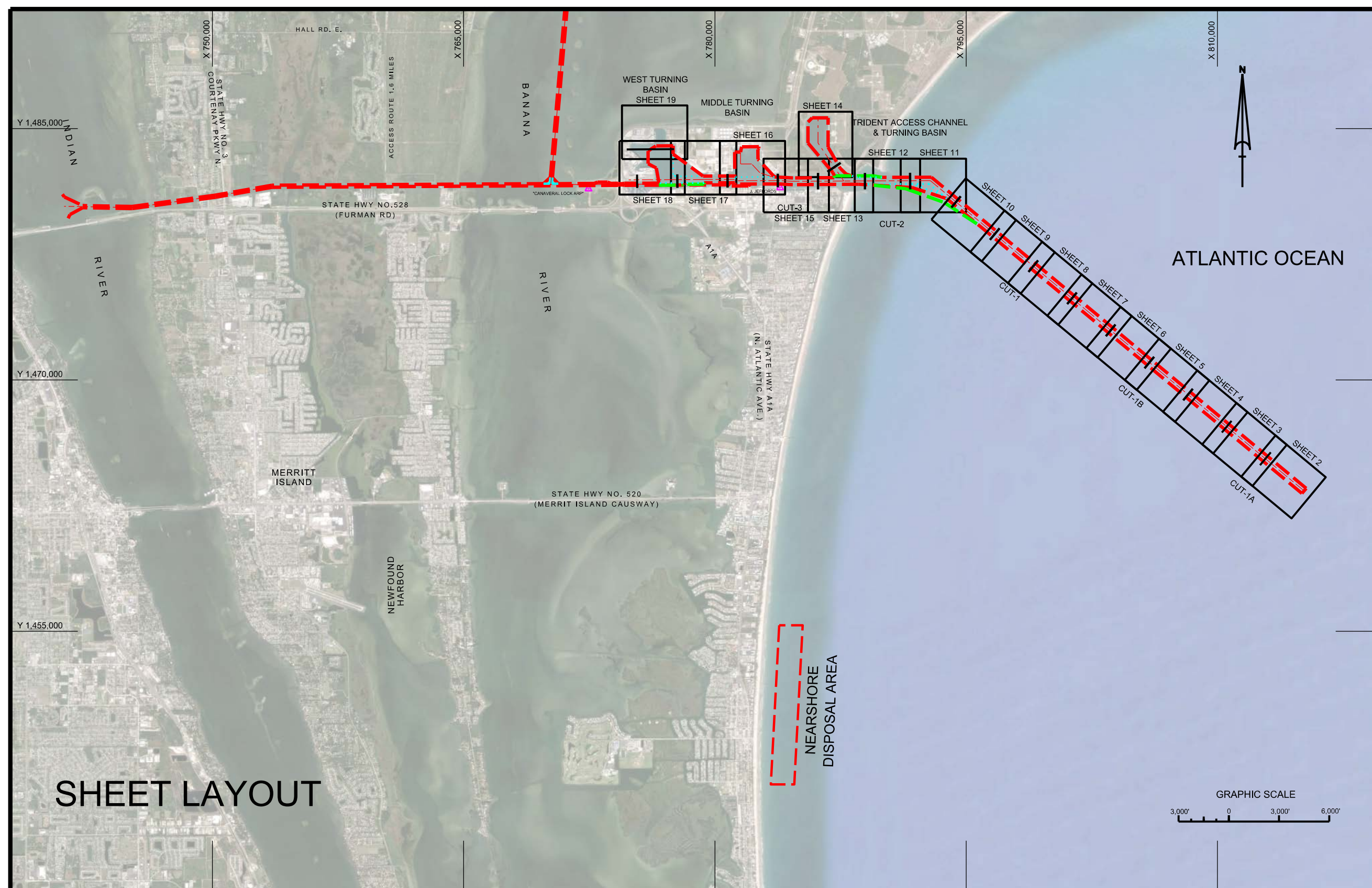
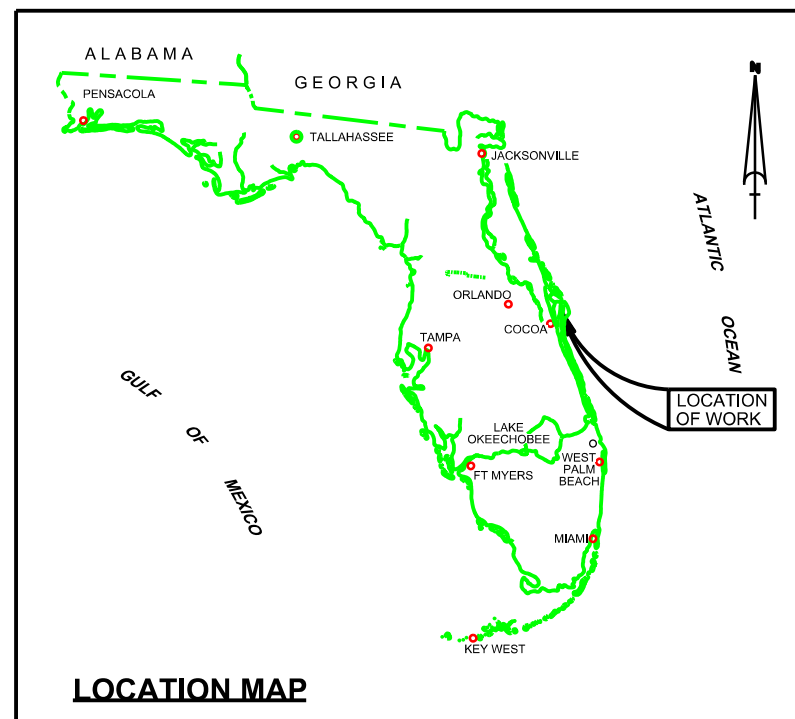


CANAVERAL HARBOR BREVARD COUNTY, FLORIDA POST-HURRICANE MATTHEW EXAMINATION SURVEY FY17



SURVEY NOTES

- REFER TO SURVEY NO. 17-009.
 - 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: "CANAVERAL-HBR-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 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 VDATUM 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 USED FOR ALL CUTS.
 - VERTICAL MEASUREMENTS WERE MADE USING A ROSS SMART SOUNDER SINGLE-BEAM TRANSDUCER OPERATING AT 28200 KHZ AND A R2SONIC 2024 OPERATING AT 240 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., TTB, AND THE MTB.
- | VESSEL | DATE OF SURVEY | CUT |
|--------|----------------|-------------------------|
| SB-46 | 26 OCT 2016 | WAC, WTB |
| SB-46 | 27 OCT 2016 | TTB, TAC, POS, MTB, WAC |
| SB-46 | 01 NOV 2016 | CUTS 1, 2, 3 |
| SB-46 | 02 NOV 2016 | NCP, CUT-1 |
| SB-46 | 03 NOV 2016 | CUT-1A, CUT-1B |
| SB-46 | 04 NOV 2016 | CUT-1 |
- 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	
POST-HURRICANE MATTHEW EXAM SURVEY FY17		35, 39, 41, 43, 44 AND 46-FOOT PROJECT INDEX, LOCATION AND VICINITY PLAN	
Scale: AS SHOWN		Drawing no.	
1		SHEET 1 OF 19	

ATLANTIC OCEAN

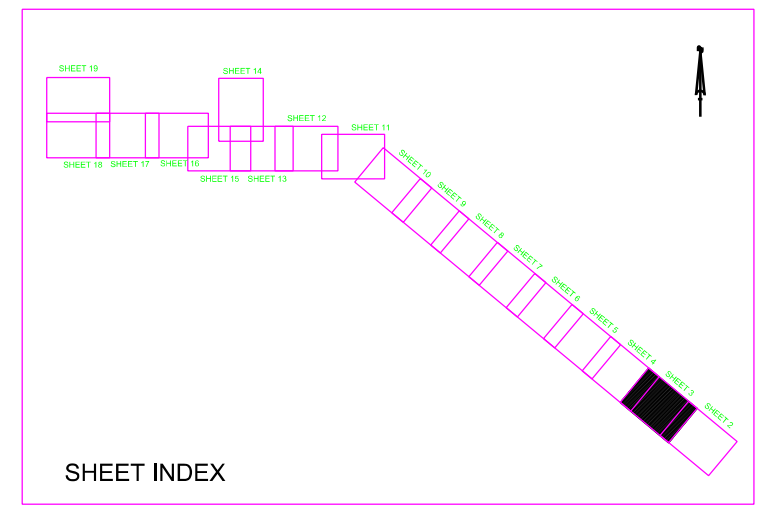
CUT-1A
AZ=129-41-09

MATCHLINE SHEET NO. 4 STA. 60+00

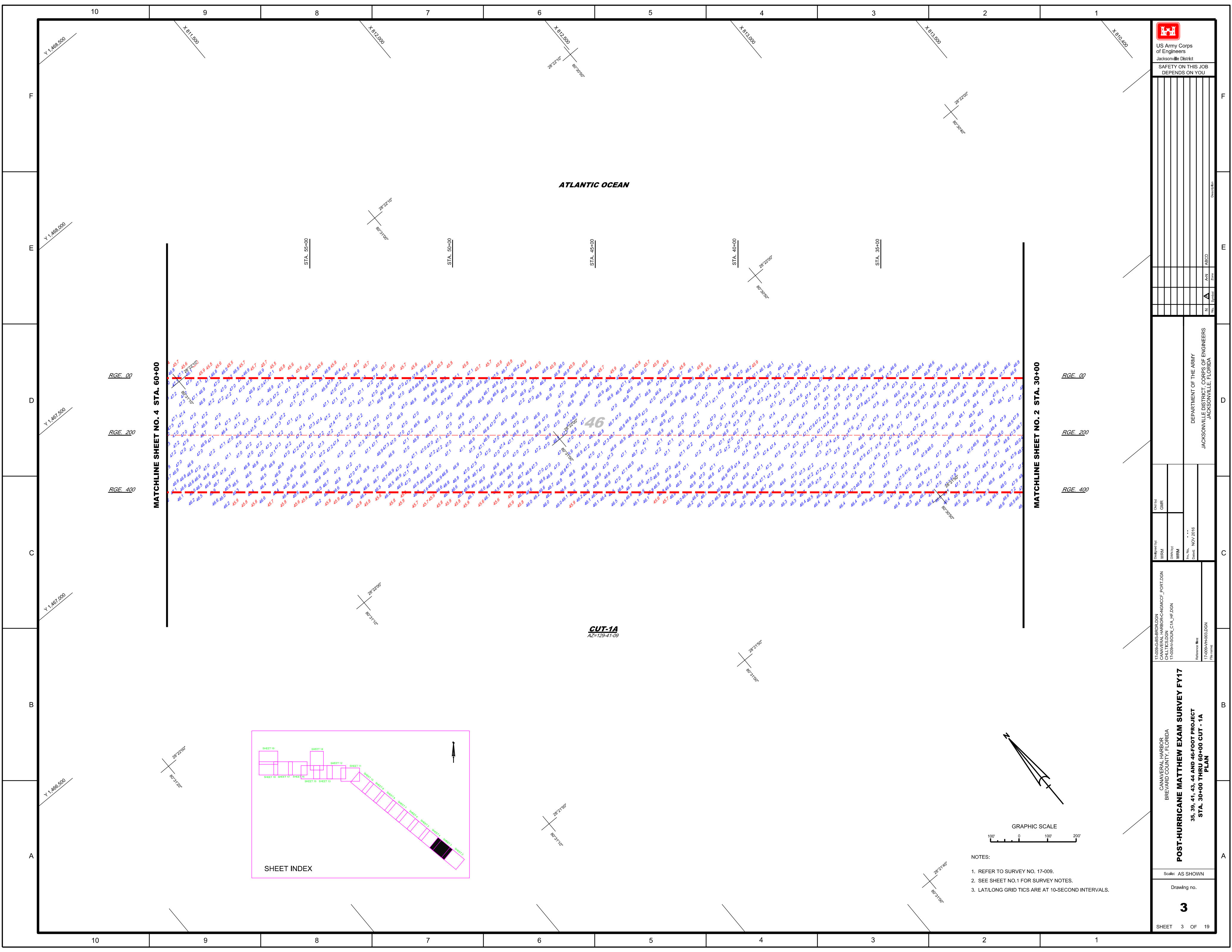
MATCHLINE SHEET NO. 2 STA. 30+00

RGE_00
RGE_200
RGE_400

RGE_00
RGE_200
RGE_400



- NOTES:
1. REFER TO SURVEY NO. 17-009.
 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

