UNITED STATES - EAST COAST
VIRGINIA

NORFOLK HARBOR AND ELIZABETH RIVER

Mercator Projection
Scale 1:20,000 at Lat. 36°49'
North American Datum of 1983
(World Geodetic System 1984)

SOUNDINGS IN FEET
AT MEAN LOWER LOW WATER

COAST SURVEY

ANCHORAGE AREAS
110.168 (see note A)

Limits and designations of anchorage areas are shown in color.

ALL ANCHORAGES ARE FOR GENERAL USE.

(N) (O) (P) (Q) (R) (S) (T) GENERAL ANCHORAGE

(U) FOR YACHTS & PLEASURE CRAFT.

ELIZABETH RIVER CHANNEL DEPTHS
TABULATED FROM SURVEYS BY THE CORPS OF ENGINEERS - REPORT OF AUG 1997
AND SURVEYS TO JUN 1997

CONTROLLING DEPTHS FROM SEAWARD IN FEET AT MEAN LOWER LOW WATER (MLLW)

NAME OF CHANNEL	LEFT OUTSIDE QUARTER	LEFT INSIDE QUARTER	RIGHT INSIDE QUARTER	RIGHT OUTSIDE QUARTER	DATE OF SURVEY	PROJECT DIMENSIONS WIDTH (FEET)	LENGTH (NAUT. MILES)	DEPTH MLLW (FEET)
CRANEY ISLAND REACH	50.5	51.8	51.7	43.9	2-8-97	800	2.1	55
LAMBERTS BEND	40.0	44.5	40.9	39.1	7-96	750	0.3	40
PORT NORFOLK REACH	39.5	40.6	41.2	39.6	7-96	750	2.3	40
TOWN POINT REACH	39.4	40.4	40.4	36.9	7-96	750	0.6	40
SOUTHERN BRANCH:								
LOWER REACH	36.4	41.1	40.8	36.3	7-96	450-800	1.7	40
MIDDLE REACH	39.4	41.8	41.3	39.4	7-96	375	0.9	40
UPPER REACH	33.8	35.1	34.3	33.6	5-97	250-500	2.7	35
TURNING BASIN	34.9	33.7	34.1	34.3	5-97	600	0.1	35
THENCE TO A POINT 100 YARDS SOUTH OF LIGHT "30"	28.9	30.4	31.5	29.6	5-94	250-500	1.1	35
TURNING BASIN AT MAINS CREEK	30.7	31.8	30.7	30.3	5-94	800	0.2	35
THENCE TO A POINT 100 YARDS NORTH OF NAP S.L. RR BRIDGE	30.0	30.8	30.8	28.1	5-94	250-500	0.2	35

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

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.

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.

NOTE B
INTRACOASTAL WATERWAY

The project depth from Norfolk to Pamlico River, N.C., via Virginia Cut, is 12 feet; from Norfolk to Albemarle Sound, via Dismal Swamp Canal, 9 feet.

The controlling depths are published periodically in the U.S. Coast Guard Local Notice to Mariners.

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

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

NOTE A
Navigation regulations are published in Chapter 2, U.S. Coast Pilot 3. Additions or revisions to Chapter 2 are published in the Notices to Mariners. Information concerning the regulations may be obtained at the Office of the Commander, 5th Coast Guard District in Portsmouth, Virginia, or at the Office of the District Engineer, Corps of Engineers in Norfolk, Virginia.
Refer to charted regulation section numbers.

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
Only marine radiobeacons have been calibrated for surface use. Limitations on the use of certain other radio signals as aids to marine navigation can be found in the U.S. Coast Guard Light Lists and National Imagery and Mapping Agency Publication 117.

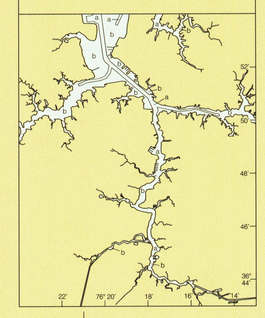
Radio direction-finder bearings to commercial broadcasting stations are subject to error and should be used with caution.

