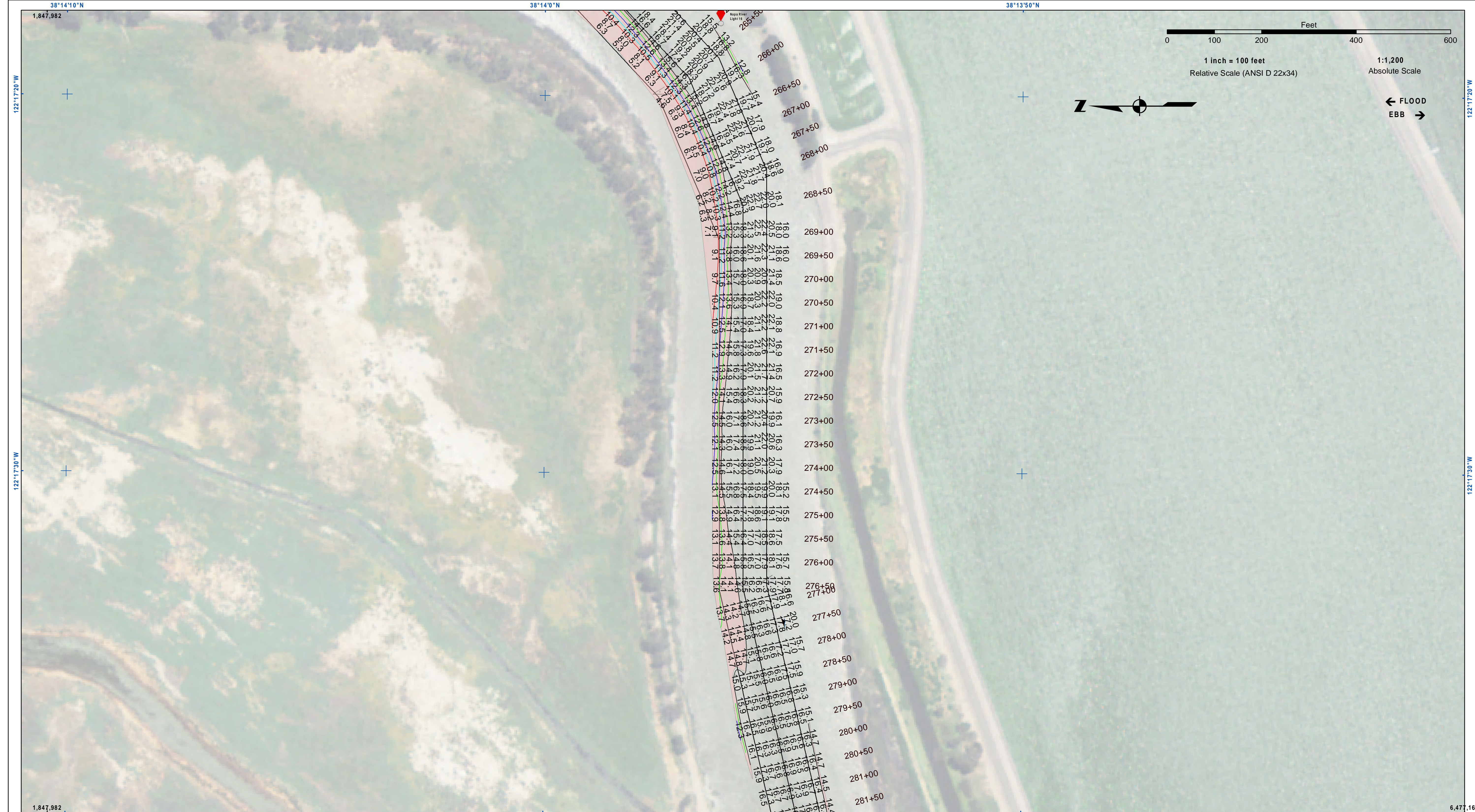


Federal Navigation Channel	Contours
Shoaling Area	-15
Placement Area	-14
Anchorage Area	-13
Wreck Area	-12
Submerged Wreck	-11
Angle Point	
Beacon, General	
Obstruction Point	
Navigation Buoy	
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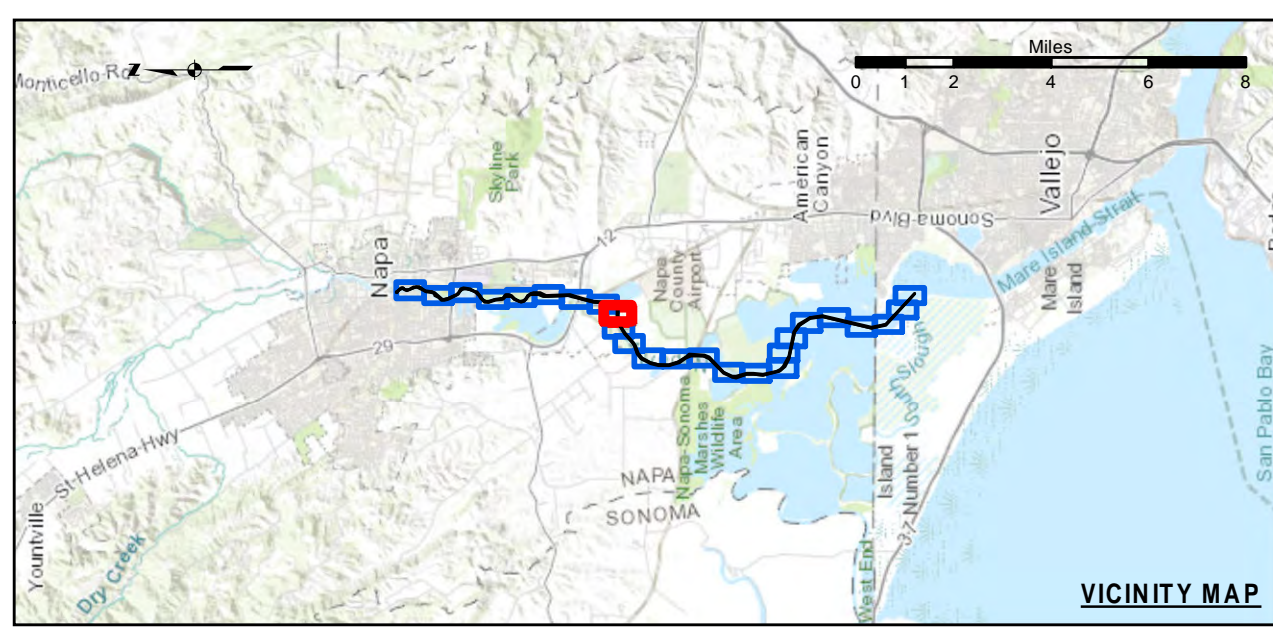
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Designed by:	PDT
Drawn by:	PDT
Checked by:	PDT
Approved:	Chief, Construction Branch

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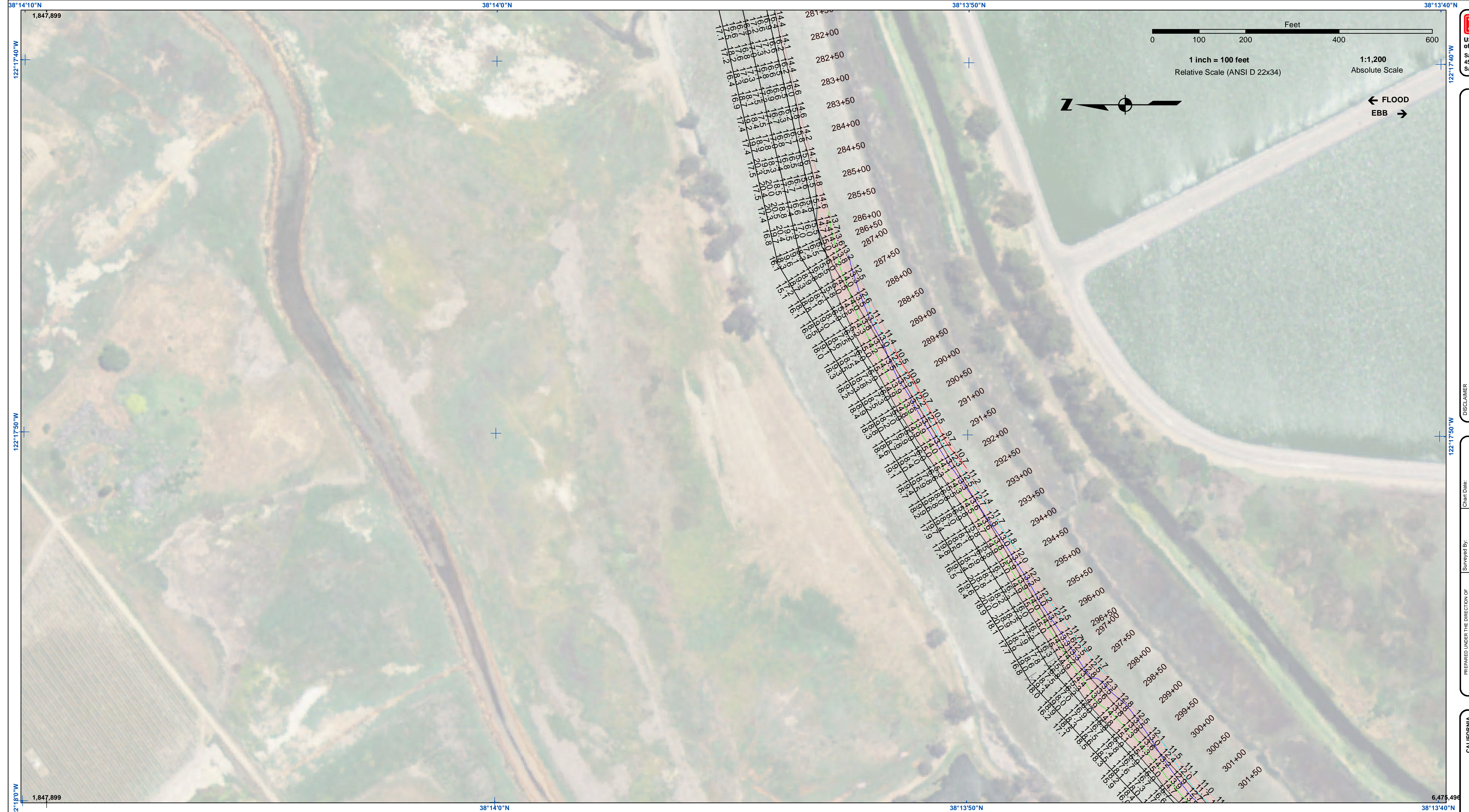
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Federal Navigation Channel	Beacon, General	Contours
Shoaling Area	Obstruction Point	-15
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Angle Point		