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--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

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

Checked by: GHR
Designed by: WRM
Drawn by: WRM
File No.: 17-009A-H004-DGN
Date: NOV 2016

17-009A-GS-BR04-DGN
CANAVERAL HARBOR-CNGICC-FORT-DGN
17-009A-SOOU_C1A_IF-DGN

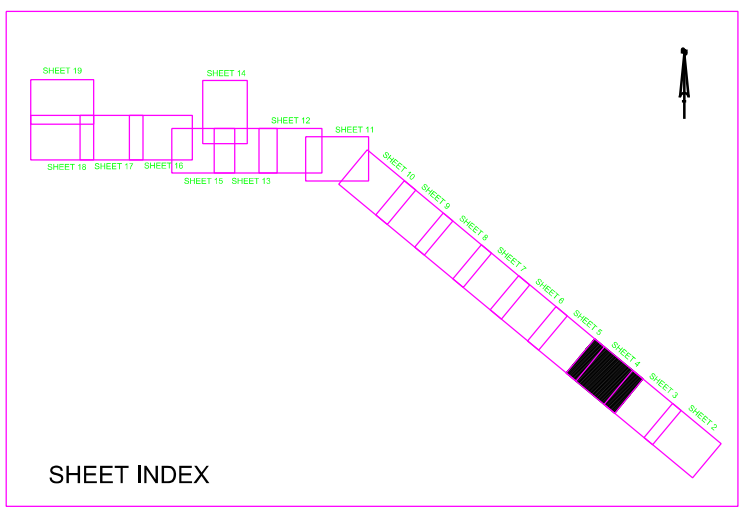
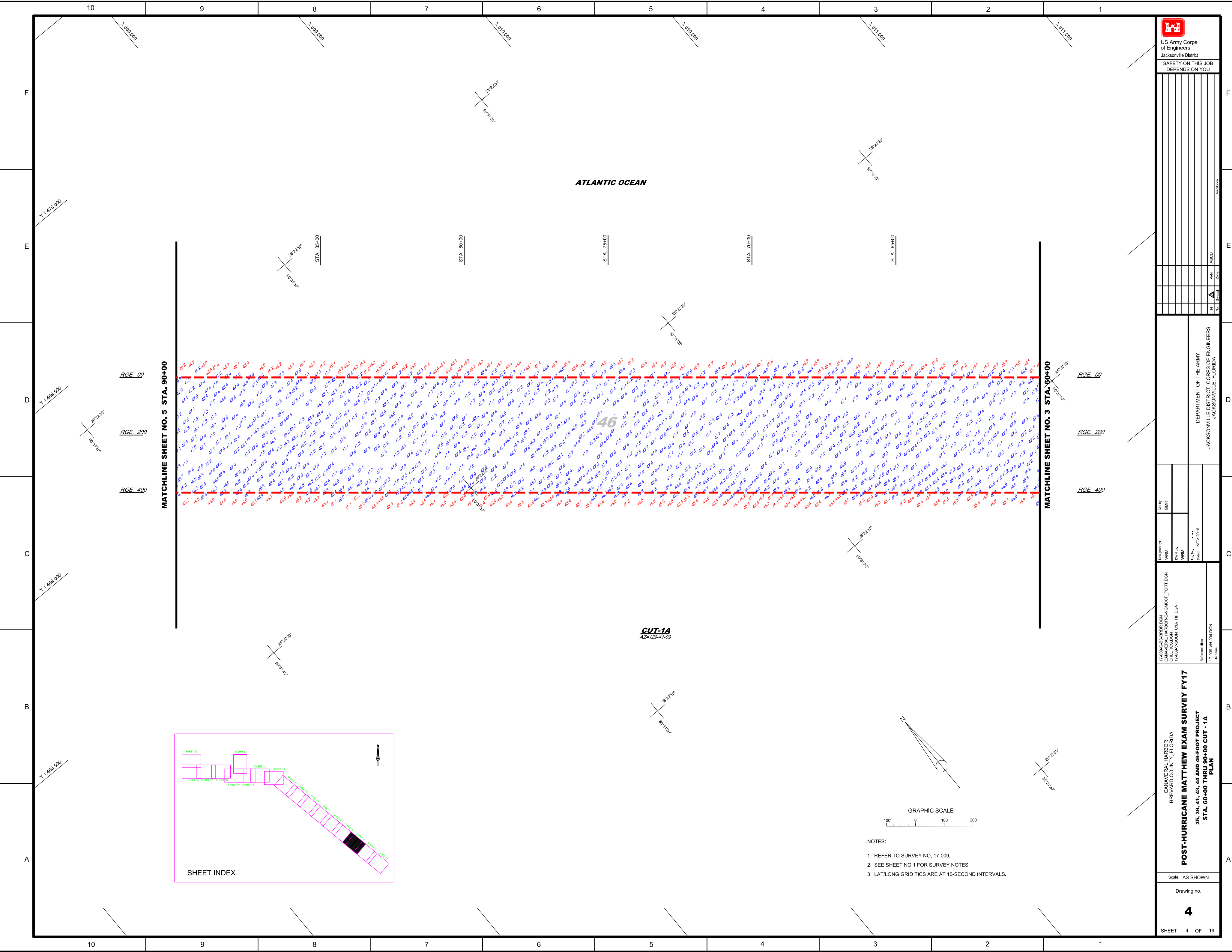
CANAVERAL HARBOR
BREVARD COUNTY, FLORIDA
POST-HURRICANE MATTHEW EXAM SURVEY FY17
35, 39, 41, 43, 44 AND 46-FOOT PROJECT
STA. 60+00 THRU 90+00 CUT - 1A
PLAN

Scale: AS SHOWN

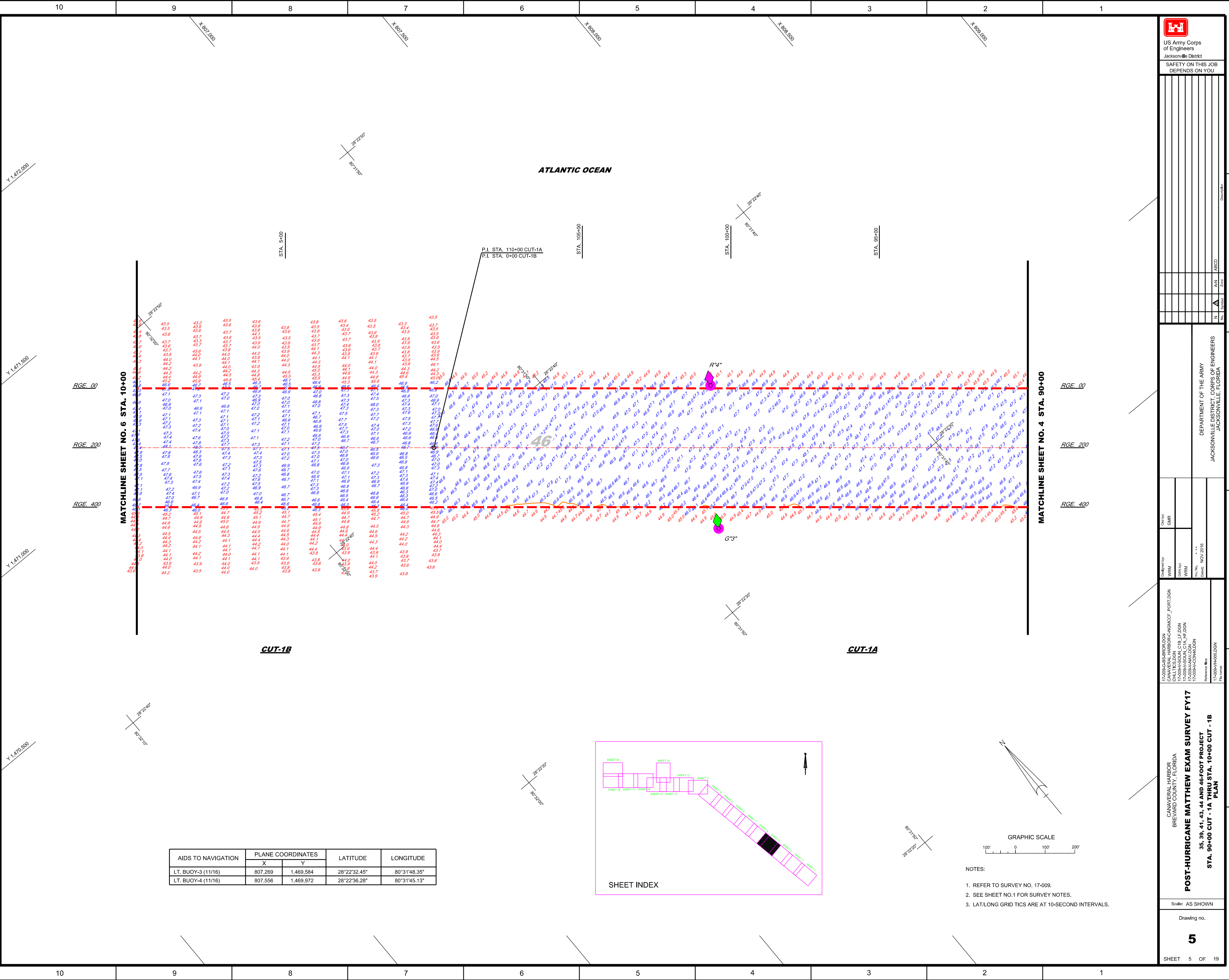
Drawing no.

4

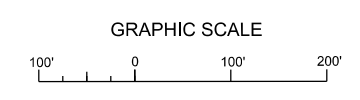
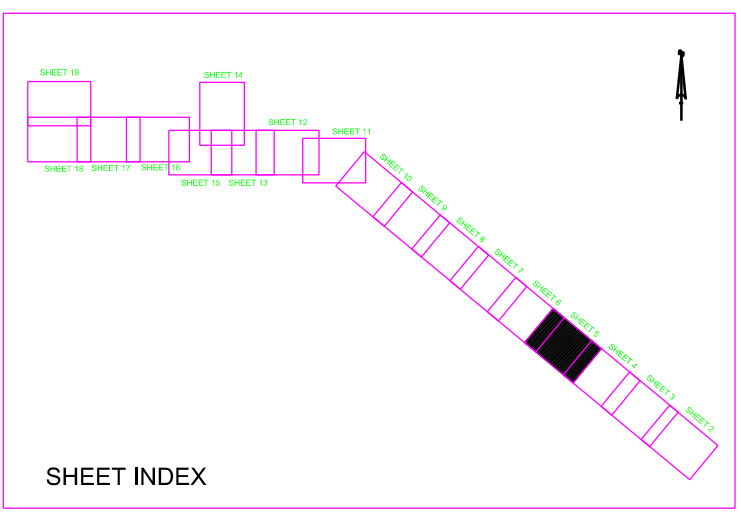
SHEET 4 OF 19



