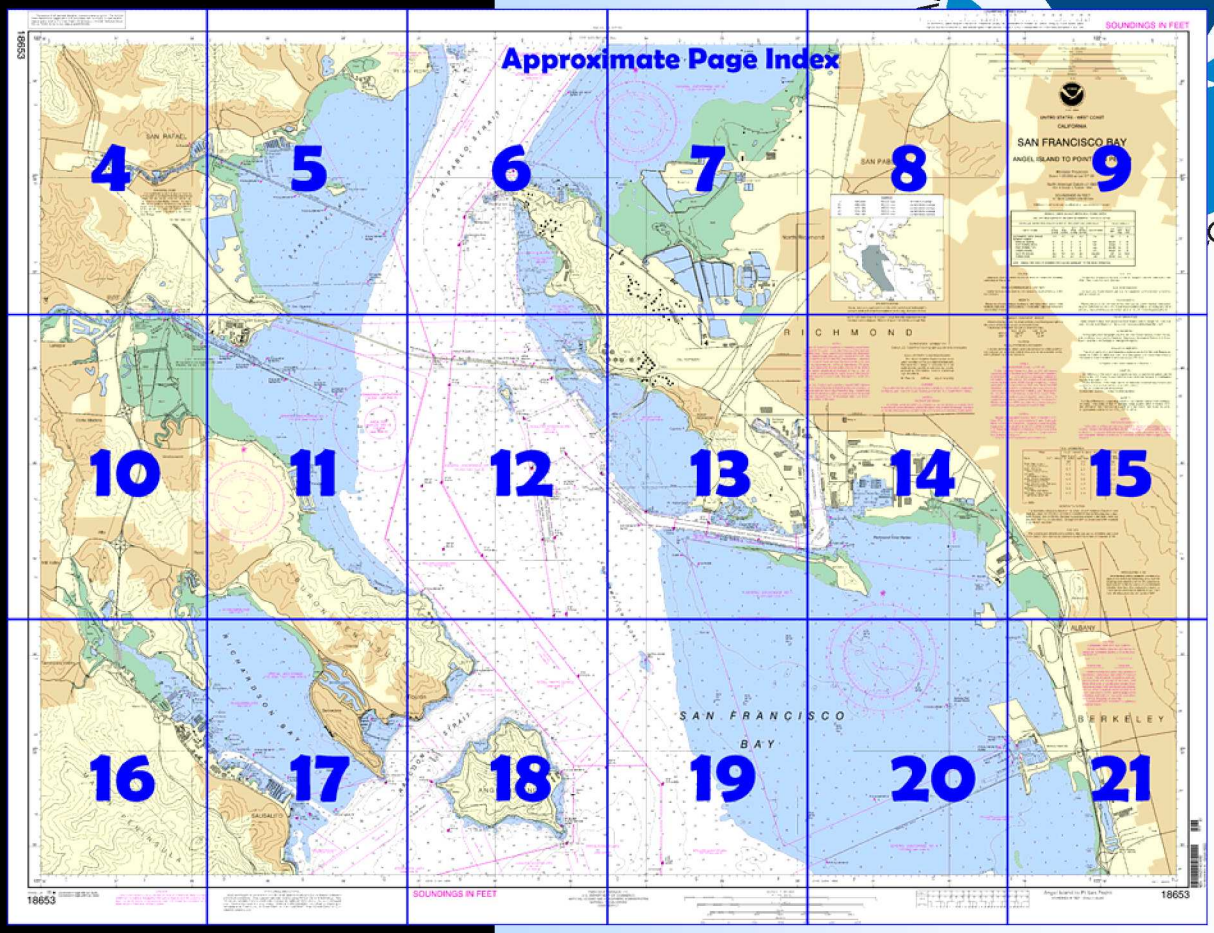
BookletChart™

San Francisco Bay – Angel Island to Point San Pedro

(NOAA Chart 18653)

A reduced scale NOAA nautical chart for small boaters. When possible, use the full size NOAA chart for navigation.

- ☑ *Complete, reduced scale nautical chart*
- ☑ *Print at home for free*
- ☑ *Convenient size*
- ☑ *Up to date with all Notices to Mariners*
- ☑ *United States Coast Pilot excerpts*
- ☑ *Compiled by NOAA, the nation's chartmaker.*



Home Edition (not for sale)

Published by the
National Oceanic and Atmospheric Administration
National Ocean Service
Office of Coast Survey
www.NauticalCharts.NOAA.gov
301-713-2770

What are Nautical Charts?

Nautical charts are a fundamental tool of marine navigation. They show water depths, obstructions, buoys, other aids to navigation, and much more. The information is shown in a way that promotes safe and efficient navigation. Chart carriage is mandatory on the commercial ships that carry America's commerce. They are also used on every Navy and Coast Guard ship, fishing and passenger vessels, and are widely carried by recreational boaters.

What is a BookletChart™?

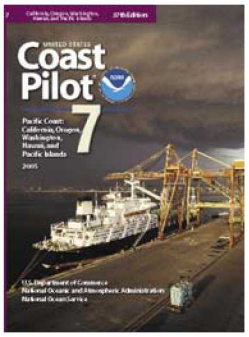
This BookletChart is made to help recreational boaters locate themselves on the water. It has been reduced in scale for convenience, but otherwise contains all the information of the full-scale nautical chart. The bar scales have also been reduced, and are accurate when used to measure distances in this BookletChart. See the Note at the bottom of page 5 for the reduction in scale applied to this chart.

Whenever possible, use the official, full scale NOAA nautical chart for navigation. Nautical chart sales agents are listed on the Internet at http://www.NauticalCharts.NOAA.gov.

This BookletChart does NOT fulfill chart carriage requirements for regulated commercial vessels under Titles 33 and 44 of the Code of Federal Regulations.

Notice to Mariners Correction Status

This BookletChart has been updated for chart corrections published in the U.S. Coast Guard Local Notice to Mariners, the National Geospatial Intelligence Agency Weekly Notice to Mariners, and, where applicable, the Canadian Coast Guard Notice to Mariners. Additional chart corrections have been made by NOAA in advance of their publication in a Notice to Mariners. The last Notices to Mariners applied to this chart are listed in the Note at the bottom of page 7. Coast Pilot excerpts are not being corrected.



[Coast Pilot 7, Chapter 7 excerpts]

(418) **Berkeley**, the site of the University of California, adjoins Oakland and Emeryville to the N. The long pier extending into the bay is marked by a light; the 1.7-mile offshore section of the pier is in ruins, and the inshore 3,000-foot section is used for fishing. In clear weather the Campanile (bell tower) at the university shows prominently from the bay.

(419) **Berkeley Yacht Harbor,** on the N side of the long pier, is protected at the entrance by two detached breakwaters. The S breakwater is marked by a light on the S end, a light at the center, and a light and fog signal at the N end. The N breakwater is marked by a light on the NE and SW ends.

(425) **Richmond Harbor,** on the E shore of San Francisco Bay 1.5 miles N of Southampton Shoal Light, includes the port facilities to Point San Pablo.

(447) Some small-craft facilities are along Santa Fe Channel. A marina and yacht club are in **Richmond Marina Bay,** and a private yacht harbor is on the E side of Point Richmond.

(450) **Invincible Rock,** 1.3 miles N of Richmond-San Rafael Bridge, is covered 7 feet. **Whiting Rock,** covered 13 feet, is 0.2 mile NNE of Invincible Rock. Both rocks are buoyed. The buoy marking Whiting Rock is reported to submerge during strong ebb currents caused by the heavy spring runoffs in the area.

(451) **The Brothers,** 1.7 miles N of Richmond-San Rafael Bridge, are two small low flat-topped islands. **East Brother Island Light** (37°57.8'N., 122°26.0'W.), 61 feet above the water, is shown from a white square tower on dwelling on the E island. A seasonal fog signal is at the station.

(452) **Point San Pablo,** 0.3 mile NE of East Brother Island Light, is the NW extremity of a low ridge of hills on the E shore of San Francisco Bay at its junction with San Pablo Bay. The point rises abruptly to a height of 140 feet. A dredged channel off the NE shore of the point is used by commercial and sport fishermen.

(456) **Golden Gate Coast Guard Station** is located at the entrance to Horseshoe Bay.

(458) **Richardson Bay,** 2 miles N of the Golden Gate Bridge, is shoal except for the S part fronting Sausalito. In the N part of Richardson Bay, a wildlife sanctuary, established by the National Audubon Society, provides safe refuge for migratory fowl that arrives each fall. The sanctuary is closed to marine traffic from October to March. Seasonal buoys N of a line approximately **097**° True from Strawberry Point to Belvedere, mark the perimeter of the sanctuary.

(460) **Sausalito** harbors some commercial fishing boats and many pleasure craft. Several boatbuilding and repair yards have marine ways, the largest of which can handle craft up to 350 tons.

(464) **Point Blunt,** the SE extremity of Angel Island, terminates in a 60–foot-high knob, and is connected with the island by a low neck of land. **Point Blunt Light** (37°51.2'N., 122°25.2'W.), 60 feet above the water, is shown from a white house on the point; a fog signal is at the station. A shoal with visible and covered rocks extends SSE for 0.1 mile. Tide rips and swirls are heavy around the point, especially with a large falling tide.

(466) A lighted buoy is off **Point Stuart**, the W extremity of Angel Island. A shoal area covered 14 to 30 feet, extending SW from **Point Knox,** is marked by a lighted buoy.

(468) **Raccoon Strait,** nearly 0.5 mile wide between Angel Island and the mainland, is used by ferry boats and pleasure craft. The tidal currents in the strait have considerable velocity, and rips and swirls are heavy at times. A midchannel course can be followed. **Raccoon Shoal,** covered 29 feet, is 500 yards N of Raccoon Strait Lighted Buoy 4. A strong ebb current sets directly across the channel at the E entrance.

(469) The charted **recreation area** extending SW of Angel Island and including all of Raccoon Strait and Richardson Bay is intended primarily for use by recreation vessels.

(470) **Bluff Point,** on the mainland and marked by a light, is the E extremity of Tiburon Peninsula 1.2 miles N of Point Stuart. Point Chauncey, 0.8 miles NW of Bluff Point, is the site of the University of San Francisco Romberg Fisheries Laboratory as well as the National Oceanic and Atmospheric Administration's Tiburon Fisheries Laboratory. Pier ruins at the site are marked by lights.

(475) **Point San Quentin,** at the W end of the Richmond-San Rafael Bridge, has low land on either side. The buildings of the State Prison S of the bridge and the long wharf N of it are prominent. A State **security zone** extends off the SE side of Point San Quentin. The buoys are orange and white and display the words "San Quentin Prison."

(476) **San Rafael Creek,** 1.8 miles NW of Point San Quentin, is used by many small craft basing at the city of **San Rafael.** A dredged channel leads across the flats in **San Rafael Bay** into San Rafael Creek to a turning basin about 1.1 miles above the mouth, thence for another 0.2 mile above the turning basin.

Table of Selected Chart Notes

Corrected through NM Oct. 24/09
Corrected through LNM Oct. 13/09

Mercator Projection
Scale 1:20,000 at Lat 37° 55'

North American Datum of 1983
(World Geodetic System 1984)

SOUNDINGS IN FEET
AT MEAN LOWER LOW WATER

For Symbols and Abbreviations see Chart No. 1

SAN RAFAEL CREEK

The controlling depth was 3 feet for a mid-width of 50 feet from the channel entrance 37° 57' 30" N, 122° 27' 34" W, to the mouth of San Rafael Creek; thence 3 feet for a width of 30 feet to the turning basin, 4 feet in the turning basin centered at 37° 58' 08" N, 122° 31' 03" W, thence 2 feet for a width of 60 feet to the Grand Ave. Bridge, except for shoal to bare for last 125 feet.

Jan 2008

NOAA WEATHER RADIO BROADCASTS

The NOAA Weather Radio station listed below provides continuous weather broadcasts. The reception range is typically 20 to 40 nautical miles from the antenna site, but can be as much as 100 nautical miles for stations at high elevations.

Mt. Pise, CA	KHB-49	162.40 MHz WX2

NOTE F

High speed ferries operate in the San Francisco Bay. Mariners are cautioned that these craft move very rapidly and may transit waterways at angles to the normal direction of traffic. Ferries may deviate from these routes if necessary. Mariners should exercise caution when transiting between the origin or terminus of a charted ferry route and the actual ferry docking facility. Go to www.sfmx.org for additional information on the Ferry Traffic Routing Protocol.