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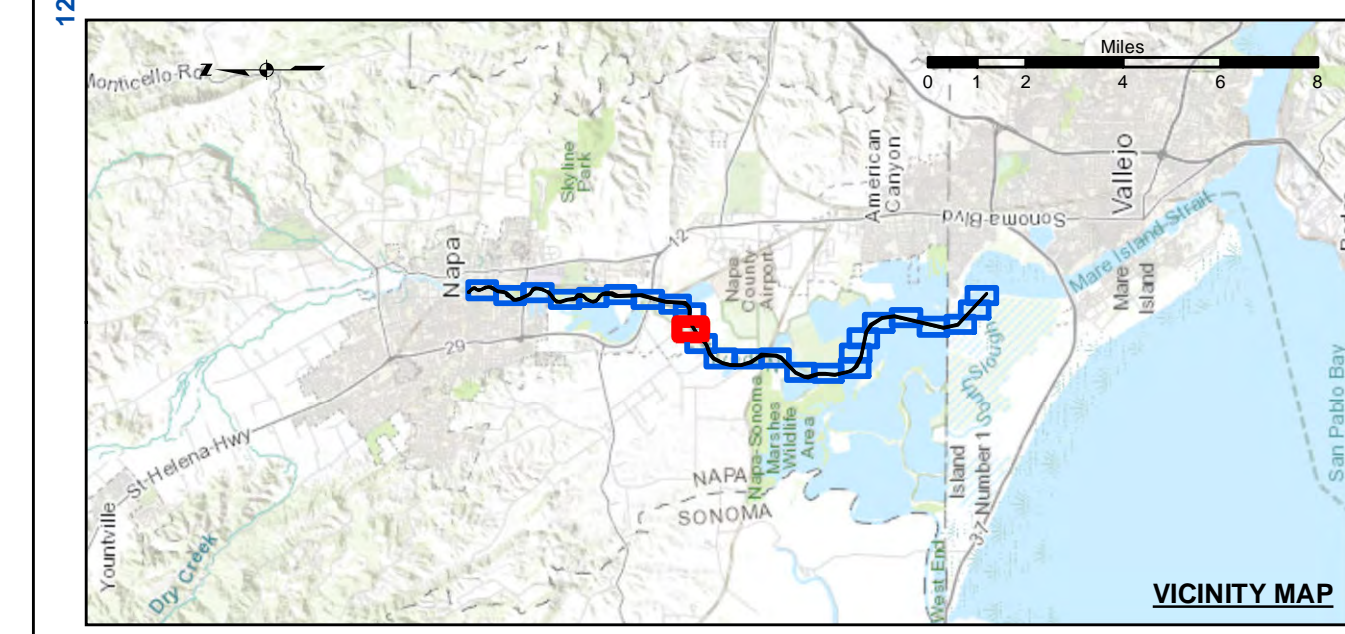
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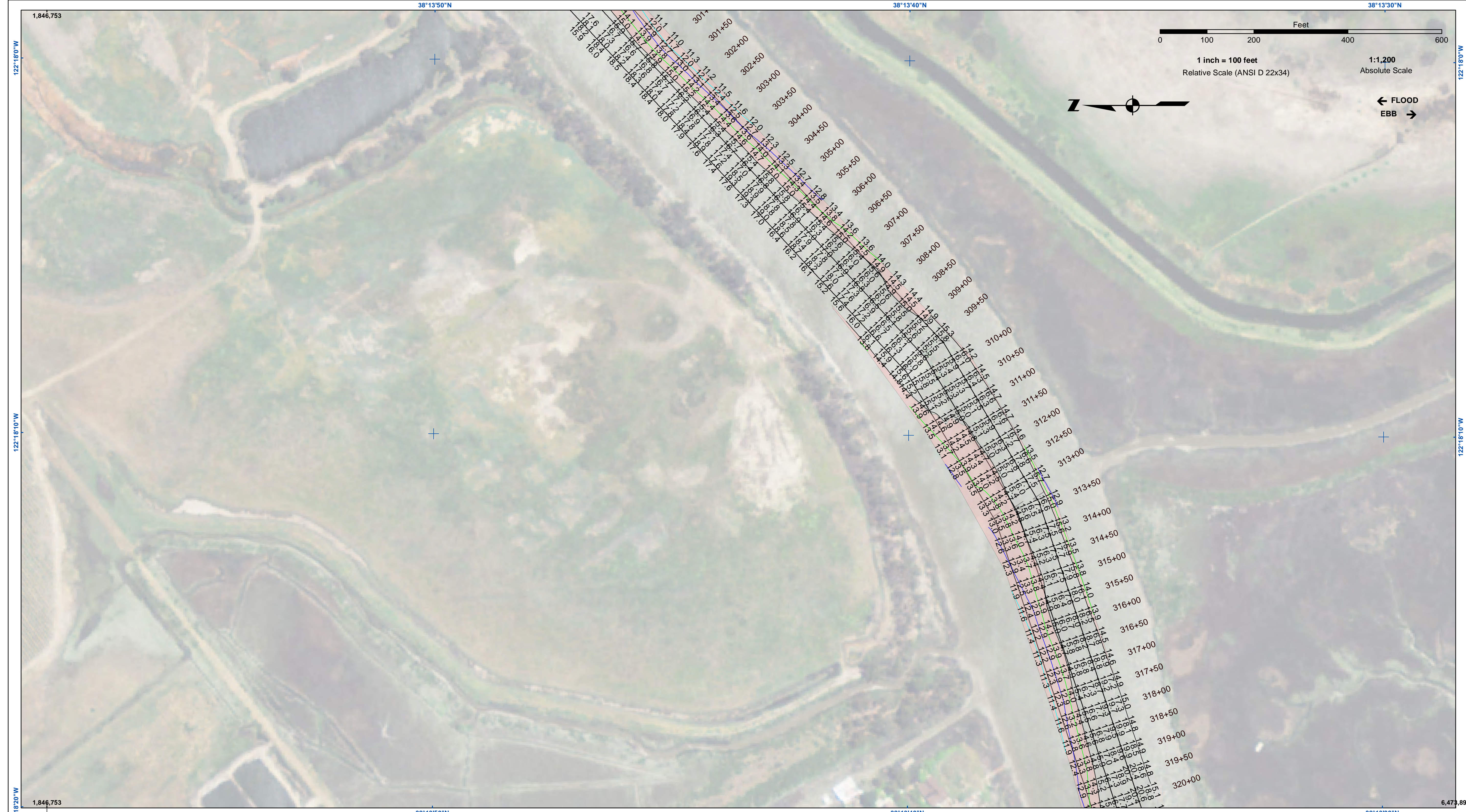
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 225+00 TO 640+00 - NAPA02 - 3.653m MLLW -28.241m WGS-84 - USACE - RTK BASE STATION WGS-84 ELEVATION FROM OPUS SOLUTION MLLW ELEV. CALCULATED BY INTERPOLATING ELEVATIONS BETWEEN NOAA TIDE STATIONS 941 5623 AND 941 5218 PID PENDING.
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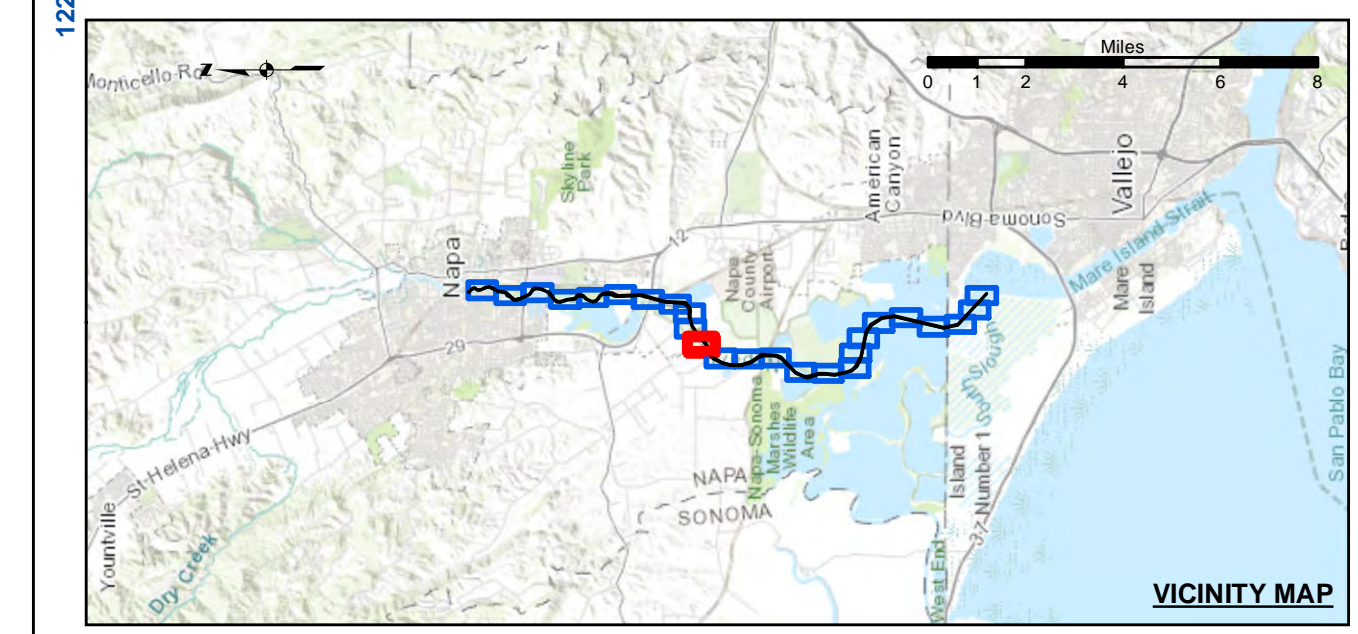
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Chart Date:	Jun 28, 2022
Designed by:	PDT
Plotted by:	PDT
Checked by:	PDT
Drawn by:	PDT

CALIFORNIA
 NAPA COUNTY
**NAPA RIVER
 LOWER NAPA
 CONDITION SURVEY**
 14-15 JUNE 2022

**Sheet
 Reference
 Number**
11 of 25



Federal Navigation Channel	Shoaling Area	Beacon, General	Contours
Placement Area	Obstruction Point	Navigation Buoy	-13
Anchorage Area	Navigation Buoy	Shoalest Sounding*	-12
Wreck Area	Shoalest Sounding*		-14
Submerged Wreck			-11
Angle Point			

NOTES:
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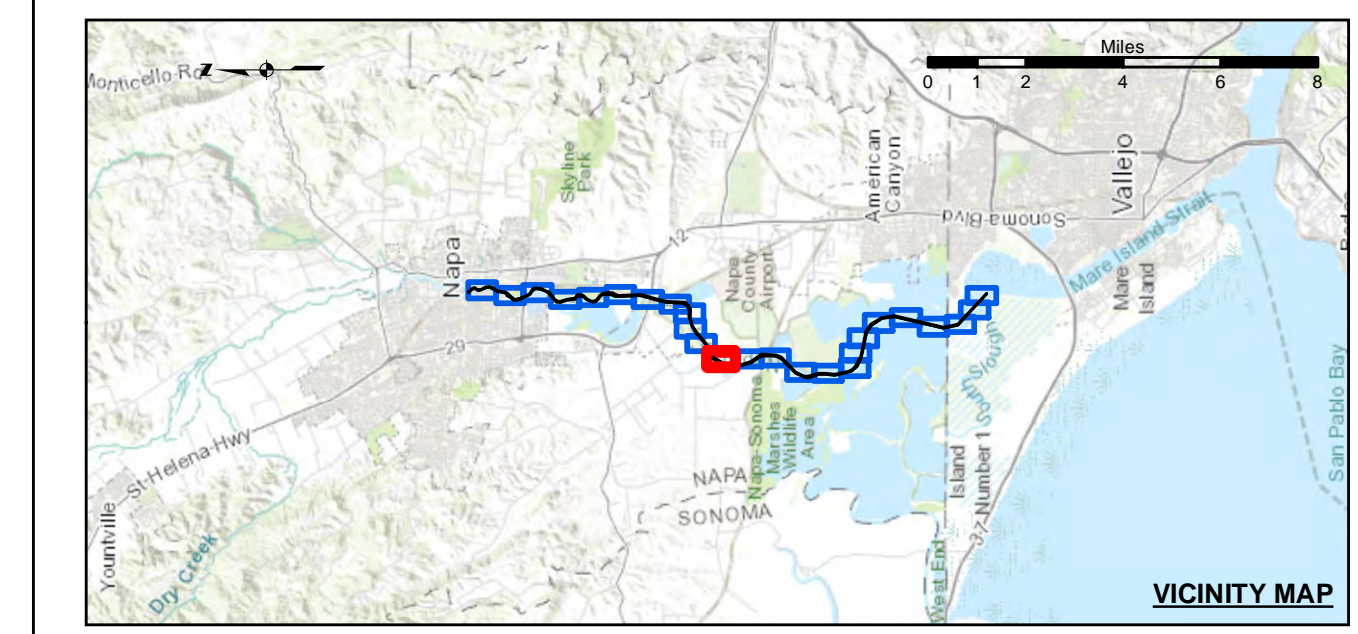


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Prepared Under the Direction of:	KEVIN P. ARNETT	Chart Date:	Jun 28, 2022
Surveyed By:	PDT	Designed by:	PDT
Plotted By:	PDT	Checked By:	PDT
Recommended:	Chief, Hydro Survey Section	Drawn by:	PDT
Approved:	Chief, Construction Branch		

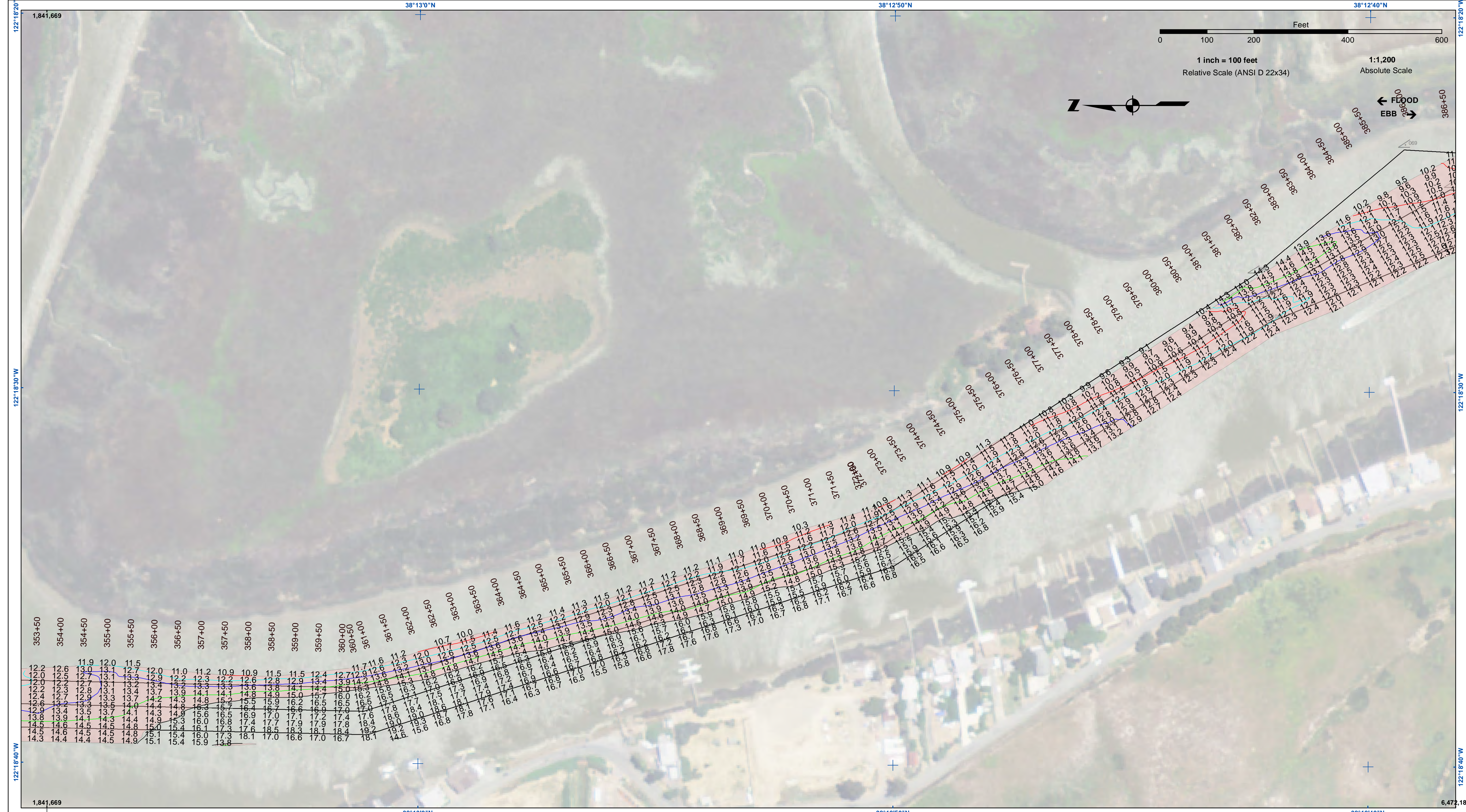
CALIFORNIA
 NAPA COUNTY
**NAPA RIVER
 LOWER NAPA
 CONDITION SURVEY**
 14-15 JUNE 2022