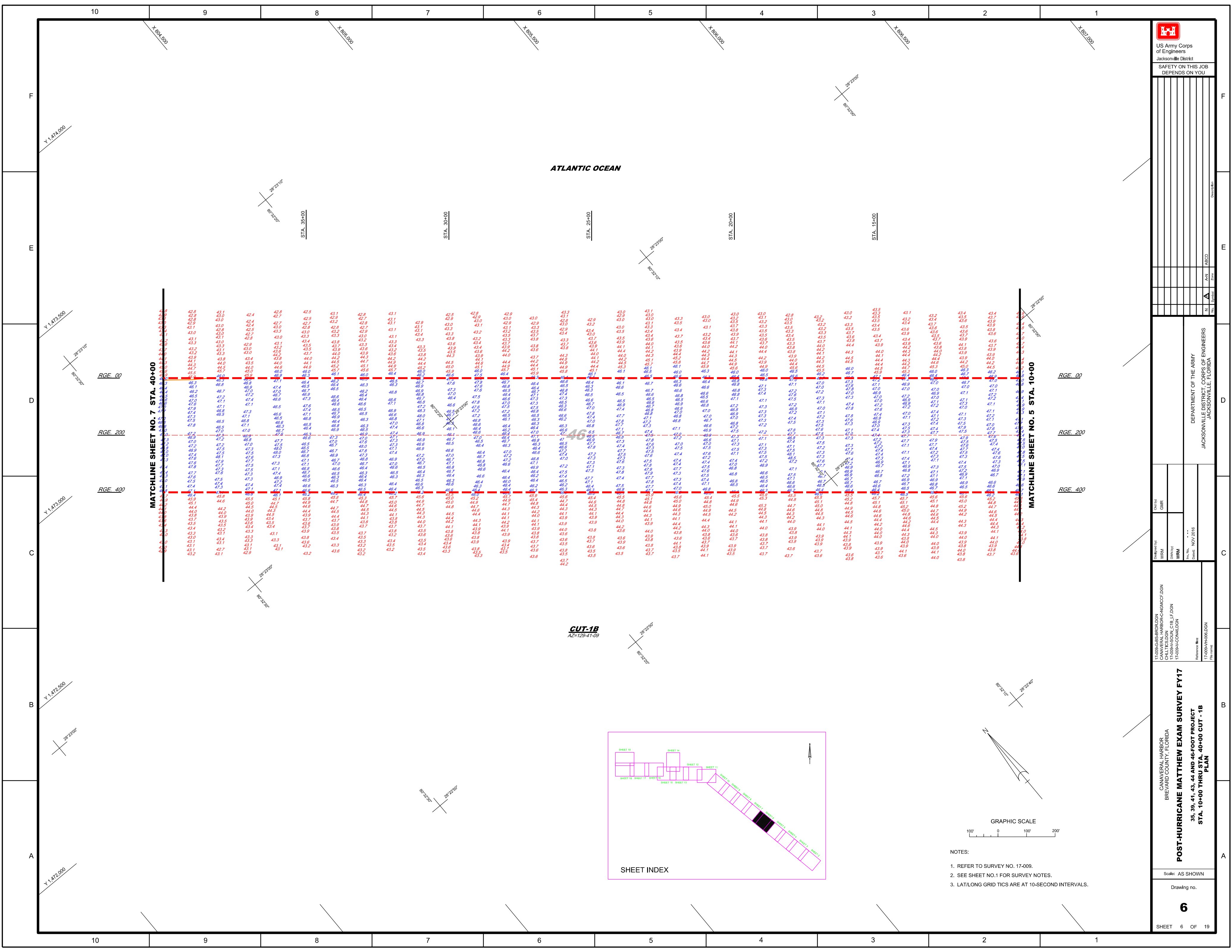
- NOTES:
- REFER TO SURVEY NO. 17-009.
 - SEE SHEET NO.1 FOR SURVEY NOTES.
 - LAT/LONG GRID TICS ARE AT 10-SECOND INTERVALS.



AIDS TO NAVIGATION	PLANE COORDINATES		LATITUDE	LONGITUDE
	X	Y		
LT. BUOY-3 (11/16)	807,269	1,469,584	28°22'32.45"	80°31'48.35"
LT. BUOY-4 (11/16)	807,556	1,469,972	28°22'36.28"	80°31'45.13"



- NOTES:
- REFER TO SURVEY NO. 17-0009.
 - SEE SHEET NO.1 FOR SURVEY NOTES.
 - LAT/LONG GRID TICS ARE AT 10-SECOND INTERVALS.

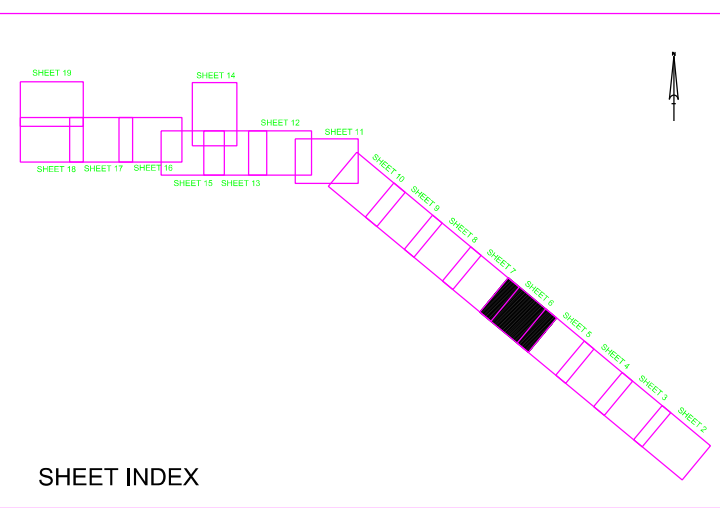


ATLANTIC OCEAN


MATCHLINE SHEET NO. 7 STA. 40+00

MATCHLINE SHEET NO. 5 STA. 10+00

CUT-1B
AZ=129-41-09



- NOTES:
1. REFER TO SHEET NO. 17-009.
 2. SEE SHEET NO.1 FOR SURVEY NOTES.
 3. LAT/LONG GRID TICS ARE AT 10-SECOND INTERVALS.



US Army Corps
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Jacksonville District

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

Drawn by: GHR
Checked by: GHR
Date: NOV 2016

17-009-C&S-BR01.DGN
CANAVERAL HARBOR-C&S-NGMCCF.DGN
17-009-A-SOUL_C1B_LF.DGN
17-009-A-COIN6.DGN

POST-HURRICANE MATTHEW EXAM SURVEY FY17
35, 39, 41, 43, 44 AND 46-FOOT PROJECT
STA. 10+00 THRU STA. 40+00 CUT - 1B
PLAN

Scale: AS SHOWN
Drawing no.
6
SHEET 6 OF 19

Zone	Magnetic Declination			
	N	A	B	C
Year	2011	2012	2013	2014
	2015	2016	2017	2018
Symbol				

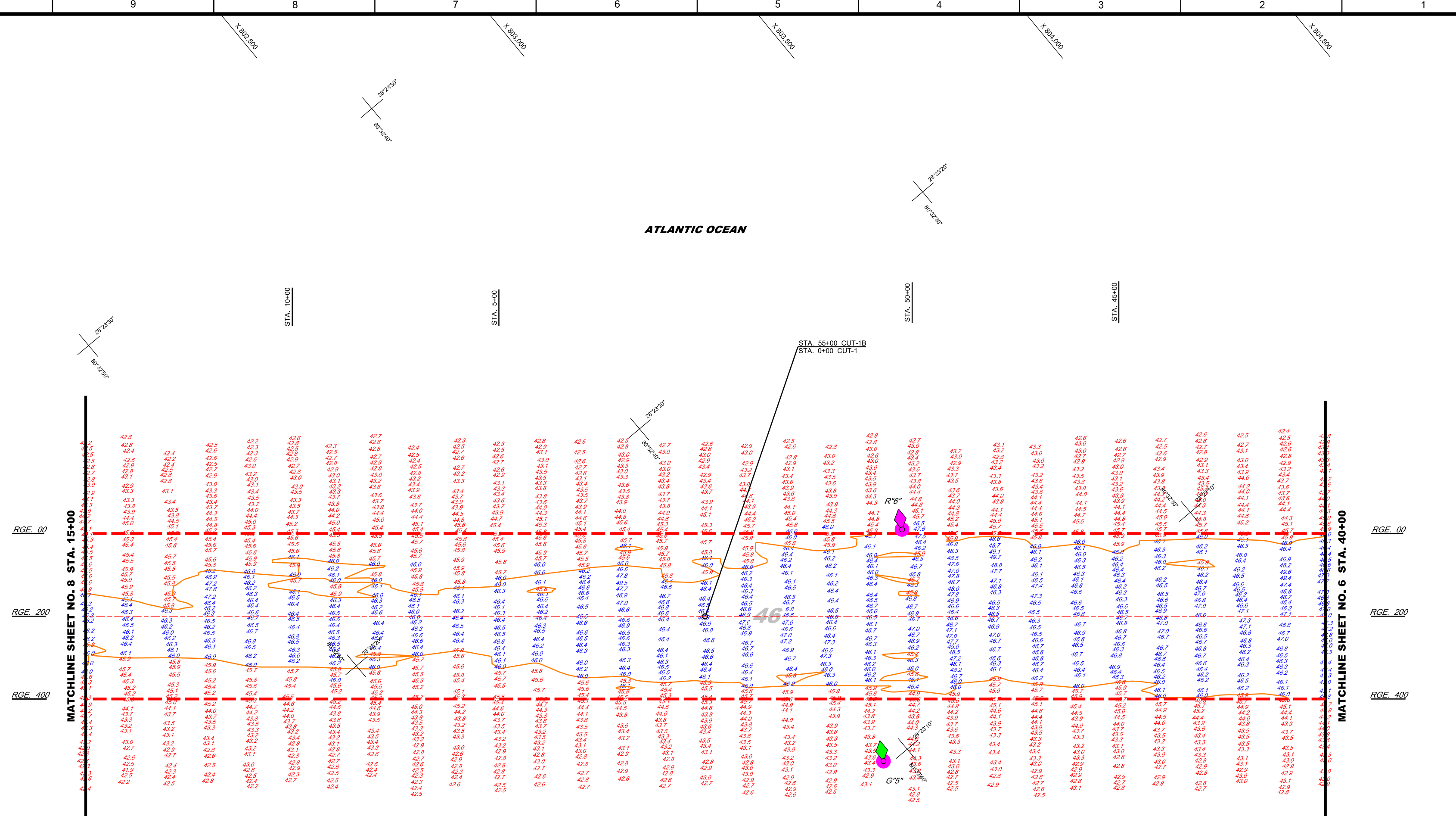
DEPARTMENT OF THE ARMY
JACKSONVILLE DISTRICT CORPS OF ENGINEERS
JACKSONVILLE, FLORIDA

Designed by: WRM
Checked by: GHR
Date: NOV 2016

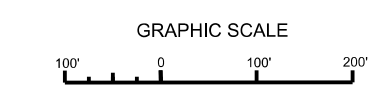
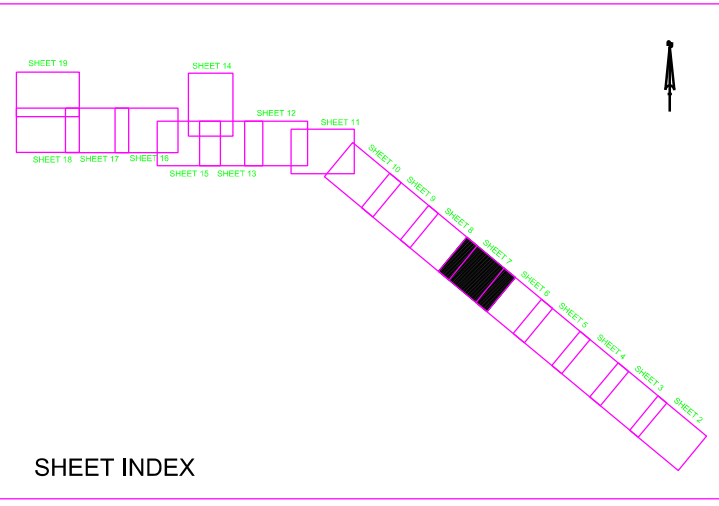
17-0004-C35-BRD.DGN
CANAVERAL HARBOR-CHONGMCCF_FORT.DGN
17-0004-SOUL_C1B_LF.DGN
17-0004-ACC16.DGN
17-0004-PAH07.DGN
Reference file:
File name:

