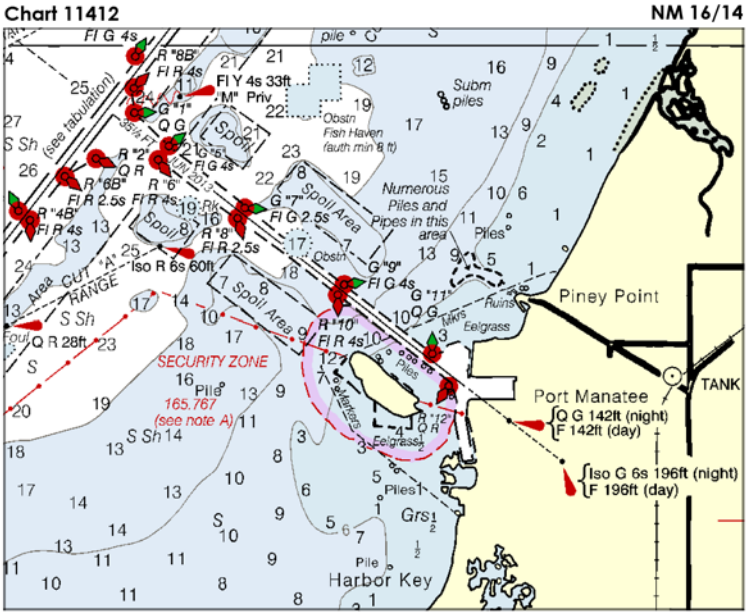
Chart 11412
NM 16/14
Piney Point
Port Manatee
TANK
Harbor Key
SECURITY ZONE
165.767
(see note A)
Numerous Piles and Pipes in this area
Iso R 6s 60ft
Q G 142ft (night)
F 142ft (day)
Iso G 6s 196ft (night)
F 196ft (day)

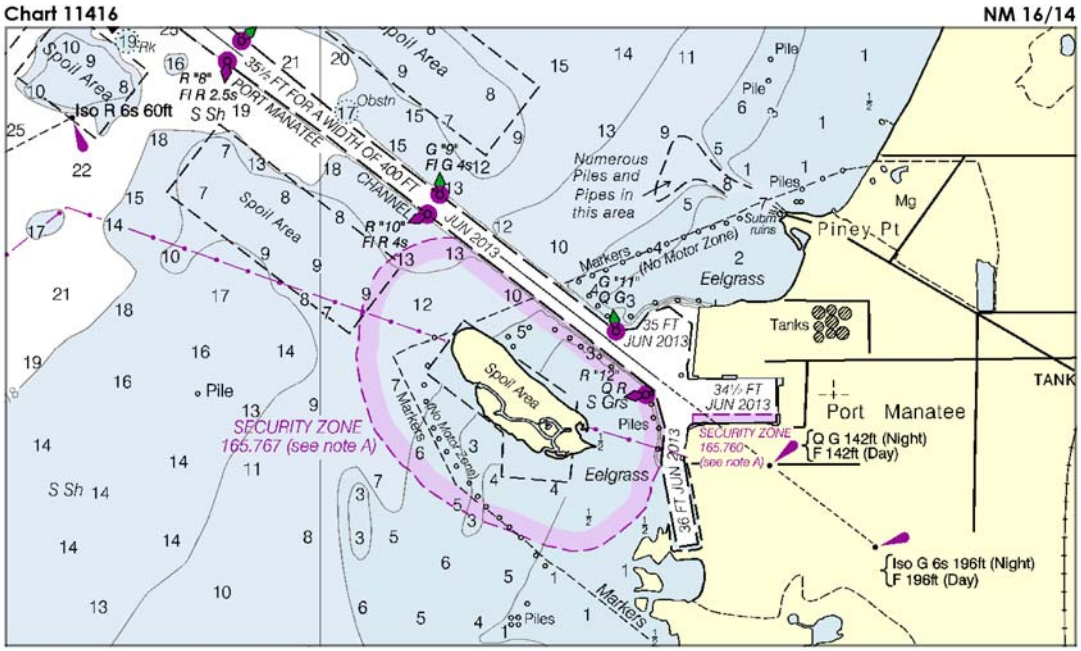
Chart 11416
NM 16/14
Iso R 6s 60ft
PORT MANATEE CHANNEL
35½ FT FOR A WIDTH OF 400 FT
JUN 2013
Numerous Piles and Pipes in this area
Piney Pt
Eelgrass
Tanks
TANK
Port Manatee
SECURITY ZONE
165.767 (see note A)
SECURITY ZONE
165.760
(see note A)
Q G 142ft (Night)
F 142ft (Day)
Iso G 6s 196ft (Night)
F 196ft (Day)

