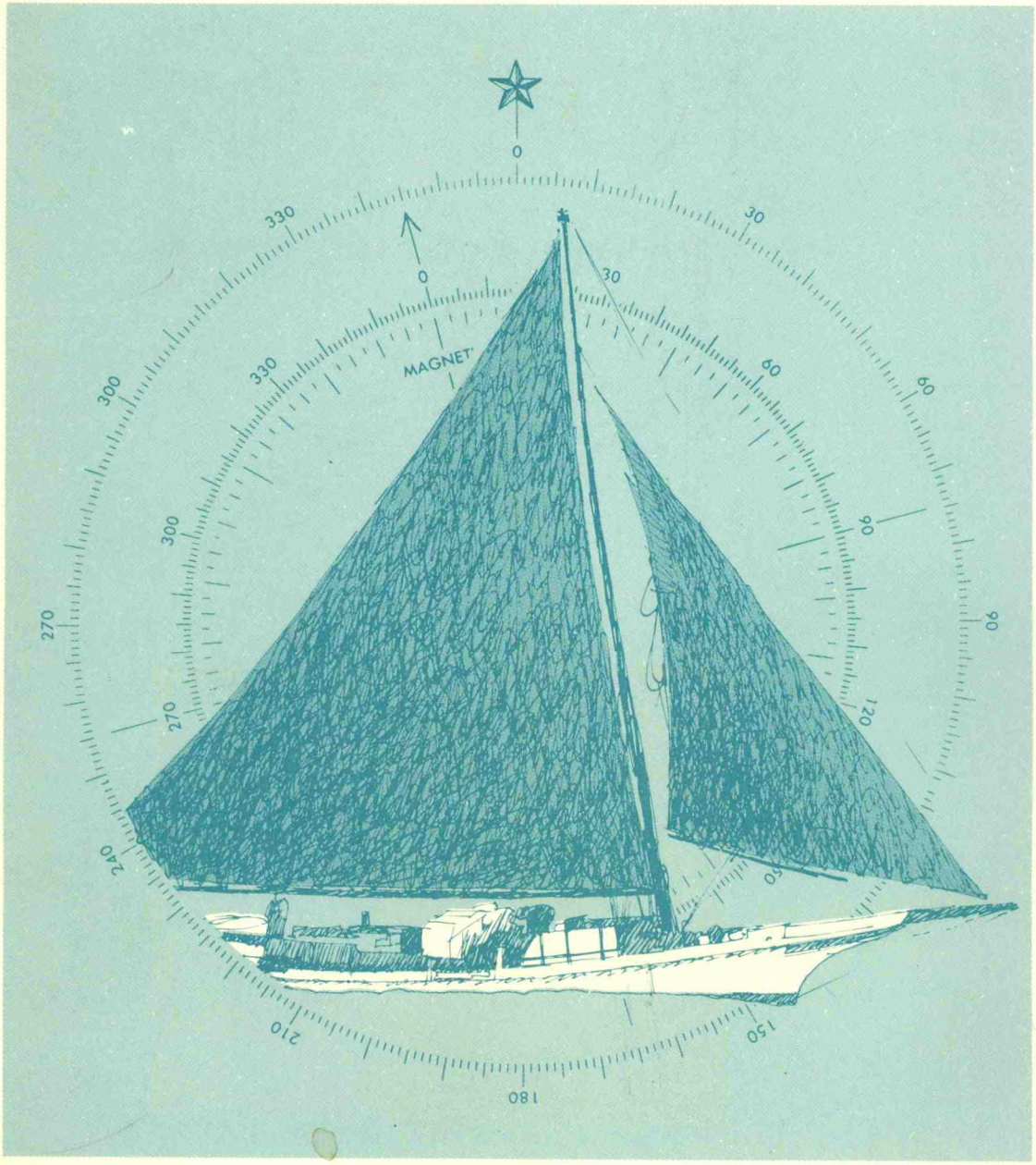
art No. 1

United States of America

Nautical Chart Symbols and Abbreviations



Sixth Edition July 1975

Chart No. 1

United States of America

Nautical Chart Symbols and Abbreviations

SIXTH EDITION
JULY 1975

Prepared jointly by

DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
National Ocean Survey *(Formerly Coast and Geodetic Survey, and U.S. Lake Survey)*

DEPARTMENT OF DEFENSE
Defense Mapping Agency
Hydrographic Center

Published at Washington, D.C.
U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
National Ocean Survey

GENERAL REMARKS

This publication (CHART NO. 1) contains symbols and abbreviations that have been approved for use on nautical charts published by the United States of America. The buoyage systems used by other countries often vary from that used by the United States. Charts produced by the Defense Mapping Agency Hydrographic Center (DMAHC) will show the colors, lights, and other characteristics in use for the area of the individual chart. Certain modified reproduction charts distributed by DMAHC will also show the shapes and other distinctive features that may vary from those illustrated in this chart. Terms, symbols, and abbreviations are numbered in accordance with a standard form approved by a 1952 resolution of the International Hydrographic Organization (IHO). Although the use of IHO-approved symbols and abbreviations is not mandatory, the United States has cooperated to adopt many IHO-approved symbols for standard use on U.S. nautical charts. Alphanumeric style differences in the first column of the following pages indicate symbol and abbreviation status as follows:

VERTICAL FIGURES indicate those items for which the symbol and abbreviation are in accordance with resolutions of the IHO.

SLANTING FIGURES indicate those symbols for which no IHO resolution has been adopted.

SLANTING FIGURES UNDERSCORED indicate IHO and U.S. symbols do not agree.

SLANTING FIGURES ASTERISKED indicate that no symbol has been adopted by the United States.

SLANTING FIGURES IN PARENTHESES indicate that the items are in addition to those appearing in the "Glossary of Cartographic Terms", SP No. 22, 3rd Edition, 1951, IHO, and subsequent revisions.

† All changes since the July 1972 edition of this publication are indicated by the dagger symbol in the margin immediately adjacent to the item identification of the symbol or abbreviation affected.

BUILDINGS. A conspicuous feature on a building may be shown by a landmark symbol with a descriptive label. (See I 8b, 36, 44, 72.) Prominent buildings that are of assistance to the mariner may be shown by actual shape as viewed from above (see I 3a, 19, 47, 66), and may be marked "CONSPICUOUS".

BUOYS and BEACONS. On entering a channel from seaward, buoys on starboard side are red with even numbers, on port side black with odd numbers. Lights on buoys on starboard side of channel are red or white, on port side white or green. Mid-channel buoys have black-and-white vertical stripes. Junction or obstruction buoys, which may be passed on either side, have red-and-black horizontal bands. This system does not always apply to foreign waters.

The position of a fixed beacon is represented by the center of the beacon symbol or the circle at the base of the symbol. The approximate position of a buoy is represented by the dot or circle associated with the buoy symbol. The approximate position is used because of practical limitations in positioning and maintaining buoys and their sinkers in precise geographical locations. These limitations include, but are not limited to, inherent imprecisions in position

fixing methods, prevailing atmospheric and sea conditions, the slope of and the material making up the seabed, the fact that buoys are moored to sinkers by varying lengths of chain, and the fact that buoy body and/or sinker positions are not under continuous surveillance, but are normally checked only during periodic maintenance visits which often occur more than a year apart. The position of the buoy body can be expected to shift inside and outside the charting symbol due to the forces of nature. The mariner is also cautioned that buoys are liable to be carried away, shifted, capsized, sunk, etc. Lighted buoys may be extinguished or sound signals may not function as a result of ice, running ice or other natural causes, collisions, or other accidents. For the foregoing reasons, a prudent mariner must not rely completely upon the charted position or operation of floating aids to navigation, but will also utilize bearings from fixed objects and aids to navigation on shore. Further, a vessel attempting to pass close aboard always risks collision with a yawing buoy or with the obstruction the buoy marks.

COLORS are optional for characterizing various features and areas in the charts.

DEPTH contours and soundings are shown in meters on an increasing number of new charts and new editions; the depth unit is stated on all charts.

HEIGHTS of land and conspicuous objects are given in feet above Mean High Water, unless otherwise stated in the title of the chart.

IMPROVED CHANNELS are shown by limiting dashed lines with the depth and date of the latest examination placed adjacent to the channel except when the channel data is tabulated.

LETTERING styles and capitalization as indicated in Chart No. 1 are not always rigidly adhered to on the charts.

LONGITUDES are referred to the Meridian of Greenwich.

OBSOLESCENT SYMBOLIZATION on charts will be revised to agree with the current preferred usage as soon as opportunity affords.

SHORELINE shown on charts represents the line of contact between the land and a selected water elevation. In areas affected by tidal fluctuation, this line of contact is usually the mean high-water line. In confined coastal waters of diminished tidal influence, a mean water level line may be used. The shoreline of interior waters (rivers, lakes) is usually a line representing a specified elevation above a selected datum. Shoreline is symbolized by a heavy line (A 9).

APPARENT SHORELINE is used on charts to show the outer edge of marine vegetation where that limit would reasonably appear as the shoreline to the mariner or where it prevents the shoreline from being clearly defined. Apparent shoreline is symbolized by a light line (A 7, C 17).

U.S. COAST PILOTS, SAILING DIRECTIONS, LIGHT LISTS, RADIO AIDS, and related publications furnish information required by the navigator that cannot be shown conveniently on the nautical chart.

U.S. NAUTICAL CHART CATALOGS and INDEXES list nautical charts, auxiliary maps and related publications, and include general information relative to the charts.

Some differences may be observed between Chart No. 1 and symbols shown on certain reproductions of foreign charts and special charts. Foreign symbols may be interpreted by reference to the Symbol Sheet or Chart No. 1 of the originating country. A glossary of foreign terms and abbreviations is generally given on charts on which they are used, as well as in the Sailing Directions.

