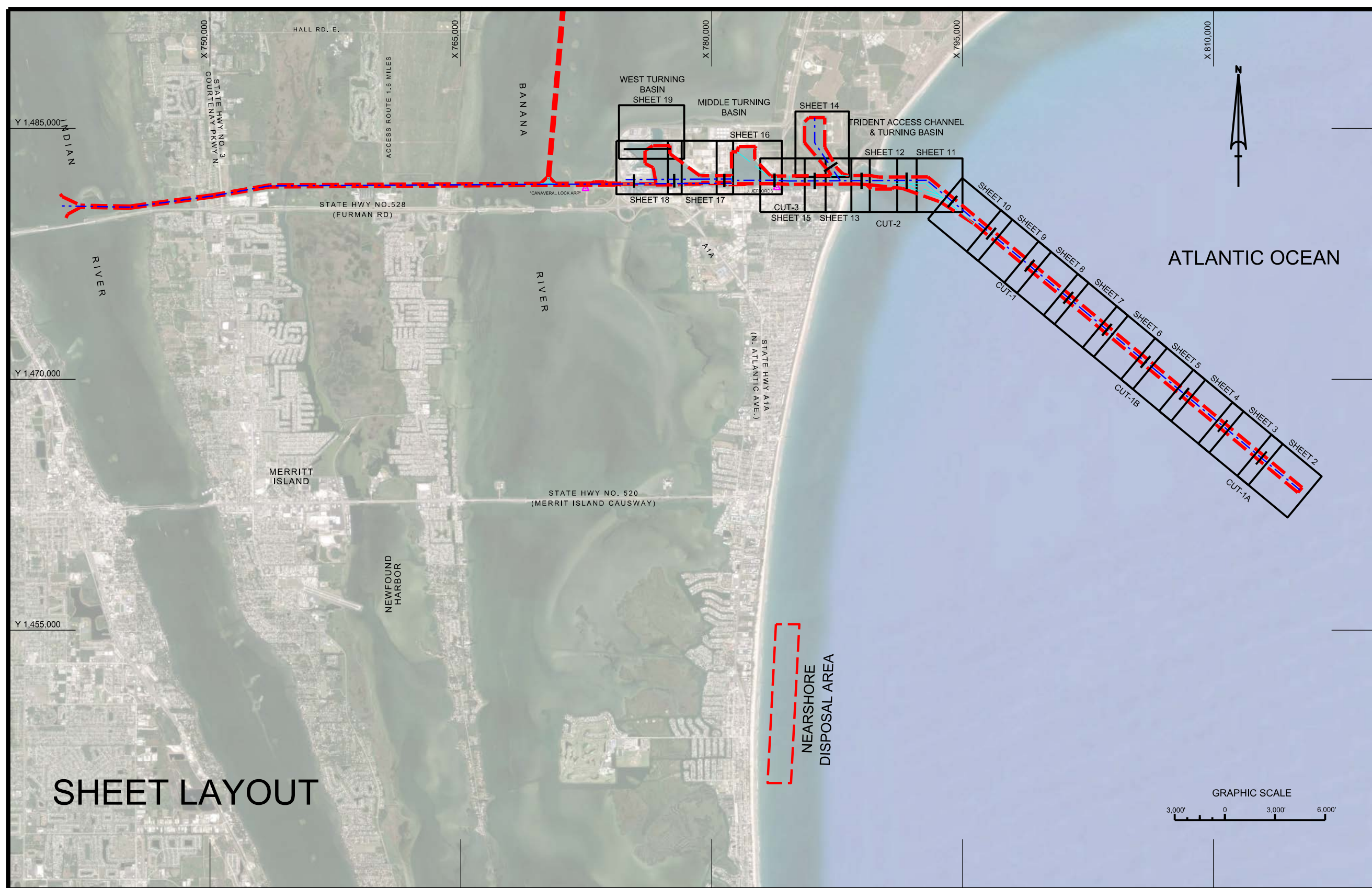
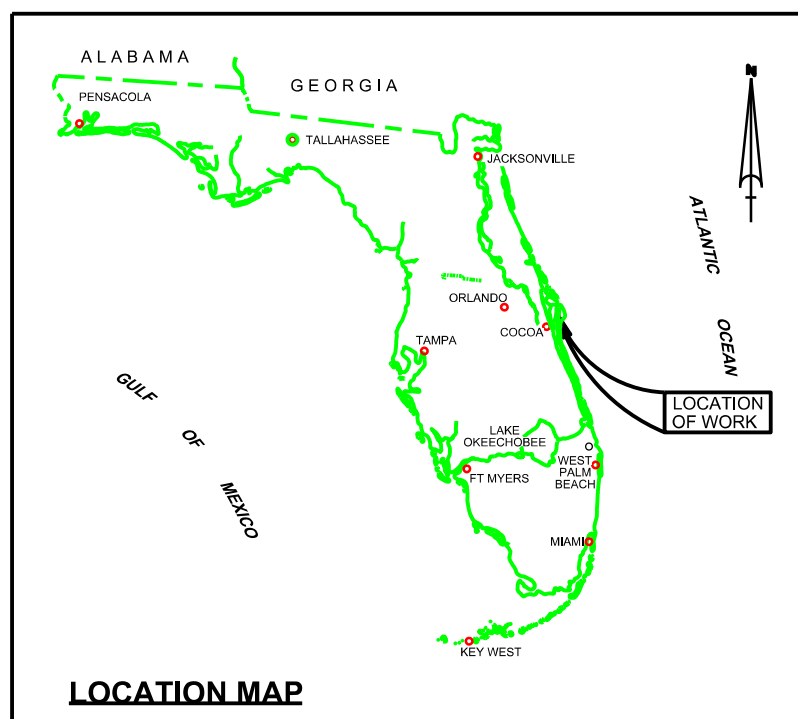


# CANAVERAL HARBOR BREVARD COUNTY, FLORIDA 2Q HYDROGRAPHIC EXAM SURVEY FY18



### SURVEY NOTES

- REFER TO SURVEY NO. 18-093.
  - TIDAL REDUCTIONS WERE OBTAINED UTILIZING A REAL-TIME KINEMATIC (RTK) GPS AND REFERENCED TO MLLW UTILIZING A HYPACK KINEMATIC TIDE DATUM (KTD) MODEL. KTD FILE NAME IS: "CANAVERALHBR-2015 02 20.KTD".
  - ALL ELEVATIONS ARE BELOW THE CHART DATUM UNLESS PRECEDED BY A (+) SIGN.
  - PLANE COORDINATES ARE BASED ON THE TRANSVERSE MERCATOR PROJECTION FOR THE EAST ZONE OF FLORIDA AND REFERENCED TO NORTH AMERICAN DATUM OF 1983 (NAD83).
  - ALL STATIONING REFERS TO THE CENTERLINE OF THE CHANNEL.
  - THIS SURVEY WAS PERFORMED USING REAL-TIME KINEMATIC (RTK) GPS POSITIONING WITH THE FOLLOWING REFERENCE BASE LOCATION:  
 \*REFERENCE BASE LOCATED AT "CANAVERAL LOCK ARP" (OPUS PID: BBCV67)  
 \*TIDE STAFF LOCATED FROM "JEFFORDS" (COE PID: BBCQ55)
  - DEPTHS DEPICTED BY THIS SURVEY ARE REFERENCED TO MLLW. TIDAL EPOCH 1983-2001 AS REPORTED BY THE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION (NOAA). NOAA'S DATUM MODEL WAS USED AND CALIBRATED TO THE PUBLISHED MLLW HEIGHTS OF THE BENCHMARKS ASSOCIATED WITH THE TIDE GAGE SITES SPECIFIED BELOW:  
 NOAA TIDAL STATION 872-1604, TRIDENT PIER, CANAVERAL, FL
  - FLORIDA II VERTICAL MEASUREMENTS WERE MADE USING A R2 SONIC 2024 MULTI-BEAM SYSTEM OPERATING AT 240 KHZ AND A ROSS SMART SOUNDER SINGLE-BEAM TRANSDUCER OPERATING AT 28200 KHZ. SB-36 VERTICAL MEASUREMENTS WERE MADE USING RESON T20P MULTIBEAM SYSTEM OPERATING AT 400 KHZ AND A ROSS SINGLE-BEAM SMARTSOUNDER OPERATING AT 28200 KHZ. HIGH FREQUENCY SOUNDINGS ARE SHOWN FOR THE WEST ACCESS CHANNEL, WEST TURNING BASIN AND CUT-1A. LOW FREQUENCY SOUNDINGS SHOWN FOR CUTS 1B, 1, 2, 3, T.A.C., MTB AND THE POSEIDON WHARF.
- | VESSEL     | DATE OF SURVEY     | CUT                              |
|------------|--------------------|----------------------------------|
| FLORIDA II | 18, 23 JAN 2018    | CUT-1A, CUT-1B                   |
| FLORIDA II | 23-24, 30 JAN 2018 | CUT-1, CUT-2                     |
| FLORIDA II | 30 JAN 2018        | CUT-3, MTB, POSEIDON WHARF       |
| SB-36      | 05-06 FEB 2018     | WAC, WTB, BARGE CANAL, TAC & TTB |
- AIDS TO NAVIGATION WERE LOCATED DURING THIS SURVEY.
  - THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF SURVEYS MADE ON THE DATES INDICATED ABOVE AND CAN ONLY BE CONSIDERED AS INDICATING THE GENERAL CONDITIONS AT THAT TIME. THIS CHART IS SOLELY FOR THE DISTRIBUTION OF AVAILABLE DEPTHS AT THE TIME OF THE SURVEY.
  - SURVEY ACCURACY PERFORMANCE STANDARDS, QUALITY CONTROL, AND QUALITY ASSURANCE REQUIREMENTS WERE FOLLOWED DURING THIS SURVEY IN ACCORDANCE WITH USACE EM 1110-2-1003, HYDROGRAPHIC SURVEYING, 30 NOV 13.

