H11863

NOAA FORM 76-35A

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

DESCRIPTIVE REPORT

Type of Survey *Navigable Area Surveys*

Registry No. **H11863**

LOCALITY

State: South Carolina

General Locality: Charleston

Sub-locality: Cooper River

2009

CHIEF OF PARTY
Robert W. Ramsey Jr
Navigation Response Team 2

LIBRARY & ARCHIVES
DATE

NOAA FORM 77-28U.S. DEPARTMENT OF COMMERCE (11-72)NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION	REGISTRY NUMBER:
HYDROGRAPHIC TITLE SHEET	**H11863**
INSTRUCTIONS: The Hydrographic Sheet should be accompanied by this form, filled in as completely as possible, when the sheet is forwarded to the Office.	FIELD NUMBER: Sheet "D"

State/Territory: **South Carolina**

General Locality: **Charleston**
Sub-Locality **Cooper River**

Scale: **1:10,000** Date of Survey: 05/27/2009-09/02/2009

Instructions Dated: **09 Apr, 2008** Project Number: **OPR-G347-NRT2-08**

Change No.1 **28 July 2009**

Vessel: **NOAA Launch 1210**

Chief of Party: **Robert W. Ramsey Jr. - Team Leader**

Surveyed by: **Robert Ramsey, Erik Anderson (NRT2)**

Soundings by: **ODOM Echotrac CV**

Graphic record scaled by: **RWR, EA**, Graphic record checked by: RWR, EA

Protracted by: **N/A** Automated Plot: **N/A**

Verification by: **Atlantic Hydrographic Branch**

Soundings in: **Meters at MLLW**

H-Cell Compilation units in: Feet at MLLW

Remarks:

1) All Times are UTC.

2) This is a basic Hydrographic Survey under the Navigable Area Concept.

3) Projection is UTM Zone 17. Bold, Red, Italic notes in the DR were made during office processing.

TABLE OF CONTENTS

SPECIAL NOTE:

Please read all notes and Special notes in this report prior to conducting SAR.

The drive letter assigned to the data drive is "O". All PSS, Sessions, and MapInfo workspaces have been opened and saved on this drive, as such, so they will open directly from the drive, in their entirety.

DESCRIPTIVE REPORT

to accompany

OPR-G347-NRT2-08

HYDROGRAPHIC SURVEY
H11863

Scale of Survey: 1:10,000
Year of Survey: 2009
Navigation Response Team 2 - Launch 1210
Robert W. Ramsey Jr.- Team Leader

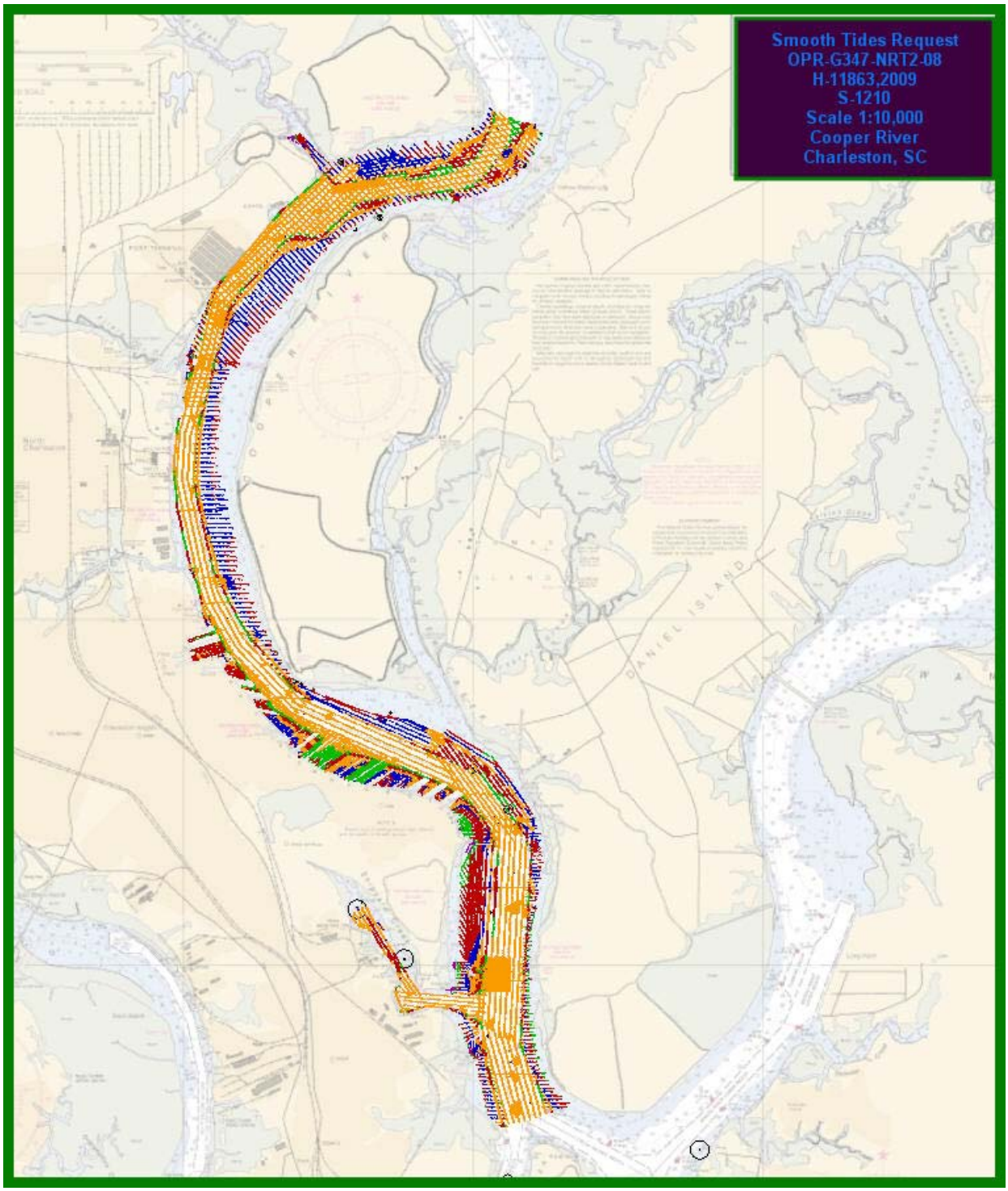
A. AREA SURVEYED

This hydrographic survey was conducted in accordance with Port Letter Instructions* for project OPR-G347-NRT2-08, Charleston, South Carolina. The instructions are dated April 9, 2008. ***Filed with original field records***

Charleston is the largest city and port in South Carolina and is a rich agricultural area with numerous manufacturing plants surrounding the city. Since Charleston is a busy port, new bathymetry data will be used to update the nautical charts. In addition, the port of Charleston is listed as one of the MTS 175 ports; this area is in need of ENC verification. The Remote Sensing Division, from National Geodetic Survey, has released a Chart Evaluation File (CEF) of the area for Charleston, SC; this CEF was addressed in survey F-00551. The hydrographic data from this project will help ensure navigational safety through updated critical nautical charts and provide new information for emergency response organizations to use in the event of a marine casualty or coastal storm.

Note: Ongoing dredging operations were noted throughout the course of the survey, and the extents of the survey area south of the 526 bridge, to the junction of Daniel Island Reach and Daniel Island Bend.

Survey limits are displayed graphically in the chartlet on the following below.



OPR-G347-NRT2-08 / H11863 / Sheet “C”

The following List contains Stats:

VBES only=	79 LNM	SSS only=	76 LNM
Combination VBES/SSS=155 LNM		X/L=	20 LNM
Development=	33 LNM	BS =	10
Features=	345	Total=	209 LNM
Dates of Acquisition:		05/27/2009-09/02/2009	

B. DATA ACQUISITION AND PROCESSING *See also H-Cell Report.*

B.1. EQUIPMENT

Data was acquired by Navigation Response Team 2 and survey Launch 1210. The vessel was configured as described in the Data Acquisition and Processing Report (DAPR)* for this project, located in O:\OPR_G347_NRT2_08\Data_Acquisition_&_Processing_Report\. Major data acquisition systems are summarized below. ***Submitted with H-Cell Deliverable***

NOAA launch 1210, a 30-foot SeaArk with a draft of 0.5 meters, was used to collect all survey data. There were no unusual vessel configurations or problems encountered with the vessel.

An ODOM EchotracCV2, Fathometer, was used to collect all echo soundings on this survey. This echo sounder is a dual frequency instrument but is only used in high frequency with a single transducer.

Klein 3000 side scan sonar was used throughout this survey. The side scan sonar equipment was used to investigate AWOIS items.

An Applanix POS MV 320 Ver4 (S/N 2546) was used as the primary navigation station and motion sensor on launch 1210 for all hydrographic data acquisition.

A Trimble DGPS Beacon Receiver was used provide RTCM broadcast correctors to the Applanix POS MV system on launch 1210.

The Instrument used for determining corrections for the speed of sound through the water column was an ODOM Digibar Ser # 98295-020606. A Seabird-Seacat Velocity Profiler, model 19-03, Ser# 198671-1477, used for quality control checks. CTD casts are processed in the Velociwin program supplied by the Hydrographic Systems and Technology Program (HSTP).

B.2. QUALITY CONTROL

Following the Field Procedures Manual, April 2009 and the NOS Hydrographic Surveys Specifications and Deliverables Manual, April 2009 has insured the integrity of the survey data for H11863.

Differential GPS (DGPS) was used for all hydrographic data acquired on this survey. DGPS performance checks were conducted in accordance with FPM 3.4 by comparing the DGPS position of the vessel to a high accuracy calibration point monthly.

Echo Sounder Control

Lead line comparisons were conducted and compared to the digital depth and draft.
The leadline log comparisons are in Descriptive Report\Separates\II. Sound_Speed_Data.*
Filed with original field records

Side Scan Sonar Quality Control

Daily confidence checks were conducted by observing side scan imagery in the vicinity of known contacts, such as buoys or sand waves. Side scan data were considered satisfactory if these contacts could be distinguished throughout the entire range of the side scan trace. The confidence checks were performed daily at 100/500 kHz.

Coverage of 200% was obtained wherever possible in the required survey areas and where water depth and/or hazards permitted. Side scan sonar coverage was conducted to the 12-foot depth curve and single beam reduced line spacing was performed in other areas where warranted. There were three special request areas within the confines of H-11863, which were assigned SSS coverage shoaler than the 12 foot contour. The towfish was deployed off the starboard quarter of the vessel, which proved very stable. Significant contacts and shadows were processed with Caris HIPS/SIPS to determine the height off the bottom. The significant contacts were then compared by position, as well as common depth and relationship to channels, and normal vessel traffic, to determine if further investigations were needed. Mosaics were generated for 100% and 200% to insure complete coverage, these may be found in: O:\HDCS Active Progect\OPR-G347-NRT2-08\H11863\Public_Relations_&_Constituent_Products\Field Products\Mapinfo Tables*.
Concur with Clarification. The Project instructions required the 18 foot contour be delineated, with the exception of the special areas where the 12 foot contour was to be delineated. *Submitted with original field records

The system frequencies used were 500 kHz. The recorder was set on one of either 25/50/75 meter range scales. There were no water depths greater than 20 meters. ***Concur.***

When operating in shoaler waters (e.g. less than 3 meters deep), a short tow was required for the Klein system. When cable-out was approximately 4 meters or less, minor degradation of the side

scan imagery occasionally occurred. ***Concur.***

Junctions ***See also the H-Cell Report.***

The survey junction with H-11861 (2008) lies to the south. The survey from 2008, H-11861 compared favorably to the current survey within 1ft. ***Concur.***

OCS considers a standard junction comparison acceptable if sounding variance is 1 meter or less between the present and junctioning surveys.

B.3. CORRECTIONS TO ECHO SOUNDING

Velocwin SVP cast have been inserted into the final Pydro PSS as suggested in the Field Procedures Manual. ***Concur.***

The leadline log comparisons are in ..\OPR-G347-NRT2-08\H11863\Descriptive Report\Separates\II. Sound_Speed_Data***. A copy of the Velocity DQA file is located here as well.
****Filed with original field records***

There are no deviations to be discussed in this section.

B.4. DATA PROCESSING

There was one base surface created in Caris for the VBES data set. It was created at 5m resolution and Finalized. No BAGs were generated in the field, as per directions from OIC AHB. ***Concur.***

C. VERTICAL AND HORIZONTAL CONTROL ***See also the H-Cell Report.***

The Instruments used for determining corrections for the speed of sound through the water column were an ODOM Digibar and a Seabird-Seacat Velocity Profiler. SVP casts are downloaded and processed in the Velociwin program supplied by the Hydrographic Systems and Technology Program (HSTP). Corrections were applied to the sounding plot using the Caris HIPS.

Field soundings are corrected by verified tides data from NOAA/CO-OPS, as per
WATER LEVEL INSTRUCTIONS
OPR-G347-NRT2-2008 Charleston, SC
(2/04/2008 MC)

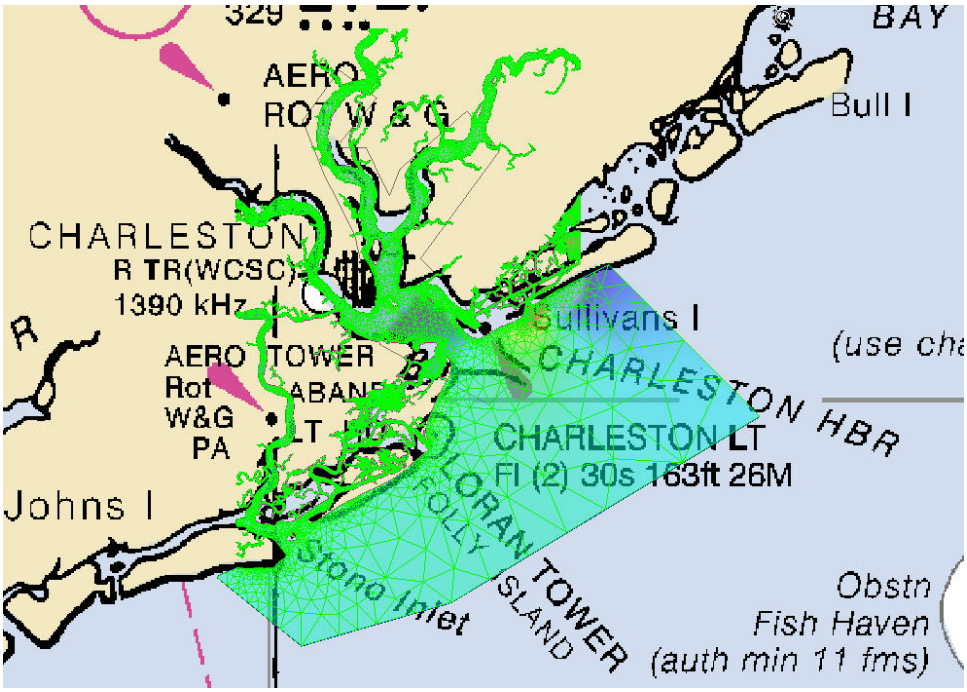
This is a TCARI controlled project.

H11863 / NRT2
Pertinent water level data were provided via email data transmissions through TIDEBOT, to the Field unit. Water level data requested and used were both 6 min Verified for final data submission. All data had "Verified" tides applied prior to submission. ***Concur.***

The operating water level station at Charleston, SC (8665530) provided water level reducers for this project, during all periods of hydrography. ***Concur.***

Tidal Constituent and Residual Interpolation (TCARI) method uses harmonic constituents and residuals from historical and operating water level stations to provide precise water level correction for bathymetric surveys.

For hydrography in the area of Charleston, SC the TCARI grid "G347NRT22008-TCARI.tc" supplied in conjunction with the water level data from Section 1.3.4 to produce a seamless tide correction, was used as the source file. This file was renamed to be matching of the survey "H11863_verified.tc". Refer to the TCARI Field SOP for detailed TCARI instructions. A copy of the *.tc file and all *.dat water level files is included with each survey, and can be found in O:\OPR-G347-NRT2-08\H11863\Caris\Tide folder*. ***Concur . *Filed with original field records***



All elevations and soundings on survey H11863 are based on MLLW unless otherwise specified.

A Request for Approved Tides letter was sent to <smooth.tides@noaa.gov> on 04 September 2009. This request was generated by PYDRO and can be found in ..\OPR-G347-NRT2-08\H11863\Descriptive Report\Appendices\IV. Tide_&_Water_Levels\Request_For_Tides*. The

smooth tides were approved on 09/22/2009, and all data for H11863 have had smooth tides applied to the PSS, then final merge was applied. ***Appended to this report***

Horizontal Control

The horizontal datum used for this survey is the North American Datum of 1983 (NAD 83), projected using UTM zone 17N. The control reference station used for this survey was the USCG DGPS Beacon Kensington, SC.

Horizontal dilution of precision (HDOP) was monitored on Applanix POS MV System daily on the survey platform. Adequate satellite coverage was maintained throughout the survey period. All positioning equipment was operated in a manner consistent with the manufacturer's requirements and as described in the DAPR*. There were no equipment malfunctions, which affected the positional quality of the data. ***Submitted with H-Cell Deliverable.***

D. RESULTS AND RECOMMENDATIONS *See also the H-Cell Report.*

D.1 Chart Comparison

There are exceptionally strong tidal currents over four knots noted in the vicinity of the survey region, predominately on the ebb tide.

The port of Charleston is a high vessel traffic area.

Chart 11524 was used for comparison on this survey due to its scale and proximity of its region related to acquisition.

Chart Number	Edition Date	Scale
11524	51stFebruary 2008	1:20,000

ENC Cell	Edition	Update Application	Issue Date	Corresponding Chart
US5SC14M	22th	12/10/2008	12/10/2008	11524

Note: A general review between the RNC and ENC products, show disparity with respects to channel limits and range lines, on the two different products, and should be evaluated and updated so both products reflect the same lines and limits. ***Concur.***

H11863 / NRT2
The pending updates from the CEF project submitted with F-00551 should alter the shoreline substantially, and correct various shoreline inconsistencies between the RNC and ENC products.
Note: during office review, F-00551 has already been applied to RNC and ENC.

General Agreement with Charted soundings

In general survey soundings compared reasonably well within two to three feet of the charted soundings. All charted soundings should be superseded by this survey. ***Concur.***

The following is a list of comparisons between the survey data and charted shoals or potentially hazardous features as well as notable sounding discrepancies on the chart. This section does not list all features and submerged obstruction located during this survey, as they can be found in the detailed "H11863_DR_Features_RPT.pdf" located O:\OPR-G347-NRT2-08\H11863\Descriptive Report\Appendices\II. Survey_Feature_Report.* ***Concur. *Appended to this report***

An isolated ~~12~~***11***ft shoal has developed at 32°50'45.19" N, 079°55'37.55" W, with notable changes to the 18ft contour in this area as well. ***Concur.***

The isolated 12ft contour at 32°51'53.99" N, 079°57'29.8" W no longer exist. ***Concur.***

The 18ft contour located at 32°49'58.34" N, 079°55'39.13" W has receded 30m due east. ***Concur.***

The 18ft contour at 32°50'46.19" N, 079°55'54.03" W has encroached eastward towards the channel edge by 20m. ***Concur with clarification. The 30ft contour has also encroached into the channel.***

The 18 ft contour from 32°50'55.86" N, 079°56'04.1" W to 32°51'47.24" N, 079°57'43.22" W, along the western side of the Cooper River, in the vicinity of the old Navy base piers, has altered notably. This area is none to shift, and is continually being dredged. ***Concur.***

A shoal sounding on the southern end of the eastern 526 main bridge support island of 9.***298***ft was acquired at 32°53'26.~~54~~***42***" N, 079°57'46.~~61~~***75***" W. ***Concur. AHB submitted this sounding to NDB as a Danger to Navigation. See also Appendix I, appended to this report.***

A shoal sounding on the southern end of the western 526 main bridge support island of 6.***732***ft was acquired at 32°53'27.8~~7~~***0***" N, 079°57'55.~~88~~***97***" W. ***Concur. AHB submitted this sounding to NDB as a Danger to Navigation. See also Appendix I, appended to this report.***

The 18ft contours in the vicinity of the 526 bridge at 32°53'29.53" N, 079°57'50.62" W needs to be adjusted to properly reflect the true position of the bridge support islands, and fender system, and the currently uncharted overhead power lines. This pending new shoreline from CEF SC0601 has not been applied to the charts to date, this accounts for the shoal soundings acquired around tower supports and bridge supports. ***Concur.***

H11863 / NRT2

The isolated 18 ft contour located at 32°54'40.61" N, 079°55'47.75" W, has migrated to the SW 100m, along the channel edge. ***Concur.***

The 18ft contour located at 32°54'48.43" N, 079°55'36.89" W has receded to the ~~NE 50m~~ the **west approximately 100m**. It may have formed an Isolated 18 ft contour around a charted 10 ft obstruction, however the area extends beyond the survey limits, therefore this could not be positively ascertained. ***Concur with clarification. Contours are forwarded to MCD for reference only. Defer charting of 12ft and 18ft contour to MCD.***

The 18ft contour located at 32°54'35.95" N, 079°55'44.22" W has receded ~~NE~~***SE*** 40m. ***Concur.***

The 18ft contour located at 32°54'04.33" N, 079°57'19.33" W has migrated to the NW 40m. ***Concur.***

An uncharted 11 ft subm obstn was located at 32°54'39.15~~4~~***4***" N, 079°56'29.~~14~~***10***" W. This item may be an old mooring buoy or its' buoy block. ***Concur. Reference DR Appendix 2, Item 1.13 Uncharted***

The charted 10ft obstn located at 32°54'50.14" N, 079°55'34.95" W exists as charted. ***Concur. Delete charted obstruction; add obstruction at survey depth and position.***

The charted ~~12~~***7***ft isolated shoal located at 32°54'38.57" N, 079°55'41.93" W exists as charted. ***Concur with clarification; shoal has shifted slightly to the south. Chart survey soundings as appropriate.***

The charted ~~18~~***16***ft isolated shoal located at 32°54'41.77" N, 079°55'45.94" W exists. ***Concur with clarification, the shoal has expanded. Chart survey soundings as appropriate.***

An uncharted isolated 12 sounding was located at 32°54'37.~~48~~***48***" N, 079°56'37.~~46~~***59***" W. ***Concur.***

The isolated 12 contour at 32°54'38.~~35~~***40***" N, 079°56'43.~~24~~***75***" W was determined to be a subm obstn, consisting of a sunken mooring buoy, with associated ground tackle trailing to the south. ***Concur with clarification, chart 12ft obstruction as sounding.***

The currently charted mooring buoy located at 32°54'35.15" N, 079°57'02.6" W does not exist. This area is a staging area for mooring buoy maintenance only, and then they are redeployed to the anchorage field to the east. ***Concur, recommend mooring buoy to be deleted from chart***

The charted pier at 32°54'46.68" N, 079°57'15.44" W, is actually a covered boat house for USCG and USN Security patrol boats. ***No picture submitted by field, cannot be verified in orthoimagery. Recommend to retain pier as charted.***

The contours at the entrance to Goose Creek at 32°54'41.01" N, 079°57'04.94" W need to be redrawn as the shoreline along the northern entrance side has receded, and the general depths entering the creek now support a 18ft contour entering. ***Concur with clarification, chart soundings as appropriate. Final contour disposition is left to MCD.***

H11863 / NRT2
Two 44ft obstrn were located inside Filbin Creek Reach in the inside left quarter that are shoaler than the chart tabulation table at 32°53'30.16" N, 079°57'51.98" W, and at 32°53'30.02" N, 079°57'52.56" W. This information was passed along to the local USACOE for resolution, and removal (email sent 17 Sep 2009). ***Concur with clarification, do not chart. See email correspondence from Appendix V***

The charted 12ft contour at 32°52'45.68" N, 079°57'47.06" W has migrated to the south 150m. ***Concur.***

The isolated 12ft contour at 32°51'54.13" N, 079°57'29.67" W no longer exist. ***Concur.***

A 45ft obstn was located in Clouter Crk Reach at 32°51'26.18" N, 079°56'59.68" W. This is shoaler than the chart tabulation table of 47ft. This information was passed along to the local USACOE for resolution, and removal (email sent 17 Sep 2009). ***Concur with clarification, do not chart. See email correspondence from Appendix V***

An 18ft ***(17.8051ft)*** obstn was located at 32°51'17.72" N, 079°56'13.15~~5~~***4***" W, and seaward of the 18ft contour. ***Concur, add obstruction.***

Shoaling along the western wall of Daniel Island Bend in the vicinity of 32°50'50.63" N, 079°55'55.19" W, to 35ft was identified. The charted tabulation table shows 48.9ft. This information was passed along to the local USACOE for resolution, and removal (email sent 17 Sep 2009). ***Concur with clarification, do not chart. See email correspondence from Appendix V***

The 18ft contour located at 32°50'45.85" N, 079°55'38.47" W has migrated towards the channel ~~40~~***30***m. ***Concur.***

Numerous obstructions were located due west of Daniel Island Reach, in the vicinity of 32°50'20.93" N, 079°55'59.79" W. Though these items were investigated and developed, review should be made with the limits of the NEW Port terminal, and wharf development currently being constructed in this area prior to charting recommendations. Detailed copies of the plans are contained in O:\OPR-G347-NRT2-08\H11863\Descriptive Report\Appendices\V. SUPPLEMENTAL_Survey_Records_&_CORRESPONDENCE*, contained within the three "CIFCRT202A" files*. ***Concur with clarification, chart soundings as appropriate. See email correspondence from Appendix V *Appended to this report***

The currently charted "Unexploded ordnance area" limits at 32°50'27.0" N, 079°55'51.0" W showed no signs of these reported features. Considering the mentioned Port construction above, it is felt that this note and charting shaded area be removed from the charts. This is likewise ATON# 7618. History can be located in O:\OPR-G347-NRT2-08\H11863\Descriptive Report\Appendices\V. SUPPLEMENTAL_Survey_Records_&_CORRESPONDENCE\email*, in the "Chart Note 1" file. ***Concur, delete unexploded ordnance area. See AWOIS1.14 (#7618) for more information *Appended to this report***

The charted "NAVY" and "Degaussing Range" notes at 32°49'59.65" N, 079°55'55.07" W are no longer correct. This area is no longer property of the US Navy, nor is there any supporting facilities

located, operated, or maintained in this area. It is felt that these notes be removed from the charts. ***Concur with clarification. AHB reviewer identified no obstructions in degaussing range. AHB defers removal of the charted "NAVY" and "Degaussing Range" notes to MCD.***

There was a large area of ruins located in the vicinity of 32°49'56.37" N, 079°55'56.86" W. A DTON was issued and can be located in O:\OPR-G347-NRT2-08\H11863\Descriptive Report\Appendices\I. DTON_Reports, which addresses this area. ***Concur. Reference Appendix I item 1.1 for more information.***

The charted obstn located at 32°50'13.56" N, 079°56'38.9" W no longer exist. There was an uncharted subm wrk, believed to be a barge, located to the SE of this position at 32°50'12.78" N, 079°56'37.7" W. The charted obstn should be removed, and a VIS WRK should be added to the charts. ***Concur. Obstruction does not exist on chart 11524. Wreck was submitted as DtoN by field, see Appendix I item 1.2 for more information.***

The following list contains brief descriptions of seaward controlling depths found by the current survey lying in the maintained channels (channel edges were avoided, unless migration was noted).

Due to the shoal extraction of VBES grids that is best practice at AHB, the exact positions and depths may not match exactly what NRT 2 discovered in the following list of seaward least depths.

ENC and Raster channel tabulation does not match. There were also four errors in ENC tabulation where raster chart tabulation was used: Daniel Island Bend LIQ, Navy Yard Reach LOQ, and North Charleston Reach LOQ and ROQ. Office processor referenced ENC tabulation and found 164 soundings shoaler than that tabulated. These soundings were reported to the Navigation Manager and forwarded to USACE. Survey H11863 took place in 2009 and there were dredge operations during and after the survey timeline with the latest dredging occurring in September 2010. The least depths provided below are not all applicable to the current channel depths.

Maintained Channel Seaward Least Depths:

Drum Island Reach	44ft	32°49'06.09" N, 079°55'36.32" W
Myers Bend	47ft	32°49'13.72" N, 079°55'36.29" W
Shipyard Creek Main Channel	27ft	32°49'58.25" N, 079°56'31.11" W
Daniel Island Reach	42ft	32°49'56.12" N, 079°55'40.58" W
Daniel Island Bend	35ft	32°50'50.63" N, 079°55'55.19" W
Clouter Crk Reach	45ft	32°51'26.17" N, 079°56'59.81" W
Navy Yard Reach	47ft	32°51'38.71" N, 079°57'22.08" W
North Charleston Reach	48ft	32°52'20.0" N, 079°57'53.06" W
Filbin Creek Reach	44ft	32°53'30.02" N, 079°57'52.56" W
Port Terminal Reach	46ft	32°53'56.68" N, 079°57'36.93" W
Ordnance Reach	46ft	32°54'29.99" N, 079°57'00.95" W
Range "A"	37ft	32°54'24.58" N, 079°56'49.49" W
Range"B"	40ft	32°54'34.93" N, 079°55'59.37" W

Charted Depth and Turning Basins:

Shipyard Creek Lower Basin	46ft	32°49'45.6" N, 079°56'26.1" W
Shipyard Creek Upper Basin	23ft	32°50'12.77" N, 079°56'43.08" W
Ordnance Reach Turning Basin	43ft	32°54'20.37" N, 079°56'57.75" W

AWOIS Item Investigations

There were ~~Four~~ *sixteen* AWOIS items within the confines of H11863. Detailed point feature information can be found "H11863_DR_Features_RPT.pdf" located in O:\OPR-G347-NRT2-08\H11863\Descriptive Report\Appendices\II. Survey_Feature_Report\.* ***Appended to this report SEE ALSO APPENDIX 2***

AWOIS#	Search	Recommendation	
11456	SSS	Remove	***Concur.***
10561	SSS	Retain	***Concur.***
10562	SSS	Retain	***Concur***
10563	VIS	Retain	***Concur.***
10564	VIS	Retain	***Concur.***
10571	SSS	Remove	***Do not concur. Retain as charted.***
10572	VIS	Retain	***Concur.***
13788	SSS	Remove	***Concur with clarification. Nothing is charted, no action is necessary.***
13818	SSS	Retain	***Concur.***
13865	SSS	Remove	***Concur.***
13866	SSS	Remove	***Concur with clarification. Nothing is charted, no action is necessary.***
7615	SSS	Remove	***Concur.***
7617	VIS	Retain/Modify	***Concur with clarification. Add sunken wreck.***
7618	SSS	Remove	***Concur.***
7616	VIS	Retain	***Concur.***
13819	***SSS***	***Retain***	

The following is a list of charted features that were investigated on H11863 that contain the label PA, ED, PD or Rep, or pier face notes, that were not assigned as AWOIS:

40ft Pier face (2004) located at 32°49'45.62" N, 079°56'15.83" W, is now 44ft. ***Do not concur. Area was surveyed in 2010 to 40ft, no action required.***

36ft Pier face (2007) located at 32°49'46.84" N, 079°56'31.02" W, is now 46ft. ***Do not concur. Area was surveyed in 2010 to 36 feet.***

25ft Rep (1997) located at 32°49'57.42" N, 079°56'31.12" W, is confirmed. ***Concur.***

25ft Rep (1997) located at 32°50'00.34" N, 079°56'33.59" W, is now 23ft. ***Concur.***

23ft Rep (2004) located at 32°50'06.33" N, 079°56'38.41" W, is now 25ft. ***Do not concur. Not enough information to change note to a deeper depth.***

32ft Rep (2005) located at 32°51'06.19" N, 079°56'42.1" W, is confirmed. ***Do not concur. Surveyed 31ft located within depth area, recommend revising note to 31ft rep 2009.***

37ft Rep (2005) located at 32°53'19.56" N, 079°57'57.56" W, is confirmed. ***Do not concur. Surveyed 34ft is located within depth area, recommend revising note to 34ft SEP 2009***

42ft 2003-2004 located at 32°54'30.22" N, 079°56'47.84" W, is now 40ft. ***Do not concur. Area was surveyed in 2010 to 40ft.***

The charted Light "F" at 32°50'19.63" N, 079°56'01.3" W, no longer exists. ***Concur, defer final light disposition to MCD.***

The charted sign at 32°52'12.62" N, 079°57'42.17" W, no longer exist. ***Concur, delete BCNSPP. See Appendix II Charted Feature 1.3 for more information***

The charted subm pile at 32°50'55.91" N, 079°55'41.19" W, no longer exist. ***Concur, remove submerged pile***

All "PA" lights at the offshore end of old navy piers from "M" through "Q" exist on the pier ends. These items were not positioned as they were not assigned in the ATON request from the USCG for OPR-G347-NRT2-08. ***Concur with clarification, retain as charted.***

The charted mooring buoys in the vicinity of 32°54'34.07" N, 079°56'37.46" W, were all positioned. The chart should remove ALL currently charted mooring buoys in this area, and replace with the currently surveyed buoys. ***Concur.***

The currently charted offshore pier face extending from 32°53'45.13" N, 079°57'51.12" W, to 32°53'51.48" N, 079°57'48.74" W, no longer exist, and should be removed. Four mooring Dols were positioned that serve for mooring barges to the existing finger pier from shore in this vicinity. ***Concur, remove charted pier and add MORFAC. See Appendix II uncharted features 1.6-1.9 for more information***

The unknown charted feature at 32°51'31.78" N, 079°57'28.21" W, is a floating dry dock. ***Concur, H-Cell Deliverable includes a DRYDOC feature.***

NOTE: Numerous charted piles and dols, both baring and subm lying along the western shoreline of the Cooper River South of the 526 bridge, and North of 32°51'57.38" N,

079°57'50.42" W, were previously addressed during the CEF portion of F-00551, 2009. This area is therefore not addressed in this report.

Dangers to Navigation

There was one DTON within the confines of H11863, submitted by the field. These features were sent in advance to MCD in a zip file via e-mail transmission on 06 August 2009 to mcd.dton@noaa.gov as per FPM 4.4.4. Detailed point feature information can be found in the DTON Reports located in Appendices I, as well as the e-mail receipt of these DTON's, and LNM actions issued. There were no other additional DTON's submitted from the field, as per consultation with AHB. Non-critical items were not fast tracked, as they can be addressed during post-process review of this survey by AHB as a normal course of the survey review. ***Concur.***

D. 2. ADDITIONAL RESULTS

Aids to Navigation and Other Detached Positions

Navigation Aids serve their intended purpose. There was no ATON Report generated for survey H11863. The assigned ATON Report was submitted at the CEF survey # F00551, conclusion.

Ferry Routes

There is no Ferry route within the confines of H11863. ***Concur.***

Submarine Cables and Pipelines

There are two submerged pipeline areas, and two cable areas within H11863. ***Concur.***

Bridges

There is one bridge (SR 526) within the confines of H11863. The vertical and horizontal clearances are adequately charted. ***See H-Cell report for more information***

Bottom Samples

There were 10 bottom samples taken on H11863. These samples were acquired and compared to those on the chart. The random samples were in agreement with the chart therefore extensive sampling was not warranted. The Survey feature report can be found in Appendices ~~H~~***V***. ***Concur.***

Historic Wrecks

There were no historic wrecks confirmed by State Archaeologists on H11863. There was one wreck identified by NRT2 in this survey, with one additional suspect, buried subm wreck. These features and information have not been released to the public, and can be found in the feature report located in Appendices II. ***Concur, appended to this report.***

Special Notes:

The PSS contained on the drive with the survey data has been redirected to the portable drive. This PSS will open in its entirety with all images directly from the drive. The PSS can be located at: O:\OPR-G347-NRT2-08\H11863\PSS. The final PSS submitted on the data drive has been verified free of all outdated and stale data.

The MapInfo 10.0 workspace named "H11863.wor" can be found at:
O:\OPR-G347-NRT2-08\H11863\Public_Relations_&_Constituent_Products\Field Products
This workspace has likewise been redirected too, and will open from the portable drive.

The Coast Pilot Report was sent to OCS.NDB@noaa.gov , on 09/15/2009 as per FPM 5.2.3.2.5

The survey outlines were sent to survey.outlines@noaa.gov on 09/15/2009 as per FPM 5.2.3.3.3

The raw data directory size report was sent via e-mail to hydro.info@noaa.gov and copied to the Chief of the Atlantic Hydrographic Branch on 09/17/2009 as per FPM 5.2.3.3.6.

The Letter Transmitting data was sent via e-mail to LTDSubmission.AHB@noaa.gov on 09/25/2009 as per FPM 5.2.5

E. APPROVAL SHEET

OPR-G347-NRT2-08

Charleston, SC

Survey Registry No. H11863

Field operations for this basic hydrographic survey were conducted under my daily supervision with frequent checks of progress and adequacy. All field sheets, this Descriptive Report, and all accompanying records and data are approved.

This survey is adequate to supersede all prior surveys in common areas, and for application to the relevant NOS nautical charts.

Submitted by:

Robert W. Ramsey Jr - Team Leader
Navigation Response Team 2

Appendix I

Danger to Navigation

H11863 Danger to Navigation

Registry Number: H-11863
State: South Carolina
Locality: Charleston Harbor
Sub-locality: Cooper River
Project Number: OPR-G347-NRT2-08
Survey Dates: 06/25/2009 - 03/18/2010

Charts Affected

Number	Edition	Date	Scale (RNC)	RNC Correction(s)*
11524	52nd	01/01/2010	1:20,000 (11524_1)	USCG LNM: 12/14/2010 (12/28/2010) NGA NTM: 10/17/2009 (12/25/2010)
11521	28th	02/01/2006	1:80,000 (11521_1)	[L]NTM: ?
11520	42nd	09/01/2005	1:432,720 (11520_1)	[L]NTM: ?
11009	37th	07/01/2004	1:1,200,000 (11009_1)	[L]NTM: ?
411	51st	12/01/2006	1:2,160,000 (411_1)	[L]NTM: ?

* Correction(s) - *source: last correction applied (last correction reviewed--"cleared date")*

Features

No.	Name	Feature Type	Survey Depth	Survey Latitude	Survey Longitude	AWOIS Item
1.1	463/1 Obstn 15ft (area Obstn)	Obstruction	4.50 m	32° 49' 54.3" N	079° 55' 57.9" W	---
1.2	384/1 Stranded Wreck	Wreck	-0.59 m	32° 50' 12.9" N	079° 56' 37.7" W	---
1.3	Anti-DtoN: Delete Charted Pier	GP	[None]	32° 52' 23.9" N	079° 57' 59.5" W	---
1.4	6ft shoal	Shoal	2.05 m	32° 53' 28.0" N	079° 57' 56.0" W	---
1.5	9ft shoal	Shoal	2.83 m	32° 53' 26.6" N	079° 57' 46.8" W	---

1 - Danger To Navigation

1.1) 463/1 Obstn 15ft (area Obstn)

DANGER TO NAVIGATION

Survey Summary

Survey Position: 32° 49' 54.3" N, 079° 55' 57.9" W

Least Depth: 4.50 m (= 14.75 ft = 2.459 fm = 2 fm 2.75 ft)

TPU (±1.96σ): **THU (TPEh)** ±1.966 m ;**TVU (TPEv)** ±0.133 m

Timestamp: 2009-176.13:50:09.767 (06/25/2009)

Survey Line: h11863 / nrt2_1210_sb / 2009-176 / 034_1349

Profile/Beam: 463/1

Charts Affected: 11524_1, 11521_1, 11520_1, 11009_1, 411_1

Remarks:

SSS depicted large ruins field consisting of piles from old wharf, and pier structure. The area was developed to 5m line spacing, due to the vast number of piles.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11863/nrt2_1210_sb/2009-176/034_1349	463/1	0.00	000.0	Primary
h11863/nrt2_1210_klein3000hf_100sss/2009-161/sss090610125900	0001	1.94	149.9	Secondary
h11863/nrt2_1210_klein3000hf_200sss/2009-160/sss090609152200	0005	4.46	114.1	Secondary
h11863/nrt2_1210_klein3000hf_200sss/2009-229/sss090817154600	0001	4.50	115.2	Secondary
h11863/nrt2_1210_klein3000hf_200sss/2009-160/sss090609152200	0001	5.10	202.1	Secondary
h11863/nrt2_1210_klein3000hf_100sss/2009-161/sss090610125900	0002	6.94	164.1	Secondary
h11863/nrt2_1210_klein3000hf_200sss/2009-160/sss090609152200	0003	34.22	178.3	Secondary

Hydrographer Recommendations

Charted shaded blue tint , ruins with LD= 15 @ mllw. Numerous ruins project several meters off bottom.

Recommend corner points follow:

32.83138982 , -079.93298757 SW

32.83297346 , -079.93298757 NW

32.83297346 , -079.93191817 NE

32.83138982 , -079.93191817 SE

Cartographically-Rounded Depth (Affected Charts):

15ft (11524_1, 11521_1)

2 ½fm (11520_1, 11009_1, 411_1)

S-57 Data

Geo object 1:	Obstruction (OBSTRN)
Attributes:	QUASOU - 6:least depth known
	SORDAT - 20090902
	SORIND - US,US,graph,H11863
	TECSOU - 1,2:found by echo-sounder,found by side scan sonar
	VALSOU - 4.497 m
	VERDAT - 12:Mean lower low water

Office Notes

Concur with clarification. Shown on chart 11524 52nd Ed., Jan2010 and smaller charts as an area obstruction. Office processing determined that the disposition of the obstruction area is different from the initial DtoN submission to MCD. Delete charted obstruction area. Chart an obstruction area at the present survey position.

ENC US5SC14M has a LNDARE that cuts into the northern part of the obstruction area. This LNDARE feature does not appear to exist in the data or 2009 orthoimgary. Recommend to delete LNDARE from ENC and chart obstruction area as it appears on chart 11524.

Feature Images

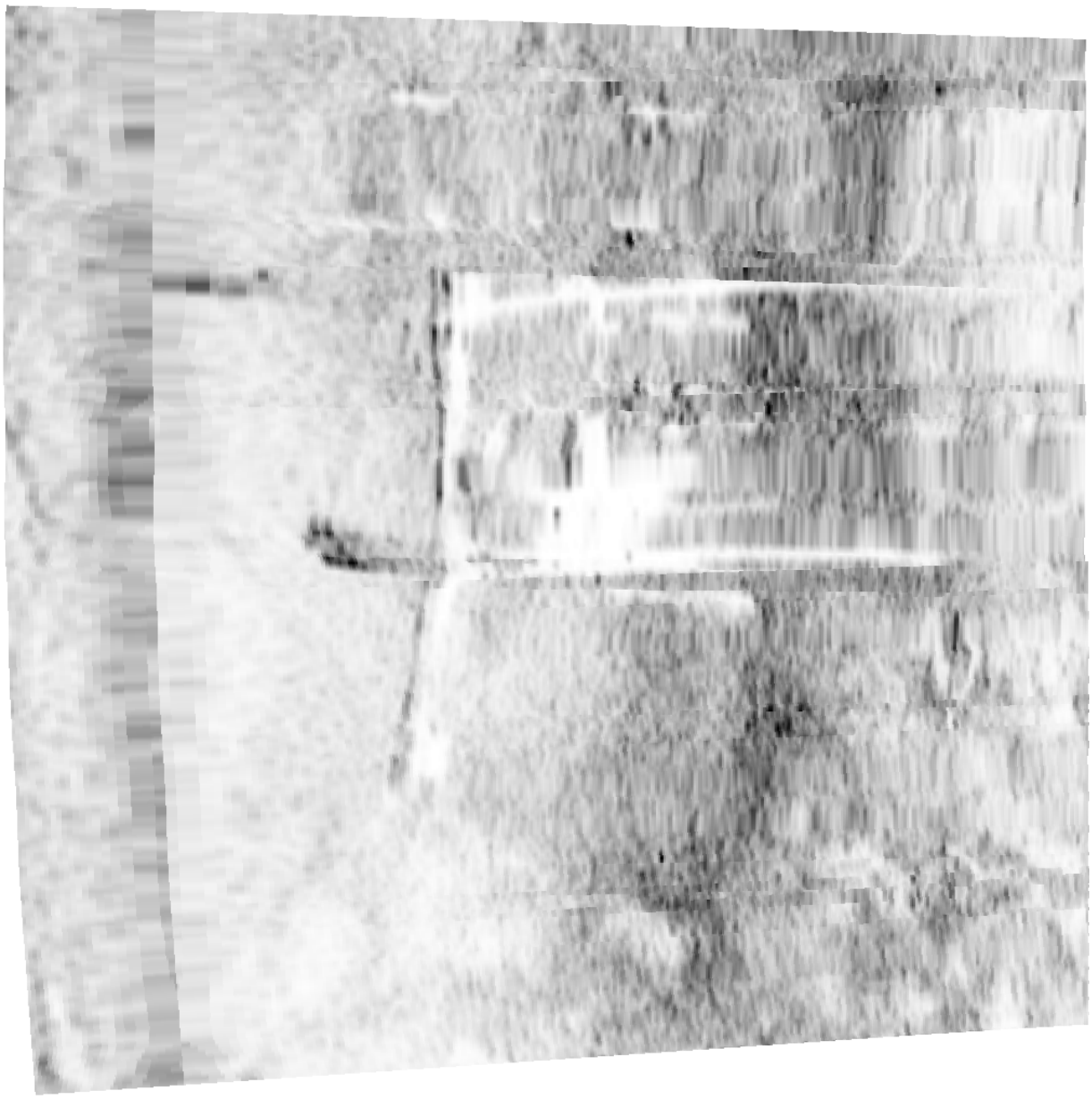


Figure 1.1.1

1.2) 384/1 Stranded Wreck

DANGER TO NAVIGATION

Survey Summary

Survey Position: 32° 50' 12.9" N, 079° 56' 37.7" W

Least Depth: -0.59 m (= -1.95 ft = -0.324 fm = 0 fm 4.05 ft)

TPU (±1.96σ): **THU (TPEh)** ±1.960 m ;**TVU (TPEv)** ±0.129 m

Timestamp: 2009-195.15:15:38.316 (07/14/2009)

Survey Line: h11863 / nrt2_1210_sb / 2009-195 / 002_1515

Profile/Beam: 384/1

Charts Affected: 11524_1, 11521_1, 11520_1, 11009_1, 411_1

Remarks:

Subm Wk apparent Barge near charted obstrn.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11863/nrt2_1210_sb/2009-195/002_1515	384/1	0.00	000.0	Primary
h11863/nrt2_1210_klein3000hf_100sss/2009-174/sss090623141600	0002	4.68	352.0	Secondary

Hydrographer Recommendations

Chart VIS Wk. Remove nearby charted obstrn.

Cartographically-Rounded Depth (Affected Charts):

-2ft (11524_1, 11521_1)

0 ¼fm (11520_1, 11009_1, 411_1)

S-57 Data

Geo object 1: Wreck (WRECKS)

Attributes: CATWRK - 5:wreck showing any portion of hull or superstructure

HEIGHT - -0.59 m

QUASOU - 1:depth known

SORDAT - 20090902

SORIND - US,US,graph,H11863

TECSOU - 1,2:found by echo-sounder,found by side scan sonar

VALSOU - -0.593 m

VERDAT - 12:Mean lower low water

WATLEV - 2:always dry

Office Notes

Concur with clarification. Shown on chart 11524 52nd Ed., Jan2010 and smaller charts as a visible wreck. Office processing determined that the disposition of the wreck is different from the initial DtoN submission to MCD. Delete charted visible wreck. Chart a visible wreck at the present survey position.

Feature Images

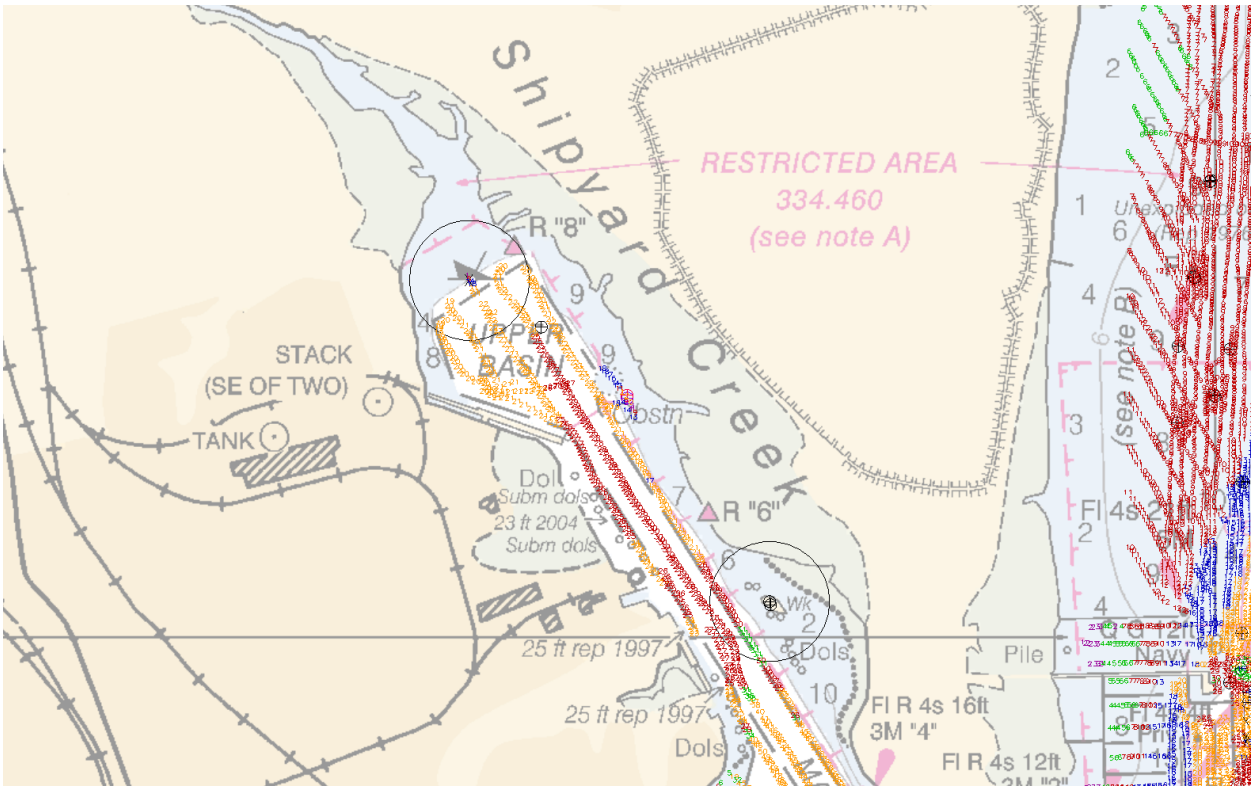


Figure 1.2.1

1.3) Anti-DtoN: Delete Charted Pier

DANGER TO NAVIGATION

Survey Summary

Survey Position:	32° 52' 23.9" N, 079° 57' 59.5" W
Least Depth:	[None]
TPU (±1.96σ):	**THU (TPEh)** [None] ; **TVU (TPEv)** [None]
Timestamp:	2010-077.12:41:45 (03/18/2010)
GP Dataset:	ChartGPs - Digitized
GP No.:	1
Charts Affected:	11524_1, 11521_1, 11520_1, 11009_1, 411_1

Remarks:

AHB received email communication from SE NSD Navigation Manager and NRT2's Bob Ramsey concerning the charted pier that is not currently existing.

Email text below:

Subject:Pier Alpha removal

From:David.Elliott@noaa.gov

Date:Wed, 17 Mar 2010 11:59:40 -0400

To:Steve Soherr , Ed Martin

CC:Robert Ramsey

Hello Steve,

Attached here in the original message are some graphics from William D. Barna, P.E.Collins Engineers, Inc.

1180 Sam Rittenberg Blvd. Suite 105, Charleston, SC 29407, Phone: 843.763.1576. This message came to me from Chief Anthony Certa the USCG AToN, Chief in Charleston. I have also attached a graphic to better show the region. The original information has pre and post surveys of the area as well as a debris removal scan from a Mesotech stationary scanner. I spoke with Mr. Barna this morning and this project was just completed less than a year ago so it would not have been addressed as a part of the survey NRT2 (H11862) did in 2009. I checked with AHB and that survey has cleared and is on it's way to MCD. I believe this number H11862 is good for the Cooper River, Bob can correct me if I am wrong. The City of Charleston now owns this property and will one day rebuild there, so I have been told but who knows when that will be. So for now this Pier should be removed from the chart. At the last Nav Ops meeting some shippers had commented that the feature (Pier A) was not showing up on radar and that was confusing them. Hopefully, this data provided will be enough justification for removal without having to have NRT2 side scan the area. I will be working with Chief Certa on some old Navy Obstructions that should be removed from Chart 11524 and will send those at a later date. They are the Degaussing ranges from long ago. More on that later. If we are lucky we can get this feature removed before the next digital updates.