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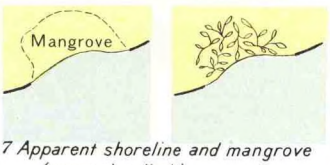
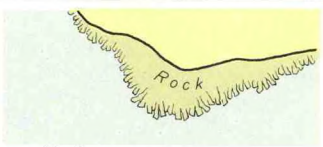
A. The Coastline (Nature of the Coast) (see General Remarks)

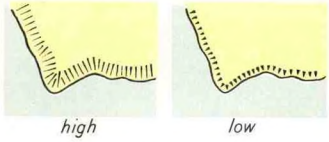
†1 *Approximate shoreline*



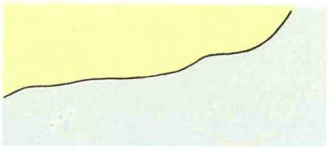
†7 *Apparent shoreline and mangrove (vegetation limit)*



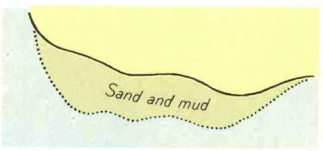
11d *Rock, uncovers at sounding datum (See A 11g)*



2 *Steep coast (Bluff)*

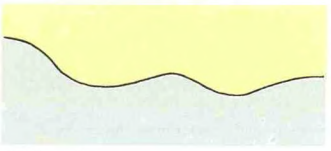


8 *Surveyed coastline*

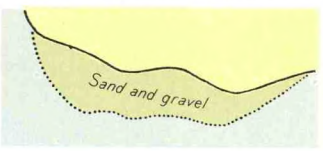


11e *Sand and mud*

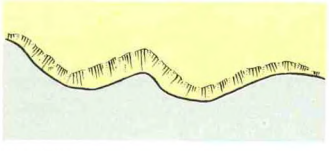
2a *Flat coast*



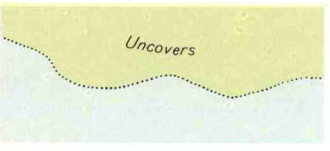
†9 *Shoreline*



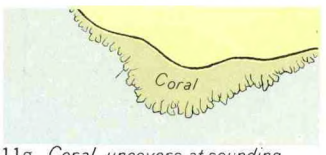
11f *Sand and gravel*



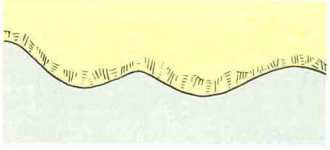
3 *Cliffy coast*



†10 *Chart sounding datum line*

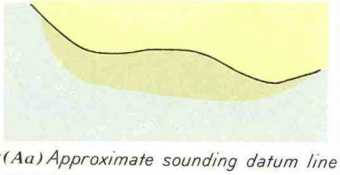


11g *Coral, uncovers at sounding datum (See O 10)*

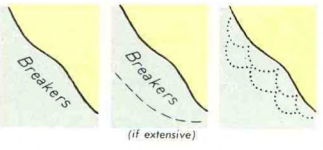


3a *Rocky coast*

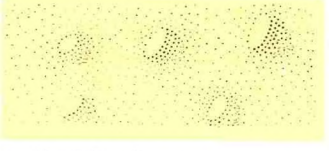
11 Foreshore
(Strand in general)



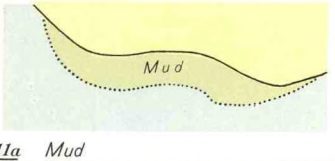
†(Aa) *Approximate sounding datum line*



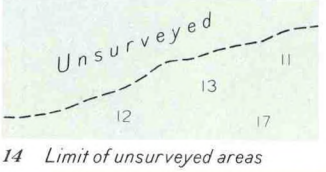
12 *Breakers along a shore (See O-25)*



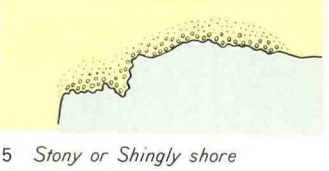
4 *Sandhills; Dunes*



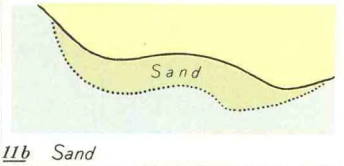
11a *Mud*



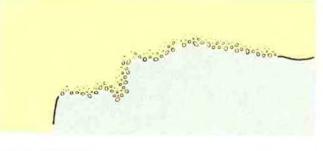
14 *Limit of unsurveyed areas*



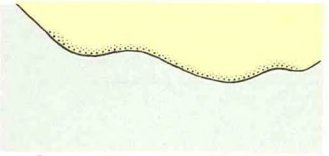
5 *Stony or Shingly shore*



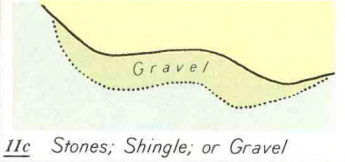
11b *Sand*



(Ab) *Rubble*



6 *Sandy shore*

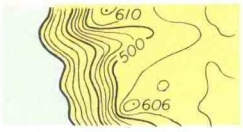


11c *Stones; Shingle; or Gravel*

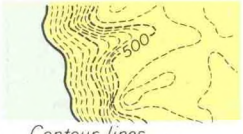
B. Coast Features

1	G	Gulf
2	B	Bay
(Ba)	B	Bayou
3	Fd	Fjord
4	L	Loch; Lough; Lake
5	Cr	Creek
5a	C	Cove
6	In	Inlet
7	Str	Strait
8	Sd	Sound
9	Pass / Thoro	Passage; Pass / Thorofare
10	Chan	Channel
10a		Narrows
11	Entr	Entrance
12	Est	Estuary
12a		Delta
13	Mth	Mouth
14	Rd	Road; Roadstead
15	Anch	Anchorage
16	Hbr	Harbor
16a	Hn	Haven
17	P	Port
(Bb)	P	Pond
18	I	Island
19	It	Islet
20	Arch	Archipelago
21	Pen	Peninsula
22	C	Cape
23	Prom	Promontory
24	Hd	Head; Headland
25	Pt	Point
26	Mt	Mountain; Mount
27	Rge	Range
27a		Valley
28		Summit
29	Pk	Peak
30	Vol	Volcano
31		Hill
32	Bld	Boulder
33	Ldg	Landing
34		Tableland (Plateau)
35	Rk	Rock
36		Isolated rock
(Bc)	Str	Stream
(Bd)	R	River
(Be)	Slu	Slough
(Bf)	Lag	Lagoon
(Bg)	Apprs	Approaches
(Bh)	Rky	Rocky
†(Bi)	Is	Islands
†(Bj)	Ma	Marsh
†(Bk)	Mg	Mangrove
†(Bl)	Sw	Swamp

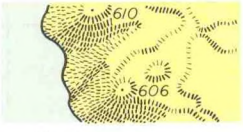
C. The Land (Natural Features)



1 Contour lines (Contours)



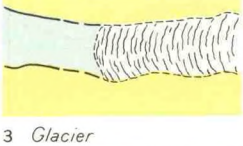
1a Contour lines, approximate (Contours)

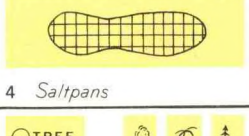


2 Hachures

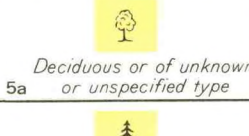

2a Form lines, no definite interval

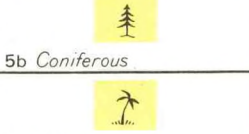

2b Shading

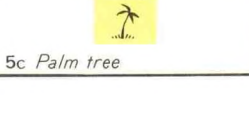

3 Glacier

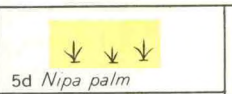

4 Saltpans

5 Isolated trees


5a Deciduous or of unknown or unspecified type


5b Coniferous


5c Palm tree

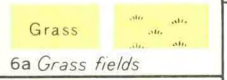

5d Nipa palm

5e Filao

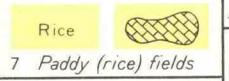

5f Casuarina


5g Evergreen tree (other than coniferous)

6 Cultivated fields

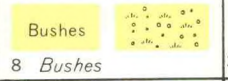


6a Grass fields

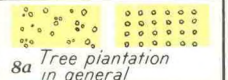


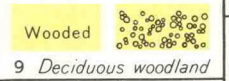
7 Paddy (rice) fields

7a Park; Garden

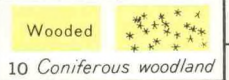


8 Bushes

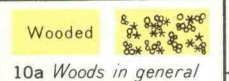

8a Tree plantation in general



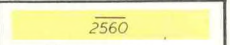
9 Deciduous woodland



10 Coniferous woodland

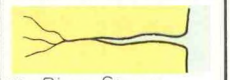


10a Woods in general

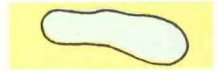


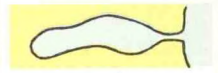
11 Tree top height (above shoreline datum)


12 Lava flow


13 River; Stream


14 Intermittent stream

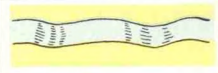

15 Lake; Pond

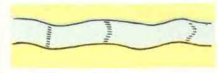

16 Lagoon (Lag)

Symbol used in small areas

17 Marsh; Swamp

18 Slough (Slu.)


19 Rapids


20 Waterfalls

21 Spring

D. Control Points

1	△		*Triangulation point (station)*
1a			*Astronomic station*
2	⊙	*(See In)*	*Fixed point (landmark, position accurate)*
(Da)	○	*(See Io)*	*Fixed point (landmark, position approx.)*
3	· 256		*Summit of height (Peak) (when not a landmark)*
(Db)	256		*Peak, accentuated by contours*
(Dc)	256		*Peak, accentuated by hachures*
(Dd)			*Peak, elevation not determined*
(De)	⊙ 256		*Peak, when a landmark*
4	⊕	Obs Spot	*Observation spot*
**5*		BM	*Bench mark*
6	View X		*View point*
7			*Datum point for grid of a plan*
8			*Graphical triangulation point*
9		Astro	*Astronomical*
10		Tri	*Triangulation*
(Df)		C of E	*Corps of Engineers*
12			*Great trigonometrical survey station*
13			*Traverse station*
14		Bdy Mon	*Boundary monument*
(Dg)	◈		*International boundary monument*

E. Units

†*1*	hr, h	*Hour*
†2	m, min	*Minute (of time)*
†3	sec, s	*Second (of time)*
4	m	*Meter*
4a	dm	*Decimeter*
4b	cm	*Centimeter*
4c	mm	*Millimeter*
4d	m^2	*Square meter*
4e	m^3	*Cubic meter*
5	km	*Kilometer*
6	in	*Inch*
7	ft	*Foot*
8	yd	*Yard*
9	fm	*Fathom*
10	cbl	*Cable length*
†11	M, Mi, N Mi	*Nautical mile*
12	kn	*Knot*
†12a	t	*Tonne (metric ton = 2,204.6 lbs.)*
12b	cd	*Candela (new candle)*
13	lat	*Latitude*
14	long	*Longitude*
14a		*Greenwich*
15	pub	*Publication*
16	Ed	*Edition*
17	corr	*Correction*
18	alt	*Altitude*