LEGEND	
	MONUMENT
	LIGHTED BEACON
	GREEN DAYBEACON
	RED DAYBEACON
	RED LIGHTED BUOY
	GREEN LIGHTED BUOY
	CAN BUOY
	NUN BUOY
	TIDE STAFF
	PROJECT DEPTH

CANAVERAL HARBOR BREVARD COUNTY, FLORIDA		DEPARTMENT OF THE ARMY JACKSONVILLE DISTRICT, CORPS OF ENGINEERS JACKSONVILLE, FLORIDA	
2Q HYDROGRAPHIC EXAM SURVEY FY18		35, 39, 41, 43, 44 AND 46-FOOT PROJECT INDEX, LOCATION AND VICINITY PLAN	
Scale: AS SHOWN	Drawing no.	1	
SHEET 1 OF 19			







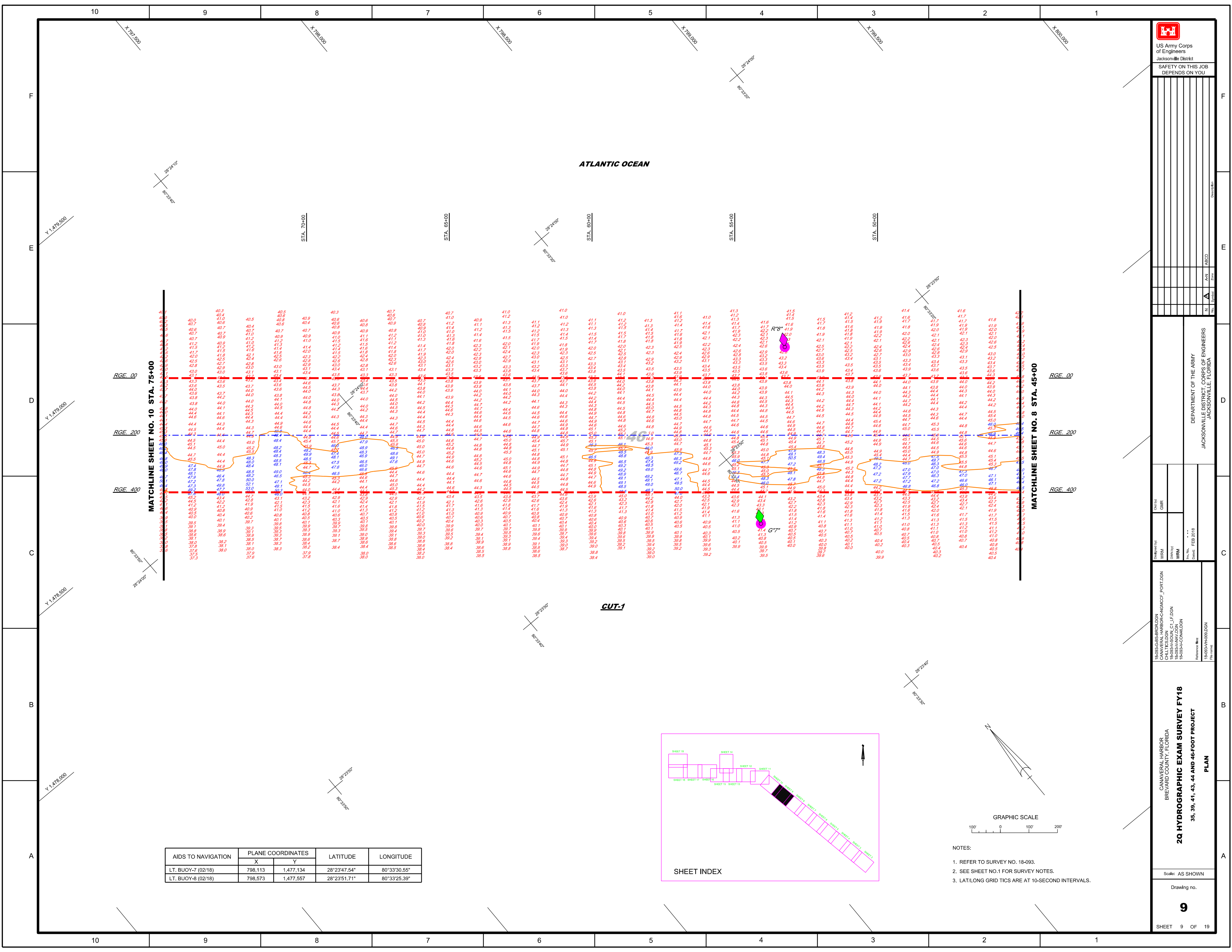




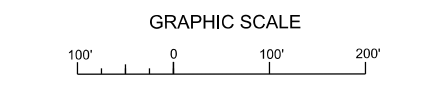
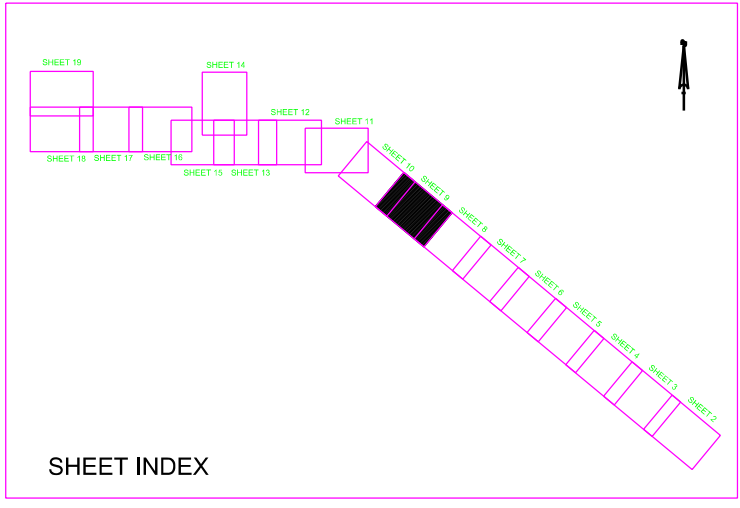








AIDS TO NAVIGATION	PLANE COORDINATES		LATITUDE	LONGITUDE
	X	Y		
LT. BUOY-7 (02/18)	798.113	1,477.134	28°23'47.54"	80°33'30.55"
LT. BUOY-8 (02/18)	798.573	1,477.557	28°23'51.71"	80°33'25.39"



- NOTES:
- 1. REFER TO SURVEY NO. 18-093.
  - 2. SEE SHEET NO. 1 FOR SURVEY NOTES.
  - 3. LAT/LONG GRID TICS ARE AT 10-SECOND INTERVALS.

US Army Corps of Engineers  
Jacksonville District  
SAFETY ON THIS JOB  
DEPENDS ON YOU