Canaveral Harbor
Brevard County, Florida
POST-HURRICANE MATTHEW EXAM SURVEY FY17
35, 39, 41, 43, 44 AND 46-FOOT PROJECT
STA. 40+00 CUT - 1B THRU STA. 15+00 CUT - 1
PLAN
Scale: AS SHOWN
Drawing no.
7
SHEET 7 OF 19

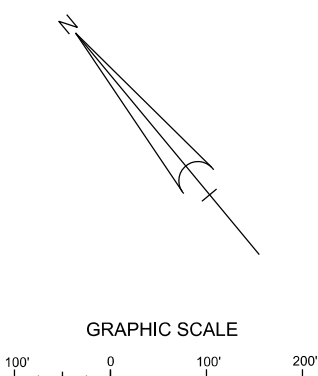
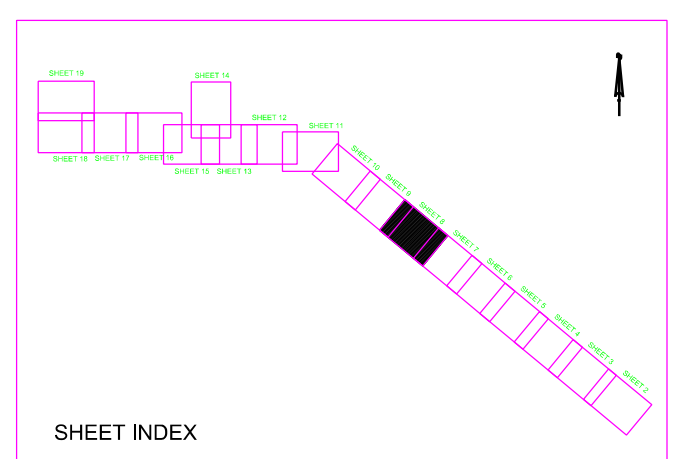
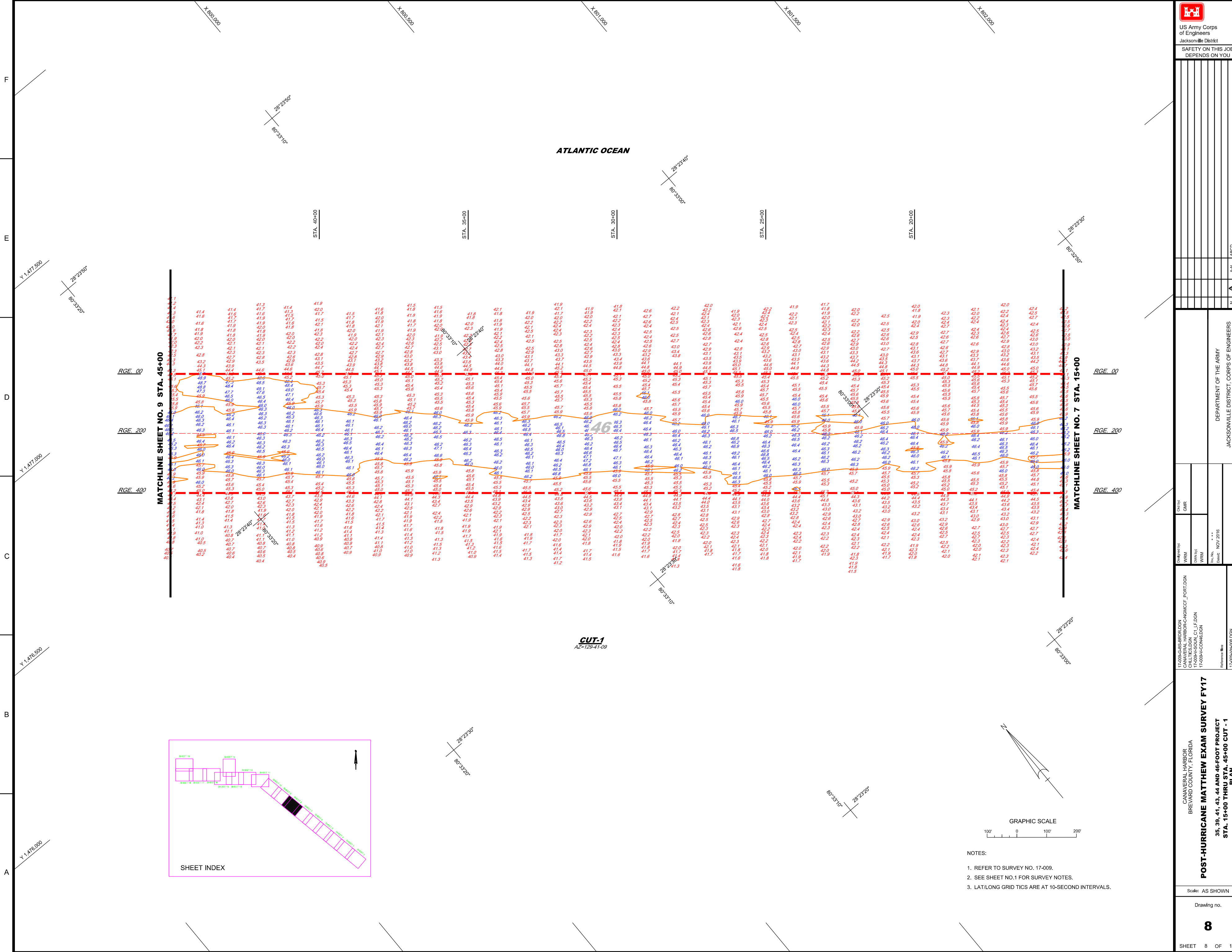
ATLANTIC OCEAN



AIDS TO NAVIGATION	PLANE COORDINATES		LATITUDE	LONGITUDE
	X	Y		
LT. BUOY-5 (11/16)	802,580	1,473,373	28°23'10.14"	80°32'40.69"
LT. BUOY-6 (11/16)	802,973	1,473,776	28°23'14.12"	80°32'36.28"



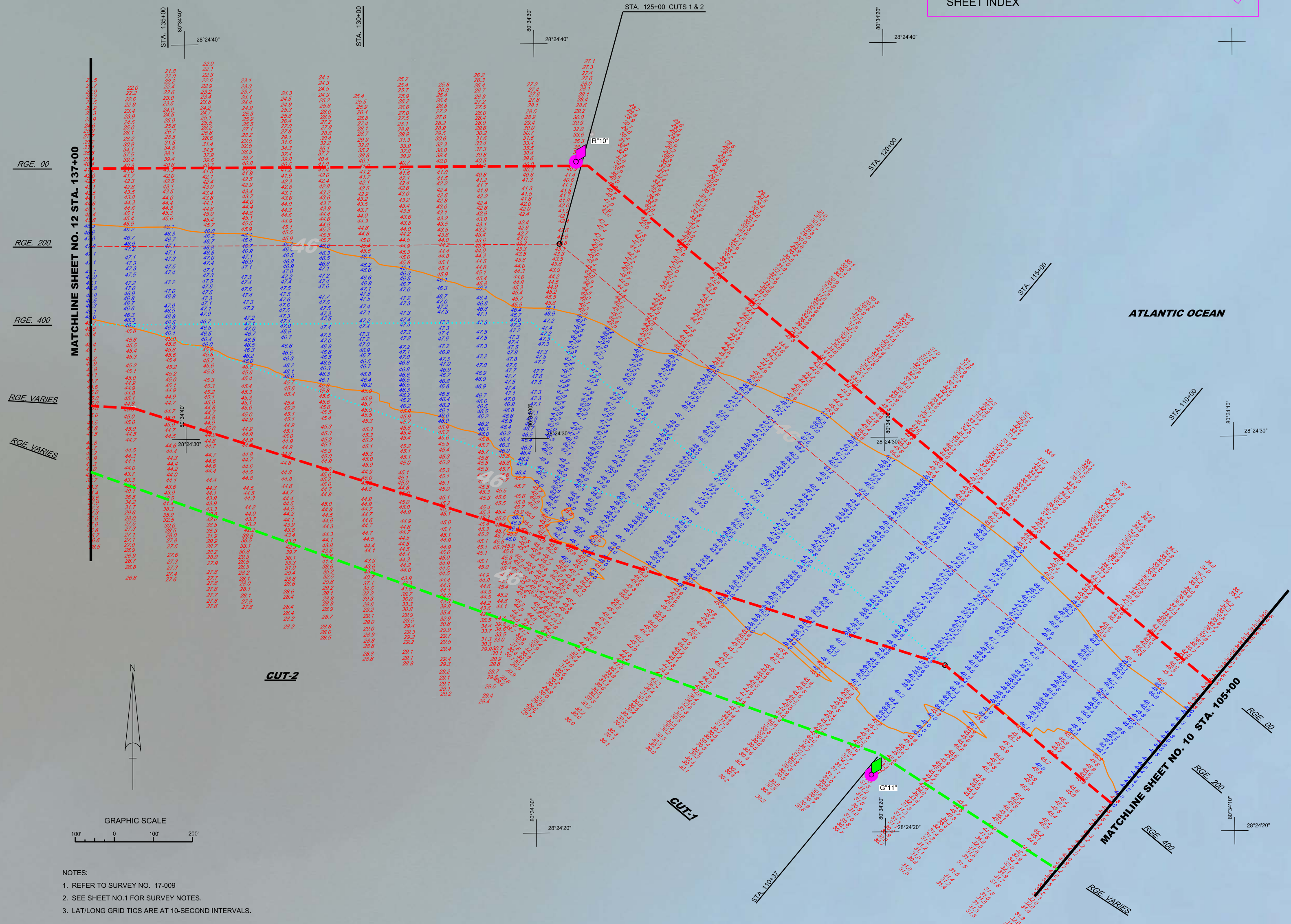
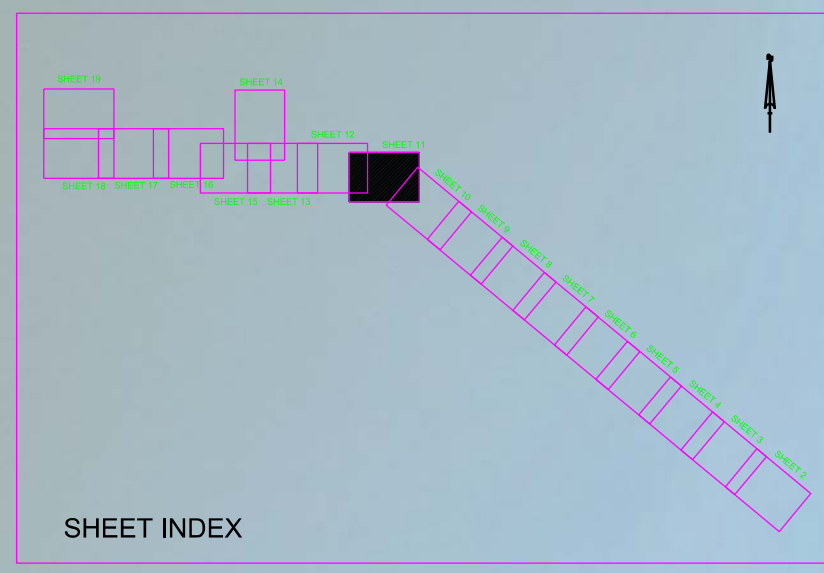
- NOTES:
- REFER TO SURVEY NO. 17-0009.
 - SEE SHEET NO.1 FOR SURVEY NOTES.
 - LAT/LONG GRID TICS ARE AT 10-SECOND INTERVALS.



- NOTES:
- REFER TO SURVEY NO. 17-009.
 - SEE SHEET NO.1 FOR SURVEY NOTES.
 - LAT/LONG GRID TICS ARE AT 10-SECOND INTERVALS.

