



Technical Memorandum

To: Rob Holmlund (HBHRCD)
From: Erik Nielsen (SHN)
Date: April 23, 2024
Subject: Assessment of Samoa Federal Channel Anchoring Restrictions
Project: Redwood Marine Multipurpose Terminal Replacement Project
Location: Eureka, CA
M&N Job No: 212991-03
cc: Shane Phillips (M&N)

Disclaimer: This draft technical memorandum is a work-in-progress and is intended to be an internal document for use by the Humboldt Bay Offshore Wind Heavy Lift Marine Terminal Project team as a part of the conceptual design process and the ongoing permitting process. This memorandum is meant to be read as a part of a comprehensive packet of technical analyses. It is not written to be a standalone document and it is assumed that the reader has substantial project knowledge and context to understand the memorandum's content. All aspects of this memorandum are subject to change and may become less accurate over time. To better understand the project, please review the more comprehensive and up-to-date documents posted to the Humboldt Bay Harbor District's website at <https://humboldt-bay.org/humboldt-bay-offshore-wind-heavy-lift-marine-terminal-project-3>.

Introduction

This memorandum provides a summary of findings for anchoring restrictions identified in National Oceanic and Atmospheric Administration Agency (NOAA) charts for Humboldt Bay. Anchoring restrictions due to a submarine "Cable" area designation is shown to extend from the City of Eureka waterfront to the Samoa Peninsula (M&N Figure V-101 in Attachment 1). The restricted area crosses the Samoa Federal Navigation Channel (Samoa Channel) from Tuluwat Island to the Redwood Marine Multipurpose Terminal (RMMT) project site (NOAA, 2021). The source of the anchor restriction is presumed to be from a communication cable located in this area.

Utility Providers

SHN corresponded with utility providers as part of the RMMT project to assess connection and availability. Utility providers contacted include power (gas and electricity), communications, water, wastewater, and fiber optic. During the course of this process, the cable crossing was discussed with American Telegraph and Telephone (AT&T) for communication lines and Optimum for cable/internet services. AT&T provided input on the matter that is summarized in the following paragraph.



Brian Johnson with AT&T indicated file records show a submarine cable from the foot of Commercial Street in Eureka to the southwest tip of Tuluwat Island was placed in 1956 and abandoned in 1988. There is no record of how it was installed, depth of placement, ability to locate, and so on. A map provided by Brian Johnson shows it consisted of a single cable that did not extend beyond Tuluwat Island to the Samoa Peninsula. (File Figure in Attachment 1). A request was made by Brian Johnson to the AT&T right-of-way group to review available files and the findings were inconclusive. The only item located was a note in the file referencing County Deed Book 170, page 434 or 436 or 438. A review of these County Deed Book pages by SHN indicated the described properties dated 1924 are not in the vicinity of the project and provided no additional information on the AT&T cable placement or continued use.

RMMT Utility Clearance

Underground Service Alert (USA) notifications were completed in April 2022 and August 2023 for upland borings installed as part of the RMMT geotechnical investigation. A map showing the completed boring locations and the approximate area of anchoring restrictions near shore to the RMMT project is provided in Attachment 1. The area identified for the USA ticket submitted prior to drilling operations consisted of a prism extending along the entire project waterfront. At no time during the utility clearance program did any service providers indicate the presence of underground utilities. This would include Pacific Gas and Electric (PG&E), AT&T, Humboldt Bay Municipal Water District (HBMWD), Town of Samoa, fiber optic, and so on.

USACE Information

Hydrographic surveys completed for the Samoa Channel by the U.S. Army Corps of Engineers (USACE) in May 2023 (existing conditions) and July 2023 (post-dredge) do not indicate the presence of a cable or anchor restrictions on sheets provided in the USACE San Francisco District Website (USACE, 2023). The USACE performs maintenance dredging of the Samoa Channel to a required depth of -38 feet mean lower low water (MLLW) that covers 400 feet in width and crosses this "restriction" area (USACE Figure in Attachment 1). It is assumed that the USACE would need to be cognizant of the cable location and depth if it were to be present in this area. In addition, RMMT project meetings for Section 408 requirements with the USACE in October 2022 that covered dredging and navigation requirements did not indicate the presence of a cable crossing the Samoa Channel as identified in the NOAA charts.

Summary and Data Limitations

The information received from AT&T does not show the communication cable extending past Tuluwat Island. Additionally, there is no known presence of any onshore infrastructure in Samoa for a cable landing. USA conducted for clearance of vertical bores installed along the RMMT project shoreline prompted no response from utility providers notified. The USACE does not appear to be aware of a cable present in the area of the Samoa Channel that is required to undergo maintenance dredging activities.