---

No.	Zone	Symbol	Description

---

**DEPARTMENT OF THE ARMY**

**JACKSONVILLE DISTRICT, CORPS OF ENGINEERS**

JACKSONVILLE, FLORIDA

---

**2Q HYDROGRAPHIC EXAM SURVEY FY18**  
 35, 39, 41, 43, 44 AND 46-FOOT PROJECT  
**PLAN**

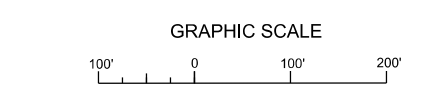
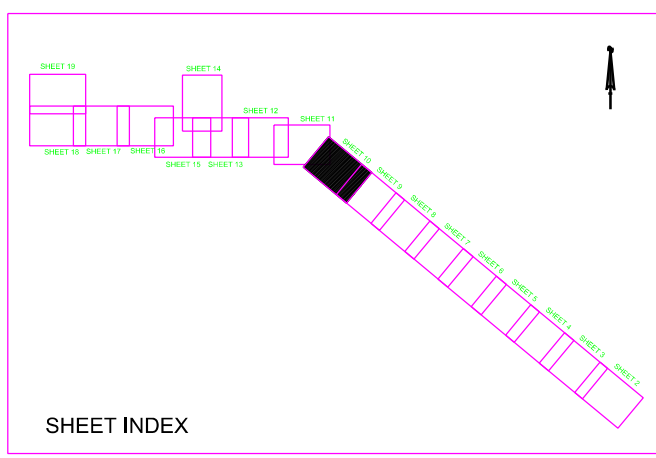
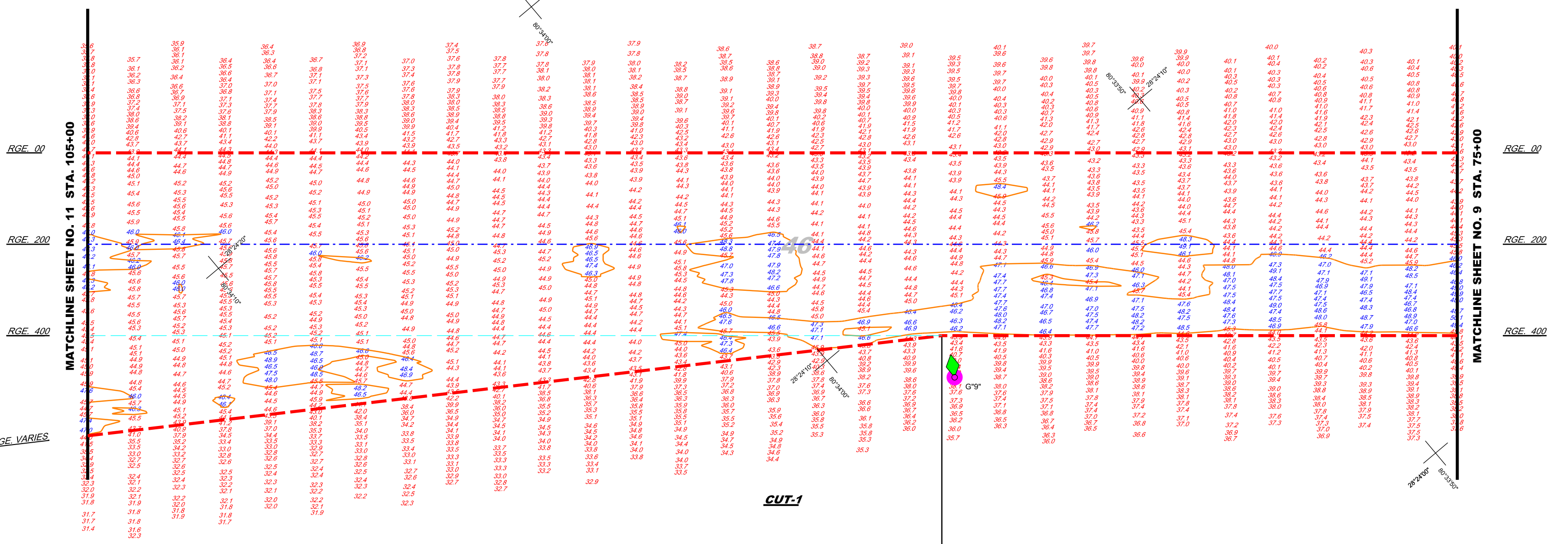
Scale: AS SHOWN

Drawing no.

**9**

SHEET 9 OF 19

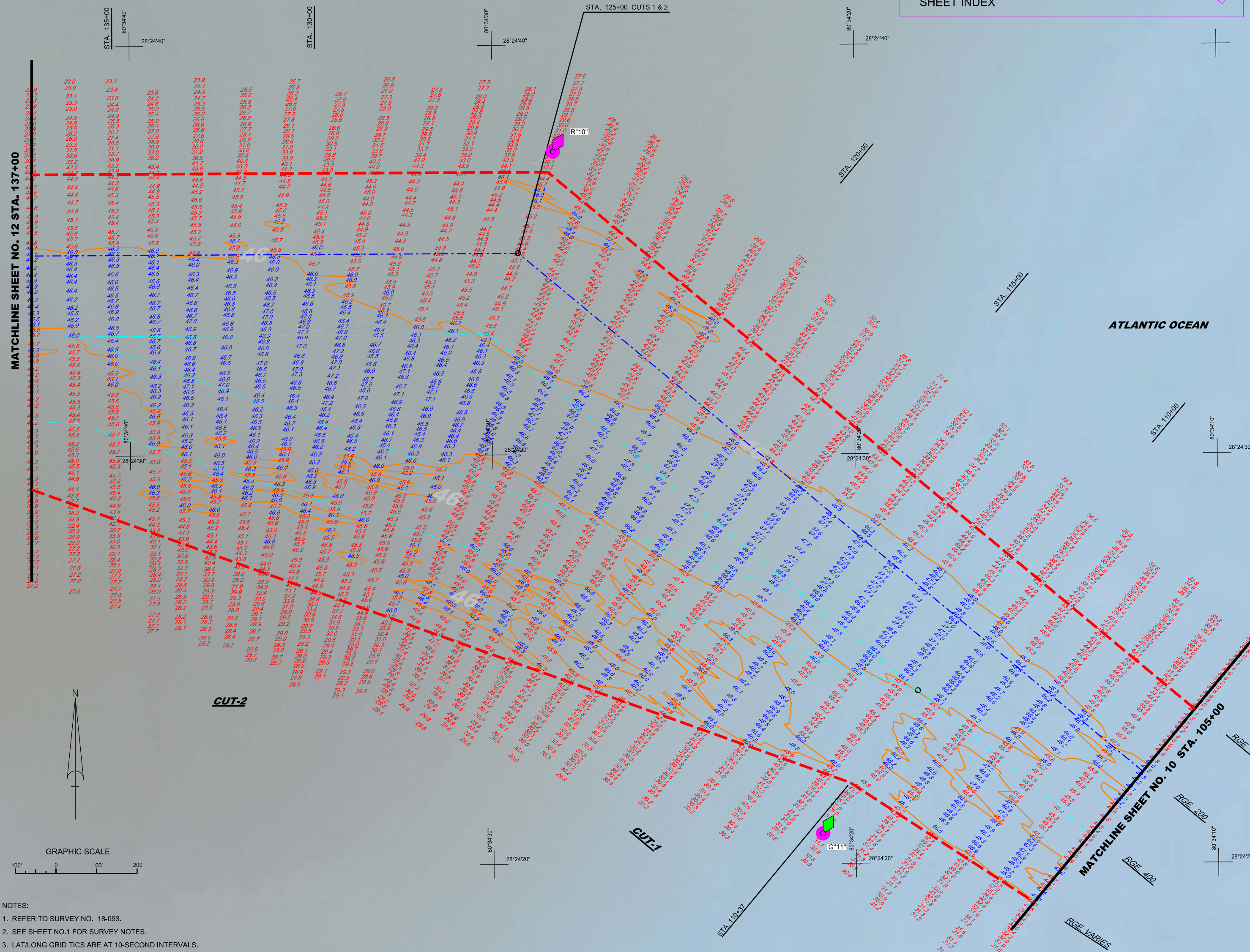
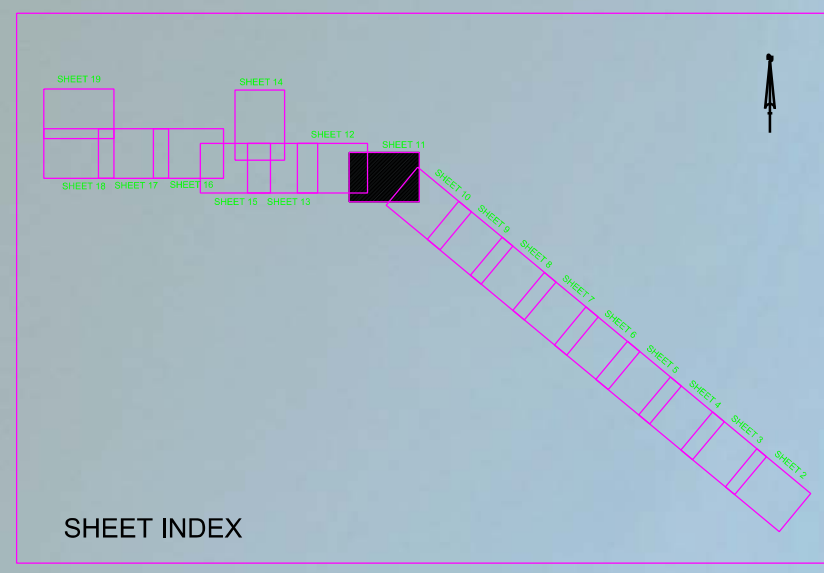
ATLANTIC OCEAN



- NOTES:
1. REFER TO SURVEY NO. 18-093.
  2. SEE SHEET NO.1 FOR SURVEY NOTES.
  3. LAT/LONG GRID TICS ARE AT 10-SECOND INTERVALS.