19	ht; elev	*Height; Elevation*
20	°	*Degree*
21	′	*Minute (of arc)*
22	″	*Second (of arc)*
23	No	*Number*
†*(Ea)*	St M, St Mi	*Statute mile*
†*(Eb)*	μsec, μs	*Microsecond*
(Ec)	Hz	*Hertz (cps)*
(Ed)	kHz	*Kilohertz (kc)*
(Ee)	MHz	*Megahertz (Mc)*
†*(Ef)*	cps, c/s	*Cycles/second (Hz)*
(Eg)	kc	*Kilocycle (kHz)*
(Eh)	Mc	*Megacycle (MHz)*
†*(Ei)*	T	*Ton (U.S. short ton = 2,000 lbs.)*

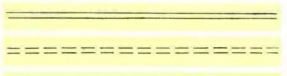
F. Adjectives, Adverbs, Nouns, and Other Words

1	gt	*Great*
2	lit	*Little*
3	Lrg	*Large*
4	sml	*Small*
5		*Outer*
6		*Inner*
7	mid	*Middle*
8		*Old*
9	anc	*Ancient*
10		*New*
11	St	*Saint*
12	conspic	*Conspicuous*
13		*Remarkable*
14	D, Destr	*Destroyed*
15		*Projected*
16	dist	*Distant*
17	abt	*About*
18		*See chart*
18a		*See plan*
19		*Lighted; Luminous*
20	sub	*Submarine*
21		*Eventual*
22	AERO	*Aeronautical*
23		*Higher*
23a		*Lower*
24	exper	*Experimental*
25	discontd	*Discontinued*
26	prohib	*Prohibited*
27	explos	*Explosive*
28	estab	*Established*
29	elec	*Electric*
30	priv	*Private, Privately*
31	prom	*Prominent*
32	std	*Standard*
33	subm	*Submerged*
34	approx	*Approximate*
35		*Maritime*
36	maintd	*Maintained*
37	aband	*Abandoned*
38	temp	*Temporary*
39	occas	*Occasional*
40	extr	*Extreme*
41		*Navigable*
42	N M	*Notice to Mariners*
(Fa)	L N M	*Local Notice to Mariners*
43		*Sailing Directions*
44		*List of Lights*
(Fb)	unverd	*Unverified*
(Fc)	AUTH	*Authorized*
(Fd)	CL	*Clearance*
(Fe)	cor	*Corner*
(Ff)	concr	*Concrete*
(Fg)	fl	*Flood*
(Fh)	mod	*Moderate*
(Fi)	bet	*Between*
(Fj)	1st	*First*
†*(Fk)*	2nd, 2d	*Second*
†*(Fl)*	3rd, 3d	*Third*
(Fm)	4th	*Fourth*
(Fn)	DD	*Deep Draft*
(Fo)	min	*Minimum*
(Fp)	max	*Maximum*
†*(Fq)*	N'ly	*Northerly*
†*(Fr)*	S'ly	*Southerly*
†*(Fs)*	E'ly	*Easterly*
†*(Ft)*	W'ly	*Westerly*
†*(Fu)*	Sk	*Stroke*
†*(Fv)*	Restr	*Restricted*

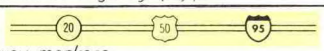
G. Ports and Harbors

1		Anch	Anchorage (large vessels)
2		Anch	Anchorage (small vessels)
3		Hbr	Harbor
4		Hn	Haven
5		P	Port
6		Bkw	Breakwater
6a			Dike
7			Mole
8			Jetty (partly below MHW)
8a			Submerged jetty
(Ga)			Jetty (small scale)
9		Pier	Pier
10			Spit
11			Groin (partly below MHW)
12	ANCH PROHIBITED	ANCH PROHIB	Anchorage prohibited (screen optional) (See P 25)
12a			Anchorage reserved
12b	QUARANTINE ANCHORAGE	QUAR ANCH	Quarantine anchorage
13	Spoil Area		Spoil ground
(Gb)	Dumping Ground		Dumping ground
(Gc)	80 83 Disposal Area 85 depths from survey of JUNE 1972 90 98		Disposal area
(Gd)	P		Pump-out facilities
14		Fsh stks	Fisheries; Fishing stakes
14a			Fish trap; Fish weirs (actual shape charted)
14b			Duck blind
15			Tuna nets (See G 14a)
15a	Oys	Oys	Oyster bed
16		Ldg	Landing place
17			Watering place
18		Whf	Wharf
19			Quay
20			Berth
20a	14		Anchoring berth
20b	3		Berth number
21		Dol	Dolphin
22			Bollard
23			Mooring ring
24			Crane
25			Landing stage
25a			Landing stairs
26		Quar	Quarantine
27			Lazaret
*28		Harbor Master	Harbormaster's office
29		Cus Ho	Customhouse
30			Fishing harbor
31			Winter harbor
32			Refuge harbor
33		B Hbr	Boat harbor
34			Stranding harbor (uncovers at LW)
35			Dock
36			Drydock (actual shape on large-scale charts)
37			Floating dock (actual shape on large-scale charts)
38			Gridiron; Careening grid
39			Patent slip; Slipway; Marine railway
39a		Ramp	Ramp
40	Lock		Lock (point upstream) (See H 13)
41			Wetdock
42			Shipyard
43			Lumber yard
44		Health Office	Health officer's office
45		Hk	Hulk (actual shape on large-scale charts) (See O 11)
46	PROHIBITED AREA	PROHIB AREA	Prohibited area (screen optional)
46a	10		Calling-in point for vessel traffic control
47			Anchorage for seaplanes
48			Seaplane landing area
49	Under construction		Work in progress
50			Under construction
51			Work projected
(Ge)	Subm ruins		Submerged ruins

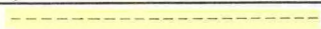
H. Topography (Artificial Features)



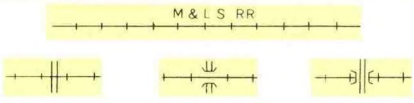
1 *Road* (Rd) *or Highway* (Hy)



(Ha) Highway markers



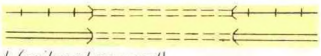
2 *Track, Footpath, or Trail*



3 *Railway* (Ry) *(single or double track); Railroad* (RR)

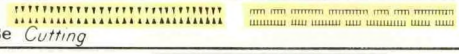
3a Tramway

3b *Railway station*

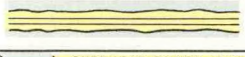


3c *Tunnel (railroad or road)*

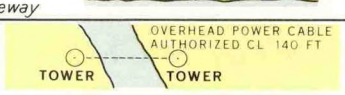
3d *Embankment, Levee*



3e *Cutting*



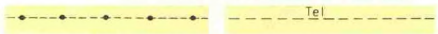
3f Causeway



4 *Overhead power cable* (OVHD PWR CAB)

5 *Power transmission line*

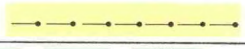
5a Power transmission mast



6 *Prominent telegraph or telephone line*

7 *Aqueduct; Water pipe*

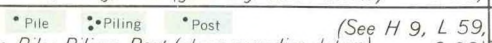
8 *Viaduct*



8a *Pipeline*

(See H 9a, L 59, O 30)

9 *Pile; Piling; Post (generally above MHW)*



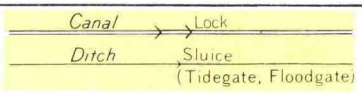
(See H 9, L 59, O 30)

9a Pile; Piling; Post (above sounding datum)

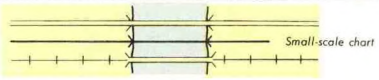
10 *Highway (See H 1)*

11 *Sewer*

12 *Culvert*



13 *Canal; Ditch; Lock; Sluice (point upstream)*



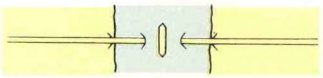
14 *Bridge* (BR) *in general*

14a *Stone, concrete bridge (same as H 14)*

14b *Wooden bridge (same as H 14)*

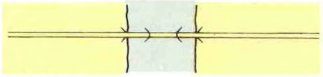
14c *Iron bridge (same as H 14)*

14d *Suspension bridge (same as H 14)*

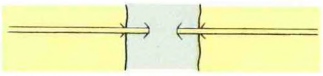


15 *Drawbridge (in general)*

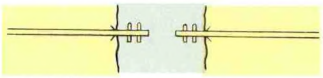
16 *Swing bridge (same as H 15)*



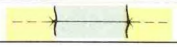
16a Lift bridge



16b *Weighbridge or Bascule bridge*

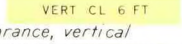


17 *Pontoon bridge*

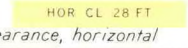


17a Footbridge

18 Transporter bridge (same as H 14)

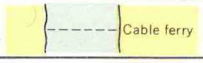


18a *Bridge clearance, vertical*



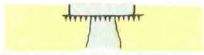
18b *Bridge clearance, horizontal*

19 *Ferry* (Fy)



(Hb) Cable ferry

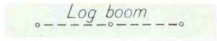
20 *Ford*



21 *Dam*

22 *Fence*

23 *Training wall*



†24 *Log boom*

I. Buildings and Structures (see General Remarks)

1			City or Town (large scale)
(Ia)			City or Town (small scale)
2			Suburb
3		Vil	Village
3a			Buildings in general
4		Cas	Castle
5			House
6			Villa
7			Farm
8			Church
8a		Cath	Cathedral
8b	SPIRE	Spire	Spire; Steeple
9			Roman Catholic Church
10			Temple
11			Chapel
12			Mosque
12a			Minaret
(Ib)			Moslem Shrine
13			Marabout
14		Pag	Pagoda
15			Buddhist Temple; Joss-House
15a			Shinto Shrine
16			Monastery; Convent
17			Calvary; Cross
17a	Cem		Cemetery, Non-Christian
18			Cemetery, Christian
18a			Tomb
19			Fort (actual shape charted)
20			Battery
21			Barracks
22			Powder magazine
23	Airport		Airplane landing field
24			Airport, large scale (See P-13)
(Ic)			Airport, military (small scale)
(Id)			Airport, civil (small scale)
25			Mooring mast
26	King St	St	Street
26a	Locust Ave	Ave	Avenue
26b	Grand Blvd	Blvd	Boulevard
27		Tel	Telegraph
28		Tel Off	Telegraph office
29		PO	Post office
30		Govt Ho	Government house
31			Town hall
32		Hosp	Hospital
33			Slaughterhouse
34		Magz	Magazine
34a			Warehouse; Storehouse
35	MON	Mon	Monument
36	CUP	Cup	Cupola
37	ELEV	Elev	Elevator; Lift
(Ie)		Elev	Elevation; Elevated
38			Shed
39			Zinc roof
40	Ruins	Ru	Ruins
41	TR	Tr	Tower
(If)	ABAND LT HO		Abandoned lighthouse
42	WINDMILL		Windmill
43			Watermill
43a	WINDMOTOR		Windmotor
44	CHY	Chy	Chimney; Stack
45	S PIPE	S'pipe	Water tower; Standpipe
46			Oil tank
47		Facty	Factory
48			Saw mill
49			Brick kiln
50			Mine; Quarry
51		Well	Well
52			Cistern
53	TANK	Tk	Tank
54			Noria
55			Fountain