CUT-1
AZ=129-41-09

AIDS TO NAVIGATION	PLANE COORDINATES		LATITUDE	LONGITUDE
	X	Y		
LT. BUOY-10 (11/16)	792,894	1,482,111	28°24'37.01"	80°34'28.79"
LT. BUOY-11 (11/16)	793,650	1,480,543	28°24'21.46"	80°34'20.39"



- NOTES:
1. REFER TO SURVEY NO. 17-009
 2. SEE SHEET NO.1 FOR SURVEY NOTES.
 3. LAT/LONG GRID TICS ARE AT 10-SECOND INTERVALS.

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

17-009A-SUB-RR01.DGN
CANAVERAL HARBOR-CANAL
BREVARD COUNTY, FLORIDA
POST-HURRICANE MATTHEW EXAM SURVEY FY17
35, 39, 41, 43, 44 AND 46-FOOT PROJECT
STA. 105+00 CUT - 1 THRU STA. 137+00 CUT - 2
PLAN

Scale: AS SHOWN
Drawing no.
11
SHEET 11 OF 19

Zone	North	East	Vertical
N	A	B	C

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

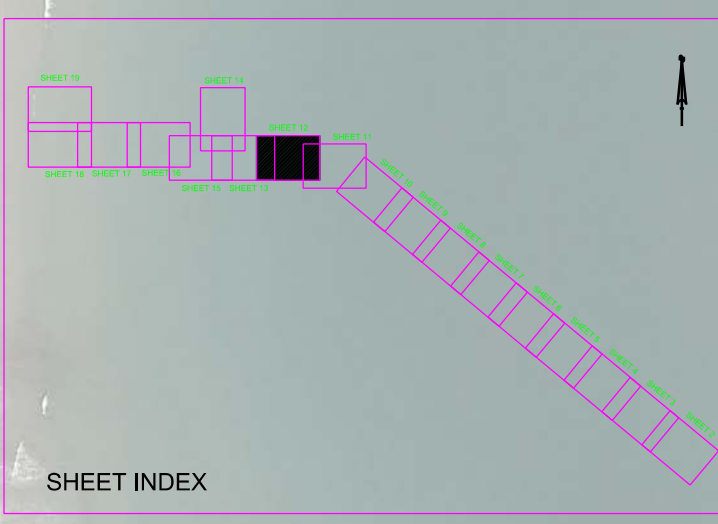
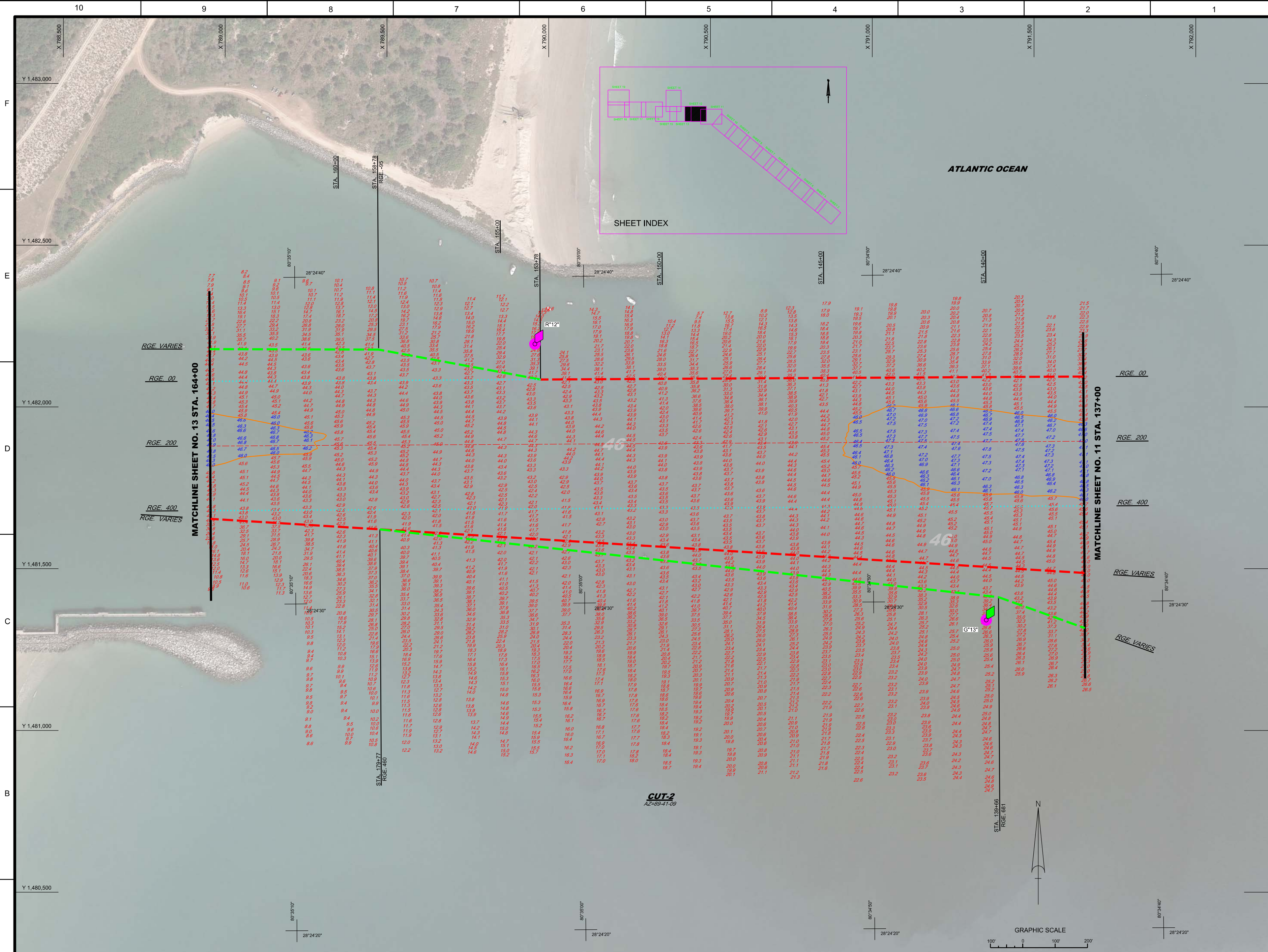
Drawn by: GHR
Checked by: GHR
Date: NOV 2016

17-0000-GIS-BROWLDRGN
CANAVERAL HARBOR-CGNMCCP_FORT.DGN
17-0000-SOUND_C2_L1_F.DGN
17-0000-HAV.DGN
17-0000-CONHE.DGN

Reference: 17-0000-HR12.DGN
17-0000-HR12.DGN

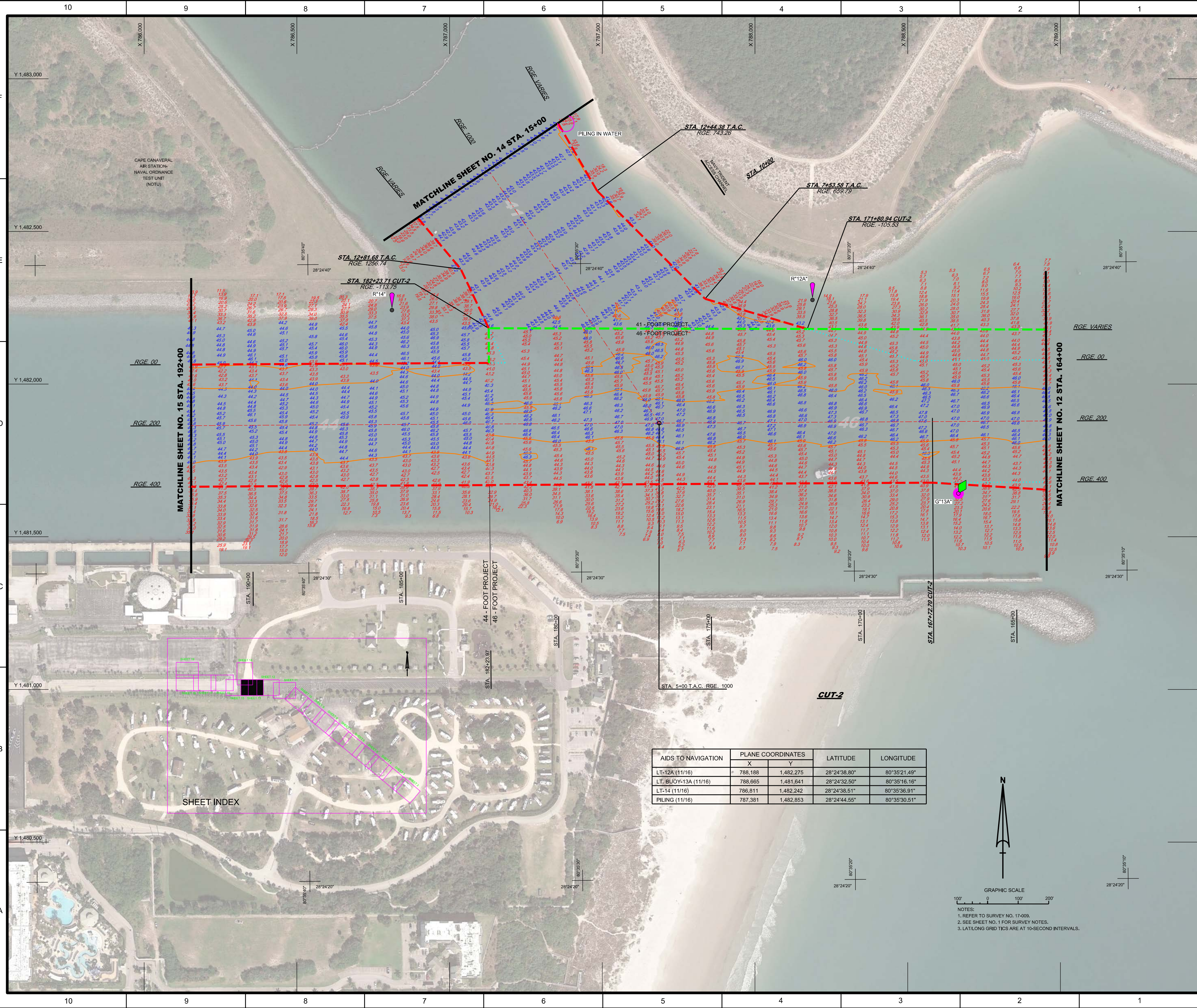
POST-HURRICANE MATTHEW EXAM SURVEY FY17
35, 39, 41, 43, 44 AND 46-FOOT PROJECT
STA. 137+00 THRU STA. 164+00 CUT - 2
PLAN

Scale: AS SHOWN
Drawing no.



AIDS TO NAVIGATION	PLANE COORDINATES		LATITUDE	LONGITUDE
	X	Y		
LT. BUOY-12 (11/16)	789,957	1,482,194	28°24'37.93"	80°35'01.68"
LT. BUOY-13 (11/16)	791,352	1,481,341	28°24'29.44"	80°34'46.09"

- NOTES:
1. REFER TO SURVEY NO. 17-009.
 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-12A (11/16)	788,188	1,482,275	28°24'38.80"	80°35'21.49"
LT_BUOY-13A (11/16)	788,665	1,481,641	28°24'32.50"	80°35'16.16"
LT-14 (11/16)	786,811	1,482,242	28°24'38.51"	80°35'36.91"
PILING (11/16)	787,381	1,482,853	28°24'44.55"	80°35'30.51"

GRAPHIC SCALE
0 100 200

NOTES:
1. REFER TO SURVEY NO. 17-009.
2. SEE SHEET NO. 1 FOR SURVEY NOTES.
3. LAT/LONG GRID TICS ARE AT 10-SECOND INTERVALS.