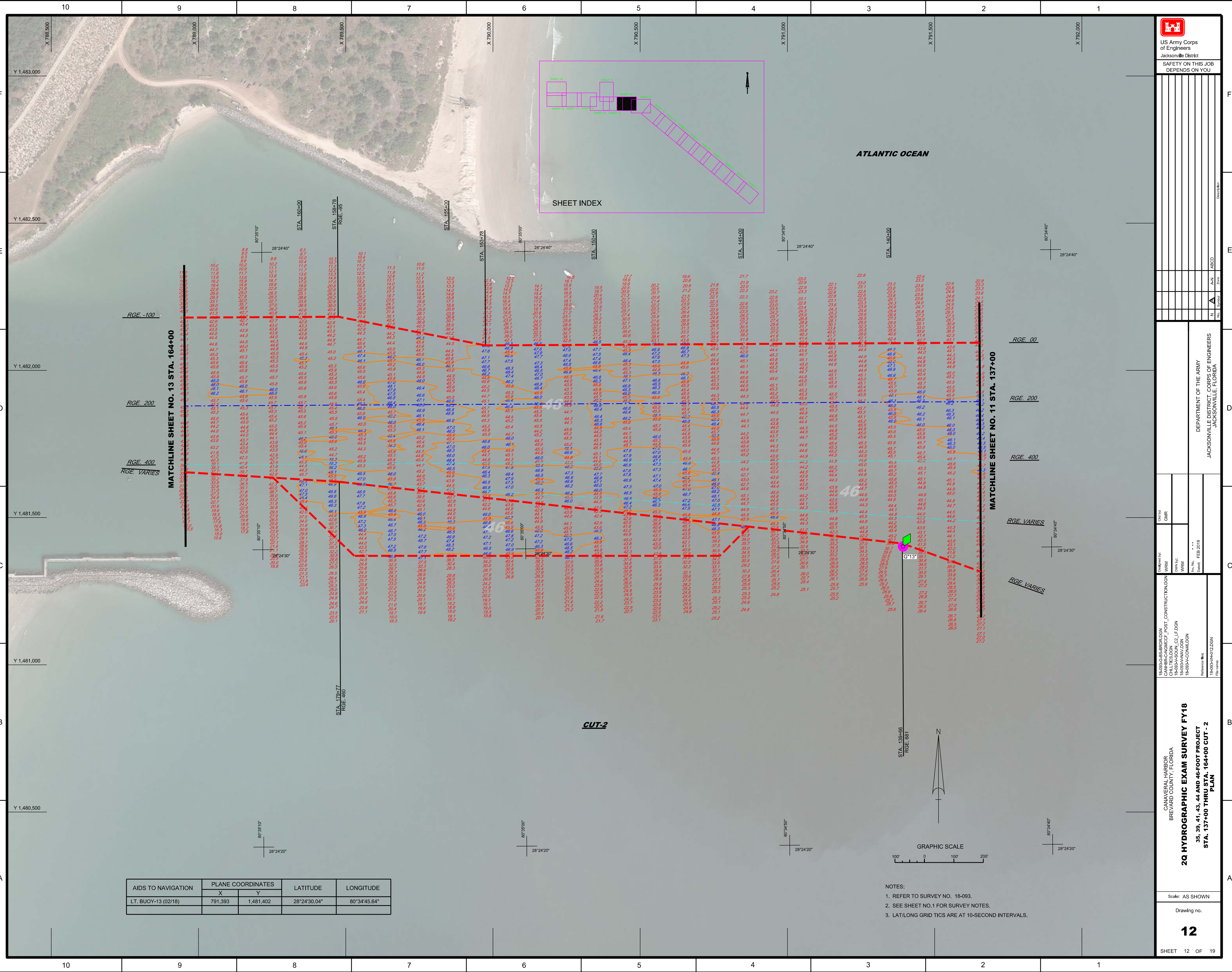
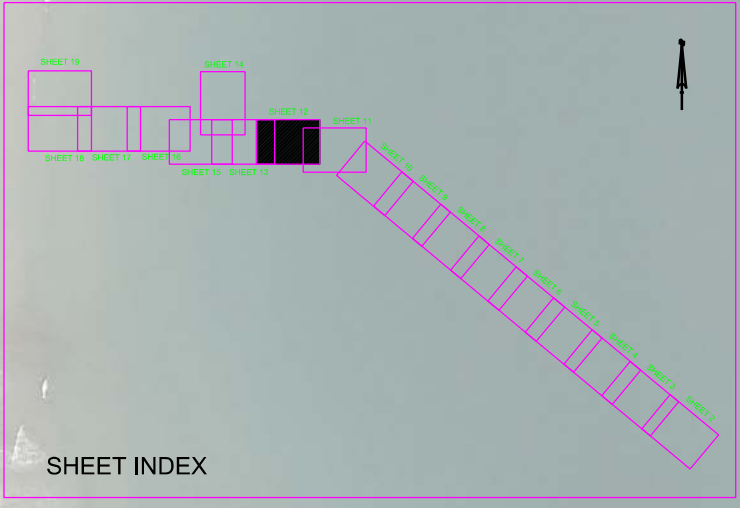
AIDS TO NAVIGATION	PLANE COORDINATES		LATITUDE	LONGITUDE
	X	Y		
LT. BUOY-9 (02/18)	795,668	1,479,187	28°24'07.95"	80°33'57.85"

AIDS TO NAVIGATION	PLANE COORDINATES		LATITUDE	LONGITUDE
	X	Y		
LT. BUOY-10 (02/18)	792,938	1,482,152	28°24'37.40"	80°34'28.30"
LT. BUOY-11 (02/18)	793,605	1,480,470	28°24'20.73"	80°34'20.90"



- NOTES:
1. REFER TO SURVEY NO. 18-093.
  2. SEE SHEET NO.1 FOR SURVEY NOTES.
  3. LAT/LONG GRID TICS ARE AT 10-SECOND INTERVALS.

DESIGNED BY: WRM DRAWN BY: WRM CHECKED BY: WRM DATE: FEB 2018		DEPARTMENT OF THE ARMY JACKSONVILLE DISTRICT, CORPS OF ENGINEERS JACKSONVILLE, FLORIDA	
CANAVERAL HARBOR BREVARD COUNTY, FLORIDA <b>2Q HYDROGRAPHIC EXAM SURVEY FY18</b> 35, 39, 41, 43, 44 AND 46-FOOT PROJECT STA. 105+00 CUT - 1 THRU STA. 137+00 CUT - 2 PLAN		SHEET 11 OF 19	

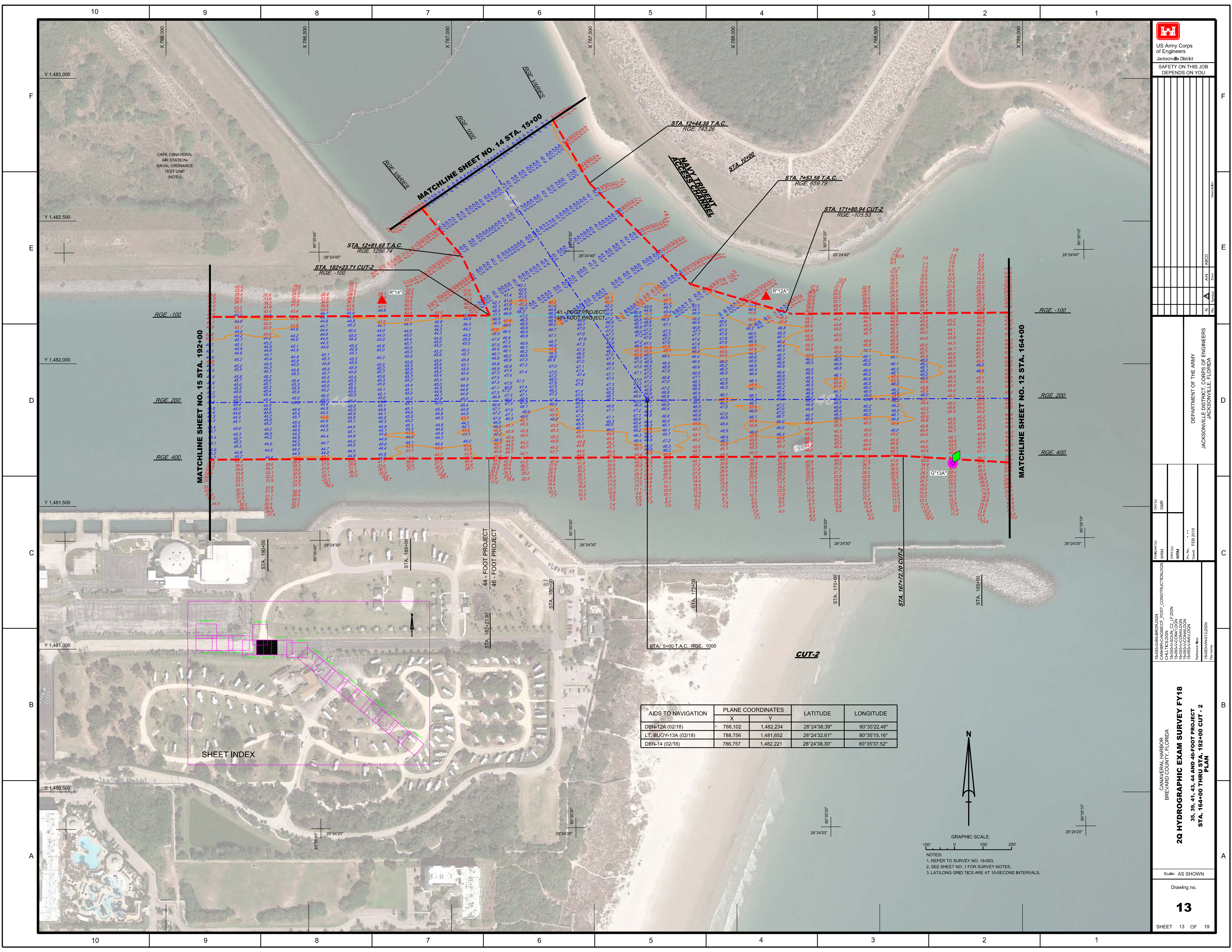


AIDS TO NAVIGATION	PLANE COORDINATES		LATITUDE	LONGITUDE
	X	Y		
LT. BUOY-13 (02/18)	791,393	1,481,402	28°24'30.04"	80°34'45.64"