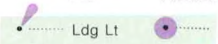
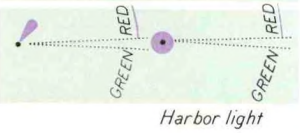
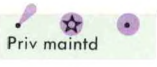
I. Buildings and Structures (continued)

61		Inst	*Institute*
62			*Establishment*
63			*Bathing establishment*
64		Ct Ho	*Courthouse*
65		Sch	*School*
(Ig)		HS	*High school*
(Ih)		Univ	*University*
66		Bldg	*Building*
67		Pav	*Pavilion*
68			*Hut*
69			*Stadium*
70		T	*Telephone*
71			*Gas tank; Gasometer*
72	GAB	Gab	*Gable*
73			*Wall*
74			*Pyramid*
75			*Pillar*
76			*Oil derrick*
(Ii)		Ltd	*Limited*
(Ij)		Apt	*Apartment*
(Ik)		Cap	*Capitol*
(Il)		Co	*Company*
(Im)		Corp	*Corporation*
(In)			*Landmark (position accurate)(See D 2)*
(Io)			*Landmark (position approximate)(See Da)*

J. Miscellaneous Stations

1		Sta	*Any kind of station*
2		Sta	*Station*
3	C G		*Coast Guard station (similar to Lifesaving Station, J 6)*
(Ja)	R TR C G WALLIS SANDS		*Coast Guard station (when landmark)*
4	LOOK TR		*Lookout station; Watch tower*
5			*Lifeboat station*
6	LS S		*Lifesaving station (See J 3)*
7		Rkt Sta	*Rocket station*
8	PIL STA		*Pilot station*
9		Sig Sta	*Signal station*
10		Sem	*Semaphore*
11		S Sig Sta	*Storm signal station*
12			*Weather signal station*
(Jb)	NWS SIG STA		*Nat'l Weather Service signal sta*
13			*Tide signal station*
14			*Stream signal station*
15			*Ice signal station*
16			*Time signal station*
16a			*Manned oceanographic station*
16b			*Unmanned oceanographic station*
17			*Time ball*
18			*Signal mast*
†*18a*	Mast		*Mast*
19	FS FS FP FP		*Flagstaff; Flagpole*
19a	F TR	F Tr	*Flag tower*
20			*Signal*
21		Obsy	*Observatory*
22		Off	*Office*
(Jc)	BELL		*Bell (on land)*
(Jd)	HECP		*Harbor entrance control post*
†*(Je)*	MARINE POLICE		*Marine police station*
†*(Jf)*	FIREBOAT STATION		*Fireboat station*

K. Lights

1		*Position of light*
2	Lt	*Light*
(Ka)		*Riprap surrounding light*
3	Lt Ho	*Lighthouse*
4		*Aeronautical light (See F-22)*
4a		*Marine and air navigation light*
5		*Light beacon*
6		*Light vessel; Lightship*
8		*Lantern*
9		*Street lamp*
10	REF	*Reflector*
11		*Leading light*
12		*Sector light*
13		*Directional light*
14		*Harbor light*
15		*Fishing light*
16		*Tidal light*
17		*Private light (maintained by private interests; to be used with caution)*
21	F	*Fixed light*
22	Occ	*Occulting light*
23	Fl	*Flashing light*
23a	Iso E Int	*Isophase light (equal interval)*
24	Qk Fl	*Quick flashing (scintillating) light*
25	Int Qk Fl I Qk Fl	*Interrupted quick flashing light*
25a	S Fl	*Short flashing light*
26	Alt	*Alternating light*
27	Gp Occ	*Group occulting light*
28	Gp Fl	*Group flashing light*
28a	S-L Fl	*Short-long flashing light*
28b		*Group short flashing light*

29	F Fl	*Fixed and flashing light*
30	F Gp Fl	*Fixed and group flashing light*
30a	Mo	*Morse code light*
31	Rot	*Revolving or Rotating light*
41		*Period*
42		*Every*
43		*With*
44		*Visible (range)*
†(Kb)	M; Mi; N Mi	*Nautical mile (See E-11)*
(Kc)	m min	*Minutes (See E-2)*
†(Kd)	s; sec	*Seconds (See E-3)*
45	Fl	*Flash*
46	Occ	*Occultation*
46a		*Eclipse*
47	Gp	*Group*
48	Occ	*Intermittent light*
49	SEC	*Sector*
50		*Color of sector*
51	Aux	*Auxiliary light*
52		*Varied*
61	Vi	*Violet*
62		*Purple*
63	B	*Blue*
64	G	*Green*
65	Or	*Orange*
66	R	*Red*
67	W	*White*
67a	Am	*Amber*
67b	Y	*Yellow*
68	OBSC	*Obscured light*
68a	Fog Det Lt	*Fog detector light (See Nb)*

K. Lights (continued)

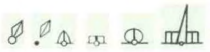
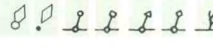
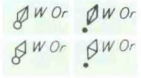
69		Unwatched light
70	Occas	Occasional light
71	Irreg	Irregular light
72	Prov	Provisional light
73	Temp	Temporary light
(Ke)	D: Destr	Destroyed
74	Exting	Extinguished light
75		Faint light
76		Upper light
77		Lower light
78		Rear light
79		Front light
80	Vert	Vertical lights
81	Hor	Horizontal lights
(Kf)	VB	Vertical beam
(Kg)	RGE	Range
(Kh)	Exper	Experimental light
(Ki)	TRLB	Temporarily replaced by lighted buoy showing the same characteristics
(Kj)	TRUB	Temporarily replaced by unlighted buoy
(Kk)	TLB	Temporary lighted buoy
(Kl)	TUB	Temporary unlighted buoy

L. Buoys and Beacons (see General Remarks)

† (new standard symbols)

1	Approximate position of buoy
†2	Light buoy
†3	Bell buoy
†3a	Gong buoy
†4	Whistle buoy
†5	Can or Cylindrical buoy
†6	Nun or Conical buoy
†7	Spherical buoy
†8	Spar buoy
†8a	Pillar or Spindle buoy
†9	Buoy with topmark (ball) (see L-70)
†10	Barrel or Ton buoy
†(La)	Color unknown
†(Lb)	Float
†12	Lightfloat
13	Outer or Landfall buoy
†14	Fairway buoy (BWVS)
†14a	Midchannel buoy (BWVS)
†15	Starboard-hand buoy (entering from seaward)
†16	Port-hand buoy (entering from seaward)
†17	Bifurcation buoy (RBHB)
†18	Junction buoy (RBHB)
†19	Isolated danger buoy (RBHB)
†20	Wreck buoy (RBHB or G)
†20a	Obstruction buoy (RBHB or G)
†21	Telegraph-cable buoy
22	Mooring buoy (colors of mooring buoys never carried)
22a	Mooring
22b	Mooring buoy with telegraphic communications
22c	Mooring buoy with telephonic communications
†23	Warping buoy
†24	Quarantine buoy
24a	Practice area buoy
†25	Explosive anchorage buoy
†25a	Aeronautical anchorage buoy
†26	Compass adjustment buoy
†27	Fish trap (area) buoy (BWHB)
†27a	Spoil ground buoy
†28	Anchorage buoy (marks limits)
†29	Private aid to navigation (buoy) (maintained by private interests, use with caution)

L. Buoys and Beacons (continued)

29 (cont.)		R	Starboard-hand buoy (entering from seaward)
		B	Port-hand buoy
30			Temporary buoy (See Ki, j, k, l)
30a			Winter buoy
†31			Horozontal stripes or bands HB
†32			Vertical stripes VS
†33			Checkered Chec
†33a		Diag	Diagonal bands
41		W	White
42		B	Black
43		R	Red
44		Y	Yellow
45		G	Green
46		Br	Brown
47		Gy	Gray
48		Bu	Blue
48a		Am	Amber
48b		Or	Orange
†51			Floating beacon
52	 △RW Bn △W Bn ▲R Bn		Fixed beacon (unlighted or daybeacon)
	▲ Bn		Black beacon
	△ Bn		Color unknown
(Lc)	⊙ MARKER ° Marker		Private aid to navigation
53		Bn	Beacon, in general (See L 52)
54			Tower beacon
55			Cardinal marking system
56	△ Deviation Bn		Compass adjustment beacon
57			Topmarks (See L 9, 70)
58			Telegraph-cable (landing) beacon
59	° Piles ° Piles		Piles (See O 30; H 9, 9a)
	⊥ ⊥		Stakes
	° Stumps		Stumps (See O 30)
	⊥ ⊥		Perches
61	⊙ CAIRN ° Cairn		Cairn
62			Painted patches
63	⊙ TR		Landmark (position accurate) (See D 2)
(Ld)	° Tr		Landmark (position approximate)
64		REF	Reflector
65	⊙ MARKER		Range targets, markers
†(Le)	 W Or W Or W Or W Or		Special-purpose buoys
66			Oil installation buoy
67			Drilling platform (See Of, Og)
70	Note: TOPMARKS on buoys and beacons may be shown on charts of foreign waters. The abbreviation for black is not shown adjacent to buoys or beacons.		
(Lf)	Ra Ref		Radar reflector (See M 13)