Federal Navigation Channel	Contours
Shoaling Area	-15
Placement Area	-14
Anchorage Area	-13
Wreck Area	-12
Submerged Wreck	-11
Angle Point	
Beacon, General	
Obstruction Point	
Navigation Buoy	
Navigation Buoy	
Shoalest Sounding*	

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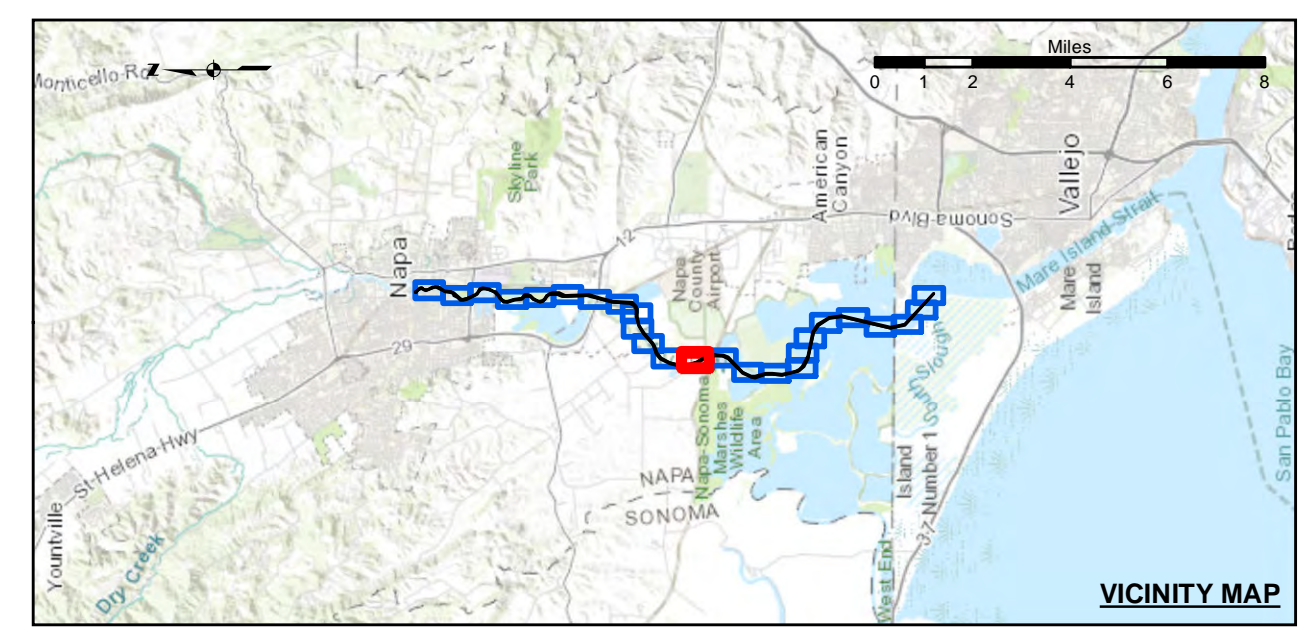
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Prepared Under the Direction of KEVIN P. ARNETT LT Colonel, C.E., District Engineer	Chart Date: Jun 28, 2022
Subject: Hydro Survey Team Leader	Designed by: PDT
Recommended: Chief, Hydro Survey Section	Drawn by: PDT
Approved: Chief, Construction Branch	PDT

CALIFORNIA
NAPA RIVER
 LOWER NAPA
 CONDITION SURVEY
 14-15 JUNE 2022

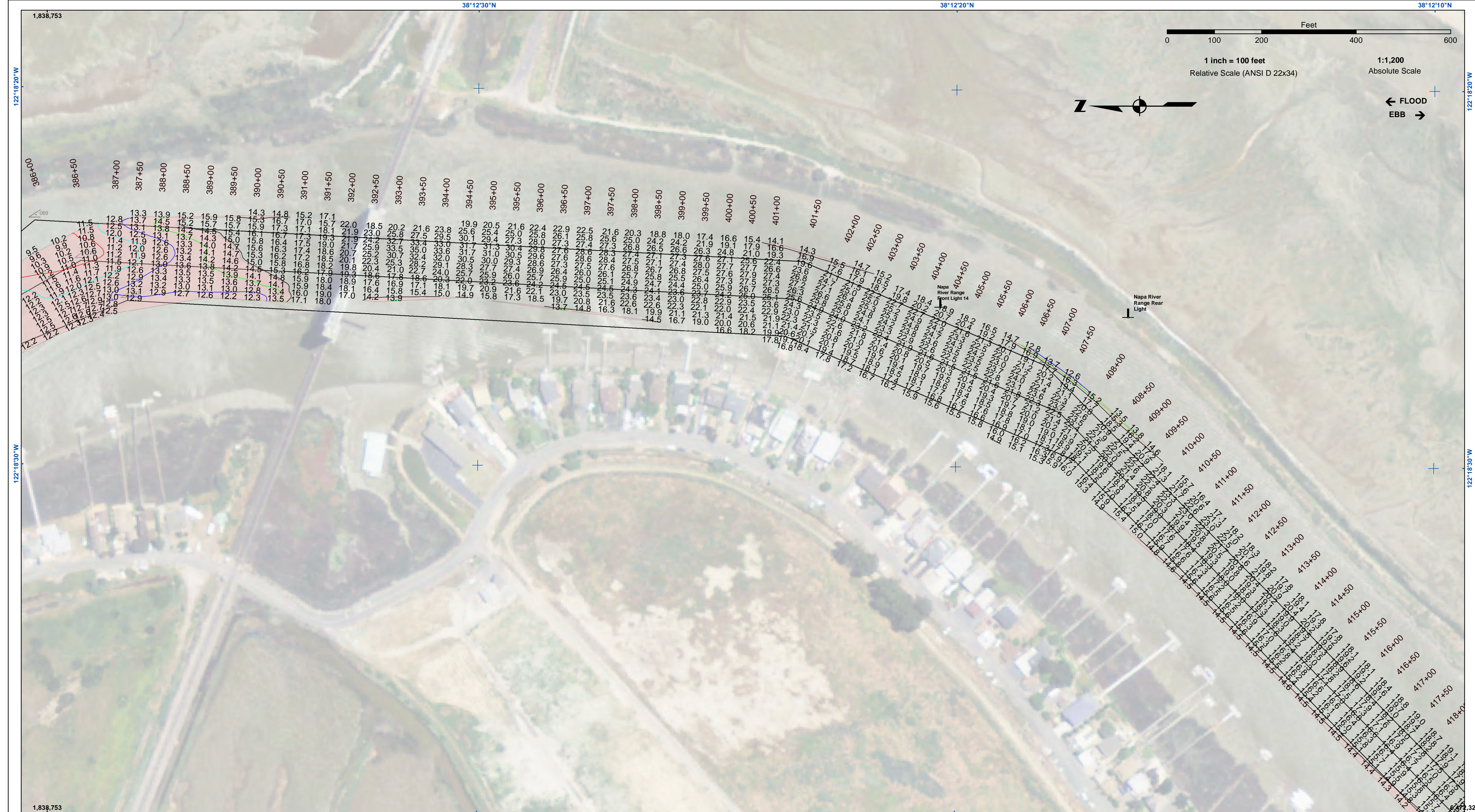
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Reference
Number
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Federal Navigation Channel	Shoaling Area	Beacon, General	-15
Placement Area	Obstruction Point	Navigation Buoy	-14
Anchorage Area	Navigation Buoy	Navigation Buoy	-13
Wreck Area	Shoalest Sounding*	Shoalest Sounding*	-12
Submerged Wreck			-11
Angle Point			

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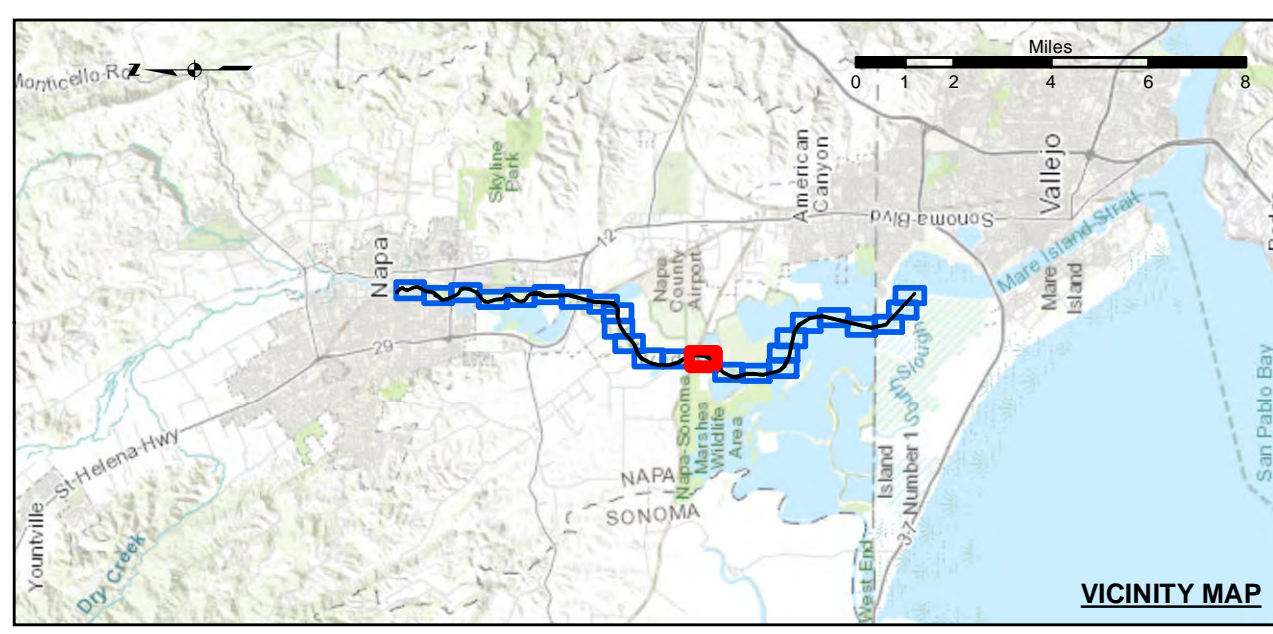
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Chart Date:	Jun 28, 2022
Designed by:	PDT
Plotted by:	PDT
Checked by:	PDT
Drawn by:	PDT

CALIFORNIA
 NAPA COUNTY
**NAPA RIVER
 LOWER NAPA
 CONDITION SURVEY**
 14-15 JUNE 2022

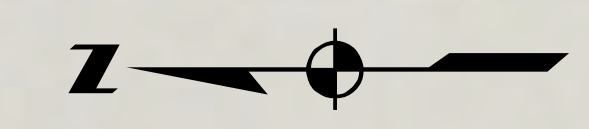
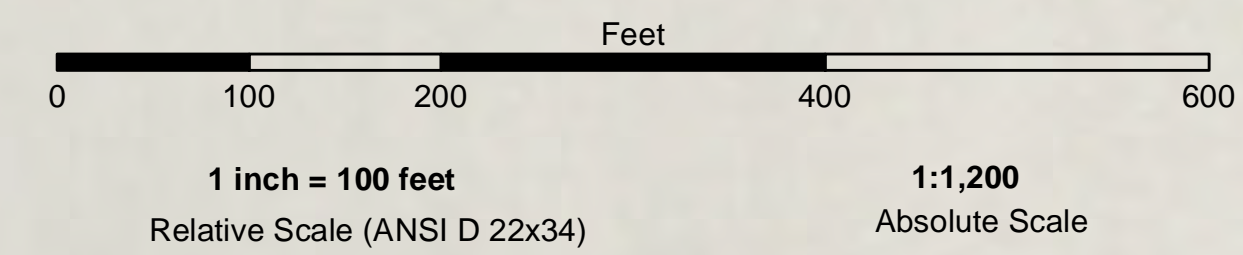
**Sheet
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 Number**
 14 of 25