- NOTES:
1. REFER TO SURVEY NO. 18-093.
  2. SEE SHEET NO.1 FOR SURVEY NOTES.
  3. LAT/LONG GRID TICS ARE AT 10-SECOND INTERVALS.

DEPARTMENT OF THE ARMY  
JACKSONVILLE DISTRICT CORPS OF ENGINEERS  
JACKSONVILLE, FLORIDA

2Q HYDROGRAPHIC EXAM SURVEY FY18  
35, 39, 41, 43, 44 AND 46-FOOT PROJECT  
STA. 137+00 THRU STA. 164+00 CUT - 2  
PLAN

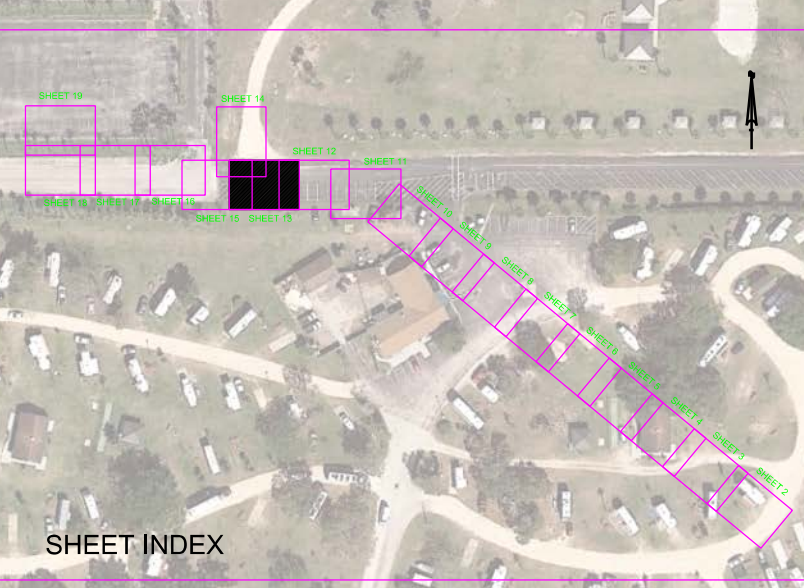


41-FOOT PROJECT

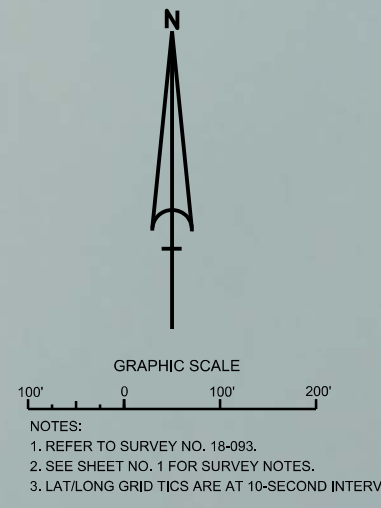
44-FOOT PROJECT

46-FOOT PROJECT

Matchlines: MATCHLINE SHEET NO. 14 STA. 15+00, MATCHLINE SHEET NO. 15 STA. 192+00, MATCHLINE SHEET NO. 12 STA. 164+00



AIDS TO NAVIGATION	PLANE COORDINATES		LATITUDE	LONGITUDE
	X	Y		
DBN-12A (02/18)	786,102	1,482,234	28°24'38.39"	80°35'22.46"
LT. BUOY-13A (02/18)	786,756	1,481,652	28°24'32.61"	80°35'15.16"
DBN-14 (02/18)	786,757	1,482,221	28°24'38.30"	80°35'37.52"



NOTES:  
1. REFER TO SURVEY NO. 18-093.  
2. SEE SHEET NO. 1 FOR SURVEY NOTES.  
3. LAT/LONG GRID TICS ARE AT 10-SECOND INTERVALS.

18-093-AS-BUILDING  
CANBER-CANBER POST CONSTRUCTION  
18-093-AS-SOUND QZ.F.DGN  
18-093-AS-COM1.DGN  
18-093-AS-COM2.DGN  
18-093-AS-CON1.DGN  
18-093-AS-CON2.DGN  
18-093-AS-NAV.DGN  
18-093-AS-H401.DGN

Scale: AS SHOWN

2Q HYDROGRAPHIC EXAM SURVEY FY18  
35, 39, 41, 43, 44 AND 46-FOOT PROJECT  
STA. 164+00 THRU STA. 192+00 CUT - 2  
PLAN

Zone	N	AN	ABCD	Zone

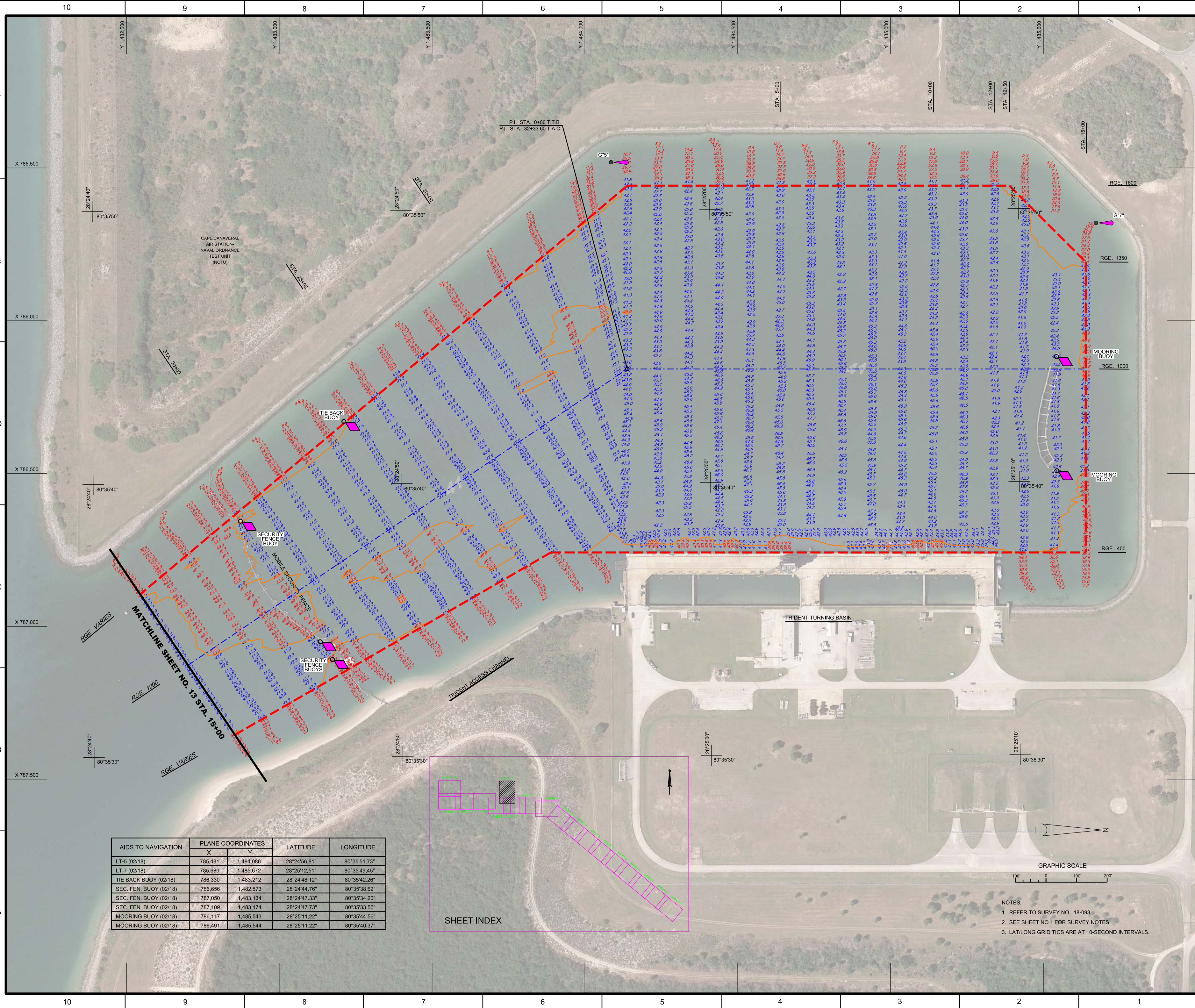
DEPARTMENT OF THE ARMY  
JACKSONVILLE DISTRICT, CORPS OF ENGINEERS  
JACKSONVILLE, FLORIDA