Best regards, D.

David B. Elliott

NOAA- SE Nav.Mgr.

2234 S. Hobson Ave.

Charleston, SC

29405

843-740-1178 office

904-229-9359 cell

Feature Correlation

Address	Feature	Range	Azimuth	Status
ChartGPs - Digitized	1	0.00	000.0	Primary

Hydrographer Recommendations

Recommend to delete the charted pier located in the vicinity of 32°52'23.936"N , 079°57'59.520"W. Strongly recommend publishing this Anti-DtoN in Local Notice to Mariners (LNM) and Notice to Mariners (NM) as charted pier was demolished and removed from the seafloor.

S-57 Data

[None]

Office Notes

Concur with clarification. The latest edition of Chart 11524_1 does not contain the salvaged pier. No charting action required.

Feature Images

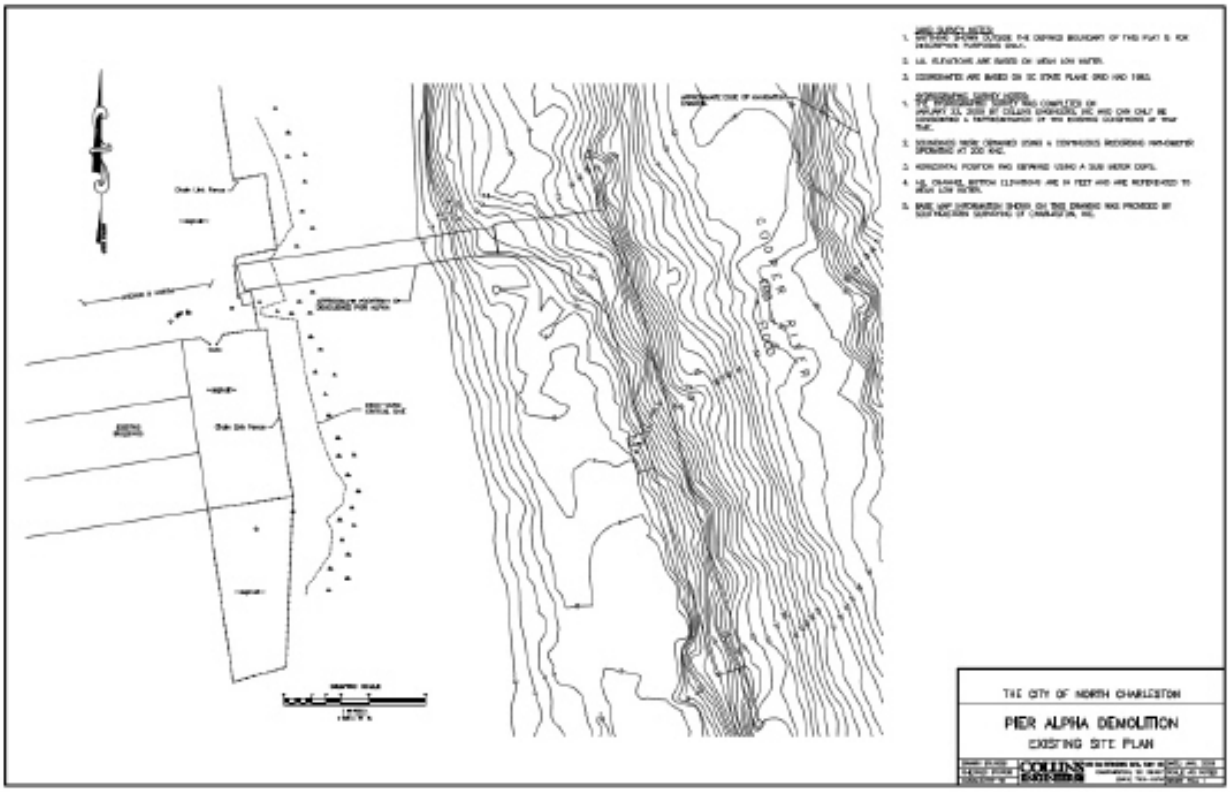


Figure 1.3.1

Figure 1.3.1

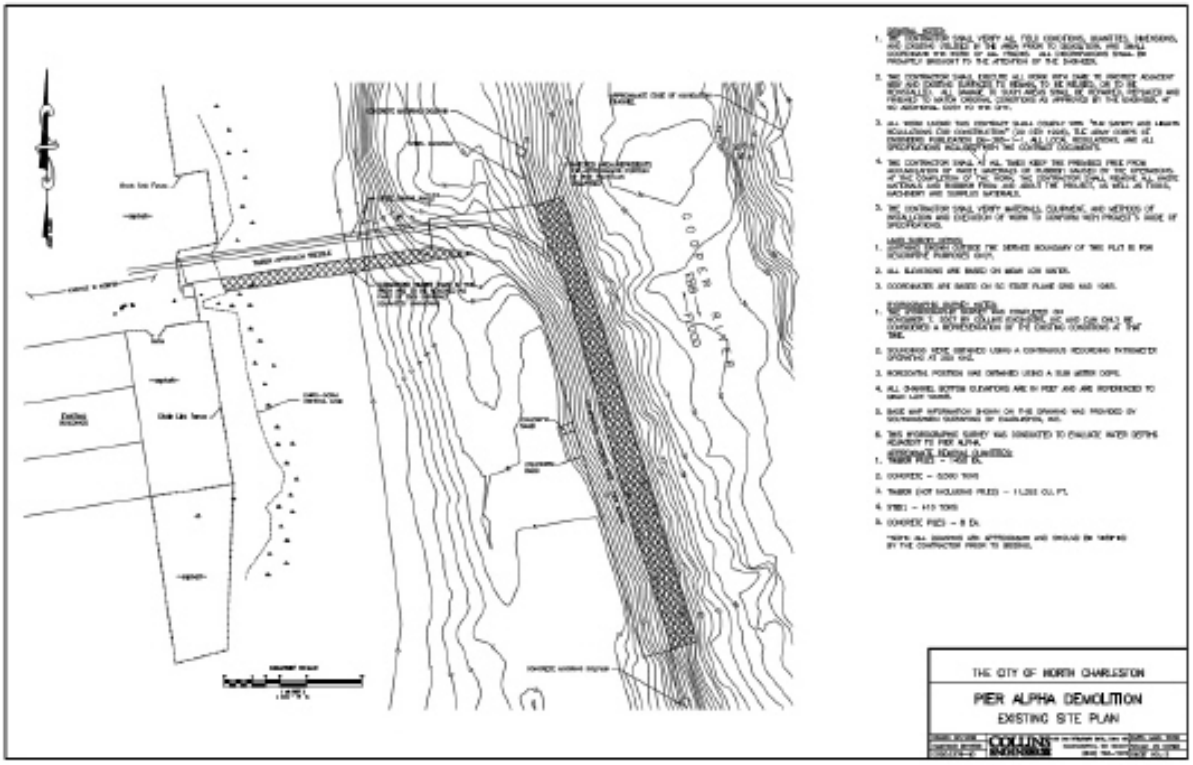


Figure 1.3.2

Figure 1.3.2

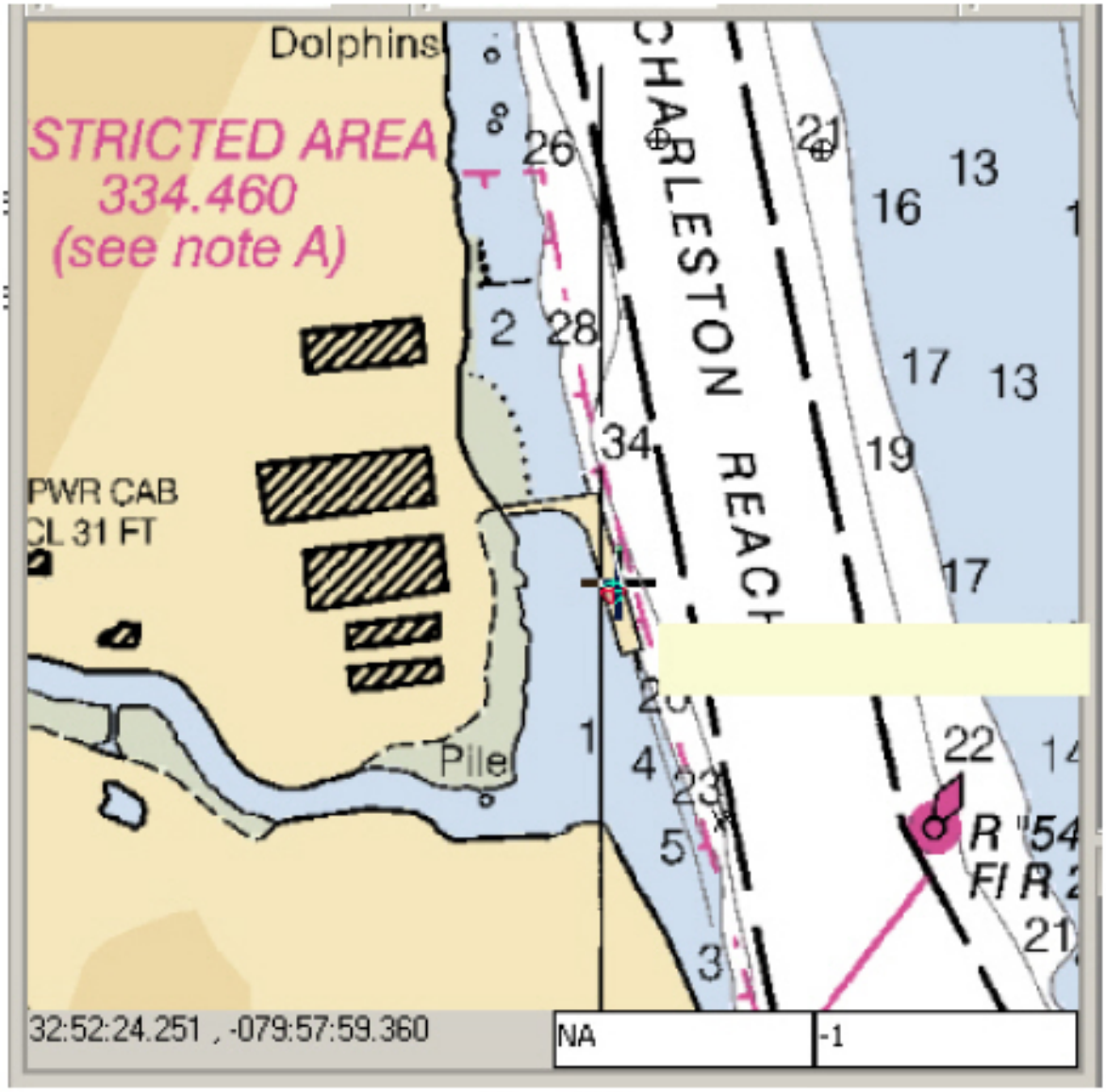


Figure 1.3.3

Figure 1.3.3

1.4) 6ft shoal

DANGER TO NAVIGATION

Survey Summary

Survey Position: 32° 53' 28.0" N, 079° 57' 56.0" W

Least Depth: 2.05 m (= 6.73 ft = 1.122 fm = 1 fm 0.73 ft)

TPU (±1.96σ): **THU (TPEh)** [None] ; **TVU (TPEv)** [None]

Timestamp: 2009-245.00:00:00.000 (09/02/2009)

GP Dataset: H11863_DtoN#1.xls

GP No.: 1

Charts Affected: 11524_1, 11521_1, 11520_1, 11009_1, 411_1

Remarks:

6ft shoal found with SSS and VBES

Feature Correlation

Address	Feature	Range	Azimuth	Status
H11863_DtoN#1.xls	1	0.00	000.0	Primary

Hydrographer Recommendations

Recommend charting 6ft sounding at survey location

Cartographically-Rounded Depth (Affected Charts):

6ft (11524_1, 11521_1)

1fm (11520_1, 11009_1, 411_1)

S-57 Data

Geo object 1: Sounding (SOUNDG)

Attributes: OBJNAM - 6ft Shoal

QUASOU - 1:depth known

SORDAT - 20090902

SORIND - US,US,graph,H11863

TECSOU - 1,2:found by echo-sounder,found by side scan sonar

Office Notes

Concur. Chart 6ft sounding at survey position.

Feature Images

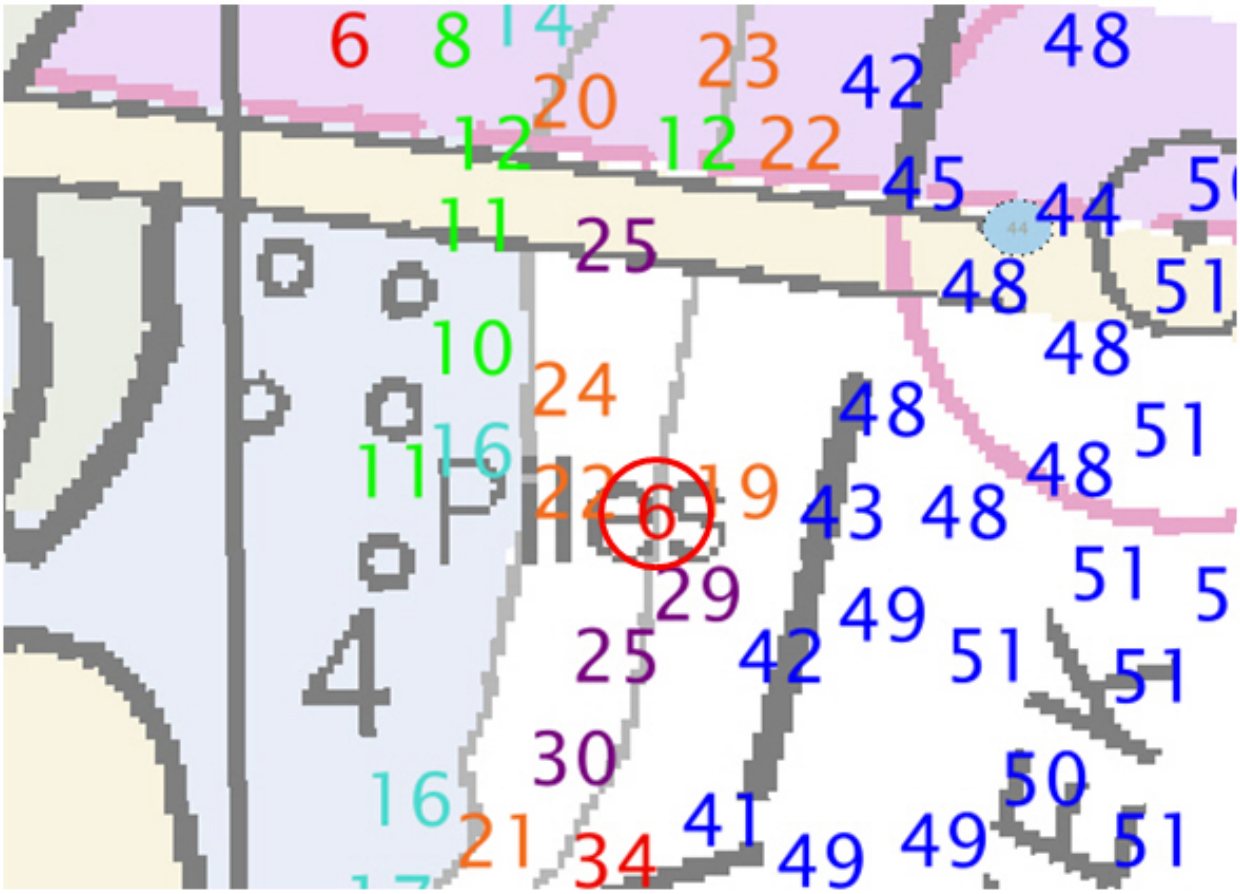


Figure 1.4.1

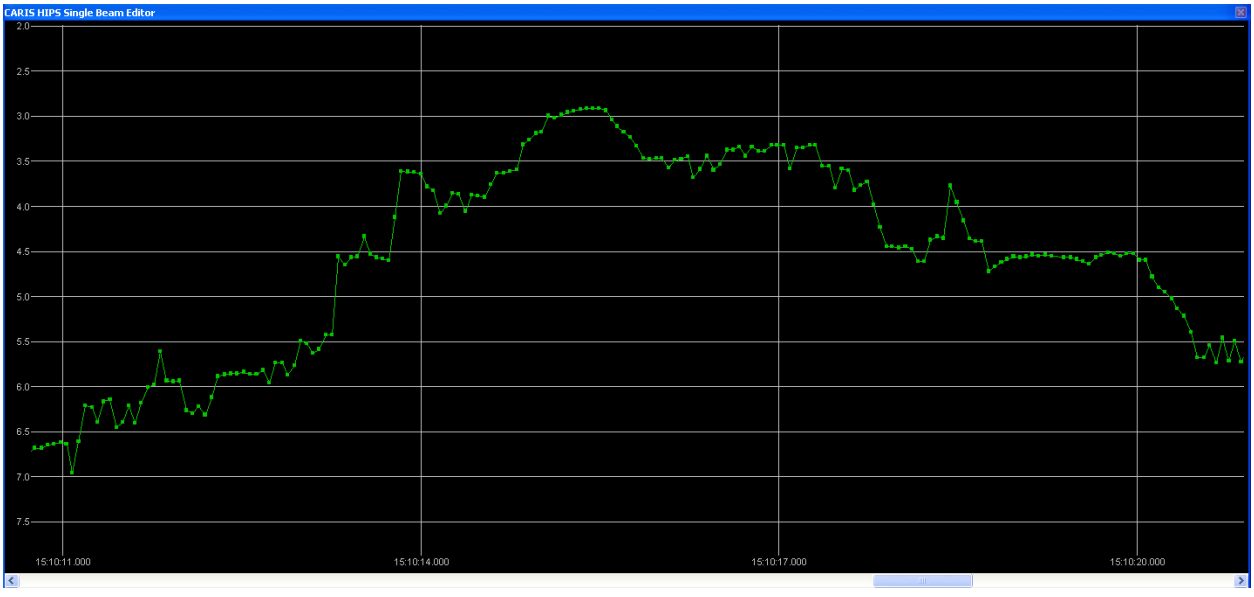


Figure 1.4.2

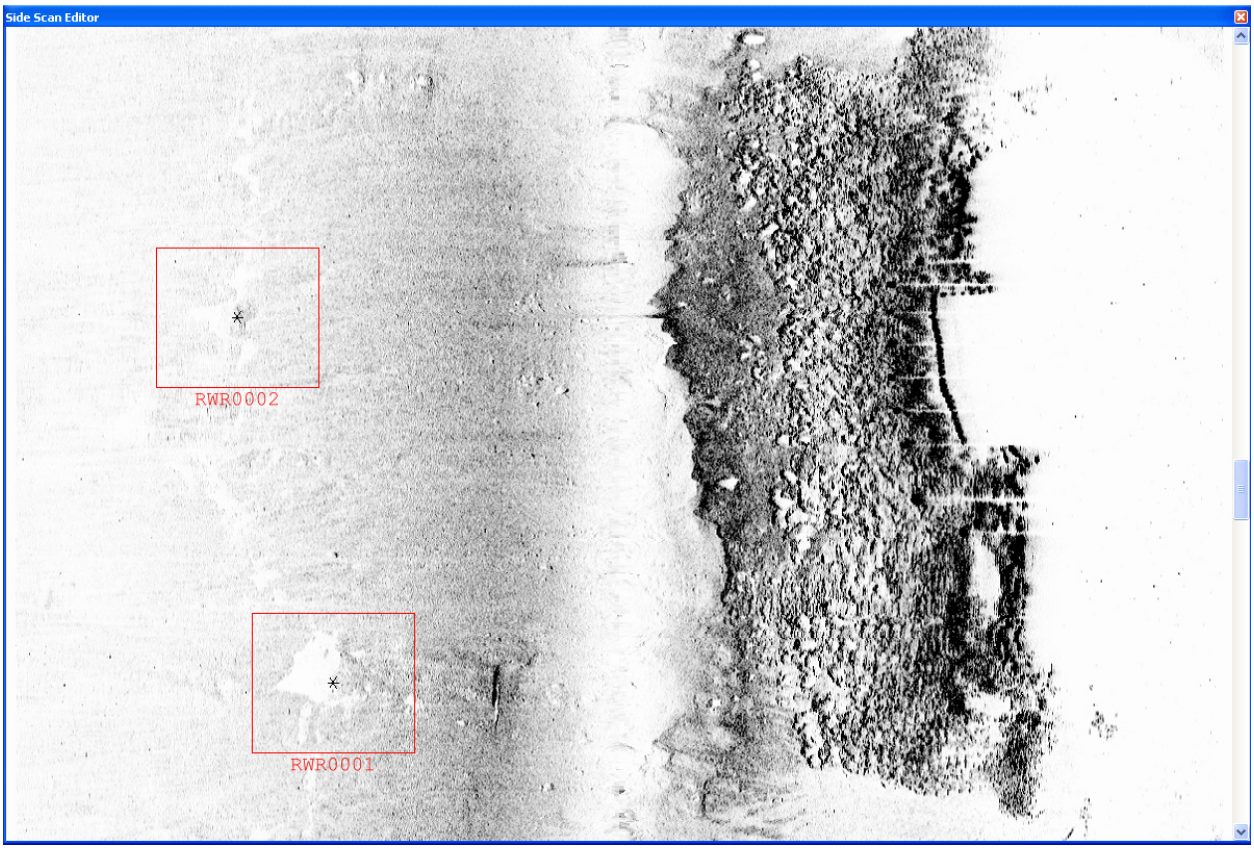


Figure 1.4.3

1.5) 9ft shoal

DANGER TO NAVIGATION

Survey Summary

Survey Position: 32° 53' 26.6" N, 079° 57' 46.8" W

Least Depth: 2.83 m (= 9.30 ft = 1.550 fm = 1 fm 3.30 ft)

TPU (±1.96σ): **THU (TPEh)** [None] ; **TVU (TPEv)** [None]

Timestamp: 2009-245.00:00:00.000 (09/02/2009)

GP Dataset: H11863_DtoN#1.xls

GP No.: 2

Charts Affected: 11524_1, 11521_1, 11520_1, 11009_1, 411_1

Remarks:

9ft shoal found with SSS and VBES

Feature Correlation

Address	Feature	Range	Azimuth	Status
H11863_DtoN#1.xls	2	0.00	000.0	Primary

Hydrographer Recommendations

Recommend charting 9ft sounding at survey location

Cartographically-Rounded Depth (Affected Charts):

9ft (11524_1, 11521_1)

1 ½fm (11520_1, 11009_1, 411_1)

S-57 Data

Geo object 1: Sounding (SOUNDG)

Attributes: OBJNAM - 9ft Shoal

QUASOU - 1:depth known

SORDAT - 20090902

SORIND - US,US,graph,H11863

TECSOU - 1,2:found by echo-sounder,found by side scan sonar

Office Notes

Concur. Chart 9ft sounding at survey position.

Feature Images

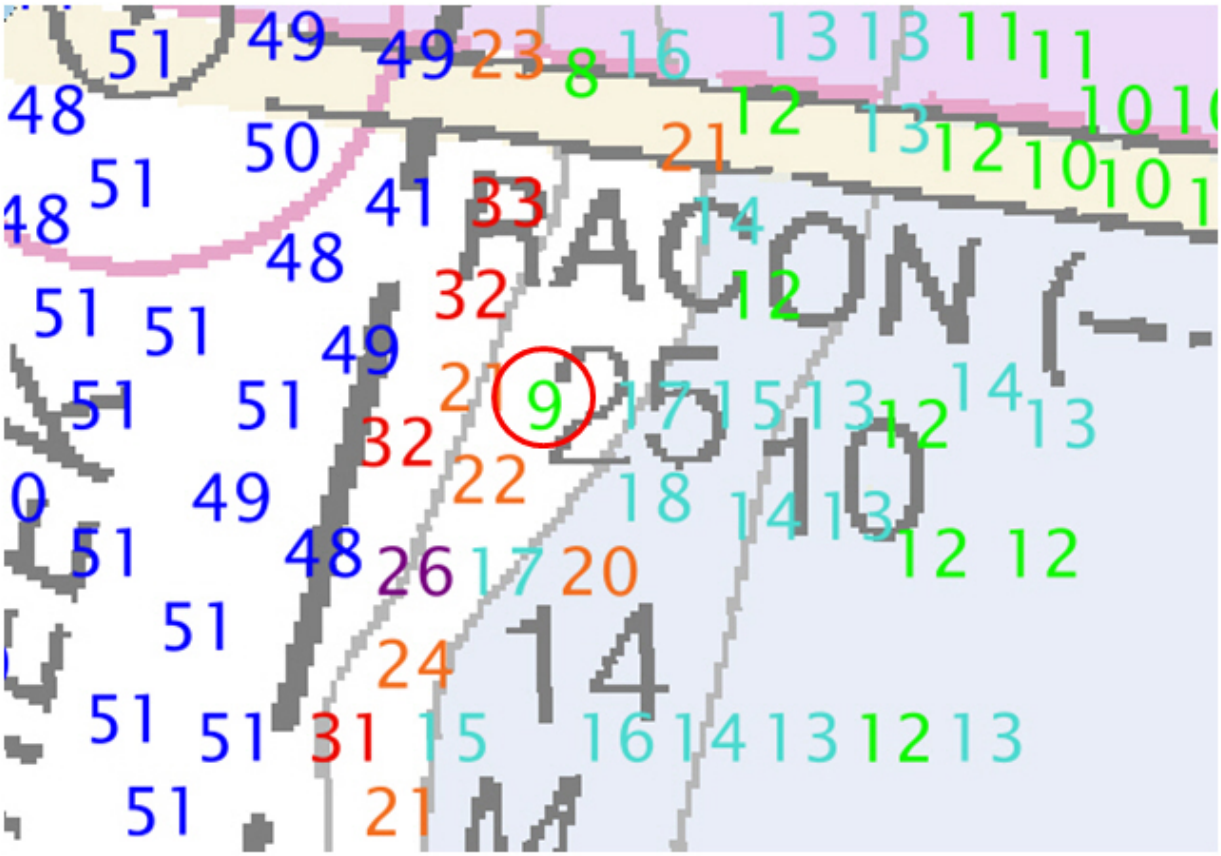


Figure 1.5.1

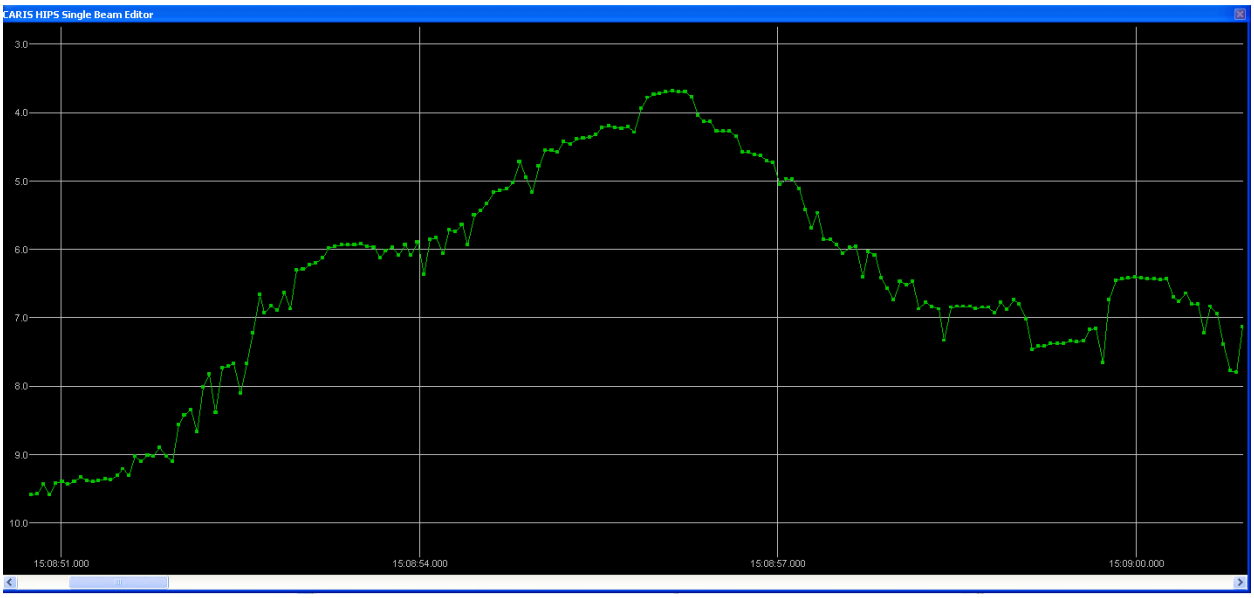


Figure 1.5.2

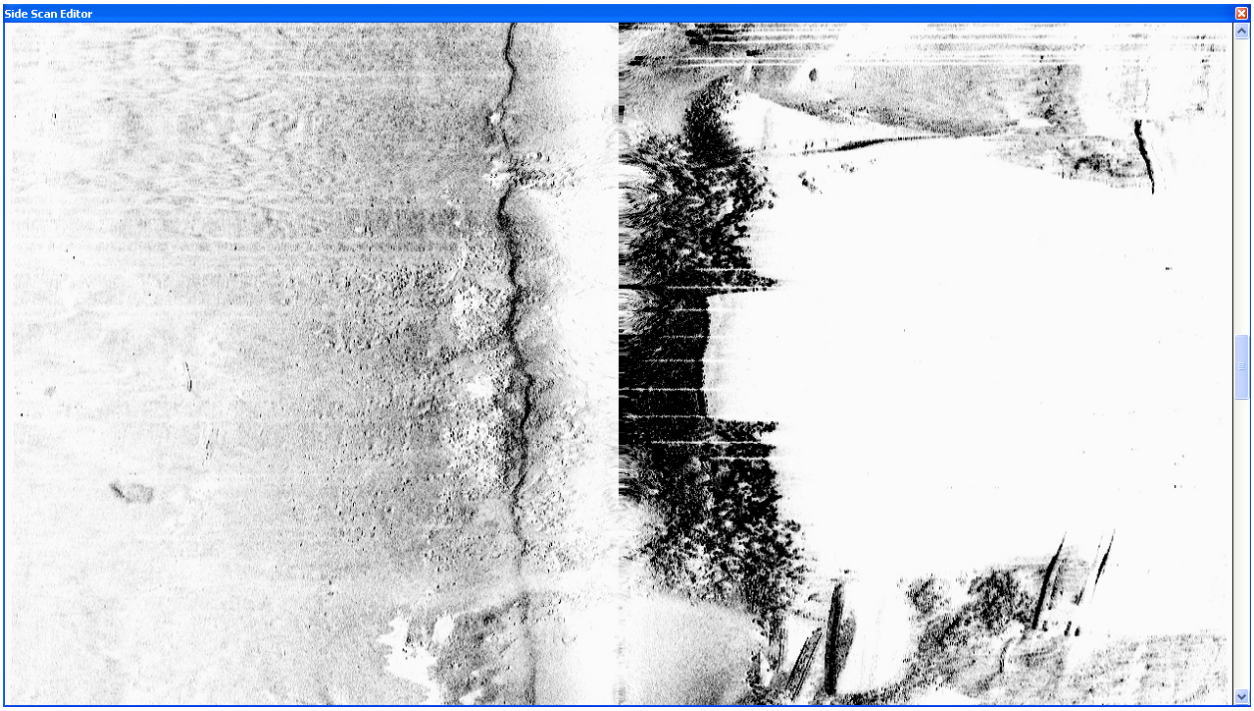


Figure 1.5.3

Appendix II

Survey Feature Report

H11863 AWOIS

Registry Number: H-11863
State: South Carolina
Locality: Charleston Harbor
Sub-locality: Cooper River
Project Number: OPR-G347-NRT2-08
Survey Dates: 05/27/2009 - 09/02/2009

Charts Affected

Number	Edition	Date	Scale (RNC)	RNC Correction(s)*
11524	52nd	01/01/2010	1:20,000 (11524_1)	USCG LNM: 12/14/2010 (12/28/2010) NGA NTM: 10/17/2009 (12/25/2010)
11527	17th	03/01/2006	1:20,000 (11527_1)	[L]NTM: ?
11521	28th	02/01/2006	1:80,000 (11521_1)	[L]NTM: ?
11520	42nd	09/01/2005	1:432,720 (11520_1)	[L]NTM: ?
11009	37th	07/01/2004	1:1,200,000 (11009_1)	[L]NTM: ?
411	51st	12/01/2006	1:2,160,000 (411_1)	[L]NTM: ?

* Correction(s) - *source: last correction applied (last correction reviewed--"cleared date")*

Features

No.	Name	Feature Type	Survey Depth	Survey Latitude	Survey Longitude	AWOIS Item
1.1	AWOIS #11456 Charted Subm Pile	AWOIS	[no data]	[no data]	[no data]	---
1.2	OBSTRUCTION	AWOIS	[no data]	[no data]	[no data]	---
1.3	AWOIS #7616 UNKNOWN	AWOIS	[no data]	[no data]	[no data]	---
1.4	AWOIS #7617 (barge) Sunken Wreck	AWOIS	[no data]	[no data]	[no data]	---
1.5	4310/1 AWOIS #13788	Shoal	15.82 m	32° 50' 31.5" N	079° 55' 43.5" W	13788
1.6	Awois #10564 Warning Sign	Marker (privately maintained)	-0.11 m	32° 54' 19.6" N	079° 56' 38.7" W	10564
1.7	405/1AWOIS #1381 Obstn 28ft	Obstruction	8.67 m	32° 50' 48.0" N	079° 55' 41.3" W	13818
1.8	Awois#10563 Warning Sign	Marker (privately maintained)	-5.75 m	32° 54' 39.2" N	079° 56' 54.5" W	10563
1.9	AWOIS #10562 DOL	Dolphin	-3.37 m	32° 54' 37.7" N	079° 55' 38.5" W	10562
1.10	2881/1 AWOIS #13865 Disproved Obstn 21-ft	Shoal	6.86 m	32° 51' 07.3" N	079° 56' 00.3" W	13865
1.11	409/1 Charted 7-ft AWOIS #10571	Obstruction	2.82 m	32° 54' 26.6" N	079° 56' 07.6" W	10571

1.12	18785/1 AWOIS #13866	Shoal	15.25 m	32° 51' 27.7" N	079° 57' 10.5" W	13866
1.13	799/1 AWOIS #7615	Shoal	4.12 m	32° 49' 59.5" N	079° 55' 37.7" W	7615
1.14	1121/1 AWOIS# 7618 Area Obstn: Disproved	Shoal	6.80 m	32° 50' 26.6" N	079° 55' 51.7" W	7618
1.15	220/1 AWOIS #10561 10-ft Obstn	Obstruction	3.10 m	32° 54' 50.2" N	079° 55' 35.2" W	10561
1.16	3933/1 AWOIS #13819	Shoal	9.59 m	32° 50' 53.4" N	079° 55' 45.9" W	13819

1 - DR_AWOIS

1.1) AWOIS #11456 - AWOIS #11456 Charted Subm Pile

No Primary Survey Feature for this AWOIS Item

Search Position: 32° 49' 55.1" N, 079° 55' 37.1" W

Historical Depth: [None]

Search Radius: 0

Search Technique: [None]

Technique Notes: [None]

History Notes:

H09731/77-78--OPR-G302-HFP; FOUND A VISIBLE PILING WITH AN ELEVATION OF 20 FEET ABOVE MHW.

H10863/99--OPR-G301-AHP; PILE NOT FOUND BUT NOT ADEQUATELY INVESTIGATED FOR DISPROVAL. PILE CHANGED TO SUBMERGED PILE IN LAT. 32/49/55.10N, LONG 079/55/37.10W (NAD83). (ENTERED 4/02 BY MBH)

S00006/02 -- S-G605-WH-02

navigable portion of item radius covered with 200% SSS and VB; no clear evidence of submerged pile found in SSS data; although survey tech aboard launch noted 3 visible piles. Retain item as charted.

Updated 9/28/2006 JCM.

OPR-G347-NRT2-08, H11863,2009: SSS coverage showed no signs of subm pile, however there was a survey platform located 23m due east of position. This plat is belived to be re-established over previous position.

Recommenddation: Remove the subm pile, and chart the survey plat at the surveyed position.RWR

Survey Summary

Charts Affected: 11524_1, 11521_1, 11520_1, 11009_1, 411_1

Remarks:

No SSS contact depicted on Awois 11456. 23m due east of AWOIS 11456, three exposed piles exist.

Feature Correlation

Address	Feature	Range	Azimuth	Status
AWOIS	AWOIS # 11456	0.00	000.0	Primary

Hydrographer Recommendations

Remove charted "Subm pile".

S-57 Data

[None]

Office Notes

Concur. Delete subm pile

1.2) AWOIS #10572 - OBSTRUCTION

No Primary Survey Feature for this AWOIS Item

Search Position: 32° 54' 15.0" N, 079° 56' 48.3" W

Historical Depth: [None]

Search Radius: 0

Search Technique: [None]

Technique Notes: [None]

History Notes:

HISTORY

H10857/99-- OPR-G301-AHP; ROW OF PILES IN LAT. 32-54-15.00N, LONG. 79-56-48.27W WERE FOUND AS CHARTED. EVALUATOR RECOMMENDS RETAINING AS CHARTED. (ENT 3/7/00, SJV)

OPR-G347-NRT2-08 // H11863,2009: Visual identification of piles awash. The shoreward row of charted are gone. Observed at MLLW with less than .7m water.

Recommend retain as charted. RWR

Survey Summary

Charts Affected: 11524_1, 11521_1, 11520_1, 11009_1, 411_1

Remarks:

AWOIS 10572 Northern

Feature Correlation

Address	Feature	Range	Azimuth	Status
AWOIS	AWOIS # 10572	0.00	000.0	Primary
h11863/nrt2_1210_dpnonechosounder/2009-215/dps_08032009	2/1	18.50	173.2	Secondary

Hydrographer Recommendations

[None]

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: OBJNAM - submerged pile awash

QUASOU - 6:least depth known

SORDAT - 20090902

SORIND - US,US,graph,H11863

TECSOU - 5:found by lead-line

WATLEV - 5:awash

Office Notes

Concur with clarification. Recommend to chart feature as an obstruction (pile awash) at the surveyed position. The most shoreward row of piles are not adequately addressed by survey, retain as charted.

Feature is currently charted as a MORFAC on ENC US5SC14M. Recommend to delete MORFAC and chart the obstruction as described.

1.3) AWOIS #7616 - AWOIS #7616 UNKNOWN

No Primary Survey Feature for this AWOIS Item

Search Position: 32° 50' 01.8" N, 079° 56' 28.6" W

Historical Depth: [None]

Search Radius: 100

Search Technique: VS,DI,SD

Technique Notes: [None]

History Notes:

H9731/78--OPR-G302-HFP-77; THE REMAINS OF AN OLD TUGBOAT LOCATED IN POS. LAT.32-50-01.2N, LONG.79-56-29.25W. THE WRECK IS 40 METERS IN LENGTH AND BARES 12 FEET AT MLW. (ENTERED 1/90)

H10863/99--OPR-G301-AHP; SURVEY VISUALLY IDENTIFIED AS EXISTING, NO POSITION OR DESCRIPTION WAS PROVIDED. (UPDATED 6/01 BY MBH)

S00006/02 -- S-G605-WH-02

item not fully investigated, but wreck was sighted by survey tech.Hydrographer recommnds retaining item as charted.

Updated 9/28/2006 JCM.

OPR-G347-NRT2-08, H11863,2009: Item exist as charted, visually identified, though unapproachable.

Recomendation: Retain as charted. RWR

Survey Summary

Charts Affected: 11524_1, 11521_1, 11520_1, 11009_1, 411_1

Remarks:

Visually identified though not approachable.

Feature Correlation

Address	Feature	Range	Azimuth	Status
AWOIS	AWOIS # 7616	0.00	000.0	Primary
h11863/nrt2_1210_klein3000hf_100sss/2009-174/sss090623141600	0001	5.41	350.1	Secondary

Hydrographer Recommendations

Retain as charted.

S-57 Data

Geo object 1: Wreck (WRECKS)

Office Notes

Concur. Retain as charted. Recommend to update AWOIS database with H11863 survey results.

Feature Images

Figure 1.3.1

Figure 1.3.2

1.4) AWOIS #7617 - AWOIS #7617 (barge) Sunken Wreck

No Primary Survey Feature for this AWOIS Item

Search Position: 32° 50' 19.1" N, 079° 56' 47.8" W

Historical Depth: [None]

Search Radius: 100

Search Technique: VS,S2,DI,SD,ES

Technique Notes: [None]

History Notes:

H9731/77-78--OPR-G302-HFP-77;VISIBLE WRECK OF A BARGE UNCOVERING 5FT AT

MLW LOCATED IN POS. LAT.32-50-18.5N, LONG.79-56-48.5W. (ENTERED 3/90 MCR)

H10863/99--OPR-G301-AHP; SURVEY VISUALLY IDENTIFIED AS EXISTING, NO POSITION OR DESCRIPTION WAS PROVIDED. (UPDATED 6/01 BY MBH)

S00006/02 -- S-G605-WH-02

200% SSS coverage of navigable portion of AWOIS radius; no sounding coverage.Hydrographer recommnds retaining item as charted.

Updated 9/28/2006 JCM.

OPR-G347-NRT2-08, H11863,2009: Visual identified Vis Wk near reported position. Though it appears to have shifted position. This area is subject to wreck dumping and abandonment.

Recommend adjusting cahrted position.RWR

Survey Summary

Charts Affected: 11524_1, 11521_1, 11520_1, 11009_1, 411_1

Remarks:

Visually identified Vis Wk near reported position.

Feature Correlation

Address	Feature	Range	Azimuth	Status
AWOIS	AWOIS # 7617	0.00	000.0	Primary

Hydrographer Recommendations

Recommend to delete charted stranded wreck.

S-57 Data

Geo object 1: Wreck (WRECKS)

Attributes:
CATWRK - 2:dangerous wreck
INFORM - Incomplete search radius; chart sunken wreck as not visually identified.
OBJNAM - AWOIS #7617
SORDAT - 20090902
SORIND - US,US,graph,H11863

Office Notes

Do not conur. AWOIS #7617 (barge) search radius incomplete and charted stranded wreck not disproved. Recommend to delete the the visible stranded wreck; recommend to chart a submerged wreck at the AWOIS location as it was not visually identified. No positional revision is recommended. Recommend to update AWOIS database with H11863 survey results.

The search area of AWOIS #7617 was reported as too shallow for side scan operations within the northern section of search radius; consider search radius incomplete. AWOIS #7617 database indicates the wreck as a barge. AHB verifier does not associate the stranded fishing vessel wreck is the same as AWOIS #7617 (barge).

The visible stranded wreck located within the search radius is a fishing vessel, not a barge and located approximately 80m to the NNE of AWOIS #7617; reference field unit photo.

Feature Images

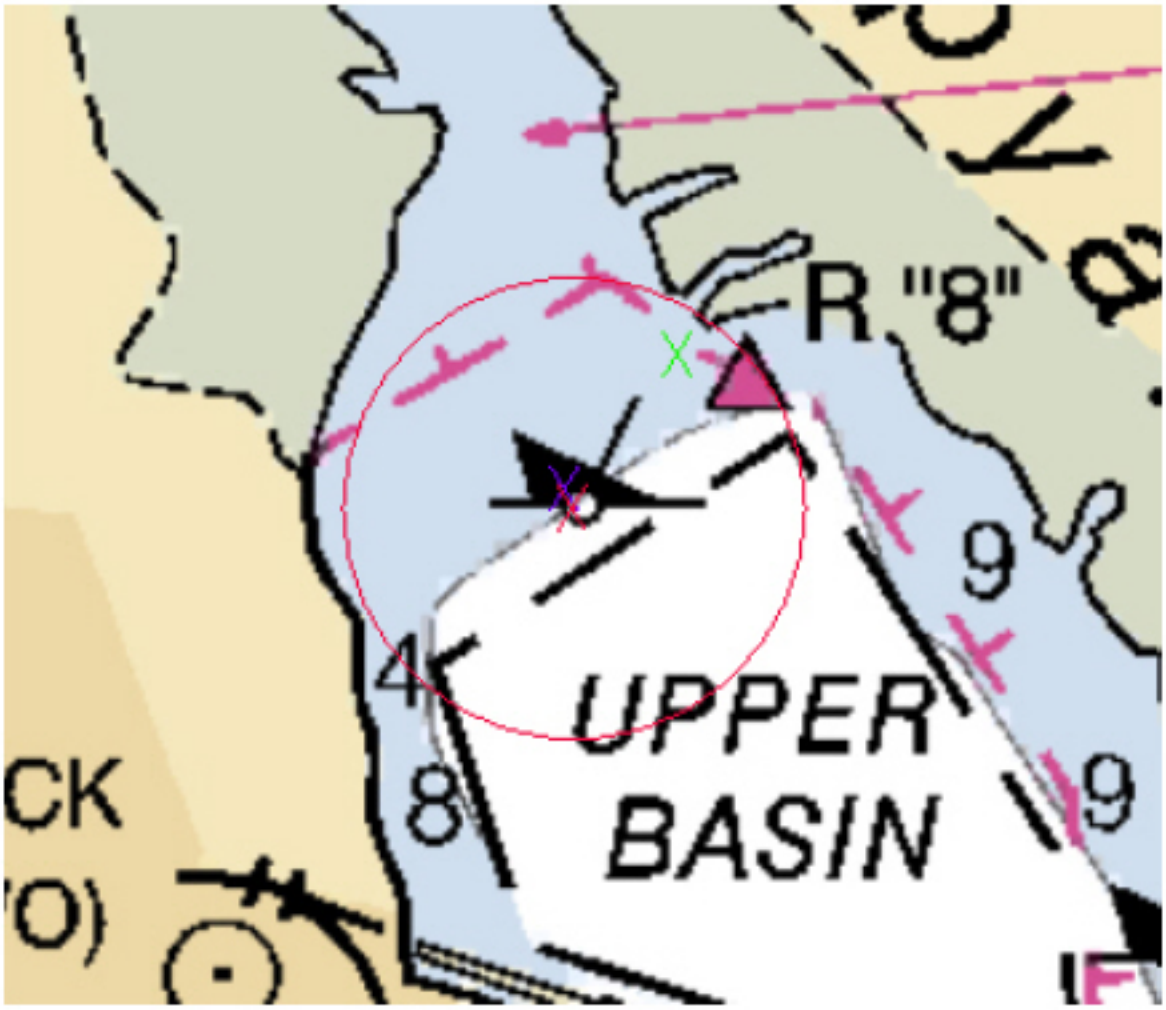


Figure 1.4.1

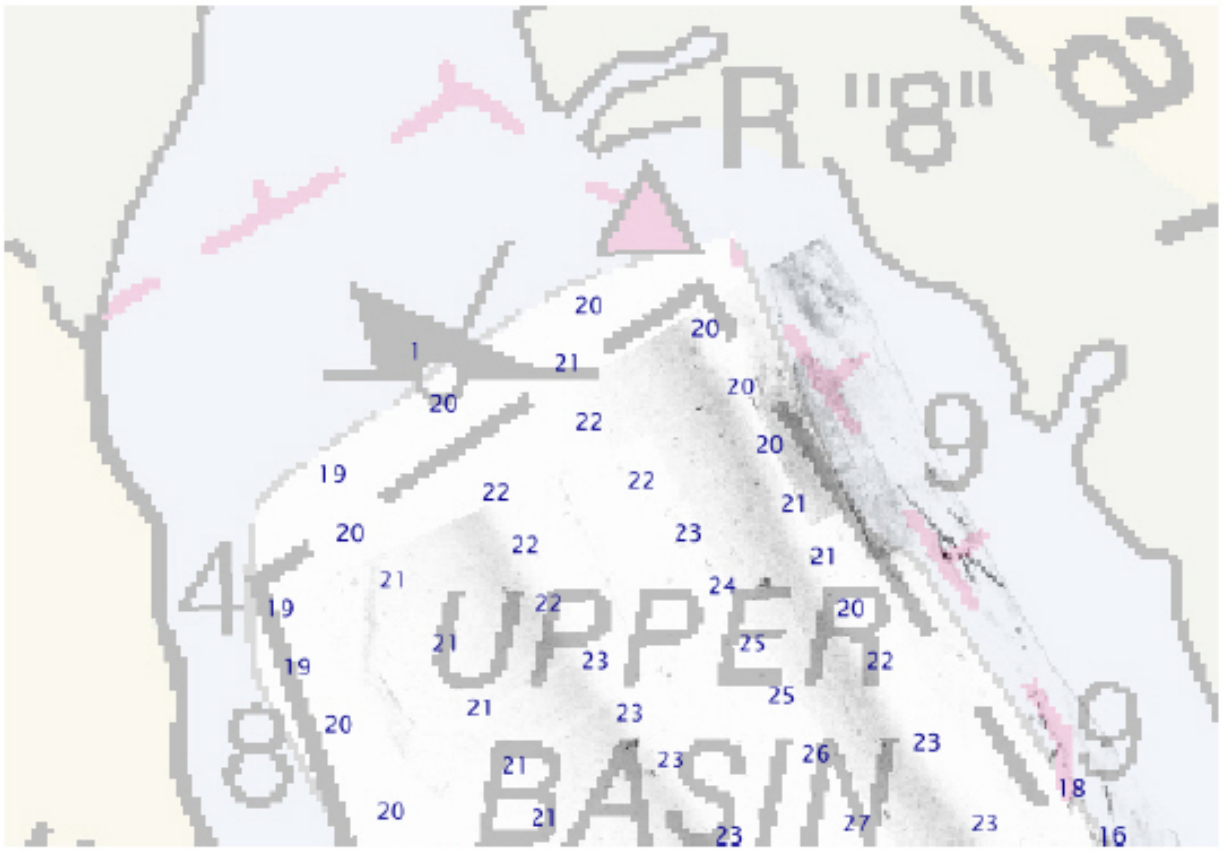

R "8"
UPPER
BASIN
20
20
1
21
20
20
22
20
19
22
22
21
20
22
23
21
21
24
19
22
20
21
25
19
23
22
25
20
21
23
20
23
26
21
23
18
20
21
23
27
23
16

Figure 1.4.2

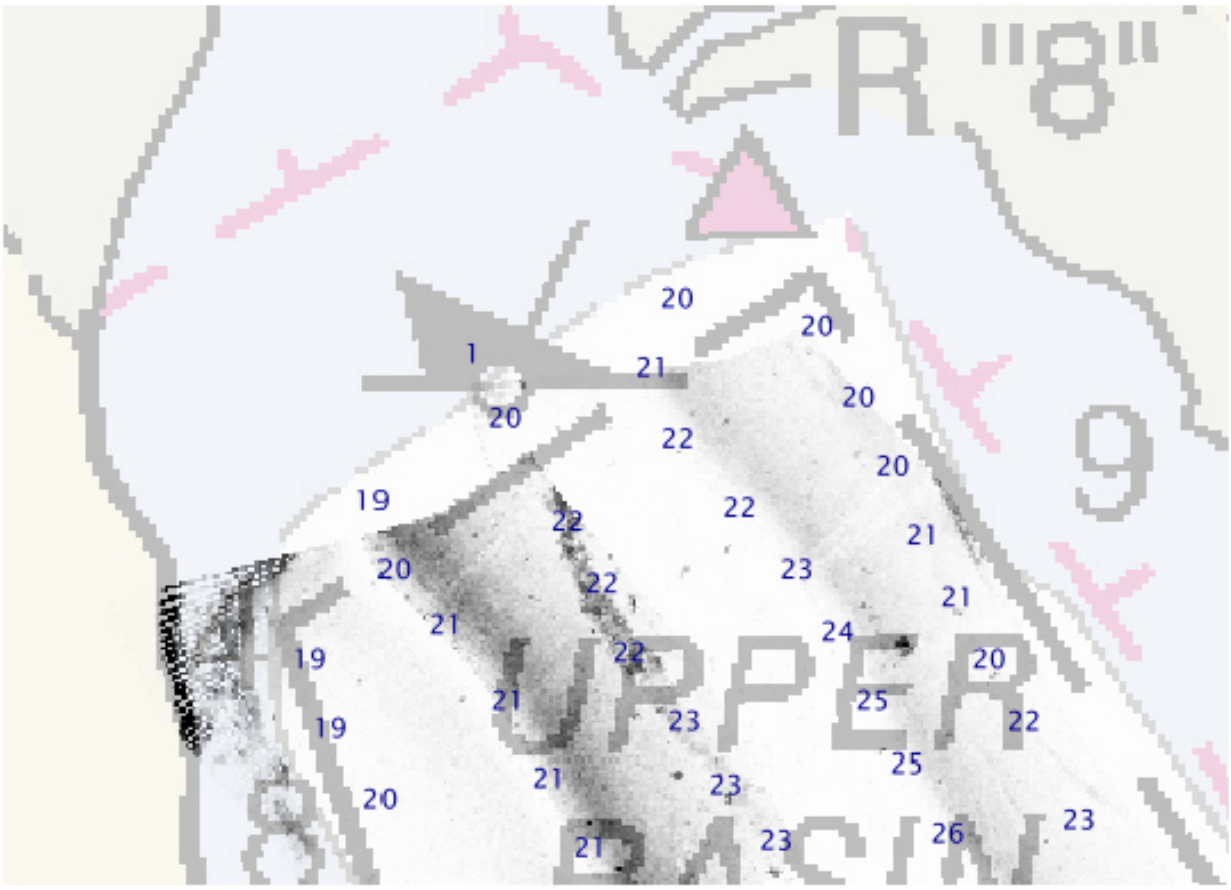

R "8"
9
UPPER
BACON
1
20
20
21
20
20
22
20
19
22
22
21
20
22
23
21
21
24
19
22
20
21
25
19
23
22
25
21
23
20
21
23
26
23

Figure 1.4.3

1.5) 4310/1 AWOIS #13788

Primary Feature for AWOIS Item #13788

Search Position:	32° 50' 31.7" N, 079° 55' 43.1" W
Historical Depth:	13.90 m
Search Radius:	0
Search Technique:	[None]
Technique Notes:	[None]

History Notes:

S00006/02 -- S-G605-WH-02 HLS;

Survey Position: 032° 50' 31.697" N, 79° 55' 43.056" W

Least Depth: 13.90 m

Timestamp: 2002-316.16:50:45.227 (11/12/2002)

Remarks: Least depth of 45.60 feet (13.90 meters) over feature located with 200% SSS and developed with 100% MB.