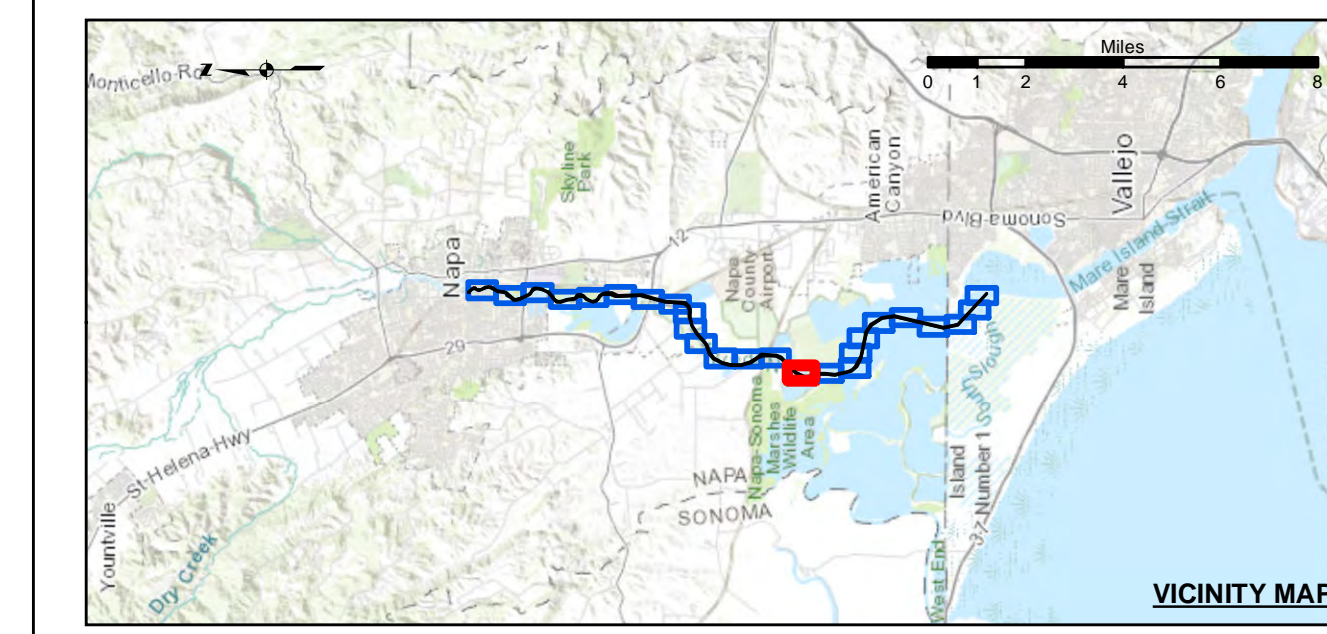
Shoaling Area	Beacon, General	-15
Placement Area	Obstruction Point	-14
Anchorage Area	Navigation Buoy	-13
Wreck Area	Navigation Buoy	-12
Submerged Wreck	Shoalest Sounding*	-11
Angle Point		

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← FLOOD
EBB →



- Federal Navigation Channel
- Shoaling Area
- Placement Area
- Anchorage Area
- Wreck Area
- Submerged Wreck
- Angle Point
- Beacon, General
- Obstruction Point
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- 15
- 14
- 13
- 12
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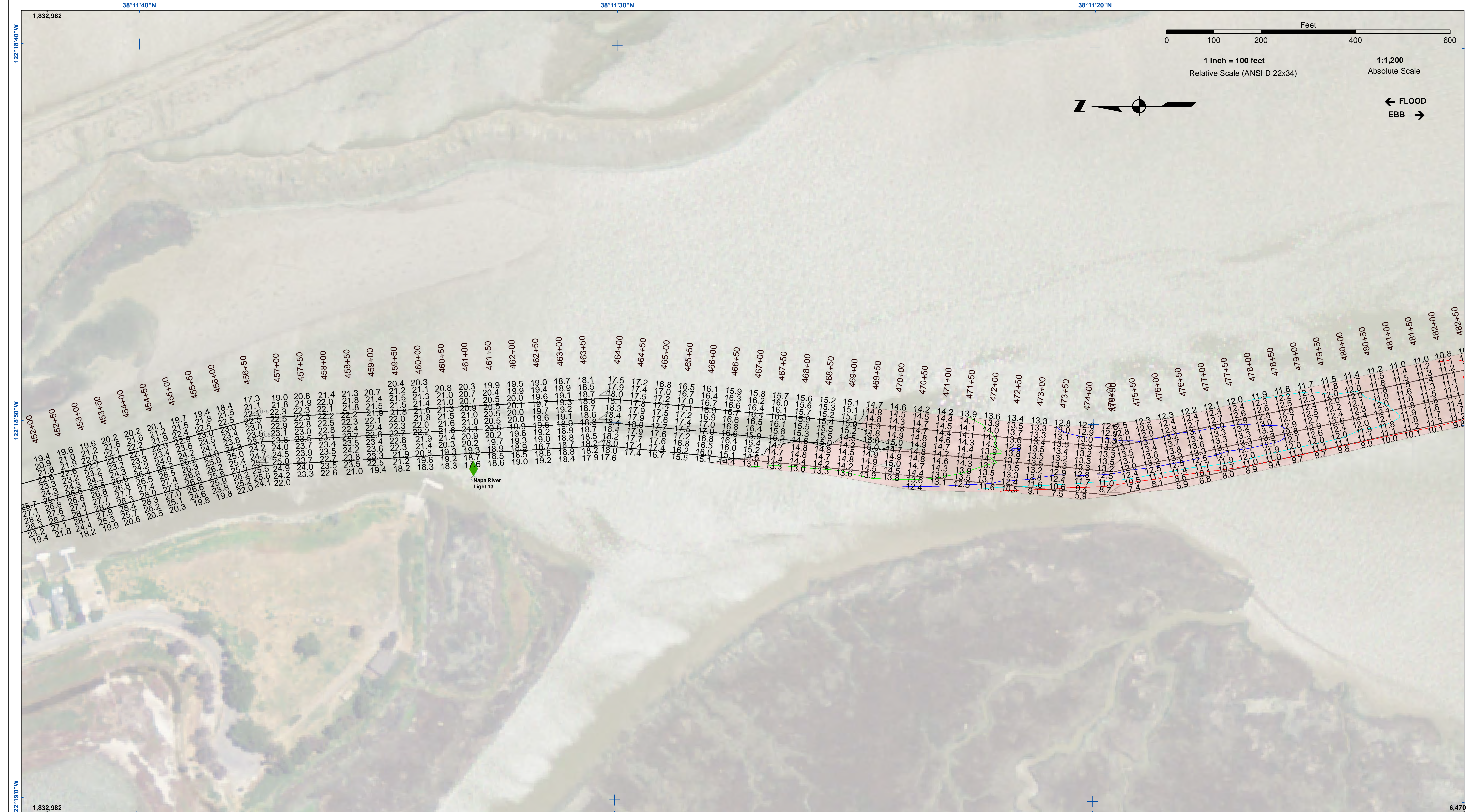
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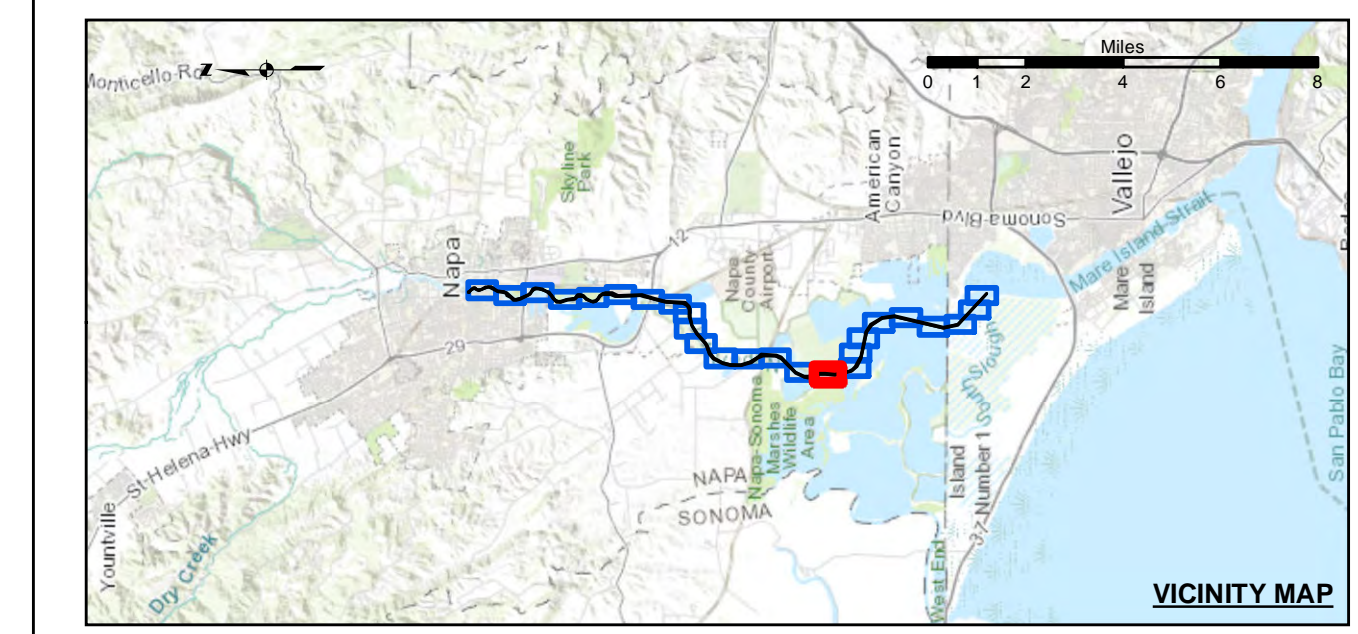
Prepared Under the Direction of:	Surveyed By:	Chart Date:
LT COLONEL C.E. DISTRICT ENGINEER	KEVIN P. ARNETT	Jun 28, 2022
Subject:	Plotted By:	Designed by:
Hydro Survey Team Leader	PDT	PDT
Recommended:	Checked By:	Drawn by:
Chief, Hydro Survey Section	PDT	PDT
Approved:	Chief, Construction Branch	PDT

CALIFORNIA
 NAPA COUNTY
**NAPA RIVER
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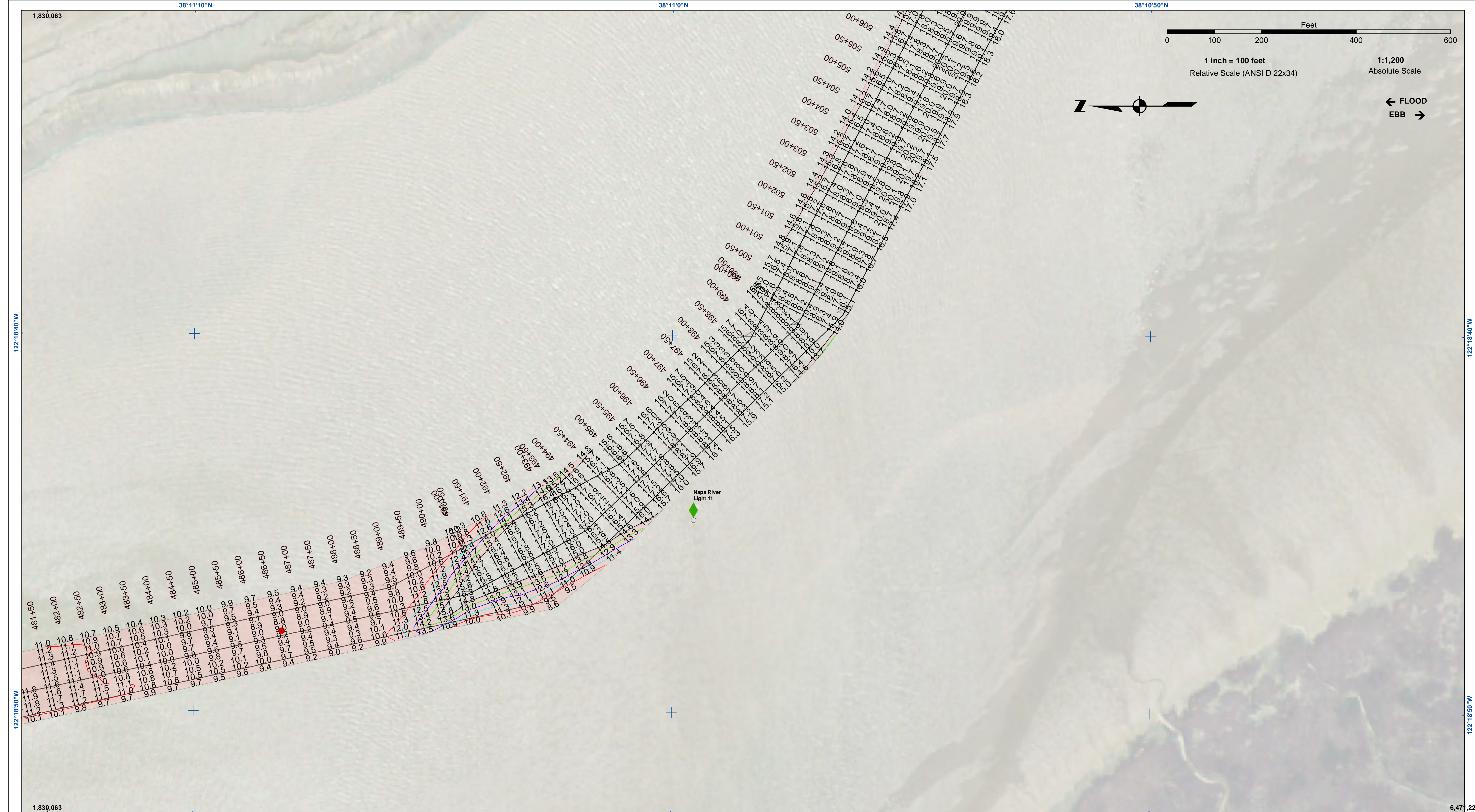
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 THE PROJECT DEPTH IS 15 FEET ON ENTRANCE AT THE MARE ISLAND CAUSEWAY TO ASYLUM SLOUGH, THENCE 10 FEET TO HEAD OF NAVIGATION.
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PREPARED UNDER THE DIRECTION OF KEVIN P. ARNETT LT COLONEL, C.E. DISTRICT ENGINEER	Chart Date: Jun 28, 2022
Submitted: Hydro Survey Team Leader	Designed by: PDT
Recommended: Chief, Hydro Survey Section	Checked by: PDT
Approved: Chief, Construction Branch	Drawn by: PDT