M. Radio and Radar Stations

1	° R Sta	Radio telegraph station
2	° RT	Radio telephone station
3	⊙ R Bn	Radiobeacon
4	⊙ R Bn	Circular radiobeacon
5	⊙ RD	Directional radiobeacon; Radio range
6		Rotating loop radiobeacon
7	⊙ RDF	Radio direction finding station
†(Ma)	⊙ ANTENNA (TELEM) ⊙ TELEM ANT	Telemetry antenna
(Mb)	⊙ R RELAY MAST	Radio relay mast
(Mc)	⊙ MICRO TR	Microwave tower
9	⊙ R MAST ⊙ R TR	Radio mast Radio tower
9a	⊙ TV TR	Television mast; Television tower
10	⊙ R TR (WBAL) 1090 KHZ	Radio broadcasting station (commercial)
10a	° R Sta	QTG radio station
11	⊙ Ra	Radar station
12	⊙ Racon	Radar responder beacon
13	Ra Ref	Radar reflector (See L-Lf)
14	Ra (conspic)	Radar conspicuous object
14a		Ramark
15	D F S	Distance finding station (synchronized signals)
16	⊙ AERO R Bn 302	Aeronautical radiobeacon
17	° Decca Sta	Decca station
18	° Loran Sta Venice	Loran station (name)
19	⊙ CONSOL Bn 190 kHz MMF	Consol (Consolan) station
(Md)	⊙ AERO R Rge 342	Aeronautical radio range
(Me)	⊙ Ra Ref Calibration Bn	Radar calibration beacon
(Mf)	⊙ LORAN TR SPRING ISLAND	Loran tower (name)
(Mg)	⊙ R TR F R Lt	Obstruction light
†(Mh)	⊙ RA DOME ⊙ DOME (RADAR) ° Ra Dome ° Dome (Radar)	Radar dome
†(Mi)	uhf	Ultrahigh frequency
†(Mj)	vhf	Very high frequency

N. Fog Signals

1	Fog Sig	Fog-signal station
2		Radio fog-signal station
3	GUN	Explosive fog signal
4		Submarine fog signal
5	SUB-BELL	Submarine fog bell (action of waves)
6	SUB-BELL	Submarine fog bell (mechanical)
7	SUB-OSC	Submarine oscillator
8	NAUTO	Nautophone
9	DIA	Diaphone
10	GUN	Fog gun
11	SIREN	Fog siren
12	HORN	Fog trumpet
13	HORN	Foghorn
13a	HORN	Electric foghorn
14	BELL	Fog bell
15	WHIS	Fog whistle
16	HORN	Reed horn
17	GONG	Fog gong
18	◎	Submarine sound signal not connected to the shore (See N 5,6,7)
18a	◎	Submarine sound signal connected to the shore (See N 5,6,7)
(Na)	HORN	Typhon
(Nb)	Fog Det Lt	Fog detector light (See K 68a)

O. Dangers

(25)

1 Rock which does not cover (height above MHW) (See General Remarks)

Uncov 2 ft Uncov 2 ft

(2) (2)

†2 Rock which covers and uncovers, with height above chart sounding datum

3 Rock awash at (near) level of chart sounding datum

Dotted line emphasizes danger to navigation

(Oa) Rock awash (height unknown)

Dotted line emphasizes danger to navigation

4 Submerged rock (depth unknown)

Dotted line emphasizes danger to navigation

(5) Rk

5 Shoal sounding on isolated rock

6 Submerged rock not dangerous to surface navigation (See O 4)

21 Rk 21 Wk 21 Obstr

6a Sunken danger with depth cleared by wire drag (in feet or fathoms)

Reef

7 Reef of unknown extent

Sub Vol

8 Submarine volcano

Discol Water

9 Discolored water

Coral Co Co Co

10 Coral reef, detached (uncovers at sounding datum)

Coral or Rocky reef, covered at sounding datum (See A-IId, IIg)

11

Wreck showing any portion of hull or superstructure (above sounding datum)

Masts

12 Wreck with only masts visible (above sounding datum)

13 Old symbols for wrecks

PA (position approx)

†13a Wreck always partially submerged

14 Sunken wreck dangerous to surface navigation (less than 11 fathoms over wreck) (See O 6a)

(5½) Wk

15 Wreck over which depth is known

21 Wk

15a Wreck with depth cleared by wire drag

(8) Wk

†15b Unsurveyed wreck over which the exact depth is unknown, but is considered to have a safe clearance to the depth shown

16 Sunken wreck, not dangerous to surface navigation

Foul

†17 Foul ground, Foul bottom (fb)

Tide Rips

18 Overfalls or Tide rips

Symbol used only in small areas

Eddies

19 Eddies

Symbol used only in small areas

Kelp

20 Kelp, Seaweed

Symbol used only in small areas

21 Bk Bank
22 Shl Shoal
23 Rf Reef (See A IId, IIg, O 10)
23a Ridge
24 Le Ledge

25 Breakers (See A 12)

26 Submerged rock (See O 4)

(5) Obstr

27 Obstruction

†(Ob) Obstr Well Subm well

Obstr Well Subm well (buoyed)

Obstruction (Fish haven)

(Oc) Fish haven (artificial fishing reef)

28 Wreck (See O 11 to 16)

Wreckage Wks

29 Wreckage

29a Wreck remains (dangerous only for anchoring)

Subm piles Subm piling

†30 Submerged piling (See H-9, 9a; L 59)

Snags Stumps

30a Snags; Submerged stumps (See L 59)

31 Lesser depth possible

32 Uncov Dries (See A 10; O 2, 10)
33 Cov Covers (See O 2, 10)
34 Uncov Uncovers (See A 10; O 2, 10)

(3) Rep (1958)

Reported (with date)

Eagle Rk (rep 1958)

35 Reported (with name and date)

36 Discol Discolored (See O 9)
37 Isolated danger

38 Limiting danger line

rky

39 Limit of rocky area

41 P A Position approximate
42 P D Position doubtful
43 E D Existence doubtful
44 P Pos Position
45 D Doubtful
46 Unexamined
(Od) L D Least Depth

Subm Crib Crib (above water)

(Oe) Crib

Platform (lighted) HORN

(Of) Offshore platform (unnamed)

Hazel (lighted) HORN

(Og) Offshore platform (named)

P. Various Limits, etc.

1 — Leading line; Range Line

2 — Transit

3 — In line with

4 — Limit of sector

5 — Channel, Course, Track recommended (marked by buoys or beacons) (See P 21)

(Pa) — Alternate course

6 — Radar-guided track

7 — Submarine cable (power, telegraph, telephone, etc.)

7a — Submarine cable area

7b — Abandoned submarine cable (includes disused cable)

8 — Submarine pipeline

8a — Submarine pipeline area

†8b — Abandoned submarine pipeline

9 — Maritime limit in general

(Pb) — Limit of restricted area

10 — Limit of fishing zone (fish trap areas)

(Pc) — U.S. Harbor Line

11 — Limit of dumping ground, spoil ground (See P 9; G 13)

12 — Anchorage limit

13 — Limit of airport (See I 23, 24)

13a — Limit of military practice areas

14 — Limit of sovereignty (Territorial waters)

15 — Customs boundary

16 — International boundary (also State boundary)

17 — Stream limit

18 — Ice limit

19 — Limit of tide

20 — Limit of navigation

21 — Course of recommended (not marked by buoys or beacons) (See P 5)

District or province limit

23 — Reservation line

(Options)

24 — Measured distance

25 — Prohibited area (See G 12, 46) (Screen optional)

(Pd) — Shipping safety fairway

(Pe) — Directed traffic lanes

Q. Soundings

1 — Doubtful sounding

2 — No bottom found

3 — Out of position

4 — Least depth in narrow channels

5 — Dredged channel (with controlling depth indicated)

6 — Dredged area

7 — Swept channel (See Q 9)

†8 — Drying (or uncovering) heights above chart sounding datum

9 — Swept area, not adequately sounded (shown by green tint)

9a — Swept area adequately sounded (swept by wire drag to depth indicated)

10 — Hairline depth figures

10a — Figures for ordinary soundings

11 — Soundings taken from foreign charts

12 — Soundings taken from older surveys (or smaller scale chts)

13 — Echo soundings

14 — Sloping figures (See Q 12)

15 — Upright figures (See Q 10a)

16 — Bracketed figures (See O 1, 2)

17 — Underlined sounding figures (See Q 8)

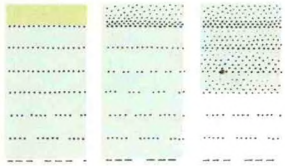
18 — Soundings expressed in fathoms and feet

22 — Unsounded area

(Qa) — Stream

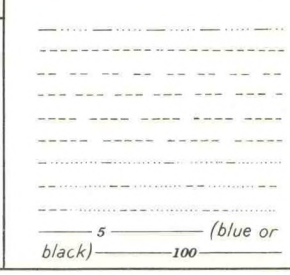
R. Depth Contours and Tints (see General Remarks)

Feet	Fm / Meters
0	0
6	1
12	2
18	3
24	4
30	5
36	6
60	10
120	20
180	30
240	40



Feet	Fm / Meters
300	50
600	100
1,200	200
1,800	300
2,400	400
3,000	500
6,000	1,000
12,000	2,000
18,000	3,000

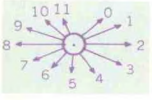
Or continuous lines, with values



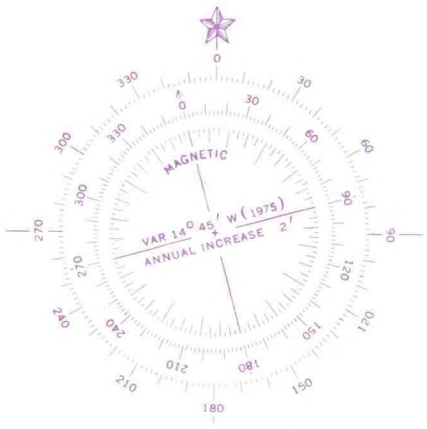
S. Quality of the Bottom

1	Grd	Ground
2	S	Sand
3	M	Mud; Muddy
4	Oz	Ooze
5	Ml	Marl
6	Cl	Clay
7	G	Gravel
8	Sn	Shingle
9	P	Pebbles
10	St	Stones
11	Rk; rky	Rock; Rocky
11a	Blds	Boulders
12	Ck	Chalk
12a	Ca	Calcareous
13	Qz	Quartz
13a	Sch	Schist
14	Co	Coral
(Sa)	Co Hd	Coral head
15	Mds	Madrepores
16	Vol	Volcanic
(Sb)	Vol Ash	Volcanic ash
17	La	Lava
18	Pm	Pumice
19	T	Tufa
20	Sc	Scoriae
21	Cn	Cinders
21a		Ash
22	Mn	Manganese
23	Sh	Shells
24	Oys	Oysters
25	Ms	Mussels
26	Spg	Sponge
27	K	Kelp
28	Wd	Seaweed
	Grs	Grass
29	Stg	Sea-tangle
31	Spi	Spicules
32	Fr	Foraminifera
33	Gl	Globigerina
34	Di	Diatoms
35	Rd	Radiolaria
36	Pt	Pteropods
37	Po	Polyzoa
38	Cir	Cirripedia
38a	Fu	Fucus
38b	Ma	Mattes
39	fne	Fine
40	crs	Coarse
41	sft	Soft
42	hrd	Hard
43	stf	Stiff
44	sml	Small
45	lrg	Large
46	stk	Sticky
47	brk	Broken
47a	grd	Ground (Shells)
48	rt	Rotten
49	str	Streaky
50	spk	Speckled
51	gty	Gritty
52	dec	Decayed
53	fly	Flinty
54	glac	Glacial
55	ten	Tenacious
56	wh	White
57	bk	Black
58	vi	Violet
59	bu	Blue
60	gn	Green
61	yl	Yellow
62	or	Orange
63	rd	Red
64	br	Brown
65	ch	Chocolate
66	gy	Gray
67	lt	Light
68	dk	Dark
70	vard	Varied
71	unev	Uneven
(Sc)	S/M	Surface layer and Under layer
76		Freshwater springs in seabed