CAUTION

SUBMARINE PIPELINES AND CABLES

Charted submarine pipelines and submarine cables and submarine pipeline and cable areas are shown as:

Pipeline Area *Cable Area*

Additional uncharted submarine pipelines and submarine cables may exist within the area of this chart. Not all submarine pipelines and submarine cables are required to be buried, and those that were originally buried may have become exposed. Mariners should use extreme caution when operating vessels in depths of water comparable to their draft in areas where pipelines and cables may exist, and when anchoring, dragging, or trawling.

Covered wells may be marked by lighted or unlighted buoys.

ARTICULATED AIDS

An articulated aid to navigation consists of a pipe structure that oscillates around a universal coupling connected to a sinker. The structure is kept upright by the buoyancy of a submerged flotation chamber. It is designed primarily to mark narrow channels in depths of up to 60 feet. All articulated aids are labelled "*Art*".

NOTE Z

NO-DISCHARGE ZONE, 40 CFR 140

Under the Clean Water Act, Section 312, all vessels operating within a No-Discharge Zone (NDZ) are completely prohibited from discharging any sewage, treated or untreated, into the waters. All vessels with an installed marine sanitation device (MSD) that are navigating, moored, anchored, or docked within a NDZ must have the MSD disabled to prevent the overboard discharge of sewage (treated or untreated) or install a holding tank. Regulations for the NDZ are contained in the U.S. Coast Pilot. Additional information concerning the regulations and requirements may be obtained from the Environmental Protection Agency (EPA) web site: http://www.epa.gov/owow/oceans/regulatory/vessel_sewage/.

NOTE C

The U.S. Coast Guard operates a mandatory Vessel Traffic Services (VTS) system in the San Francisco Bay and surrounding areas. Vessel operating procedures and designated radiotelephone frequencies are published in 33 CFR 161, the U.S. Coast Pilot, and/or the VTS User's Manual. Mariners should consult these sources for applicable rules and reporting requirements. Although mandatory VTS participation is limited to the navigable waters of the United States, certain vessels are encouraged or may be required, as a condition of port entry, to report beyond this area to facilitate advance vessel traffic management within the VTS area.

The U.S. Coast Guard operates a Vessel Traffic Service Offshore Vessel Movement Reporting System covering the seaward approaches to San Francisco Bay. Vessels are requested to monitor VTSSF on Channel 12 at 15 and 45 minutes past each hour for broadcast reports of known shipping traffic in the area.

SUPPLEMENTAL INFORMATION

Consult U.S. Coast Pilot 7 for important supplemental information.

Additional information can be obtained at nauticalcharts.noaa.gov.

CAUTION

BASCULE BRIDGE CLEARANCES

For bascule bridges, whose spans do not open to a full upright or vertical position, unlimited vertical clearance is not available for the entire charted horizontal clearance.

PLANE COORDINATE GRID (NAD 1927)

California State Grid, Zone 3, is indicated by dashed ticks at 5,000 foot intervals.

HEIGHTS

Elevations of rocks, bridges, landmarks, and lights are in feet and refer to Mean High Water. Contour and summit elevation values are in feet and refer to Mean Sea Level.

CAUTION

Improved channels shown by broken lines are subject to shoaling, particularly at the edges.

SOURCE DIAGRAM

The outlined areas represent the limits of the most recent hydrographic survey information that has been evaluated for charting. Surveys have been banded in this diagram by date and type of survey. Channels maintained by the U.S. Army Corps of Engineers are periodically resurveyed and are not shown on this diagram. Refer to Chapter 1, United States Coast Pilot.

CAUTION

Temporary changes or defects in aids to navigation are not indicated on this chart. See Local Notice to Mariners.

RADAR REFLECTORS

Radar reflectors have been placed on many floating aids to navigation. Individual radar reflector identification on these aids has been omitted from this chart.

NOTE E

PRECAUTIONARY AREA

Traffic within the Precautionary Area consists of vessels maneuvering on various courses. Vessels transiting the Precautionary Area should, when possible, keep the centerline of the area to port providing for a counterclockwise movement of vessels within the area. Mariners are advised to use extreme caution when navigating within this area.

NOTE D

The City of Richmond is requesting vessels to use extreme caution when turning or anchoring in the vicinity of their 72" diameter sewer pipeline which is located 4700 feet offshore of Point Richmond at a depth of 26 feet below mean lower low water in approximate position 37° 54' 47" N, 122° 25' 08" W.

RACING BUOYS

Racing buoys within the limits of this chart are not shown hereon. Information may be obtained from the U.S. Coast Guard District Offices as racing and other privately maintained buoys are not all listed in the U.S. Coast Guard Light List.

AUTHORITIES

Hydrography and topography by the National Ocean Service, Coast Survey, with additional data from the Corps of Engineers, Geological Survey, U.S. Coast Guard, and National Geospatial-Intelligence Agency.

NOTE B

RECREATION AREAS

Recreation areas are intended primarily for use by recreation vessels. Such areas should not be utilized by vessels 300 gross tons or more for through passage or for any other purpose, except in case of emergency or special circumstances.

POLLUTION REPORTS

Report all spills of oil and hazardous substances to the National Response Center via 1-800-424-8802 (toll free), or to the nearest U.S. Coast Guard facility if telephone communication is impossible (33 CFR 153).

AIDS TO NAVIGATION

Consult U.S. Coast Guard Light List for supplemental information concerning aids to navigation.

HORIZONTAL DATUM

The horizontal reference datum of this chart is North American Datum of 1983 (NAD 83), which for charting purposes is considered equivalent to the World Geodetic System 1984 (WGS 84). Geographic positions referred to the North American Datum of 1927 must be corrected an average of 0.269" southward and 3.899" westward to agree with this chart.

WARNING

The prudent mariner will not rely solely on any single aid to navigation, particularly on floating aids. See U.S. Coast Guard Light List and U.S. Coast Pilot for details.

CAUTION

The currents are variable and uncertain, tide rips, swirls, or eddies may occur in the Golden Gate and as far eastward as Alcatraz Island and Racoon Strait.

CAUTION

This chart has been corrected from the Notice to Mariners (NM) published weekly by the National Geospatial-Intelligence Agency and the Local Notice to Mariners (LNM) issued periodically by each U.S. Coast Guard district to the dates shown in the lower left hand corner. Chart updates corrected from Notice to Mariners published after the dates shown in the lower left hand corner are available at nauticalcharts.noaa.gov.

This nautical chart has been designed to promote safe navigation. The National Ocean Service encourages users to submit corrections, additions, or comments for improving this chart to the Chief, Marine Chart Division (N/CS2), National Ocean Service, NOAA, Silver Spring, Maryland 20910-3282.

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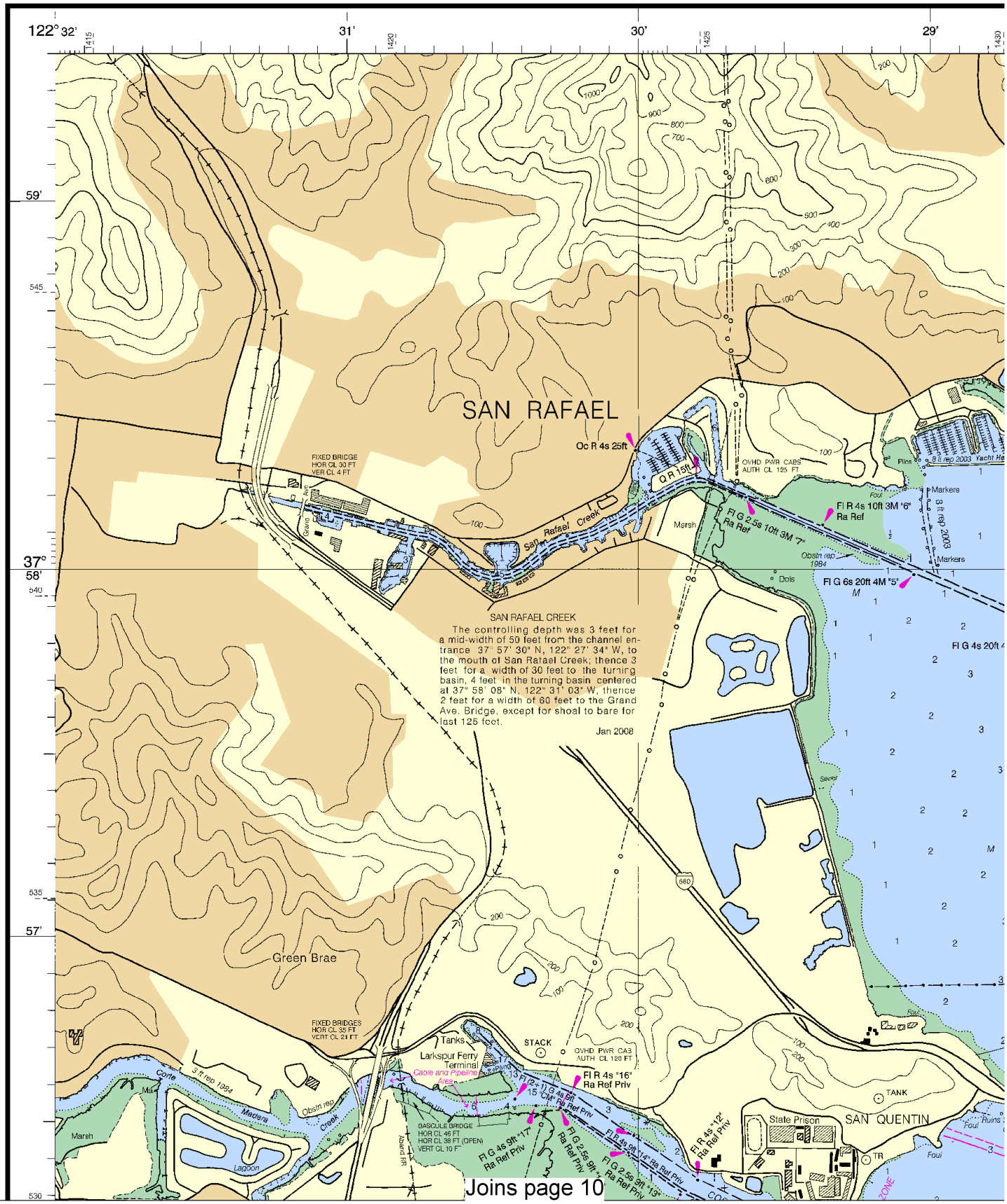
18653



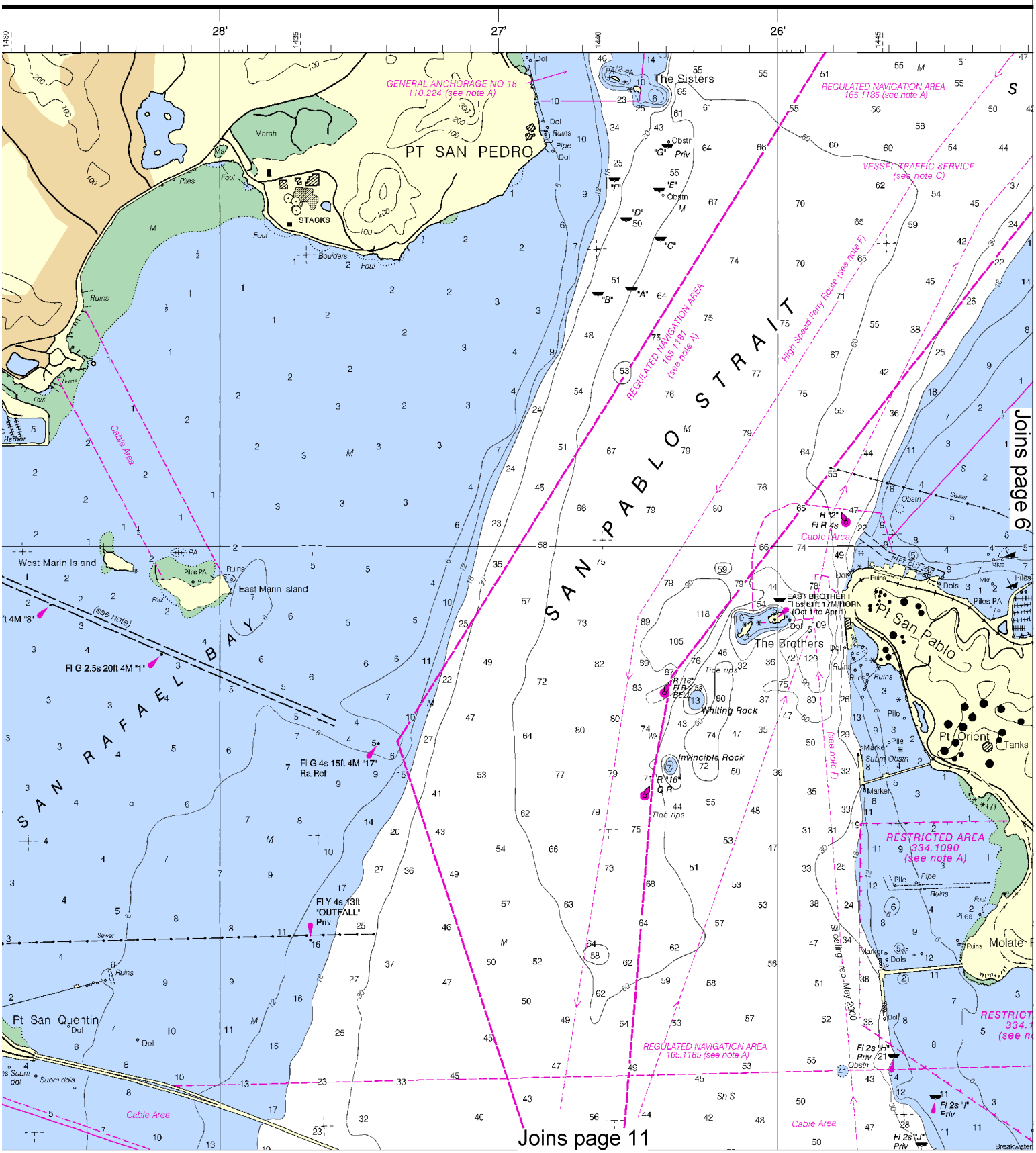
4

North

Printed at reduced scale. ~~SCALE 1:20,000~~ See Note on page 5.