CALIFORNIA
NAPA RIVER
 LOWER NAPA
 CONDITION SURVEY
 14-15 JUNE 2022

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Number
16 of 25



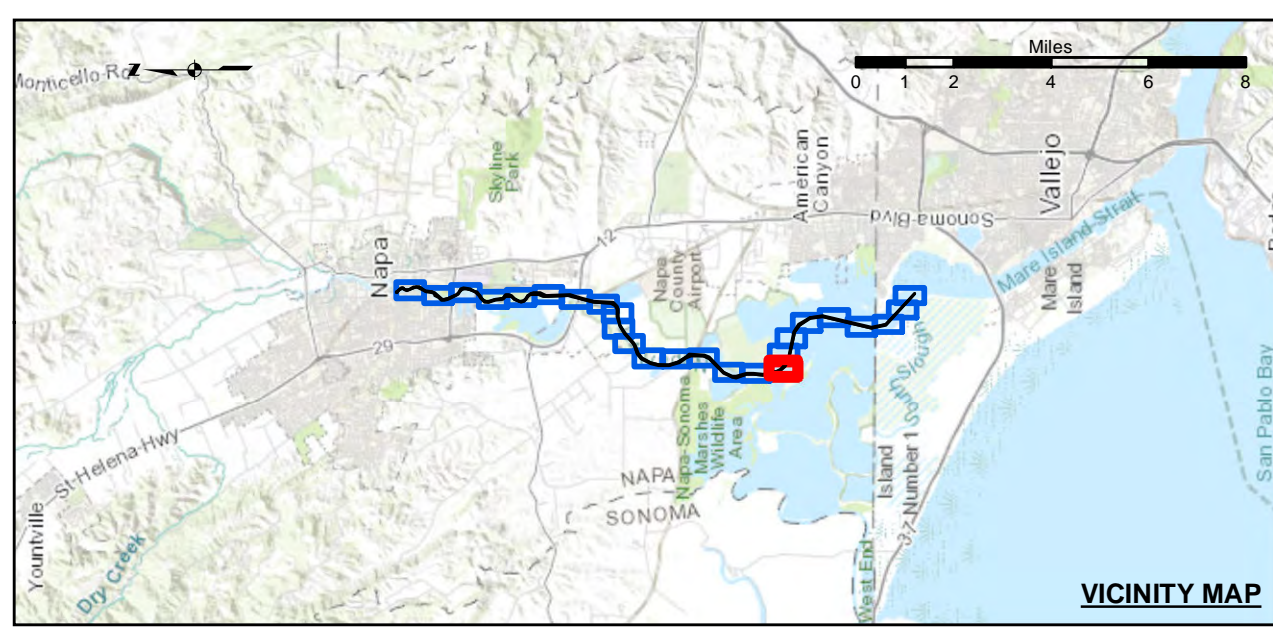
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Subject:	Hydro Survey Team Leader	Plotted By:	PDT
Recommended:	Chief, Hydro Survey Section	Checked By:	PDT
Approved:	Chief, Construction Branch	Drawn by:	PDT

CALIFORNIA
 NAPA COUNTY
**NAPA RIVER
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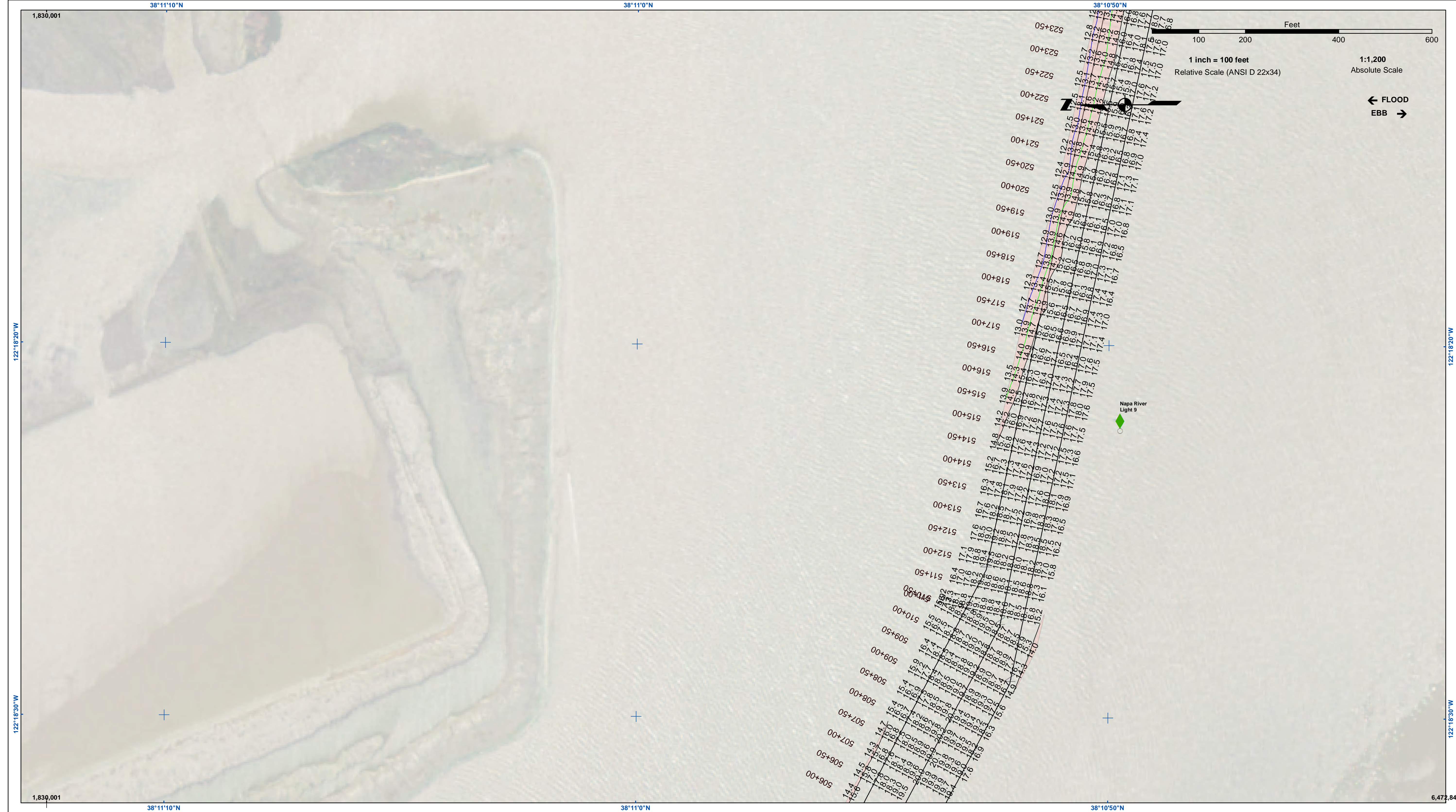
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Federal Navigation Channel	Contours
Shoaling Area	-15
Placement Area	-14
Anchorage Area	-13
Wreck Area	-12
Submerged Wreck	-11
Angle Point	
Beacon, General	
Obstruction Point	
Navigation Buoy	
Navigation Buoy	
Shoalest Sounding*	

NOTES:
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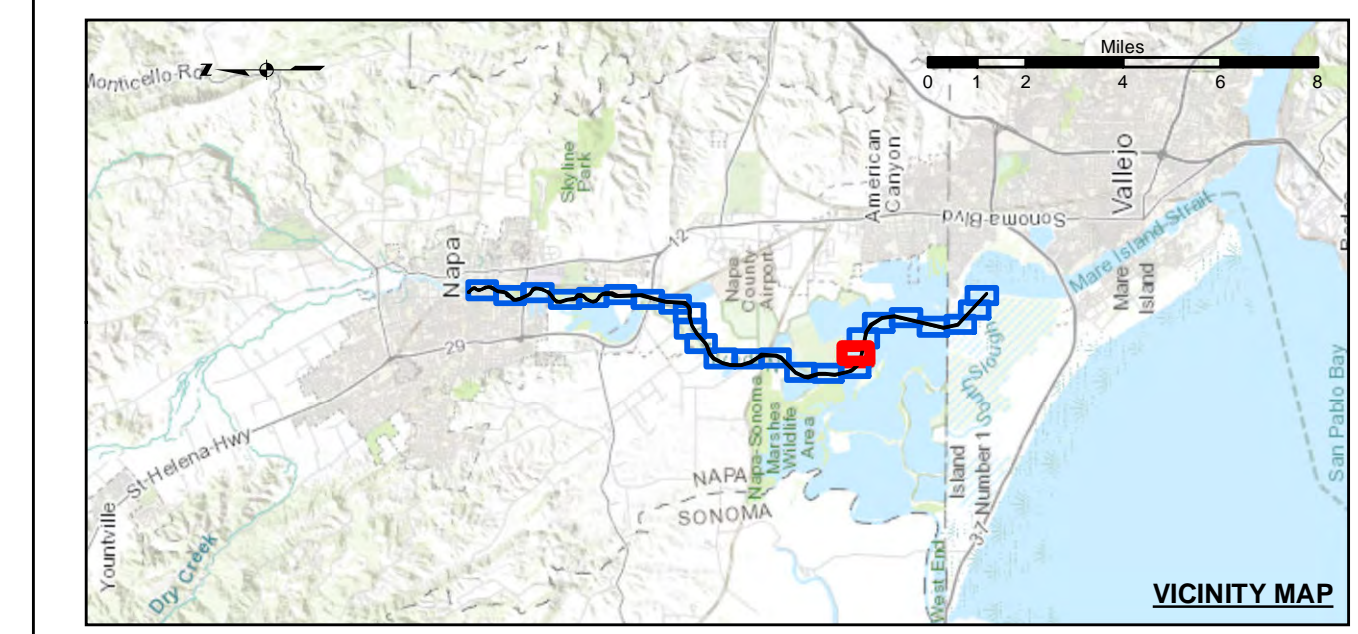
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Prepared Under the Direction of:	Chart Date:
KEVIN P. ARNETT	Jun 28, 2022
LT Colonel, C.E., District Engineer	Designed by:
Hydro Survey Team Leader	PDT
Chief, Hydro Survey Section	Checked by:
Chief, Construction Branch	PDT
Drawn by:	PDT