USACE dove on item and identified it as a clay mound; least depth is deeper than 45-foot depth

Hydrographer Recommendations: Hydrographer recommends charting feature as an obstruction with a least depth of 45 feet.

Updated 9/19/2006 JCM

OPR-G347-NRT2-08 , H11863,2009: 200 % sss showed no signs of previous bottom irregularity.

Recommendation: Remove from Awois data base. RWR

Survey Summary

Survey Position:	32° 50' 31.5" N, 079° 55' 43.5" W
Least Depth:	15.82 m (= 51.91 ft = 8.652 fm = 8 fm 3.91 ft)
TPU (±1.96σ):	**THU (TPEh)** ±1.992 m ; **TVU (TPEv)** ±0.150 m
Timestamp:	2009-167.13:07:48.602 (06/16/2009)
Survey Line:	h11863 / nrt2_1210_sb / 2009-167 / 1d
Profile/Beam:	4310/1
Charts Affected:	11524_1, 11521_1, 11520_1, 11009_1, 411_1

Remarks:

200 SSS showed no contacts this area.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11863/nrt2_1210_sb/2009-167/1d	4310/1	0.00	000.0	Primary
AWOIS	AWOIS # 13788	12.45	238.2	Secondary

Hydrographer Recommendations

Remove.

S-57 Data

Geo object 1: Sounding (SOUNDG)

Attributes: EXPSOU - 1:within the range of depth of the surrounding depth area

QUASOU - 1:depth known

TECSOU - 1,2:found by echo-sounder,found by side scan sonar

VERDAT - 12:Mean lower low water

Office Notes

Concur with clarification. No charting action required as AWOIS #13788 is not a charted feature. AWOIS #13788 is reported at a benthic (clay) mound within the USACE channel. Recommend no charting action. Update the AWOIS database with H11863 survey results.

1.6) Awois #10564 Warning Sign

Primary Feature for AWOIS Item #10564

Search Position: 32° 54' 19.5" N, 079° 56' 38.7" W

Historical Depth: [None]

Search Radius: 30

Search Technique: VS

Technique Notes: [None]

History Notes:

HISTORY

H10857/99-- OPR-G301-AHP; ONE OF TWO UNCHARTED SIGNS (SEE AWOIS #10563 FOR DATA ON SECOND SIGN) LOCATED IN LAT. 32-54-19.51N, LONG. 79-56-38.74W. THESE ARE RESTRICTED AREA SIGNS MARKING THE SOUTHERN LIMITS OF THE US NAVY WEAPONS STATION. EVALUATOR RECOMMENDS CHARTING TWO SYMBOLS LABELED "SIGN" AS SURVEYED. (ENT 3/7/00, SJV)

OPR-G347-NRT2-08, H11863,2009: Visual identification of Restricted Area Sign.

Recommend Retain as charted.RWR

Survey Summary

Survey Position: 32° 54' 19.6" N, 079° 56' 38.7" W

Least Depth: -0.11 m (= -0.34 ft = -0.057 fm = 0 fm 5.66 ft)

TPU (±1.96σ): **THU (TPEh)** ±1.960 m ; **TVU (TPEv)** ±0.129 m

Timestamp: 2009-215.15:33:15.000 (08/03/2009)

DP Dataset: h11863 / nrt2_1210_dpnonechosounder / 2009-215 / dps_08032009

Profile/Beam: 3/1

Charts Affected: 11524_1, 11527_1, 11521_1, 11520_1, 11009_1, 411_1

Remarks:

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11863/nrt2_1210_dpnonechosounder/2009-215/dps_08032009	3/1	0.00	000.0	Primary
AWOIS	AWOIS # 10564	49.15	266.6	Secondary

Hydrographer Recommendations

Retain as charted.

S-57 Data

Geo object 1:	Beacon, special purpose/general (BCNSPP)
Attributes:	CATSPM - 13:private mark
	INFORM - Restricted Area Sign
	SORDAT - 20090902
	SORIND - US,US,graph,H11863

Office Notes

Concur. Retain as charted.

Feature Images

Figure 1.6.1

Figure 1.6.2

1.7) 405/1AWOIS #1381 Obstn 28ft

Primary Feature for AWOIS Item #13818

Search Position:	32° 50' 47.8" N, 079° 55' 41.4" W
Historical Depth:	8.52 m
Search Radius:	50
Search Technique:	S2, ES
Technique Notes:	[None]

History Notes:

S00006/02 -- S-G605-WH-02 (HLS);

Survey Position: 032° 50' 47.762" N, 79° 55' 41.415" W

Least Depth: 8.52 m

Timestamp: 2002-316.16:27:45.500 (11/12/2002)

Least depth of 27.95 feet (8.52 meters) over cable lying on bottom. To the south of the least depth, the cable gets deeper, but suspended with a maximum height above the bottom of ~2 meters. Feature located with 200% SSS and developed with MB.

UPDATED 9/27/2006 JCM

OPR-G347-NRT2-08, H11863,2009: Large rise , subm obstrn exist as charted. Section of abandon dredge pipe crosses over.

Recommend Retain as charted.

Survey Summary

Survey Position:	32° 50' 48.0" N, 079° 55' 41.3" W
Least Depth:	8.67 m (= 28.45 ft = 4.742 fm = 4 fm 4.45 ft)
TPU (±1.96σ):	**THU (TPEh)** ±1.975 m ; **TVU (TPEv)** ±0.139 m
Timestamp:	2009-195.17:23:31.854 (07/14/2009)
Survey Line:	h11863 / nrt2_1210_sb / 2009-195 / 148_1723
Profile/Beam:	405/1
Charts Affected:	11524_1, 11521_1, 11520_1, 11009_1, 411_1

Remarks:

Large rise confirmed , with a abandon section of dredge pipe crossing over.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11863/nrt2_1210_sb/2009-195/148_1723	405/1	0.00	000.0	Primary
h11863/nrt2_1210_klein3000hf_200sss/2009-167/sss090616132200	0003	6.04	183.0	Secondary (grouped)
h11863/nrt2_1210_klein3000hf_200sss/2009-167/sss090616123800	0001	6.59	042.3	Secondary (grouped)
AWOIS	AWOIS # 13818	7.66	013.8	Secondary
h11863/nrt2_1210_klein3000hf_100sss/2009-167/sss090616130100	0001	24.92	007.4	Secondary

Hydrographer Recommendations

Retain as charted.

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes:

QUASOU - 6:least depth known

SORDAT - 20090902

SORIND - US,US,graph,H11863

TECSOU - 1,2:found by echo-sounder,found by side scan sonar

VALSOU - 8.672 m

WATLEV - 3:always under water/submerged

Office Notes

Concur with clarification. Delete charted obstruction. Add obstruction at survey depth and position.

Feature Images

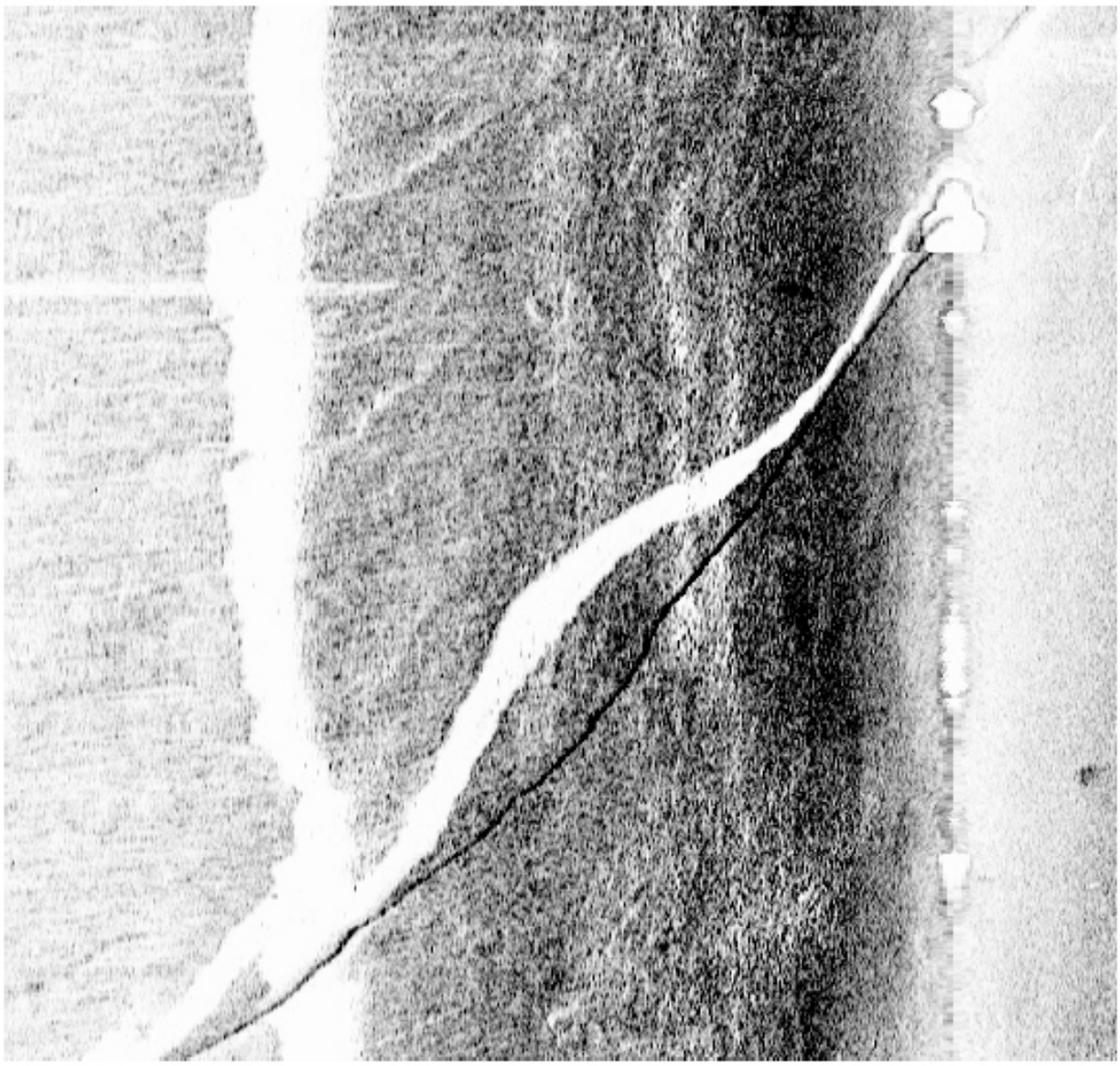


Figure 1.7.1

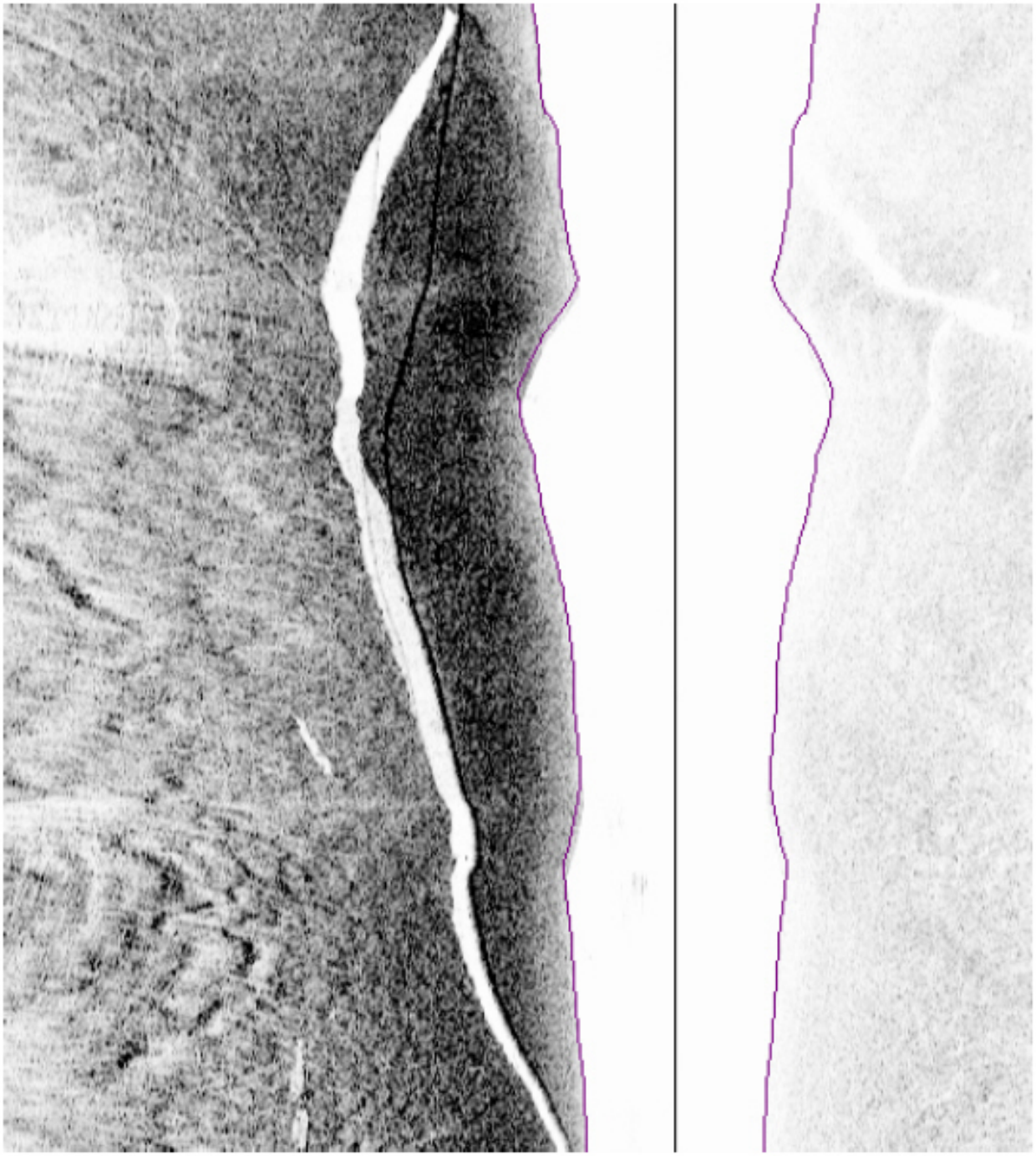


Figure 1.7.2

1.8) Awois#10563 Warning Sign

Primary Feature for AWOIS Item #10563

Search Position: 32° 54' 38.9" N, 079° 56' 54.7" W

Historical Depth: [None]

Search Radius: 30

Search Technique: VS

Technique Notes: [None]

History Notes:

HISTORY

H10857/99-- OPR-G301-AHP; ONE OF TWO UNCHARTED SIGNS (SEE AWOIS # 10564 FOR DATA ON SECOND SIGN) LOCATED IN LAT. 32/54/38.94N, LONG. 79/56/54.73W. THESE ARE RESTRICTED AREA SIGNS MARKING THE SOUTHERN LIMITS OF THE US NAVY WEAPONS STATION. EVALUATOR RECOMMENDS CHARTING TWO SYMBOLS LABELED "SIGN" AS SURVEYED. (ENT 3/7/00, SJV)

OPR-G347-NRT2-08 // H11863,2009: Confirmed sign, marking limits of Restricted Area.

Recommend :Retain as charted.RWR

Survey Summary

Survey Position: 32° 54' 39.2" N, 079° 56' 54.5" W

Least Depth: -5.75 m (= -18.88 ft = -3.146 fm = -3 fm 0.88 ft)

TPU (±1.96σ): **THU (TPEh)** ±1.963 m ; **TVU (TPEv)** ±0.131 m

Timestamp: 2009-217.13:18:17.000 (08/05/2009)

DP Dataset: h11863 / nrt2_1210_dpnonechosounder / 2009-217 / dp_08052009

Profile/Beam: 1/1

Charts Affected: 11524_1, 11527_1, 11521_1, 11520_1, 11009_1, 411_1

Remarks:

Warning Sign, restricted waterway. Southwest Limit

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11863/nrt2_1210_dpnonechosounder/2009-217/dp_08052009	1/1	0.00	000.0	Primary
AWOIS	AWOIS # 10563	8.04	068.2	Secondary

Hydrographer Recommendations

Retain charted sign, ADD "Restricted AREA"

S-57 Data

Geo object 1:	Beacon, special purpose/general (BCNSPP)
Attributes:	BCNSHP - 5:pile beacon
	CATSPM - 27:general warning mark
	COLOUR - 1:white
	HEIGHT - 5.75 m
	SORDAT - 20090902
	SORIND - US,US,graph,H11863

Office Notes

Concur. Recommend update AWOIS database with H11863 survey results. Delete charted sign, add BCNSPP with survey attributes.

Feature Images

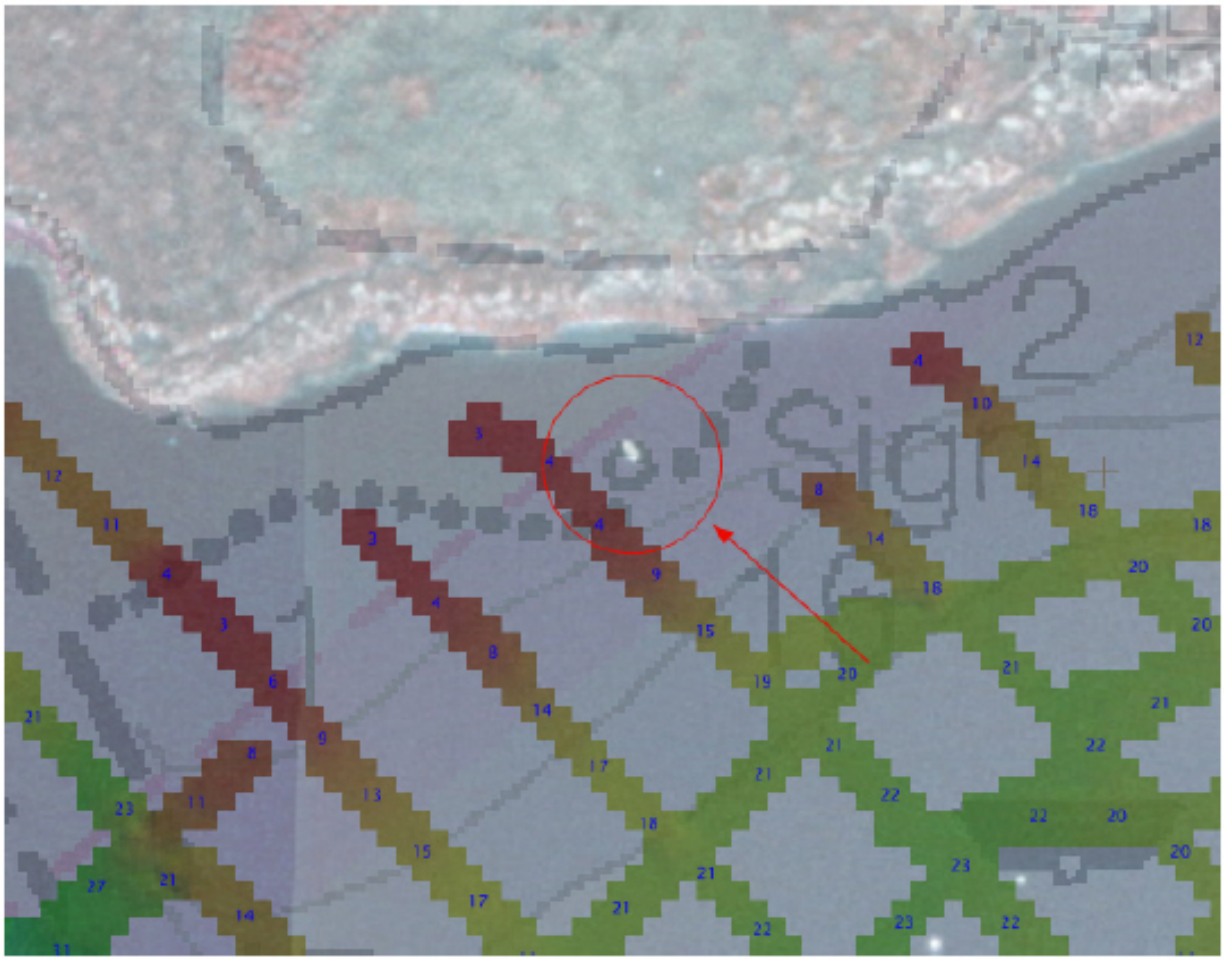


Figure 1.8.1

1.9) AWOIS #10562 DOL

Primary Feature for AWOIS Item #10562

Search Position: 32° 54' 37.6" N, 079° 55' 38.7" W

Historical Depth: [None]

Search Radius: 20

Search Technique: VS

Technique Notes: [None]

History Notes:

HISTORY

H10857/99- OPR-G301-AHP; UNCHARTED DOLPHIN LOCATED IN LAT. 32-54-37.62N, LONG. 79-55-38.65W. ESTABLISHED BY THE USCG AS A MOORING ASSIST FOR SERVICING THE FORWARD RANGE "A". EVALUATOR RECOMMENDS CHARTING A VISIBLE DOLPHIN AS SURVEYED. (ENT 3/7/00, SJV)

OPR-G347-NRT2-08// H11863,2009: Verified dol exist a charted position. Used for working near bye range.

Recommendation: Retain as charted.

Survey Summary

Survey Position: 32° 54' 37.7" N, 079° 55' 38.5" W

Least Depth: -3.37 m (= -11.07 ft = -1.844 fm = -1 fm 5.07 ft)

TPU (±1.96σ): **THU (TPEh)** ±1.961 m ; **TVU (TPEv)** ±0.130 m

Timestamp: 2009-217.14:54:19.000 (08/05/2009)

DP Dataset: h11863 / nrt2_1210_dpnonechosounder / 2009-217 / dp_08052009

Profile/Beam: 3/1

Charts Affected: 11524_1, 11527_1, 11521_1, 11520_1, 11009_1, 411_1

Remarks:

3 Pile DOL

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11863/nrt2_1210_dpnonechosounder/2009-217/dp_08052009	3/1	0.00	000.0	Primary
AWOIS	AWOIS # 10562	4.50	131.3	Secondary

Hydrographer Recommendations

Retain as charted.

S-57 Data

Geo object 1: Mooring/warping facility (MORFAC)

Attributes: CATMOR - 1:dolphin

HEIGHT - 3.37 m

Office Notes

Concur with clarification. Delete charted dolphin, add MORFAC at survey position

Feature Images

Figure 1.9.1

1.10) 2881/1 AWOIS #13865 Disproved Obstn 21-ft

Primary Feature for AWOIS Item #13865

Search Position:	32° 51' 07.9" N, 079° 56' 00.1" W
Historical Depth:	6.44 m
Search Radius:	50
Search Technique:	S2, ES
Technique Notes:	[None]

History Notes:

S00006/02 -- S-G605-WH-02 HLS;

Survey Position: 032° 51' 07.881" N, 79° 56' 00.104" W

Least Depth: 6.44 m

Timestamp: 2002-316.18:59:48.660 (11/12/2002)

Remarks: Least depth of 21 feet over AWOIS item #11057. AWOIS item's position covered with 100% SSS and 100% MB;

no obstruction found; NOTE: this information AWOIS item has a search radius of 0 meters

Office Notes:Delete charted 18 ft dangerous submerged obstruction (AWOIS #11057). Add a 21 ft

dangerous submerged obstruction in the present survey location.

Updated 9/19/2006 JCM

OPR-G347-NRT2-08 // H11863,2009: 200% sss showed no contact.

Recommendation: Remove the charted obstrn.RWR

Survey Summary

Survey Position:	32° 51' 07.3" N, 079° 56' 00.3" W
Least Depth:	6.86 m (= 22.51 ft = 3.751 fm = 3 fm 4.51 ft)
TPU (±1.96σ):	**THU (TPEh)** ±1.967 m ; **TVU (TPEv)** ±0.134 m
Timestamp:	2009-202.15:37:20.666 (07/21/2009)
Survey Line:	h11863 / nrt2_1210_sb / 2009-202 / 1c
Profile/Beam:	2881/1
Charts Affected:	11524_1, 11521_1, 11520_1, 11009_1, 411_1

Remarks:

200% sss showed no contacts to develop.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11863/nrt2_1210_sb/2009-202/1c	2881/1	0.00	000.0	Primary
h11863/nrt2_1210_dpnonechosounder/2009-231/dps_08192009	13/1	15.54	273.2	Secondary
AWOIS	AWOIS # 13865	17.92	193.1	Secondary

Hydrographer Recommendations

Remove charted 22ft obstrn.

Cartographically-Rounded Depth (Affected Charts):

22ft (11524_1, 11521_1)

3 ¾fm (11520_1, 11009_1, 411_1)

S-57 Data

Geo object 1: Sounding (SOUNDG)

Attributes: EXPSOU - 1:within the range of depth of the surrounding depth area

QUASOU - 1:depth known

TECSOU - 1,2:found by echo-sounder,found by side scan sonar

VERDAT - 12:Mean lower low water

Office Notes

Concur. Delete charted 21ft obstruction. Update AWOIS database with H11863 survey results.

Feature Images

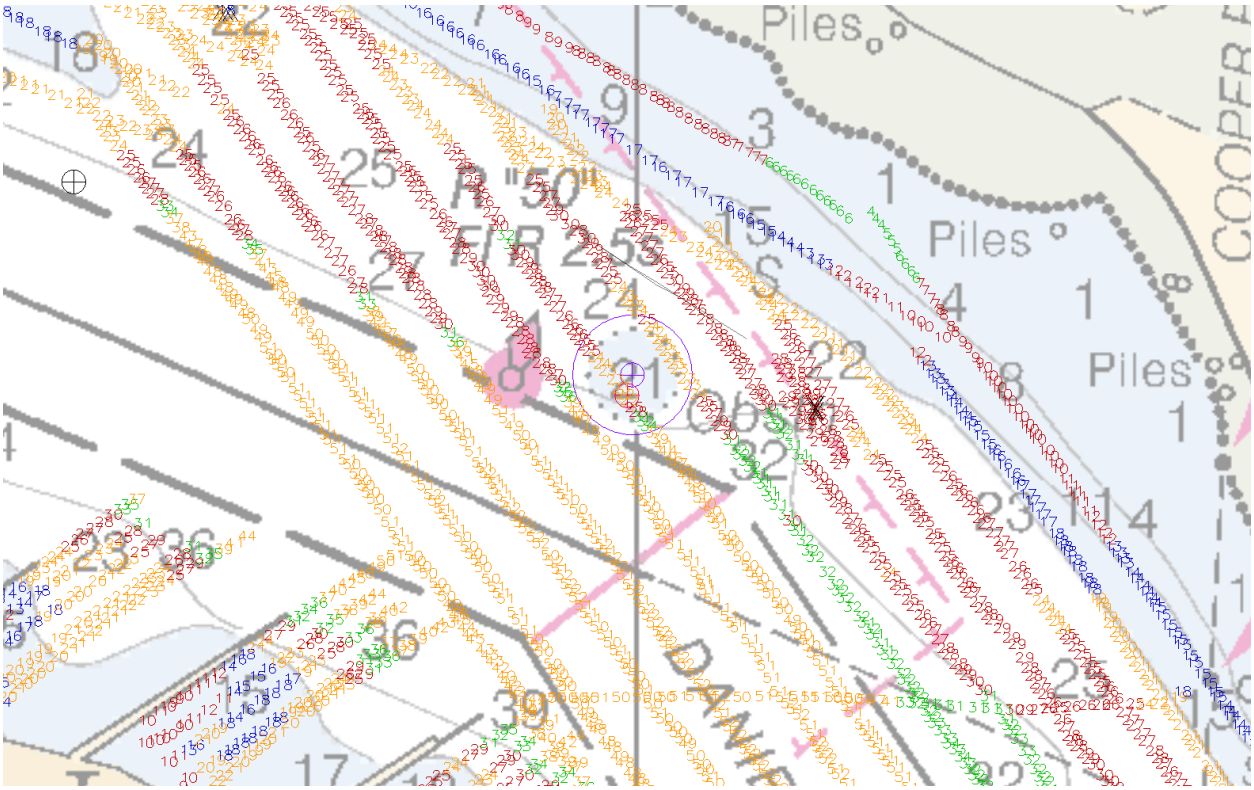


Figure 1.10.1

1.11) 409/1 Charted 7-ft AWOIS #10571

Primary Feature for AWOIS Item #10571

Search Position: 32° 54' 26.7" N, 079° 56' 07.2" W

Historical Depth: 2.13 m

Search Radius: 0

Search Technique: [None]

Technique Notes: [None]

History Notes:

HISTORY

H10857/99-- OPR-G301-AHP; SUBMERGED OBSTRUCTION LOCATED IN LAT. 32-54-26.66N, LONG. 79-56-07.16W WITH A LD OF 7.0 FEET. THIS IS THE REMAINS OF THE FRONT RANGE "B" WHICH WAS MOVED TO A NEW LOCATION CLOSER TO SHORE. EVALUATOR RECOMMENDS ADDING A 7 OBSTN TO THE CHART AS SURVEYED. (ENT 3/7/00, SJV)

OPR-G347-NRT2-08, H11863,2009: 200% SSS could not be obtained due to shallow depths. 100% sss was conducted with VBES developement. Area appears to be natural bottom.

Recommend removal of obstn.RWR

Survey Summary

Survey Position: 32° 54' 26.6" N, 079° 56' 07.6" W

Least Depth: 2.82 m (= 9.26 ft = 1.544 fm = 1 fm 3.26 ft)

TPU (±1.96σ): **THU (TPEh)** ±1.964 m ; **TVU (TPEv)** ±0.131 m

Timestamp: 2009-217.14:04:00.974 (08/05/2009)

Survey Line: h11863 / nrt2_1210_sb / 2009-217 / 023_1403

Profile/Beam: 409/1

Charts Affected: 11524_1, 11527_1, 11521_1, 11520_1, 11009_1, 411_1

Remarks:

To shoal for 200% SSS, however 100% was obtained, and VBES was obtained. No signs of an obstn, the area appears to be natural bottom.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11863/nrt2_1210_sb/2009-217/023_1403	409/1	0.00	000.0	Primary
AWOIS	AWOIS # 10571	11.40	267.6	Secondary

Hydrographer Recommendations

Recommend removal of the Obstn.

Cartographically-Rounded Depth (Affected Charts):

9ft (11524_1, 11527_1, 11521_1)

1 ½fm (11520_1, 11009_1, 411_1)

S-57 Data

Geo object 1:	Obstruction (OBSTRN)
Attributes:	VALSOU - 2.823 m
	WATLEV - 3:always under water/submerged

Office Notes

Concur. Delete obstruction.

Feature Images

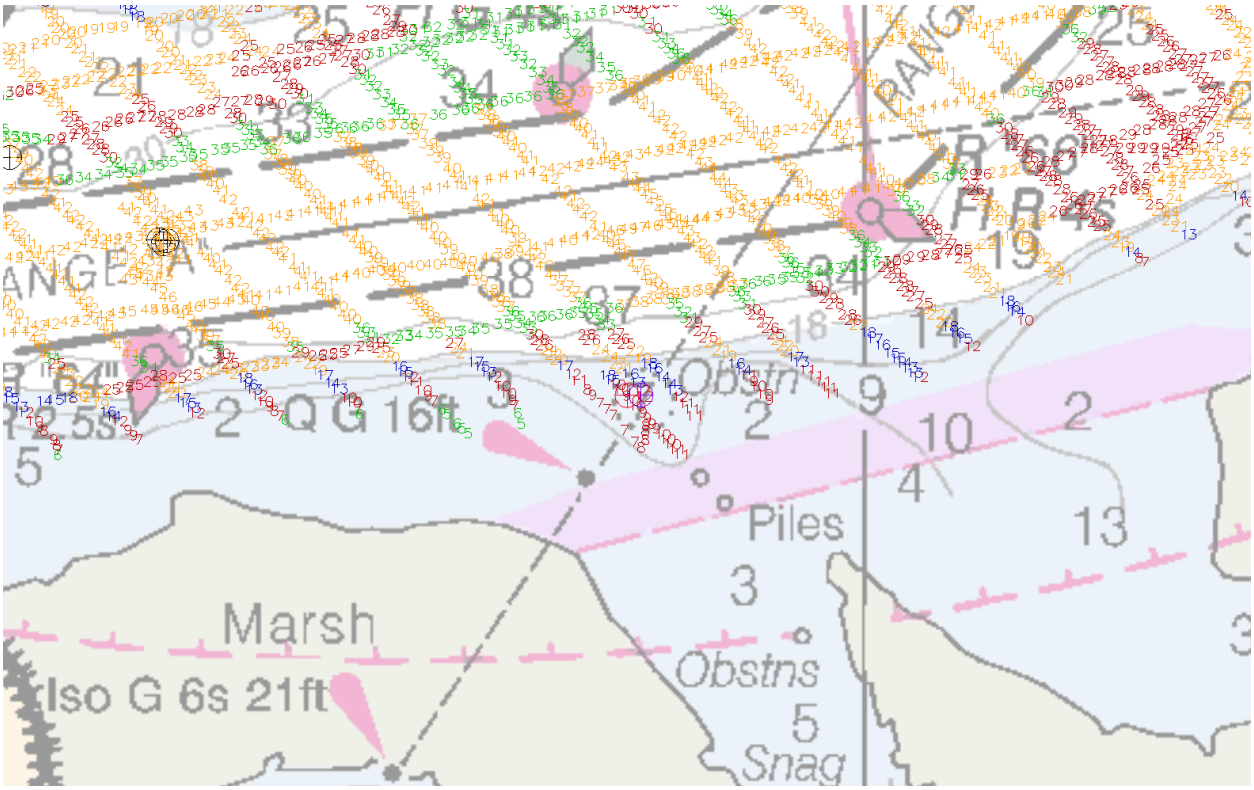


Figure 1.11.1

1.12) 18785/1 AWOIS #13866

Primary Feature for AWOIS Item #13866

Search Position:	32° 51' 26.9" N, 079° 57' 10.1" W
Historical Depth:	12.13 m
Search Radius:	0
Search Technique:	[None]
Technique Notes:	[None]

History Notes:

S00006/02 -- S-G605-WH-02 HLS;

Survey Position: 032° 51' 26.856" N, 79° 57' 10.085" W

Least Depth: 12.13 m

Timestamp: 2002-316.15:53:43.773 (11/12/2002)

Remarks: Least deapth of 39.80 feet (12.13 meters) over AWOIS item #11451. Item located with 200% SSS and developed

with 100% MB.

Office Notes: Consult the latest USACE data.

Updated 9/19/2006 JCM

OPR-G347-NRT2-08, H11863,2009: 200% SSS showed no contacts of the reported feature.

This item was removed when NRT2 last surveyed this port in the Late 1990's.

Recommendation: Remove from Awois Data base.RWR

Survey Summary

Survey Position:	32° 51' 27.7" N, 079° 57' 10.5" W
Least Depth:	15.25 m (= 50.04 ft = 8.340 fm = 8 fm 2.04 ft)
TPU (±1.96σ):	**THU (TPEh)** ±1.993 m ; **TVU (TPEv)** ±0.151 m
Timestamp:	2009-223.14:03:23.595 (08/11/2009)
Survey Line:	h11863 / nrt2_1210_sb / 2009-223 / 201_1346
Profile/Beam:	18785/1
Charts Affected:	11524_1, 11521_1, 11520_1, 11009_1, 411_1

Remarks:

200% SSS showed no contacts of the reported feature.

This item was removed when NRT2 last surveyed this port in the Late 1990's.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11863/nrt2_1210_sb/2009-223/201_1346	18785/1	0.00	000.0	Primary
AWOIS	AWOIS # 13866	27.47	336.8	Secondary

Hydrographer Recommendations

Remove.

S-57 Data

Geo object 1: Sounding (SOUNDG)

Attributes: EXPSOU - 1:within the range of depth of the surrounding depth area

QUASOU - 1:depth known

TECSOU - 1,2:found by echo-sounder,found by side scan sonar

VERDAT - 12:Mean lower low water

Office Notes

Concur with clarification. The AWOIS feature is located within a USACE federal maintained channel and is not charted. No charting action required. Recommend to update AWOIS databased with H11863 survey results.

1.13) 799/1 AWOIS #7615

Primary Feature for AWOIS Item #7615

Search Position:	32° 49' 59.4" N, 079° 55' 37.8" W
Historical Depth:	[None]
Search Radius:	0
Search Technique:	[None]
Technique Notes:	[None]

History Notes:

H9731/78--OPR-G302-HFP-77; OBSTRUCTION UNCOVERING BY 2 FT AT MLW LOCATED IN POS. LAT.32-49-58.75N, LONG.79-55-38.5W. NO DESCRIPTION GIVEN. (ENTERED 1/90 MCR)

H10863/99--OPR-G301-AHP; FEATURE NOT ADEQUATELY INVESTIGATED. RETAIN AS CHARTED. (UPDATED 6/01 BY MBH)

S00006/03 -- OBSTRUCTION, Chart 11524, Status: Assigned, Search: Information / VS,BD,DI: S-G605-WH-02 - navigable

portion of AWOIS radius covered with 200% SSS and VB; no evidence of obstruction found. Hydrographer recommends removing charted obstruction and charting present survey soundings.

Office Notes: Do not concur. Retain item as charted. Updated 9/20/2006 JCM.

OPR-G347-NRT2-08, H11863,2009: 100% SSS pass with full cover to shallows showed no sign of the charted Obstn. Water depth precluded further SSS. VBES developement showed no signs.

Recommendation:Remove the charted pile symbol, and the Obstn note.RWR

Survey Summary

Survey Position:	32° 49' 59.5" N, 079° 55' 37.7" W
Least Depth:	4.12 m (= 13.52 ft = 2.254 fm = 2 fm 1.52 ft)
TPU (±1.96σ):	**THU (TPEh)** ±1.963 m ; **TVU (TPEv)** ±0.132 m
Timestamp:	2009-174.16:37:00.014 (06/23/2009)
Survey Line:	h11863 / nrt2_1210_sb / 2009-174 / 004_1636
Profile/Beam:	799/1
Charts Affected:	11524_1, 11521_1, 11520_1, 11009_1, 411_1

Remarks:

100% SSS pass with full cover to shallows showed no sign of the charted Obstn. Water depth precluded further SSS. VBES developement showed no signs.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11863/nrt2_1210_sb/2009-174/004_1636	799/1	0.00	000.0	Primary
AWOIS	AWOIS # 7615	3.63	042.8	Secondary

Hydrographer Recommendations

Remove the charted pile symbol, and the Obstn note.

Cartographically-Rounded Depth (Affected Charts):

13ft (11524_1, 11521_1)

2 ¼fm (11520_1, 11009_1, 411_1)

S-57 Data

Geo object 1: Sounding (SOUNDG)

Attributes: EXPSOU - 1:within the range of depth of the surrounding depth area

QUASOU - 1:depth known

TECSOU - 1,2:found by echo-sounder,found by side scan sonar

VERDAT - 12:Mean lower low water

Office Notes

Concur. Delete Obstrn. Recommend to update the AWOIS database with survey results.

Feature Images

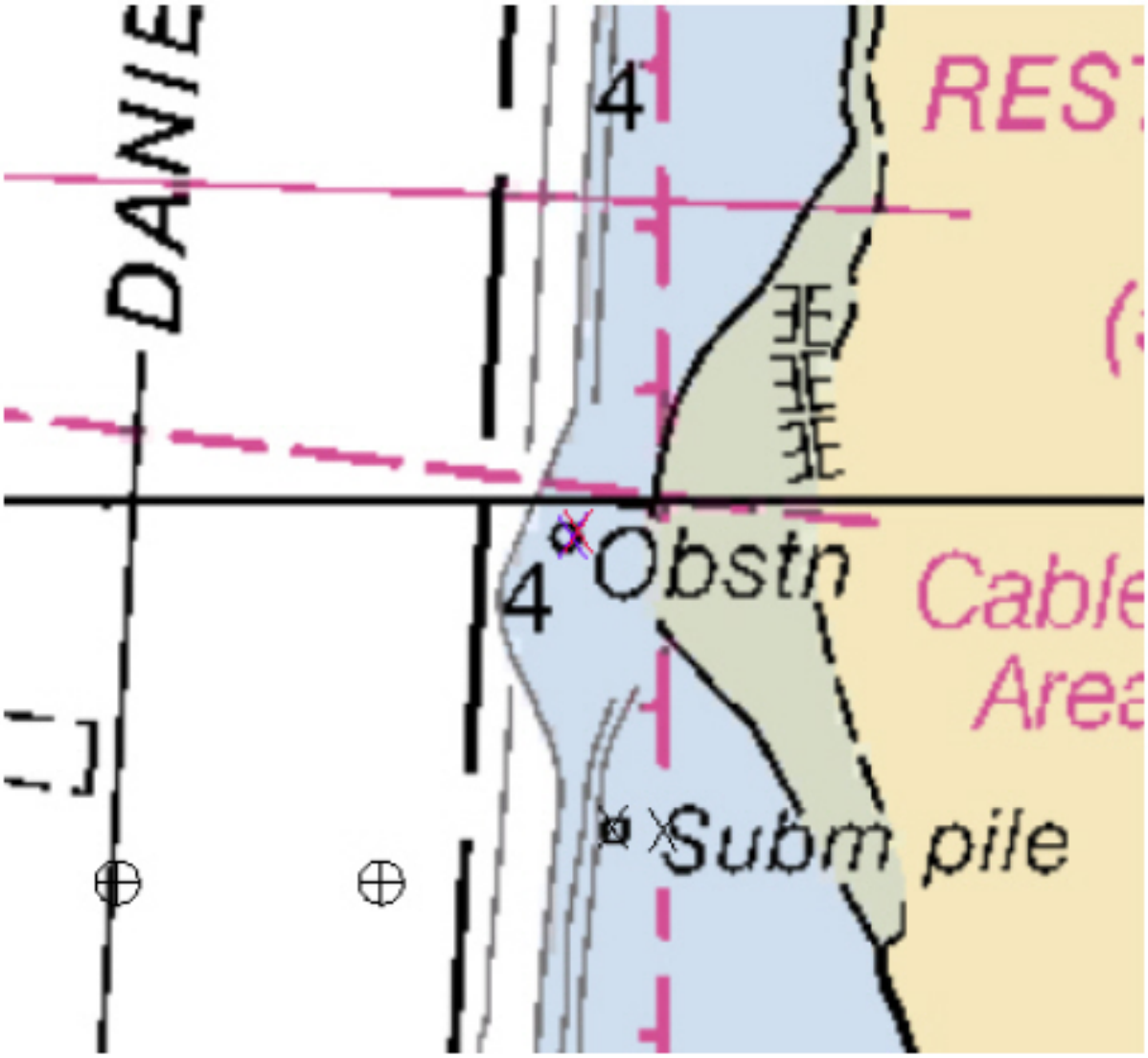


Figure 1.13.1

1.14) 1121/1 AWOIS# 7618 Area Obstn: Disproved

Primary Feature for AWOIS Item #7618

Search Position:	32° 50' 27.0" N, 079° 55' 51.0" W
Historical Depth:	[None]
Search Radius:	0
Search Technique:	[None]
Technique Notes:	CONDUCT A SEARCH IN THE AREA OF CHARTED RECTANGLE EXTENDING AN ADDITIONAL 25M IN EACH DIRECTION.

History Notes:

BP94768/75--USN;CHARLESTON NAVAL SHIPYARD BLUEPRINT SHOWING AN AREA WHERE

TWO MARK 47 DEPTH BOMBS WERE SUBMERGED ON 11/20/43. THE AREA EXTENDS 60

METERS EITHER SIDE OF AN AXIS RUNNING SE-NW FROM POS. LAT.32-50-21N,

LONG.79-55-49.5W TO POS. LAT.32-50-33N, LONG.79-55-52.5W. CENTER OF THE

AREA LOCATED IN APPROX. POS. LAT.32-50-27N, LONG.79-55-51W. (ENTERED 3/90 MCR)

CL26/76--REFERS TO BP94768

H10863/99--OPR-G301-AHP; COVERED BY 200% SIDE SCAN SONAR - ELEVEN CONTACTS OF WHICH FOUR WERE CONSIDERED SIGNIFICANT AND FURTHER DEVELOPED. THIS INFORMATION WAS PROVIDED TO THE U.S. NAVY EOD. AN EOD REPRESENTATIVE WAS SUBSEQUENTLY CONTACTED BY HSD, AND HSD WAS ADVISED THAT THERE ARE NO PLANS BY EOD TO INVESTIGATE THE CONTACTS. NONE OF THESE CONTACTS WERE PLOTTED ON THE SMOOTH SHEET. RETAIN THE AREA AND ACCOMPANYING NOTE AS CHARTED. (UPDATED 6/01 BY MBH)

S00006/02 -- S-G605-WH-02

~10% of charted rectangular area covered with 200% SSS; ~5% MB and VB coverage. Retain item as charted.

Updated 9/28/2006 JCM.

OPR-G347-NRT2-08, H11863,2009: Numerous insignificant contacts were noted in this bounded area. None show positive characteristics of the reported features. This area is now under construction for the New South Carolina Port Authorities new commercial shipping port. It is highly recommended that the feature and notes be removed from the charts.

Recommendation: Remove.RWR

Survey Summary

Survey Position:	32° 50' 26.6" N, 079° 55' 51.7" W
Least Depth:	6.80 m (= 22.32 ft = 3.720 fm = 3 fm 4.32 ft)
TPU (±1.96σ):	**THU (TPEh)** ±1.973 m ; **TVU (TPEv)** ±0.136 m
Timestamp:	2009-147.15:00:16.645 (05/27/2009)

Survey Line: h11863 / nrt2_1210_sb / 2009-147 / 008_1458

Profile/Beam: 1121/1

Charts Affected: 11524_1, 11521_1, 11520_1, 11009_1, 411_1

Remarks:

Numerous insignificant contacts were noted in this bounded area. None show positive characteristics of the reported features. This area is now under construction for the New South Carolina Port Authorities new commercial shipping port. It is highly recommended that the feature and notes be removed from the charts.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11863/nrt2_1210_sb/2009-147/008_1458	1121/1	0.00	000.0	Primary
AWOIS	AWOIS # 7618	21.04	235.3	Secondary
h11863/nrt2_1210_klein3000hf_200sss/2009-160/sss090609161400	0004	159.22	190.9	Secondary (grouped)

Hydrographer Recommendations

Remove.

Cartographically-Rounded Depth (Affected Charts):

22ft (11524_1, 11521_1)

3 ¾fm (11520_1, 11009_1, 411_1)

S-57 Data

Geo object 1: Sounding (SOUNDG)

Attributes: EXPSOU - 1:within the range of depth of the surrounding depth area

QUASOU - 1:depth known

TECSOU - 1,2:found by echo-sounder,found by side scan sonar

VERDAT - 12:Mean lower low water

Office Notes

Concur. Delete OBSTRN area.

Feature Images

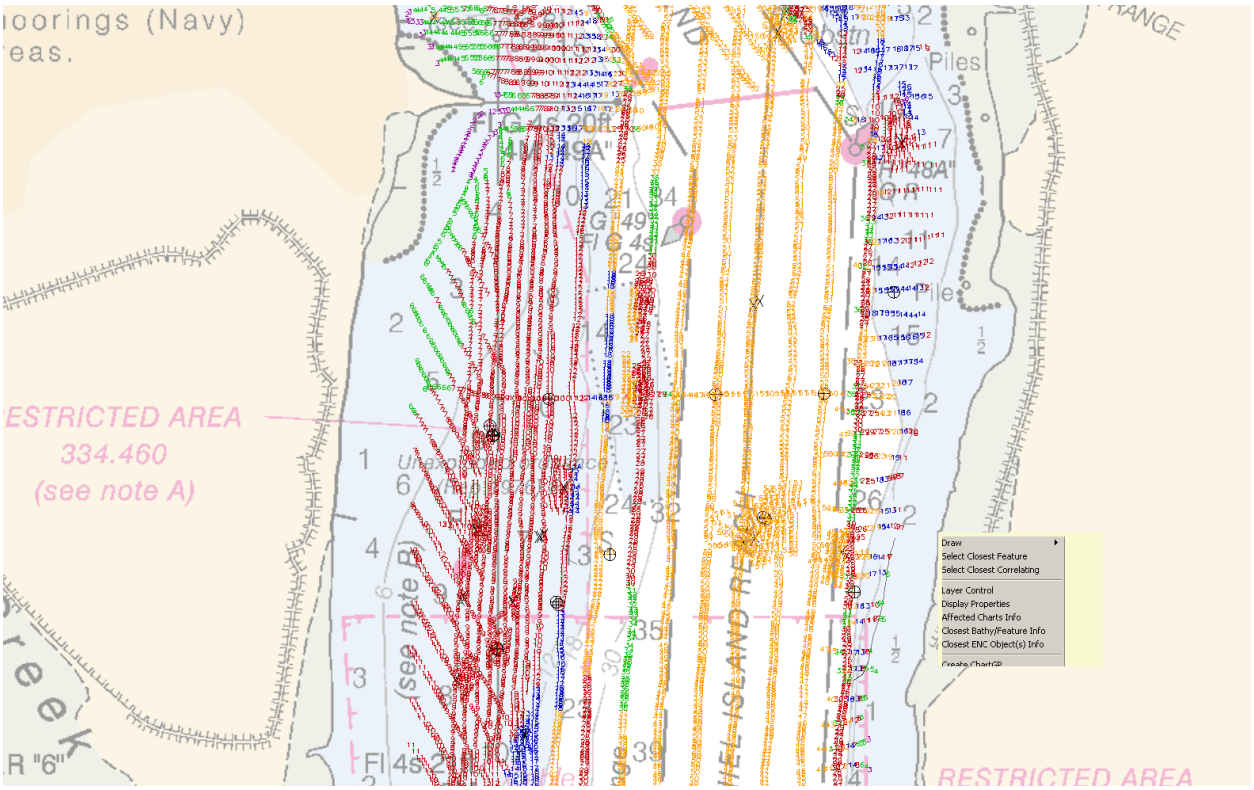


Figure 1.14.1

1.15) 220/1 AWOIS #10561 10-ft Obstn

Primary Feature for AWOIS Item #10561

Search Position: 32° 54' 50.2" N, 079° 55' 35.1" W

Historical Depth: 3.05 m

Search Radius: 0

Search Technique: [None]

Technique Notes: [None]

History Notes:

HISTORY

H10857/99-- OPR-G301-AHP; UNCHARTED AREA OF DEBRIS LOCATED WITH A 60-METER RADIUS FOUL LIMIT. LD OF 10 FEET LOCATED IN LAT. 32-54-50.16N, LONG. 79-55-35.08W. THIS WAS THE FORMER SITE OF COOPER RIVER FORWARD RANGE "B". EVALUATOR RECOMMENDS CHARTING A 10 OBSTN WITH DANGER CURVE AS SURVEYED. (ENT 3/7/00, SJV)

OPR-G347-NRT2-08 // H11863,2009: SSS located obstn's. LD of 10ft @ mllw was obtained.