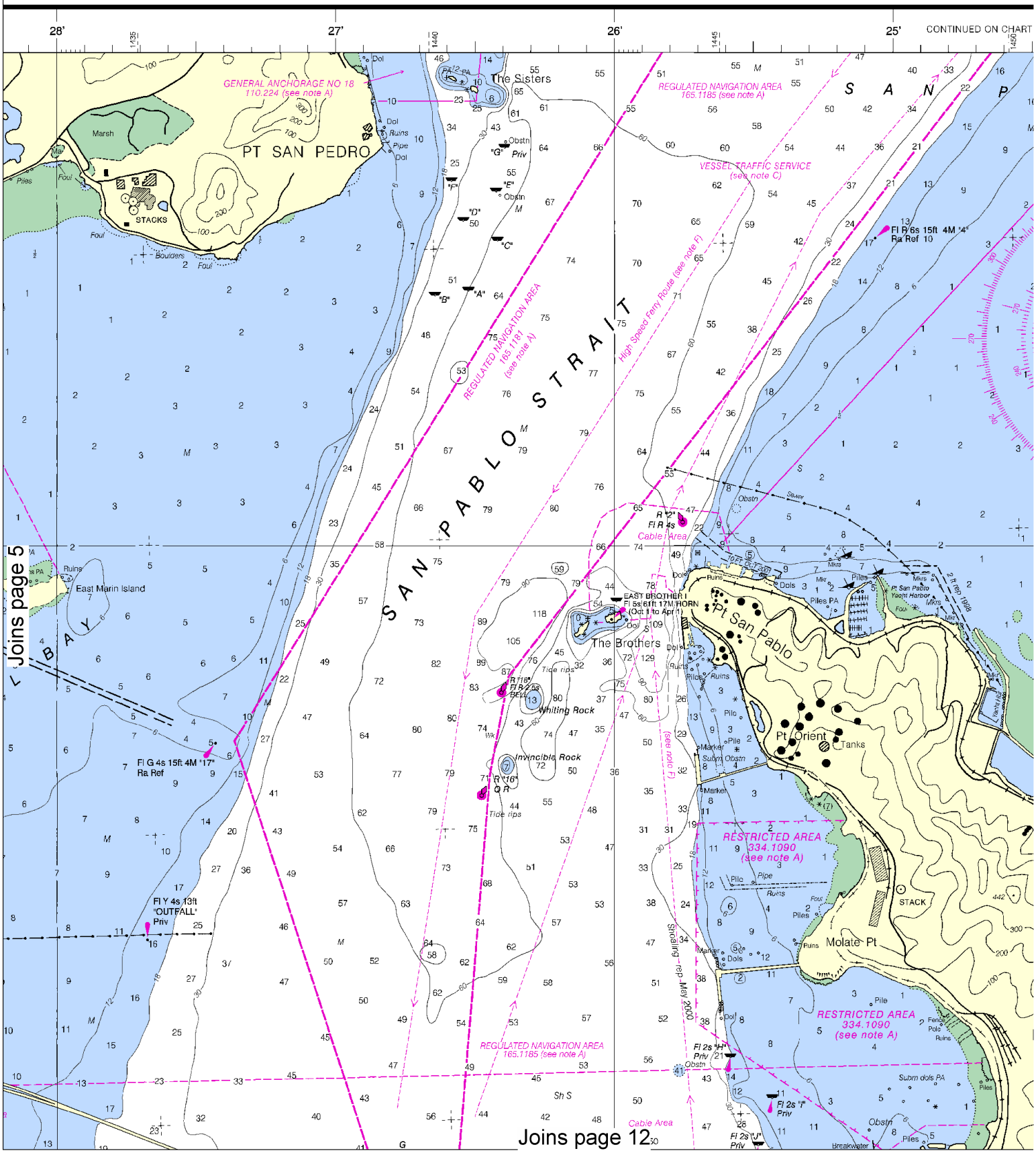
Nautical Miles: 0 — 1 — 1 ½

Yards: 500 — 0 — 500 — 1000 — 1500 — 2000 — 2500



This BookletChart was reduced to 75% of the original chart scale.
The new scale is 1:26667. Barscales have also been reduced and
are accurate when used to measure distances in this BookletChart.

CONTINUED ON CHART



North

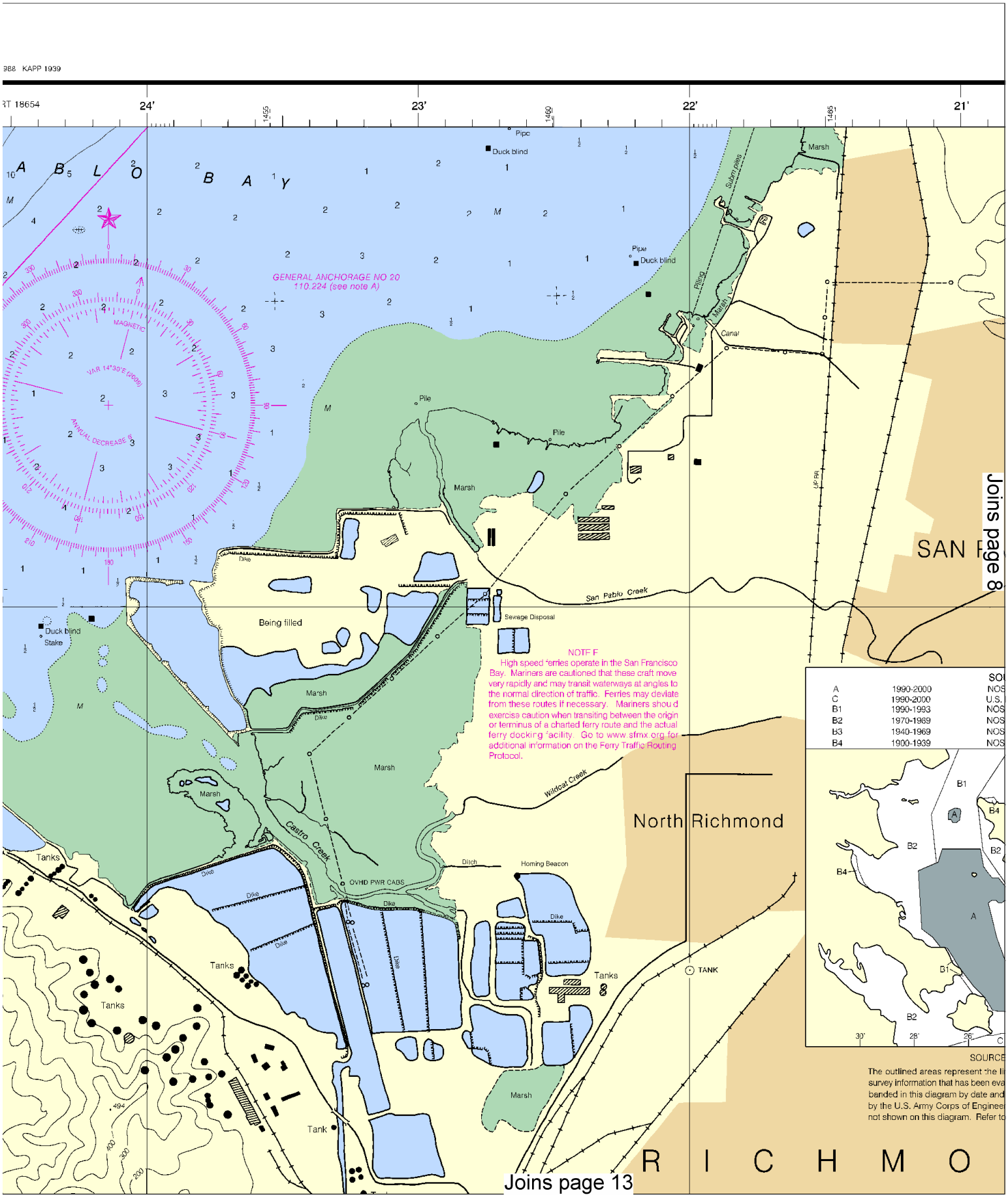
Printed at reduced scale. ~~SCALE 1:20,000~~ See Note on page 5.

Nautical Miles

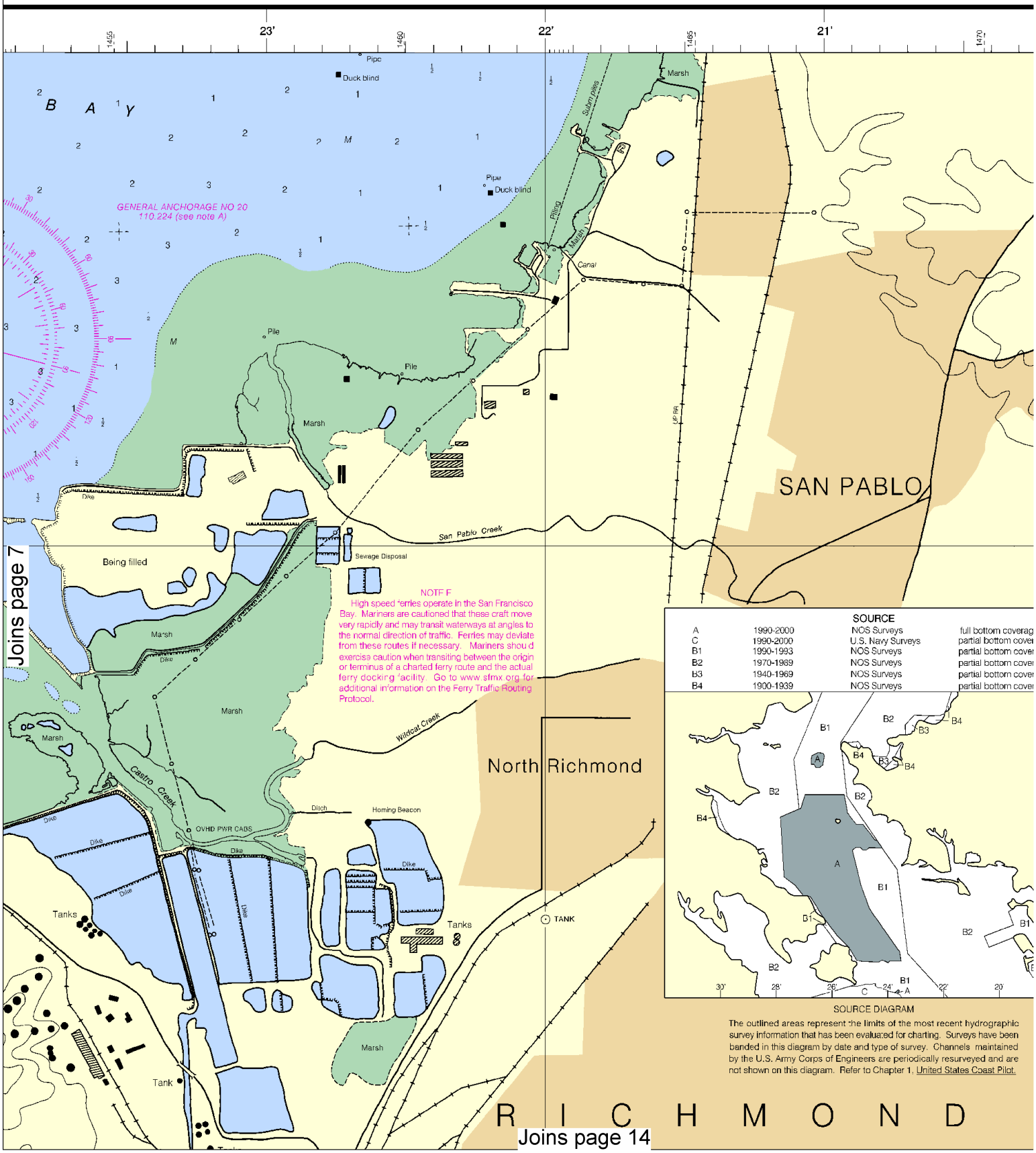
0 1 1 ½

Yards

500 0 500 1000 1500 2000 2500



This BookletChart has been updated with: Coast Guard Local Notice To Mariners: 0510 2/2/2010,
NGA Weekly Notice to Mariners: 0910 2/27/2010,
Canadian Coast Guard Notice to Mariners: n/a .