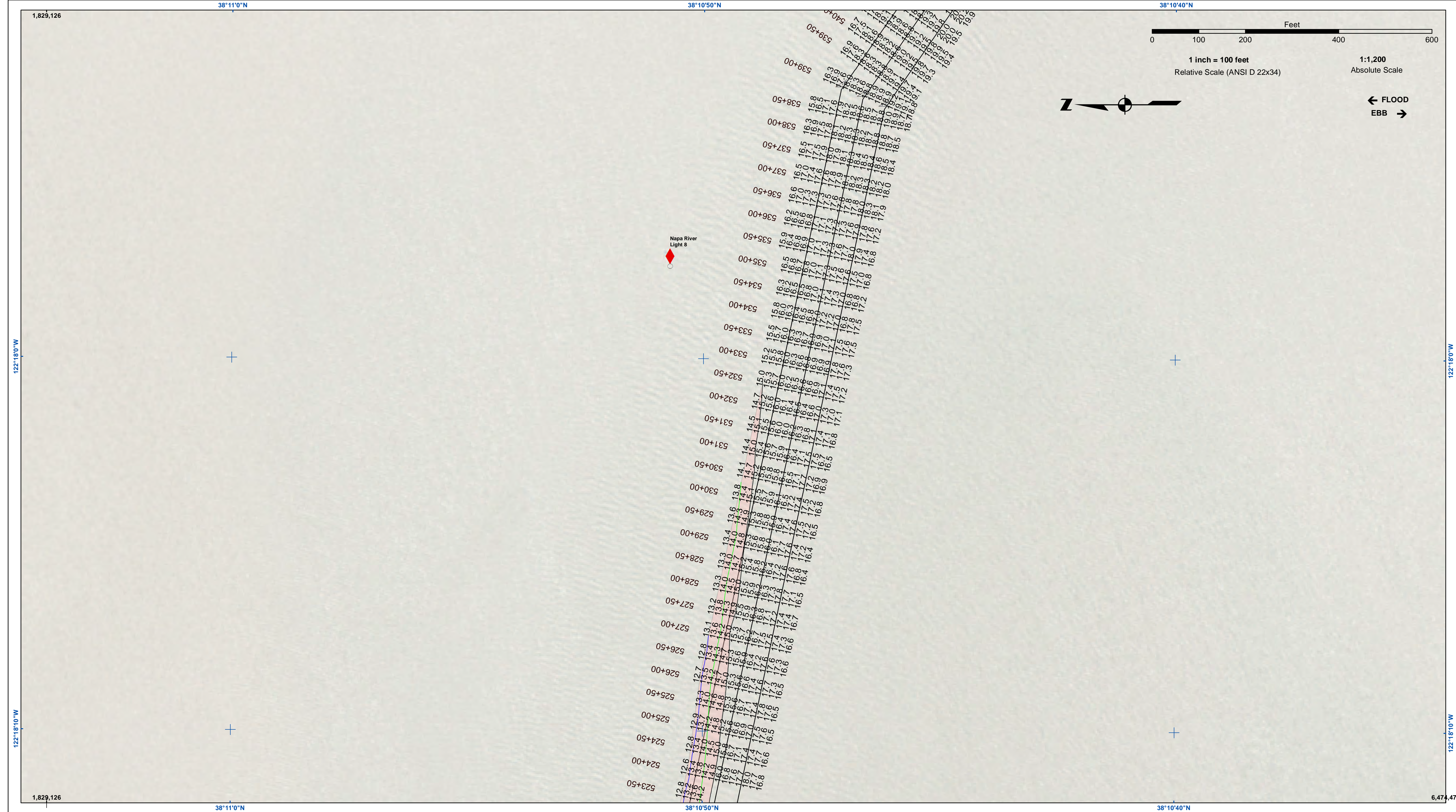
- | | | |
|----------------------------|--------------------|-----|
| Federal Navigation Channel | Beacon, General | -15 |
| Shoaling Area | Obstruction Point | -14 |
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CALIFORNIA
 NAPA COUNTY
**NAPA RIVER
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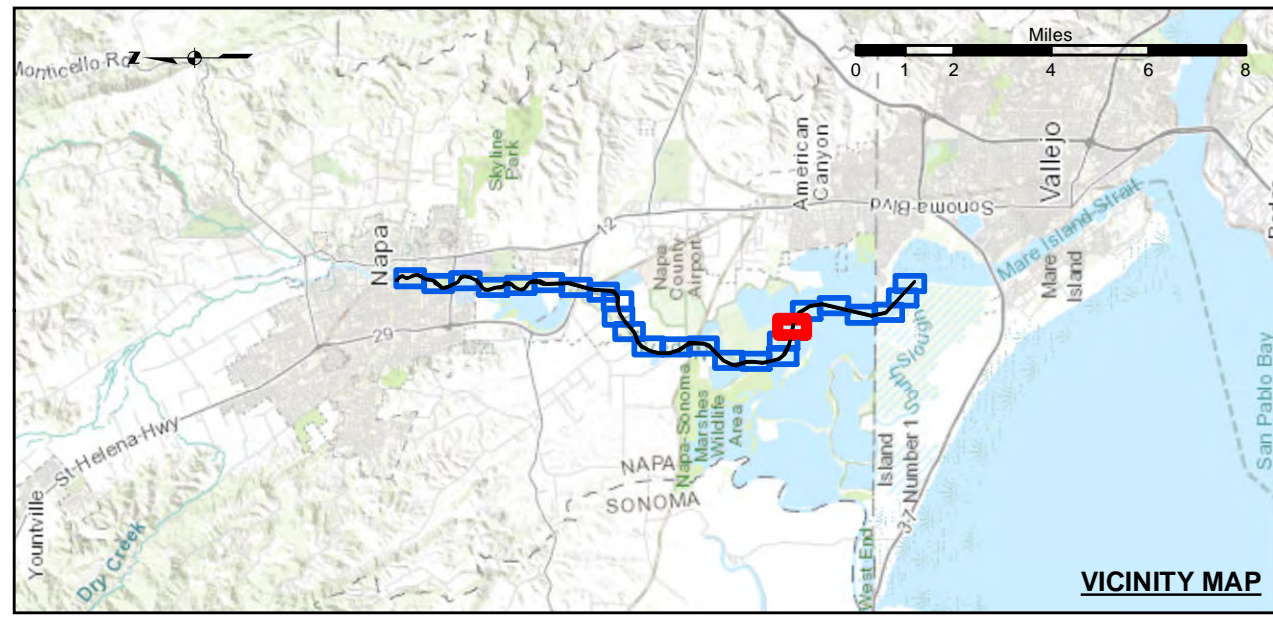
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Prepared Under the Direction of	Chart Date:
KEVIN P. ARNETT	Jun 28, 2022
LT Colonel, C.E., District Engineer	Designed by:
Submittal:	PDT
Hydro Survey Team Leader	Plotted by:
Recommended:	PDT
Chief, Hydro Survey Section	Checked by:
Approved:	PDT
Chief, Construction Branch	Drawn by:
	PDT

CALIFORNIA
 NAPA COUNTY
**NAPA RIVER
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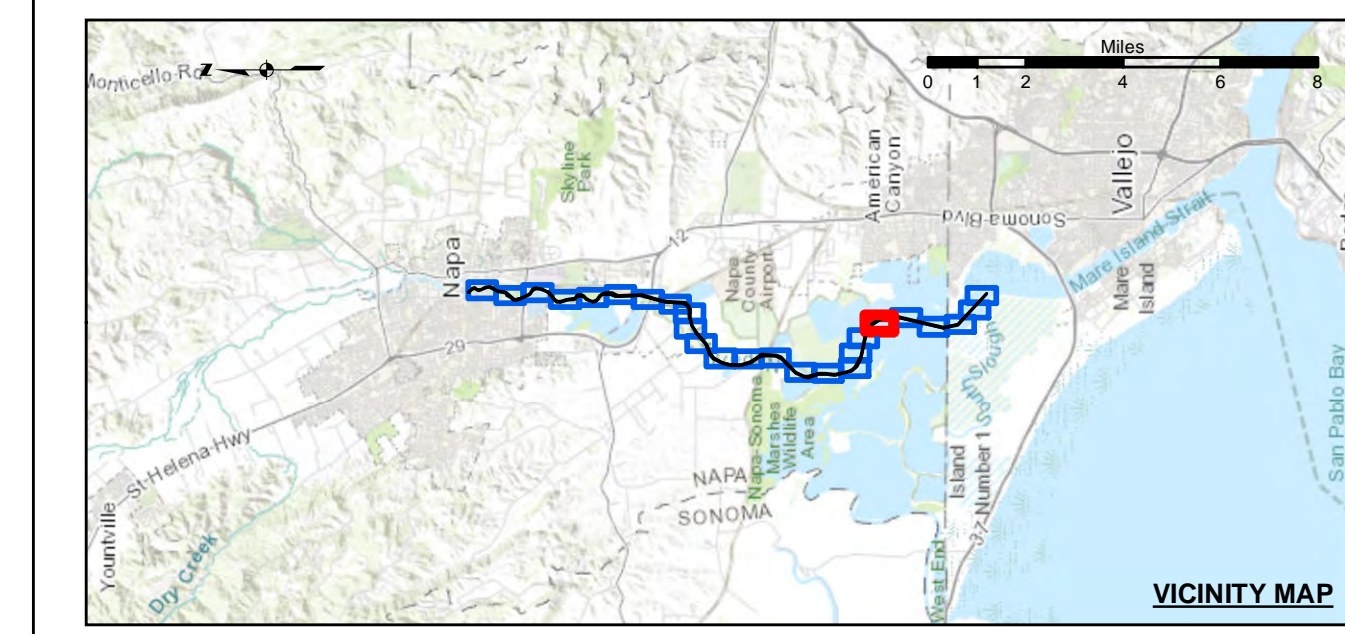
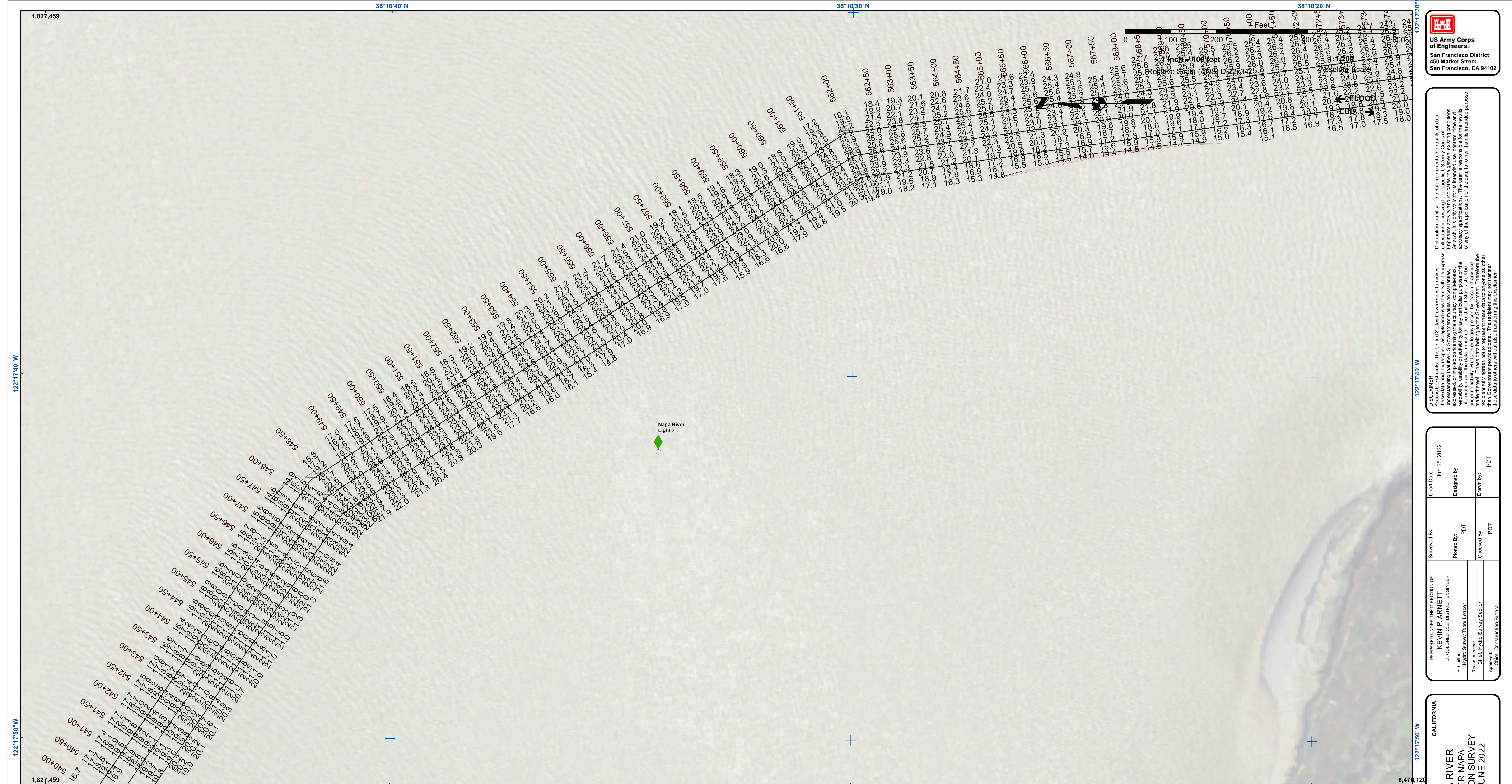
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- Federal Navigation Channel
- Shoaling Area
- Placement Area
- Anchorage Area
- Wreck Area
- Submerged Wreck
- Angle Point
- Beacon, General
- Obstruction Point
- Navigation Buoy
- Navigation Buoy
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- 15
- 14
- 13
- 12
- 11

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	Federal Navigation Channel		Navigation Buoy		-15
	Shoaling Area		Shoalest Sounding*		-11
	Placement Area		Obstruction Point		-12
	Anchorage Area		Navigation Buoy		-14
	Wreck Area		Navigation Buoy		-13
	Submerged Wreck		Shoalest Sounding*		-15
	Angle Point				