Rob Holmlund (HBHRCD)

Assessment of Samoa Federal Channel Anchoring Restrictions, RMMT, Eureka, CA

April 23, 2024

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Based on the information obtained, there appears to be a high probability that the anchor restriction area shown in NOAA charts is referring to a cable placement "Set-Aside" area for future use. The anchor restriction area should be added to the list of items for future consideration during final project design.

References Cited

National Oceanic and Atmospheric Administration Agency (NOAA). (2021). Nautical Chart 18622 56th Ed, Corrected November 2021. Electronic Navigation Charts, Version US5CA94M. Accessed August 2023 at: <https://www.nauticalcharts.noaa.gov/charts/noaa-enc.html>

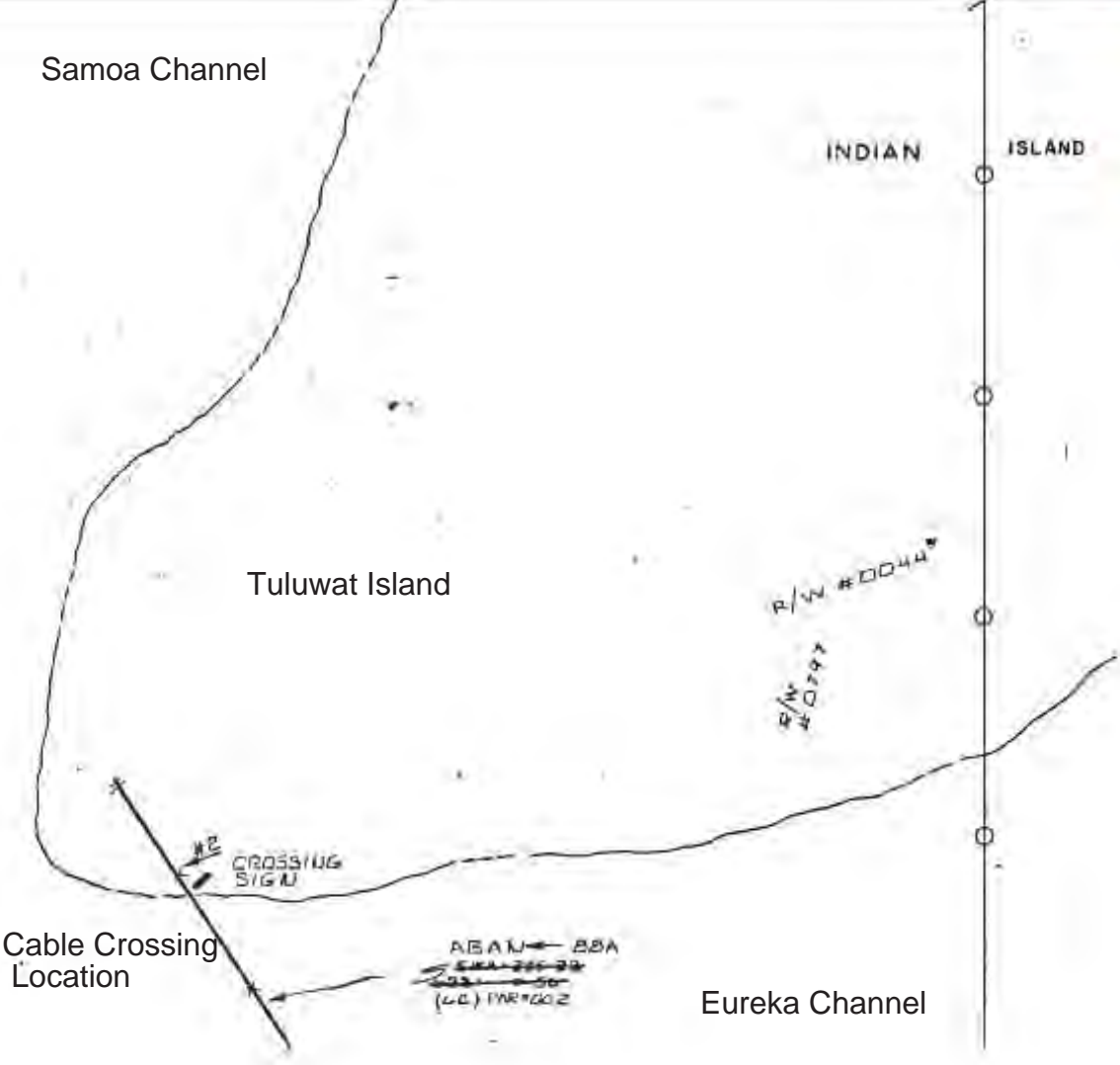
U.S. Army Corps of Engineers (USACE). (2023). San Francisco District Website, Humboldt Bay Channel Hydrographic Surveys. Accessed September 2023 at: <https://www.spn.usace.army.mil/Missions/Surveys-Studies-Strategy/Hydro-Survey/Humboldt-Bay-Channel/>