Recommend: Retain as charted.RWR

Survey Summary

Survey Position: 32° 54' 50.2" N, 079° 55' 35.2" W

Least Depth: 3.10 m (= 10.18 ft = 1.697 fm = 1 fm 4.18 ft)

TPU (±1.96σ): **THU (TPEh)** ±1.965 m ; **TVU (TPEv)** ±0.131 m

Timestamp: 2009-245.14:13:57.665 (09/02/2009)

Survey Line: h11863 / nrt2_1210_sb / 2009-245 / 047_1413

Profile/Beam: 220/1

Charts Affected: 11524_1, 11527_1, 11521_1, 11520_1, 11009_1, 411_1

Remarks:

Area foul with old debris. Retain as charted.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11863/nrt2_1210_sb/2009-245/047_1413	220/1	0.00	000.0	Primary
AWOIS	AWOIS # 10561	2.56	294.0	Secondary
h11863/nrt2_1210_klein3000hf_100sss/2009-229/sss090817160200	0003	3.06	181.5	Secondary

h11863/nrt2_1210_klein3000hf_100sss/2009-229/sss090817160200	0002	9.05	140.1	Secondary
h11863/nrt2_1210_klein3000hf_100sss/2009-229/sss090817160200	0001	23.84	352.0	Secondary

Hydrographer Recommendations

Retain

Cartographically-Rounded Depth (Affected Charts):

10ft (11524_1, 11527_1, 11521_1)

1 ¾fm (11520_1, 11009_1, 411_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes:

QUASOU - 6:least depth known

SORDAT - 20090902

SORIND - US,US,graph,H11863

TECSOU - 1,2:found by echo-sounder,found by side scan sonar

VALSOU - 3.104 m

WATLEV - 3:always under water/submerged

Office Notes

Concur, delete charted obstruction. Add obstruction at survey depth and position.

Feature Images

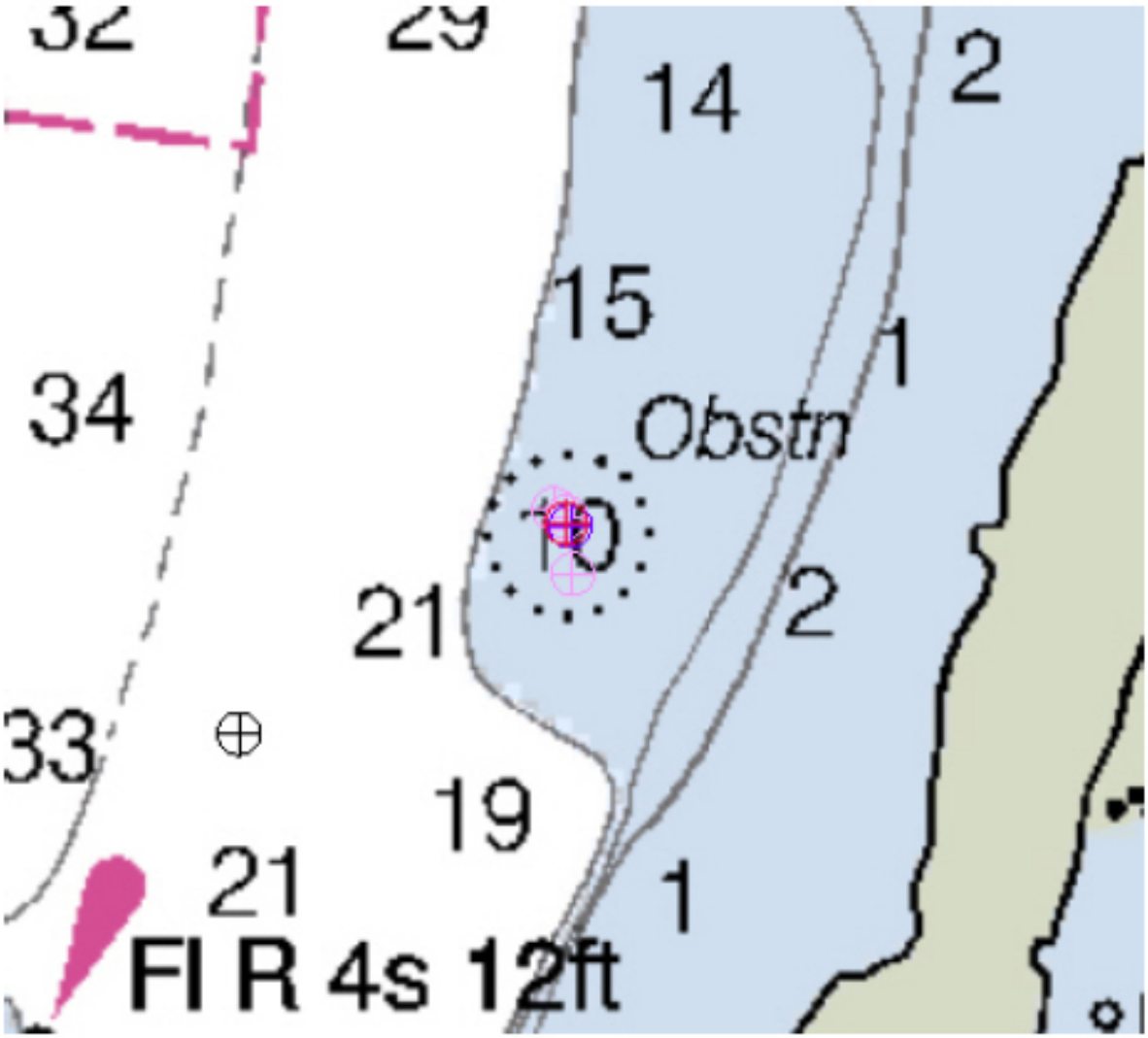


Figure 1.15.1

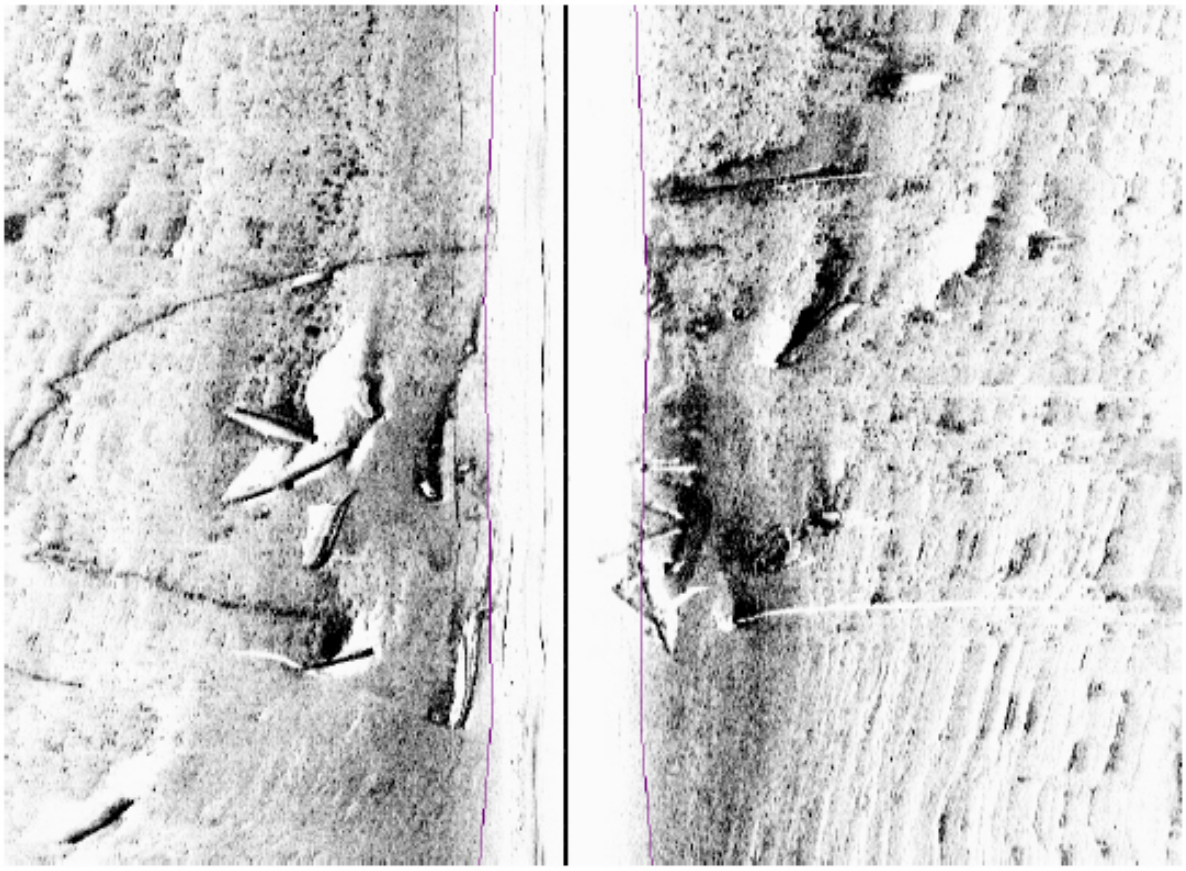


Figure 1.15.2

1.16) 3933/1 AWOIS #13819

Primary Feature for AWOIS Item #13819

Search Position:	32° 50' 53.8" N, 079° 55' 45.2" W
Historical Depth:	8.31 m
Search Radius:	50
Search Technique:	S2, ES
Technique Notes:	[None]

History Notes:

S00006/02 -- S-G605-WH-02 (HLS);

Survey Position: 032° 50' 53.834" N, 79° 55' 45.194" W

Least Depth: 8.31 m

Timestamp: 2002-316.16:35:29.519 (11/12/2002)

Least depth of 27.27 feet (8.31 meters) over feature located with 100% SSS and developed with 100% MB.

UPDATED 9/27/2006 JCM

OPR-G347-NRT2-08, H11863,2009: 200% SSS operations showed a minor contact upon final review of the charted 27ft obstn. The caculated height was 8th meter off bottom. This feature lies shoreward of the 30 feet contour with common depths in the 30 foot range. Unfortunatley this week signiture was not noted during processing. As a result there was no developement conducted over this item. Therfore, it is recommended that the 27 ft Obstn be retained as charted.

Recommendation: Retain as charted.RWR

Survey Summary

Survey Position:	32° 50' 53.4" N, 079° 55' 45.9" W
Least Depth:	9.59 m (= 31.47 ft = 5.244 fm = 5 fm 1.47 ft)
TPU (±1.96σ):	**THU (TPEh)** ±1.973 m ; **TVU (TPEv)** ±0.139 m
Timestamp:	2009-202.14:49:49.656 (07/21/2009)
Survey Line:	h11863 / nrt2_1210_sb / 2009-202 / 2d
Profile/Beam:	3933/1
Charts Affected:	11524_1, 11521_1, 11520_1, 11009_1, 411_1

Remarks:

OPR-G347-NRT2-08, H11863,2009: 200% SSS operations showed a minor contact upon final review of the charted 27ft obstn. The calculated height was 8th meter off bottom. This feature lies shoreward of the 30 feet contour with common depths in the 30 foot range. Unfortunately this week signature was not noted during processing. As a result there was no development conducted over this item. Therefore, it is recommended that the 27

ft Obstn be retained as charted.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11863/nrt2_1210_sb/2009-202/2d	3933/1	0.00	000.0	Primary
AWOIS	AWOIS # 13819	22.54	230.6	Secondary

Hydrographer Recommendations

Retain.

S-57 Data

Geo object 1: Sounding (SOUNDG)

Attributes: EXPSOU - 1:within the range of depth of the surrounding depth area

QUASOU - 1:depth known

TECSOU - 1,2:found by echo-sounder,found by side scan sonar

VERDAT - 12:Mean lower low water

Office Notes

Concur. Retain 27-ft Obstn as charted.

Feature Images

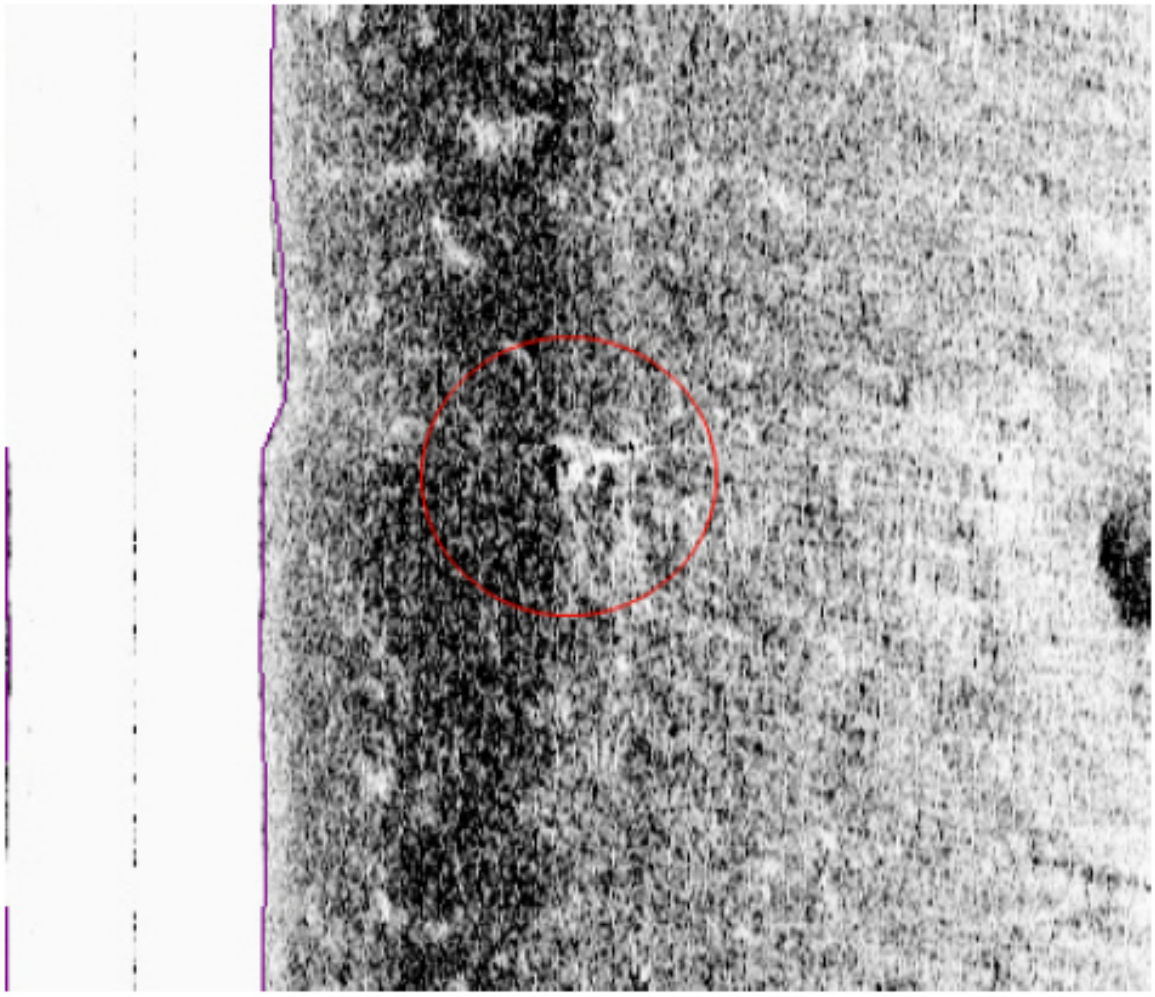


Figure 1.16.1

H11863 Charted

Registry Number: H-11863
State: South Carolina
Locality: Charleston Harbor
Sub-locality: Cooper River
Project Number: OPR-G347-NRT2-08
Survey Dates: 07/28/2009 - 09/02/2009

Charts Affected

Number	Edition	Date	Scale (RNC)	RNC Correction(s)*
11524	52nd	01/01/2010	1:20,000 (11524_1)	USCG LNM: 12/14/2010 (12/28/2010) NGA NTM: 10/17/2009 (12/25/2010)
11527	17th	03/01/2006	1:20,000 (11527_1)	[L]NTM: ?
11521	28th	02/01/2006	1:80,000 (11521_1)	[L]NTM: ?
11520	42nd	09/01/2005	1:432,720 (11520_1)	[L]NTM: ?
11009	37th	07/01/2004	1:1,200,000 (11009_1)	[L]NTM: ?
411	51st	12/01/2006	1:2,160,000 (411_1)	[L]NTM: ?

* Correction(s) - *source: last correction applied (last correction reviewed--"cleared date")*

Features

No.	Name	Feature Type	Survey Depth	Survey Latitude	Survey Longitude	AWOIS Item
1.1	Lighted Morring Buoy 2A & 2B	Mooring buoy	11.68 m	32° 54' 33.3" N	079° 56' 27.5" W	---
1.2	Lighted Morring Buoys 2G & 2H	Shoal	7.96 m	32° 54' 35.5" N	079° 56' 28.0" W	---
1.3	Lighted Morring Buoys 2E & 2F	Shoal	8.70 m	32° 54' 34.0" N	079° 56' 38.9" W	---
1.4	Lighted Mooring Buoys 2C & 2D	Shoal	13.40 m	32° 54' 31.7" N	079° 56' 38.2" W	---
1.5	Lighted Mooring Buoys	Shoal	13.32 m	32° 54' 30.7" N	079° 56' 40.8" W	---
1.6	Lighted Mooring Buoys	Shoal	11.58 m	32° 54' 32.6" N	079° 56' 40.8" W	---
1.7	Lighted Mooring Buoys	Shoal	12.78 m	32° 54' 30.9" N	079° 56' 53.1" W	---
1.8	Lighted Mooring Buoys	Shoal	12.12 m	32° 54' 29.3" N	079° 56' 52.7" W	---
1.9	Mooring Buoy	Shoal	5.52 m	32° 54' 37.3" N	079° 56' 28.9" W	---
1.10	432/1 22ft obstruction	Obstruction	6.95 m	32° 51' 38.9" N	079° 57' 17.1" W	---
1.11	Sign	Marker (privately maintained)	4.60 m	32° 52' 12.9" N	079° 57' 41.7" W	---

1 - DR_Charted

1.1) Lighted Morring Buoy 2A 2B

Survey Summary

Survey Position:	32° 54' 33.3" N, 079° 56' 27.5" W
Least Depth:	11.68 m (= 38.33 ft = 6.389 fm = 6 fm 2.33 ft)
TPU (±1.96σ):	**THU (TPEh)** ±1.980 m ; **TVU (TPEv)** ±0.142 m
Timestamp:	2009-217.15:33:15.000 (08/05/2009)
DP Dataset:	h11863 / nrt2_1210_dpnonechosounder / 2009-217 / dp_08052009
Profile/Beam:	4/1
Charts Affected:	11524_1, 11527_1, 11521_1, 11520_1, 11009_1, 411_1

Remarks:

Positon at Center of Two white lighted Morring buoys 2A-2B

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11863/nrt2_1210_dpnonechosounder/2009-217/dp_08052009	4/1	0.00	000.0	Primary

Hydrographer Recommendations

Chart mooring buoys

Cartographically-Rounded Depth (Affected Charts):

38ft (11524_1, 11527_1, 11521_1)

6 ¼fm (11520_1, 11009_1, 411_1)

S-57 Data

Geo object 1:	Mooring/warping facility (MORFAC)
Attributes:	BOYSHP - 2:can (cylindrical)
	CATMOR - 7:mooring buoy
	COLOUR - 1,5:white,blue
	SORDAT - 20090902
	SORIND - US,US,graph,H11863

Office Notes

Concur, add MORFAC

Feature Images

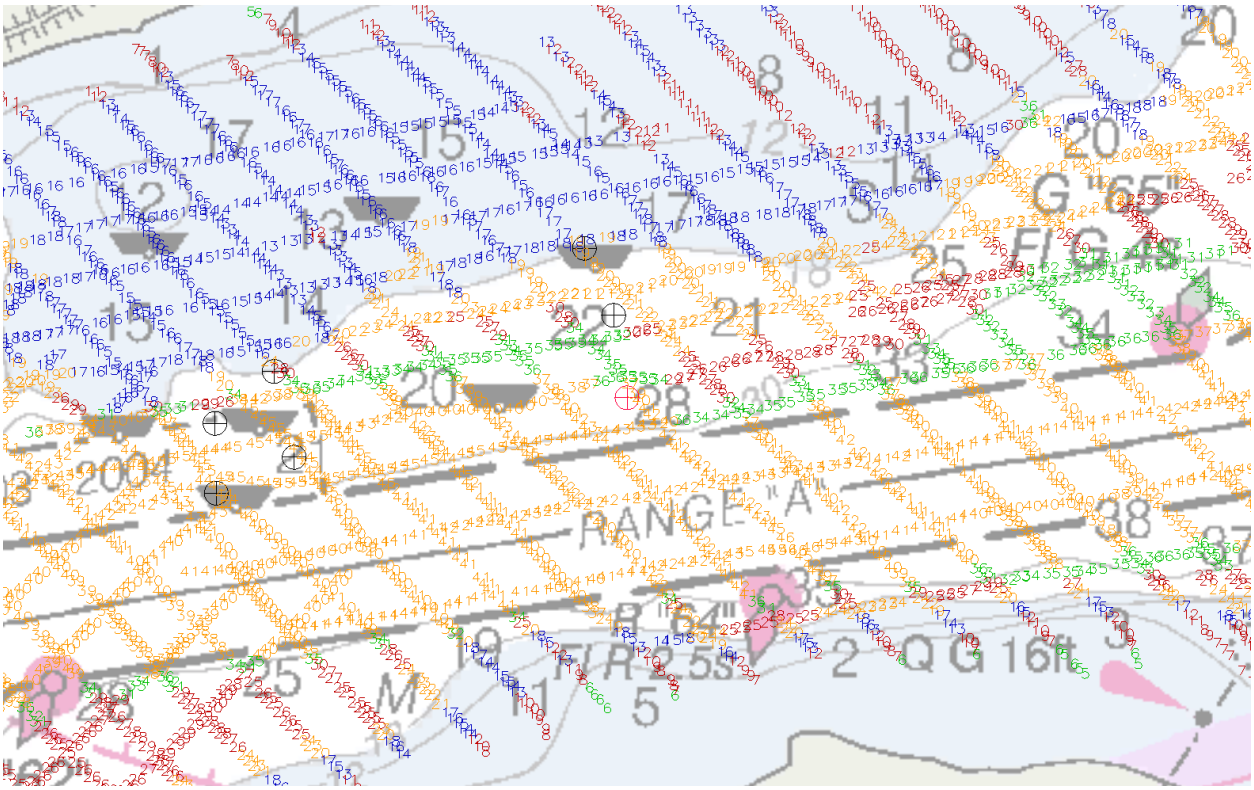


Figure 1.1.1

Figure 1.1.2

1.2) Lighted Morring Buoys 2G 2H

Survey Summary

Survey Position:	32° 54' 35.5" N, 079° 56' 28.0" W
Least Depth:	7.96 m (= 26.11 ft = 4.352 fm = 4 fm 2.11 ft)
TPU (±1.96σ):	**THU (TPEh)** ±1.971 m ; **TVU (TPEv)** ±0.136 m
Timestamp:	2009-217.15:35:27.000 (08/05/2009)
DP Dataset:	h11863 / nrt2_1210_dpnonechosounder / 2009-217 / dp_08052009
Profile/Beam:	5/1
Charts Affected:	11524_1, 11527_1, 11521_1, 11520_1, 11009_1, 411_1

Remarks:

Position at Center of Two white lighted Mooring buoys 2G-2H.

See photo 2a-2b for example of buoy.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11863/nrt2_1210_dpnonechosounder/2009-217/dp_08052009	5/1	0.00	000.0	Primary

Hydrographer Recommendations

Chart mooring buoy.

Cartographically-Rounded Depth (Affected Charts):

26ft (11524_1, 11527_1, 11521_1)

4 ¼fm (11520_1, 11009_1, 411_1)

S-57 Data

Geo object 1:	Mooring/warping facility (MORFAC)
Attributes:	CATMOR - 7:mooring buoy
	COLOUR - 1,5:white,blue
	SORDAT - 20090902
	SORIND - US,US,graph,H11863

Office Notes

Concur, add MORFAC

Feature Images

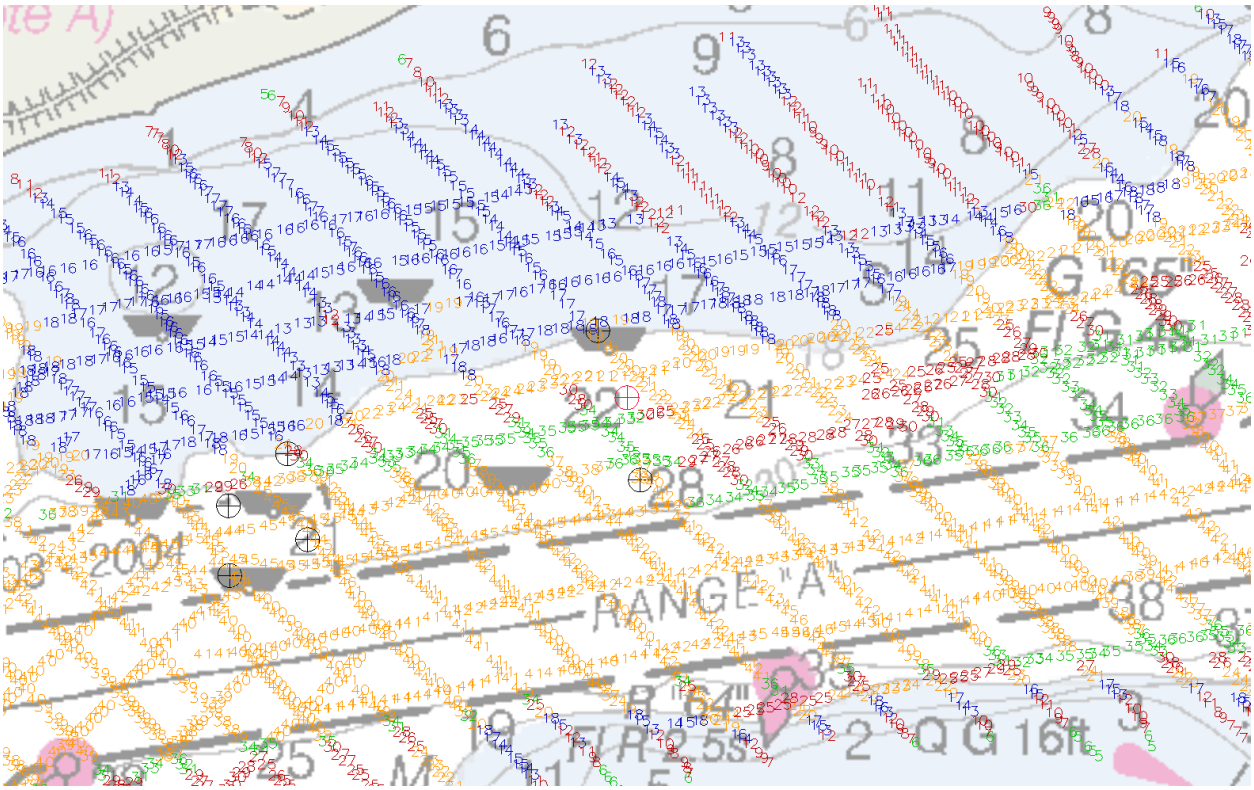


Figure 1.2.1

Figure 1.2.2

1.3) Lighted Morring Buoys 2E 2F

Survey Summary

Survey Position:	32° 54' 34.0" N, 079° 56' 38.9" W
Least Depth:	8.70 m (= 28.55 ft = 4.758 fm = 4 fm 4.55 ft)
TPU (±1.96σ):	**THU (TPEh)** ±1.972 m ; **TVU (TPEv)** ±0.137 m
Timestamp:	2009-217.15:37:18.000 (08/05/2009)
DP Dataset:	h11863 / nrt2_1210_dpnonechosounder / 2009-217 / dp_08052009
Profile/Beam:	6/1
Charts Affected:	11524_1, 11527_1, 11521_1, 11520_1, 11009_1, 411_1

Remarks:

Position at Center of Two white lighted Mooring buoys 2E-2F.

See photo 2a-2b for example of buoy.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11863/nrt2_1210_dpnonechosounder/2009-217/dp_08052009	6/1	0.00	000.0	Primary

Hydrographer Recommendations

chart mooring buoys

S-57 Data

Geo object 1:	Mooring/warping facility (MORFAC)
Attributes:	BOYSHP - 2:can (cylindrical)
	CATMOR - 7:mooring buoy
	COLOUR - 1,5:white,blue
	SORDAT - 20090902
	SORIND - US,US,graph,H11863

Office Notes

Concur, add MORFAC

Feature Images

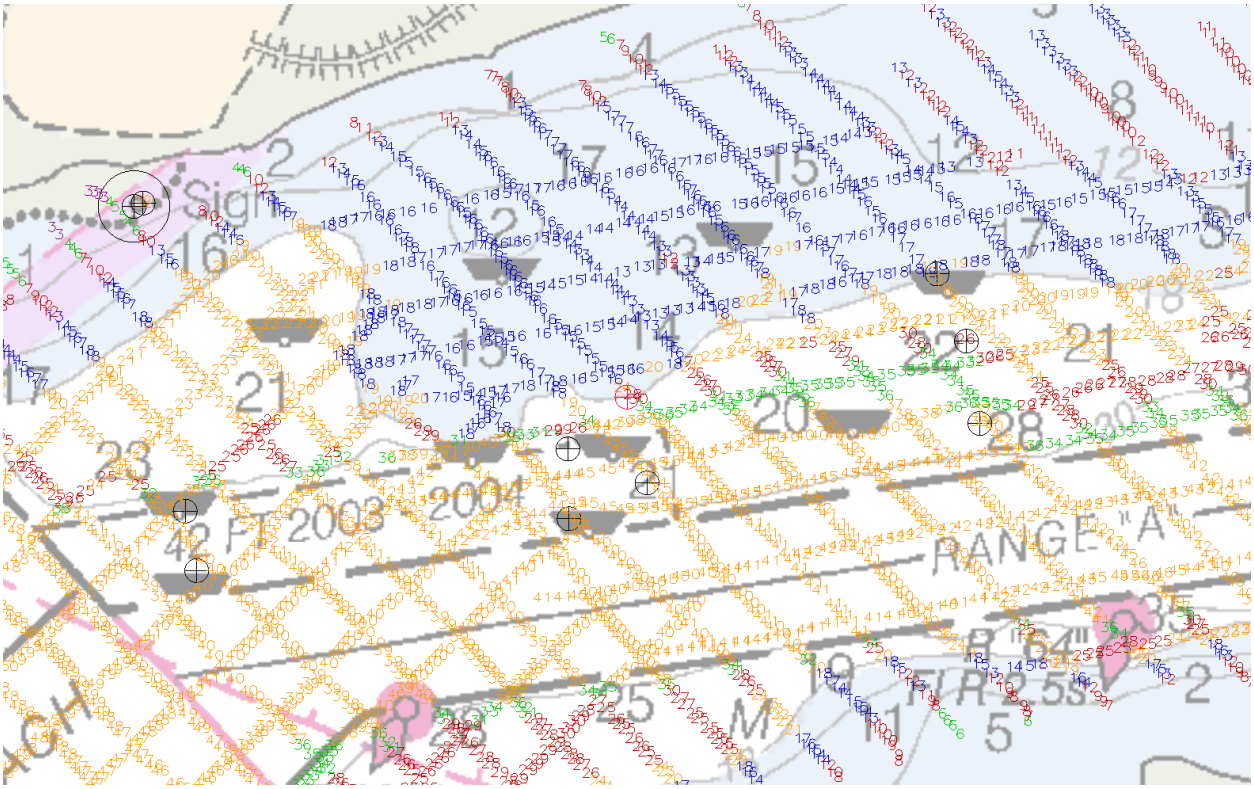


Figure 1.3.1

1.4) Lighted Mooring Buoys 2C 2D

Survey Summary

Survey Position:	32° 54' 31.7" N, 079° 56' 38.2" W
Least Depth:	13.40 m (= 43.96 ft = 7.326 fm = 7 fm 1.96 ft)
TPU (±1.96σ):	**THU (TPEh)** ±1.986 m ; **TVU (TPEv)** ±0.146 m
Timestamp:	2009-217.15:38:21.000 (08/05/2009)
DP Dataset:	h11863 / nrt2_1210_dpnonechosounder / 2009-217 / dp_08052009
Profile/Beam:	7/1
Charts Affected:	11524_1, 11527_1, 11521_1, 11520_1, 11009_1, 411_1

Remarks:

Position at Center of Two white lighted Mooring buoys 2C-2D.

See photo 2a-2b for example of buoy.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11863/nrt2_1210_dpnonechosounder/2009-217/dp_08052009	7/1	0.00	000.0	Primary

Hydrographer Recommendations

Chart mooring buoys.

Cartographically-Rounded Depth (Affected Charts):

44ft (11524_1, 11527_1, 11521_1)

7 ¼fm (11520_1, 11009_1, 411_1)

S-57 Data

Geo object 1:	Mooring/warping facility (MORFAC)
Attributes:	BOYSHP - 2:can (cylindrical)
	CATMOR - 7:mooring buoy
	COLOUR - 1,5:white,blue
	SORDAT - 20090902
	SORIND - US,US,graph,H11863

Office Notes

Concur, add MORFAC

Feature Images

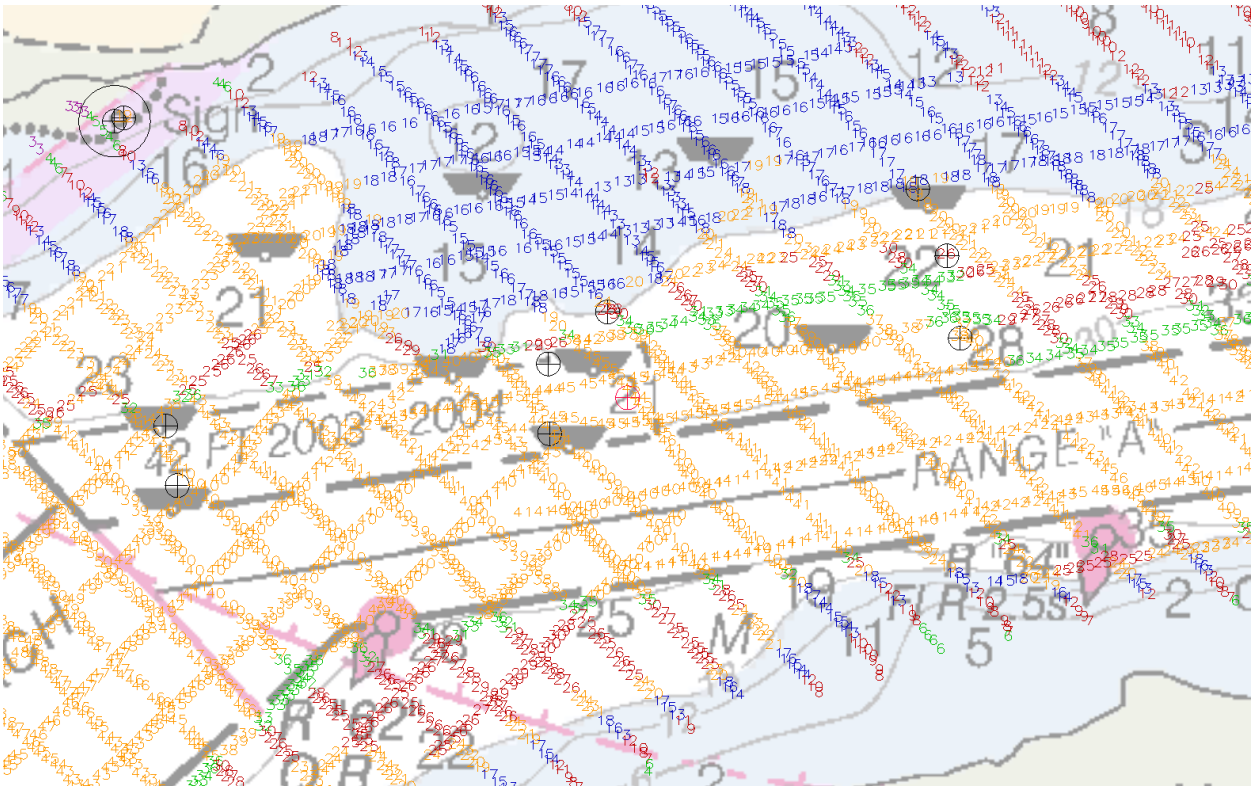


Figure 1.4.1

1.5) Lighted Mooring Buoys

Survey Summary

Survey Position:	32° 54' 30.7" N, 079° 56' 40.8" W
Least Depth:	13.32 m (= 43.71 ft = 7.286 fm = 7 fm 1.71 ft)
TPU (±1.96σ):	**THU (TPEh)** ±1.986 m ; **TVU (TPEv)** ±0.145 m
Timestamp:	2009-217.15:39:16.000 (08/05/2009)
DP Dataset:	h11863 / nrt2_1210_dpnonechosounder / 2009-217 / dp_08052009
Profile/Beam:	8/1
Charts Affected:	11524_1, 11527_1, 11521_1, 11520_1, 11009_1, 411_1

Remarks:

Position at Center of Two white lighted Mooring buoys Unmarked.

See photo 2a-2b for example of buoy.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11863/nrt2_1210_dpnonechosounder/2009-217/dp_08052009	8/1	0.00	000.0	Primary

Hydrographer Recommendations

Chart mooring buoys

Cartographically-Rounded Depth (Affected Charts):

43ft (11524_1, 11527_1, 11521_1)

7 ¼fm (11520_1, 11009_1, 411_1)

S-57 Data

Geo object 1:	Mooring/warping facility (MORFAC)
Attributes:	BOYSHP - 2:can (cylindrical)
	CATMOR - 7:mooring buoy
	COLOUR - 1:white
	HEIGHT - 1.5 m
	SORDAT - 20090902
	SORIND - US,US,graph,H11863

Office Notes

Concur, delete charted MORFAC, add MORFAC and LIGHTS at survey position.

1.6) Lighted Mooring Buoys

Survey Summary

Survey Position:	32° 54' 32.6" N, 079° 56' 40.8" W
Least Depth:	11.58 m (= 37.99 ft = 6.332 fm = 6 fm 1.99 ft)
TPU (±1.96σ):	**THU (TPEh)** ±1.981 m ; **TVU (TPEv)** ±0.142 m
Timestamp:	2009-217.15:40:09.000 (08/05/2009)
DP Dataset:	h11863 / nrt2_1210_dpnonechosounder / 2009-217 / dp_08052009
Profile/Beam:	9/1
Charts Affected:	11524_1, 11527_1, 11521_1, 11520_1, 11009_1, 411_1

Remarks:

Position at Center of Two white lighted Mooring buoys, Unmarked.

See photo 2a-2b for example of buoy.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11863/nrt2_1210_dpnonechosounder/2009-217/dp_08052009	9/1	0.00	000.0	Primary

Hydrographer Recommendations

Chart mooring buoys.

Cartographically-Rounded Depth (Affected Charts):

38ft (11524_1, 11527_1, 11521_1)

6 ¼fm (11520_1, 11009_1, 411_1)

S-57 Data

Geo object 1:	Mooring/warping facility (MORFAC)
Attributes:	BOYSHP - 2:can (cylindrical)
	CATMOR - 7:mooring buoy
	COLOUR - 1:white
	SORDAT - 20090902
	SORIND - US,US,graph,H11863

Office Notes

Concur, add MORFAC

Feature Images

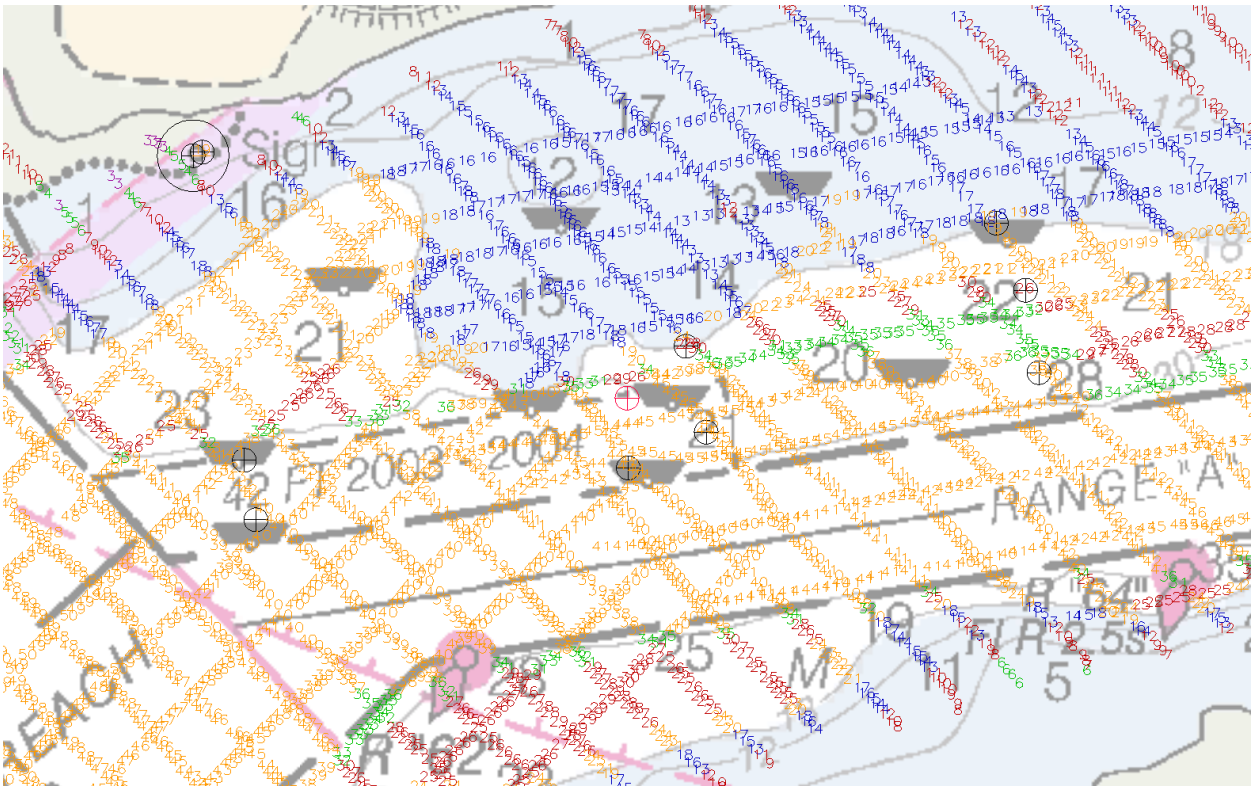


Figure 1.6.1

1.7) Lighted Mooring Buoys

Survey Summary

Survey Position:	32° 54' 30.9" N, 079° 56' 53.1" W
Least Depth:	12.78 m (= 41.93 ft = 6.989 fm = 6 fm 5.93 ft)
TPU (±1.96σ):	**THU (TPEh)** ±1.984 m ; **TVU (TPEv)** ±0.144 m
Timestamp:	2009-217.15:41:53.000 (08/05/2009)
DP Dataset:	h11863 / nrt2_1210_dpnonechosounder / 2009-217 / dp_08052009
Profile/Beam:	10/1
Charts Affected:	11524_1, 11527_1, 11521_1, 11520_1, 11009_1, 411_1

Remarks:

Position at Center of Two white lighted Mooring buoys, Unmarked

See photo 2a-2b for example of buoy.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11863/nrt2_1210_dpnonechosounder/2009-217/dp_08052009	10/1	0.00	000.0	Primary

Hydrographer Recommendations

Chart mooring buoys.

Cartographically-Rounded Depth (Affected Charts):

42ft (11524_1, 11527_1, 11521_1)

7fm (11520_1, 11009_1, 411_1)

S-57 Data

Geo object 1:	Mooring/warping facility (MORFAC)
Attributes:	BOYSHP - 2:can (cylindrical)
	CATMOR - 7:mooring buoy
	COLOUR - 1:white
	SORDAT - 20090902
	SORIND - US,US,graph,H11863

Office Notes

Concur, add MORFAC

Feature Images

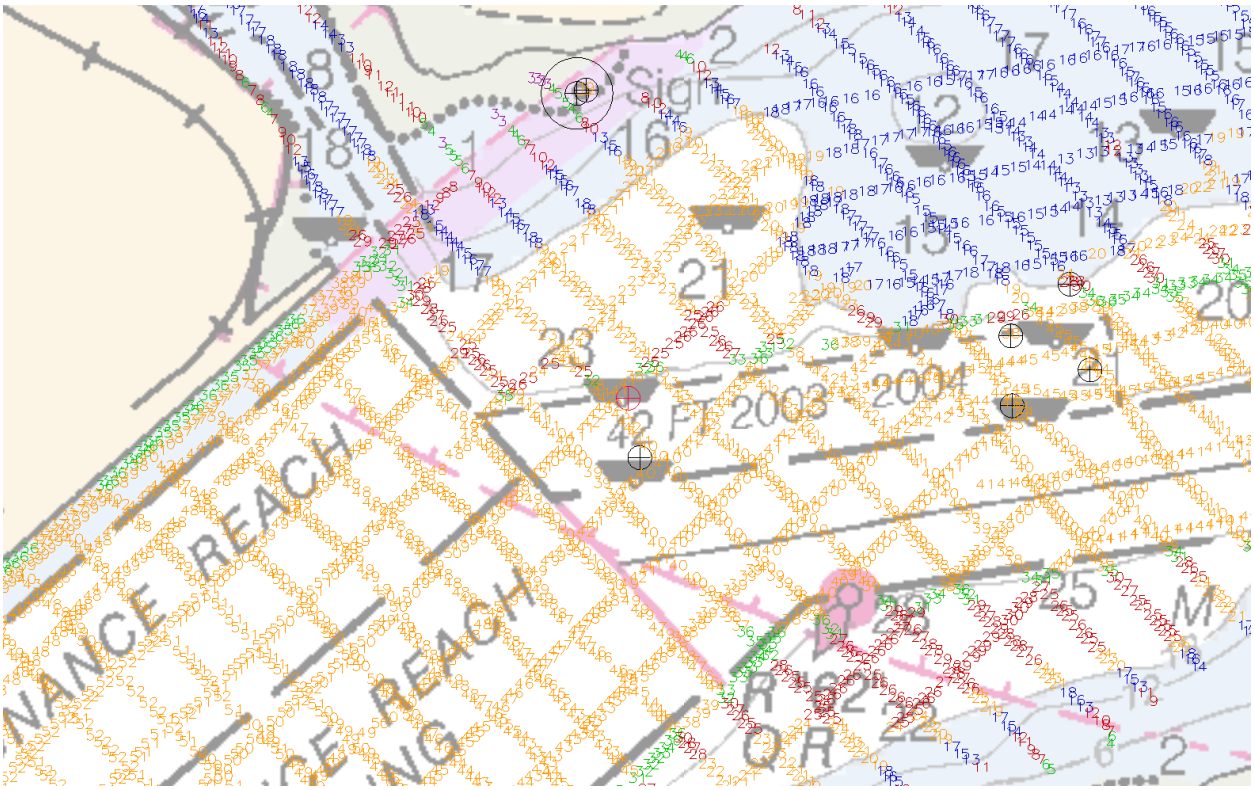


Figure 1.7.1

1.8) Lighted Mooring Buoys

Survey Summary

Survey Position:	32° 54' 29.3" N, 079° 56' 52.7" W
Least Depth:	12.12 m (= 39.75 ft = 6.626 fm = 6 fm 3.75 ft)
TPU (±1.96σ):	**THU (TPEh)** ±1.988 m ; **TVU (TPEv)** ±0.143 m
Timestamp:	2009-217.15:42:53.000 (08/05/2009)
DP Dataset:	h11863 / nrt2_1210_dpnonechosounder / 2009-217 / dp_08052009
Profile/Beam:	11/1
Charts Affected:	11524_1, 11527_1, 11521_1, 11520_1, 11009_1, 411_1

Remarks:

Position at Center of Two white lighted Mooring buoys, Unmarked.

See photo 2a-2b for example of buoy.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11863/nrt2_1210_dpnonechosounder/2009-217/dp_08052009	11/1	0.00	000.0	Primary

Hydrographer Recommendations

Chart mooring buoy.

Cartographically-Rounded Depth (Affected Charts):

40ft (11524_1, 11527_1, 11521_1)

6 ½fm (11520_1, 11009_1, 411_1)

S-57 Data

Geo object 1:	Mooring/warping facility (MORFAC)
Attributes:	BOYSHP - 2:can (cylindrical)
	CATMOR - 7:mooring buoy
	COLOUR - 1:white
	SORDAT - 20090902
	SORIND - US,US,graph,H11863

Office Notes

Concur, add MORFAC

Feature Images

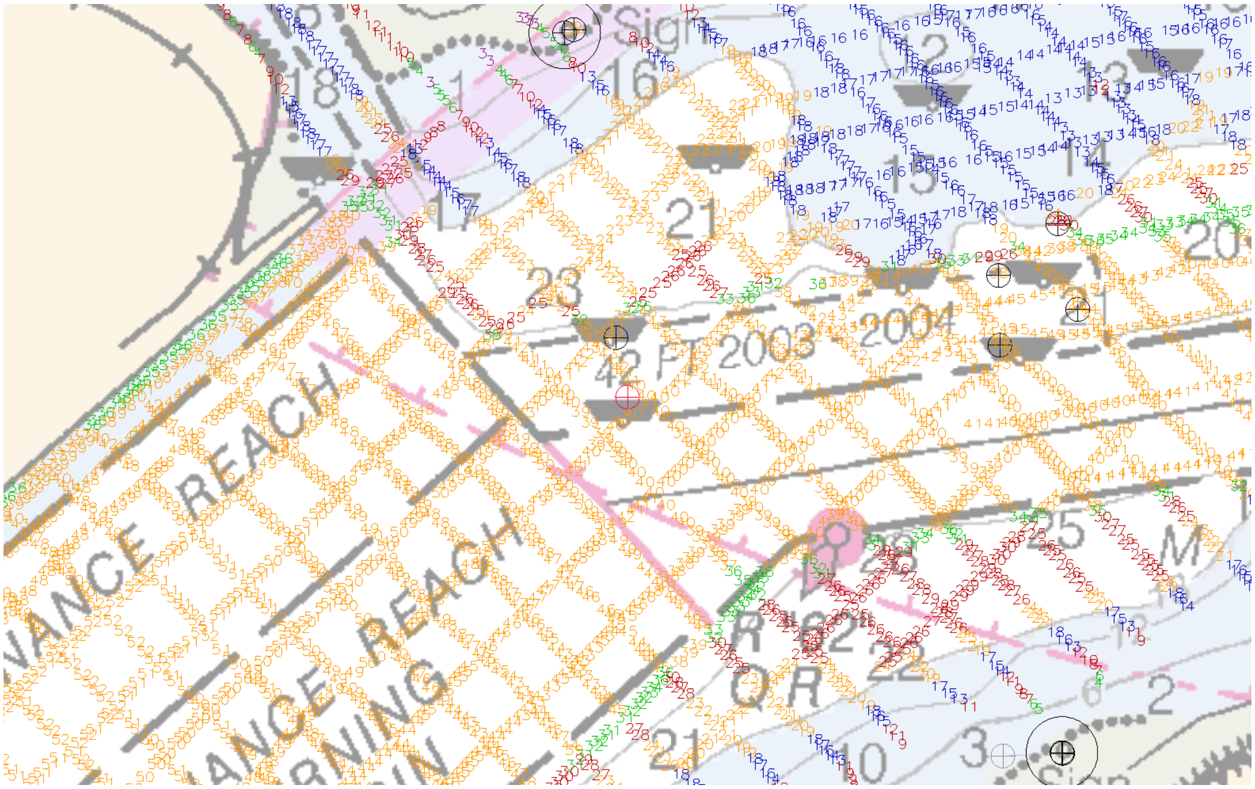


Figure 1.8.1

1.9) Mooring Buoy

Survey Summary

Survey Position:	32° 54' 37.3" N, 079° 56' 28.9" W
Least Depth:	5.52 m (= 18.11 ft = 3.018 fm = 3 fm 0.11 ft)
TPU (±1.96σ):	**THU (TPEh)** ±1.972 m ; **TVU (TPEv)** ±0.133 m
Timestamp:	2009-217.15:44:45.000 (08/05/2009)
DP Dataset:	h11863 / nrt2_1210_dpnonechosounder / 2009-217 / dp_08052009
Profile/Beam:	12/1
Charts Affected:	11524_1, 11527_1, 11521_1, 11520_1, 11009_1, 411_1

Remarks:

Unlighted Temporary Mooring Buoy Awash

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11863/nrt2_1210_dpnonechosounder/2009-217/dp_08052009	12/1	0.00	000.0	Primary

Hydrographer Recommendations

Chart buoy

Cartographically-Rounded Depth (Affected Charts):

18ft (11524_1, 11527_1, 11521_1)

3fm (11520_1, 11009_1, 411_1)

S-57 Data

Geo object 1:	Mooring/warping facility (MORFAC)
Attributes:	CATMOR - 7:mooring buoy
	SORDAT - 20090902
	SORIND - US,US,graph,H11863

Office Notes

Concur, add MORFAC

Feature Images

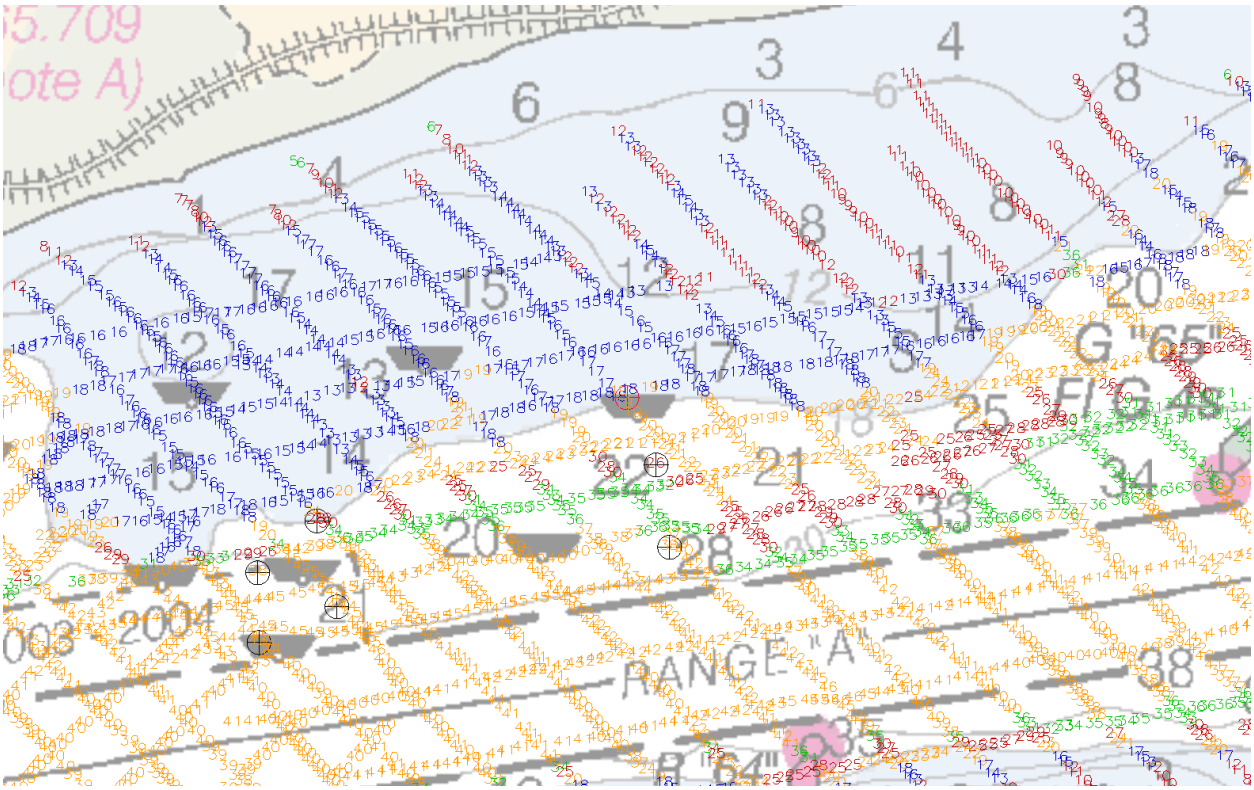


Figure 1.9.1

1.10) 432/1 22ft obstruction

Survey Summary

Survey Position: 32° 51' 38.9" N, 079° 57' 17.1" W

Least Depth: 6.95 m (= 22.80 ft = 3.800 fm = 3 fm 4.80 ft)

TPU (±1.96σ): **THU (TPEh)** ±1.969 m ; **TVU (TPEv)** ±0.135 m

Timestamp: 2009-209.15:58:32.807 (07/28/2009)

Survey Line: h11863 / nrt2_1210_sb / 2009-209 / 118_1558

Profile/Beam: 432/1

Charts Affected: 11524_1, 11521_1, 11520_1, 11009_1, 411_1

Remarks:

200% SSS located obstn at ruins area. It is felt that a more appropriate symbology would be of Obstn. There is no connection to shore noted.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11863/nrt2_1210_sb/2009-209/118_1558	432/1	0.00	000.0	Primary
h11863/nrt2_1210_klein3000hf_100sss/2009-222/sss090810163400	0001	5.39	359.4	Secondary

Hydrographer Recommendations

Remove charted ruins symbol, and add 22ft Obstn.