North

Printed at reduced scale. ~~SCALE 1:20,000~~ See Note on page 5.

Nautical Miles

0 1 1 ½

Yards

500 0 500 1000 1500 2000 2500

LOGARITHMIC SPEED SCALE

2 3 4 5 6 7 8 9 10 15 20 25 30 40 50 60

To find SPEED, place one point of dividers on distance run (in any unit) and the other on minutes run. Without changing divider spread, place right point on 60 and left point will then indicate speed in units per hour. Example: with 4.0 nautical miles run in 15 minutes, the spread is 16.0 knots

SOUNDINGS IN FEET

20' 19' 122° 18' 17'

1475 1480 1485

37° 59'24.0" N

122° 17'00.0" W

SCALE 1:20,000

Nautical Miles

½ 0 ½ 1 1½

Statute Miles

½ 0 ½ 1 1½

Yards

500 0 500 1000 1500 2000 2500

Meters

500 0 500 1000 1500 2000 2500

59' 545

540

37° 58'

535

57'

530

THE NATION'S CHARTMAKER SINCE 1807

UNITED STATES

CALIFORNIA - WEST COAST

SAN FRANCISCO BAY

ANGEL ISLAND TO POINT SAN PEDRO

Mercator Projection
Scale 1:20,000 at Lat 37° 55'

North American Datum of 1983
(World Geodetic System 1984)

SOUNDINGS IN FEET
AT MEAN LOWER LOW WATER

Additional information can be obtained at nauticalcharts.noaa.gov.

age
verage
verage
verage
verage
verage

37°58'

56'

54'

37°52'

B1

122°18'

RICHMOND HARBOR AND SOUTHAMPTON SHOAL CHANNEL DEPTHS

TABULATED FROM SURVEYS BY THE CORPS OF ENGINEERS - SURVEYS TO SEP 2009

CONTROLLING DEPTHS FROM SEAWARD IN FEET AT MEAN LOWER LOW WATER (MLLW)						PROJECT DIMENSIONS		
NAME OF CHANNEL	LEFT OUTSIDE QUARTER	LEFT INSIDE QUARTER	RIGHT INSIDE QUARTER	RIGHT OUTSIDE QUARTER	DATE OF SURVEY	WIDTH (FEET)	LENGTH (NAUT. MILES)	DEPTH MLLW (FEET)
SOUTHAMPTON SHOAL CHANNEL	44	46	46	45	7-09	600	1.1	45
RICHMOND HARBOR								
ENTRANCE CHANNEL	35	37	36	36	6-09	600-550	1.0	35
POINT POTRERO REACH	36	36	36	35	6-09	500-600	1.4	35
POINT POTRERO TURN	36	37	37	36	6-09	600-1250	0.6	35
HARBOR CHANNEL	37	38	38	37	6-09	850-200	0.5	35
SANTA FE CHANNEL	27	29	29	26	1-08; 9-09	200	0.5	35-30
TURNING BASIN	27	28	27	21	9-09	200-500	0.16	30

NOTE - CONSULT THE CORPS OF ENGINEERS FOR CHANGES SUBSEQUENT TO THE ABOVE INFORMATION

CAUTION

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PLANE COORDINATE GRID (NAD 1927)

California State Grid, Zone 3, is indicated by dashed ticks at 5,000 foot intervals.

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RICHMOND - SAN RAFAEL BRIDGE

3 fixed white lights are mounted vertically over fixed green lights at the center of the main navigation channel spans.

Clearances of the main navigation channel spans.

	WEST CHAN	EAST CHAN
HOR CL	1000 FT	970 FT
VERT CL	185 FT	135 FT

CAUTION

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AIDS TO NAVIGATION

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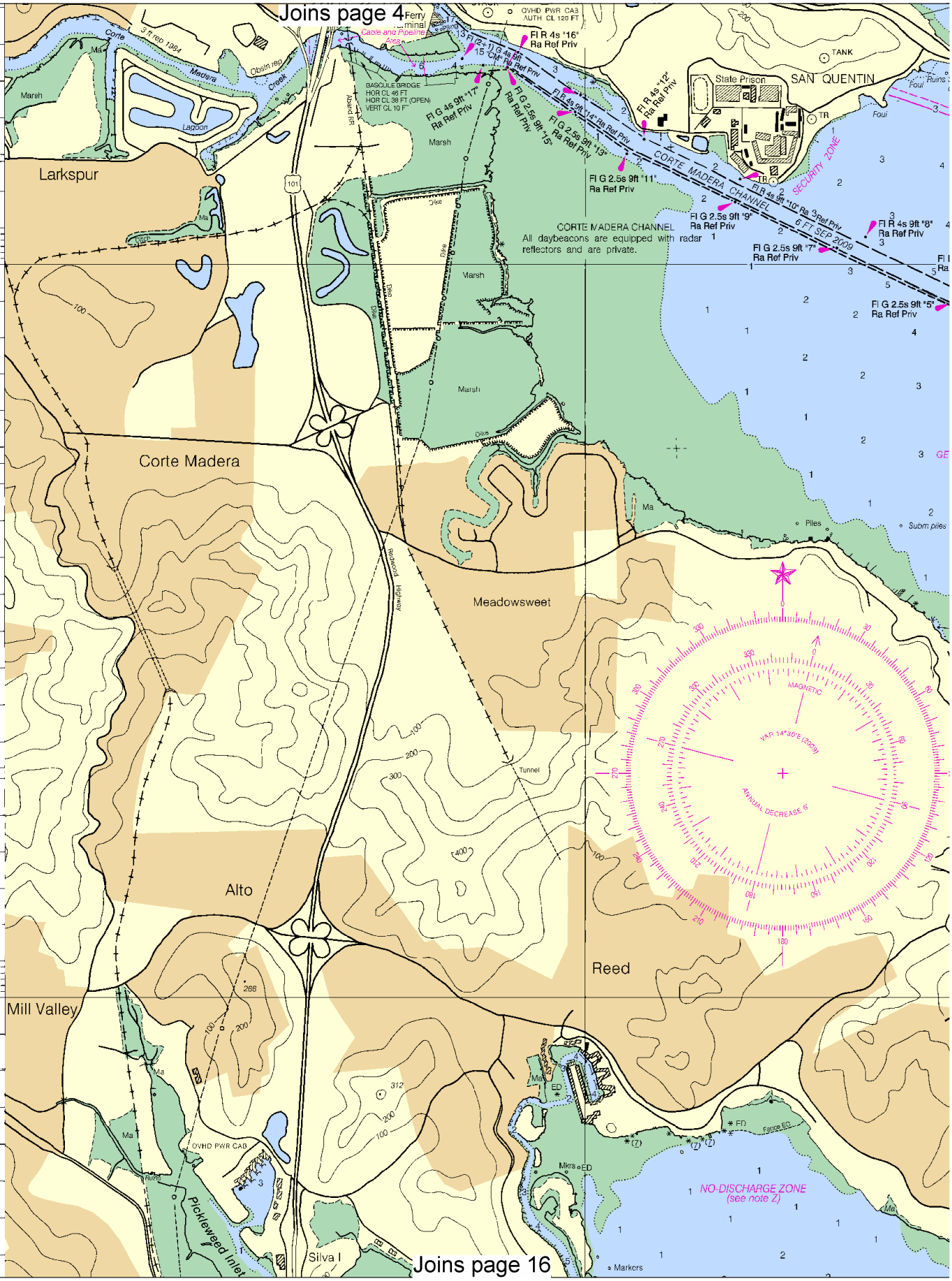
AUTHORITIES

Hydrography and topography by the National Ocean Service, Coast Survey, from the Corps of Engineers, Geological Survey, U.S. Coast Geospatial-Intelligence Agency.