CAPE CANAVERAL AIR STATION- NAVAL ORDNANCE TEST UNIT (NOTU)

41 - FOOT PROJECT
46 - FOOT PROJECT

STA. 12+81.68 T.A.C. RGE. 1256.74
STA. 182+23.71 CUT-2 RGE. -113.75
STA. 12+44.38 T.A.C. RGE. 743.26
STA. 7+53.58 T.A.C. RGE. 659.79
STA. 171+80.94 CUT-2 RGE. -105.53
STA. 182+23.97
STA. 185+00
STA. 180+00
STA. 175+00
STA. 170+00
STA. 167+12.70 CUT-2
STA. 165+00

RGE VARIES
RGE 00
RGE 200
RGE 400

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

SHEET INDEX

GRAPHIC SCALE
0 100 200

NOTES:
1. REFER TO SURVEY NO. 17-009.
2. SEE SHEET NO. 1 FOR SURVEY NOTES.
3. LAT/LONG GRID TICS ARE AT 10-SECOND INTERVALS.

Scale: AS SHOWN

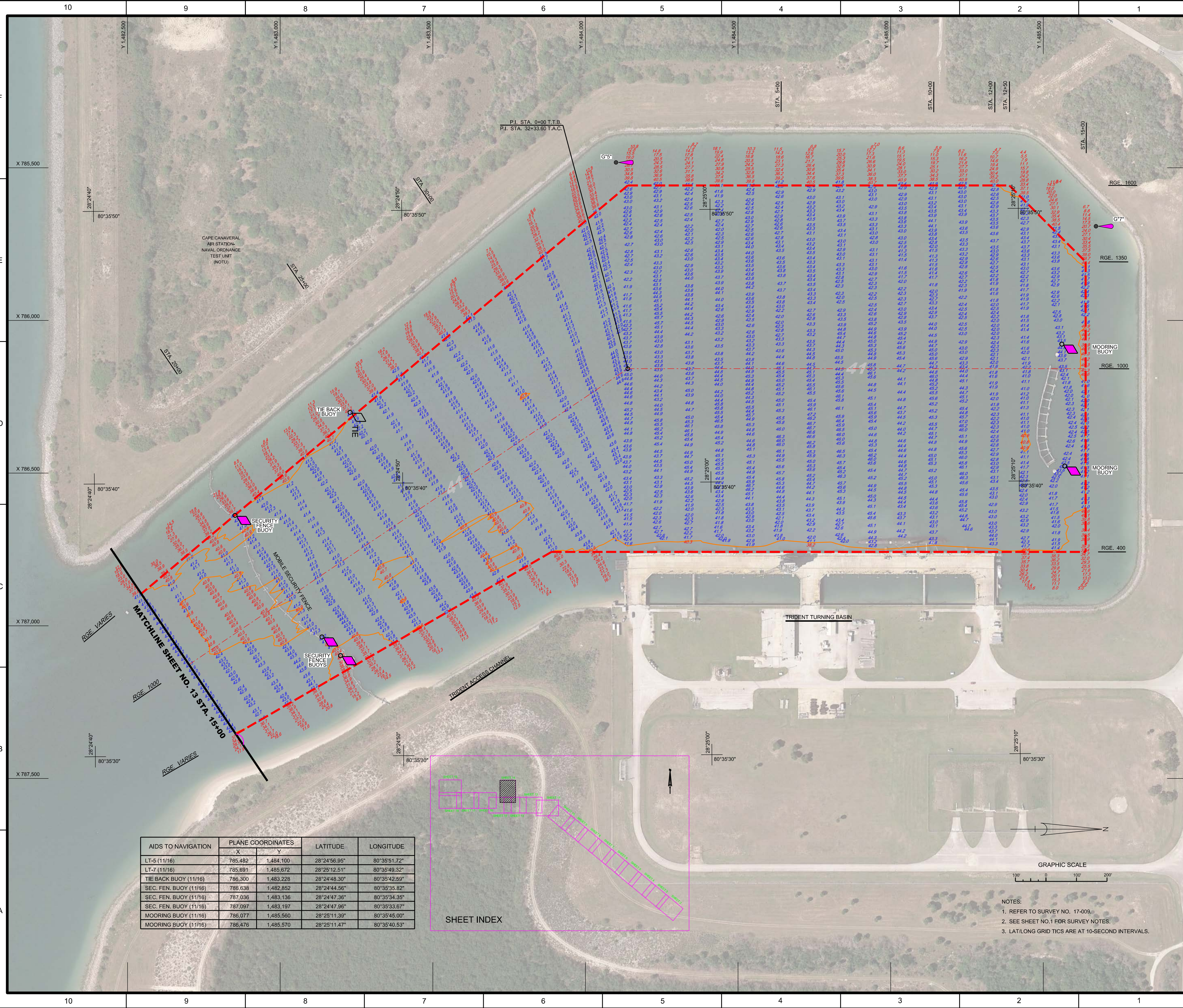
Drawing no.
13

SHEET 13 OF 19

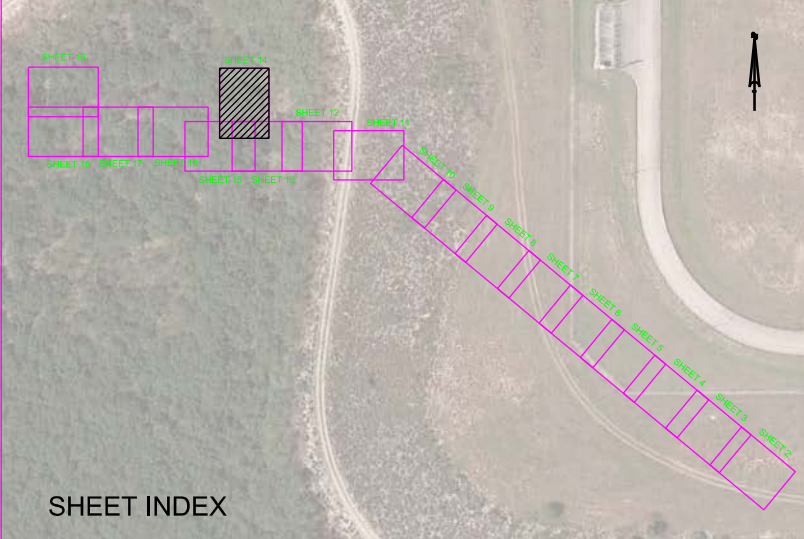
DESIGNED BY: WRM
CHECKED BY: GHR
DATE: NOV 2016

17-009-CAN-HARBOR-DGN
CANAVERAL HARBOR-CANAL-PORT-DGN
17-009-A-SOON-CZ-L-DGN
17-009-A-SOON-TACT-L-DGN
17-009-A-CANAL-DGN
17-009-A-NAV-DGN
Reference: 17-009-PORT-DGN

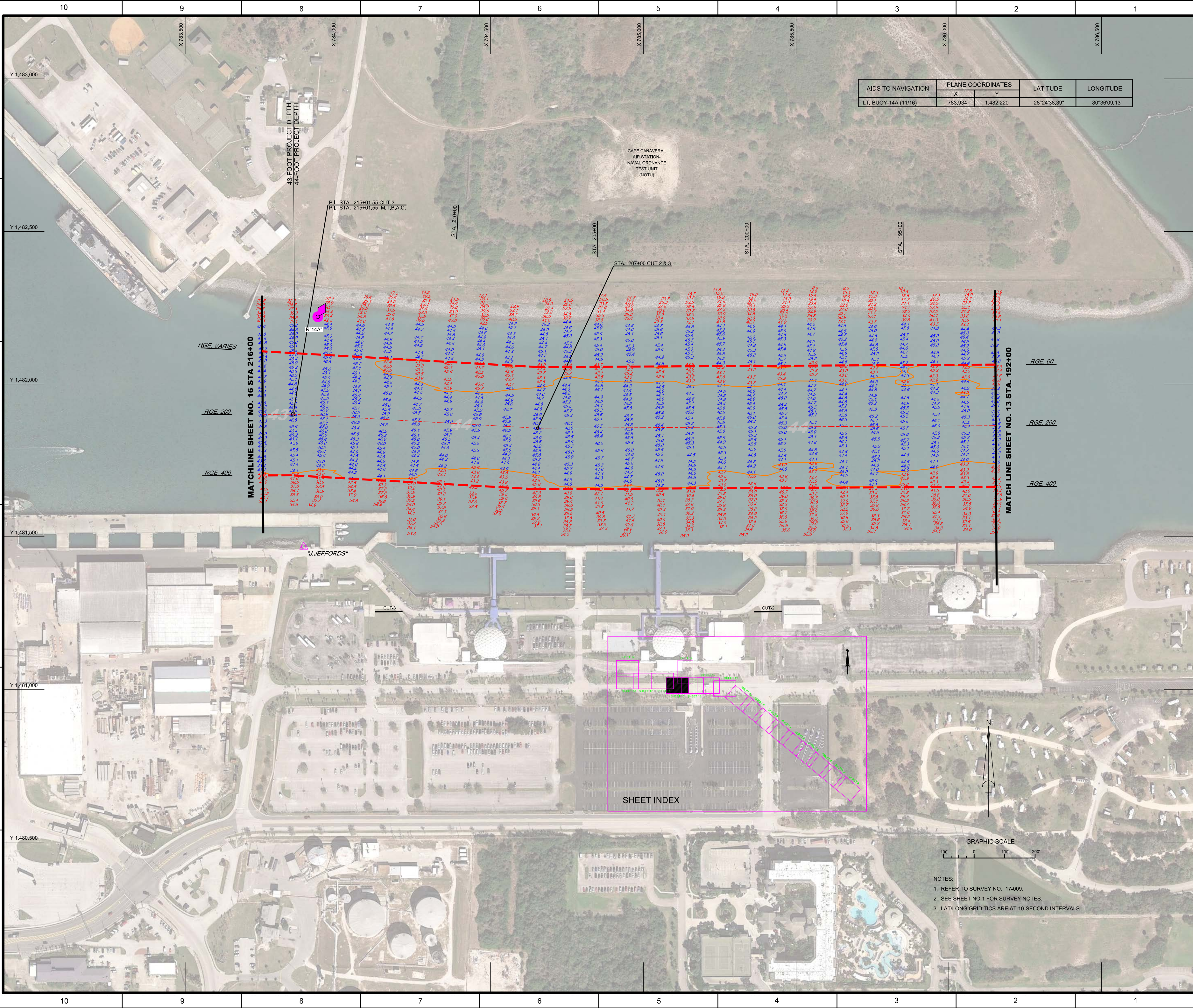
DEPARTMENT OF THE ARMY
JACKSONVILLE DISTRICT, CORPS OF ENGINEERS
JACKSONVILLE, FLORIDA




AIDS TO NAVIGATION	PLANE COORDINATES		LATITUDE	LONGITUDE
	X	Y		
LT-5 (11/16)	785,482	1,484,100	28°24'56.95"	80°35'51.72"
LT-7 (11/16)	785,691	1,485,672	28°25'12.51"	80°35'49.32"
TIE BACK BUOY (11/16)	786,300	1,483,228	28°24'48.30"	80°35'42.59"
SEC. FEN. BUOY (11/16)	786,638	1,482,852	28°24'44.56"	80°35'35.82"
SEC. FEN. BUOY (11/16)	787,036	1,483,136	28°24'47.36"	80°35'34.35"
SEC. FEN. BUOY (11/16)	787,097	1,483,197	28°24'47.96"	80°35'33.67"
MOORING BUOY (11/16)	786,077	1,485,560	28°25'11.39"	80°35'45.00"
MOORING BUOY (11/16)	786,476	1,485,570	28°25'11.47"	80°35'40.53"



NOTES:
1. REFER TO SURVEY NO. 17-009.
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-14A (11/16)	783,934	1,482,220	28°24'38.39"	80°36'09.13"



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Jacksonville District
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N	A	B	C	D	E	F	G	H	I	J	K
1	2	3	4	5	6	7	8	9	10	11	12