Check by	Checked
GHR	
WRM	
WRM	
WRM	
WRM	
WRM	
WRM	
WRM	
WRM	
WRM	

Designated by	Designation	Date
WRM	18-093A-SUB-10-RD-DGN	FEB 2018
WRM	18-093A-SUB-11-POST-CO	FEB 2018
WRM	18-093A-SUB-12-TAC-LF-DGN	FEB 2018
WRM	18-093A-SUB-13-LF-DGN	FEB 2018
WRM	18-093A-SUB-14-LF-DGN	FEB 2018
WRM	18-093A-SUB-15-LF-DGN	FEB 2018

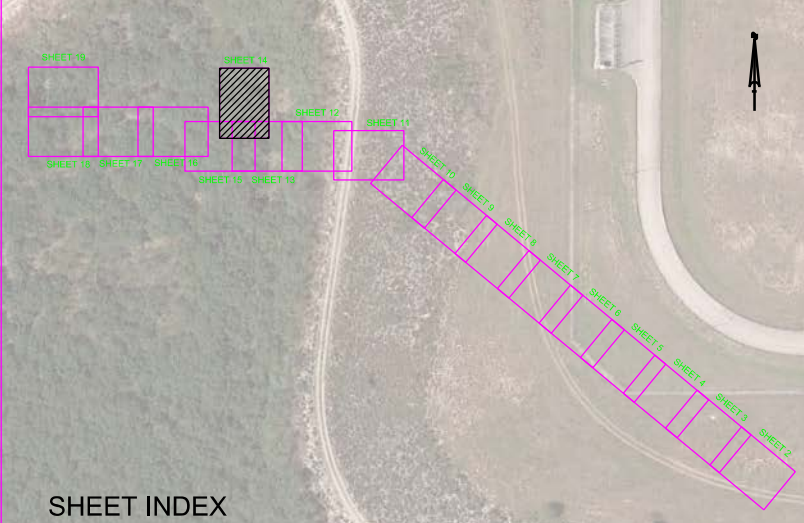
Reference Sheet	Description
18-093A-SUB-10-RD-DGN	CONSTRUCTION
18-093A-SUB-11-POST-CO	CONSTRUCTION
18-093A-SUB-12-TAC-LF-DGN	CONSTRUCTION
18-093A-SUB-13-LF-DGN	CONSTRUCTION
18-093A-SUB-14-LF-DGN	CONSTRUCTION
18-093A-SUB-15-LF-DGN	CONSTRUCTION

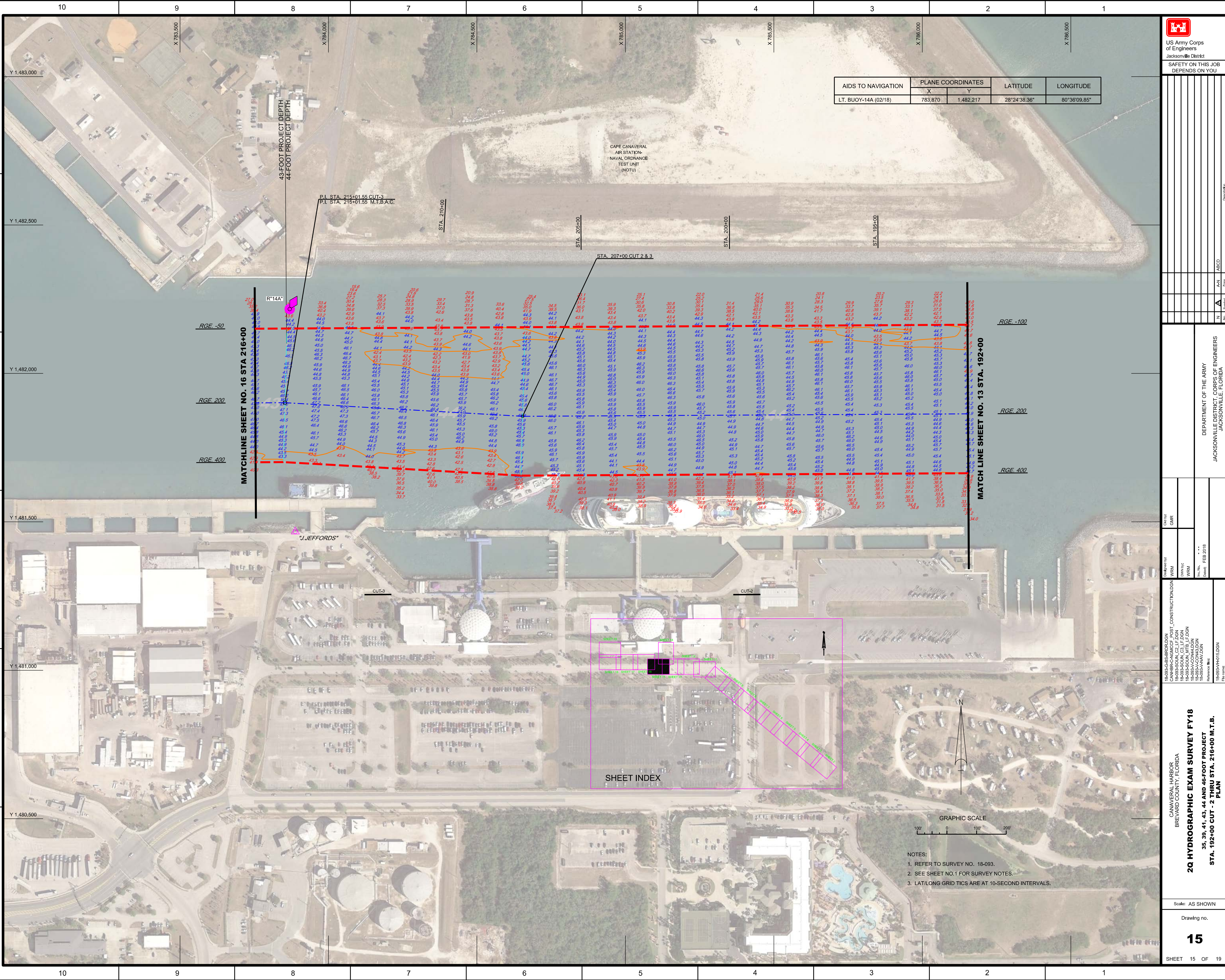
2Q HYDROGRAPHIC EXAM SURVEY FY18  
35, 39, 41, 43, 44 AND 46-FOOT PROJECT  
TRIDENT ACCESS CHANNEL & TURNING BASIN  
PLAN



AIDS TO NAVIGATION	PLANE COORDINATES		LATITUDE	LONGITUDE
	X	Y		
LT-5 (02/18)	785.481	1,484,086	28°24'56.81"	80°35'51.73"
LT-7 (02/18)	785.680	1,485.672	28°25'12.51"	80°35'49.45"
TIE BACK BUOY (02/18)	786.330	1,483.212	28°24'48.12"	80°35'42.26"
SEC. FEN. BUOY (02/18)	786.656	1,482.873	28°24'44.76"	80°35'38.62"
SEC. FEN. BUOY (02/18)	787.050	1,483.134	28°24'47.33"	80°35'34.20"
SEC. FEN. BUOY (02/18)	787.109	1,483.174	28°24'47.73"	80°35'33.55"
MOORING BUOY (02/18)	786.117	1,485.543	28°25'11.22"	80°35'44.56"
MOORING BUOY (02/18)	786.491	1,485.544	28°25'11.22"	80°35'40.37"

- NOTES:
- REFER TO SURVEY NO. 18-093.
  - SEE SHEET NO.1 FOR SURVEY NOTES.
  - LAT/LONG GRID TICS ARE AT 10-SECOND INTERVALS.