Joins page 15

Joins page 4



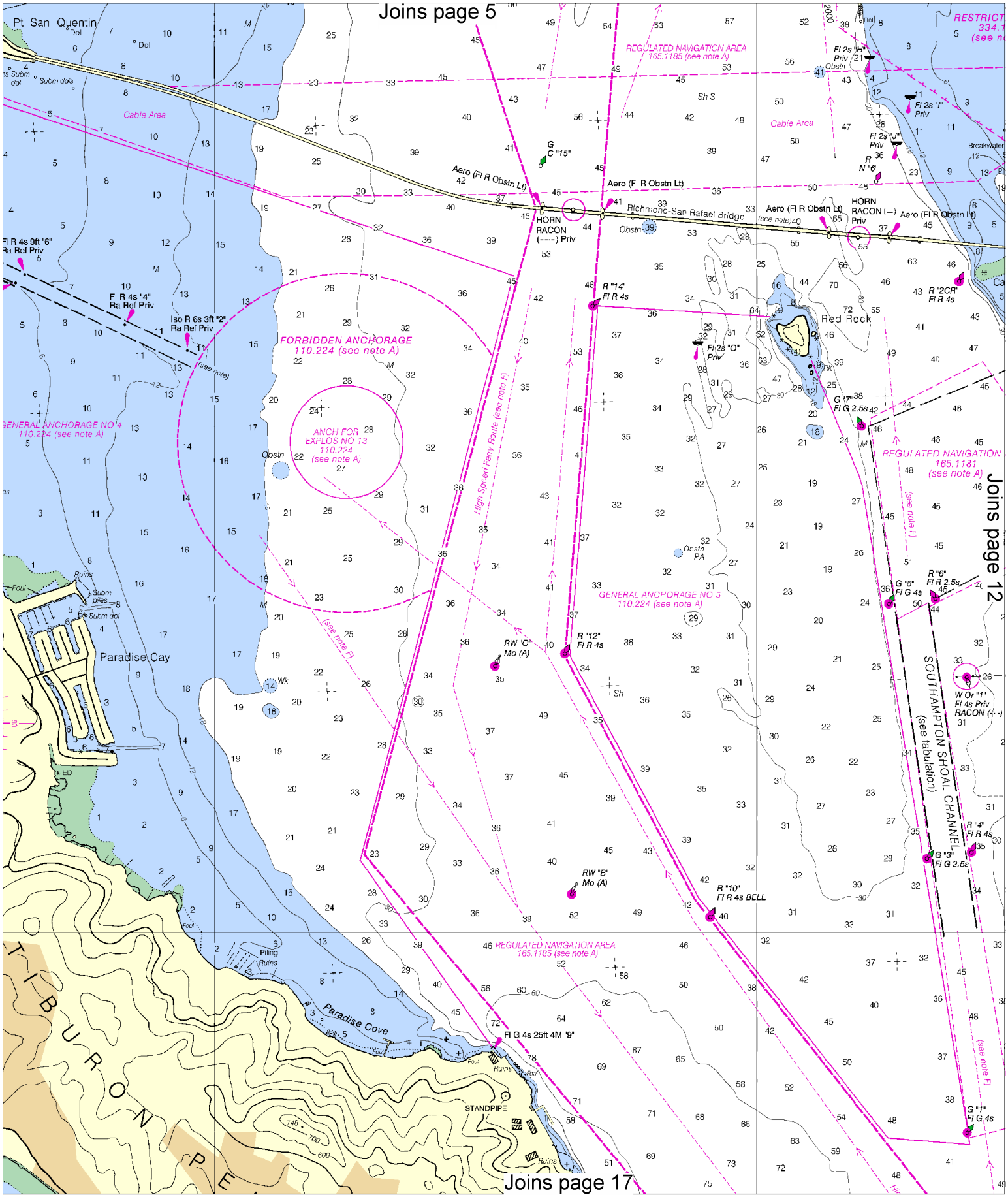
Joins page 16

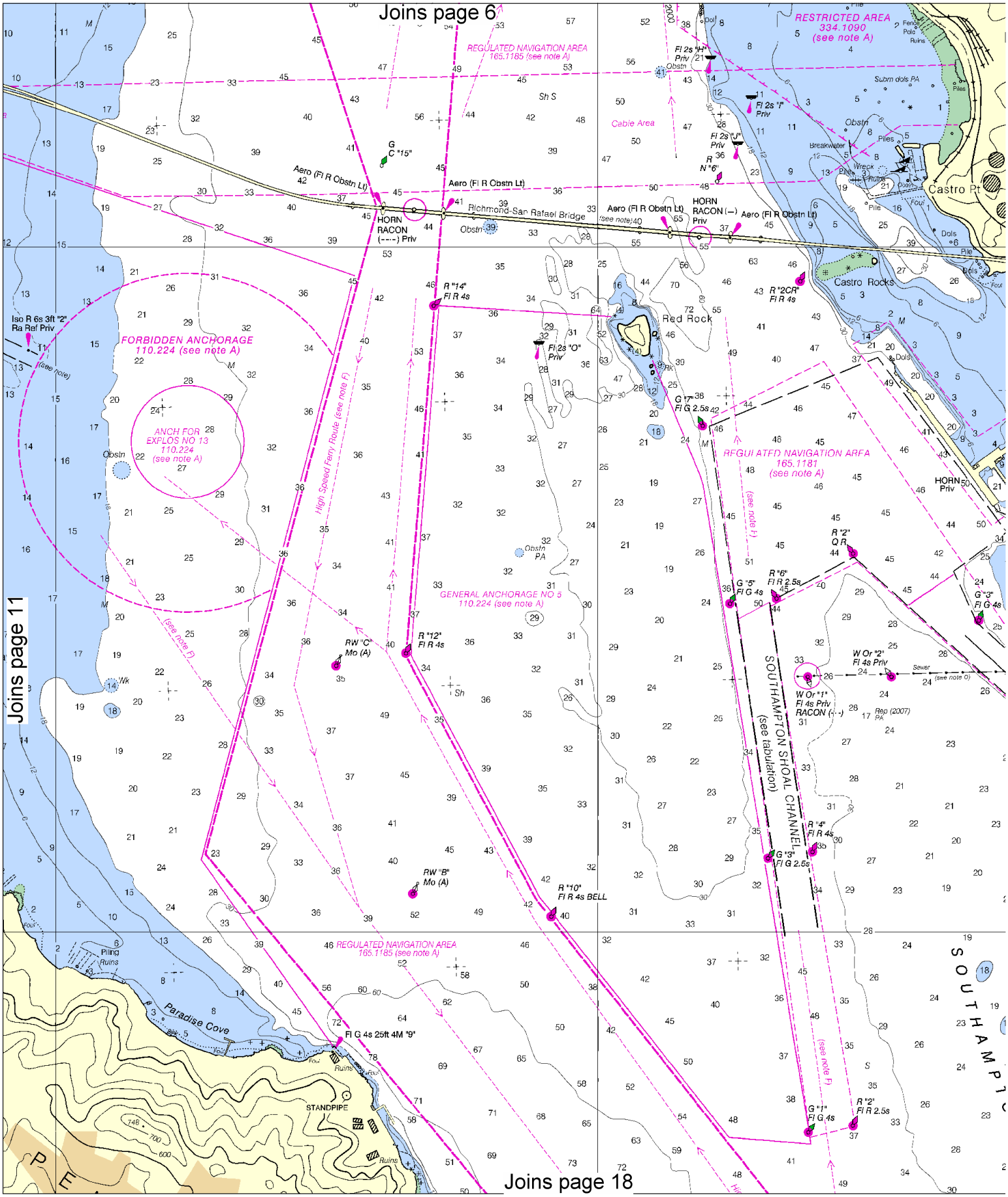
North

Printed at reduced scale. ~~SCALE 1:20,000~~ See Note on page 5.

Nautical Miles: 0 1 1½

Yards: 500 0 500 1000 1500 2000 2500


Joins page 5
Joins page 12
Joins page 17
Pt San Quentin
Cable Area
REGULATED NAVIGATION AREA 165.1185 (see note A)
Aero (Fl R Obstn Lt)
HORN RACON (----) Priv
Richmond-San Rafael Bridge
Fl R 4s 9ft "6" Ra Ref Priv
Fl R 4s "4" Ra Ref Priv
Iso R 6s 3ft "2" Ra Ref Priv
FORBIDDEN ANCHORAGE 110.224 (see note A)
ANCH FOR EXPLOS NO 13 110.224 (see note A)
GENERAL ANCHORAGE NO 4 110.224 (see note A)
High Speed Ferry Route (see note F)
Red Rock
GENERAL ANCHORAGE NO 5 110.224 (see note A)
REGULATED NAVIGATION 165.1181 (see note A)
SOUTHAMPTON SHOAL CHANNEL (see tabulation)
Paradise Cay
Paradise Cove
Fl G 4s 25ft 4M "9"
STANDPIPE
TIBURON PE



North

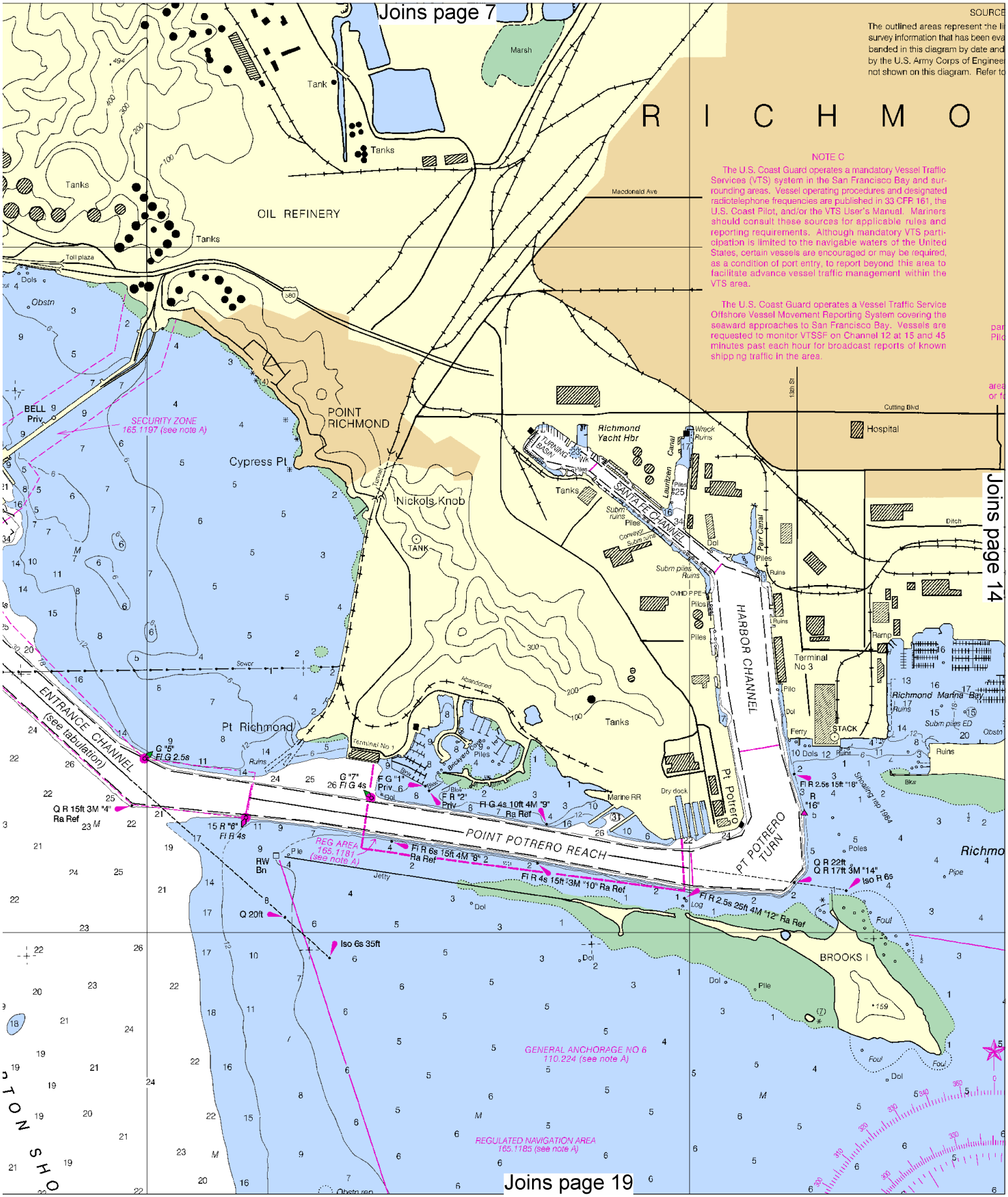
Printed at reduced scale. ~~SCALE 1:20,000~~ See Note on page 5.

Nautical Miles

0 1 1½

Yards

500 0 500 1000 1500 2000 2500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Joins page 14
Joins page 19
R I C H M O
SOURCE
The outlined areas represent the li
survey information that has been eva
banded in this diagram by date and
by the U.S. Army Corps of Enginee
not shown on this diagram. Refer to
NOTE C
The U.S. Coast Guard operates a mandatory Vessel Traffic Services (VTS) system in the San Francisco Bay and surrounding areas. Vessel operating procedures and designated radiotelephone frequencies are published in 33 CFR 161, the U.S. Coast Pilot, and/or the VTS User's Manual. Mariners should consult these sources for applicable rules and reporting requirements. Although mandatory VTS participation is limited to the navigable waters of the United States, certain vessels are encouraged or may be required, as a condition of port entry, to report beyond this area to facilitate advance vessel traffic management within the VTS area.
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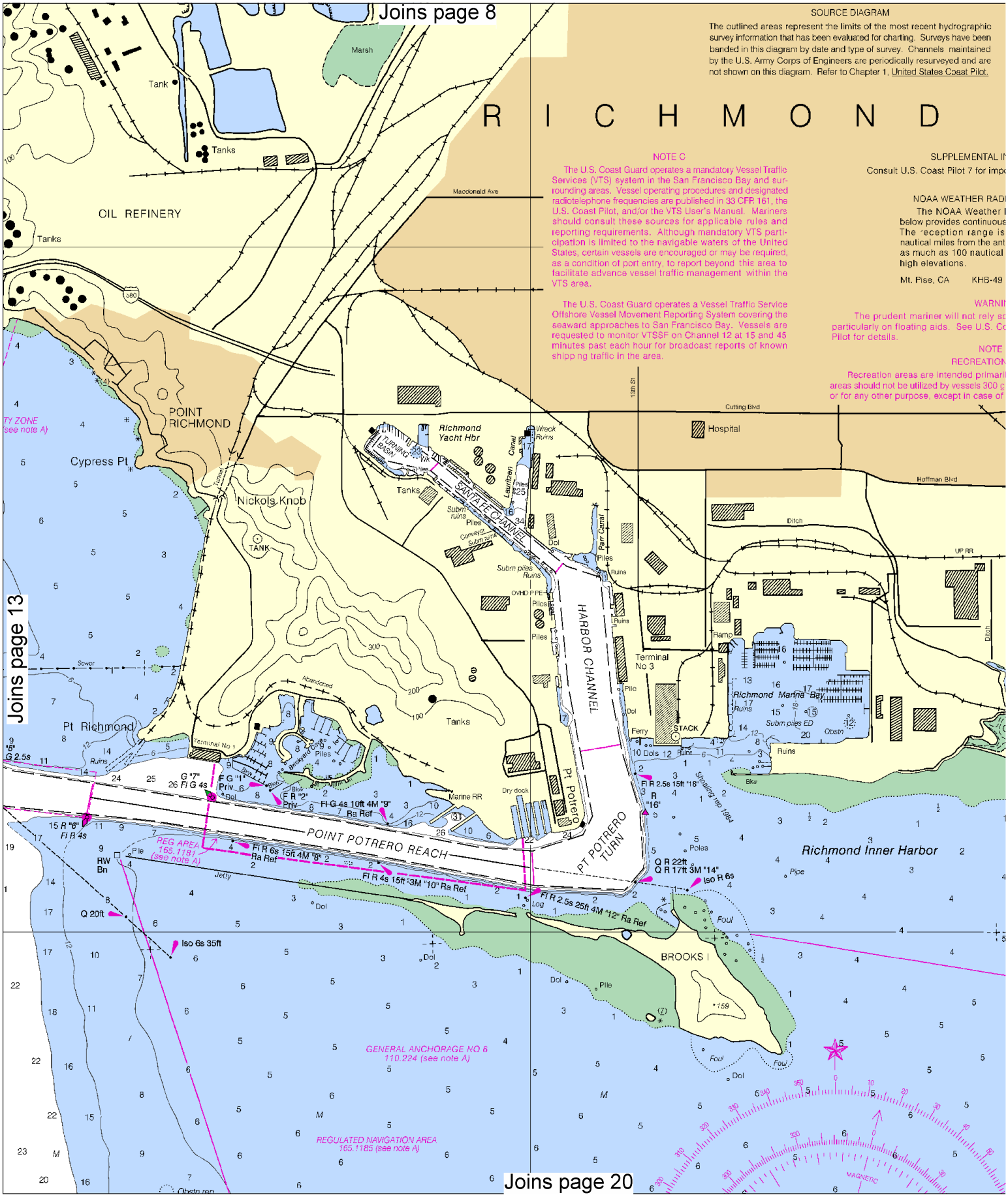
OIL REFINERY
Tanks
Marsh
Toll plaza
Macdonald Ave
Cutting Blvd
Hospital
POINT RICHMOND
Cypress Pt
Nickols Knob
SECURITY ZONE 165.1197 (see note A)
Richmond Yacht Hbr
TURNING BASIN
SANTA FE CHANNEL
Laurritzen Canal
Parr Canal
HARBOR CHANNEL
Terminal No 3
Richmond Marina Bay
STACK
Pt Potrero
PT POTRERO TURN
POINT POTRERO REACH
ENTRANCE CHANNEL (see tabulation)
Pt Richmond
Terminal No 1
Marine RR
Dry dock
REG AREA 165.1181 (see note A)
GENERAL ANCHORAGE NO 6 110.224 (see note A)
REGULATED NAVIGATION AREA 165.1185 (see note A)
BROOKS I
BELL Priv
G "5" Fl G 2.5s
Q R 15ft 3M "4" Ra Ref
R "6" Fl R 4s
G "7" Fl G 4s
F G "1" Priv
F R "2" Priv
Fl G 4s 10ft 4M "9" Ra Ref
Fl R 6s 15ft 4M "8" Ra Ref
Fl R 4s 15ft 3M "10" Ra Ref
Fl R 2.5s 25ft 4M "12" Ra Ref
Fl R 2.5s 15ft "18"
R "16"
Q R 22ft
Q R 17ft 3M "14"
Iso R 6s
Q 20ft
Iso 6s 35ft
RW Bn