Attachment 1. Figures

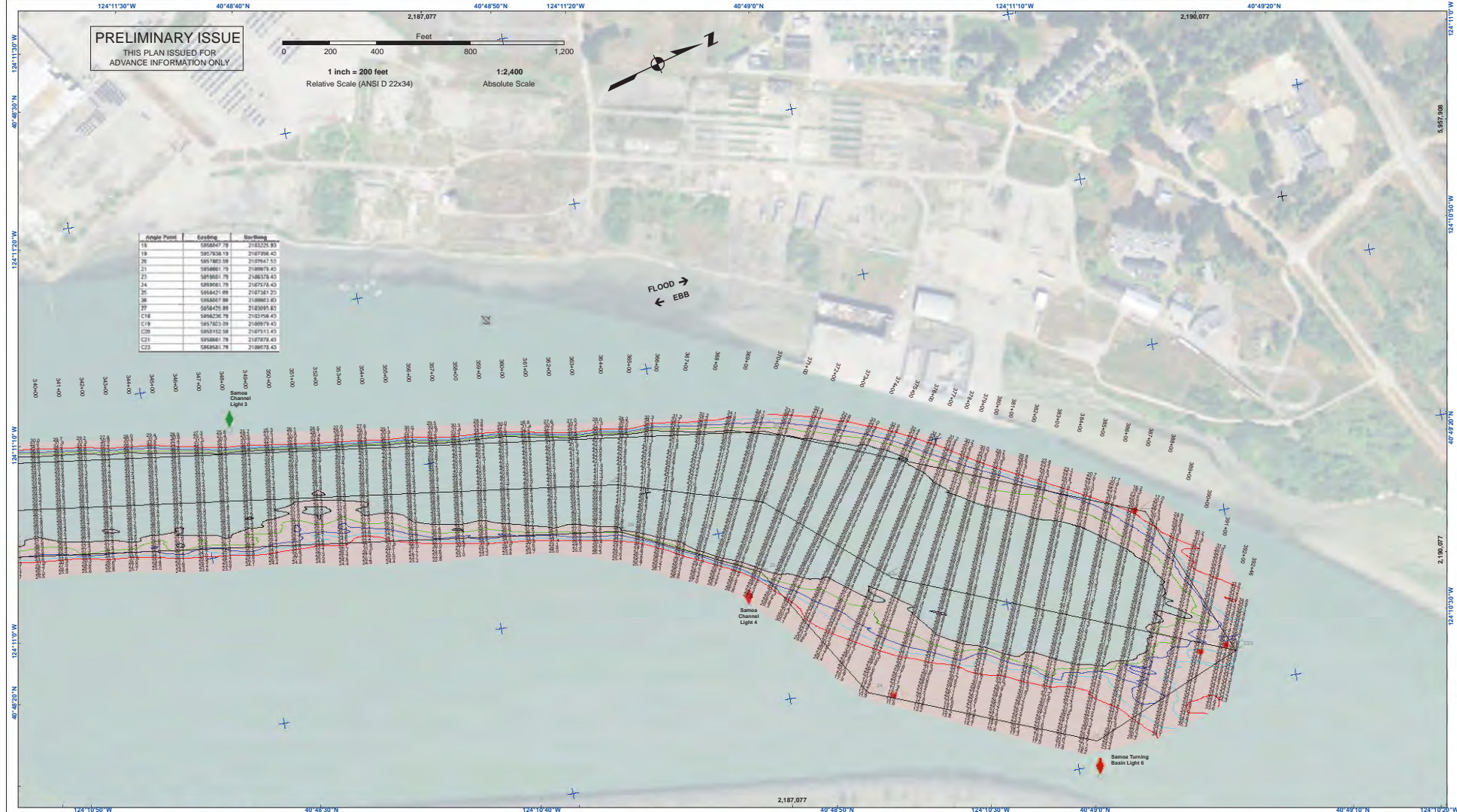


FIGURES **1**

Drawing provided by AT&T in email correspondence dated 8/24/23.