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

Checked by:	GHR	Designed by:	WRM
Drawn by:	WRM	Date:	NOV 2016

17-009-04S-BRDLDGN
CANAVERAL HARBOR/CANAVERAL COUNTY, FLORIDA
17-009-SOUN_C3_LF.DGN
17-009-SOUN_MTS_LF.DGN
17-009-ACCONL.DGN
17-009-AVAVDGN

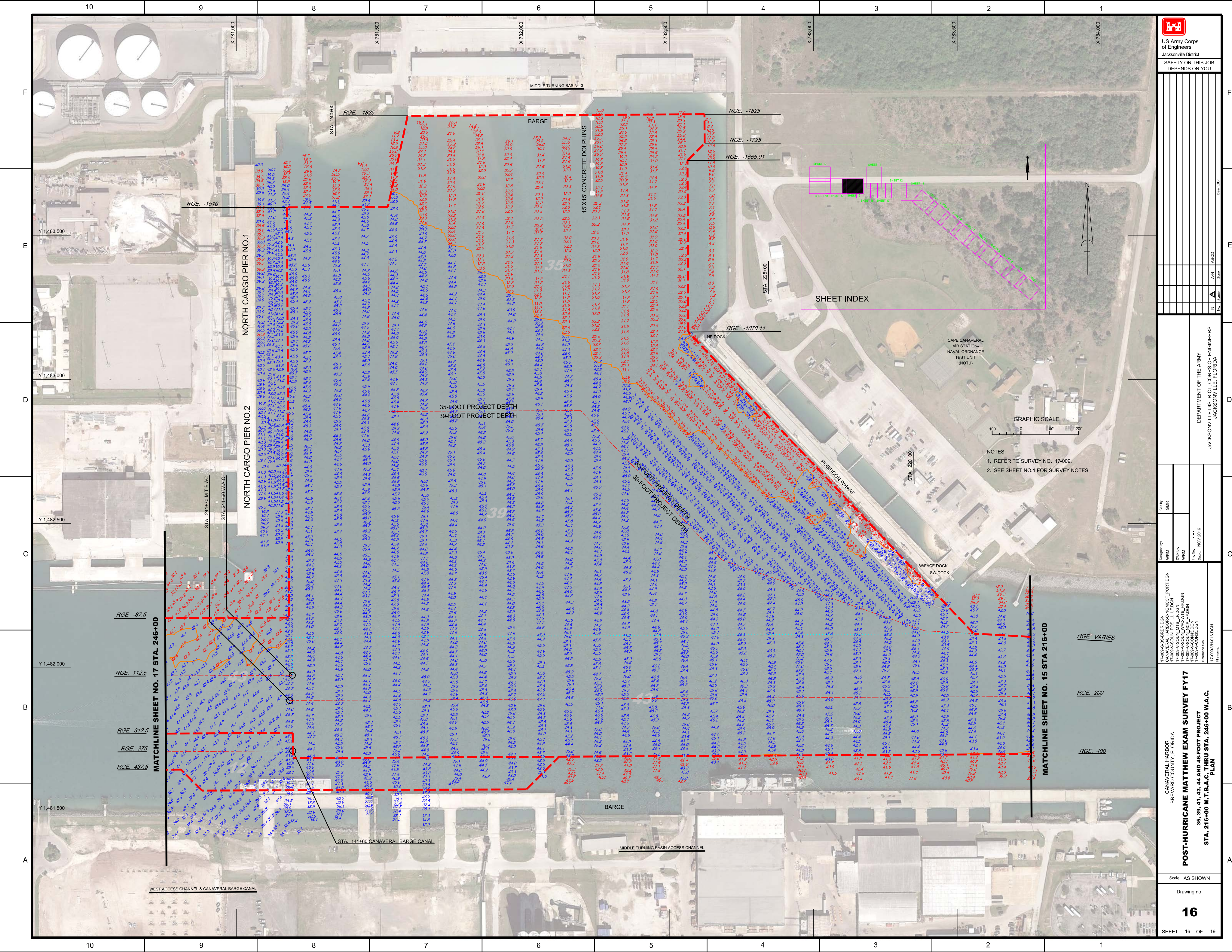
POST-HURRICANE MATTHEW EXAM SURVEY FY17
35, 39, 41, 43, 44 AND 46-FOOT PROJECT
STA. 192+00 CUT - 2 THRU STA. 216+00 M.T.B.
PLAN

Scale: AS SHOWN

Drawing no.

15

SHEET 15 OF 19



North arrow and coordinate grid information.

North Arrow	North
Zone	N
System	AN
Scale	AS SHOWN

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

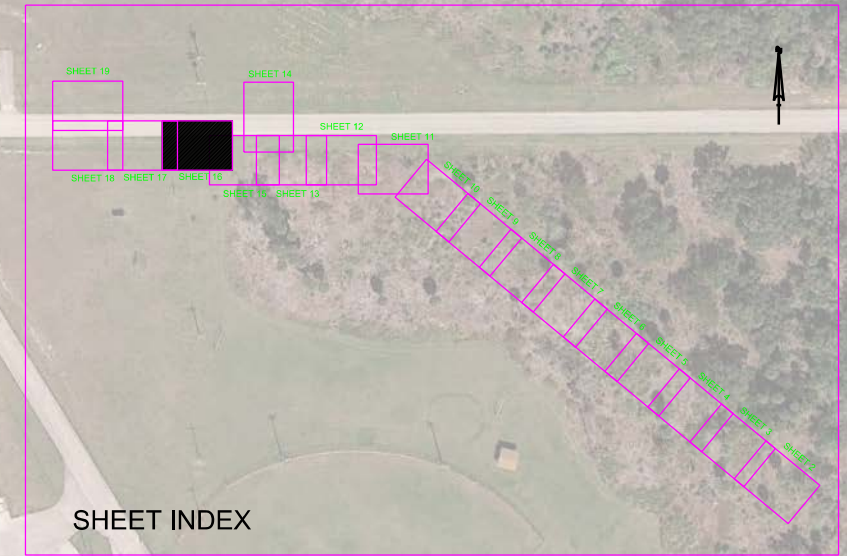
Drawn by: WRM
Checked: WRM
Date: NOV 2016

POST-HURRICANE MATTHEW EXAM SURVEY FY17
35, 39, 41, 43, 44 AND 46-FOOT PROJECT
STA. 246+00 M.T.B.A.C. THRU STA. 246+00 W.A.C.
PLAN

Scale: AS SHOWN
Drawing no.
16
SHEET 16 OF 19

GRAPHIC SCALE
0 100' 200'

NOTES:
1. REFER TO SURVEY NO. 17-009.
2. SEE SHEET NO.1 FOR SURVEY NOTES.



MIDDLE TURNING BASIN - 3

MIDDLE TURNING BASIN ACCESS CHANNEL

WEST ACCESS CHANNEL & CANAVERAL BARGE CANAL

CAPE ANNULAR AIR STATION
NAVAL ORDNANCE TEST UNIT (NOTU)

POSEIDON WHARF

W/FACE DOCK
SW DOCK

BARGE

16X15' CONCRETE DOLPHINS

NORTH CARGO PIER NO. 1

NORTH CARGO PIER NO. 2

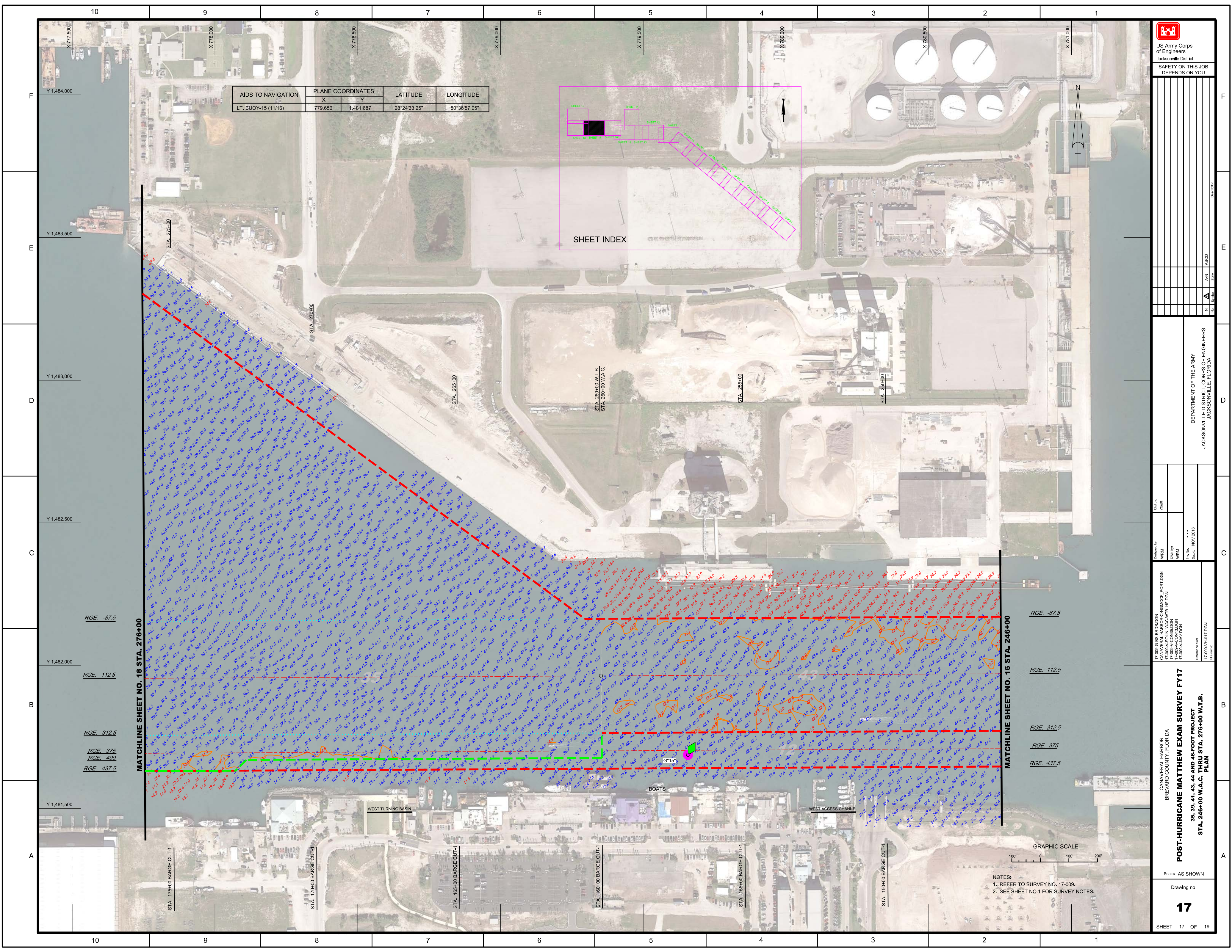
35-FOOT PROJECT DEPTH
39-FOOT PROJECT DEPTH

RGE -1825
RGE -1725
RGE -1665.01
RGE -1510
RGE -1070.11
RGE -87.5
RGE 112.5
RGE 312.5
RGE 375
RGE 437.5

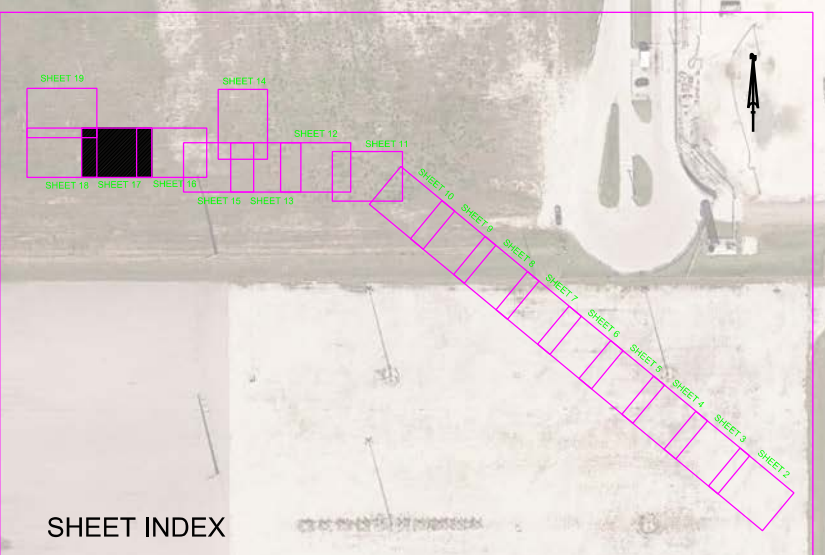
STA. 246+00
STA. 246+10
STA. 246+20
STA. 246+30
STA. 246+40
STA. 246+50
STA. 246+60
STA. 246+70
STA. 246+80
STA. 246+90
STA. 247+00