North

Printed at reduced scale. ~~SCALE 1:20,000~~ See Note on page 5.

Nautical Miles: 0 — 1 — 1½

Yards: 500 — 0 — 500 — 1000 — 1500 — 2000 — 2500

Joins page 9

Elevations of rocks, bridges, landmarks, an
to Mean High Water. Contour and summi: el
refer to Mean Sea Level.

RICHMOND - SAN RAFAEL BRIDGE

3 fixed white lights are mounted vertically over fixed green lights at the center of the main navigation channel spans.

Clearances of the main navigation channel spans.

	WEST CHAN	EAST CHAN
HOR CL	1000 FT	970 FT
VERT CL	185 FT	135 FT

CAUTION

BASCULE BRIDGE CLEARANCES

For bascule bridges, whose spans do not open to a full upright or vertical position, unlimited vertical clearance is not available for the entire charted horizontal clearance.

NOTE Z

NO-DISCHARGE ZONE, 40 CFR 140

Under the Clean Water Act, Section 312, all vessels operating within a No-Discharge Zone (NDZ) are completely prohibited from discharging any sewage, treated or untreated, into the waters. All vessels with an installed marine sanitation device (MSD) that are navigating, moored, anchored, or docked within a NDZ must have the MSD disabled to prevent the overboard discharge of sewage (treated or untreated) or install a holding tank. Regulations for the NDZ are contained in the U.S. Coast Pilot. Additional information concerning the regulations and requirements may be obtained from the Environmental Protection Agency (EPA) web site: http://www.epa.gov/owow/oceans/regulatory/vessel_sewage/.

NOTE A

Navigation regulations are published in Chapter 2, U.S. Coast Pilot 7. Additions or revisions to Chapter 2 are published in the Notice to Mariners. Information concerning the regulations may be obtained at the Office of the Commander, 11th Coast Guard District in Alameda, California or at the Office of the District Engineer, Corps of Engineers in San Francisco, California.

Refer to charted regulation section numbers.

Racing buoys within the limits of this chart are not shown hereon. Information may be obtained from the U.S. Coast Guard District Offices as racing and other privately maintained buoys are not all listed in the U.S. Coast Guard Light List.

RADAR REFLECTORS

Radar reflectors have been placed on many floating aids to navigation. Individual radar reflector identification on these aids has been omitted from this chart.

AUTHORITIES

Hydrography and topography by the National Ocean Service, Coast Survey, with additional data from the Corps of Engineers, Geological Survey, U.S. Coast Guard, and National Geospatial-Intelligence Agency.

POLLUTION REPORTS

Report all spills of oil and hazardous substances to the National Response Center via 1-800-424-8802 (toll free), or to the nearest U.S. Coast Guard facility if telephone communication is impossible (33 CFR 153).

For Symbols and Abbreviations see Chart No. 1

CAUTION

Limitations on the use of radio signals as aids to marine navigation can be found in the U.S. Coast Guard Light Lists and National Geospatial-Intelligence Agency Publication 117.

Radio direction-finder bearings to commercial broadcasting stations are subject to error and should be used with caution.

Station positions are shown thus:

⊙(Accurate location) ○(Approximate location)

NOTE D

The City of Richmond is requesting vessels to use extreme caution when turning or anchoring in the vicinity of their 72" diameter sewer pipeline which is located 4700 feet offshore of Point Richmond at a depth of 26 feet below mean lower low water in approximate position 37° 54' 47" N, 122° 25' 08" W.

NOTE E

PRECAUTIONARY AREA

Traffic within the Precautionary Area consists of vessels maneuvering on various courses. Vessels transiting the Precautionary Area should, when possible, keep the centerline of the area to port providing for a counterclockwise movement of vessels within the area. Mariners are advised to use extreme caution when navigating within this area.

TIDAL INFORMATION

PLACE		Height referred to datum of soundings (MLLW)		
NAME	(LAT/LONG)	Mean Higher High Water	Mean High Water	Mean Low Water
		feet	feet	foot
Sausalito	(37°51'N/122°29'W)	5.7	5.1	1.1
Berkeley	(37°52'N/122°18'W)	5.9	5.3	1.1
Angel Island (west side)	(37°52'N/122°27'W)	5.6	5.0	1.1
Angel Island (East Garrison)	(37°52'N/122°25'W)	5.9	5.3	1.2
Point Chauncey	(37°54'N/122°27'W)	5.7	5.1	1.1
Richmond (Inner Harbor)	(37°55'N/122°21'W)	6.0	5.4	1.1
Point San Quentin	(37°57'N/122°29'W)	5.8	5.2	1.1

Dashes (- - -) located in datum columns indicate unavailable datum values for a tide station. Real-time water levels, tide predictions, and tidal current predictions are available on the Internet from http://tidesandcurrents.noaa.gov.

(Sep 2009)

HORIZONTAL DATUM

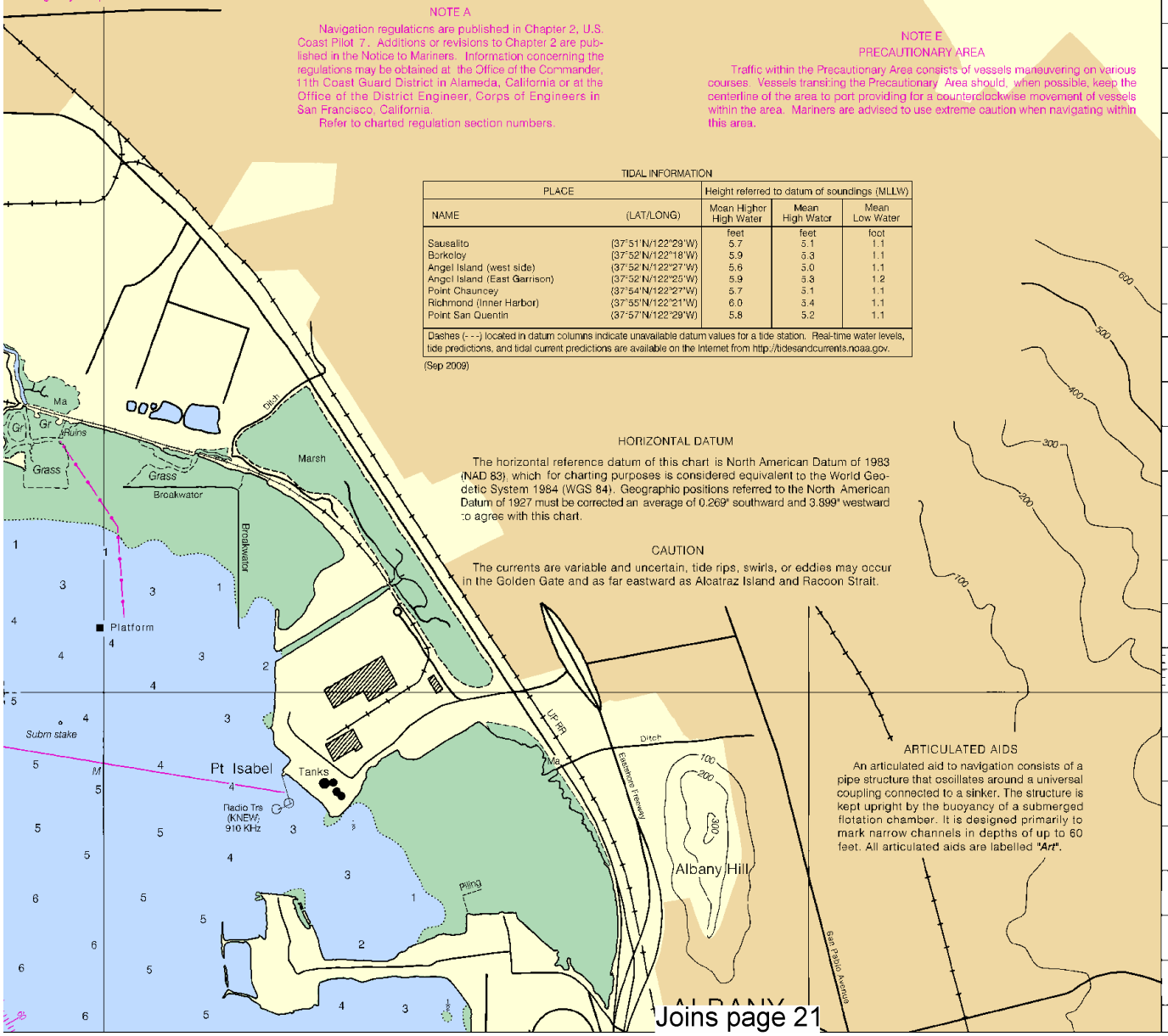
The horizontal reference datum of this chart is North American Datum of 1983 (NAD 83), which for charting purposes is considered equivalent to the World Geodetic System 1984 (WGS 84). Geographic positions referred to the North American Datum of 1927 must be corrected an average of 0.269" southward and 3.899" westward to agree with this chart.

CAUTION

The currents are variable and uncertain, tide rips, swirls, or eddies may occur in the Golden Gate and as far eastward as Alcatraz Island and Racoon Strait.

ARTICULATED AIDS

An articulated aid to navigation consists of a pipe structure that oscillates around a universal coupling connected to a sinker. The structure is kept upright by the buoyancy of a submerged flotation chamber. It is designed primarily to mark narrow channels in depths of up to 60 feet. All articulated aids are labelled "*Art*".