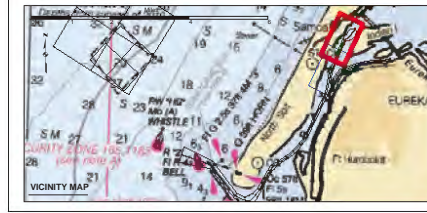
U.S. Army Corps of Engineers
 San Francisco District
 450 Golden Gate Ave.
 San Francisco, CA 94102

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PROJECT NO.	10-000
DATE	Jul 10, 2023
DESIGNED BY	POT
PROJECT NO.	POT
DATE	07/10/23
CHECKED BY	POT
DATE	07/10/23

CALIFORNIA
HUMBOLDT BAY
SAMOA CHANNEL
POST-DREDGE SURVEY
 29 JUNE - 01 JULY 2023

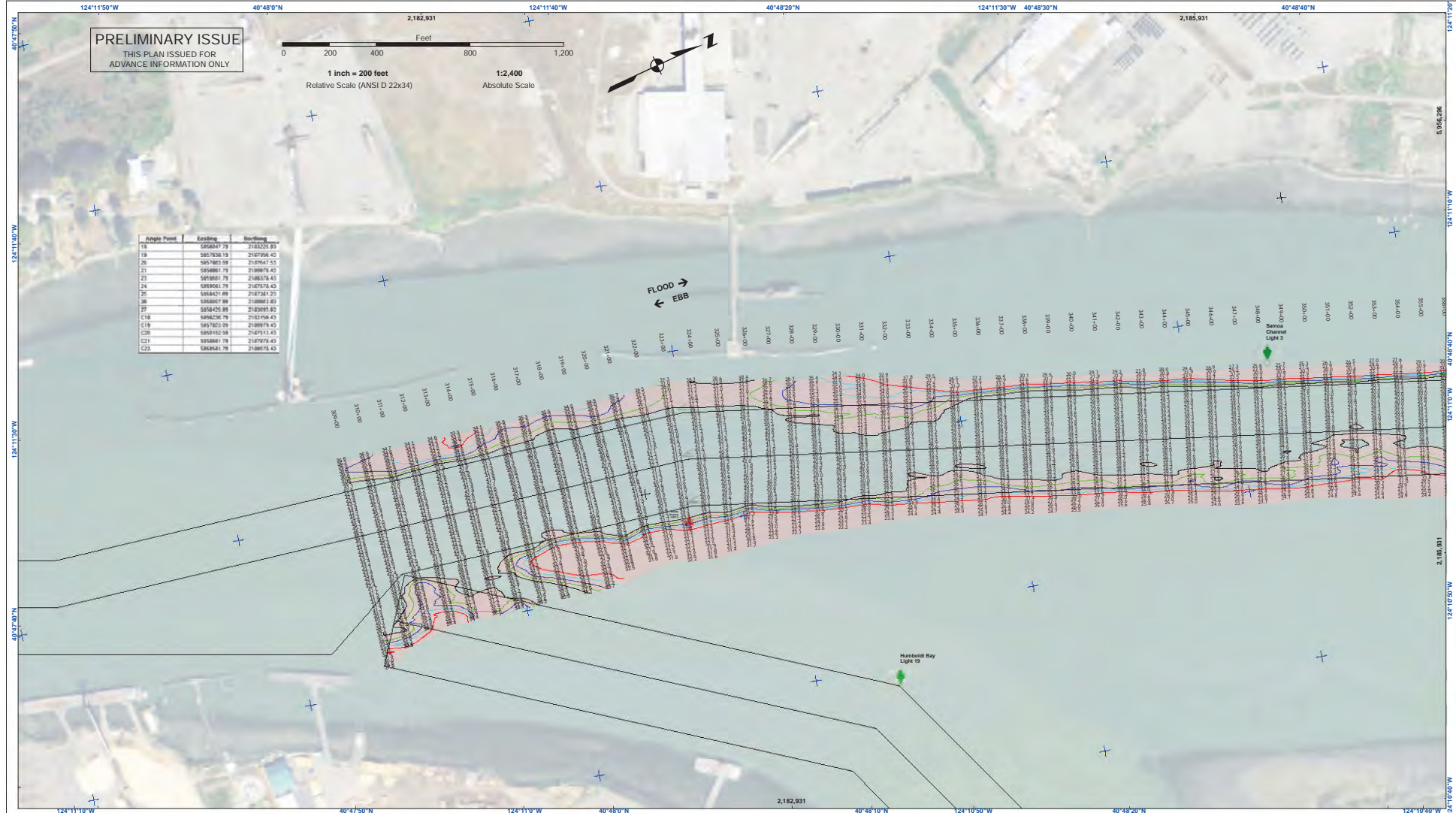
Sheet Reference
Number
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Federal Navigation Channel	Beacon, General	Contours
Shoaling Area	Obstruction Point	
Placement Area	Navigation Buoy	
Anchorage Area	Navigation Buoy	
Wreck Area	Shoalest Sounding*	
Submerged Wreck		
Angle Point		-38
		-37
		-36
		-35
		-34