Cartographically-Rounded Depth (Affected Charts):

23ft (11524_1, 11521_1)

3 ¾fm (11520_1, 11009_1, 411_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: QUASOU - 6:least depth known

SORDAT - 20090902

SORIND - US,US,graph,H11863

TECSOU - 1,2:found by echo-sounder,found by side scan sonar

VALSOU - 6.950 m

WATLEV - 3:always under water/submerged

Office Notes

Concur with clarification. Delete charted SLCONS feature. Add obstruction at survey position and depth (32-51-38.91N, 79-57-17.08W, 21.1877ft).

Feature Images

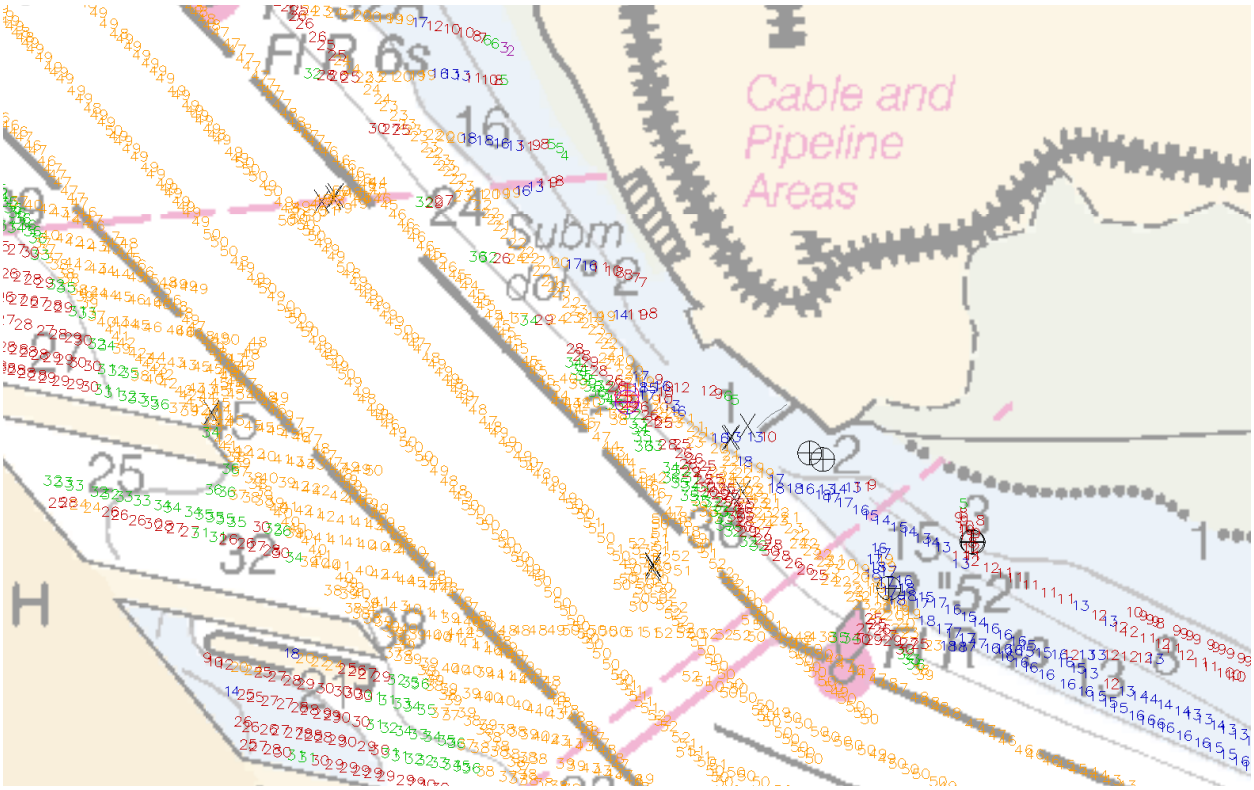


Figure 1.10.1

[Unable to convert image file h:/compilation/h11863-g347-nrt2/caris/hdcs_data/h11863/nrt2_1210_klein3000hf_100sss/2009-222/sss090810163400/sss090810001_ to JPEG.]

1.11) Sign

Survey Summary

Survey Position: 32° 52' 12.9" N, 079° 57' 41.7" W

Least Depth: 4.60 m (= 15.10 ft = 2.516 fm = 2 fm 3.10 ft)

TPU (±1.96σ): **THU (TPEh)** ±1.968 m ; **TVU (TPEv)** ±0.133 m

Timestamp: 2009-245.13:13:20.537 (09/02/2009)

Survey Line: h11863 / nrt2_1210_sb / 2009-245 / 007_1313

Profile/Beam: 316/1

Charts Affected: 11524_1, 11521_1, 11520_1, 11009_1, 411_1

Remarks:

charted sign is gone. Small footprint pile lieing flat on bottom near scower and mound located. This pile symbol should be removed.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11863/nrt2_1210_sb/2009-245/007_1313	316/1	0.00	000.0	Primary
h11863/nrt2_1210_klein3000hf_200sss/2009-222/sss090810171100	0001	0.79	012.6	Secondary
h11863/nrt2_1210_klein3000hf_100sss/2009-229/sss090817130900	0001	8.32	150.2	Secondary

Hydrographer Recommendations

Remove the charted sign and pile symbol, add survey sounding.

Cartographically-Rounded Depth (Affected Charts):

15ft (11524_1, 11521_1)

2 ½fm (11520_1, 11009_1, 411_1)

S-57 Data

Geo object 1: Beacon, special purpose/general (BCNSPP)

Attributes: CATSPM - 13:private mark

VERDAT - 12:Mean lower low water

Office Notes

Concur, delete charted sign.

Feature Images

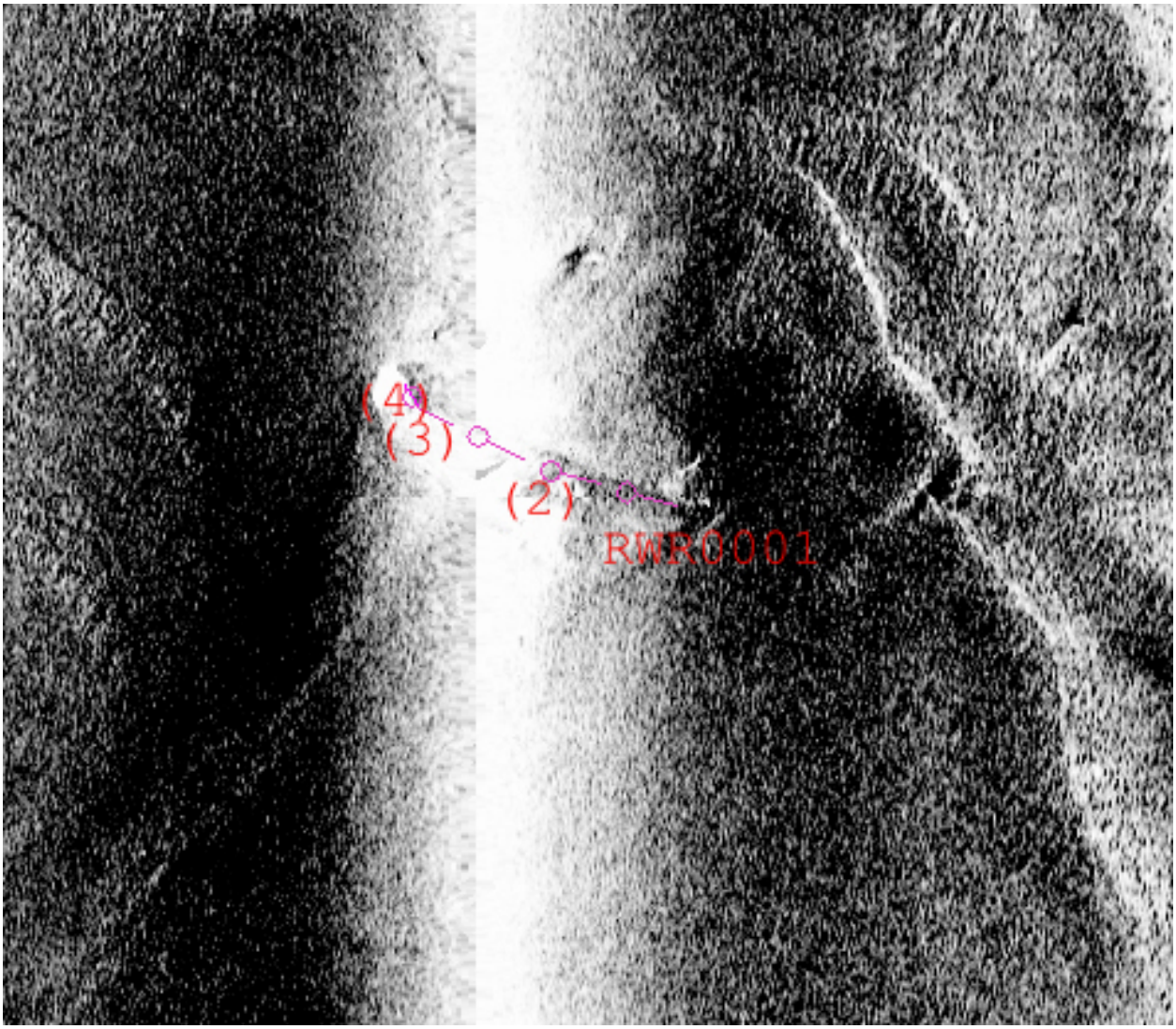


Figure 1.11.1

H11863 Uncharted

Registry Number: H-11863
State: South Carolina
Locality: Charleston Harbor
Sub-locality: Cooper River
Project Number: OPR-G347-NRT2-08
Survey Dates: 06/23/2009 - 08/19/2009

Charts Affected

Number	Edition	Date	Scale (RNC)	RNC Correction(s)*
11524	52nd	01/01/2010	1:20,000 (11524_1)	USCG LNM: 12/14/2010 (12/28/2010) NGA NTM: 10/17/2009 (12/25/2010)
11527	17th	03/01/2006	1:20,000 (11527_1)	[L]NTM: ?
11521	28th	02/01/2006	1:80,000 (11521_1)	[L]NTM: ?
11520	42nd	09/01/2005	1:432,720 (11520_1)	[L]NTM: ?
11009	37th	07/01/2004	1:1,200,000 (11009_1)	[L]NTM: ?
411	51st	12/01/2006	1:2,160,000 (411_1)	[L]NTM: ?

* Correction(s) - *source: last correction applied (last correction reviewed--"cleared date")*

Features

No.	Name	Feature Type	Survey Depth	Survey Latitude	Survey Longitude	AWOIS Item
1.1	Pile	Pile	-4.84 m	32° 49' 55.4" N	079° 55' 36.2" W	---
1.2	Sign	Shoal	-5.43 m	32° 54' 50.5" N	079° 56' 00.1" W	---
1.3	296/1 18ft Obstn	Obstruction	5.43 m	32° 51' 17.7" N	079° 56' 13.1" W	---
1.4	Exposed Pile	Pile	-3.47 m	32° 50' 47.2" N	079° 56' 04.1" W	---
1.5	Stranded Wreck	Wreck	-4.67 m	32° 50' 21.4" N	079° 56' 46.1" W	---
1.6	Mooring Dol (southern DOL)	Dolphin	-4.14 m	32° 53' 48.0" N	079° 57' 50.1" W	---
1.7	Mooring Dol	Dolphin	-4.14 m	32° 53' 49.4" N	079° 57' 49.5" W	---
1.8	Mooring Dol	Dolphin	-4.13 m	32° 53' 50.0" N	079° 57' 49.3" W	---
1.9	Mooring Dol	Dolphin	-4.13 m	32° 53' 50.5" N	079° 57' 49.0" W	---
1.10	Mooring Dol	Dolphin	-4.13 m	32° 53' 53.6" N	079° 57' 47.7" W	---
1.11	ruins: offshore end	Pile	-1.28 m	32° 51' 38.2" N	079° 57' 13.1" W	---

1.12	Standed Wreck	Wreck	-3.25 m	32° 51' 37.5" N	079° 57' 11.2" W	---
1.13	252/1 11ft Obstn	Obstruction	3.54 m	32° 54' 39.2" N	079° 56' 29.1" W	---

1 - DR_UnCharted

1.1) Pile

Survey Summary

Survey Position:	32° 49' 55.4" N, 079° 55' 36.2" W
Least Depth:	-4.84 m (= -15.89 ft = -2.648 fm = -2 fm 3.89 ft)
TPU (±1.96σ):	**THU (TPEh)** ±1.962 m ; **TVU (TPEv)** ±0.131 m
Timestamp:	2009-174.16:24:43.000 (06/23/2009)
DP Dataset:	h11863 / nrt2_1210_dpnonechosounder / 2009-174 / 06232009_awois_dp
Profile/Beam:	1/1
Charts Affected:	11524_1, 11521_1, 11520_1, 11009_1, 411_1

Remarks:

3 pile survey platform. No SSS contact depicted on Awois 11456, 23m due west of this plat. Plat was most likley rebuilt over the old pile.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11863/nrt2_1210_dpnonechosounder/2009-174/06232009_awois_dp	1/1	0.00	000.0	Primary

Hydrographer Recommendations

Delete charted "Subm pile." Chart survey platform at surveyed location.

Cartographically-Rounded Depth (Affected Charts):

-16ft (11524_1, 11521_1)

-2 ½fm (11520_1, 11009_1, 411_1)

S-57 Data

Geo object 1:	Pile (PILPNT)
Attributes:	CATPLE - 3:post
	SORDAT - 20090421
	SORIND - US,US,graph,NAIP Orthoimagery for Zone 17 South Carolina

Office Notes

Concur with clarification. See AWOIS 1.1 (#11456) for information on submerged pile.

Field position of pile was not verified with orthoimagery. Pile positioned based on 2009 orthoimagery. See H-Cell Report for more information. Pile located at 32-49-55.00N, 79-55-36.09W.

Feature Images

Figure 1.1.1

1.2) Sign

Survey Summary

Survey Position:	32° 54' 50.5" N, 079° 56' 00.1" W
Least Depth:	-5.43 m (= -17.83 ft = -2.971 fm = -2 fm 5.83 ft)
TPU (±1.96σ):	**THU (TPEh)** ±1.963 m ; **TVU (TPEv)** ±0.131 m
Timestamp:	2009-217.14:43:28.000 (08/05/2009)
DP Dataset:	h11863 / nrt2_1210_dpnonechosounder / 2009-217 / dp_08052009
Profile/Beam:	2/1
Charts Affected:	11524_1, 11527_1, 11521_1, 11520_1, 11009_1, 411_1

Remarks:

Waring Sign, restricted waterway. Western Edge.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11863/nrt2_1210_dpnonechosounder/2009-217/dp_08052009	2/1	0.00	000.0	Primary

Hydrographer Recommendations

Add Sign

Cartographically-Rounded Depth (Affected Charts):

-18ft (11524_1, 11527_1, 11521_1)

-1fm (11520_1, 11009_1, 411_1)

S-57 Data

Geo object 1:	Beacon, special purpose/general (BCNSPP)
Attributes:	BCNSHP - 5:pile beacon
	CATSPM - 27:general warning mark
	COLOUR - 1:white
	HEIGHT - 5.4 m
	SORDAT - 20090902
	SORIND - US,US,graph,H11863

Office Notes

Concur. Add BCNSPP at survey position.

Feature Images

Figure 1.2.1

1.3) 296/1 18ft Obstn

Survey Summary

Survey Position: 32° 51' 17.7" N, 079° 56' 13.1" W

Least Depth: 5.43 m (= 17.81 ft = 2.968 fm = 2 fm 5.81 ft)

TPU (±1.96σ): **THU (TPEh)** ±1.968 m ; **TVU (TPEv)** ±0.133 m

Timestamp: 2009-209.16:37:56.481 (07/28/2009)

Survey Line: h11863 / nrt2_1210_sb / 2009-209 / 025_1637

Profile/Beam: 296/1

Charts Affected: 11524_1, 11521_1, 11520_1, 11009_1, 411_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11863/nrt2_1210_sb/2009-209/025_1637	296/1	0.00	000.0	Primary
h11863/nrt2_1210_klein3000hf_100sss/2009-203/sss090722130500	0003	4.16	260.0	Secondary
h11863/nrt2_1210_klein3000hf_200sss/2009-203/sss090722131400	0001	4.54	097.0	Secondary
h11863/nrt2_1210_klein3000hf_200sss/2009-202/sss090721151500	0003	8.28	151.1	Secondary

Hydrographer Recommendations

Chart obstrn 18ft LD

Cartographically-Rounded Depth (Affected Charts):

18ft (11524_1, 11521_1)

3fm (11520_1, 11009_1, 411_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: CATOBS - 1:snag / stump

QUASOU - 6:least depth known

SORDAT - 20090902

SORIND - US,US,graph,H11863

TECSOU - 1,2:found by echo-sounder,found by side scan sonar

VALSOU - 5.427 m

WATLEV - 3:always under water/submerged

Office Notes

Concur add dangerous obstruction "subm pile"

Feature Images

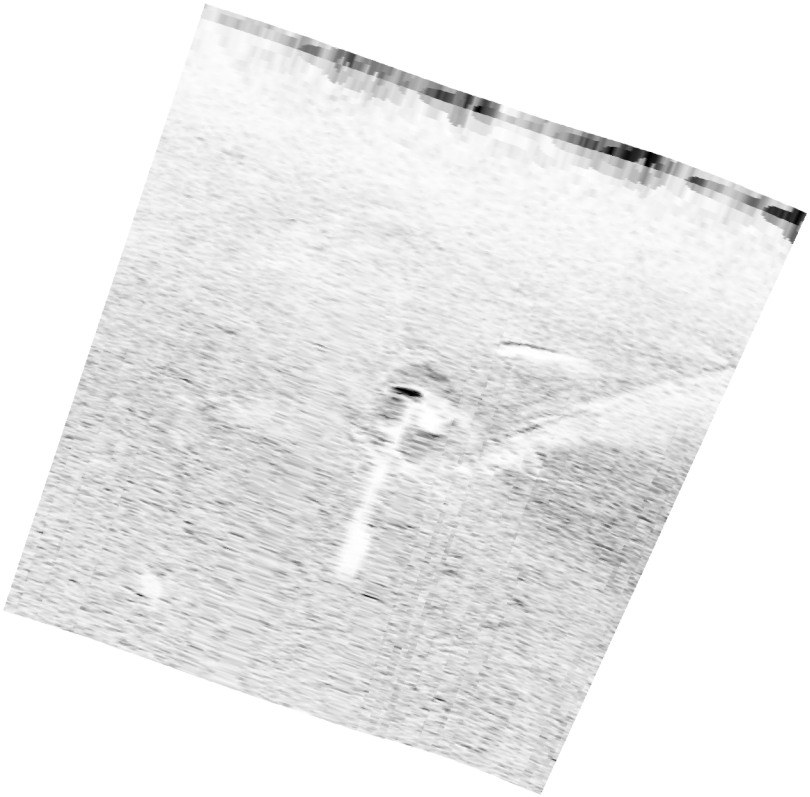


Figure 1.3.1

1.4) Exposed Pile

Survey Summary

Survey Position:	32° 50' 47.2" N, 079° 56' 04.1" W
Least Depth:	-3.47 m (= -11.38 ft = -1.896 fm = -1 fm 5.38 ft)
TPU (±1.96σ):	**THU (TPEh)** ±1.961 m ; **TVU (TPEv)** ±0.130 m
Timestamp:	2009-223.12:42:23.000 (08/11/2009)
DP Dataset:	h11863 / nrt2_1210_dpnonechosounder / 2009-223 / dp_dn223
Profile/Beam:	1/1
Charts Affected:	11524_1, 11521_1, 11520_1, 11009_1, 411_1

Remarks:

Offshore concrete pile , one of four.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11863/nrt2_1210_dpnonechosounder/2009-223/dp_dn223	1/1	0.00	000.0	Primary

Hydrographer Recommendations

Chart offshore pile of four.

S-57 Data

[None]

Office Notes

Do not concur. Do not chart pile. See H-Cell Report.

Feature Images

Figure 1.4.1

Figure 1.4.2

1.5) Stranded Wreck

Survey Summary

Survey Position: 32° 50' 21.4" N, 079° 56' 46.1" W

Least Depth: -4.67 m (= -15.31 ft = -2.552 fm = -2 fm 3.31 ft)

TPU (±1.96σ): **THU (TPEh)** ±1.966 m ; **TVU (TPEv)** ±0.130 m

Timestamp: 2009-231.12:34:50.000 (08/19/2009)

DP Dataset: h11863 / nrt2_1210_dpnonechosounder / 2009-231 / dps_08192009

Profile/Beam: 1/1

Charts Affected: 11524_1, 11521_1, 11520_1, 11009_1, 411_1

Remarks:

Visable wooden wk aprox 65ft LOA. Believed to be AWOIS #7617.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11863/nrt2_1210_dpnonechosounder/2009-231/dps_08192009	1/1	0.00	000.0	Primary
h11863/nrt2_1210_sb/2009-195/007_1525	493/1	78.09	039.2	Secondary (grouped)

Hydrographer Recommendations

Chart VIS WK at survey position.

Cartographically-Rounded Depth (Affected Charts):

-16ft (11524_1, 11521_1)

-2 ½fm (11520_1, 11009_1, 411_1)

S-57 Data

Geo object 1: Wreck (WRECKS)

Attributes: CATWRK - 2:dangerous wreck

INFORM - Stranded Wreck (fishing vessel) height unknown

VALSOU - -4.667 m

WATLEV - 2:always dry

Office Notes

Concur with clarification. Office processing determined this is not AWOIS 7617. Recommend to chart a stranded wreck at the survey DP position.

Feature Images

Figure 1.5.1

Figure 1.5.2

1.6) Mooring Dol (southern DOL)

Survey Summary

Survey Position: 32° 53' 48.0" N, 079° 57' 50.1" W

Least Depth: -4.14 m (= -13.59 ft = -2.265 fm = -2 fm 1.59 ft)

TPU (±1.96σ): **THU (TPEh)** ±1.961 m ; **TVU (TPEv)** ±0.130 m

Timestamp: 2009-231.12:57:22.000 (08/19/2009)

DP Dataset: h11863 / nrt2_1210_dpnonechosounder / 2009-231 / dps_08192009

Profile/Beam: 2/1

Charts Affected: 11524_1, 11521_1, 11520_1, 11009_1, 411_1

Remarks:

Multi pile mooring dol

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11863/nrt2_1210_dpnonechosounder/2009-231/dps_08192009	2/1	0.00	000.0	Primary

Hydrographer Recommendations

Chart dol

Cartographically-Rounded Depth (Affected Charts):

-14ft (11524_1, 11521_1)

-2 ¼fm (11520_1, 11009_1, 411_1)

S-57 Data

Geo object 1: Mooring/warping facility (MORFAC)

Attributes: CATMOR - 1:dolphin

HEIGHT - 4.1 m

SORDAT - 20090902

SORIND - US,US,graph,H11863

Office Notes

Concur. Chart dolphin at the surveyed position

Feature Images

Figure 1.6.1

1.7) Mooring Dol

Survey Summary

Survey Position:	32° 53' 49.4" N, 079° 57' 49.5" W
Least Depth:	-4.14 m (= -13.57 ft = -2.262 fm = -2 fm 1.57 ft)
TPU (±1.96σ):	**THU (TPEh)** ±1.961 m ; **TVU (TPEv)** ±0.130 m
Timestamp:	2009-231.12:59:03.000 (08/19/2009)
DP Dataset:	h11863 / nrt2_1210_dpnonechosounder / 2009-231 / dps_08192009
Profile/Beam:	3/1
Charts Affected:	11524_1, 11521_1, 11520_1, 11009_1, 411_1

Remarks:

Multi pile mooring dol

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11863/nrt2_1210_dpnonechosounder/2009-231/dps_08192009	3/1	0.00	000.0	Primary

Hydrographer Recommendations

Chart dolphin

Cartographically-Rounded Depth (Affected Charts):

-14ft (11524_1, 11521_1)

-2 ¼fm (11520_1, 11009_1, 411_1)

S-57 Data

Geo object 1:	Mooring/warping facility (MORFAC)
Attributes:	CATMOR - 1:dolphin
	HEIGHT - 4.1 m
	SORDAT - 20090902
	SORIND - US,US,graph,H11863

Office Notes

Concur. Chart dolphin at the surveyed position

Feature Images

Figure 1.7.1

1.8) Mooring Dol

Survey Summary

Survey Position:	32° 53' 50.0" N, 079° 57' 49.3" W
Least Depth:	-4.13 m (= -13.56 ft = -2.260 fm = -2 fm 1.56 ft)
TPU (±1.96σ):	**THU (TPEh)** ±1.961 m ; **TVU (TPEv)** ±0.130 m
Timestamp:	2009-231.12:59:56.000 (08/19/2009)
DP Dataset:	h11863 / nrt2_1210_dpnonechosounder / 2009-231 / dps_08192009
Profile/Beam:	4/1
Charts Affected:	11524_1, 11521_1, 11520_1, 11009_1, 411_1

Remarks:

Multi pile mooring dol

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11863/nrt2_1210_dpnonechosounder/2009-231/dps_08192009	4/1	0.00	000.0	Primary

Hydrographer Recommendations

Chart dol

Cartographically-Rounded Depth (Affected Charts):

-14ft (11524_1, 11521_1)

-2 ¼fm (11520_1, 11009_1, 411_1)

S-57 Data

Geo object 1:	Mooring/warping facility (MORFAC)
Attributes:	CATMOR - 1:dolphin
	HEIGHT - 4.1 m
	SORDAT - 20090902
	SORIND - US,US,graph,H11863

Office Notes

Concur. Chart dolphin at the surveyed position

Feature Images

Figure 1.8.1

1.9) Mooring Dol

Survey Summary

Survey Position:	32° 53' 50.5" N, 079° 57' 49.0" W
Least Depth:	-4.13 m (= -13.55 ft = -2.259 fm = -2 fm 1.55 ft)
TPU (±1.96σ):	**THU (TPEh)** ±1.961 m ; **TVU (TPEv)** ±0.130 m
Timestamp:	2009-231.13:00:29.000 (08/19/2009)
DP Dataset:	h11863 / nrt2_1210_dpnonechosounder / 2009-231 / dps_08192009
Profile/Beam:	5/1
Charts Affected:	11524_1, 11521_1, 11520_1, 11009_1, 411_1

Remarks:

Multi pile mooring dol

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11863/nrt2_1210_dpnonechosounder/2009-231/dps_08192009	5/1	0.00	000.0	Primary

Hydrographer Recommendations

chart dol

Cartographically-Rounded Depth (Affected Charts):

-14ft (11524_1, 11521_1)

-2 ¼fm (11520_1, 11009_1, 411_1)

S-57 Data

Geo object 1:	Mooring/warping facility (MORFAC)
Attributes:	CATMOR - 1:dolphin
	HEIGHT - 4.1 m
	SORDAT - 20090902
	SORIND - US,US,graph,H11863

Office Notes

Concur. Chart dolphin at the surveyed position

Feature Images

Figure 1.9.1

1.10) Mooring Dol

Survey Summary

Survey Position:	32° 53' 53.6" N, 079° 57' 47.7" W
Least Depth:	-4.13 m (= -13.54 ft = -2.256 fm = -2 fm 1.54 ft)
TPU (±1.96σ):	**THU (TPEh)** ±1.961 m ; **TVU (TPEv)** ±0.130 m
Timestamp:	2009-231.13:01:42.000 (08/19/2009)
DP Dataset:	h11863 / nrt2_1210_dpnonechosounder / 2009-231 / dps_08192009
Profile/Beam:	6/1
Charts Affected:	11524_1, 11521_1, 11520_1, 11009_1, 411_1

Remarks:

Multi pile mooring dol with catwalk leading from shore

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11863/nrt2_1210_dpnonechosounder/2009-231/dps_08192009	6/1	0.00	000.0	Primary

Hydrographer Recommendations

chart dol

Cartographically-Rounded Depth (Affected Charts):

-14ft (11524_1, 11521_1)

-2 ¼fm (11520_1, 11009_1, 411_1)

S-57 Data

Geo object 1:	Mooring/warping facility (MORFAC)
Attributes:	CATMOR - 1:dolphin
	HEIGHT - 4.1 m
	SORDAT - 20090902
	SORIND - US,US,graph,H11863

Office Notes

Concur. Chart dolphin at the surveyed position

Feature Images

Figure 1.10.1

1.11) ruins: offshore end

Survey Summary

Survey Position:	32° 51' 38.2" N, 079° 57' 13.1" W
Least Depth:	-1.28 m (= -4.19 ft = -0.698 fm = 0 fm 1.81 ft)
TPU (±1.96σ):	**THU (TPEh)** ±1.960 m ; **TVU (TPEv)** ±0.129 m
Timestamp:	2009-231.15:53:17.000 (08/19/2009)
DP Dataset:	h11863 / nrt2_1210_dpnonechosounder / 2009-231 / dps_08192009
Profile/Beam:	8/1
Charts Affected:	11524_1, 11521_1, 11520_1, 11009_1, 411_1

Remarks:

pier ruins, positioned offshore baring pile.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11863/nrt2_1210_dpnonechosounder/2009-231/dps_08192009	8/1	0.00	000.0	Primary
h11863/nrt2_1210_klein3000hf_100sss/2009-222/sss090810163400	0002	6.34	292.5	Secondary

Hydrographer Recommendations

Remove charted pier, and chart ruins from shore to DP on offshore pile.

Cartographically-Rounded Depth (Affected Charts):

-4ft (11524_1, 11521_1)

0 ¾fm (11520_1, 11009_1, 411_1)

S-57 Data

Geo object 1:	Shoreline Construction (SLCONS)
Attributes:	CONDTN - 2:ruined
	SORDAT - 20090902
	SORIND - US,US,graph,H11863

Office Notes

Concur, delete charted pier. Add SLCONS at survey position.

Feature Images

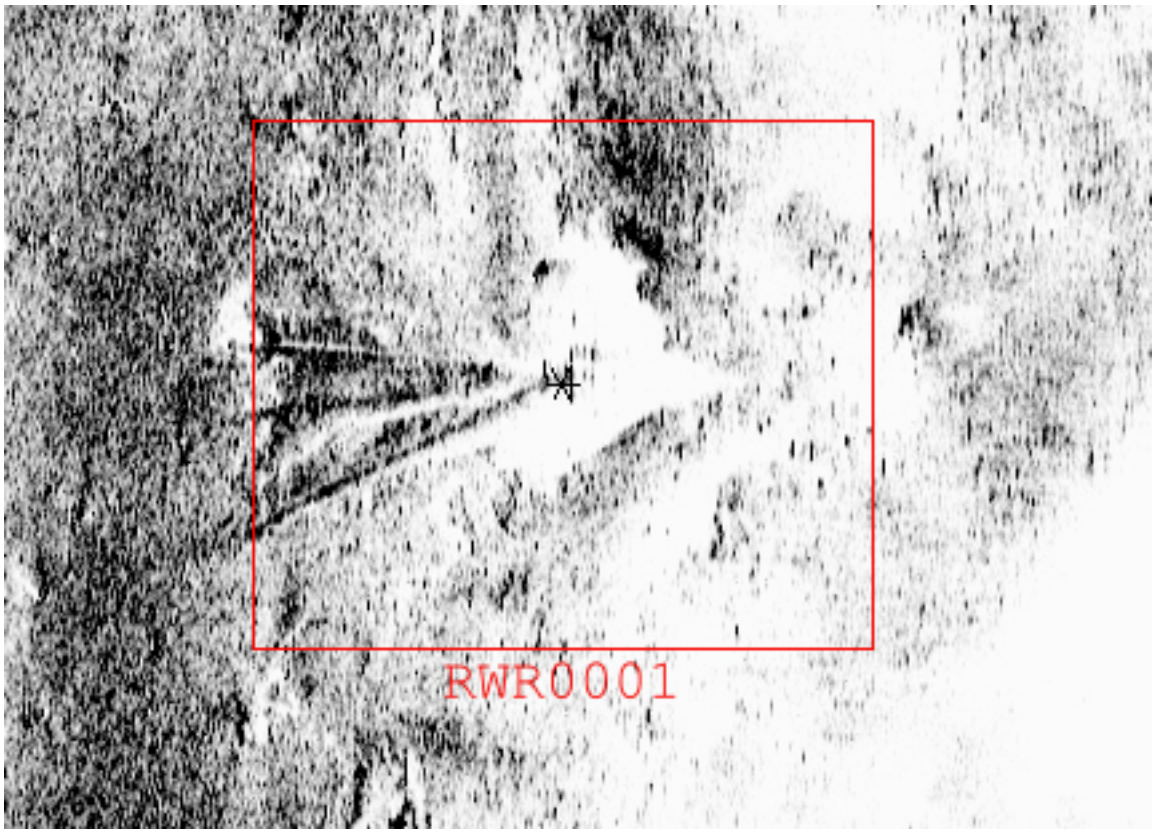


Figure 1.11.1

Figure 1.11.2

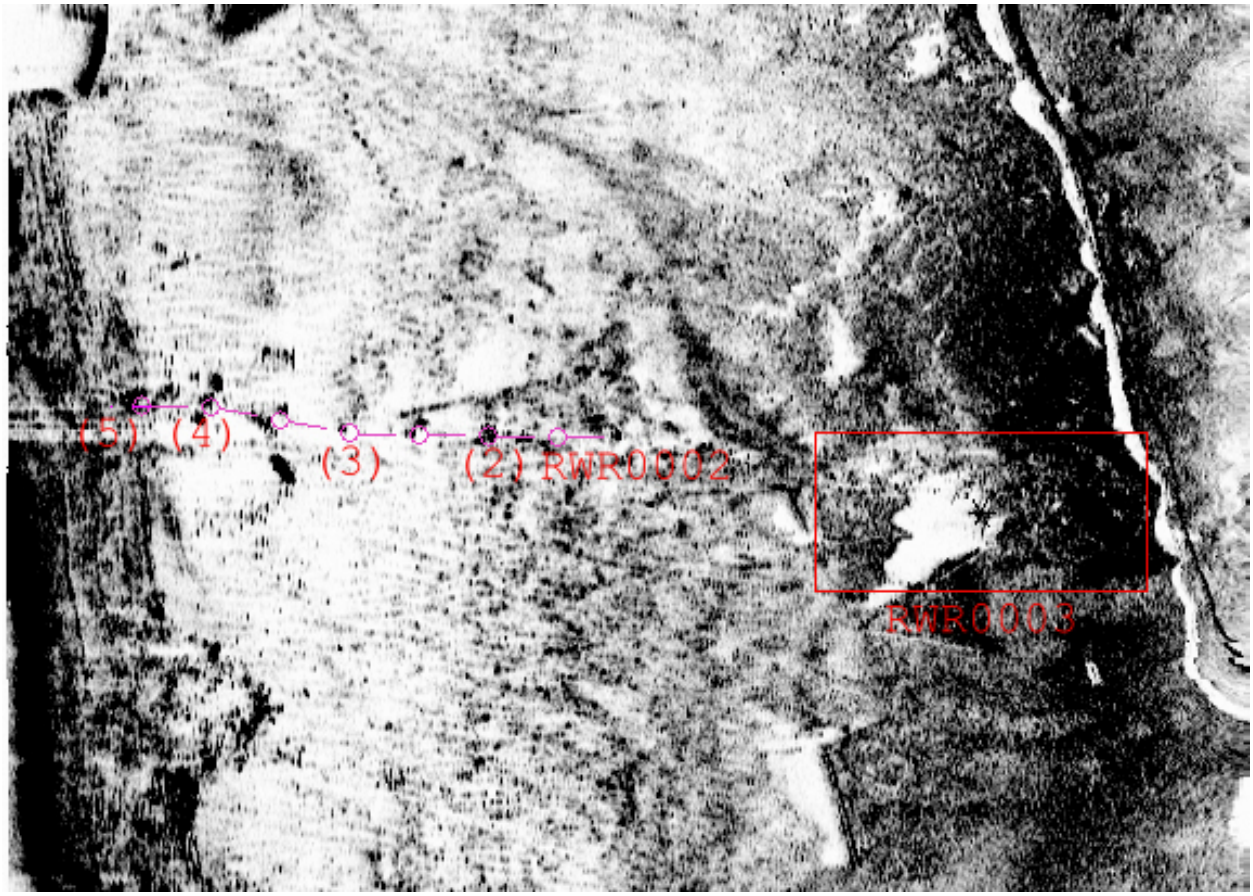


Figure 1.11.3

1.12) Standed Wreck

Survey Summary

Survey Position: 32° 51' 37.5" N, 079° 57' 11.2" W

Least Depth: -3.25 m (= -10.67 ft = -1.779 fm = -1 fm 4.67 ft)

TPU (±1.96σ): **THU (TPEh)** ±1.963 m ; **TVU (TPEv)** ±0.130 m

Timestamp: 2009-231.15:55:44.000 (08/19/2009)

DP Dataset: h11863 / nrt2_1210_dpnonechosounder / 2009-231 / dps_08192009

Profile/Beam: 9/1

Charts Affected: 11524_1, 11521_1, 11520_1, 11009_1, 411_1

Remarks:

Two barge wrks grounded

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11863/nrt2_1210_dpnonechosounder/2009-231/dps_08192009	9/1	0.00	000.0	Primary
h11863/nrt2_1210_klein3000hf_100sss/2009-203/sss090722132800	0002	12.07	297.6	Secondary

Hydrographer Recommendations

Add VIS WK

Cartographically-Rounded Depth (Affected Charts):

-11ft (11524_1, 11521_1)

-1 ¾fm (11520_1, 11009_1, 411_1)

S-57 Data

Geo object 1: Wreck (WRECKS)

Attributes: CATWRK - 5:wreck showing any portion of hull or superstructure

HEIGHT - 3.25 m

SORDAT - 20090902

SORIND - US,US,graph,H11863

TECSOU - 2:found by side scan sonar

VALSOU - -3.253 m

WATLEV - 2:always dry

Office Notes

Concur. Chart stranded wreck at surveyed position

Feature Images

Figure 1.12.1

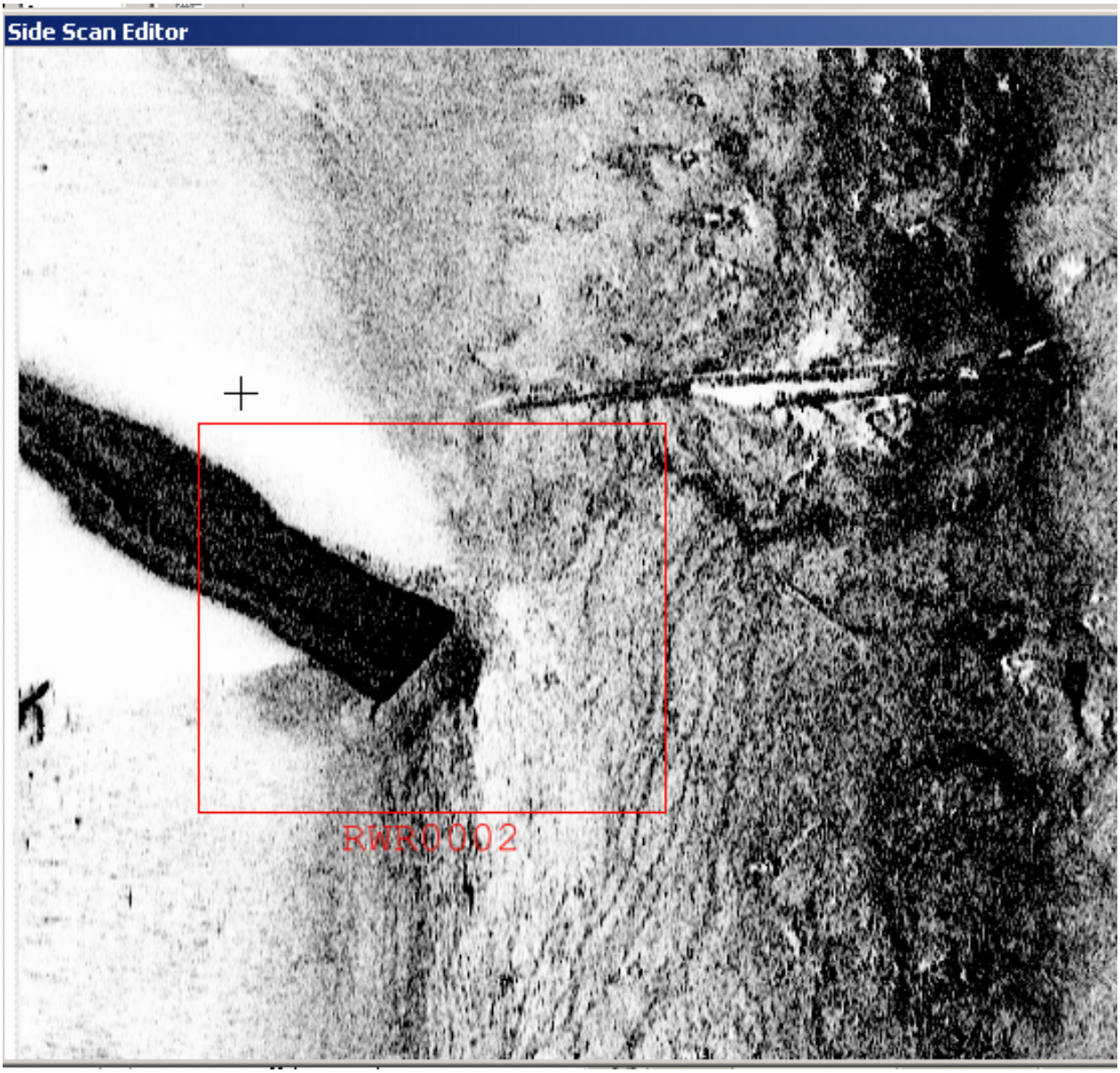


Figure 1.12.2

1.13) 252/1 11ft Obstn

Survey Summary

Survey Position:	32° 54' 39.2" N, 079° 56' 29.1" W
Least Depth:	3.54 m (= 11.61 ft = 1.936 fm = 1 fm 5.61 ft)
TPU (±1.96σ):	**THU (TPEh)** ±1.964 m ; **TVU (TPEv)** ±0.132 m
Timestamp:	2009-231.14:06:13.653 (08/19/2009)
Survey Line:	h11863 / nrt2_1210_sb / 2009-231 / 361_1405
Profile/Beam:	252/1
Charts Affected:	11524_1, 11527_1, 11521_1, 11520_1, 11009_1, 411_1

Remarks:

hard obstn. The LD is shoaler than the contour, and surrounding depths.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11863/nrt2_1210_sb/2009-231/361_1405	252/1	0.00	000.0	Primary
h11863/nrt2_1210_klein3000hf_100sss/2009-217/sss090805161500	0003	3.86	064.6	Secondary
h11863/nrt2_1210_klein3000hf_200sss/2009-217/sss090805160400	0001	6.07	094.2	Secondary

Hydrographer Recommendations

Chart 11ft obstn

Cartographically-Rounded Depth (Affected Charts):

11ft (11524_1, 11527_1, 11521_1)

1 ¾fm (11520_1, 11009_1, 411_1)

S-57 Data

Geo object 1:	Obstruction (OBSTRN)
Attributes:	QUASOU - 6:least depth known
	SORDAT - 20090902
	SORIND - US,US,graph,H11863
	TECSOU - 1,2:found by echo-sounder,found by side scan sonar
	VALSOU - 3.540 m