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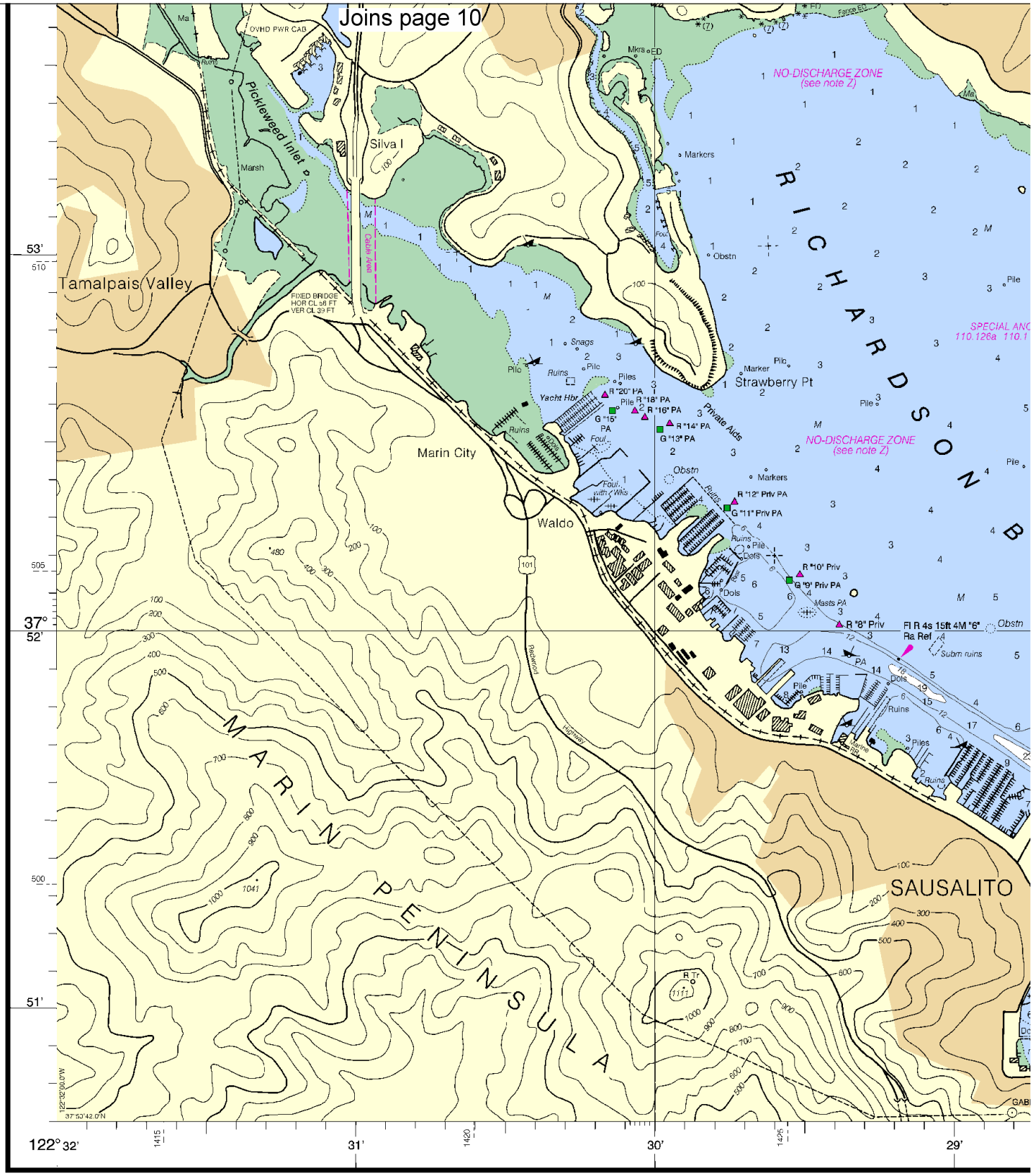

11th Ed., Oct./ 09 ■ Corrected through NM Oct. 24/09
Corrected through LNM Oct. 13/09

18653

CAUTION

This chart has been corrected from the Notice to Mariners (NM) published weekly by the National Geospatial-Intelligence Agency and the Local Notice to Mariners (LNM) issued periodically by each U.S. Coast Guard district to the dates shown in the lower left hand corner. Chart updates corrected from Notice to Mariners published after the dates shown in the lower left hand corner are available at nauticalcharts.noaa.gov.

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North

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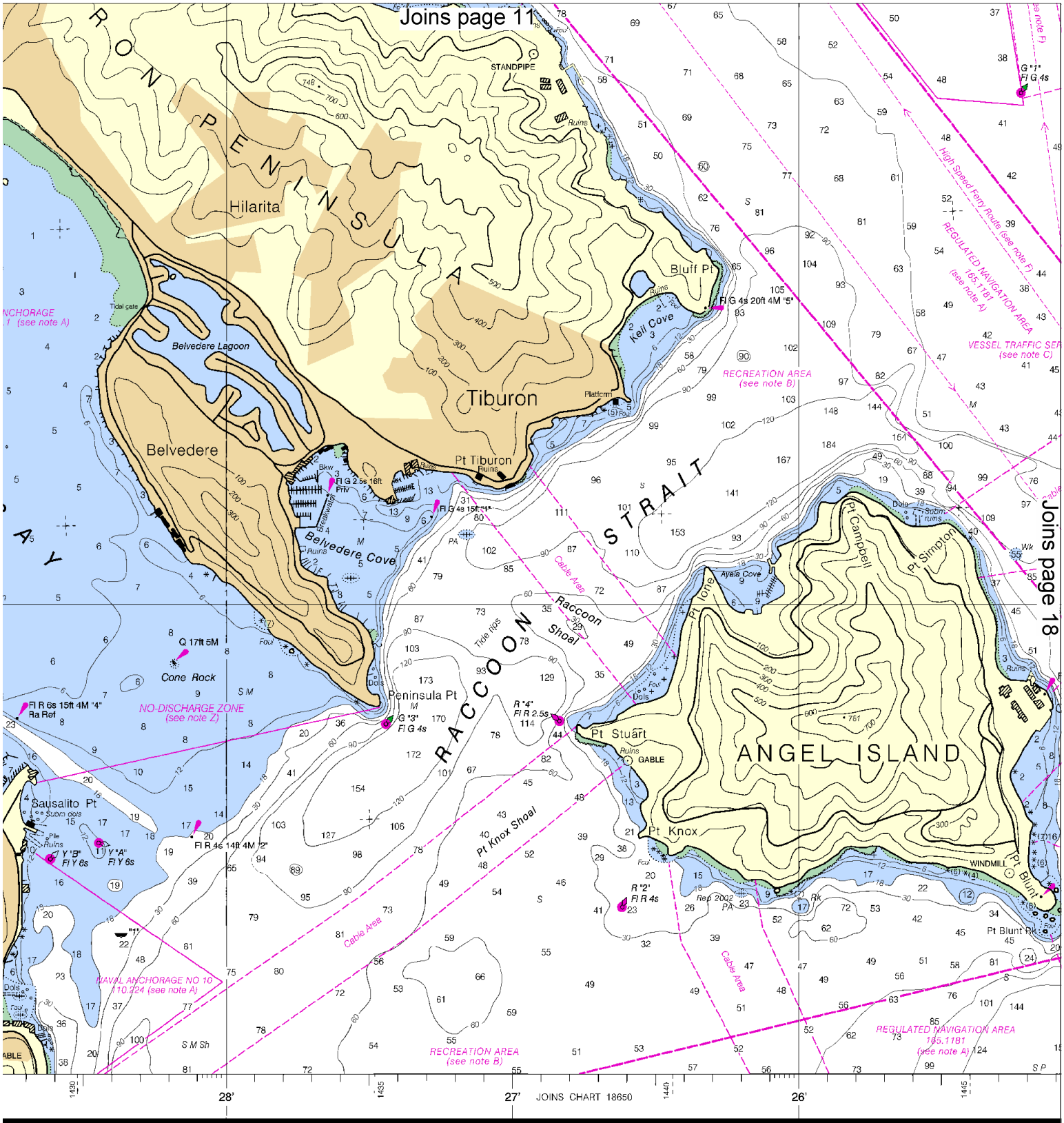
Nautical Miles: 0 1 1½

Yards: 500 0 500 1000 1500 2000 2500



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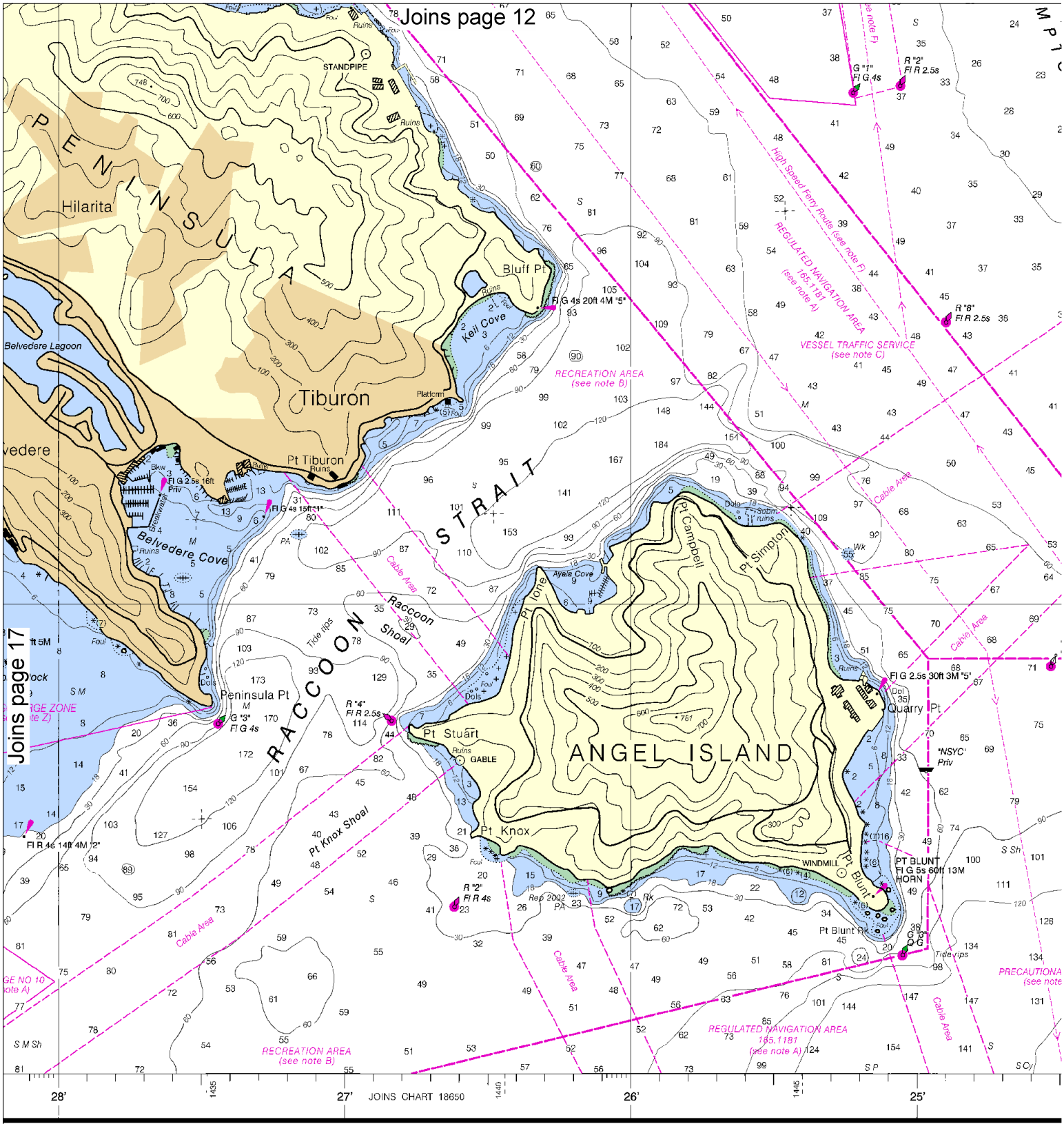