Station positions are shown thus:
⊙(Accurate location) ⊕(Approximate location)

SOURCE DIAGRAM
The outlined areas represent the limits of the most recent hydrographic survey information that has been evaluated for charting. Charted hydrography may originate from these and prior surveys.

SOURCE

a 1984-97	Corps of Engineers Surveys
b	Miscellaneous Surveys



TIDAL INFORMATION

Place Name	(LAT/LONG)	Height referred to datum of soundings (MLLW) Mean Higher High Water feet	Mean High Water feet	Mean Low Water feet	Extreme Low Water feet
Craney Island	(36°54'N/76°20'W)	2.9	2.7	0.1	-3.5
Norfolk	(36°51'N/76° 8'W)	3.1	2.9	0.1	-3.0
Portsmouth	(36°48'N/76° 8'W)	3.2	2.9	0.1	-3.5

(1998)

ABBREVIATIONS (For complete list of Symbols and Abbreviations, see Chart No. 1.)

Aids to Navigation (lights are white unless otherwise indicated):
AERO aeronautical; Al alternating; B black; Bn beacon; C can; DIA diaphone; F fixed; Fl flashing; G green; IQ interrupted quick; Iso isophase; LT HO lighthouse; M nautical mile; m minutes; MICRO TR microwave tower; Mkr marker; Mo morse code; N nun; OBSC obscured; Oc occulting; Or orange; Q quick; R red; Ra Ref radar reflector; R Bn radiobeacon; R TR radio tower; Rot rotating; s seconds; SEC sector; St M statute miles; VQ very quick; W white; WHS whistle; Y yellow

Bottom characteristics:
Bds boulders; bk broken; Cy clay; Co coral; G gravel; Grs grass; gy gray; h hard; M mud; Oys oysters; Rk rock; S sand; so soft; Sh shells; sy sticky

Miscellaneous:
AUTH authorized; (D) existence doubtful; 21 Wreck, rock, obstruction, or shoal swept clear to the depth indicated; (21) Rocks that cover and uncover, with heights in feet above datum of soundings; Obstn obstruction; PA position approximate; PD position doubtful; Rep reported; Subm submerged

HEIGHTS
Heights in feet above Mean High Water.

AUTHORITIES
Hydrography and topography by the National Ocean Service, Coast Survey, with additional data from the Corps of Engineers, and U.S. Coast Guard.

SUPPLEMENTAL INFORMATION
Consult U.S. Coast Pilot 3 for important supplemental information.

PLANE COORDINATE GRID
(based on NAD 1927)
Virginia State Grid, south zone, is indicated by dotted ticks at 10,000 foot intervals.

NOAA VHF-FM WEATHER BROADCASTS
The National Weather Service station listed below provides continuous marine weather broadcasts. The range of reception is variable, but for most stations is usually 20 to 40 miles from the antenna site.
Norfolk, Va. KHB-37 162.55 MHz

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.

HORIZONTAL DATUM
The horizontal reference datum of this chart is North American Datum of 1983 (NAD 83) and 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 on average of 0.53" northward and 1.210" eastward to agree with this chart.

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.

LOGARITHMIC SPEED SCALE

1 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 speed is 16.0 knots.

Nautical Miles 1 0 1
Yards 1000 500 0 1000 2000

(JOINS CHART 12245) (CONTINUED ON CHART 12206) (CONTINUED ON CHART 12206)

40th Ed., Mar. 14/ 98 ■
12253

CAUTION
This chart has been corrected from the Notice to Mariners published weekly by the National Imagery and Mapping Agency and the Local Notice to Mariners issued periodically by each U.S. Coast Guard district to the date shown in the lower left hand corner.

SOUNDINGS IN FEET

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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U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SERVICE
COAST SURVEY

FATHOMS 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17
FEET 6 12 18 24 30 36 42 48 54 60 66 72 78 84 90 96 102
METERS 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

(Norfolk Harbor and Elizabeth River)
SOUNDINGS IN FEET - 1:20,000

12253

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