AIDS TO NAVIGATION	PLANE COORDINATES		LATITUDE	LONGITUDE
	X	Y		
LT. BUOY-14A (02/18)	783.870	1,482.217	28°24'38.36"	80°36'09.85"

US Army Corps of Engineers  
Jacksonville District  
SAFETY ON THIS JOB  
DEPENDS ON YOUR

Zone	AN	ABCD
N		

DEPARTMENT OF THE ARMY  
JACKSONVILLE DISTRICT CORPS OF ENGINEERS  
JACKSONVILLE, FLORIDA

Checked by:	GHR
Designed by:	WRM
Drawn by:	WRM
Scale:	AS SHOWN
Date:	FEB 2018

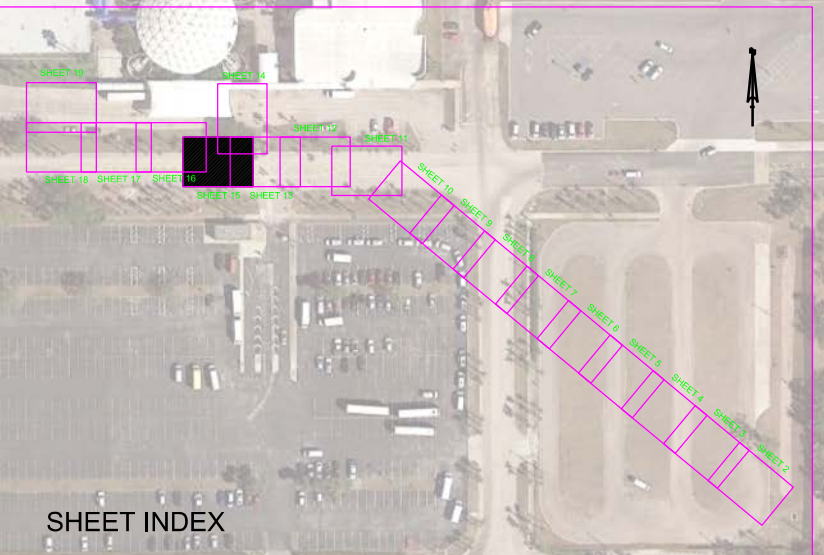
18-093-AS-BROLDEN  
CANBERG-NEARBY POST CONSTRUCTION  
18-093-SOUN, MTS, LF, DGN  
18-093-SOUN, MTS, LF, DGN  
18-093-SOUN, MTS, LF, DGN  
18-093-SOUN, MTS, LF, DGN  
18-093-SOUN, MTS, LF, DGN

**2Q HYDROGRAPHIC EXAM SURVEY FY18**  
35, 39, 41, 43, 44 AND 46-FOOT PROJECT  
STA. 192+00 CUT - 2 THRU STA. 216+00 M.T.B.  
PLAN

Scale: AS SHOWN  
Drawing no.  
**15**

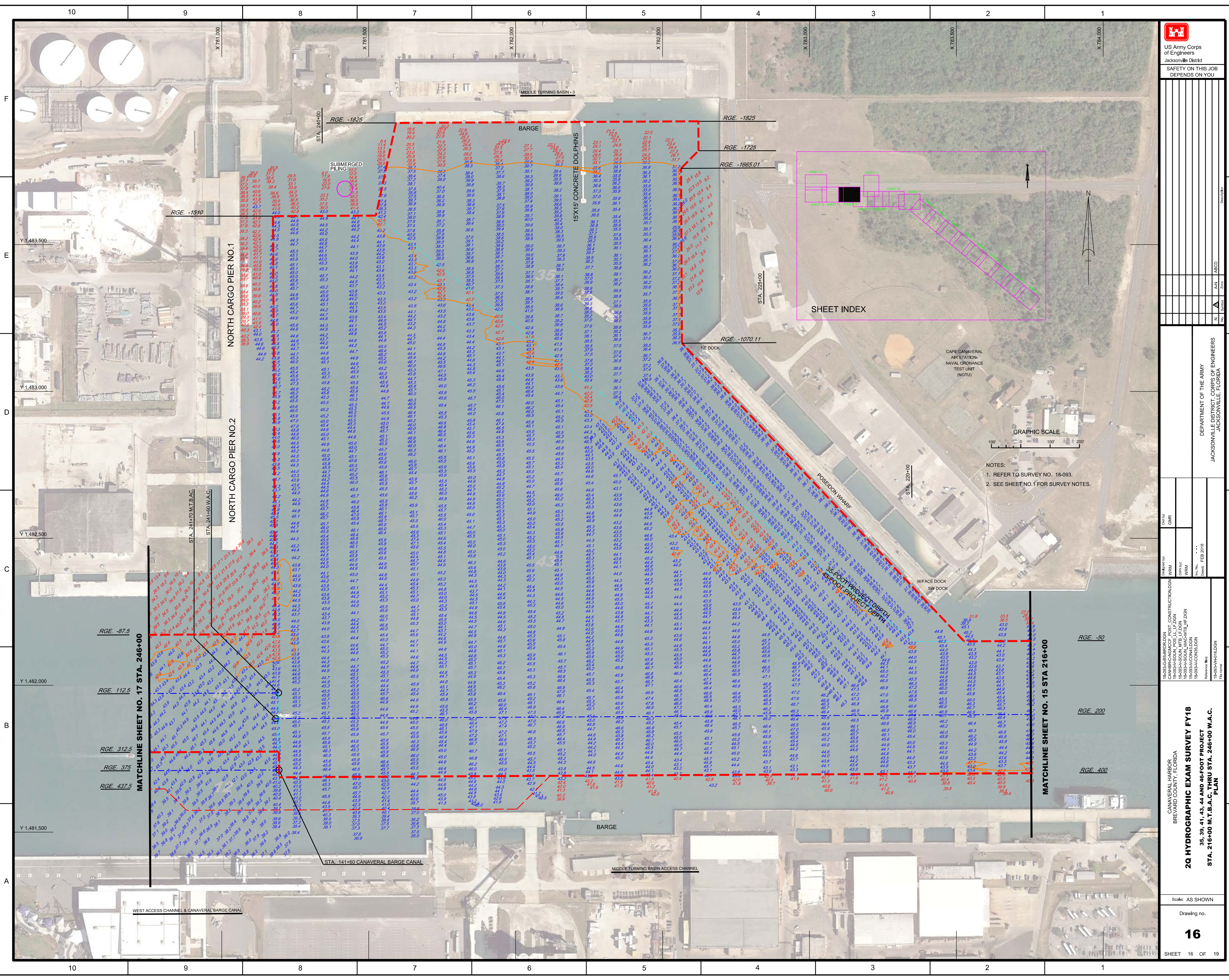


- NOTES:  
1. REFER TO SURVEY NO. 18-093.  
2. SEE SHEET NO.1 FOR SURVEY NOTES.  
3. LAT/LONG GRID TICS ARE AT 10-SECOND INTERVALS.



MATCHLINE SHEET NO. 16 STA 216+00

MATCHLINE SHEET NO. 13 STA. 192+00



Sheet No.	Description
15	North Cargo Pier No. 1
16	North Cargo Pier No. 2
17	Matchline No. 17
18	Matchline No. 15

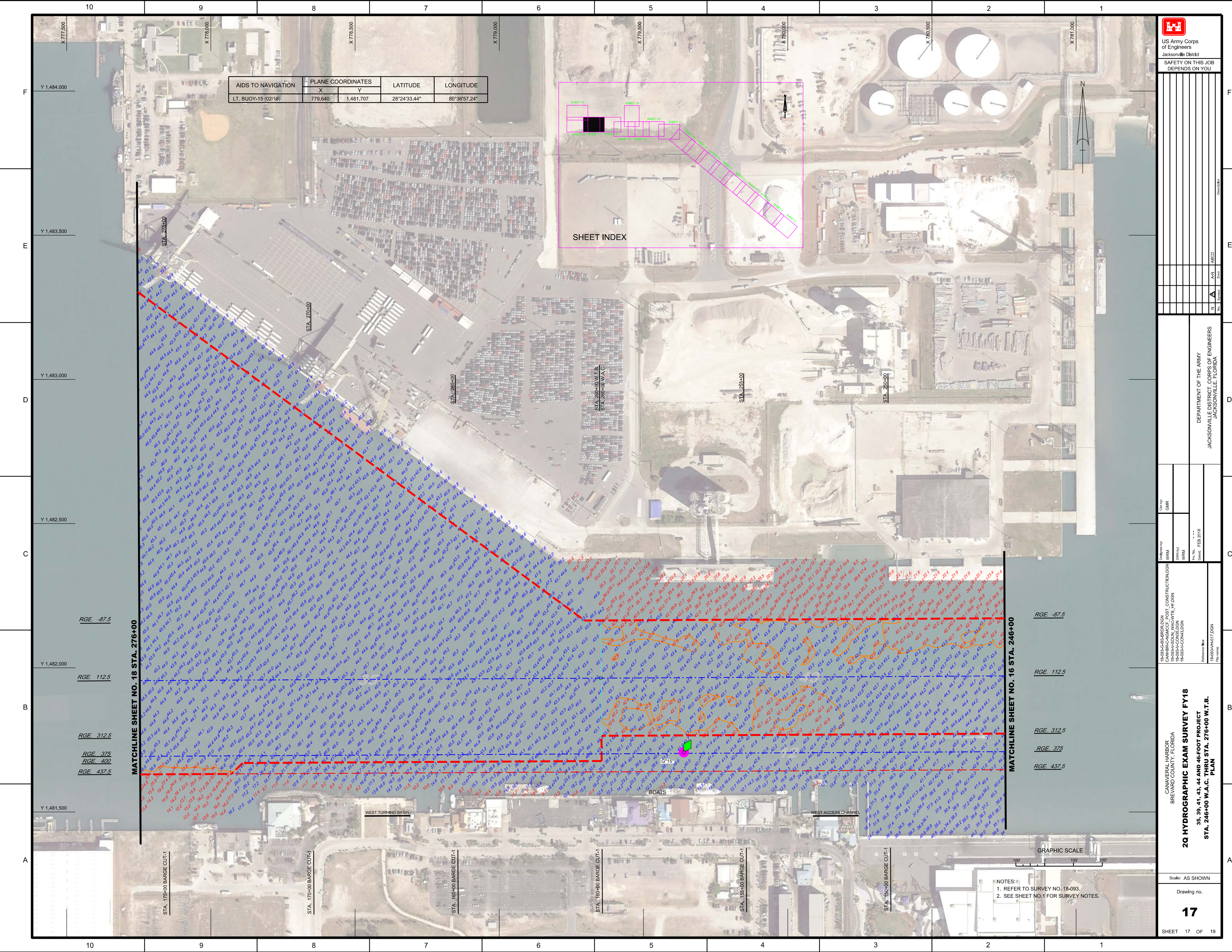
DEPARTMENT OF THE ARMY  
JACKSONVILLE DISTRICT CORPS OF ENGINEERS  
JACKSONVILLE, FLORIDA