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

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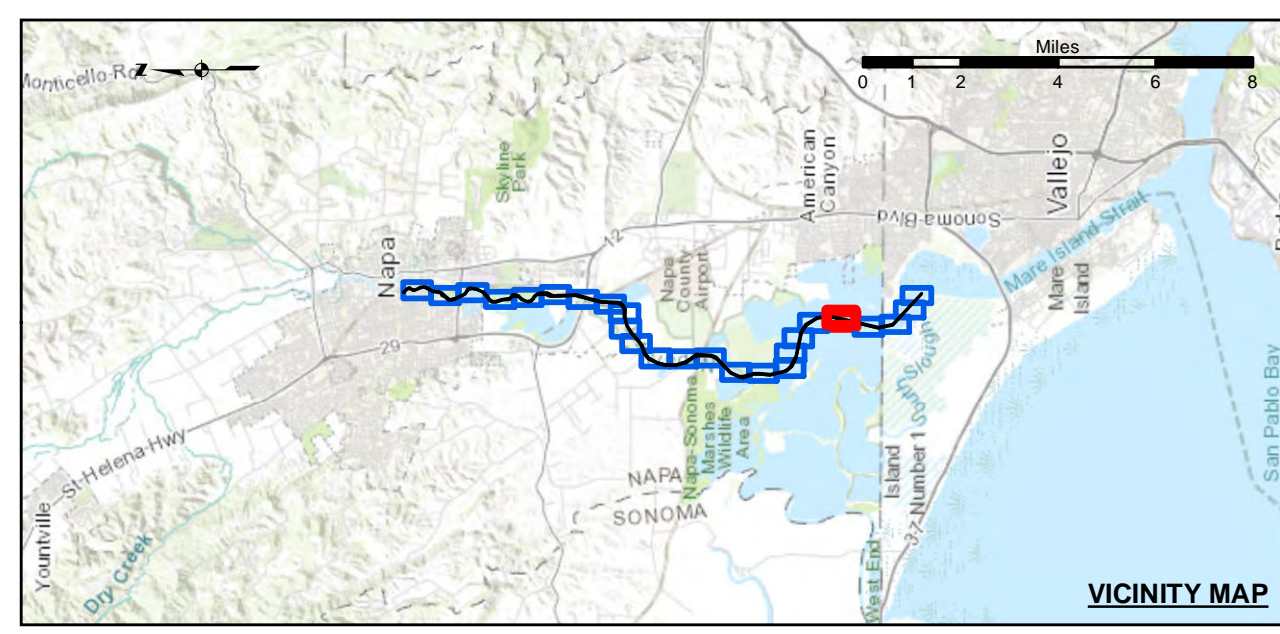
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LT COLONEL C.E. DISTRICT ENGINEER	KEVIN P. ARNETT	Jun 28, 2022
Submitted:	Plotted By:	Designed by:
Hydro Survey Team Leader	PDT	PDT
Recommended:	Checked By:	Drawn by:
Chief, Hydro Survey Section	PDT	PDT
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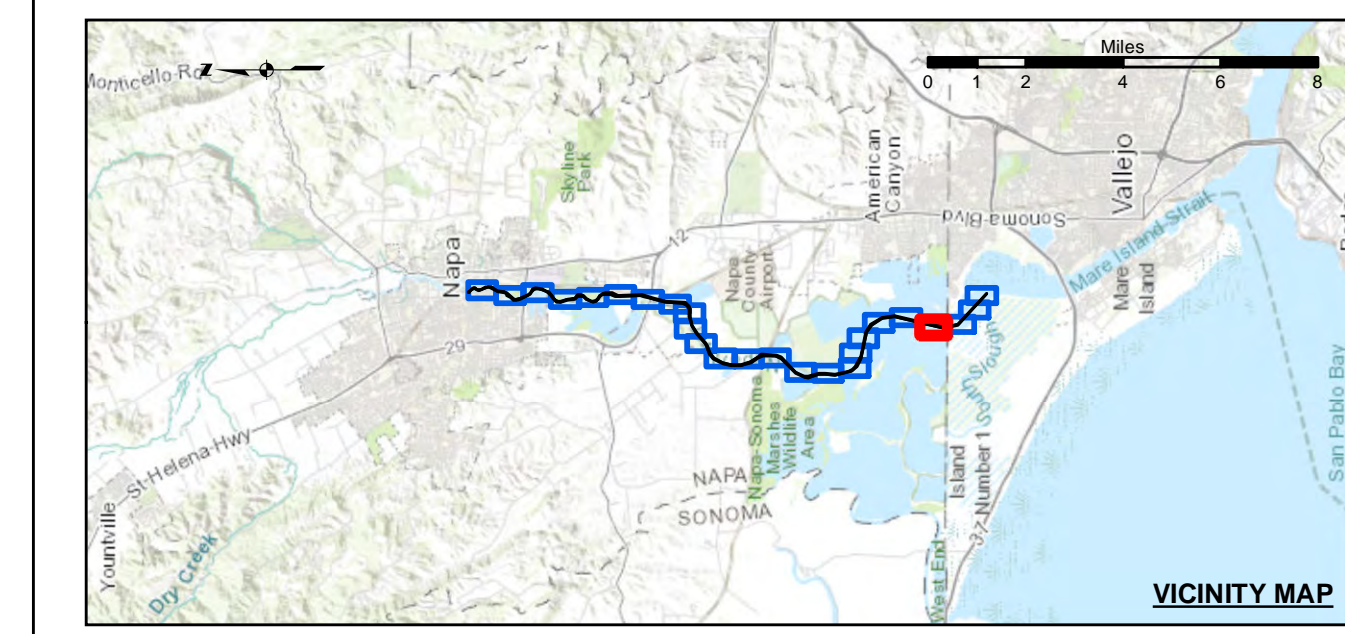


- | | | |
|----------------------------|--------------------|----------|
| Federal Navigation Channel | Beacon, General | Contours |
| Shoaling Area | Obstruction Point | -14 |
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 NAPA COUNTY
NAPA RIVER LOWER NAPA CONDITION SURVEY
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Shoaling Area	Obstruction Point	-14
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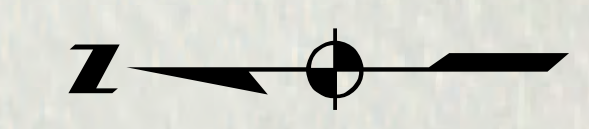
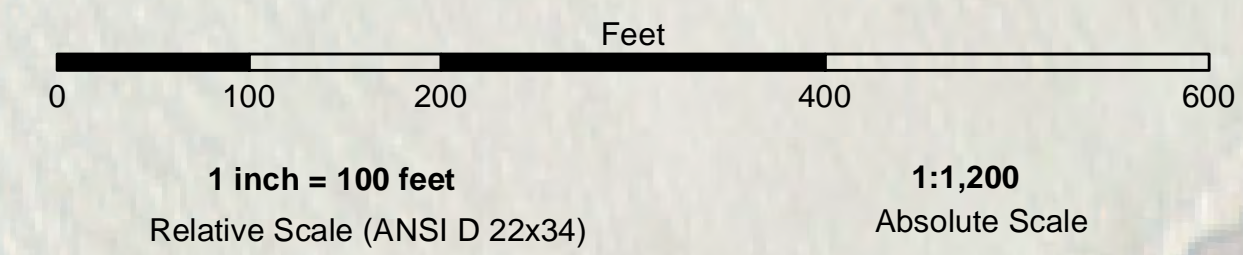
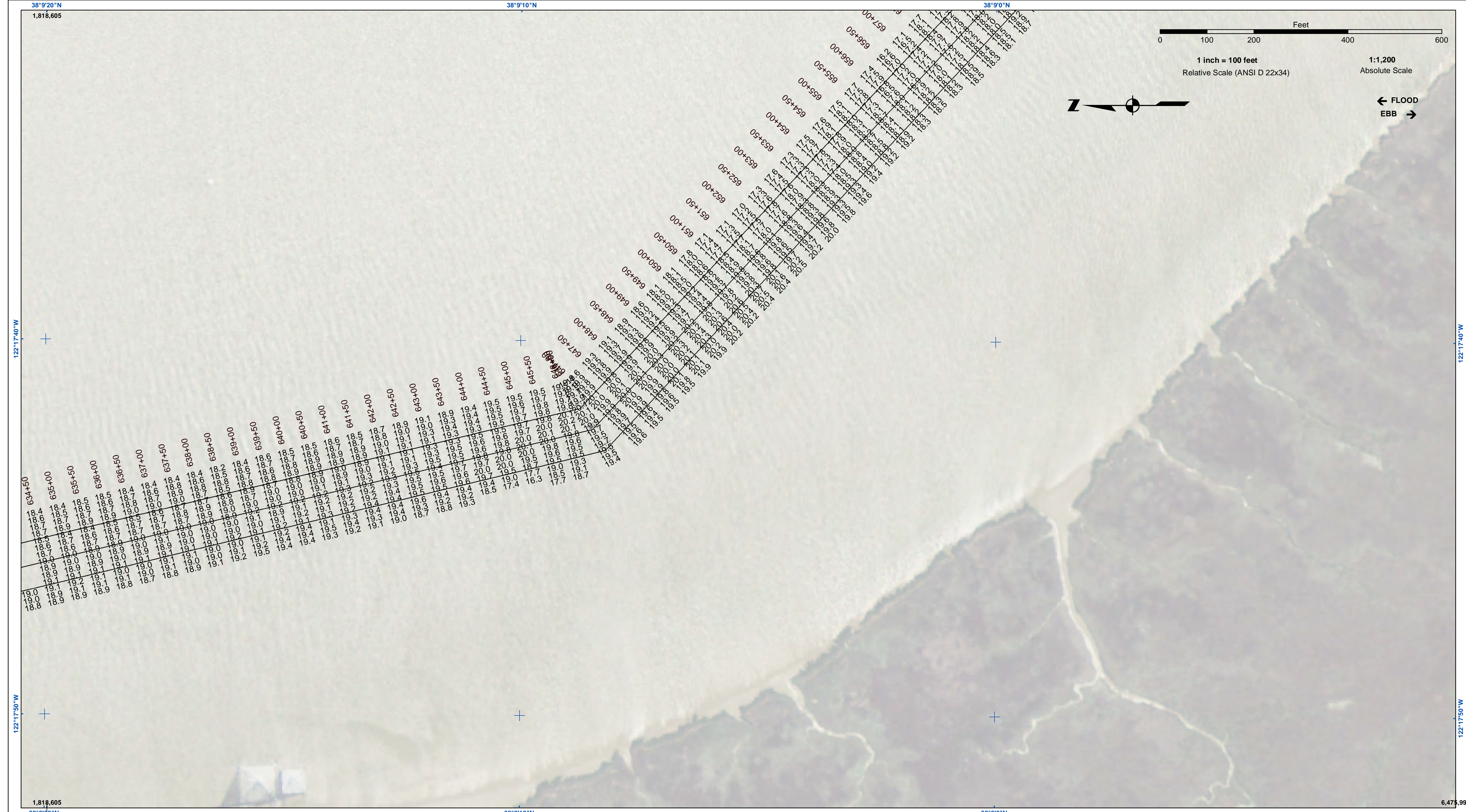
VERTICAL CONTROLS:
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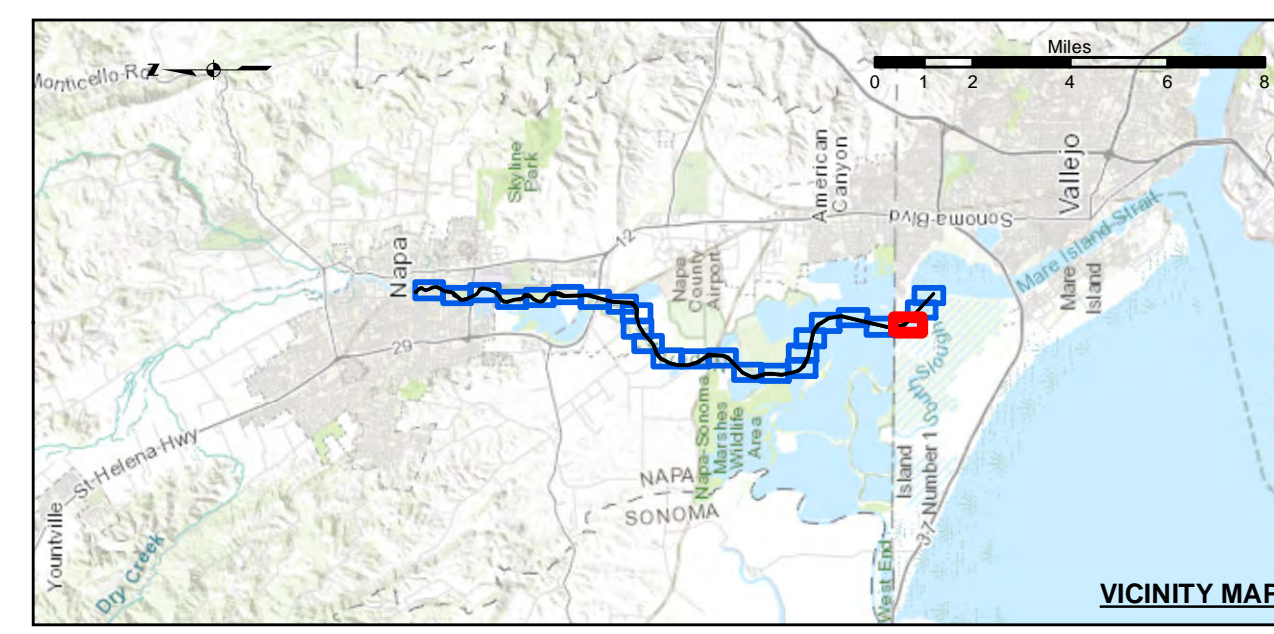
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Prepared Under the Direction of:	Chart Date:
LT COLONEL C.E. DISTRICT ENGINEER	Jun 28, 2022
Submittal:	Designed by:
Hydro Survey Team Leader	PDT
Recommendation:	Checked by:
Chief, Hydro Survey Section	PDT
Approval:	Drawn by:
Chief, Construction Branch	PDT