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North

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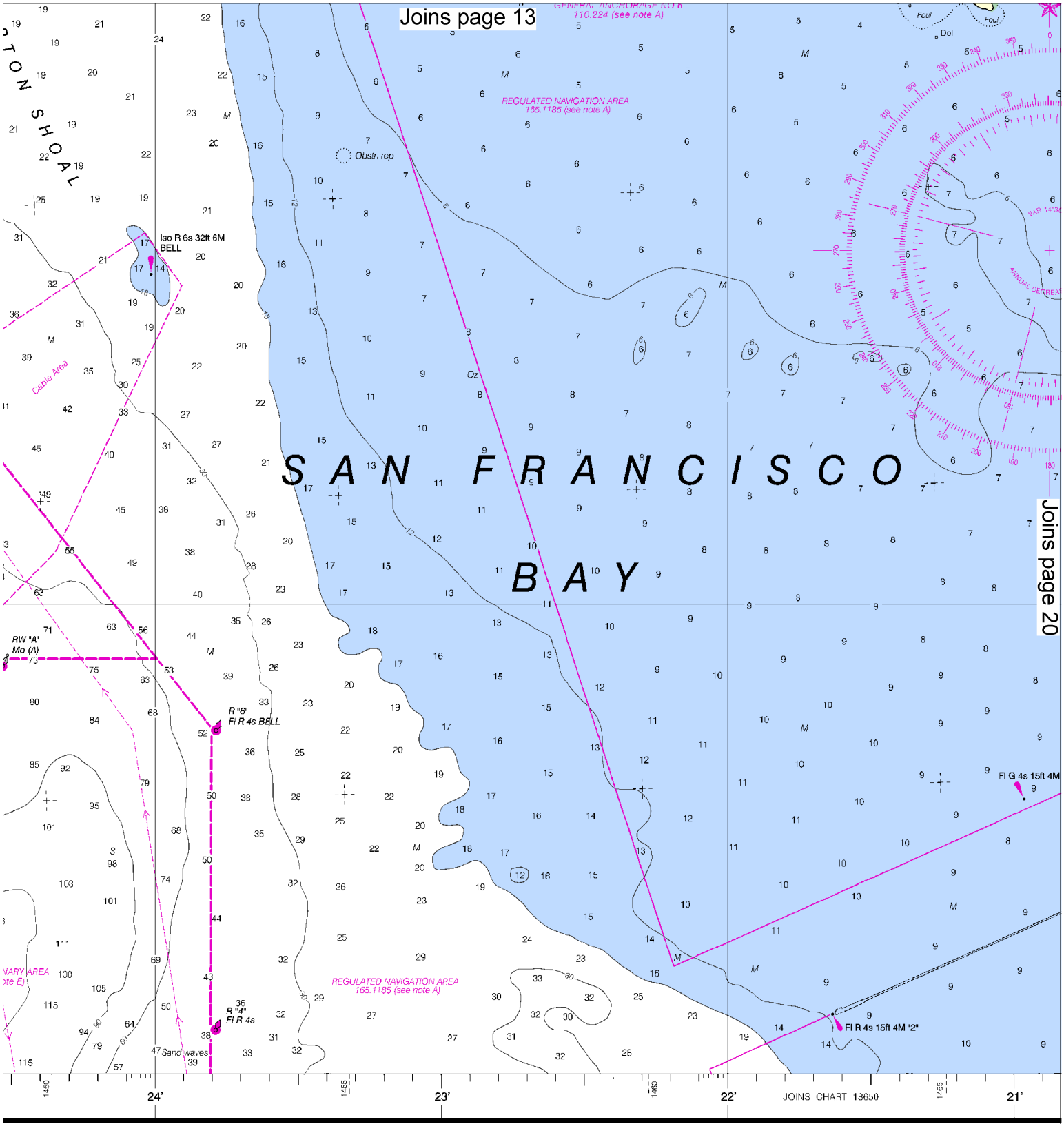
Nautical Miles: 0 — 1 — 1½

Yards: 500 — 0 — 500 — 1000 — 1500 — 2000 — 2500



Washington, D.C.
NT OF COMMERCE
TMOSPHERIC ADMINISTRATION
OCEAN SERVICE
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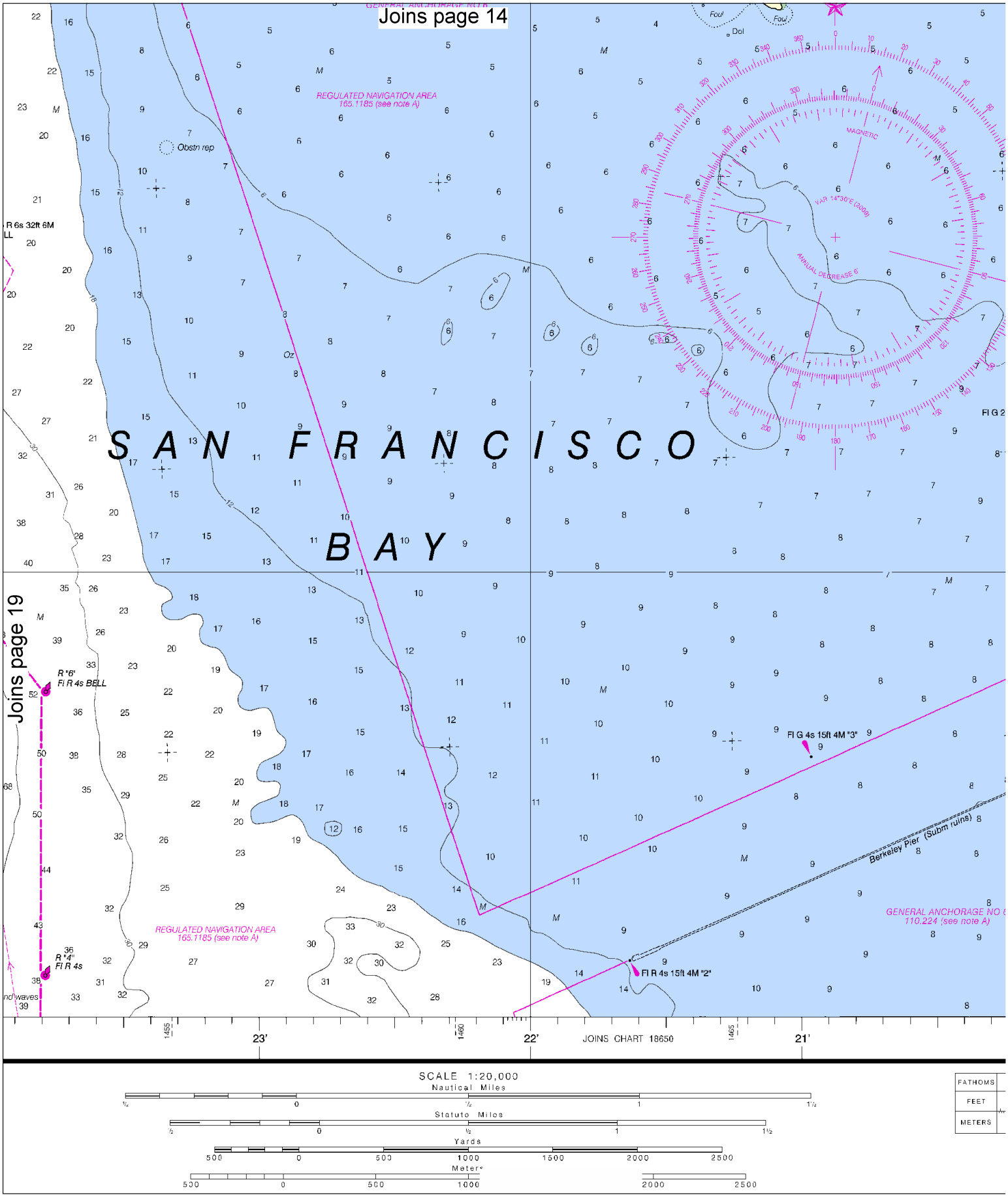
Nautical Miles

Statute Miles

Yards



North

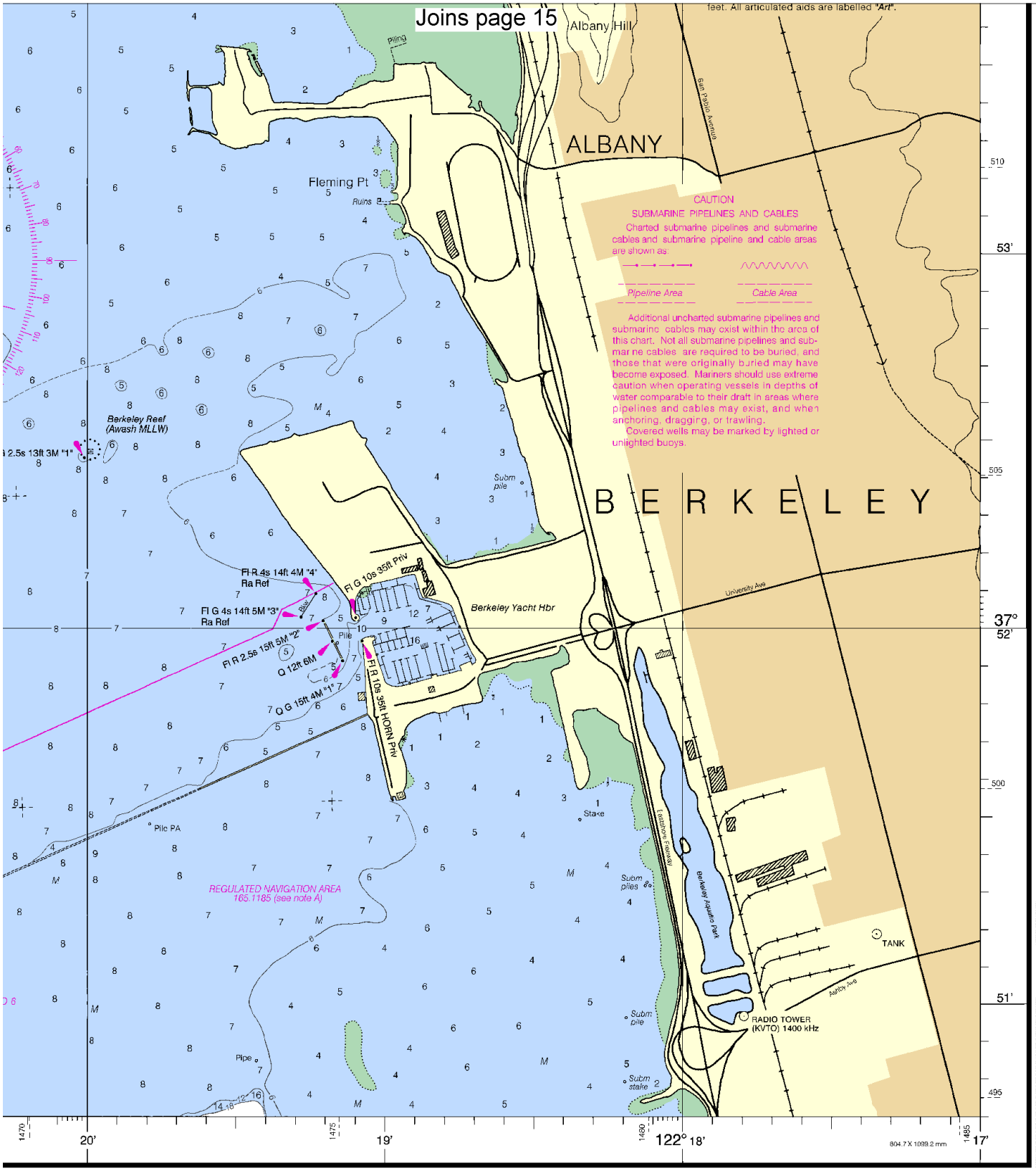
Printed at reduced scale. ~~SCALE 1:20,000~~ See Note on page 5.

Nautical Miles

0 1 1½

Yards

500 0 500 1000 1500 2000 2500



Angel Island to Pt San Pedro

SOUNDINGS IN FEET - SCALE 1:20,000

18653

ED NO. 11

NSN 7642014014992

NGA REFERENCE NO. 18AHA18653

EMERGENCY INFORMATION

VHF Marine Radio channels for use on the waterways:

Channel 6 – Inter-ship safety communications.
Channel 9 – Communications between boats and ship-to-coast.
Channel 13 – Navigation purposes at bridges, locks, and harbors.
Channel 16 – Emergency, distress and safety calls to Coast Guard and others, and to initiate calls to other vessels. Contact the other vessel, agree to another channel, and then switch.
Channel 22A – Calls between the Coast Guard and the public. Severe weather warnings, hazards to navigation and safety warnings are broadcast here.
Channels 68, 69, 71, 72 & 78A – Recreational boat channels.

Distress Call Procedures

1. Make sure radio is on.
2. Select Channel 16.
3. Press/Hold the transmit button.
4. Clearly say: "MAYDAY, MAYDAY, MAYDAY."
5. Also give: Vessel Name and/or Description; Position and/or Location; Nature of Emergency; Number of People on Board.
6. Release transmit button.
7. Wait for 10 seconds – If no response Repeat MAYDAY Call.

HAVE ALL PERSONS PUT ON LIFE JACKETS !!

Mobile Phones – Call 911 for water rescue.
Coast Guard Search & Rescue – 510-437-3700
Coast Guard San Francisco – 415-399-3479
Commercial Vessel Assistance – 1-800-367-8222

NOAA Weather Radio – 162.400 MHz, 162.425 MHz, 162.450 MHz, 162.475 MHz, 162.500 MHz, 162.525 MHz, 162.550 MHz.

Getting and Giving Help – Signal other boaters using visual distress signals (flares, orange flag, lights, arm signals); whistles; horns; and on your VHF radio. You are required by law to help boaters in trouble. Respond to distress signals, but do not endanger yourself.

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Official Nautical Chart Catalogs – Large format, regional catalogs are available for free from official chart agents. Page size, state catalogs are posted on the Internet and can be printed at home for free. Go to http://NauticalCharts.NOAA.gov/mcd/ccatalogs.htm.

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