NOTES:  
1. REFER TO SURVEY NO. 18-093.  
2. SEE SHEET NO. 17 FOR SURVEY NOTES.

Checked by:	GHK
Designed by:	WRM
Drawn by:	WRM
Date:	FEB 2018

2Q HYDROGRAPHIC EXAM SURVEY FY18  
35, 39, 41, 43, 44 AND 46-FOOT PROJECT  
STA. 216+00 M.T.B.A.C. THRU STA. 246+00 W.A.C.  
PLAN





AIDS TO NAVIGATION	PLANE COORDINATES		LATITUDE	LONGITUDE
	X	Y		
LT. BUOY-15 (02/16)	779,640	1,481,707	28°24'33.44"	80°36'57.24"

SHEET INDEX

RGE. -87.5  
RGE. 112.5  
RGE. 312.5  
RGE. 375  
RGE. 400  
RGE. 437.5

RGE. -87.5  
RGE. 112.5  
RGE. 312.5  
RGE. 375  
RGE. 437.5

MATCHLINE SHEET NO. 18 STA. 276+00

MATCHLINE SHEET NO. 16 STA. 246+00

STA. 175+00 BARGE CUT-1

STA. 170+00 BARGE CUT-1

STA. 165+00 BARGE CUT-1

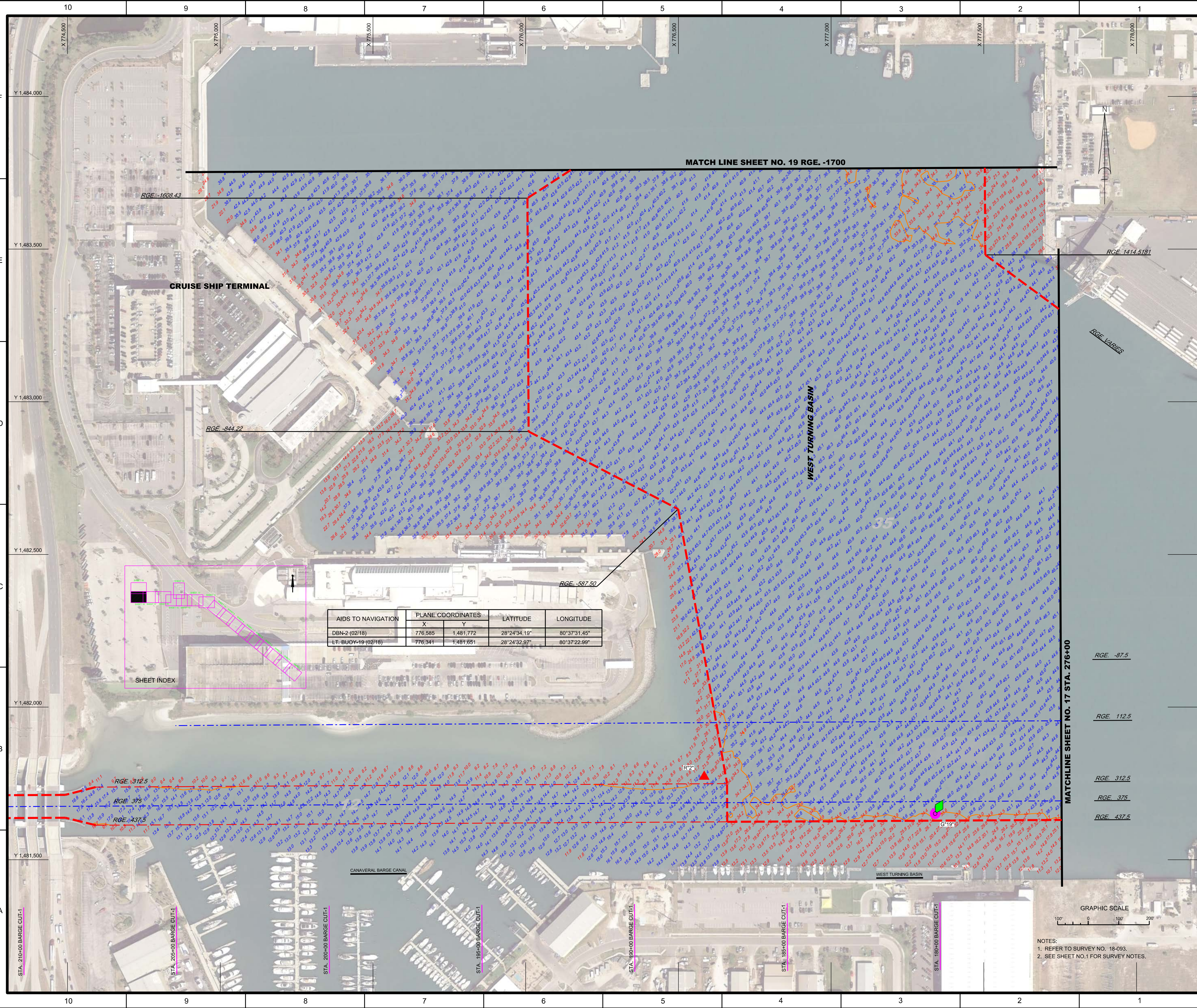
STA. 160+00 BARGE CUT-1

STA. 155+00 BARGE CUT-1

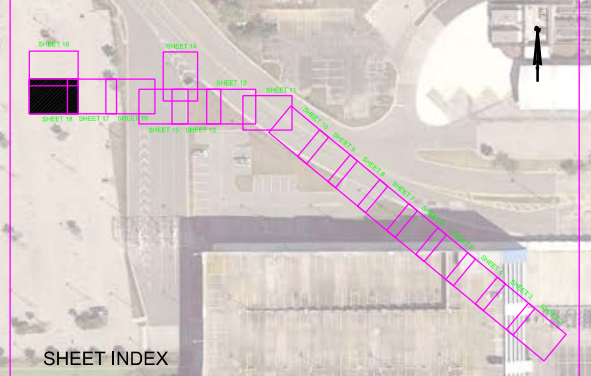
STA. 150+00 BARGE CUT-1



NOTES:  
1. REFER TO SURVEY NO. 18-093.  
2. SEE SHEET NO.1 FOR SURVEY NOTES.



AIDS TO NAVIGATION	PLANE COORDINATES		LATITUDE	LONGITUDE
	X	Y		
DBN-2 (02/18)	776.595	1,481,772	28°24'34.19"	80°37'31.45"
LT BUOY-19 (02/18)	776.341	1,481,851	28°24'32.97"	80°37'22.99"



NOTES:  
 1. REFER TO SURVEY NO. 18-093.  
 2. SEE SHEET NO.1 FOR SURVEY NOTES.

US Army Corps of Engineers  
 Jacksonville District  
**SAFETY ON THIS JOB DEPENDS ON YOU**

---

DEPARTMENT OF THE ARMY  
 JACKSONVILLE DISTRICT, CORPS OF ENGINEERS  
 JACKSONVILLE, FLORIDA

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Drawn by: GHR  
 Checked by: WRM  
 Date: FEB 2018

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Project: 20 HYDROGRAPHIC EXAM SURVEY FY18  
 35, 39, 41, 43, 44 AND 46-FOOT PROJECT  
 STA. 276+00 W.T.B. THRU END OF WEST TURNING BASIN  
 PLAN

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Scale: AS SHOWN  
 Drawing no. **18**  
 SHEET 18 OF 19