WATLEV - 3:always under water/submerged

Office Notes

Concur chart 11ft dangerous obstruction at survey position

Feature Images

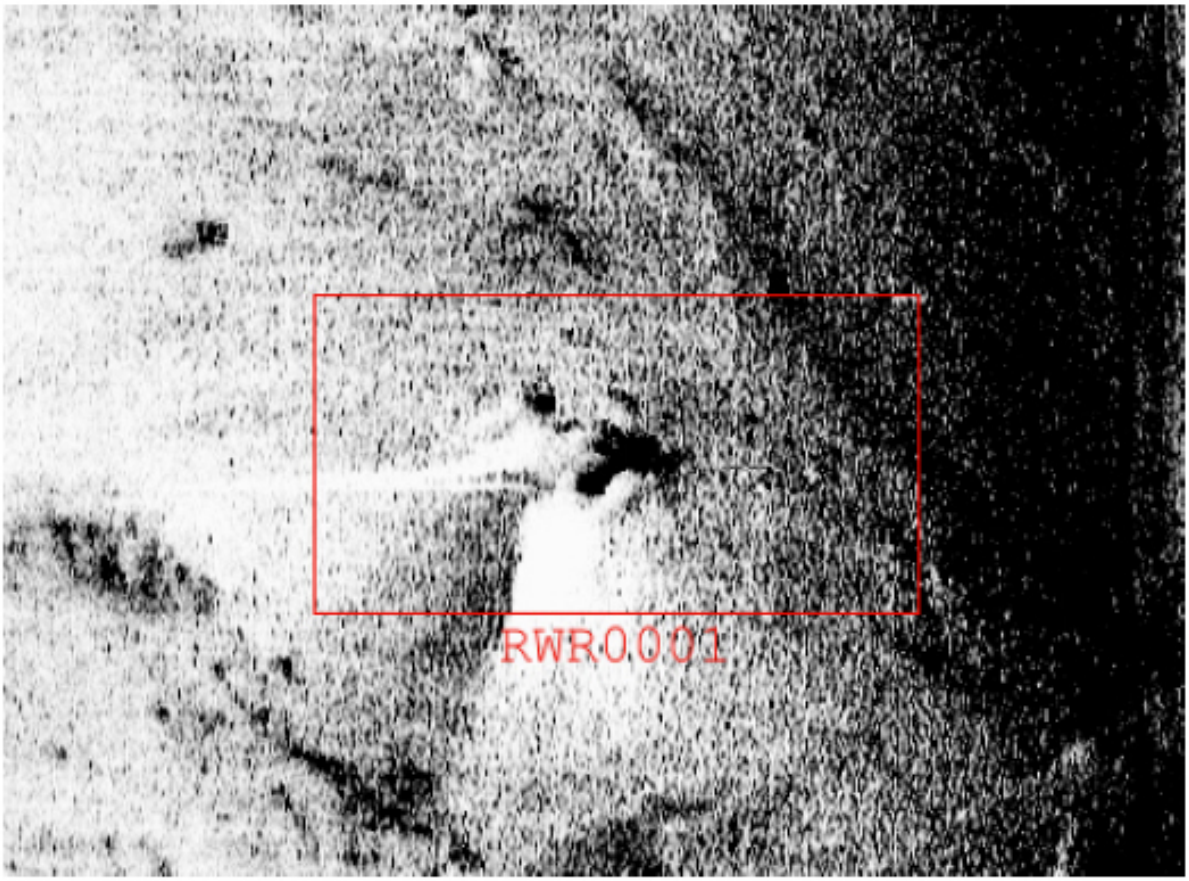


Figure 1.13.1

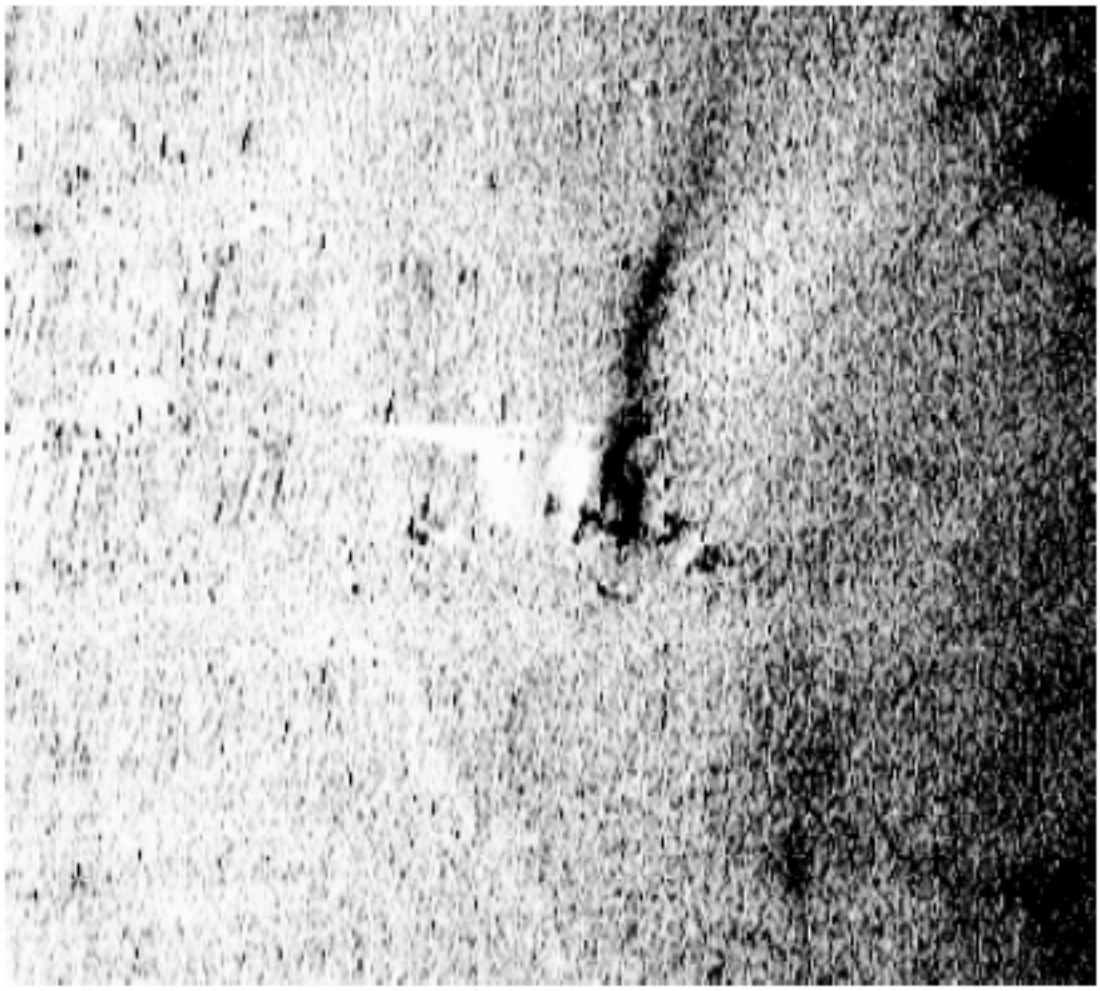
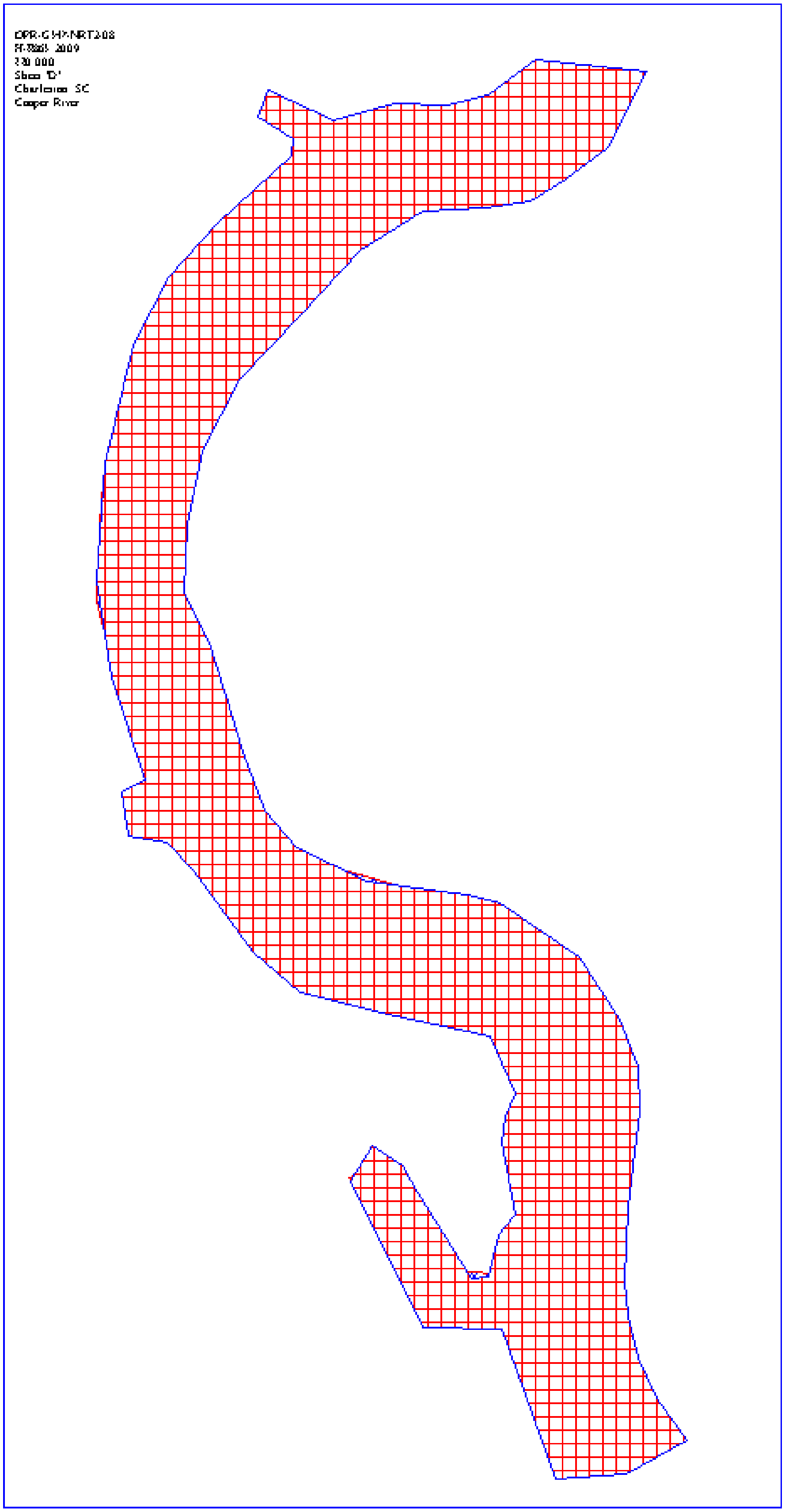


Figure 1.13.2

Appendix III

Final Progress Sketch and Survey Outline


Sheet 'D'
Charleston SC
Cooper River

Appendix IV

Tides and Water Levels

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NOAA NRT-2 (N/CS53x2)
800 Scallop Dr, c/o Cape Marina
Cape Canaveral, FL 32920

September 04, 2009

MEMORANDUM FOR: Chief, Requirements and Development Division, N/OPS1

FROM: Robert W Ramsey Jr, NOAA NRT-2 (N/CS53x2)

SUBJECT: Request for Approved Tides/Water Levels

Please provide the following data:

1. Tide Note
2. Final TCARI grid
3. Six Minute Water Level data (Co-ops web site)

Transmit data to the following:

Robert.Ramsey@NOAA.GOV

These data are required for the processing of the following hydrographic survey:

Project No.:	OPR-G347-NRT2-08
Registry No.:	H-11863
State:	South Carolina
Locality:	Charleston Harbor
Sublocality:	Cooper River

Attachments containing:

1) an Abstract of Times of Hydrography,
2) digital MID MIF files of the track lines from Pydro

Year_DOY	Min Time	Max Time
2009_147	14:25:00	15:32:25
2009_160	12:39:00	17:05:54
2009_161	13:00:31	15:26:47
2009_167	12:24:00	14:28:20
2009_174	12:45:47	17:21:00
2009_176	12:40:13	16:17:43
2009_195	13:04:11	17:28:46
2009_196	12:56:46	16:40:08
2009_202	13:17:09	16:05:00
2009_203	12:59:29	17:10:27
2009_208	12:50:37	17:55:35
2009_209	13:11:00	16:51:28
2009_215	12:45:56	16:14:00
2009_217	12:41:27	17:09:40
2009_218	12:44:33	17:44:41
2009_222	12:57:43	17:38:48
2009_223	12:42:23	15:20:48
2009_229	13:09:56	17:26:52
2009_230	12:37:22	17:18:01
2009_231	12:34:50	16:24:45
2009_245	13:04:02	14:26:00

From Gerald Hovis <Gerald.Hovis@noaa.gov>
Sent Wednesday, September 23, 2009 1:11 pm
To "'robert.ramsey@noaa.gov'" <Robert.Ramsey@noaa.gov>
Subject Fw: Final Tides for OPR-G347-NRT2-2009, H11863
Attachments H11863.pdf 536K

Try this one
Jerry

From: Lijuan Huang <Lijuan.Huang@noaa.gov>
To: Norris A Wike <Norris.A.Wike@noaa.gov>; David Elliott <David.Elliott@noaa.gov>
Cc: _NOS.CO-OPS.HTP <NOS.COOPS.HPT@noaa.gov>
Sent: Tue Sep 22 15:17:25 2009
Subject: Final Tides for OPR-G347-NRT2-2009, H11863

UNITED STATES DEPARMENT OF COMMERCE
National Oceanic and Atmospheric Administration
National Ocean Service
Silver Spring, Maryland 20910

DATE: 09/22/2009

MEMORANDUM FOR: LCDR Shepard Smith
Chief, Atlantic Hydrograhic Branch

FROM: Gerald Hovis
Oceanographic Division/Requirements and Development Division, N/OPS1

SUBJECT: Delivery of Tide Requirements for Hydrographic Surveys

This is notification that the preliminary TCARI grid is accepted as the final grid for survey project OPR-G347-NRT2-2009, Registry No. H11863 during the time period between May 27 and September 2, 2009. The accepted reference station for Registry No. H11863 is Charleston, SC (866-5530).

Included with this memo is Tide Note in .PDF format , stating the preliminary grid have been accepted as the final grid.


```
--
Name:         Lijuan Huang
Title:        IMSG Contractor
Organization: NOAA/NOS/CO-OPS
Address:      1305 East-West Highway
              N/OPS3, Sta. 6342, SSMC4
              Silver Spring, MD 20910-3218
Email:        lijuan.huang@noaa.gov
Phone:        1-301-713-2890 x192
```

UNITED STATES DEPARMENT OF COMMERCE
National Oceanic and Atmospheric Administration
National Ocean Service
Silver Spring, Maryland 20910

TIDE NOTE FOR HYDROGRAPHIC SURVEY

DATE : September 15, 2009

HYDROGRAPHIC BRANCH: Atlantic
HYDROGRAPHIC PROJECT: OPR-G347-NRT2-2009
HYDROGRAPHIC SHEET: H11863

LOCALITY: Cooper River, Charleston Harbor, SC
TIME PERIOD: May 27 - September 2, 2009

TIDE STATION USED: 866-5530 Charleston, SC
Lat. 32° 46.9'N Long. 79° 55.5' W
PLANE OF REFERENCE (MEAN LOWER LOW WATER): 0.000 meters
HEIGHT OF HIGH WATER ABOVE PLANE OF REFERENCE: 1.648 meters

REMARKS: RECOMMENDED GRID

Please use the TCARI grid "G347NRT22009-TCARI" as the final grid for project OPR-G347-NRT2-2009, H11863, during the time period between May 27 and September 2, 2009

Refer to attachments for grid information.

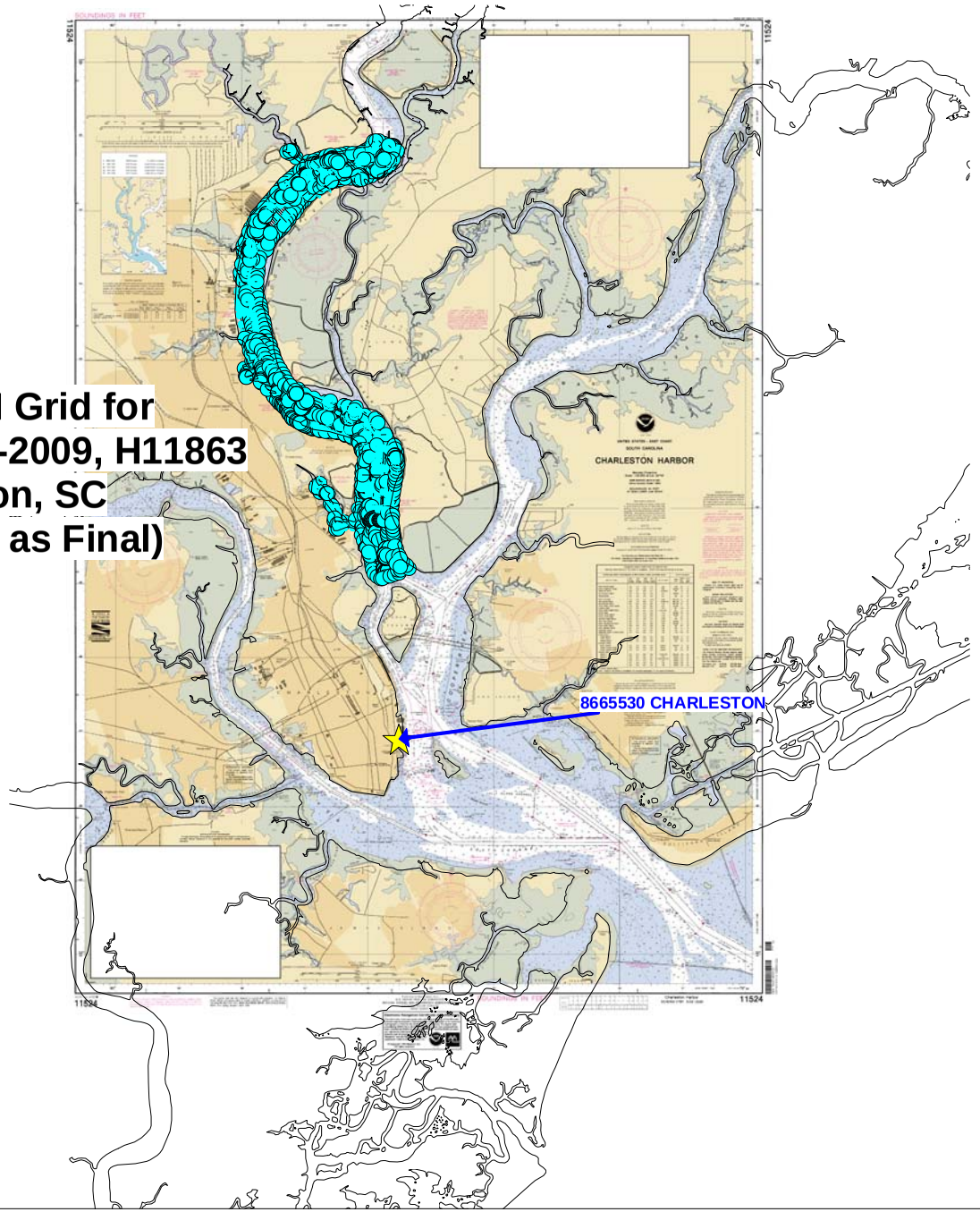
Note 1: Provided time series data are tabulated in metric units (meters), relative to MLLW and on Greenwich Mean Time on the 1983-2001 National Tidal Datum Epoch (NTDE).

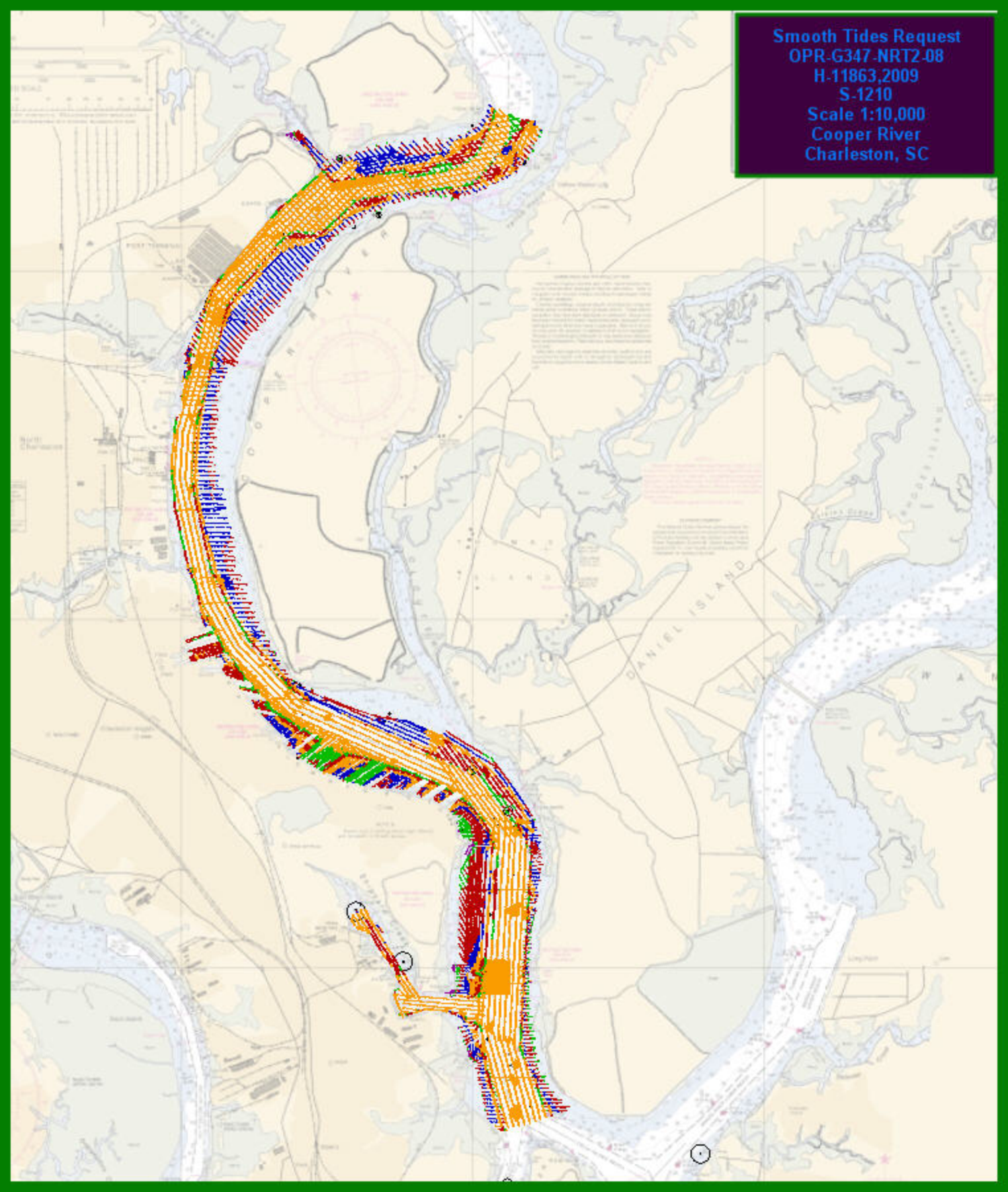
Peter J. Stone

Digitally signed by Peter J. Stone
DN: cn=Peter J. Stone, o=CO-OPS, ou=NOAA/NOS, email=peter.stone@noaa.gov, c=US
Date: 2009.09.22 12:50:20 -04'00'

CHIEF, OCEANOGRAPHIC DIVISION

Final TCARI Grid for
OPR-G347-NRT2-2009, H11863
Charleston, SC
(Preliminary as Final)




Smooth Tides Request
OPR-G347-NRT2-08
H-11863,2009
S-1210
Scale 1:10,000
Cooper River
Charleston, SC
DANIEL ISLAND

Appendix V

Supplemental Survey Records and Correspondence

Subject: Fwd: RE: 46 ft at Port Terminal Reach
From: David.Elliott@noaa.gov
Date: Mon, 21 Jun 2010 19:37:34 -0400
To: Castle E Parker <Castle.E.Parker@noaa.gov>
CC: "LCDR Rick Brennan, NOAA" <Richard.T.Brennan@noaa.gov>

Gene,

See original message, ACOE says MB depth is 47.83 ft @ MLLW. The tabulation is 47.5, so I guess there is no need for a DToN. How on that? Over?
Graphic attached with original message. Matt Foss was on NRT4 out in Seattle for a while with Kathryn. Let me know if you need more info?

Cheers, D.

Subject: RE: 46 ft at Port Terminal Reach
From: "Foss, Matthew D SAC" <Matthew.D.Foss@usace.army.mil>
Date: Mon, 21 Jun 2010 13:05:12 -0400
To: David.Elliott@noaa.gov
CC: "Wolf, Philip M SAC" <Philip.M.Wolf@usace.army.mil>, "Moebs, Norman D SAC" <Norman.D.Moebs@usace.army.mil>

Dave,

We MB'ed the area and found the obstruction in the report. Our least depth
was 47.83ft MLLW. I attached an image from Caris showing the sounding and
its depth. Let me know if you need any more data to back this sounding up.

V/R, Matt

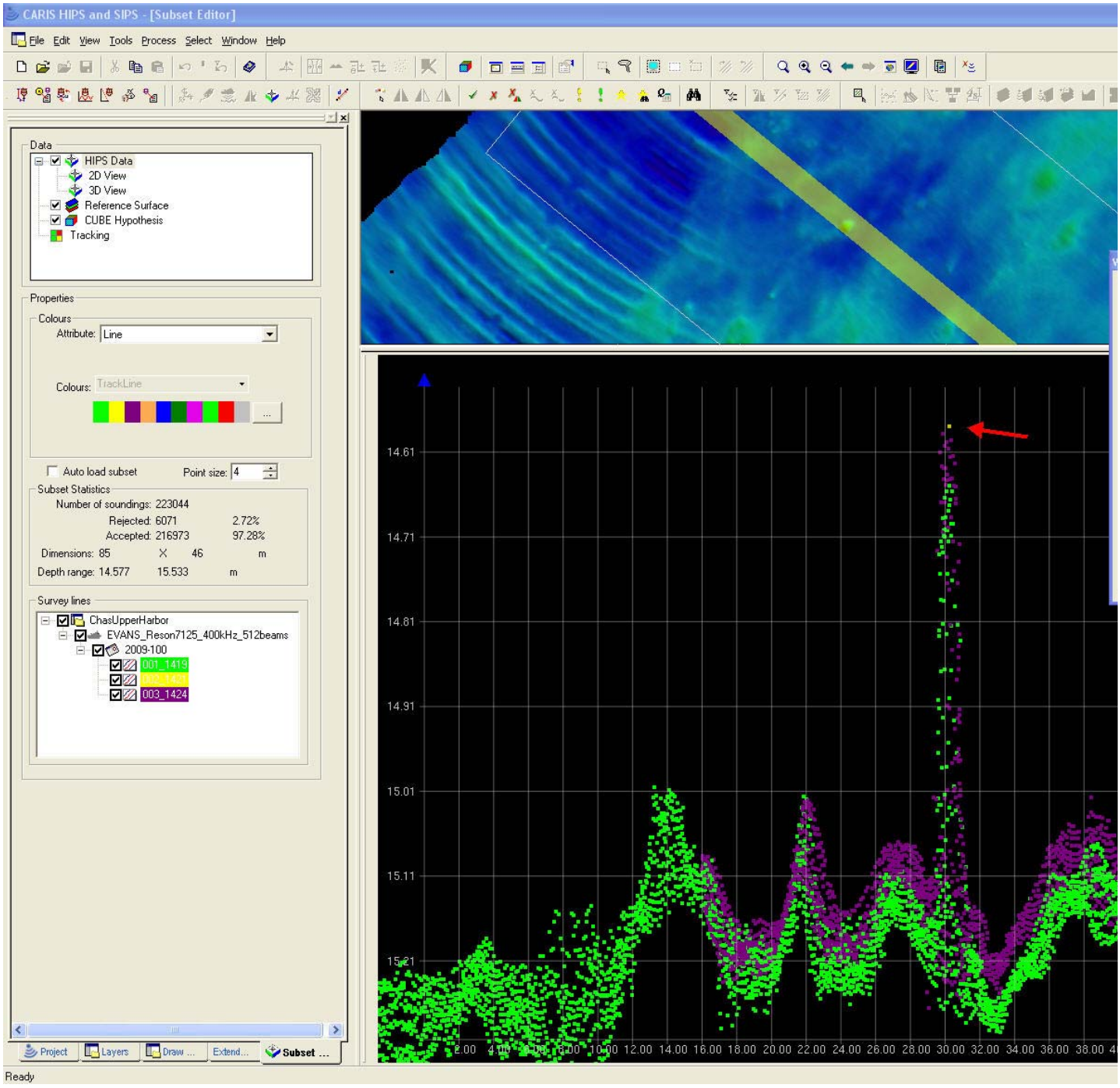
-----Original Message-----
From: David.Elliott@noaa.gov [mailto:David.Elliott@noaa.gov]
Sent: Wednesday, June 16, 2010 10:36 AM
To: Foss, Matthew D SAC
Cc: Wolf, Philip M SAC; Moebs, Norman D SAC
Subject: 46 ft at Port Terminal Reach

Howdy Matt,

Are you guys looking into the obstruction at the Port Terminal reach anytime
this week? The 46 ft obstr, Tab depth is 47.5ft. Let me know what you find
if you do get out there. I am hoping that sounding may be deeper with MB.
If it does come up to 46 ft, NOAA/AHB is going to chart it as an Obstruction
unless there are plans to remove it. That survey is in review right now. A
diver investigation might be imminent to at least determine what it is. Drop
a line or give a call anytime.

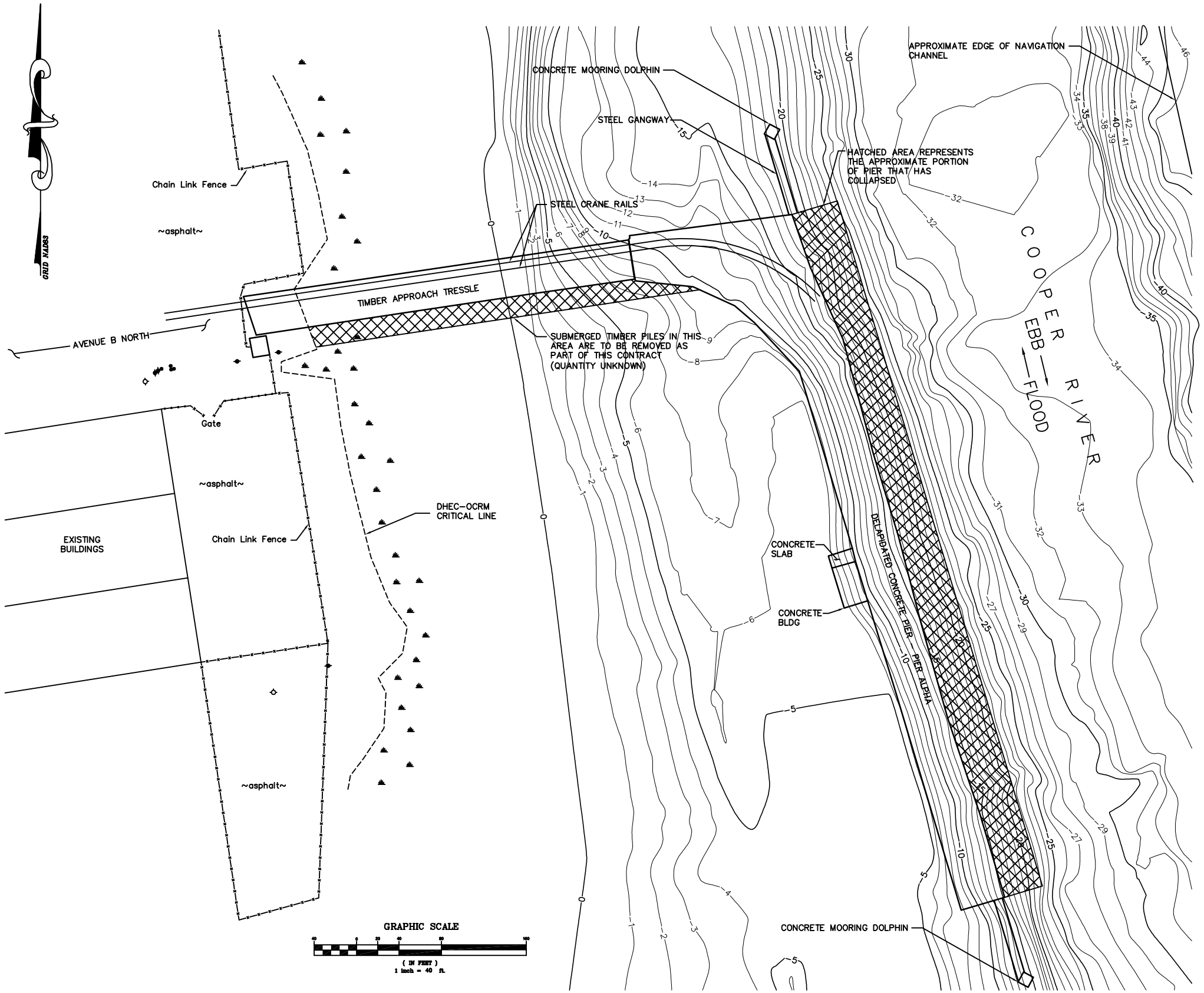
Best regards, D.

904-229-9359 cell



RE: 46 ft at Port Terminal Reach.eml	**Content-Type:** message/rfc822 **Content-Encoding:** 7bit

PortTerminalReachObstruction.jpg	**Content-Description:** PortTerminalReachObstruction.jpg **Content-Type:** image/jpeg **Content-Encoding:** base64



GENERAL NOTES:

1. THE CONTRACTOR SHALL VERIFY ALL FIELD CONDITIONS, QUANTITIES, DIMENSIONS, AND EXISTING UTILITIES IN THE AREA PRIOR TO DEMOLITION, AND SHALL COORDINATE THE WORK OF ALL TRADES. ALL DISCREPANCIES SHALL BE PROMPTLY BROUGHT TO THE ATTENTION OF THE ENGINEER.
2. THE CONTRACTOR SHALL EXECUTE ALL WORK WITH CARE TO PROTECT ADJACENT NEW AND EXISTING SURFACES TO REMAIN, TO BE REUSED, OR TO BE REINSTALLED. ALL DAMAGE TO SUCH AREAS SHALL BE REPAIRED, REPLACED AND FINISHED TO MATCH ORIGINAL CONDITIONS AS APPROVED BY THE ENGINEER, AT NO ADDITIONAL COST TO THE CITY.
3. ALL WORK UNDER THIS CONTRACT SHALL COMPLY WITH "THE SAFETY AND HEALTH REGULATIONS FOR CONSTRUCTION" (29 CFR 1926), THE ARMY CORPS OF ENGINEERS PUBLICATION EM-385-1-1, ALL LOCAL REGULATIONS, AND ALL SPECIFICATIONS INCLUDED WITH THE CONTRACT DOCUMENTS.
4. THE CONTRACTOR SHALL AT ALL TIMES KEEP THE PREMISES FREE FROM ACCUMULATION OF WASTE MATERIALS OR RUBBISH CAUSED BY THE OPERATIONS. AT THE COMPLETION OF THE WORK, THE CONTRACTOR SHALL REMOVE ALL WASTE MATERIALS AND RUBBISH FROM AND ABOUT THE PROJECT, AS WELL AS TOOLS, MACHINERY AND SURPLUS MATERIALS.
5. THE CONTRACTOR SHALL VERIFY MATERIALS, EQUIPMENT, AND METHODS OF INSTALLATION AND EXECUTION OF WORK TO CONFORM WITH PROJECT'S GUIDE OF SPECIFICATIONS.

LAND SURVEY NOTES:

1. ANYTHING SHOWN OUTSIDE THE DEFINED BOUNDARY OF THIS PLAT IS FOR DESCRIPTIVE PURPOSES ONLY.
2. ALL ELEVATIONS ARE BASED ON MEAN LOW WATER.
3. COORDINATES ARE BASED ON SC STATE PLANE GRID NAD 1983.

HYDROGRAPHIC SURVEY NOTES:

1. THE HYDROGRAPHIC SURVEY WAS COMPLETED ON NOVEMBER 7, 2007 BY COLLINS ENGINEERS, INC AND CAN ONLY BE CONSIDERED A REPRESENTATION OF THE EXISTING CONDITIONS AT THAT TIME.
2. SOUNDINGS WERE OBTAINED USING A CONTINUOUS RECORDING FATHOMETER OPERATING AT 200 KHZ.
3. HORIZONTAL POSITION WAS OBTAINED USING A SUB METER DGPS.
4. ALL CHANNEL BOTTOM ELEVATIONS ARE IN FEET AND ARE REFERENCED TO MEAN LOW WATER.
5. BASE MAP INFORMATION SHOWN ON THIS DRAWING WAS PROVIDED BY SOUTHEASTERN SURVEYING OF CHARLESTON, INC.
6. THIS HYDROGRAPHIC SURVEY WAS CONDUCTED TO EVALUATE WATER DEPTHS ADJACENT TO PIER ALPHA.

APPROXIMATE REMOVAL QUANTITIES:

1. TIMBER PILES – 1450 EA.
2. CONCRETE – 8,500 TONS
3. TIMBER (NOT INCLUDING PILES) – 11,352 CU. FT.
4. STEEL – 410 TONS
5. CONCRETE PILES – 8 EA.

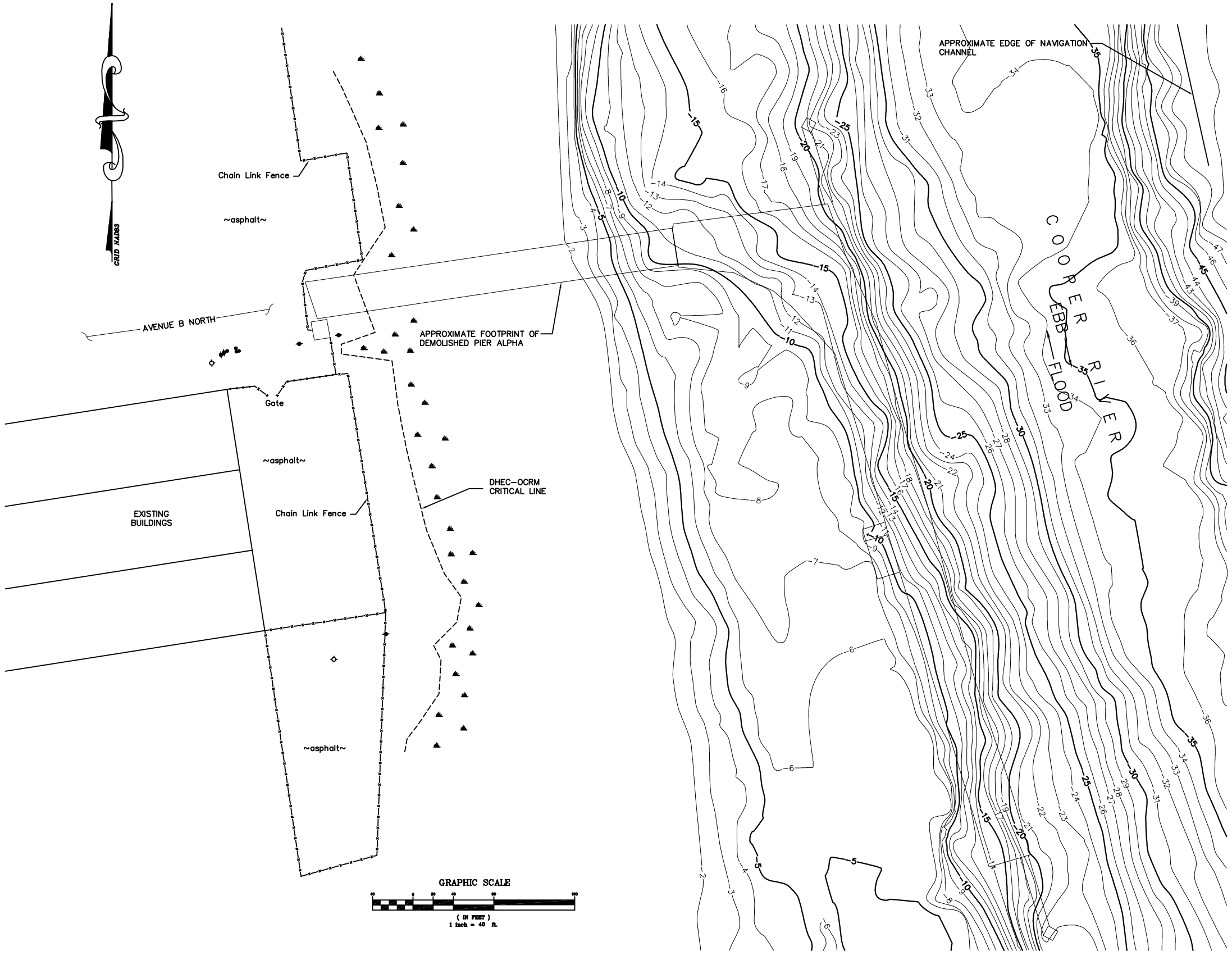
*NOTE: ALL QUANTIES ARE APPROXIMATE AND SHOULD BE VERIFIED BY THE CONTRACTOR PRIOR TO BIDDING.

THE CITY OF NORTH CHARLESTON

PIER ALPHA DEMOLITION

EXISTING SITE PLAN

DRAWN BY: WDB	COLLINS ENGINEERS, INC. 1180 SAM RITTENBERG BLVD., SUITE 105 CHARLESTON, SC 29407 (843) 763-1576	DATE: MAR. 2008
CHECKED BY: WDB		SCALE: AS NOTED
CODE: 5378-40		SHEET NO.: 2



LAND SURVEY NOTES:

1. ANYTHING SHOWN OUTSIDE THE DEFINED BOUNDARY OF THIS PLAT IS FOR DESCRIPTIVE PURPOSES ONLY.
2. ALL ELEVATIONS ARE BASED ON MEAN LOW WATER.
3. COORDINATES ARE BASED ON SC STATE PLANE GRID NAD 1983.

HYDROGRAPHIC SURVEY NOTES:

1. THE HYDROGRAPHIC SURVEY WAS COMPLETED ON JANUARY 23, 2009 BY COLLINS ENGINEERS, INC AND CAN ONLY BE CONSIDERED A REPRESENTATION OF THE EXISTING CONDITIONS AT THAT TIME.
2. SOUNDINGS WERE OBTAINED USING A CONTINUOUS RECORDING FATHOMETER OPERATING AT 200 KHZ.
3. HORIZONTAL POSITION WAS OBTAINED USING A SUB METER DGPS.
4. ALL CHANNEL BOTTOM ELEVATIONS ARE IN FEET AND ARE REFERENCED TO MEAN LOW WATER.
5. BASE MAP INFORMATION SHOWN ON THIS DRAWING WAS PROVIDED BY SOUTHEASTERN SURVEYING OF CHARLESTON, INC.

THE CITY OF NORTH CHARLESTON

PIER ALPHA DEMOLITION

EXISTING SITE PLAN

DRAWN BY: WDB	COLLINS ENGINEERS, INC. 1180 SAM RITTENBERG BLVD., SUITE 105 CHARLESTON, SC 29407 (843) 763-1576	DATE: JAN. 2009
CHECKED BY: WDB		SCALE: AS NOTED
CODE: 5378-40		SHEET NO.: 1

Subject: Fwd: Pier Alpha removal
From: Robert.Ramsey@noaa.gov
Date: Thu, 18 Mar 2010 11:42:50 +0000 (GMT)
To: gene parker <Castle.E.Parker@noaa.gov>, David Elliott <David.Elliott@noaa.gov>

Gene,

This is a heads up on H-11863 that you are stamping to go out the door. If we can add this to the Supplemental correspondence of the Survey. We can remove this pier before you submit H-11863.

Dave, if you want, give Gene a call, as he holds the survey at this moment, and maybe we can get the pier gone. It would be nice to get the Degaussing Plats off as well, but they will already be going down as no longer existing, and or subm obstrn where warranted., based on 200% sss coverage.

Later,

Bob

Subject: Pier Alpha removal
From: David.Elliott@noaa.gov
Date: Wed, 17 Mar 2010 11:59:40 -0400
To: Steve Soherr <Steve.Soherr@noaa.gov>, Ed Martin <Ed.Martin@noaa.gov>
CC: Robert Ramsey <Robert.Ramsey@noaa.gov>

Hello Steve,

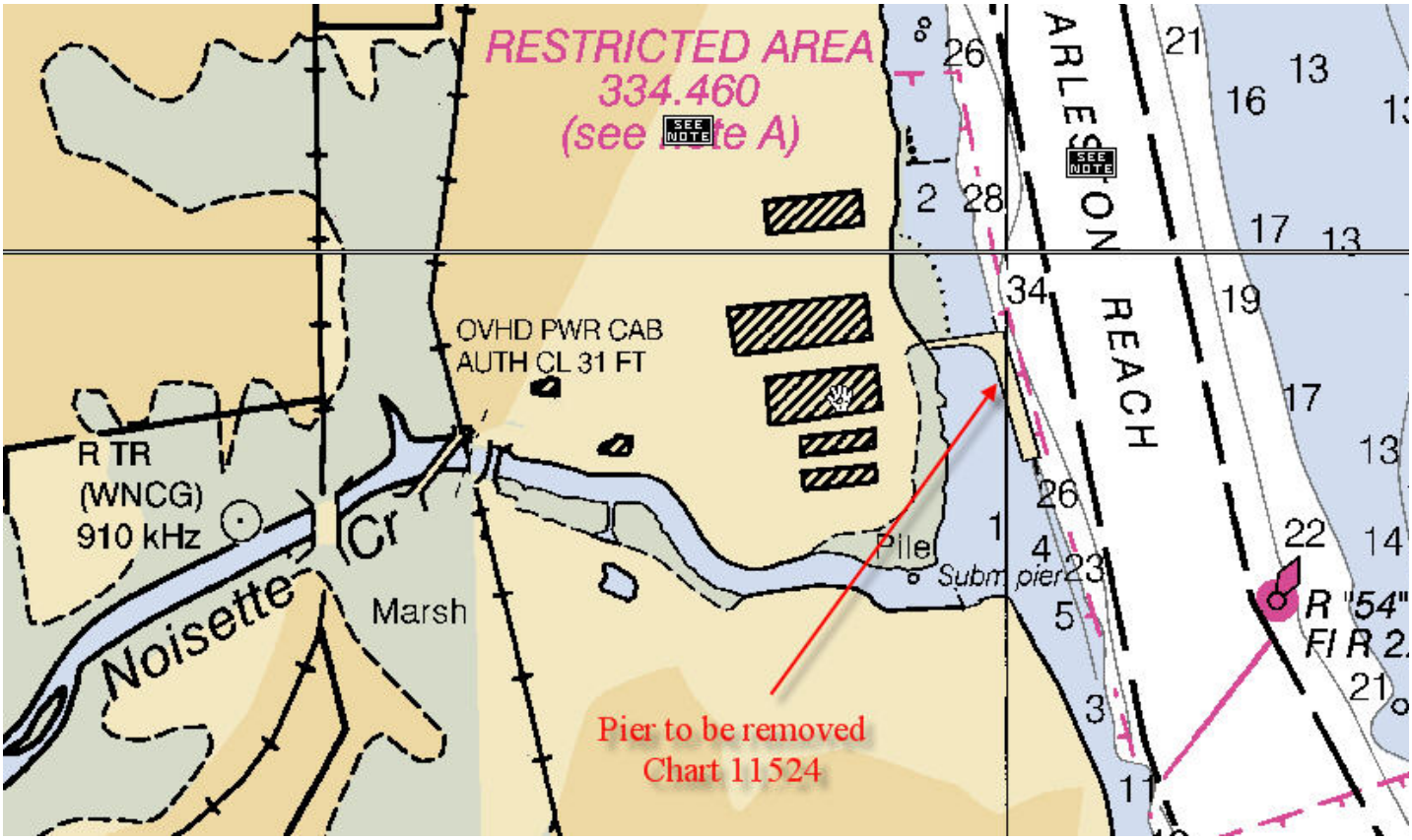
Attached here in the original message are some graphics from William D. Barna, P.E.Collins Engineers, Inc.
1180 Sam Rittenberg Blvd. Suite 105, Charleston, SC 29407, Phone: 843.763.1576. This message came to me from Chief Anthony Certa the USCG AToN, Chief in Charleston. I have also attached a graphic to better show the region. The original information has pre and post surveys of the area as well as a debris removal scan from a Mesotech stationary scanner. I spoke with Mr. Barna this morning and this project was just completed less than a year ago so it would not have been addressed as a part of the survey NRT2 (H11862) did in 2009. I checked with AHB and that survey has cleared and is on it's way to MCD. I believe this number H11862 is good for the Cooper River, Bob can correct me if I am wrong. The City of Charleston now owns this property and will one day rebuild there, so I have been told but who knows when that will be. So for now this Pier should be removed from the chart. At the last Nav Ops meeting some shippers had commented that the feature (Pier A) was not showing up on radar and that was confusing them. Hopefully, this data provided will be enough justification for removal without having to have NRT2 side scan the area. I will be working with Chief Certa on some old Navy Obstructions that should be removed from Chart 11524 and will send those at a later date. They are the Degaussing ranges from long ago. More on that later. If we are lucky we can get this feature removed before the next digital updates.

Best regards, D.

David B. Elliott
NOAA- SE Nav.Mgr.
2234 S. Hobson Ave.
Charleston, SC
29405

843-740-1178 office
904-229-9359 cell

“The problems we create cannot be resolved at the rate we create them.”
Jacques Cousteau



Subject: FW: Pier Alpha
From: "Certa, Anthony BMC" <Anthony.J.Certa@uscg.mil>
Date: Wed, 17 Mar 2010 09:51:41 -0400
To: David.Elliott@noaa.gov

Good morning Dave,
I am trying to get our harbor chart cleaned up and this Pier A is one of the no longer there items. I also have some other water borne structures from the old Navy days I would like to talk to you about.

I'm about to head up to King St to watch the parade with the wife. We will be having lunch at O'Malley's later this afternoon.

Happy St. Patrick's Day! I'll give you a shout,
Tony

-----Original Message-----
From: wbarna@collinsengr.com [mailto:wbarna@collinsengr.com]
Sent: Thursday, March 04, 2010 10:52 AM
To: Certa, Anthony BMC
Subject: Pier Alpha

Tony,

I spoke with you at the last Nav Ops meeting about ATONs and Pier Alpha. I was in charge of the removal of Pier Alpha and I have sent you some documents for your endeavor to have it removed from the charts. I have provided our pre and post demolition hydrographic surveys and one document that shows the actual location of where the pier was in relation to what was shown on the NOAA ENC. The other two items are images from our high resolution underwater acoustic imaging system. The one with the bulls eye rings are actual bottom scans we did at Pier Alpha during the demolition. You can clearly see the bottom debris before removal. The post demolition survey used the same equipment to verify the removal. The other image is with the same system, but scanned in the vertical plane. You can clearly see the bridge foundations and timber piles.

I hope these help. Please let me know if you have any questions. Also, we have done extensive work with USCG ATONs from Canada to Puerto Rico, if you need out assistance with anything, we would be glad to help.

Regards,

Bill

William D. Barna, P.E.

Collins Engineers, Inc.

1180 Sam Rittenberg Blvd. Suite 105

Charleston, SC 29407

Phone: 843.763.1576

Cell: 843.670.3394

Visit us at www.collinsengr.com
<file:///C:\Documents%20and%20Settings\wbarna\Application%20Data\Microsoft\Signatures\www.collinsengr.com>

Pier Alpha removal.eml	**Content-Type:** message/rfc822 **Content-Encoding:** 7bit

Pier to be removed.jpg	**Content-Type:** image/jpeg **Content-Encoding:** base64

FW: Pier Alpha.eml	**Content-Type:** message/rfc822 **Content-Encoding:** 7bit

debris verification- Pier Alpha.pdf	**Content-Description:** debris verification- Pier Alpha.pdf **Content-Type:** application/pdf **Content-Encoding:** base64

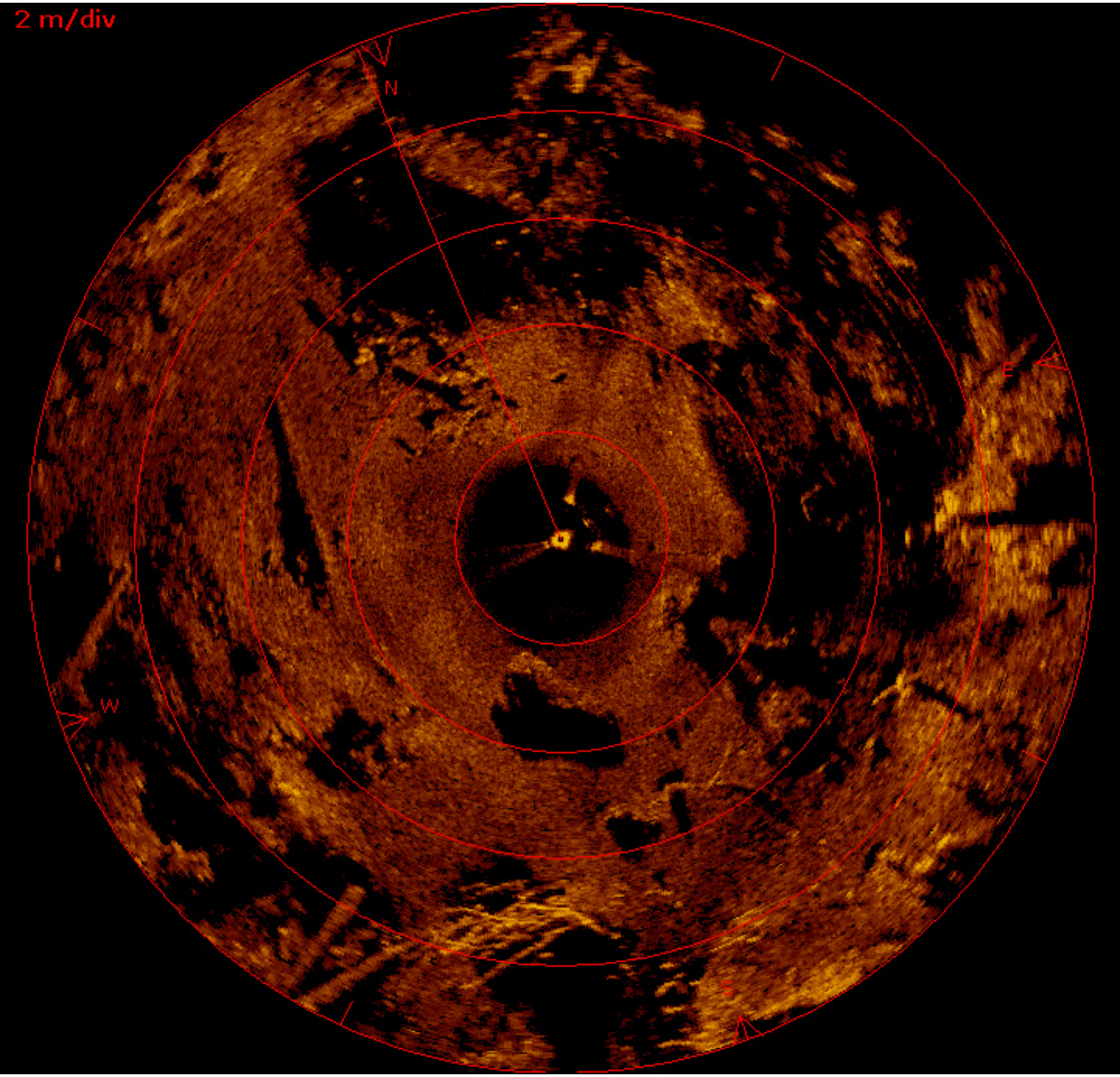
Pier Alpha - Post Demo.pdf	**Content-Description:** Pier Alpha - Post Demo.pdf **Content-Type:** application/pdf **Content-Encoding:** base64

Pier Alpha - Pre Demo.pdf	**Content-Description:** Pier Alpha - Pre Demo.pdf

	Content-Type: application/pdf **Content-Encoding:** base64

Actual vs NOAA ENC.doc	**Content-Description:** Actual vs NOAA ENC.doc **Content-Type:** application/msword **Content-Encoding:** base64

Mesotech Scan.doc	**Content-Description:** Mesotech Scan.doc **Content-Type:** application/msword **Content-Encoding:** base64


2 m/div
N
E
S
W

From "Wilson, Joe SAC" <Joe.Wilson@usace.army.mil>
Sent Wednesday, September 23, 2009 3:14 pm
To David.Elliott@noaa.gov
Cc "Moebs, Norman D SAC" <Norman.D.Moebs@usace.army.mil> , Robert.Ramsey@noaa.gov , "Wolf, Philip M SAC" <Philip.M.Wolf@usace.army.mil> , "Hubbard, David F SAC" <David.F.Hubbard@usace.army.mil> , "Foss, Matthew D SAC" <Matthew.D.Foss@usace.army.mil>
Subject RE: FW: Filbin Crk Reach obstn's

David,
Thank you so much for forwarding the information on the two "obstructions" in our channel. We are currently making plans to have a dive team dive on both locations. Once the objects are identified we intend to have them removed from the project. Please DO NOT have them identified on 11524 or any other NOAA chart as obstruction, wrecks, etc. . .