Chart 14975 (A) NM 16/14

DULUTH HARBOR

TABULATED FROM SURVEYS BY THE CORPS OF ENGINEERS - SURVEYS TO JUL 2013

CONTROLLING DEPTHS FROM SEAWARD IN FEET AT GREAT LAKES LOW WATER DATUM (LWD)						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 LWD (FEET)
DULUTH ENTRY	A	A	A	A				
1	25.9	30.8	32.0	29.0	7-2013	245-1000	.13	32
2	29.7	34.2	33.6	30.4	7-2013	245	.08	31
3	29.6	31.9	31.7	32.5	7-2013	245	.07	30
4	32.4	31.5	30.8	31.4	7-2013	245	.07	29
5	25.3	30.9	31.3	28.4	7-2013	245-480	.07	28
DULUTH HARBOR BASIN								
NORTHERN SECTION	24.9	27.4	27.9	25.8	7-2013	1100-2700	.64	28
SOUTHERN SECTION	23.9	25.0	27.2	21.9	7-2013	1200-2700	.91	27
EAST GATE BASIN (NORTH)	25.6	24.5	25.8	22.5	10,11-2011; 7-2013	1500-3300	.33	27
WEST GATE BASIN	24.6	28.3	27.7	25.2	11-2011	400-850	.66	27
HOWARDS BAY	23.6	24.8	25.5	21.5	7, 11-2011	100-750	.99	27
NORTH CHANNEL								
EASTERN SECTION	22.4	23.1	22.8	B10.1	8, 9, 11-2011	400	1.66	27
WESTERN SECTION	18.6	20.3	20.7	19.2	8, 11-2011	400	.59	21
21ST AVE WEST CHANNEL	7.0	11.7	19.9	19.7	8-2011	200	.33	20
SOUTH CHANNEL								
EASTERN SECTION	20.2	22.3	23.1	25.6	9, 11-2011	400-800	.74	27
WESTERN SECTION	22.3	22.4	23.0	21.6	8, 10-2011	400	.83	23
CROSS CHANNEL	22.8	27.6	27.2	C20.8	9, 11-2011	1300	.33	27
UPPER CHANNEL	19.3	23.0	20.9	D18.6	8-2011	500	1.00	23
MINNESOTA CHANNEL								
EASTERN SECTION	18.0	21.4	22.0	12.3	8, 10-2011	600	.95	23
WESTERN SECTION	E13.4	14.6	10.6	F10.3	8-2009; 10-2011	200	2.39	20

A. CHANNEL DIVIDED INTO QUARTERS WHEN ENTERING FROM LAKE.
B. SHOALING TO 4.0 FT IN THE OUTSIDE HALF OF THE QUARTER FROM 46°45'02.7"N - 92°06'10.1"W TO 46°45'05.6"N - 92°06'15.9"W
C. SHOALING TO 6.0 FT AT 46°44'43.5"N - 92°07'17.8"W
D. SHOALING TO 8.2 FT AT 46°43'54.6"N - 92°08'39.9"W
E. SHOALING TO 5.3 FT IN THE OUTSIDE HALF OF THE QUARTER
F. SHOALING TO 5.7 FT IN THE OUTSIDE HALF OF THE QUARTER.

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

Chart 14975 (B) NM 16/14

SUPERIOR HARBOR

TABULATED FROM SURVEYS BY THE CORPS OF ENGINEERS - SURVEYS TO JUL 2013

CONTROLLING DEPTHS FROM SEAWARD IN FEET AT GREAT LAKES LOW WATER DATUM (LWD)						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 LWD (FEET)
SUPERIOR ENTRY	A	A	A	A				
1	23.1 B	31.6	32.6	30.4 C	8-10; 8-11	600-1100	.18	31
2	29.2	31.3	32.5	30.9	8, 10-11	415-1100	.15	30
3	29.8	30.6	31.3	27.8	10-11	415	.08	29
4	28.2	30.5	29.8	26.3	10-11	415-430	.08	28
5	24.1	29.4	30.1	26.6	10-11	430-840	.08	27
SUPERIOR HARBOR BASIN	22.1 D	24.1	23.1	21.3	9, 10, 11-11	600-2000	1.21	27
ALLOUEZ BAY CHANNEL	20.2	23.1	21.8	22.1	8, 10-11	400-900	.44	27
SUPERIOR FRONT CHANNEL	25.1	27.1	26.4	24.5	10, 11-11	600	2.32	27
EAST GATE BASIN (SOUTH)	26.0	26.2	27.1	27.2	10, 11-11; 7-13	600-3200	.57	27

A. CHANNEL DIVIDED INTO QUARTERS WHEN ENTERING FROM LAKE.
B. SHOALING TO 15.2 FEET AT 46°42'32.8"N 092°00'26.7"W
C. SHOALING TO 20.6 FEET AT 46°42'40.6"N 092°00'35.6"W
D. SHOALING TO 6.0 FEET AT 46°42'16.9"N 092°01'38.5"W

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