T. Tides and Currents

1	HW	High water
1a	HHW	Higher high water
2	LW	Low water
(Ta)	LWD	Low-water datum
2a	LLW	Lower low water
3	MTL	Mean tide level
4	MSL	Mean sea level
4a		Elevation of mean sea level above chart (sounding) datum
5		Chart datum (datum for sounding reduction)
6	Sp	Spring tide
7	Np	Neap tide
7a	MHW	Mean high water
8	MHWS	Mean high-water springs
8a	MHWN	Mean high-water neaps
8b	MHHW	Mean higher high water
8c	MLW	Mean low water
9	MLWS	Mean low-water springs
9a	MLWN	Mean low-water neaps
9b	MLLW	Mean lower low water
10	ISLW	Indian spring low water
11		High-water full and change (vulgar establishment of the port)
12		Low-water full and change
13		Mean establishment of the port
13a		Establishment of the port
14		Unit of height
15		Equinoctial
16		Quarter; Quadrature
17	Str	Stream
18		Current, general, with rate
19		Flood stream (current) with rate
20		Ebb stream (current) with rate
21		Tide gauge; Tidepole; Automatic tide gauge
23	vel	Velocity; Rate
24	kn	Knots
25	ht	Height
26		Tide
27		New moon
28		Full moon
29		Ordinary
30		Syzygy
31	fl	Flood
32		Ebb
33		Tidal stream diagram
34		Place for which tabulated tidal stream data are given
35		Range (of tide)
36		Phase lag
(Tb)		Current diagram, with explanatory note

U. Compass



Compass Rose

The outer circle is in degrees with zero at true north. The inner circles are in points and degrees with the arrow indicating magnetic north.

1	N	North
2	E	East
3	S	South
4	W	West
5	NE	Northeast
6	SE	Southeast
7	SW	Southwest
8	NW	Northwest
9	N	Northern
10	E	Eastern
11	S	Southern
12	W	Western
21	brg	Bearing
22	T	True
23	mag	Magnetic
24	var	Variation
25		Annual change
25a		Annual change nil
26		Abnormal variation; Magnetic attraction
27	deg	Degrees (See E-20)
28	dev	Deviation

Index of Abbreviations

A

aband	Abandoned	F 37
ABAND LT HO	Abandoned lighthouse	If
abt	About	F 17
AERO	Aeronautical	F 22; K 4
AERO R Bn	Aeronautical radiobeacon	M 16
AERO R Rge	Aeronautical radio range	Md
alt	Altitude	E 18
Alt	Alternating (light)	K 26
Am	Amber	K 67a; L 48a
anc	Ancient	F 9
Anch	Anchorage	B 15; G 1, 2
Anch prohib	Anchorage prohibited	G 12
Ant	Antenna	Ma
approx	Approximate	F 34
Apprs	Approaches	Bg
Apt	Apartment	Ij
Arch	Archipelago	B 20
Astro	Astronomical	D 9
AUTH	Authorized	Fc
Aux	Auxiliary (light)	K 51
Ave	Avenue	I 26a

B

B	Bay	B 2
B	Bayou	Ba
B, b, bk	Black	L 42; S 57
Bdy Mon	Boundary monument	D 14
BELL	Fog Bell	N 14
bet	Between	Fi
B Hbr	Boat harbor	G 33
Bk	Bank	O 21
Bkw	Breakwater	G 6
Bl	Blast	
Bld, Blds	Boulder, Boulders	B 32; S 11a
Bldg	Building	I 66
Blvd	Boulevard	I 26b
BM	Bench mark	D 5
Bn	Beacon (in general)	L 52, 53
BR	Bridge	H 14
Br, br	Brown	L 46; S 64
brg	Bearing	U 21
brk	Broken	S 47
Bu, bu	Blue	K 63; L 48; S 69
BWHB	Black and white horizontal bands	L 27
BWVS	Black and white vertical stripes	L 14, 14a

C

C	Can, Cylindrical (buoy)	L 5
C	Cape	B 22
C	Cove	B 5a
Ca	Calcareous	S 12a
Cap	Capitol	Ik
Cas	Castle	I 4
Cath	Cathedral	I 8a
cbl	Cable length	E 10
cd	Candela	E 12b
C G	Coast Guard	J 3, Ja
ch	Chocolate	S 65
Ch	Church	I 8
Chan	Channel	B 10
Chec	Checkered (buoy)	L 33
CHY	Chimney	I 44
Cir	Cirripedia	S 38
Ck	Chalk	S 12
Cl	Clay	S 6
CL	Clearance	Fd
cm	Centimeter	E 4b
Cn	Cinders	S 21
Co	Company	Il
Co	Coral	S 14
Co Hd	Coral head	Sa
concr	Concrete	Ff
conspic	Conspicuous	F 12
C of E	Corps of Engineers	Df
cor	Corner	Fe
Corp	Corporation	Im
Cov	Covers	O 33
corr	Correction	E 17
cps, c/s	Cycles per second	Ef
Cr	Creek	B 5
crs	Coarse	S 40
Cswy	Causeway	H 3f
Ct Ho	Courthouse	I 64
CUP	Cupola	I 36
Cus Ho	Customhouse	G 29

D

D	Doubtful	O 45
DD	Deep Draft	F n
D, Destr	Destroyed	F 14; Ke
dec	Decayed	S 52
deg	Degrees	U 27
dev	Deviation	U 28
Diag	Diagonal bands	L 33a
D F S	Distance finding station	M 15
Di	Diatoms	S 34
DIA	Diaphone	N 9
Discol	Discolored	O 36
discontd	Discontinued	F 25
dist	Distant	F 16
dk	Dark	S 68
dm	Decimeter	E 4a
Dol	Dolphin	G 21
DRDG RGE	Dredging Range	

E

E	East, Eastern	U 2, 10
Ed	Edition	E 16
ED	Existence doubtful	O 43
elec	Electric	F 29
elev	Elevation	E 19
ELEV	Elevator, Lift	I 37
Elev	Elevation, Elevated	Ie
E'ly	Easterly	Fq
Entr	Entrance	B 11
E Int	Isophase light (equal interval)	K 23a
Est	Estuary	B 12
estab	Established	F 28
Exper	Experimental (light)	Kh
exper	Experimental	F 24
explos	Explosive	F 27

Abbreviations

Explos Anch	Explosive Anchorage (buoy)	L 25
Exting	Extinguished (light)	K 74
extr	Extreme	F 40

F

F	Fixed (light)	K 21
Facty	Factory	I 47
Fd	Fjord	B 3
F Fl	Fixed and flashing (light)	K 29
F Gp Fl	Fixed and group flashing (light)	K 30
Fl	Flash, Flashing (light)	K 23, 45
fl	Flood	Fg; T 31
fly	Flinty	S 53
fm	Fathom	E 9
fne	Fine	S 39
Fog Det Lt	Fog detector light	K 68a; Nb
Fog Sig	Fog signal station	N 1
FP	Flagpole	J 19
Fr	Foraminifera	S 32
FS	Flagstaff	J 19
Fsh stks	Fishing stakes	G 14
ft	Foot	E 7
Ft	Fort	I 19
F TR	Flag tower	J 19a
Fu	Fucus	S 38a
Fy	Ferry	H 19

G

G	Gulf	B 1
G	Gravel	S 7
G, Gn, gn	Green	K 64; L 20, 20a, 45; S 60
GAB	Gable	I 72
Gl	Globigerina	S 33
glac	Glacial	S 54
GONG	Fog gong	N 17
Govt Ho	Government House	I 30
Gp	Group	K 47
Gp Fl	Group flashing	K 28
Gp Occ	Group occulting	K 27
Grd, grd	Ground	S 1, 47a
Grs	Grass	S 28
gt	Great	F 1
gty	Gritty	S 51
GUN	Explosive fog signal	N 3
GUN	Fog gun	N 10
Gy, gy	Gray	L 47; S 66

H

HB	Horizontal bands or stripes	L 31
Hbr	Harbor	B 16; G 3
Hd	Head, Headland	B 24
HECP	Harbor entrance control post	Jd
Hk	Hulk	G 45
HHW	Higher high water	T Ia
Hn	Haven	B 16a; G 4
Hor	Horizontal lights	K 81
HOR CL	Horizontal clearance	H 18b
HORN	Fog trumpet, Foghorn, Reed horn, Typhon	N 12, 13, 13a, 16, Na
Hosp	Hospital	I 32
hr, h	Hour	E 1
hrd	Hard	S 42
H S	High School	Ig
ht	Height	E 19; T 25
HW	High water	T 1
Hy	Highway	H 1
Hz	Hertz	Ec

I

I	Island	B 18
I Qk, Int Qk	Interrupted quick	K 25
in	Inch	E 6
In	Inlet	B 6
Inst	Institute	I 61
Irreg	Irregular	K 71
ISLW	Indian spring low water	T 10
Is	Islands	Bi
Iso	Isophase	K 23a
It	Islet	B 19

K

K	Kelp	S 27
kc	Kilocycle	Eg
kHz	Kilohertz	Ed
km	Kilometer	E 5
kn	Knots	E 12; T 24