Joseph L. Wilson

Navigation PM
Charleston District ACOE

-----Original Message-----
From: David.Elliott@noaa.gov [mailto:David.Elliott@noaa.gov]
Sent: Wednesday, September 23, 2009 8:12 AM
To: Foss, Matthew D SAC
Cc: Wilson, Joe SAC; Moebs, Norman D SAC; Robert.Ramsey@noaa.gov; Wolf, Philip M SAC; Hubbard, David F SAC
Subject: Re: FW: Filbin Crk Reach obstn's

Matt, Norm, Joe

Hello to all and thank you for your timely response. We hope this data and inter agency cooperation will be beneficial to everyone. Our goal is for information purposes as a courtesy so these features do not get charted in the channel. NRT2 will make note in the Descriptive Report that the features have been reported to USACOE and will be addressed. Please let me know when these features are disposed of so I can contact the Marine Chart Division and be absolutely certain they stay off the chart. I see no need to bring these features up at the next MASC meeting unless it is something you guys want to discuss. Otherwise we will just keep it in house. If we can be of any further assistance call or drop a line anytime.

Best regards, D.

David B. Elliott
NOAA- SE Nav.Mgr.
2234 S. Hobson Ave.
Charleston, SC
29405

843-740-1178 office
904-229-9359 cell

"The water taste funny when you're far from your home but it's only the thirsty that hunger to roam! " John Prine

----- Original Message -----
From: "Foss, Matthew D SAC" <Matthew.D.Foss@usace.army.mil>
Date: Friday, September 18, 2009 10:32 am
Subject: FW: Filbin Crk Reach obstn's
To: "Wilson, Joe SAC" <Joe.Wilson@usace.army.mil>, "Moebs, Norman D SAC" <Norman.D.Moebs@usace.army.mil>
Cc: Robert.Ramsey@noaa.gov, David Elliott <David.Elliott@noaa.gov>, "Wolf,

Philip M SAC" <Philip.M.Wolf@usace.army.mil>, "Hubbard, David F SAC" <David.F.Hubbard@usace.army.mil>

> Joe/Norm,
>
> NOAA reported an obstruction under the 526 bridge and sent this email
> to me yesterday. We collected MB condition survey data over this area
> this Wednesday and are confirming that this target exists. From the
> MB data we collected we believe this not to be two separate objects
> but one 75'x 25" x 4'high obstruction with a depth of 44.3ft MLLW.
> This obstruction was in between our condition survey lines therefore
> never discovered. We want to investigate this item further with SB to
> confirm the 44.3ft depth because we are still in the testing phases of
> the MB sytem. Please inform NOAA of our intentions for removal of
> this object.
>
> Thanks,
> Matt
>
> -----Original Message-----
> From: Robert.Ramsey@noaa.gov [
> Sent: Thursday, September 17, 2009 10:40 AM
> To: David Elliott; Foss, Matthew D SAC; Wolf, Philip M SAC
> Subject: Filbin Crk Reach obstn's
>
> Matt,
>
> The positions for these two are:
>
> 44 ft 32ø53'30.16" N 079ø57'51.98" W ; (596857.88 , 3639757.49)
> 44 ft 32ø53'30.02" N 079ø57'52.56" W ; (596843.05 , 3639752.91)
>
>
> Attached are snapshots from Mapinfo.
>
> Please email me back with yawls intent and or resolution dates
> expected. Let
> me know if removal will be delayed to a point that you (USACOE) would
> like
> NOAA to chart these items as obstn's.
>
> Dave, I would let this go through you, but I know your in meeting
> today. I
> talk to Rick Brennan about it , and you are the normal conduit for this
> communication Inter-Agency, with the USACE.
>
> Thanks,
>
> Bob

From "Foss, Matthew D SAC" <Matthew.D.Foss@usace.army.mil>
Sent Friday, September 18, 2009 2:39 pm
To "Wilson, Joe SAC" <Joe.Wilson@usace.army.mil> , "Moebs, Norman D SAC" <Norman.D.Moebs@usace.army.mil>
Cc Robert.Ramsey@noaa.gov , David Elliott <David.Elliott@noaa.gov> , "Wolf, Philip M SAC" <Philip.M.Wolf@usace.army.mil> , "Hubbard, David F SAC" <David.F.Hubbard@usace.army.mil> , "Wells, Brian R SAC" <Brian.R.Wells@usace.army.mil>
Subject FW: Clouter Crk Obstn
Attachments 45ft obstn 2.jpg 156K

Joe/Norm,

We have not verified this object yet as we have not made it to the area in question with the MB. Next week we will be working on this area and will report our results.

Matt

-----Original Message-----
From: Robert.Ramsey@noaa.gov [mailto:Robert.Ramsey@noaa.gov]
Sent: Thursday, September 17, 2009 12:11 PM
To: David Elliott; Foss, Matthew D SAC; Wolf, Philip M SAC
Subject: Clouter Crk Obstn

Matt,

Here is one more located in Clouter Creek Rch.

A 45ft obstn was located in Clouter Crk Reach at 32°51'26.18" N, 079°56'59.68" W. This is shoaler than the chart tabulation table of 47ft. This information was passed along to the local USACOE for resolution, and removal (email sent 17 Sep 2009).

Same as before, just email me back on what yawl want on this one as well.

Dave, same as before.

Later,

Bob

From "Foss, Matthew D SAC" <Matthew.D.Foss@usace.army.mil>
Sent Friday, September 18, 2009 2:31 pm
To "Wilson, Joe SAC" <Joe.Wilson@usace.army.mil> , "Moebs, Norman D SAC" <Norman.D.Moebs@usace.army.mil>
Cc Robert.Ramsey@noaa.gov , David Elliott <David.Elliott@noaa.gov> , "Wolf, Philip M SAC" <Philip.M.Wolf@usace.army.mil> , "Hubbard, David F SAC" <David.F.Hubbard@usace.army.mil>
Subject FW: Filbin Crk Reach obstn's
Attachments

NOAA_44ft obstn 2.jpg	173K	COE_Don Holt Shoal.jpg	146K	COE_Shoal_44 3ft.jpg	189K
COE_Shoal_45 6.jpg	189K	NOAA_44ft obstn 1.jpg	158K		

Joe/Norm,

NOAA reported an obstruction under the 526 bridge and sent this email to me yesterday. We collected MB condition survey data over this area this Wednesday and are confirming that this target exists. From the MB data we collected we believe this not to be two separate objects but one 75'x 25" x 4'high obstruction with a depth of 44.3ft MLLW. This obstruction was in between our condition survey lines therefore never discovered. We want to investigate this item further with SB to confirm the 44.3ft depth because we are still in the testing phases of the MB sytem. Please inform NOAA of our intentions for removal of this object.

Thanks,
Matt

-----Original Message-----
From: Robert.Ramsey@noaa.gov [mailto:Robert.Ramsey@noaa.gov]
Sent: Thursday, September 17, 2009 10:40 AM
To: David Elliott; Foss, Matthew D SAC; Wolf, Philip M SAC
Subject: Filbin Crk Reach obstn's

Matt,

The positions for these two are:

44 ft 32ø53'30.16" N 079ø57'51.98" W ; (596857.88 , 3639757.49)
44 ft 32ø53'30.02" N 079ø57'52.56" W ; (596843.05 , 3639752.91)

Attached are snapshots from Mapinfo.

Please email me back with yawls intent and or resolution dates expected. Let me know if removal will be delayed to a point that you (USACOE) would like NOAA to chart these items as obstn's.

Dave, I would let this go through you, but I know your in meeting today. I talk to Rick Brennan about it , and you are the normal conduit for this communication Inter-Agency, with the USACE.

Thanks,

Bob

From <Robert.Ramsey@noaa.gov>
Sent Tuesday, September 15, 2009 6:08 pm
To Survey Outlines <Survey.Outlines@noaa.gov>
Subject Survey Outline OPR-G347-NRT2-08 // H11863
Attachments H11863_FinalSurveyCoverage.zip 3K

Please find attached Mapinfo Tables with the final Survey Outlines for survey H-11863,2009.

OPR-G347-NRT2-08
H-11863
1:10,000
S-1210
South Carolina

Please contact NRT2 with any questions

RW Ramsey
NRT2 Team Lead

From Smooth.Tides@noaa.gov
Sent Friday, September 4, 2009 3:33 pm
To Robert.Ramsey@noaa.gov
Subject Return Receipt (displayed) - Smooth Tide Request OPR-G347-NRT2-08 // H-11863
Attachments MDNPart2.txt 1K MDNPart3.txt 1K

This is a Return Receipt for the mail that you sent to Smooth.Tides@noaa.gov.

Note: This Return Receipt only acknowledges that the message was displayed on the recipient's computer. There is no guarantee that the recipient has read or understood the message contents.

Return-path: <Robert.Ramsey@noaa.gov>
Disposition-notification-to: Robert.Ramsey@noaa.gov
Received: from noaa.gov ([127.0.0.1])
by mail.nos.noaa.gov (Sun Java System Messaging Server 6.2-7.05 (built Sep 5
2006)) with ESMTP id <0KPG00ARO8IPBRB0@mail.nos.noaa.gov> for
smooth.tides@noaa.gov; Fri, 04 Sep 2009 09:37:37 -0400 (EDT)
Received: from [74.178.8.117] by mail.nos.noaa.gov (mshttpd); Fri,
04 Sep 2009 13:37:37 +0000 (GMT)
Date: Fri, 04 Sep 2009 13:37:37 +0000 (GMT)
From: Robert.Ramsey@noaa.gov
Subject: Smooth Tide Request OPR-G347-NRT2-08 // H-11863
To: Smooth Tides Request <Smooth.Tides@noaa.gov>
Message-id: <de769188165251f7.4aa11821@noaa.gov>
MIME-version: 1.0
X-Mailer: Sun Java(tm) System Messenger Express 6.2-7.05 (built Sep 5 2006)
Content-type: multipart/mixed; boundary=--467fd411566619c24e3196764a7c428e
Content-language: en
X-Accept-Language: en
Priority: normal
Original-recipient: rfc822;smooth.tides@noaa.gov

From <Robert.Ramsey@noaa.gov>
Sent Friday, September 4, 2009 1:37 pm
To Smooth Tides Request <smooth.tides@noaa.gov>
Subject Smooth Tide Request OPR-G347-NRT2-08 // H-11863
Attachments H11863_Requested_SmoothTides.zip 364K

Please find attached request for smooth tides for the following:

OPR-G347-NRT2-08
H-11863, 2009
S-1210
Scale 1:10,000
Cooper River
Charleston, SC

Gauge 866-5530

This is a TCARI Project.

Thank You,

RW Ramsey Jr
NRT2 Team Lead

From Gerald Hovis <Gerald.Hovis@noaa.gov>
Sent Wednesday, September 23, 2009 1:11 pm
To "'robert.ramsey@noaa.gov'" <Robert.Ramsey@noaa.gov>
Subject Fw: Final Tides for OPR-G347-NRT2-2009, H11863
Attachments H11863.pdf 536K

Try this one
Jerry

From: Lijuan Huang <Lijuan.Huang@noaa.gov>
To: Norris A Wike <Norris.A.Wike@noaa.gov>; David Elliott <David.Elliott@noaa.gov>
Cc: _NOS.CO-OPS.HTP <NOS.COOPS.HPT@noaa.gov>
Sent: Tue Sep 22 15:17:25 2009
Subject: Final Tides for OPR-G347-NRT2-2009, H11863

UNITED STATES DEPARMENT OF COMMERCE
National Oceanic and Atmospheric Administration
National Ocean Service
Silver Spring, Maryland 20910

DATE: 09/22/2009

MEMORANDUM FOR: LCDR Shepard Smith
Chief, Atlantic Hydrograhic Branch

FROM: Gerald Hovis
Oceanographic Division/Requirements and Development Division, N/OPS1

SUBJECT: Delivery of Tide Requirements for Hydrographic Surveys

This is notification that the preliminary TCARI grid is accepted as the final grid for survey project OPR-G347-NRT2-2009, Registry No. H11863 during the time period between May 27 and September 2, 2009. The accepted reference station for Registry No. H11863 is Charleston, SC (866-5530).

Included with this memo is Tide Note in .PDF format , stating the preliminary grid have been accepted as the final grid.


```
--
Name:         Lijuan Huang
Title:        IMSG Contractor
Organization: NOAA/NOS/CO-OPS
Address:      1305 East-West Highway
              N/OPS3, Sta. 6342, SSMC4
              Silver Spring, MD 20910-3218
Email:        lijuan.huang@noaa.gov
Phone:        1-301-713-2890 x192
```

From Mark.Frydrych@noaa.gov
Sent Thursday, September 17, 2009 2:05 pm
To Robert.Ramsey@noaa.gov
Subject Return Receipt (displayed) - Raw Data Size H11863
Attachments MDNPart2.txt 1K MDNPart3.txt 1K

This is a Return Receipt for the mail that you sent to mark.frydrych@noaa.gov.

Note: This Return Receipt only acknowledges that the message was displayed on the recipient's computer. There is no guarantee that the recipient has read or understood the message contents.

Return-path: <Joseph.E.Salazar@noaa.gov>
Disposition-notification-to: Robert.Ramsey@noaa.gov
Received: from mail.nos.noaa.gov (mail.nos.noaa.gov [140.90.114.20])
by email.boulder.noaa.gov
(iPlanet Messaging Server 5.2 HotFix 2.01 (built Aug 26 2004))
id <0KQ40060160TDF@email.boulder.noaa.gov>
(original mail from Robert.Ramsey@noaa.gov); Thu,
17 Sep 2009 12:03:32 +0000 (GMT)
Received: from mail.nos.noaa.gov (mail.nos.noaa.gov [140.90.114.20])
by email.boulder.noaa.gov
(iPlanet Messaging Server 5.2 HotFix 2.01 (built Aug 26 2004))
with ESMTP id <0KQ4004J26TUOH@email.boulder.noaa.gov> for hydro.info@noaa.gov;
Thu, 17 Sep 2009 12:03:31 +0000 (GMT)
Received: from noaa.gov ([127.0.0.1])
by mail.nos.noaa.gov (Sun Java System Messaging Server 6.2-7.05 (built Sep 5
2006)) with ESMTP id <0KQ400KIZ6TUD060@mail.nos.noaa.gov> for
hydro.info@noaa.gov (ORCPT hydro.info@noaa.gov); Thu,
17 Sep 2009 08:03:30 -0400 (EDT)
Received: from [74.178.8.117] by mail.nos.noaa.gov (mshttpd); Thu,
17 Sep 2009 12:03:30 +0000 (GMT)
Date: Thu, 17 Sep 2009 12:03:30 +0000 (GMT)
From: Robert.Ramsey@noaa.gov
Subject: Raw Data Size H11863
To: Hydro Info <hydro.info@noaa.gov>,
Richard T Brennan <Richard.T.Brennan@noaa.gov>
Cc: "Lawrence T. Krepp" <Lawrence.T.Krepp@noaa.gov>
Message-id: <932afbb51d4a1318.4ab22592@noaa.gov>
MIME-version: 1.0
X-Mailer: Sun Java(tm) System Messenger Express 6.2-7.05 (built Sep 5 2006)
Content-type: multipart/mixed; boundary="Boundary_(ID_sDb/U4qzYJGBkOCHNWoF1w)"
Content-language: en
X-Accept-Language: en
Priority: normal

From <Robert.Ramsey@noaa.gov>
Sent Thursday, September 17, 2009 12:03 pm
To Hydro Info <hydro.info@noaa.gov> , Richard T Brennan <Richard.T.Brennan@noaa.gov>
Cc Lawrence T. Krepp <Lawrence.T.Krepp@noaa.gov>
Subject Raw Data Size H11863
Attachments Raw Data Size.jpg 53K

OPR-G347-NRT2-08 / Survey # H11863
(Sheet "D") Cooper River, SC
NOAA Launch 1210
VBES= 8.71 gb / SSS= 15.08 gb

Submission Planned:

September, 2009 from Charleston, SC
to Atlantic Hydrographic Branch, Norfolk, VA

From OCS.NDB@noaa.gov
Sent Tuesday, September 15, 2009 5:17 pm
To Robert.Ramsey@noaa.gov
Subject Return Receipt (displayed) - Final Coast Pilot Report
Attachments MDNPart2.txt 1K MDNPart3.txt 1K

This is a Return Receipt for the mail that you sent to ocs.ndb@noaa.gov.

Note: This Return Receipt only acknowledges that the message was displayed on the recipient's computer. There is no guarantee that the recipient has read or understood the message contents.

Return-path: <Robert.Ramsey@noaa.gov>
Disposition-notification-to: Robert.Ramsey@noaa.gov
Received: from noaa.gov ([127.0.0.1])
by mail.nos.noaa.gov (Sun Java System Messaging Server 6.2-7.05 (built Sep 5
2006)) with ESMTP id <0KQ000LQBVYEOG80@mail.nos.noaa.gov>; Tue,
15 Sep 2009 13:15:51 -0400 (EDT)
Received: from [74.178.8.117] by mail.nos.noaa.gov (mshttpd); Tue,
15 Sep 2009 17:15:50 +0000 (GMT)
Date: Tue, 15 Sep 2009 17:15:50 +0000 (GMT)
From: Robert.Ramsey@noaa.gov
Subject: Final Coast Pilot Report
To: ocs ndb <OCS.NDB@noaa.gov>, Steve Soherr <Steve.Soherr@noaa.gov>
Message-id: <ad12323f5b4e562e.4aafcbc6@noaa.gov>
MIME-version: 1.0
X-Mailer: Sun Java(tm) System Messenger Express 6.2-7.05 (built Sep 5 2006)
Content-type: multipart/mixed; boundary=--5e488d97d367dc33c6bb1c2696aea9a
Content-language: en
X-Accept-Language: en
Priority: normal

From <Robert.Ramsey@noaa.gov>
Sent Tuesday, September 15, 2009 5:15 pm
To ocs ndb <ocs.ndb@noaa.gov> , Steve Soherr <Steve.Soherr@noaa.gov>
Bcc Chris Hare <Christopher.Hare@noaa.gov>
Subject Final Coast Pilot Report
Attachments CP4-07-39Ed-pages 268-281_edited.rtf 249K

Attached please find the final Coast Pilot Section review for OPR-G347-NRT2-08, H11863,2009.
This concludes this sections review. No further Coast Pilot Review may be anticipated for this project.

This review is submitted with the Survey Data Package for informational use to AHB.

Please feel free to contact this unit for any question.

Thank You,

RW Ramsey Jr
NRT2 Team Lead

From "ocs.ndb" <OCS.NDB@noaa.gov>
Sent Thursday, August 6, 2009 2:33 pm
To Robert.Ramsey@noaa.gov , Douglas Harpine <Douglas.Harpine@noaa.gov> , Andrew Kampia <Andrew.Kampia@noaa.gov> , Castle E Parker <Castle.E.Parker@noaa.gov> , Dave Neander <Dave.Neander@noaa.gov> , Ed Martin <Ed.Martin@noaa.gov> , Howard Danley <Howard.Danley@noaa.gov> , Jim Crocker <James.M.Crocker@noaa.gov> , Joseph Robinson <Joseph.Robinson@noaa.gov> , Ken Forster <Ken.Forster@noaa.gov> , Kevin Shaw <Kevin.Shaw@noaa.gov> , Mark Griffin <Mark.Griffin@noaa.gov> , NDB e-Mailbox <OCS.NDB@noaa.gov> , Richard Sillcox <Richard.Sillcox@noaa.gov> , Rick Brennan <Richard.T.Brennan@noaa.gov> , Stephen Hill <Stephen.Hill@noaa.gov> , Tara Wallace <Tara.Wallace@noaa.gov> , Tom Loeper <Thomas.Loeper@noaa.gov> , Travis Newman <Travis.Newman@noaa.gov>
Subject Re: OPR-G347-NRT2-08 // H11863 DTON
Attachments H11863_DTON_08062009.zip 2.6MB

L-1077-2009 and DD-15165 have been registered by the Nautical Data
Branch and directed to Products Branch E for processing.

The DTONs reported are two features in Shipyard Creek and Cooper River, SC

The following chart is affected:
11524 kapp 215

The following ENC is affected:
US5SC14M

References:
H-11863
OPR-G347-NRT2-08

This information was discovered and submitted by NRT2.

Robert.Ramsey@noaa.gov wrote:
> The attached DTON is in the confines of the following survey , and was deemed to warrant early release.
>
> OPR-G347-NRT2-08
> H-11863
> Cooper River
> Charleston,SC
> Scale 1:10,000
>
>
> RWR

From Kelly Kriner <Kelly.Kriner@noaa.gov>
Sent Monday, June 15, 2009 9:04 pm
To Robert Ramsey <Robert.Ramsey@noaa.gov>
Cc Christopher Hare <Christopher.Hare@noaa.gov>
Subject Chart 11524 Ordinance Area
Attachments L486-2003[1].TIF 3.2MB

Hi Bob,

I did some research into the chart features for Chris:

Unexploded Ordnance (Rep 1979) PA at west edge of Daniel Island Reach - chart 11524.
See attached letter for the latest info regarding this area (L-486-2003).
In summary:
NW-SE Rectangle added to chart in 1976 based on a Blue Print from the Charleston Naval Shipyard submitted during request for moorings. BP (map of Charleston Naval Shipyard and vicinity) included the charted rectangle with text inside reading:
" TWO AN MARK 47 TORPEX LOADED DEPTH BOMBS DROPPED IN THIS AREA 20 NOVEMBER 1943"

The rectangle was modified in 2003 to show the south eastern corner clipped so as to be outside the channel limits when the new channel limits were charted (post dredging). (Based on L-486-2003) See this letter (Attached) for a good summary of previous research and correspondence regarding the area.

also,

F
The F is listed as cooper river light and was added 1-30-2001 from a local Notice to Mariners listed as F W LT (Visible 360 degrees) in 32-50-19.680N 079-56-01.380W

Hope that helps!
Let me know if you need more info or clarification ;)

Kelly

--
Kelly Kriner
Navigation Response Branch
SSMC3, 6312
Phone: 301-713-2750 x 175

COMP	CODE	OUT	IN
EB	A	3/3	

486

2003

EB

To: Nautical Data Branch
From: Navigation Services Division
Date: 2/28/2003
Subject: Daniel Island Reach Danger Area (Unexploded Ordinance)

Background:

In mid - January of 2003, Cartographers from Products Branch E received a set of channel surveys of the Cooper River in Charleston, SC. The blueprints indicated that channel widening activities known to be ongoing in the area had finally been completed. Unfortunately, widening in the area of Daniel Island Reach took resulted in the new channel limits clipping a charted danger area labeled "Unexploded Ordinance - Rep 1976".

NSD was made aware of the encroachment and Charleston Regional Navigation Manager, Larry Krepp, was asked to contact both the Navy and the Corps. The attached letter from Larry is based on emails and correspondence with Corps personnel.

Per Chief of the Marine Chart Division, this letter and the attached documentation shall be sufficient for revising the limits of the danger area such that they no longer encroach into the newly widened channel.

Action Required:

Clip the limits of the currently charted danger area back to the edge of the newly widened channel and issue latest tab for the channel in it's entirety based on latest available Corps Surveys.

Attached Documentation:

- Letter from Larry Krepp
- Graphic of Area / Ordinance Field from chart 11524
- Summary of Research and Events by Mark Griffin – Cartographer, PBE
- Extract from H-10858 and 10863 Descriptive Reports
- Email Correspondence between NSD personnel and Charleston Corps Personnel
- Email Correspondence between HSD and U.S. Navy Personnel
- Excerpts from original Source Documents adding the Danger Area (L-26/76 and BP-94767-68)

(E) (D)
Ref: BP179944-945

PRODUCTS
CP4
11524 215
US53C14M
11521 NC

486
MAR 11 2003

From <Robert.Ramsey@noaa.gov>
Sent Thursday, September 17, 2009 4:10 pm
To David Elliott <David.Elliott@noaa.gov> , Matthew D Foss <Matthew.D.Foss@usace.army.mil> , "Wolf, Philip M SAWatSAC" <Philip.M.Wolf@usace.army.mil>
Subject Clouter Crk Obstn
Attachments 45ft obstn 2.jpg 156K

Matt,

Here is one more located in Clouter Creek Rch.

A 45ft obstn was located in Clouter Crk Reach at 32°51'26.18" N, 079°56'59.68" W. This is shoaler than the chart tabulation table of 47ft. This information was passed along to the local USACOE for resolution, and removal (email sent 17 Sep 2009).

Same as before, just email me back on what yawl want on this one as well.

Dave, same as before.

Later,

Bob

From <Robert.Ramsey@noaa.gov>
Sent Thursday, September 17, 2009 2:39 pm
To David Elliott <David.Elliott@noaa.gov> , Matthew D Foss <Matthew.D.Foss@usace.army.mil> , "Wolf, Philip M SAWatSAC" <Philip.M.Wolf@usace.army.mil>
Subject Filbin Crk Reach obstn's
Attachments 44ft obstn 1.jpg 158K 44ft obstn 2.jpg 173K

Matt,

The positions for these two are:

44 ft 32ø53'30.16" N 079ø57'51.98" W ; (596857.88 , 3639757.49)
44 ft 32ø53'30.02" N 079ø57'52.56" W ; (596843.05 , 3639752.91)

Attached are snapshots from Mapinfo.

Please email me back with yawls intent and or resolution dates expected. Let me know if removal will be delayed to a point that you (USACOE) would like NOAA to chart these items as obstn's.

Dave, I would let this go through you, but I know your in meeting today. I talk to Rick Brennan about it , and you are the normal conduit for this communication Inter-Agency, with the USACE.

Thanks,

Bob

From <Robert.Ramsey@noaa.gov>
Sent Thursday, September 17, 2009 6:28 pm
To David Elliott <David.Elliott@noaa.gov> , Matthew D Foss <Matthew.D.Foss@usace.army.mil> , "Wolf, Philip M SAWatSAC" <Philip.M.Wolf@usace.army.mil>
Subject 36ft channel encroachment Daniel Isl Bend
Attachments 36ft channel encroahment pydro.jpg 327K 36ft channel encroahment.jpg 236K

Matt, Dave, Phil,

Shoaling along the western wall of Daniel Island Bend in the vicinity of 32°50'51.83" N, 079°55'56.08" W, to 36ft was identified. The charted tabulation table shows 48.9ft. This information was passed along to the local USACOE for resolution, and removal (email sent 17 Sep 2009).

Same thing, let me know.

Thanks,

Bob

Return-path: <David.Elliott@noaa.gov>
Received: from noaa.gov ([127.0.0.1])
 by mail.nos.noaa.gov (Sun Java System Messaging Server 6.2-7.05 (built Sep 5
 2006)) with ESMTP id <0LH6000ODTFAD510@mail.nos.noaa.gov> for
 Katrina.Wyllie@noaa.gov; Fri, 25 Feb 2011 14:13:59 -0500 (EST)
Received: from [75.201.230.255] by mail.nos.noaa.gov (mshttpd); Fri,
 25 Feb 2011 14:13:58 -0500
Date: Fri, 25 Feb 2011 14:13:58 -0500
From: David.Elliott@noaa.gov
Subject: Re: H11863 Charleston NRT2 Survey
In-reply-to: <4D67F032.7090801@noaa.gov>
To: Katrina Wyllie <Katrina.Wyllie@noaa.gov>
Message-id: <86ae062a5f1c6126.4d67b926@noaa.gov>
MIME-version: 1.0
X-Mailer: Sun Java(tm) System Messenger Express 6.2-7.05 (built Sep 5 2006)
Content-type: text/plain; charset=us-ascii
Content-language: en
Content-transfer-encoding: 7bit
Content-disposition: inline
X-Accept-Language: en
Priority: normal
References: <4D67F032.7090801@noaa.gov>
Original-recipient: rfc822;Katrina.Wyllie@noaa.gov

Hi Katrina,

Thank you for this data. I will send it over to the folks at USACOE in Charleston and wait for their reply. I know there are some ongoing dredge projects so I will give them a chance to reply to the soundings in red and then get back to you early next week.

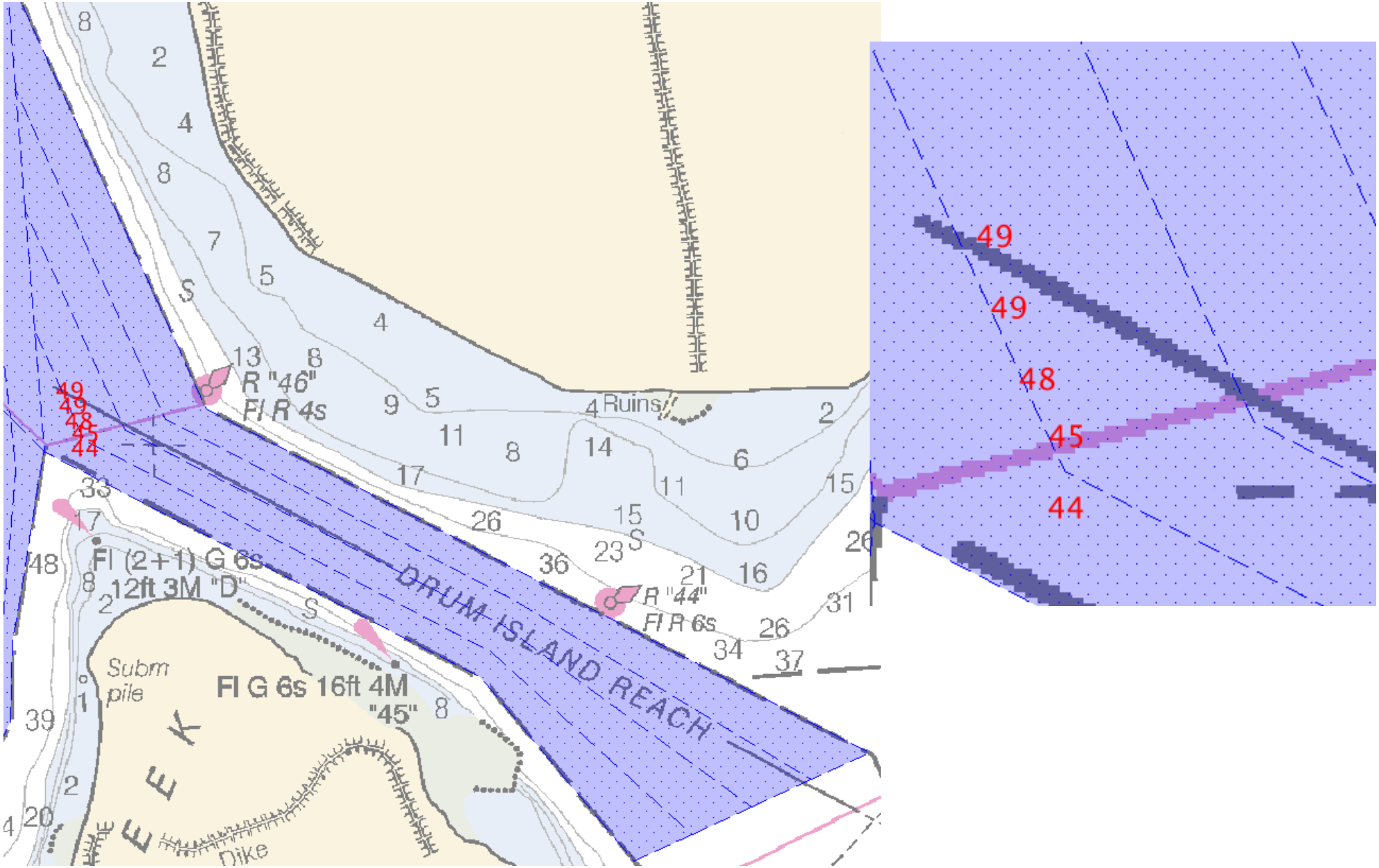
Best regards, D.

----- Original Message -----
From: Katrina Wyllie <Katrina.Wyllie@noaa.gov>
Date: Friday, February 25, 2011 1:08 pm
Subject: H11863 Charleston NRT2 Survey
To: David Elliott <David.Elliott@noaa.gov>

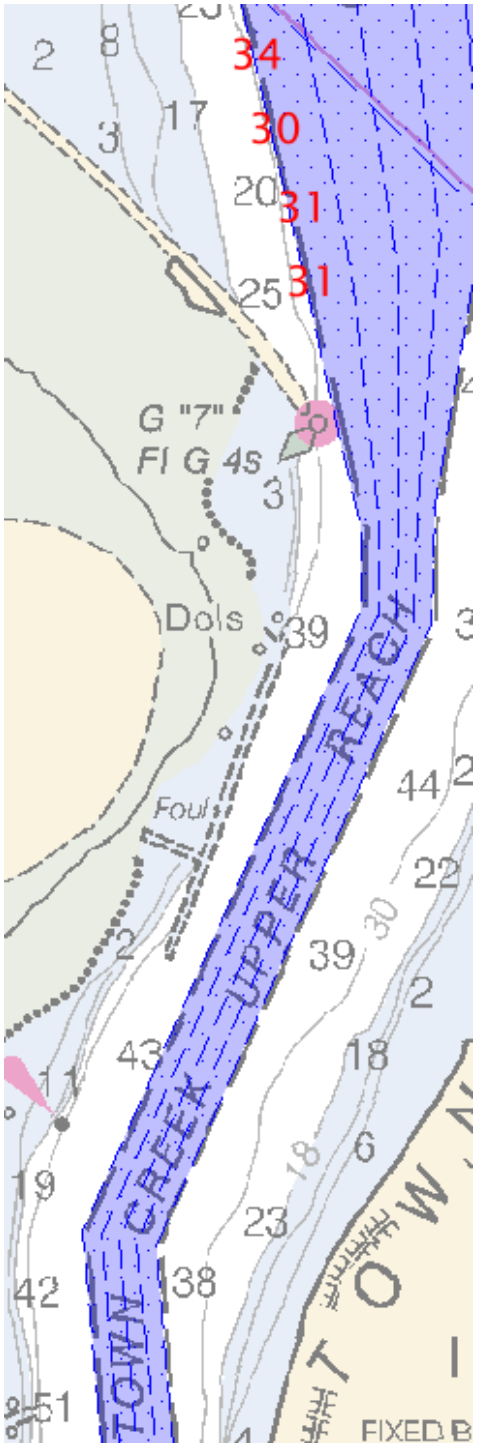
> Hi Dave,
>
> The Charleston survey done by NRT2 (H11863) is almost out the door at
>
> AHB but I wanted to pass along some information about shoal soundings
> in
> federally maintained channels. There had been a lot of discussion
> between the SAR person at AHB with you and USACE on this matter. There
>
> are some emails that state USACE had the intention of removing
> obstructions located by NRT2 and that AHB would not be charting them.
>
> Survey H11863 was completed in September 2009. There was dredge
> activity
> during the survey as well as after. The ENC and RNC have channel
> tabulations dated September 2010 (although, the ENC and RNC tabulated
>
> depths do not match). During my compilation, I found 165 soundings
> that
> were shoaler than the ENC tabulated depths. I understand the channels
>
> have been dredged between the time the survey took place and now. I
> would just like to pass this information along to you so you can take

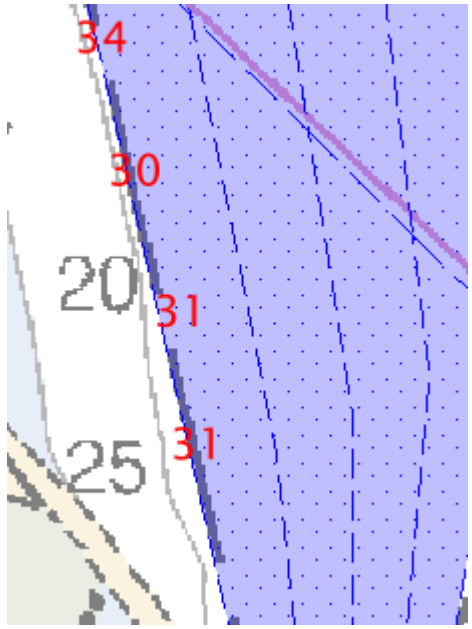
>
> the appropriate action with USACE (if any action is indeed necessary).
> I
> attached a file containing the lat/long and depth of each shoal
> sounding
> as well as a .pdf that has some images of the channels with the shoal
>
> soundings highlighted in red. Please let me know if AHB should chart
> any
> of these shoal soundings in the channels or if the recent dredging
> operations have taken care of some/all of these shoals. Please do not
>
> hesitate to call me, my office number is 757 441 6746 ext 118.
>
> Thank you,
>
> Katrina Wyllie