NOTES:
 DRAWINGS NOT TO BE USED AS 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 LOCATION REPRESENT THE POSITION OF THE BUOY ONLY.
 SURVEYED BY THE CORPS OF ENGINEERS.
 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.
 PLANE GRID AND COORDINATES ARE BASED ON THE STATE OF CALIFORNIA COORDINATE SYSTEM, LAMBERT CONFORMAL PROJECTION, ZONE 18N. CALIFORNIA, AS DESCRIBED IN SPECIAL PUBLICATION NO. 205, PUBLISHED BY THE NATIONAL OCEAN SURVEY.

PROJECT DEPTHS ARE AS FOLLOWS:
 BAR 4 ENTRANCE CHANNEL - 48 FEET
 NORTH BAY, SAMOA TO MILE 5.0 - 38 FEET
 EUREKA CHANNEL, FIELDS LANDING CHANNEL & MILE 5.0 TO "N" STREET - 26 FEET
 1:00 INDICATES THE NUMBER AND BEGINNING OF A LINE OF SOUNDINGS.
 SOUNDINGS ARE BASED ON TIDE GAUGES REFERENCED TO U.S.C. & G.S.
SENCH MARKS AS FOLLOWS:
 EUREKA & SOMMA CHANNELS - B.M. NO. 4 (1908) ELEV. 33.61' M.L.L.W.
 ENTRANCE & NORTH BAY CHANNELS - B.M. NO. 9 (1937) ELEV. 16.30' M.L.L.W.
 FIELDS LANDING CHANNEL - B.M. NO. 5 (1929) ELEV. 8.52' M.L.L.W.



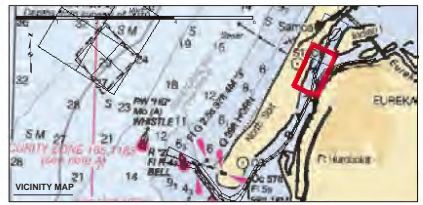
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Angle Point	Easting	Northing
18	585847.79	2183255.83
19	5857836.19	21847996.45
20	5857865.58	21847964.51
21	5858881.79	2183979.43
22	5858993.79	21848376.43
23	5858001.79	21847576.43
24	5858427.89	21847347.23
25	5858527.89	21848893.83
26	5858475.99	21848995.83
C18	5858426.79	21831598.43
C19	5857822.89	21848979.43
C20	5858192.58	21847913.43
C21	5858881.79	21847876.43
C22	5858541.79	21848675.43

Federal Navigation Channel	Beacon, General	Contours
Shoaling Area	Obstruction Point	
Placement Area	Navigation Buoy	
Anchorage Area	Navigation Buoy	
Wreck Area	Shoalest Sounding*	
Submerged Wreck		-38
Angle Point		-37
		-36
		-35
		-34

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 SOUNDINGS ARE BASED ON THE DATUM OF MEAN LOWER LOW WATER AT THE LOCALITY.
 PLANE GRID AND COORDINATES ARE BASED ON THE STATE OF CALIFORNIA COORDINATE SYSTEM, LAMBERT CONFORMAL PROJECTION, ZONE 18N03, CALIFORNIA, AS DESCRIBED IN SPECIAL PUBLICATION NO. 225, PUBLISHED BY THE NATIONAL OCEAN SURVEY.

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 BENCH MARKS AS FOLLOWS:
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 ENTRANCE & NORTH BAY CHANNELS - B.M. NO. 9 (1937) ELEV. 14.35' M.L.L.W.
 FIELDS LANDING CHANNEL - B.M. NO. 5 (1925) ELEV. 8.52' M.L.L.W.



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HUMBOLDT COUNTY
 CALIFORNIA
HUMBOLDT BAY
SAMOA CHANNEL
 POST-DREDGE SURVEY
 29 JUNE - 01 JULY 2023

Sheet Reference
Number
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