L

L	Loch, Lough, Lake	B 4
La	Lava	S 17
Lag	Lagoon	Bf; C 16
lat	Latitude	E 13
LD	Least Depth	Od
Ldg	Landing, Landing place	B 33; G 16
Ldg Lt	Leading light	K 11
Le	Ledge	O 24
Lit	Little	F 2
LLW	Lower low water	T 2a
LNM	Local Notice to Mariners	Fa
long	Longitude	E 14
LOOK TR	Lookout station, Watch tower	J 4
lrg	Large	F 3; S 45
LS S	Lifesaving station	J 6
Lt	Light	K 2
It	Light	S 67
Ltd	Limited	Ii
Lt Ho	Lighthouse	K 3
LW	Low water	T 2
LWD	Low water datum	Ta

M

M, Mi	Nautical mile	E11; Kb
M	Mud, Muddy	S 3
m	Meter	E 4, d, e
m^2	Square meter	E4d
m^3	Cubic meter	E4c
m, min	Minute (of time)	E2; Kc
Ma	Marsh	Bj
Ma	Mattes	S 38b
mag	Magnetic	U 23
Magz	Magazine	I 34
maintd	Maintained	F 36
max	Maximum	Fp
Mc	Megacycle	Eh
Mds	Madrepores	S 15

Mg	Mangrove	Bk
MHHW	Mean higher high water	T 8b
MHW	Mean high water	T 7a
MHWN	Mean high-water neaps	T 8a
MHWS	Mean high-water springs	T 8
MHz	Megahertz	Ee
MICRO TR	Microwave tower	Mc
mid	Middle	F 7
min	Minimum	Fo
Mkr	Marker	Lc
Ml	Marl	S 5
MLLW	Mean lower low water	T 9b
MLW	Mean low water	T 8c
MLWN	Mean low-water neaps	T 9a
MLWS	Mean low-water springs	T 9
mm	Millimeter	E 4c
Mn	Manganese	S 22
Mo	Morse code light	K 30a
mod	Moderate	Fh
MON	Monument	I 35
Ms	Mussels	S 25
μsec, μs	Microsecond (one millionth)	Eb
MSL	Mean sea level	T 4
Mt	Mountain, Mount	B 26
Mth	Mouth	B 13
MTL	Mean tide level	T 3

N

N	North; Northern	U 1, 9
N	Nun; Conical (buoy)	L 6
N M, N Mi	Nautical mile	E 11
NAUTO	Nautophone	N 8
NE	Northeast	U 5
N'Ly	Northerly	Fq
NM	Notice to Mariners	F 42
No	Number	E 23
Np	Neap tide	T 7
NW	Northwest	U 8
NWS	National Weather Service Signal Station	Jb

O

OBSC	Obscured (light)	K 68
Obs Spot	Observation spot	D 4
Obstr	Obstruction	O 27
Obsy	Observatory	J 21
Occ	Occulting (light), Occultation	K 22, 46
Occ	Intermittent (light)	K 48
Occas	Occasional (light)	F 39; K 70
Off	Office	J 22
Or, or	Orange	K 65; L48b; S 62
OVHD PWR CAB	Overhead power cable	H 4
Oys	Oysters, Oyster bed	S 24; G 15a
Oz	Ooze	S 4

P

P	Pebbles	S 9
P	Pillar (buoy)	L 8a
P	Pond	Bb
P	Port	B 17; G 5
PA	Position approximate	O 41
Pag	Pagoda	I 14
Pass	Passage, Pass	B 9
Pav	Pavilion	I 67
PD	Position doubtful	O 42
Pen	Peninsula	B 21
PIL STA	Pilot station	J 8
Pk	Peak	B 29
Pm	Pumice	S 18
Po	Polyzoa	S 37
P O	Post Office	I 29
P, Pos	Position	O 44
priv	Private, Privately	F 30
Priv maintd	Privately maintained	K 17; L 29
Prohib	Prohibited	F 26
prom	Prominent	F 31
Prom	Promontory	B 23
Prov	Provisional (light)	K 72
Pt	Point	B 25
Pt	Pteropods	S 36
pub	Publication	E 15
P F	Pump-out facilities	Gd
PWI	Potable water intake	

Q

Quar	Quarantine	G 26
Qk Fl	Quick flashing (light)	K 24
Qz	Quartz	S 13

R

R	Red	K 66; L 15, 43
R	River	Bd
Ra	Radar station	M 11
Racon	Radar responder beacon	M 12
Ra (conspic)	Radar conspicuous object	M 14
RA DOME	Radar dome	Mh
Ra Ref	Radar reflector	Lf; M 13
RBHB	Red and black horizontal bands	L 17, 18, 19, 20, 20a
R Bn	Red beacon	L 52
R Bn	Radiobeacon	M 3, 4, 16
Rd	Radiolaria	S 35
rd	Red	S 63
Rd	Road, Roadstead	B 14; H 1
RD	Directional Radiobeacon, Radio range	M 5
RDF	Radio direction finding station	M 7
REF	Reflector	K 10; L 64
Rep	Reported	O 35
Restr	Restricted	Fv
Rf	Reef	O 23
Rge	Range	B 27
RGE	Range	Kg
Rk	Rock	B 35
Rk, rky	Rock, Rocky	S 11
Rky	Rocky	Bh
R MAST	Radio mast	M 9
Rot	Rotating (light), Revolving	K 31
RR	Railroad	H 3
R RELAY MAST	Radio relay mast	Mb
R Sta	Radio telegraph station, QTG Radio station	M1, 10a
RT	Radio telephone station	M 2

rt	Rotten	S 48
R TR	Radio tower	M 9
Ru	Ruins	I 40
RW Bn	Red and white beacon	L 52
Rv	Railway	H 3

S

S	Sand	S 2
S	South; Southern	U 3, 11
S	Spar (buoy)	L 8
Sc	Scoriae	S 20
Sch	Schist	S 13a
Sch	School	I 65
Sd	Sound	B 8
SD	Sounding doubtful	Q 1
SE	Southeast	U 6
sec, s	Second (time; geo. pos.)	E 3; Kd
SEC	Sector	K 49
Sem	Semaphore	J 10
S Fl	Short flashing (light)	K 25a
sft	Soft	S 41
Sh	Shells	S 23
Shl	Shoal	O 22
Sig Sta	Signal station	J 9
SIREN	Fog siren	N 11
Sk	Stroke	Fu
S-L Fl	Short-long flashing (light)	K 28a
Slu	Slough	Be; C 18
S'ly	Southerly	Fr
sml	Small	F4; S 44
Sn	Shingle	S 8
Sp	Spring tide	T 6
SP	Spherical (bouy)	L 7
Spg	Sponge	S 26
Spi	Spicules	S 31
S'PIPE	Standpipe	I 45
spk	Speckled	S 50
S Sig Sta	Storm signal station	J 11
St	Saint	F 11
St	Street	I 26
St	Stones	S 10
Sta	Station	J 1, 2
std	Standard	F 32
stf	Stiff	S 43
Stg	Sea-tangle	S 29
stk	Sticky	S 46
St M, St Mi	Statute mile	Ea
Str	Strait	B 7
Str	Stream	Bc; T 17
str	Streaky	S 49
sub	Submarine	F 20
SUB-BELL	Submarine fog bell	N 5, 6
Subm, subm	Submerged	F 33; Oa, 30
Subm Ruins	Submerged ruins	Gd
SUB-OSC	Submarine oscillator	N 7
Sub Vol	Submarine volcano	O 8
Subm W	Submerged Well	Ob
SW	Southwest	U 7
sw	Swamp	B 1

T

t	Tonne	E12a
T	Ton	Ei
T	Telephone	I 70; L 22c
T	True	U 22
T	Tufa	S 19
TB	Temporary buoy	L 30
Tel	Telegraph	I 27; L 22b
Telem Ant	Telemetry antenna	Ma
Tel Off	Telegraph office	I 28
Temp	Temporary (light)	F 38; K 73
ten	Tenacious	S 55
Thoro	Thorofare	B 9
Tk	Tank	I 53
TR	Tower	I 41
TRLB, TRUB,	TLB, TUB	Ki, j, k, l
Tri	Triangulation	D 10
TV TR	Television tower (mast)	M 9a

U

uhf	Ultra high frequency	Mi
Uncov	Uncovers; Dries	O 2, 32, 34
Univ	University	Ih
unverd	Unverified	Fb
unev	Uneven	S 71
μsec, μs	Microsecond (one millionth)	Eb

V

var	Variation	U 24
vard	Varied	S 70
VB	Vertical beam	Kf
vel	Velocity	T 23
Vert	Vertical (lights)	K 80
VERT CL	Vertical clearance	H 18a
vhf	Very high frequency	Mi
Vi, vi	Violet	K 61; S 68
View X	View point	D 6
Vil	Village	I 3
Vol	Volcanic	S 16
Vol Ash	Volcanic ash	Sb
VS	Vertical stripes	L 32

W

W	West, Western	U 4, 12
W, wh	White	K 67; L 41; S 56
W Bn	White beacon	L 52
Wd	Seaweed	S 28
Whf	Wharf	G 18
WHIS	Fog whistle	N 15
Wk	Wreck	O 15, 28
Wks	Wrecks, Wreckage	O 29
W Or	White and orange	Le
W'ly	Westerly	Ft

Y

Y, yl	Yellow	L 24, 44; S 61
yd	Yard	E 8
1st	First	Fj
2nd, 2d	Second	Fk
3rd, 3d	Third	Fl
4th	Fourth	Fm
°	Degree	E 20
′	Minute (of arc)	E 21
″	Second (of arc)	E 22

NAVIGATIONAL AIDS

IN

UNITED STATES WATERS

AIDS TO NAVIGATION ON NAVIGABLE WATERS
except Western Rivers and Intracoastal Waterway

LATERAL SYSTEM AS SEEN ENTERING FROM SEAWARD

PORT SIDE
ODD NUMBERED AIDS
□ WHITE OR ■ GREEN LIGHTS

FIXED
FLASHING
OCCULTING
QUICK FLASHING
EQ INT

LIGHTED BUOY — "9" Fl G 4sec Ra Ref

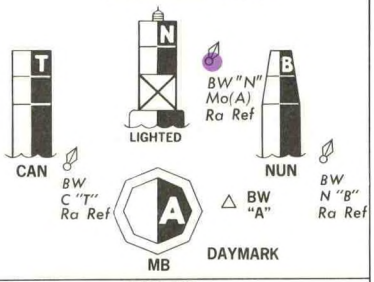
CAN — C "7" Ra Ref

"1" ▲ DAYMARKS △ W "3"