Drum Island Reach

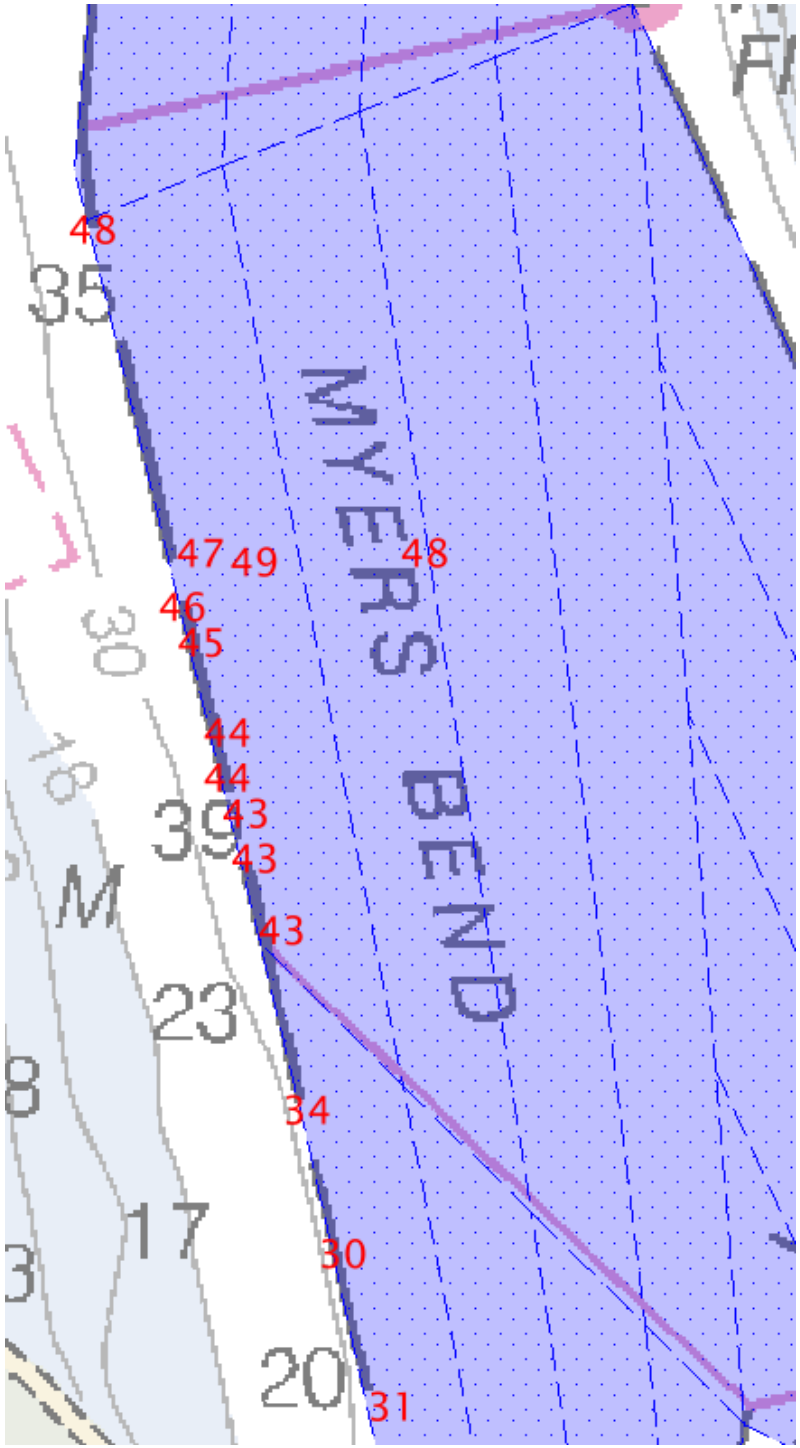


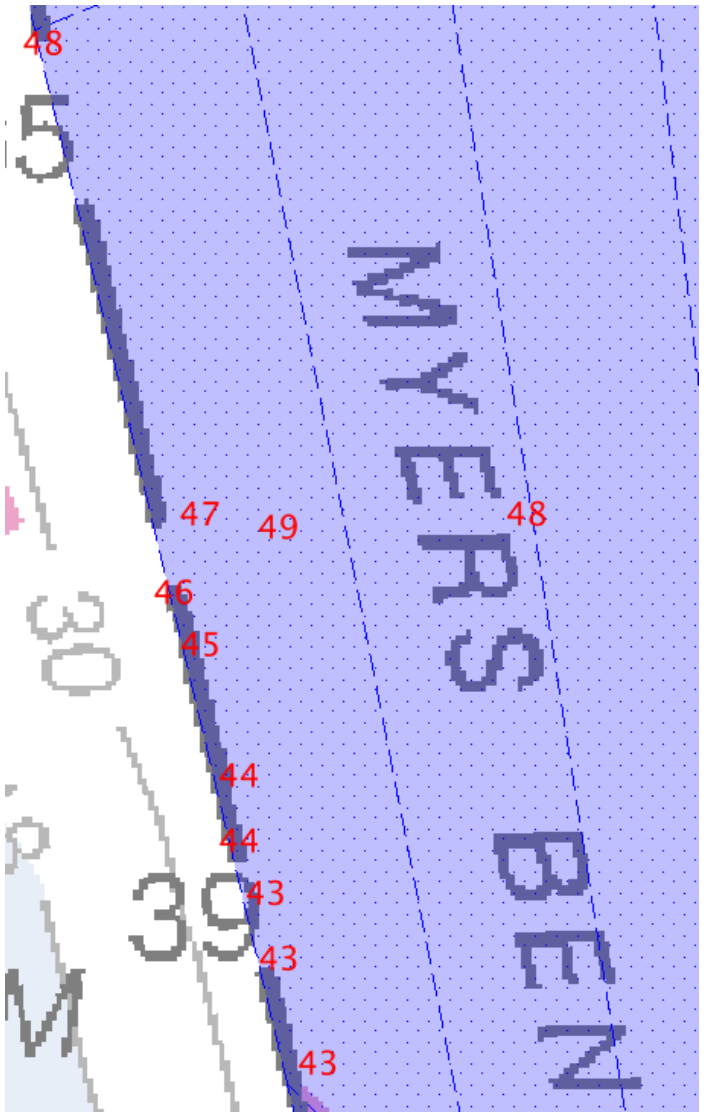
Town Creek Upper Reach



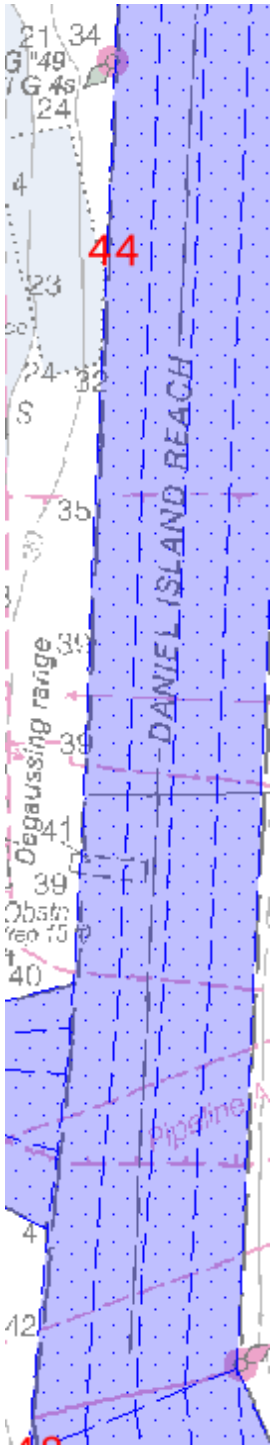


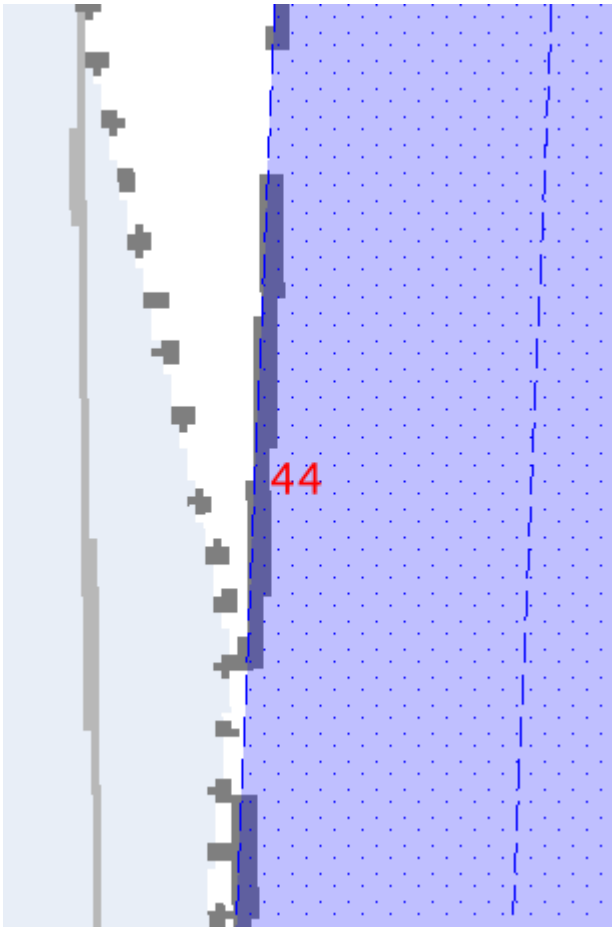
Myers Bend


MYERS BEND
48
35
47
49
48
46
45
30
44
44
43
39
43
43
16
M
23
8
34
17
3
30
20
31

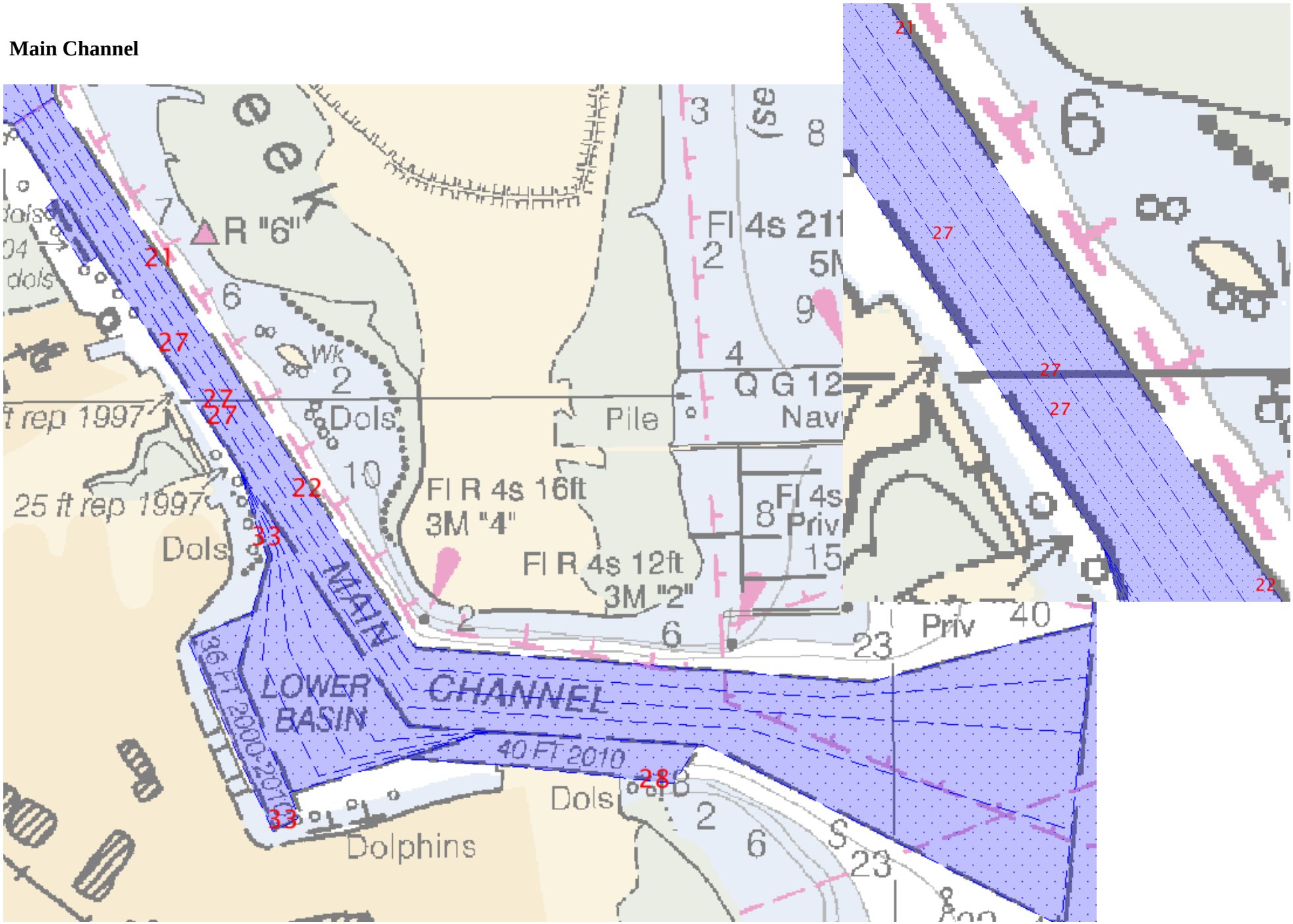

MYERS BEN
48
47
49
48
46
45
30
44
44
43
39
43
M
43

Daniel Island Reach

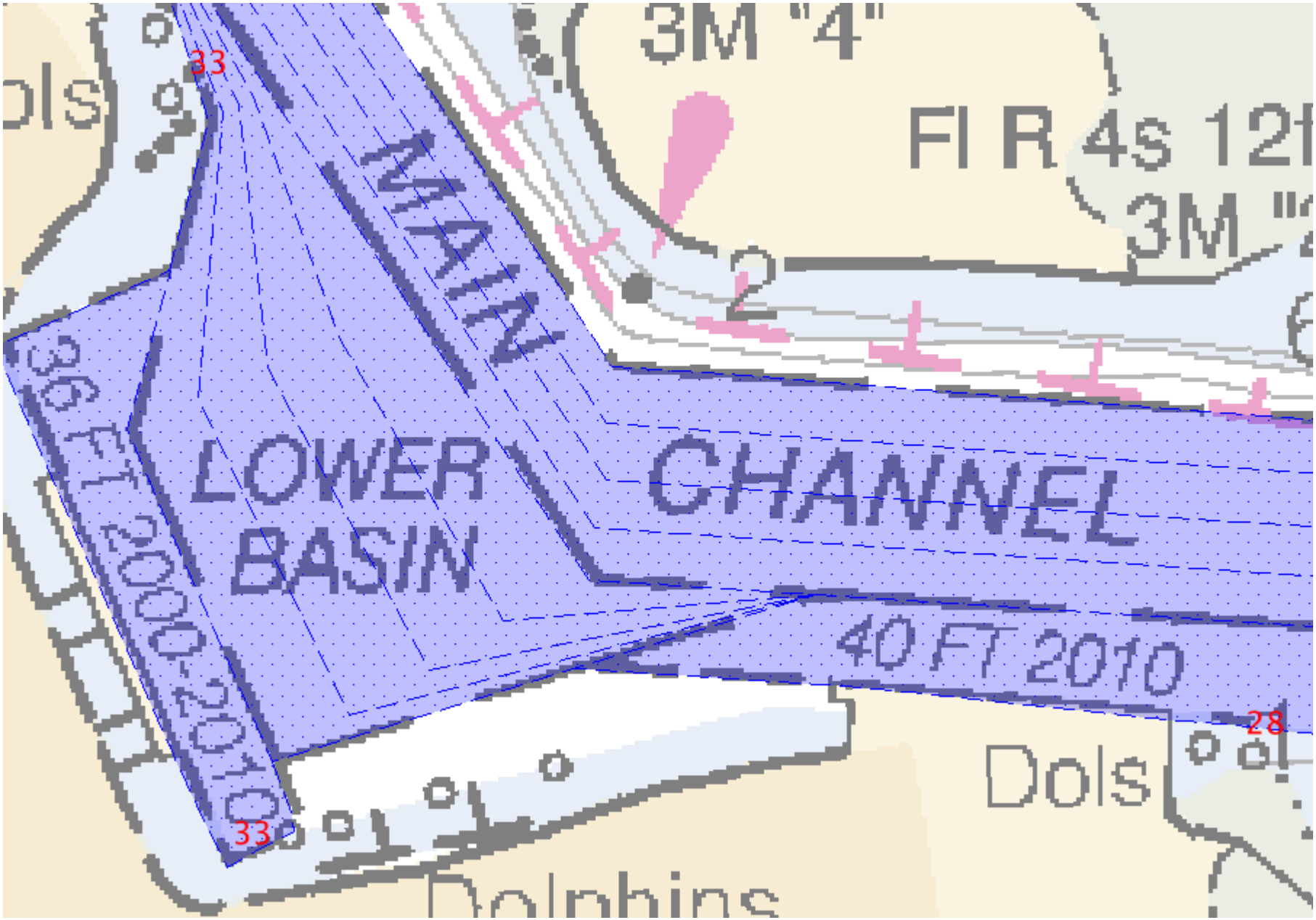




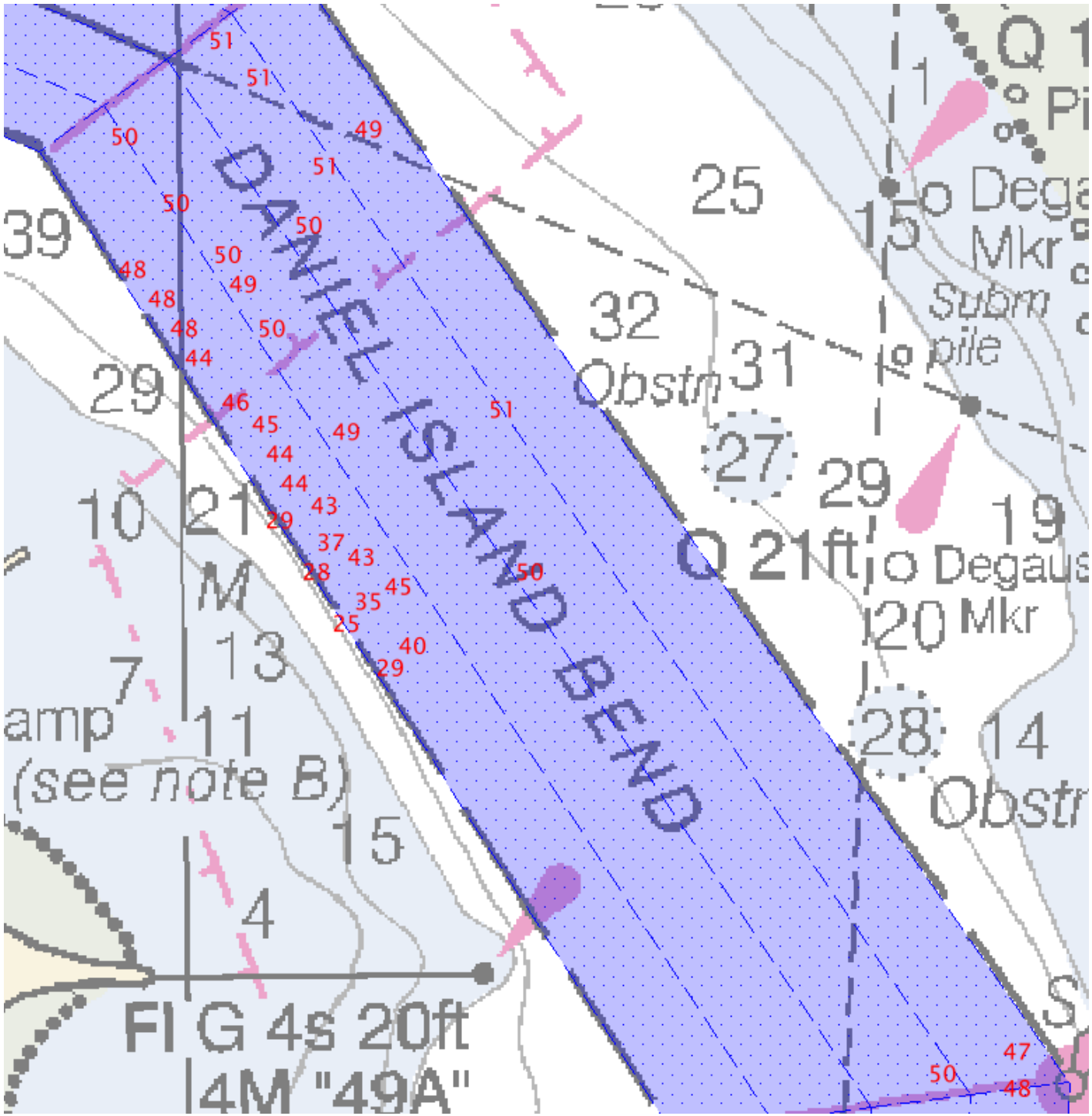
Main Channel



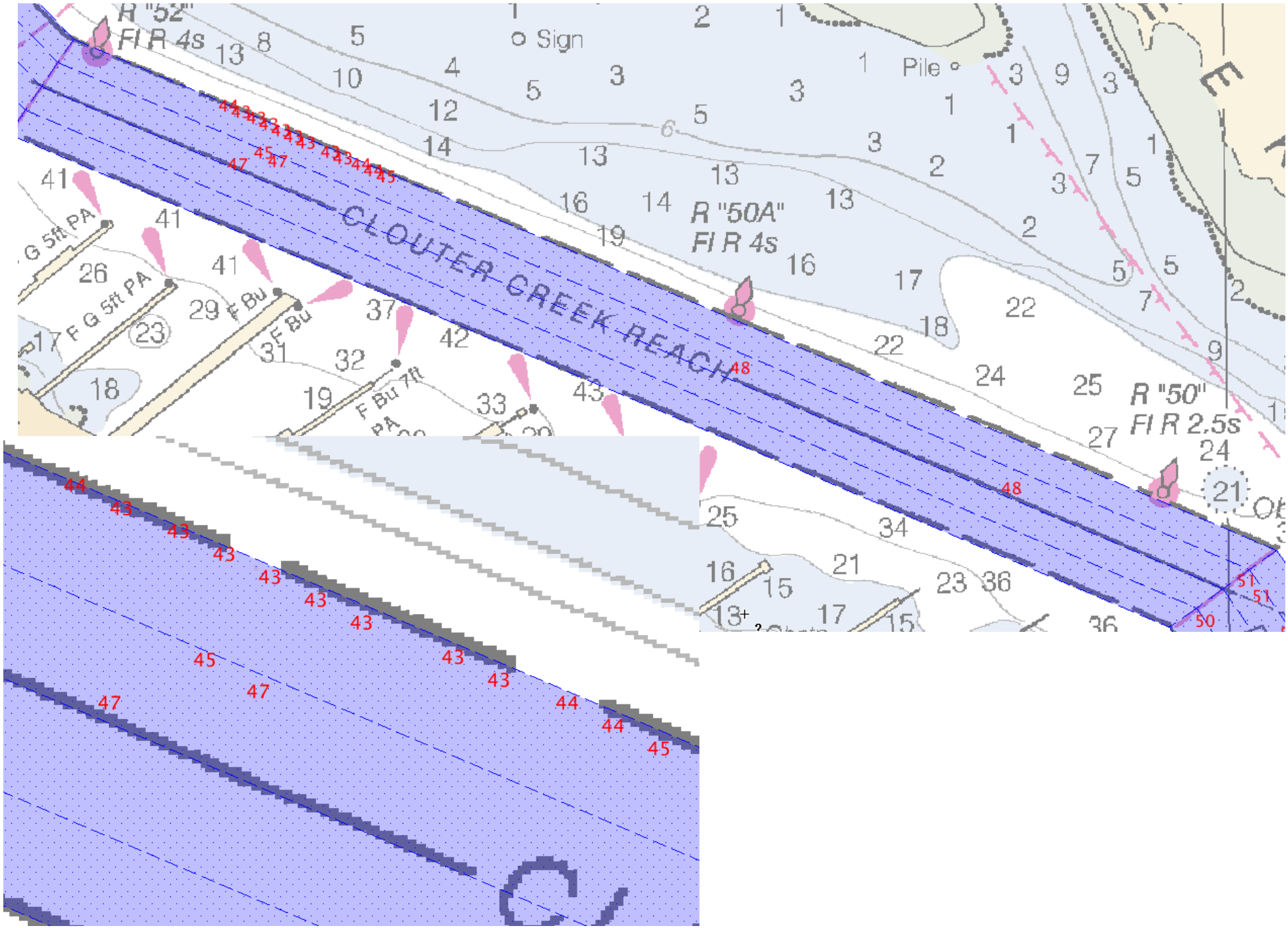
Lower Basin and surrounding depth areas



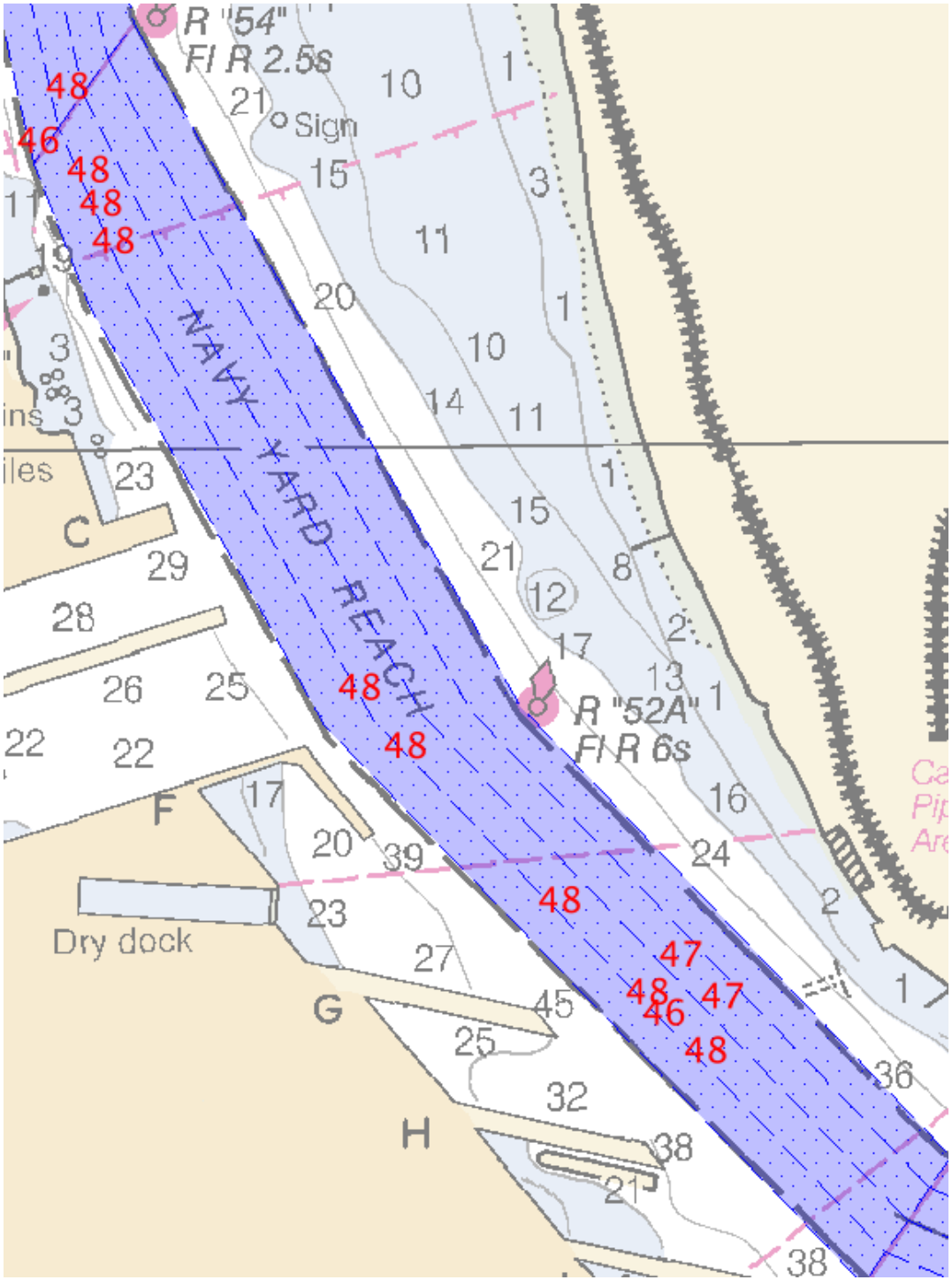
Daniel Island Bend



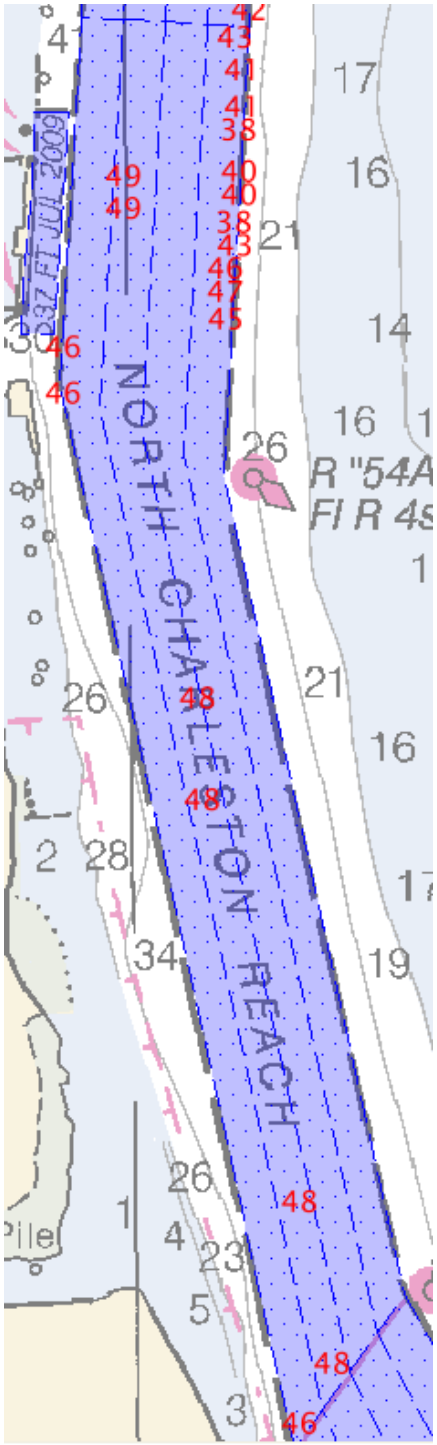
Clouter Creek Reach

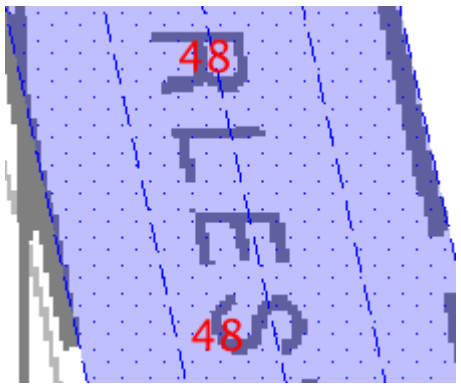


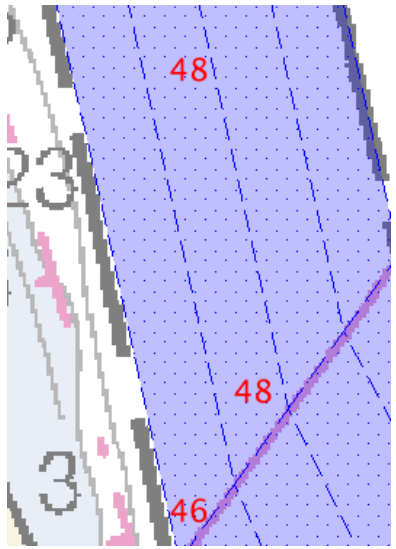
Navy Yard Reach

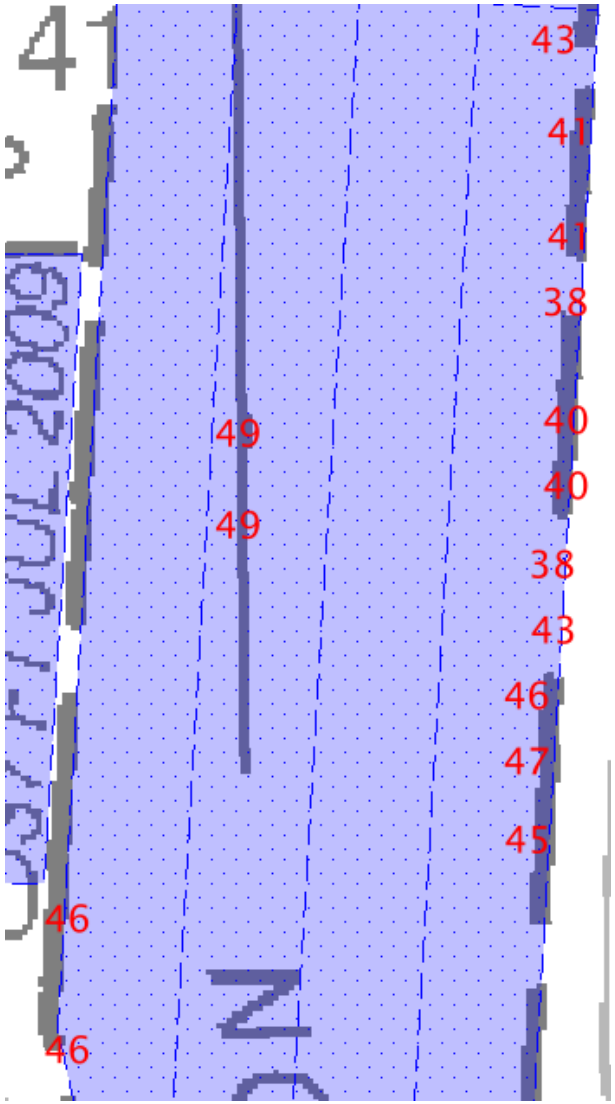


North Charleston Reach

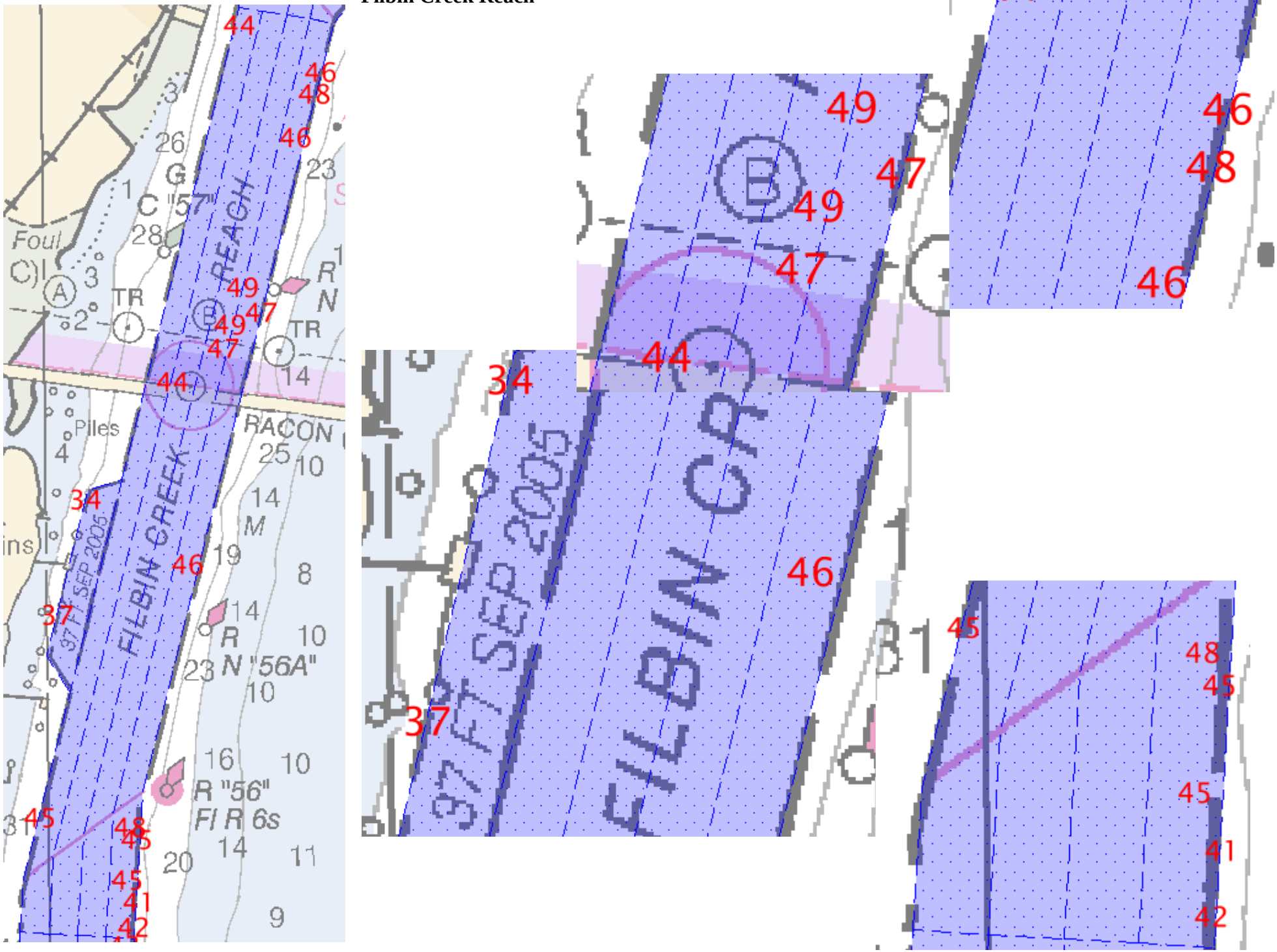




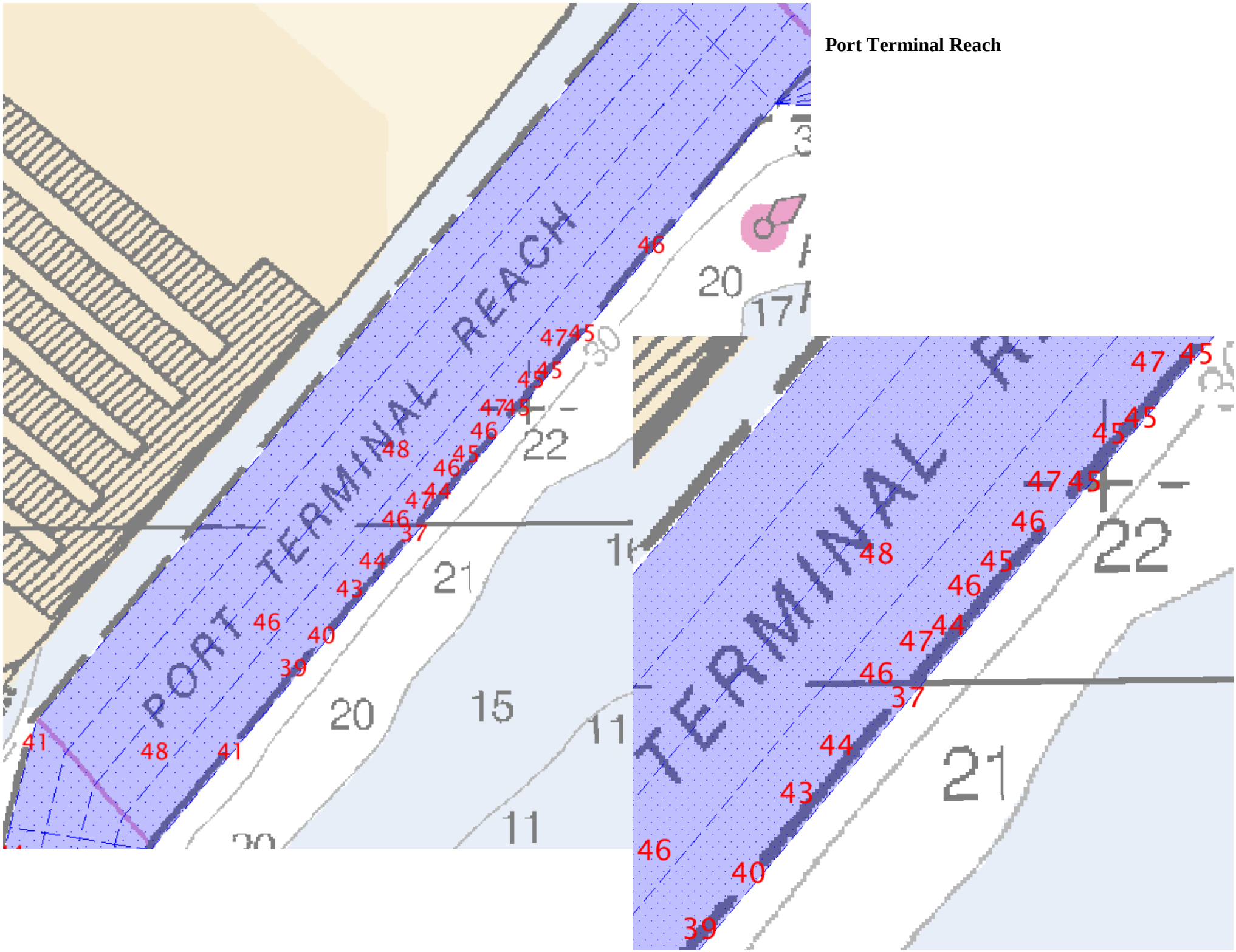




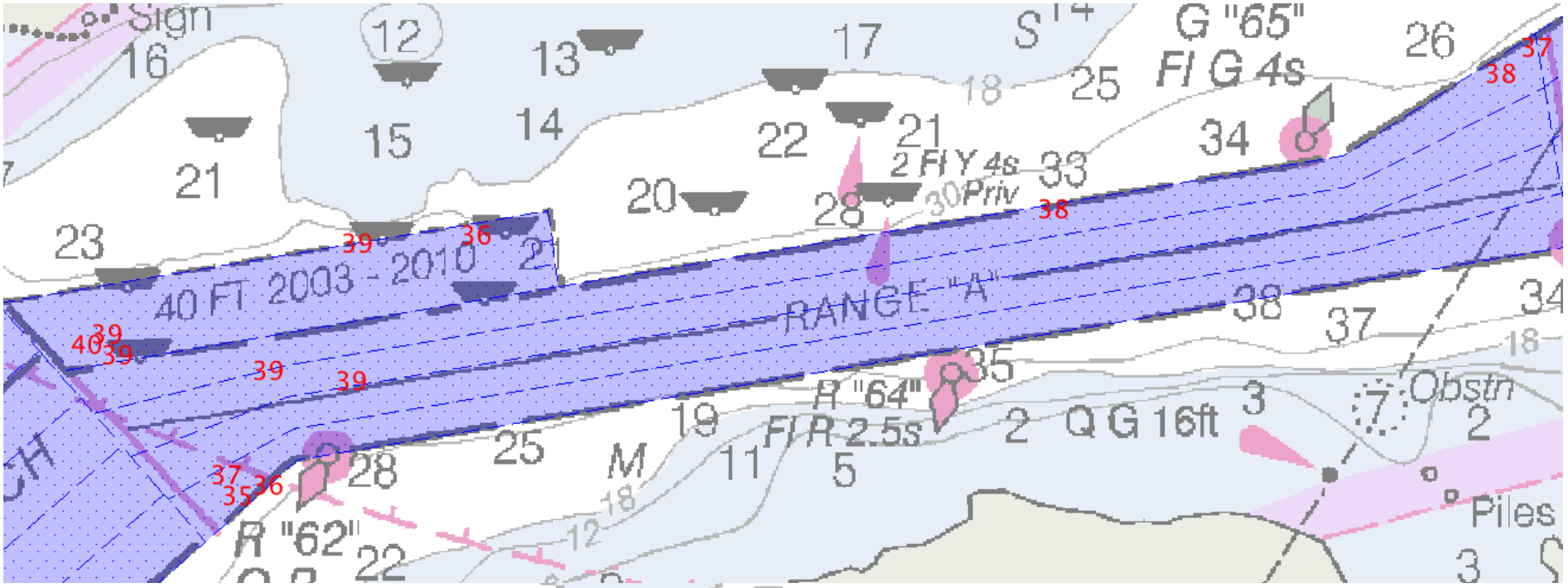
Filbin Creek Reach

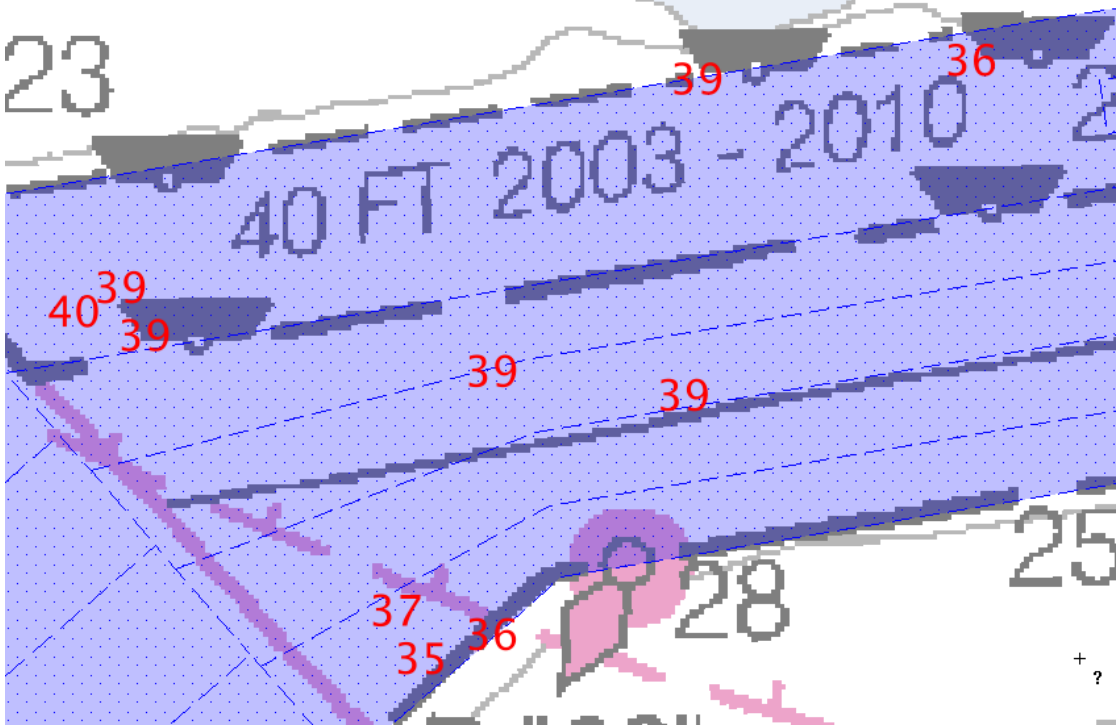


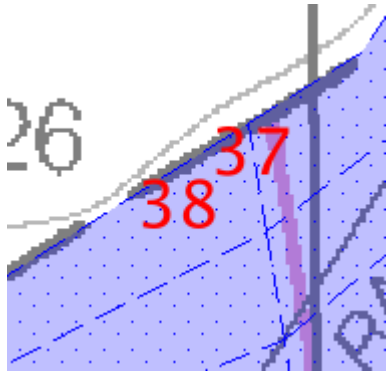
Port Terminal Reach



Range “A” and surrounding depth area







AHB COMPILATION LOG

General Survey Information	
REGISTRY No.	**H11863**
PROJECT No.	**OPR-G347-NRT2-08**
FIELD UNIT	**NRT 2**
DATE OF SURVEY	**20090527-20090809**
LARGEST SCALE CHART	***11524_1, edition 52, January 2010, 1:20,000***
SOUNDING UNITS	**FEET**
COMPILER	**Wyllie**

Source Grids	**File Name** H:\Compilation\H11863-G347-NRT2\AHB_H11863\SAR Final Products\GRIDS
	H11863_VB_5m_shoal_MLLW.csar
Surfaces	**File Name** H:\Compilation\H11863-G347-NRT2\AHB_H11863\COMPILE\Working
Interpolated TIN	\Interpolated TIN**H11863_10m_InterpTIN.csar**
Shifted Interpolated TIN	\Shifted Surface**H11863_10m_InterpTIN_shifted.csar**
Final HOBs	**File Name** H:\Compilation\H11863-G347-NRT2\AHB_H11863\COMPILE\Final_Hobs
Survey Scale Soundings	**H11863_SS_Soundings.hob**
Chart Scale Soundings	**H11863_CS_Soundings.hob**
Contour Layer	**H11863_Contours.hob**
Feature Layer	**H11863_Features.hob**
Meta-Objects Layer	**H11863_MetaObjects.hob**
Blue Notes	**H11863_BlueNotes.hob**

Meta-Objects Attribution	
Acronym	**Value**
M_COVR	
CATCOV	1 – coverage available
SORDAT	20090902
SORIND	US,US,graph,H11863
M_QUAL	
CATZOC	6 – zone of confidence U (data not assessed)
INFORM	NRT2
POSACC	10.0 m
SORDAT	20090902
SORIND	US,US,graph,H11863
SUREND	20090902
SURSTA	20090527
DEPARE	
DRVALV 1	-2.000 ft
DRVALV2	55.000 ft
SORDAT	20090902
SORIND	US,US,graph,H11863

I. COMBINED SURFACE:
- a. Number of SAR Final Grids: 1
- b. Resolution of Combined (m): 5 m

II. SURVEY SCALE SOUNDINGS (SS):
- a. Attribute Name: Depth
- b. Selection criteria: Radius, Shoal bias
- c. Radius value is: mm at map scale
  - i. radius table file: H11863_SS_SSR.txt

H11863_SS_SSR.txt - Notepad

File Edit Format View Help

```
0          0.91140 .6
0.91141 1.82880 .7
1.82881 3.65760 .8
3.65761 5.48640 .9
5.48641 9.14400 1.0
9.14401 18.2880 1.1
```

- d. Queried Depth of All Soundings
  - i. Minimum: -1.9455ft
  - ii. Maximum: 54.4521ft

III. INTERPOLATED TIN SURFACE:
- a. Resolution (m): 10 m
- b. Interpolation method: Natural Neighbor
- c. Shift value: -0.75 ft

IV. CONTOURS:
- a. Attribute Name: Depth
- b. Use a Depth List: H11863_depth_contours.txt
- c. Output Options: Create contour lines
  - i. Line Object: DEPCNT
  - ii. Value Attribute: VALDCO

V. FEATURES:
- a. Number of Chart Features: 63
- b. Number of Non-Chart Features: XX

VI. CHART SURVEY SOUNDINGS (CS):
- a. Number of ENC CS Soundings: 387
- b. Attribute Name: Depth
- c. Selection criteria: Radius, Shoal bias
- d. Radius value is:
  - i. use radius table file: H1XXXX_CS_SSR_XXk.txt

H11863_CS_SSR.txt - Notepad

File Edit Format View Help

```
0          1.82880 120
1.82881 3.65760 140
3.65761 5.48640 150
5.48641 9.14400 200
9.14401 18.2880 250
```

  - ii. Enable Filter: Interpolated !=1
- e. Number Survey CS Soundings: 290

ATLANTIC HYDROGRAPHIC BRANCH
H-CELL REPORT to ACCOMPANY
SURVEY H11863 (2009)

This H-Cell Report has been written to supplement and/or clarify the original Descriptive Report (DR) and pass critical compilation information to the cartographers in the Marine Chart Division. Sections in this report refer to the corresponding sections of the Descriptive Report.

B. DATA ACQUISITION AND PROCESSING

B.2 QUALITY CONTROL

The AHB source depth grid for the survey's nautical chart update product was a 5m resolution BASE surface (*.CSAR). The survey scale soundings were created from the surface using a sounding space range (SSR) file at the largest scale chart covering the respective area of the survey (Chart 11524 ~ 1:20,000). A TIN was created from the survey scale soundings, from which an interpolated surface of 10m resolution was generated. The chart scale soundings were derived from only the non-interpolated nodes of this surface to preserve absolute continuity between the charted depths, the survey scale soundings, and the original source grid. The chart scale soundings were selected using a SSR file. The chart scale soundings are a subset of the survey scale soundings. The surface model was referenced when selecting the chart scale soundings, to ensure that the selected soundings portray the bathymetry within the common area.

The interpolated TIN surface of 10m resolution was shifted by the NOAA sounding rounding value of -0.75 feet. The shifted interpolated TIN was used to generate depth contours in feet (0, 6, 12, 18, and 30). The depth contours are forwarded to MCD for reference only. The contours were utilized during chart scale sounding selection and quality assurance efforts at AHB. The depth contours are incorporated into the SS H-Cell product as per 2009 H-Cell Specifications.

The compilation products (Final *.HOB files) for this survey are detailed in the H11863 AHB Compilation Log contained within this document. The Final HOB files include depth areas (DEPARE), depth contours (DEPCNT), soundings (SOUNDG), meta-objects (M_COVR, M_QUAL), cartographic Blue Notes ($CSYMB, $LINES), and features (BCNSPP, LIGHTS, MORFAC, OBSTRN, PILPNT, PIPSOL, SBDARE, SLCONS, WRECKS).

As dictated by Hydrographic Technical Directive 2008-8, the Final HOB files were combined into two separate H-Cell files in S-57 format. Both S-57 files were exported from CARIS Bathy DataBASE in meters, and then converted from metric units into feet using CARIS HOM ENC 3.3. Quality assurance and topology checks were conducted using CARIS S-57 Composer 2.1 and DKART Inspector 5.1 validation tests.

The final H-Cell products are two S-57 files, in Lat/Long NAD-83. The contents of these two H-Cell deliverables are listed in the table below:

TABLE 1 - Contents of H-Cell Files

H11863_CS.000			Scale 1:20,000
Object Class Types	**Geographic**	**Cartographic**	**Meta**
S-57 Object Acronyms	DEPARE	$CSYMB	M_COVR
	OBSTRN	$LINES	M_QUAL
	SOUNDG		
	BRIDGE		
	MORFAC		
	PILPNT		
	PIPSOL		
	SLCONS		
	WRECKS		
	BCNSPP		
	SBDARE		
	CBLOHD		
	DRYDOC		
H11863_SS.000			**Scale 1:10,000**
Object Class Types	**Geographic**		
S-57 Object Acronyms	DEPCNT		
	SOUNDG		

B.2.4 Junctions and Prior Surveys

Survey H11863 (2009) junctions with survey H11861 (2008) to the south. Most present survey depths compare within 1 foot of junctioning survey depths to the south. Most present survey depths compare within 3 feet of the charted hydrography to the north, east and west.

B.4 DATA PROCESSING

The following software was used to process data at the Atlantic Hydrographic Branch:

CARIS Bathy DataBASE version 3.0/HF10
CARIS Bathy DataBASE version 2.3/HF16
CARIS Bathy DataBASE version 2.1/HF10
CARIS HIPS/SIPS version 7.0/SP2/HF5
CARIS S-57 Composer version 2.1/HF4
CARIS HOM ENC version 3.3/SP3/HF8
DKART Inspector version 5.1
HSTP Pydro version 10.11 (r3191)

C. HORIZONTAL AND VERTICAL CONTROL

The hydrographer makes adequate mention of horizontal and vertical control used for this survey in section C of the DR. The sounding datum for this survey is Mean Lower Low Water (MLLW), and the vertical datum is Mean High Water (MHW). Horizontal control used for this survey during data acquisition is based upon the North American Datum of 1983 (NAD83), UTM projection zone 17 North.

D. RESULTS AND RECOMMENDATIONS

D.1 CHART COMPARISON

11524 (52nd Edition, Jan/2010)
Charleston Harbor
Corrected through NM 01/08/2011
Corrected through LNM 01/04/2011
Scale 1:20,000

ENC COMPARISON **US5SC14M**
Charleston Harbor
Edition 39
Application Date 12/15/2010
Issue Date 01/03/2011
Chart 11524

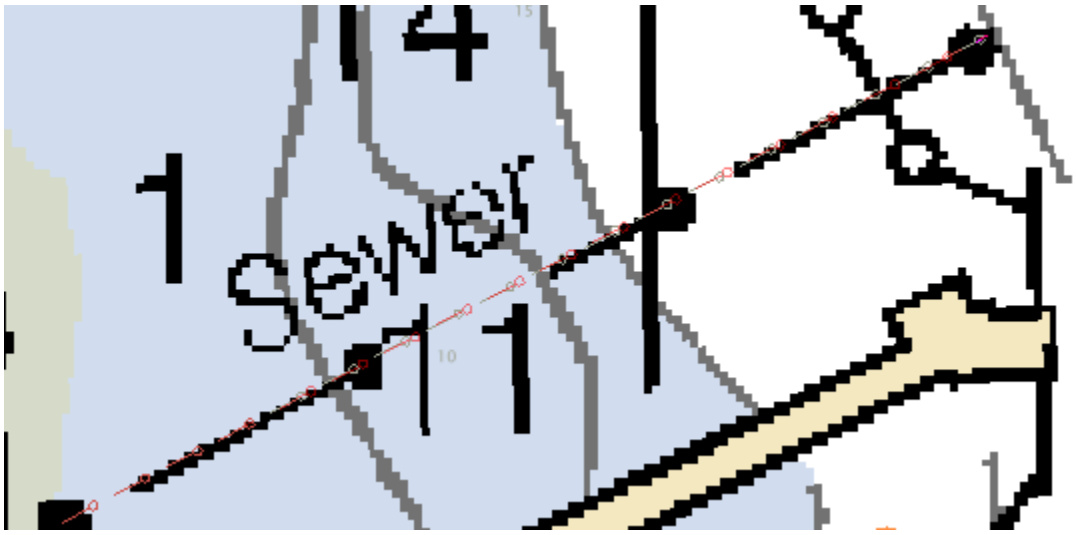
D.2 ADDITIONAL RESULTS

The charted hydrography originates with prior surveys and requires no further consideration. The hydrographer makes adequate chart comparisons in section D and Appendix I and II of the DR. The hydrographer recommends that any charted features not specifically addressed either in the H-Cell files or the Blue Notes should be retained as charted. The following exceptions are noted:

a. The field unit collected a total of 10 bottom samples. Most charted seabed characteristics were retained as charted, but some of the charted seabed characteristics were superceded by the survey findings.

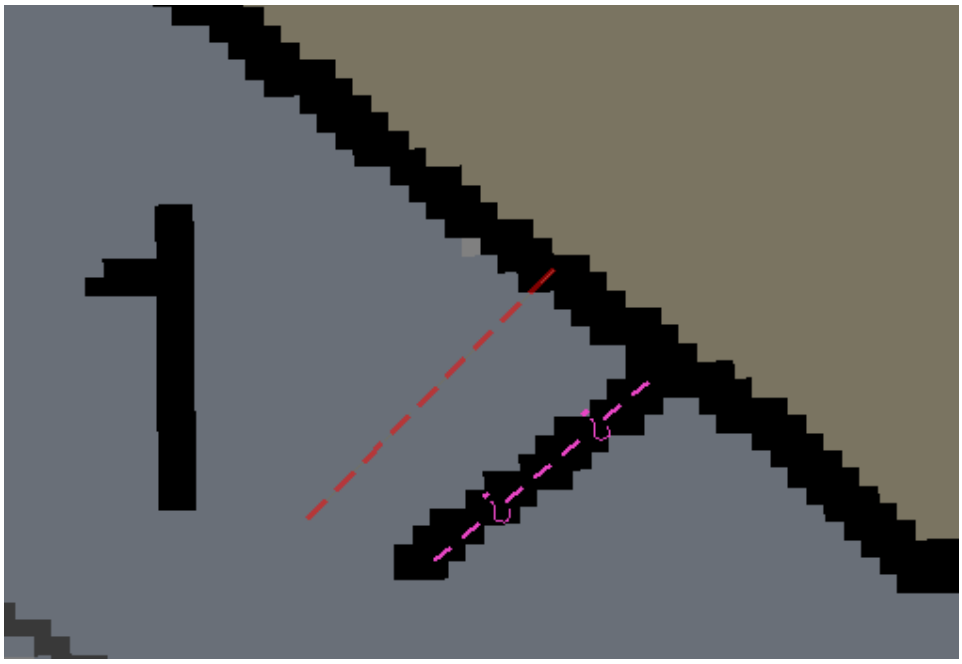
b. The field submitted a PILPNT at 32-50-47.18N, 79-56-04.07W with indication of several more piles shoreward. After referencing the most recent orthoimagery available, office review found a pier at the location and did not chart the pile. Recommend to update area with most recent RSD shoreline.

c. The field did not mention the sewer located at 32-49-35.34N, 79-56-02.24W. Recommend to retain PIPSOL as charted.

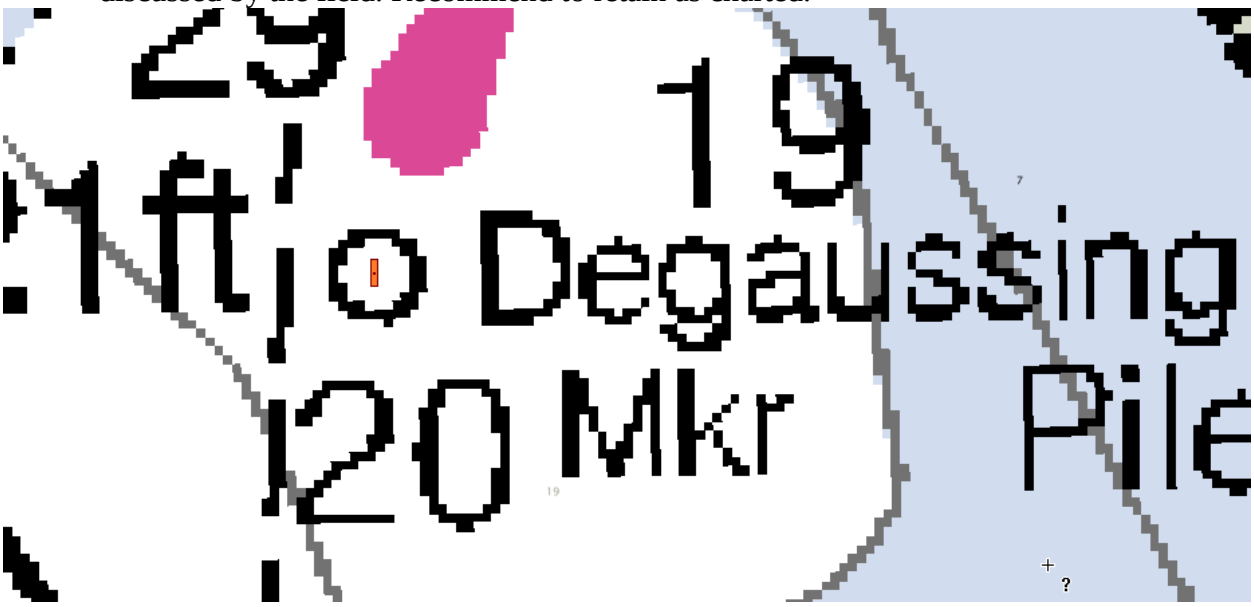


d. The field positioned a pile at 32-49-55.38N, 079-55-36.24W. This position is close to but is not verified by 2009 orthoimagery. The H-Cell deliverable includes a PILPNT at 32-49-55.00N, 79-55-36.09W. This position is directly in line with the orthoimagery. In the image below, the orthoimagery is shown in the background with the PILPNT shown in red.

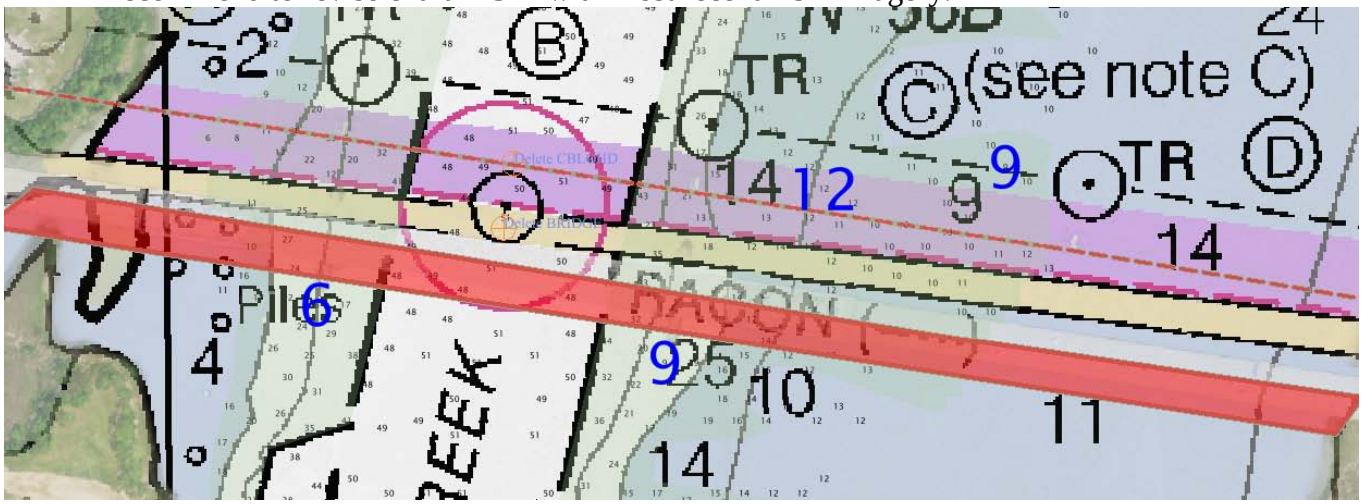
e. The charted pier at 32-51-38.37N, 79-57-12.23W was disproved by the field (shown below by a pink dotted line). The field located a pier in ruins to the northwest of the charted pier. The field submitted a DP on the seaward most point. The H-Cell Deliverable includes a SLCONS feature (shown below by a red dotted line), a ruined pier, which includes the field's DP and extends to shore.



f. The Degaussing Marker (BCNSPP) located at 32-50-51.42N, 79-55-41.24W was not discussed by the field. Recommend to retain as charted.



g. There is an inconsistency between the RSD shoreline position of the 526 bridge (centered on 32-53-29.60N, 79-57-50.99W) and overhead cables and what was submitted by the F00551 shoreline survey. The currently charted bridge does not match the RSD bridge and overhead cables or the most recent orthoimagery. The H-Cell deliverable includes the overhead cable and bridge from the RSD shoreline project, both shown in red below. Recommend to revise chart 11524 with most recent RSD imagery.



h. As discussed in the Descriptive Report Section D, the ENC and Raster channel tabulations do not match though both are dated September 2010. Recommend to update raster chart channel tabulation with USACE survey. There are four errors in the ENC channel tabulations: Daniel Island Bend Left Inside Quarter, Navy Yard Reach Left Outside Quarter, North Charleston Reach Left Outside Quarter and North Charleston Reach Right Outside Quarter. Recommend to update ENC channel tabulation errors.

During office review, the ENC tabulation was referenced when looking for soundings shoaler than the tabulated depths. There were 164 soundings identified as shoaler than the ENC channel tabulation. This survey was done in September 2009. The channel tabulations are majority September 2010. Because of the dredge project that occurred, it is possible many of these soundings are no longer valid. An email was sent to the Navigation Manger and was forwarded to USACE. This email is included in Appendix V. No shoal soundings are included in the channels with the H-Cell deliverable.

D.6 MISCELLANEOUS

Chart compilation was completed by Atlantic Hydrographic Branch personnel in Norfolk, Virginia. Compilation data will be forwarded to the Marine Chart Division in Silver Spring, Maryland. See section D.1 of this report for a list of the Raster Charts and Electronic Navigation Charts (ENC) used for compiling the present survey.

D.7 ADEQUACY OF SURVEY

The present survey is adequate to supersede the charted bathymetry within the common area. Any features not specifically addressed either in the H-Cell files or the Blue Notes should be retained as charted. Refer to section D and Appendix I and II of the DR for further recommendations by the hydrographer.

APPROVAL SHEET
H11863

Initial Approvals:

The completed survey has been inspected with regard to survey coverage, delineation of depth contours, disposition of critical depths, cartographic symbolization, and verification or disproval of charted data. All revisions and additions made to the H-Cell files during survey processing have been entered in the digital data for this survey. The survey records and digital data comply with National Ocean Service and Office of Coast Survey requirements except where noted in the Descriptive Report and the H-Cell Report.

All final products have undergone a comprehensive review per the Hydrographic Surveys Division Office Processing Manual and are verified to be accurate and complete except where noted.

Digitally signed by Katrina Wyllie
DN: cn=Katrina Wyllie, o=NOAA, ou=AHB, email=katrina.wyllie@noaa.gov, c=US
Date: 2011.02.28 16:47:17 -05'00'

Katrina Wyllie
Physical Scientist
Atlantic Hydrographic Branch

I have reviewed the H-Cell files, accompanying data, and reports. This survey and accompanying Marine Chart Division deliverables meet National Ocean Service requirements and standards for products in support of nautical charting except where noted.

Richard T. Brennan
I am approving this document
2011.02.28 19:51:04 -05'00'

Approved: _____

CDR Richard T. Brennan, NOAA
Chief, Atlantic Hydrographic Branch

Christopher Hare
HQ Survey Review
2011.03.04 13:36:28
-05'00'