CALIFORNIA
 NAPA COUNTY
 NAPA RIVER
 LOWER NAPA
 CONDITION SURVEY
 14-15 JUNE 2022



← FLOOD
EBB →



Federal Navigation Channel	Beacon, General	-15
Shoaling Area	Obstruction Point	-14
Placement Area	Navigation Buoy	-13
Anchorage Area	Navigation Buoy	-12
Wreck Area	Shoalest Sounding*	-11
Submerged Wreck		
Angle Point		

NOTES:
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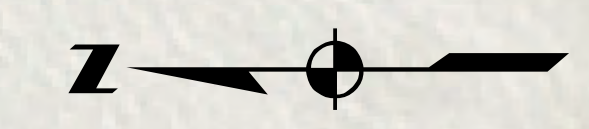
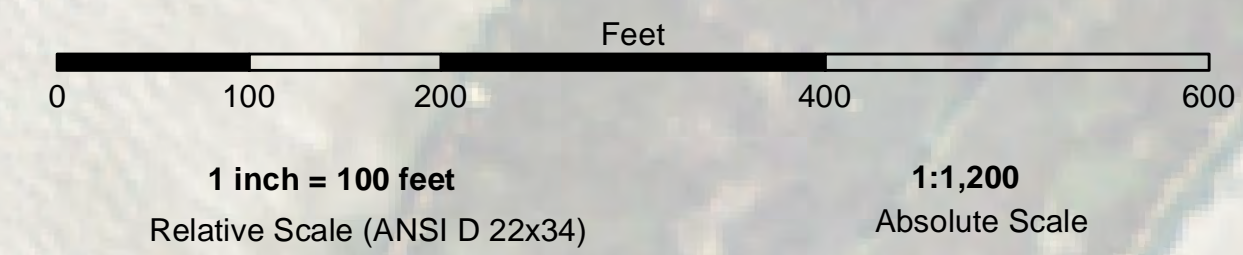
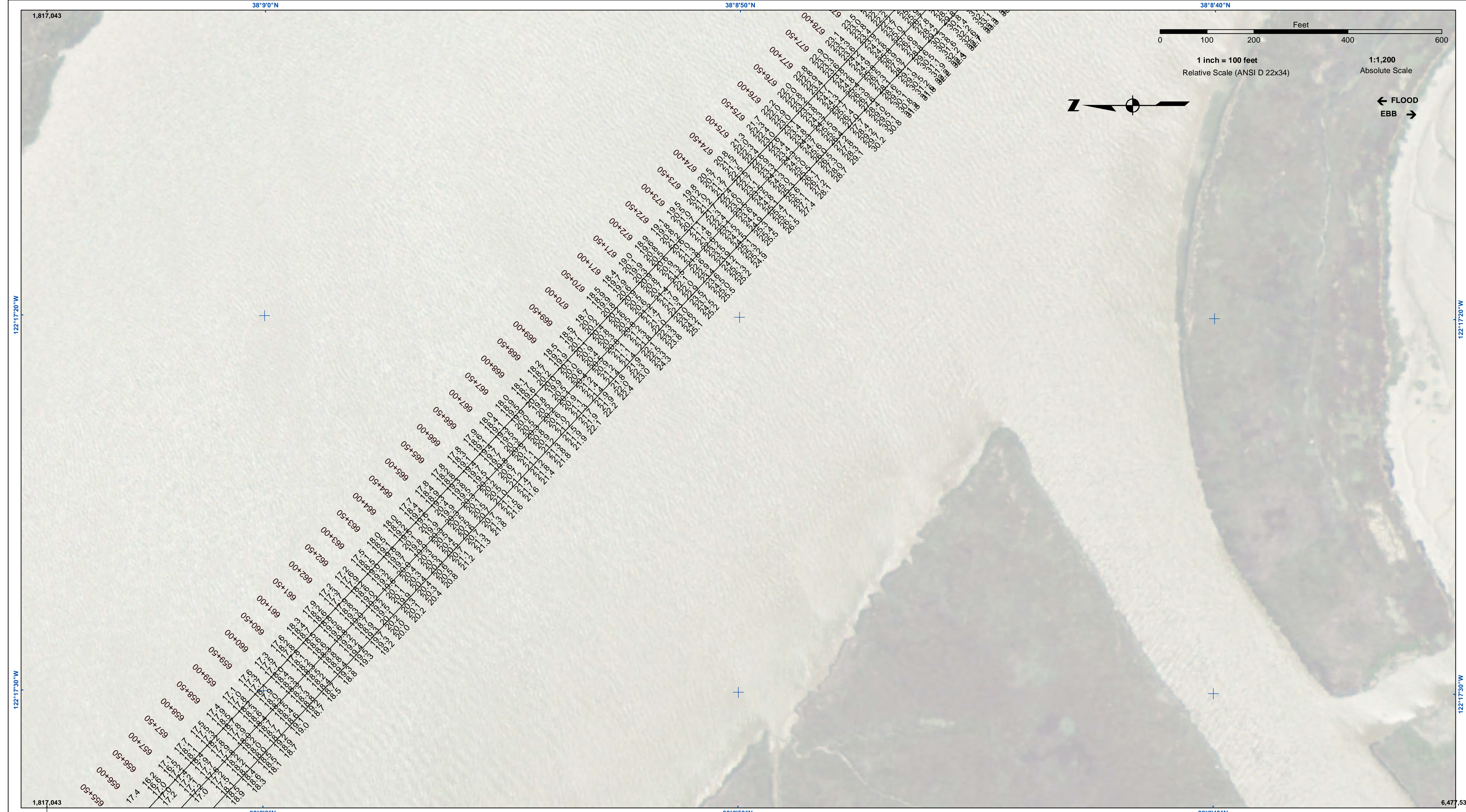
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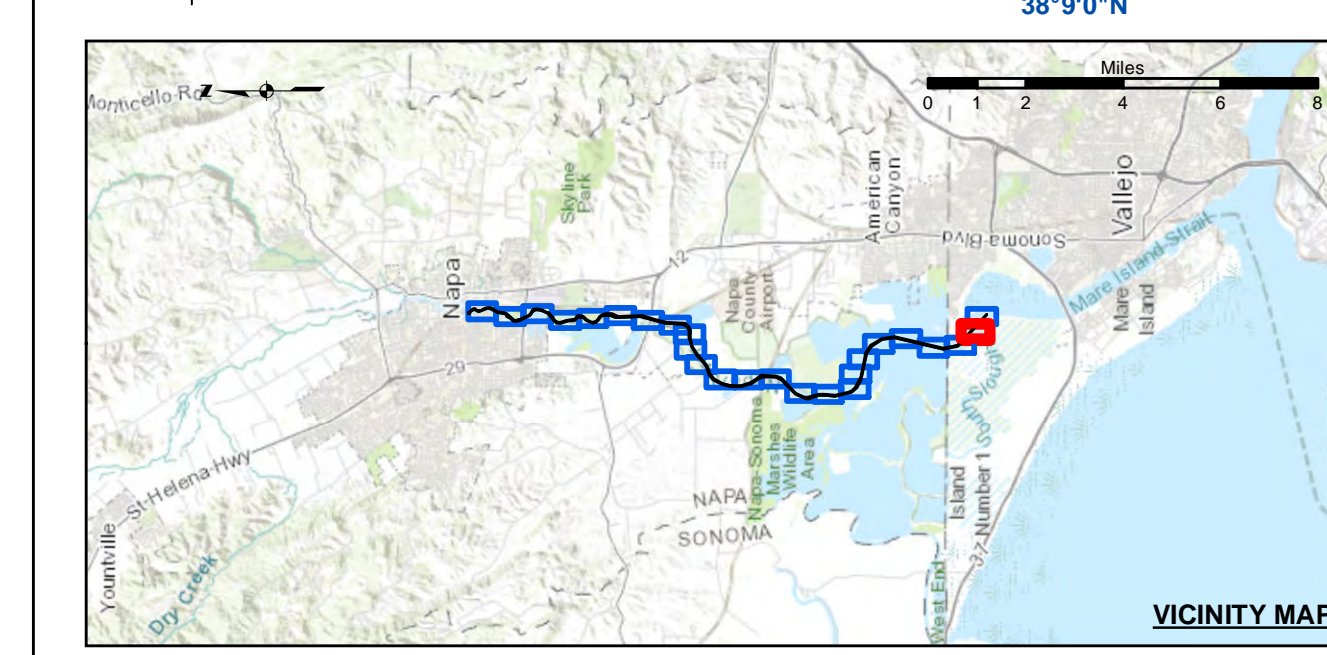
Prepared Under the Direction of KEVIN P. ARNETT LT COLONEL, C.E., DISTRICT ENGINEER	Chart Date: Jun 28, 2022
Subject: Hydro Survey Team Leader	Designed by: PDT
Recommended: Chief, Hydro Survey Section	Checked by: PDT
Approved: Chief, Construction Branch	Drawn by: PDT

CALIFORNIA
 NAPA COUNTY
**NAPA RIVER
 LOWER NAPA
 CONDITION SURVEY**
 14-15 JUNE 2022

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← FLOOD
EBB →



Federal Navigation Channel	Beacon, General	-15
Shoaling Area	Obstruction Point	-14
Placement Area	Navigation Buoy	-13
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Submerged Wreck		
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Prepared Under the Direction of	Chart Date:
LT COLONEL C.E. DISTRICT ENGINEER	Jun 28, 2022
Submitted:	Designed by:
Hydro Survey Team Leader	PDT
Recommended:	Checked by:
Chief, Hydro Survey Section	PDT
Approved:	Drawn by:
Chief, Construction Branch	PDT

CALIFORNIA
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**NAPA RIVER
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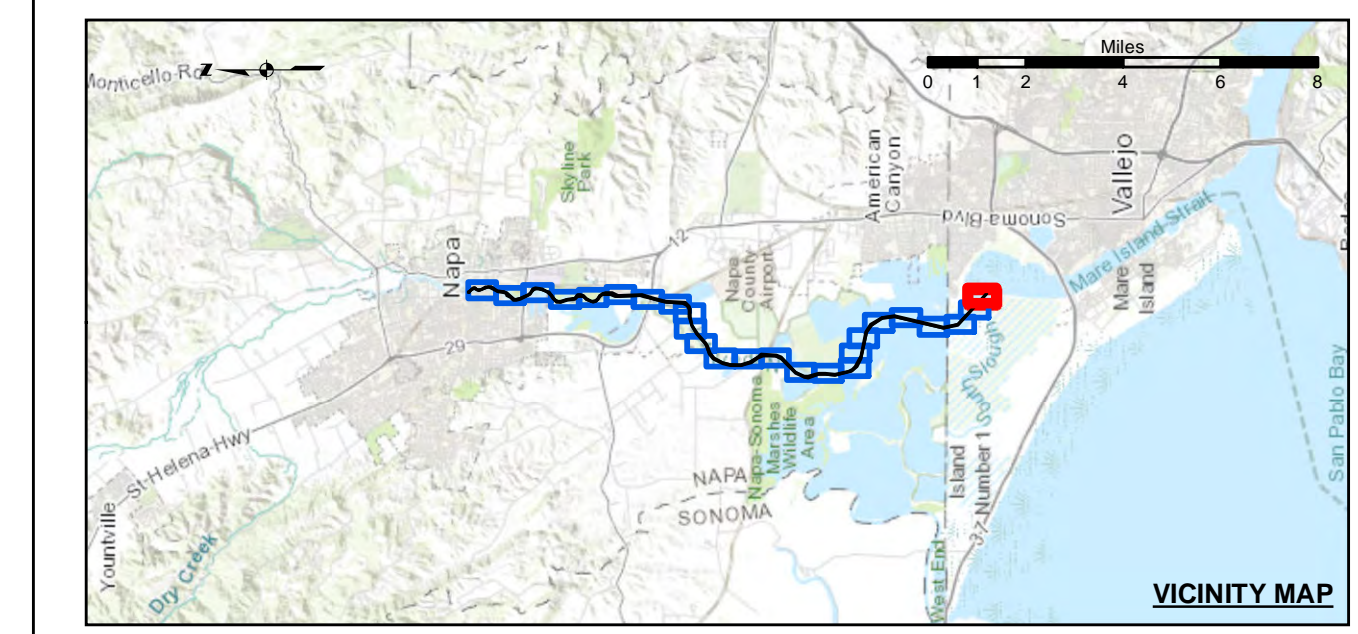
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Chart Date:	Jun 28, 2022
Designed by:	PDT
Drawn by:	PDT
Checked by:	PDT
Approved:	Chief, Construction Branch
Surveyed By:	KEVIN P. ARNETT
Plotted By:	PDT
Flashed By:	PDT
Recommended:	Chief, Hydro Survey Section
Approved:	Chief, Construction Branch

CALIFORNIA
NAPA RIVER
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Federal Navigation Channel	Beacon, General	Contours
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