△ G "3"

MID CHANNEL
NO NUMBERS—MAY BE LETTERED
□ WHITE LIGHT ONLY

MORSE CODE — Mo(A)



CAN — BW C "T" Ra Ref
LIGHTED — BW "N" Mo(A) Ra Ref
NUN — BW N "B" Ra Ref
MB — △ BW "A" — DAYMARK

JUNCTION
MARK JUNCTIONS AND OBSTRUCTIONS
NO NUMBERS—MAY BE LETTERED
INTERRUPTED QUICK FLASHING

□ WHITE OR ■ GREEN — □ WHITE OR ■ RED

LIGHTED — RB "M" I Qk Fl G Ra Ref
LIGHTED — RB "D" I Qk Fl R Ra Ref

PREFERRED CHANNEL TO STARBOARD — TOPMOST BAND BLACK
CAN — RB C "N" Ra Ref

PREFERRED CHANNEL TO PORT — TOPMOST BAND RED
NUN — RB N "L" Ra Ref

JB — △ RB "L"
JR — △ RB "J"

STARBOARD SIDE
EVEN NUMBERED AIDS
□ WHITE OR ■ RED LIGHTS

FIXED
FLASHING
OCCULTING
QUICK FLASHING
EQ INT
GROUP FLASHING (2)

LIGHTED BUOY — R "8" Fl R 4sec Ra Ref

NUN — R N "6" Ra Ref

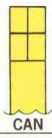
DAYMARK — △ R "4"

BUOYS HAVING NO LATERAL SIGNIFICANCE—ALL WATERS

SHAPE HAS NO SIGNIFICANCE
NO NUMBERS—MAY BE LETTERED
MAY BE LIGHTED
ANY COLOR LIGHT EXCEPT RED OR GREEN

FIXED
FLASHING
OCCULTING

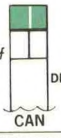
W Or C Ra Ref — SPECIAL PURPOSE — CAN



Y C Ra Ref — QUARANTINE ANCHORAGE — CAN

W C "N" Ra Ref — ANCHORAGE — CAN

BW C Ra Ref — FISH NET AREA — CAN



GW C Ra Ref — DREDGING — CAN

UNLIGHTED

DANGER

EXCLUSION AREA

DAYMARKS HAVING NO LATERAL SIGNIFICANCE
MAY BE LETTERED

NW — △ W Bn

NR — △ RW Bn

NB — △ BW Bn

AIDS TO NAVIGATION ON THE INTRACOASTAL WATERWAY

AS SEEN ENTERING FROM NORTH AND EAST—PROCEEDING TO SOUTH AND WEST

PORT SIDE
ODD NUMBERED AIDS
□ WHITE OR ■ GREEN LIGHTS

FIXED — OCCULTING
FLASHING — QUICK FLASHING
EQ INT

LIGHTED BUOY — "3" Fl G 4sec Ra Ref

CAN — C "9" Ra Ref

SB-I — SW-I

"5" ▲ DAYMARKS △ W "3"

SG-I

△ G "3"

JUNCTION
MARK JUNCTIONS AND OBSTRUCTIONS
NO NUMBERS—MAY BE LETTERED
INTERRUPTED QUICK FLASHING

□ WHITE OR ■ GREEN LIGHTS — □ WHITE OR ■ RED LIGHTS

LIGHTED — RB "J" I Qk Fl G Ra Ref

LIGHTED — RB "N" I Qk Fl R Ra Ref

PREFERRED CHANNEL TO STARBOARD
TOPMOST BAND BLACK

CAN — RB C "A" Ra Ref

PREFERRED CHANNEL TO PORT
TOPMOST BAND RED

NUN — RB N "S" Ra Ref

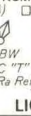
JB-I — △ RB "E"

JR-I — △ RB "D"

MID CHANNEL MORSE CODE NO NUMBERS-MAY BE LETTERED
Mo (A) □WHITE LIGHT ONLY

MB-I DAYMARK △ BW "C"

BW C "T" Ra Ref



BW Mo (A) "N" Ra Ref

BW N "B" Ra Ref

CAN — LIGHTED — NUN

STARBOARD SIDE
EVEN NUMBERED AIDS
□ WHITE OR ■ RED LIGHTS

FIXED — OCCULTING
FLASHING — QUICK FLASHING
EQ INT
GROUP FLASHING (2)

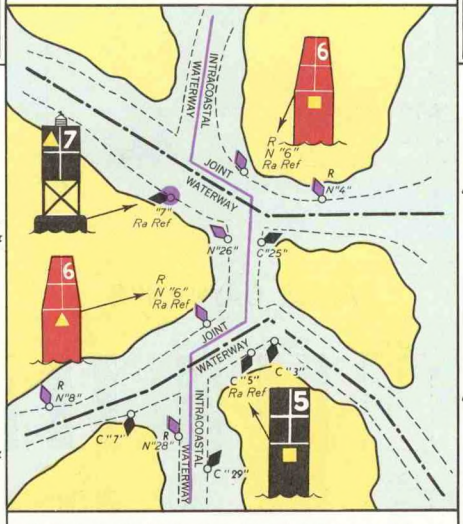
LIGHTED BUOY — R "8" Fl R 4sec Ra Ref

NUN — R N "6" Ra Ref

TR-I

DAYMARK — ▲ R "4"

DUAL PURPOSE MARKING USED WHERE THE ICW AND OTHER WATERWAYS COINCIDE



When following the ICW from New Jersey through Texas, a △ should be kept to your starboard hand and a □ should be kept to your port hand, regardless of the color of the aid on which they appear.

SB-SY

"3" ▲ DUAL PURPOSE DAYMARKS

DUAL PURPOSE BUOYS — C "5" Ra Ref

TR-SY

R "6" ▲

R N "6" Ra Ref

JB-SY

△ RB "A"

JR-SY

RB "B" △

TR-TY

R "6" ▲ DUAL PURPOSE DAYMARKS

DUAL PURPOSE BUOYS — R N "6" Ra Ref

SB-TY

"5" ▲

C "5" Ra Ref

JB-TY

△ RB "C"

JR-TY

RB "D" △

AIDS TO NAVIGATION ON WESTERN RIVERS

AS SEEN ENTERING FROM SEAWARD

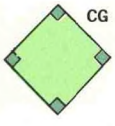
PORT SIDE

□ WHITE OR ■ GREEN LIGHTS
FLASHING

LIGHTED BUOY

CAN

PASSING DAYMARK



CROSSING DAYMARK

176.9

MILE BOARD

JUNCTION

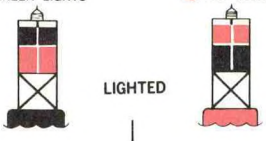
MARK JUNCTIONS AND OBSTRUCTIONS
INTERRUPTED QUICK FLASHING

PREFERRED CHANNEL TO STARBOARD
TOPMOST BAND BLACK

PREFERRED CHANNEL TO PORT
TOPMOST BAND RED

□ WHITE OR
■ GREEN LIGHTS

□ WHITE OR
■ RED LIGHTS



LIGHTED

CAN

NUN

JB

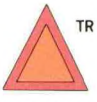
JR

STARBOARD SIDE

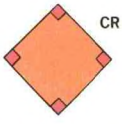
□ WHITE OR ■ RED LIGHTS
GROUP FLASHING (2)

LIGHTED BUOY

NUN



PASSING DAYMARK



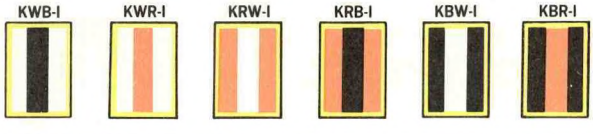
CROSSING DAYMARK

123.5

MILE BOARD

RANGE DAYMARKS

NAVIGABLE WATERS
EXCEPT ICW



INTRACOASTAL
WATERWAY

MAY BE LETTERED

UNIFORM STATE WATERWAY MARKING SYSTEM

STATE WATERS AND DESIGNATED STATE WATERS FOR PRIVATE AIDS TO NAVIGATION

REGULATORY MARKERS

BOAT EXCLUSION AREA

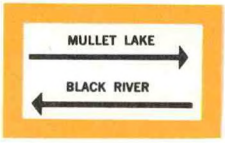
EXPLANATION MAY BE PLACED OUTSIDE THE CROSSED DIAMOND SHAPE, SUCH AS DAM, RAPIDS, SWIM AREA, ETC.

DANGER

THE NATURE OF DANGER MAY BE INDICATED INSIDE THE DIAMOND SHAPE, SUCH AS ROCK, WRECK, SHOAL, DAM, ETC.

CONTROLLED AREA

TYPE OF CONTROL IS INDICATED IN THE CIRCLE, SUCH AS 5 MPH, NO ANCHORING, ETC.



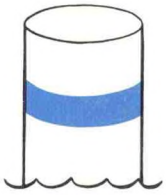
INFORMATION

FOR DISPLAYING INFORMATION SUCH AS DIRECTIONS, DISTANCES, LOCATIONS, ETC.

BUOY USED TO DISPLAY REGULATORY MARKERS

MAY SHOW WHITE LIGHT
MAY BE LETTERED

AIDS TO NAVIGATION

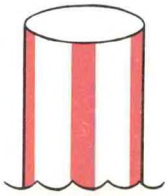


MOORING BUOY

WHITE WITH BLUE BAND

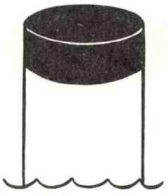
MAY SHOW WHITE REFLECTOR OR LIGHT

MAY SHOW WHITE REFLECTOR OR LIGHT



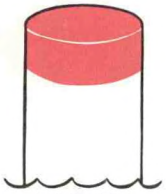
RED-STRIPED WHITE BUOY

MAY BE LETTERED
DO NOT PASS BETWEEN BUOY AND NEAREST SHORE



BLACK-TOPPED WHITE BUOY

MAY BE NUMBERED
PASS TO NORTH OR EAST OF BUOY



RED-TOPPED WHITE BUOY

PASS TO SOUTH OR WEST OF BUOY

CARDINAL SYSTEM

MAY SHOW GREEN REFLECTOR OR LIGHT

MAY SHOW RED REFLECTOR OR LIGHT

SOLID RED AND SOLID BLACK BUOYS

USUALLY FOUND IN PAIRS
PASS BETWEEN THESE BUOYS

PORT SIDE — LOOKING UPSTREAM — STARBOARD SIDE

LATERAL SYSTEM