Y 1,483,500
Y 1,483,000
Y 1,482,500
Y 1,482,000
Y 1,481,500

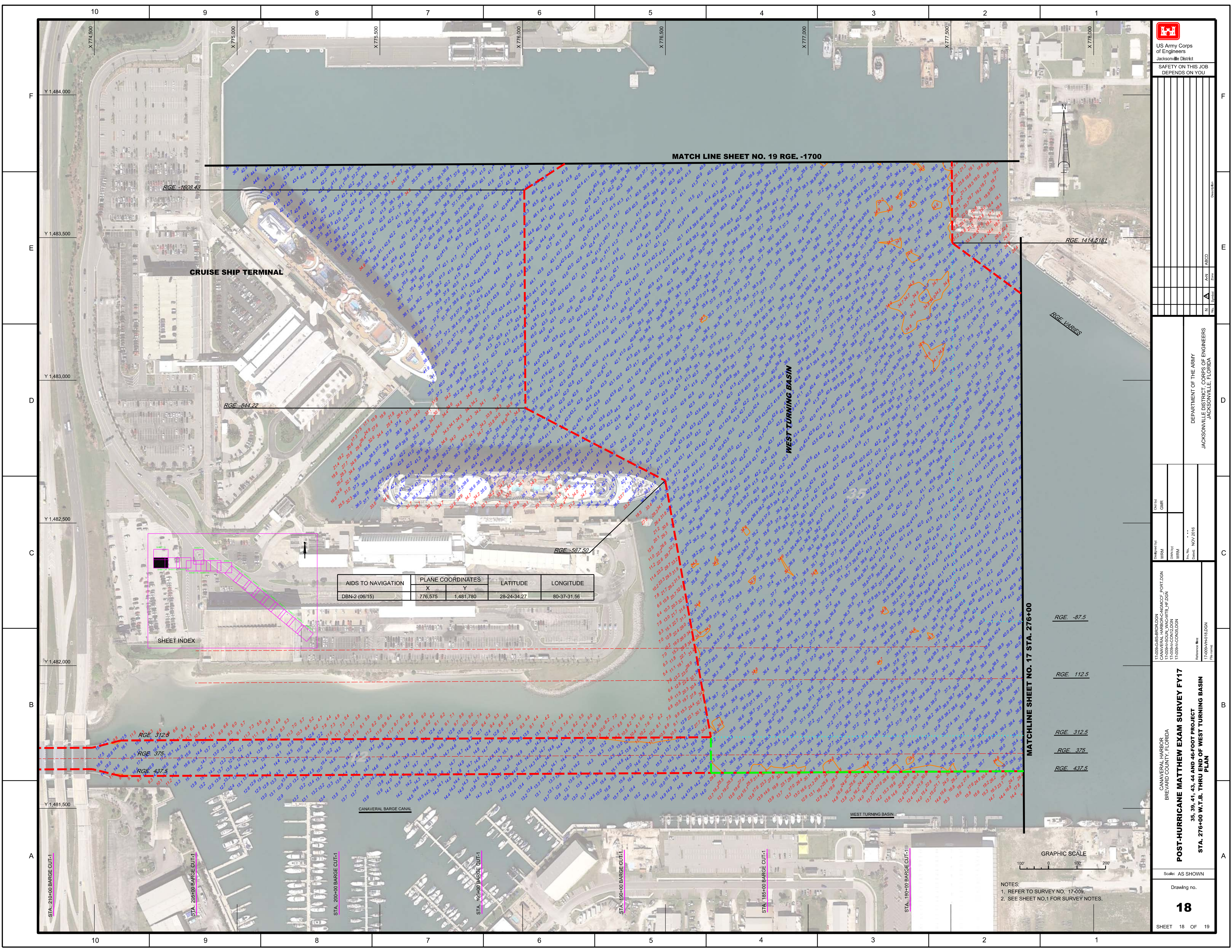
X 781,000
X 782,000
X 783,000
X 784,000



AIDS TO NAVIGATION	PLANE COORDINATES		LATITUDE	LONGITUDE
	X	Y		
LT. BUOY-15 (11/16)	779,656	1,481,687	28°38'33.25"	80°38'57.05"



NOTES:
 1. REFER TO SURVEY NO. 17-009.
 2. SEE SHEET NO.1 FOR SURVEY NOTES.



RGE -1608.43

CRUISE SHIP TERMINAL

RGE -844.22

RGE -587.50

MATCH LINE SHEET NO. 19 RGE. -1700

RGE. 1414.5181

RGE VARIES

SHEET INDEX

AIDS TO NAVIGATION	PLANE COORDINATES		LATITUDE	LONGITUDE
DBN-2 (06/15)	X	Y		
	776,575	1,481,780	28-24-34.27	80-37-31.56

RGE -87.5

RGE. 112.5

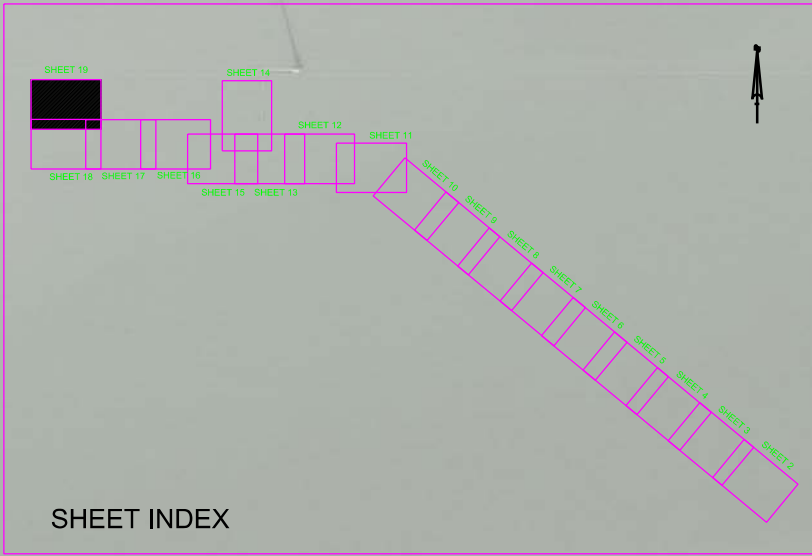
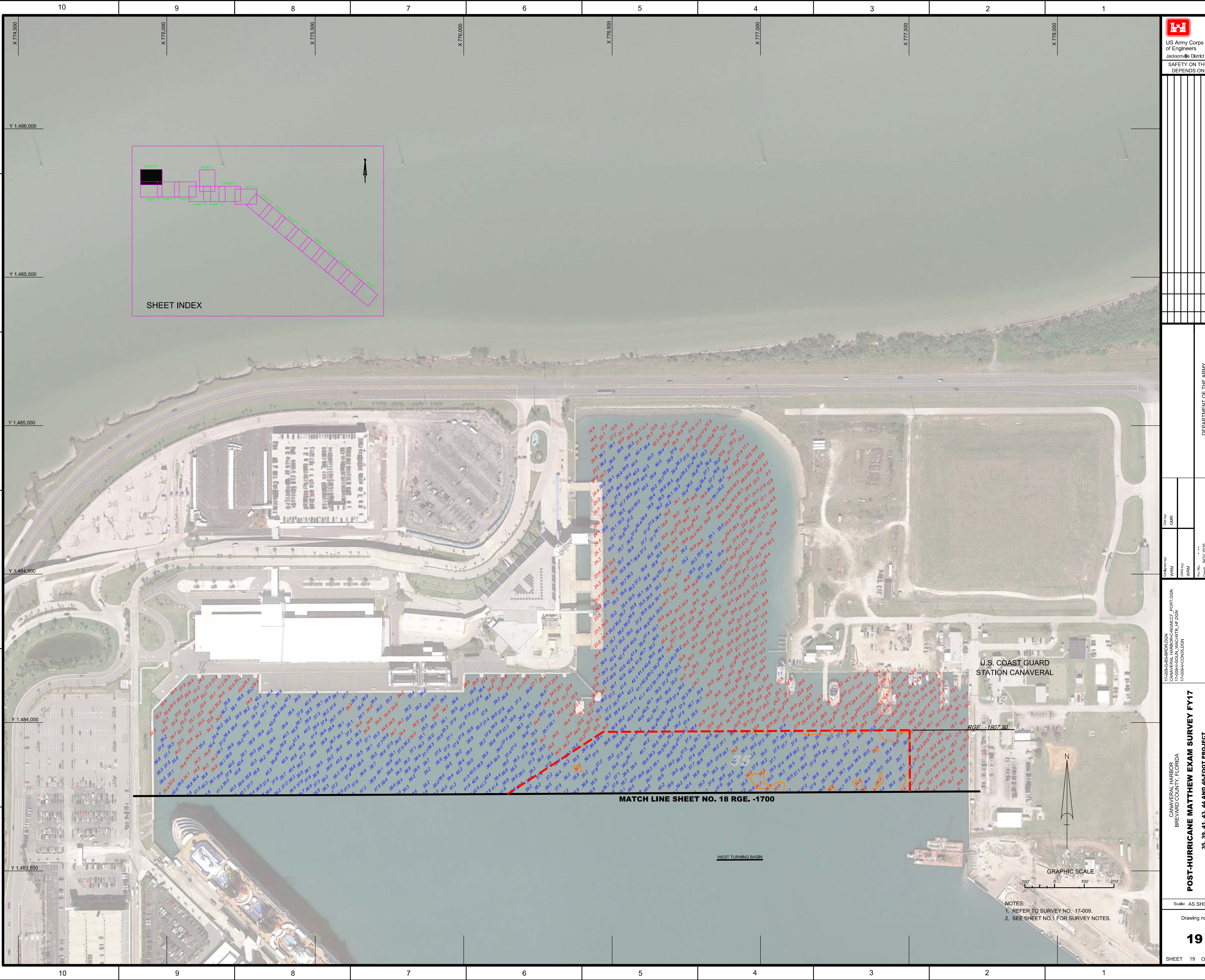
RGE. 312.5

RGE. 375

RGE. 437.5

GRAPHIC SCALE
0 100 200

NOTES:
1. REFER TO SURVEY NO. 17-009.
2. SEE SHEET NO.1 FOR SURVEY NOTES.



 US Army Corps of Engineers Jacksonville District SAFETY ON THIS JOB DEPENDS ON YOU	
Drawn by: WRM	Check by: GHR
Designated by: WRM	Date: NOV 2016
17-0009-AS-BROLDEN CANAVERAL HARBOR-CANAVARAL 17-0009-CON-036.DGN	DEPARTMENT OF THE ARMY JACKSONVILLE DISTRICT, CORPS OF ENGINEERS JACKSONVILLE, FLORIDA
POST-HURRICANE MATTHEW EXAM SURVEY FY17 35, 39, 41, 43, 44 AND 46-FOOT PROJECT WEST TURNING BASIN PLAN	
Scale: AS SHOWN Drawing no. 19 SHEET 19 OF 19	

U.S. COAST GUARD
STATION CANAVERAL

RGE -1907.50

MATCH LINE SHEET NO. 18 RGE.-1700

WEST TURNING BASIN

GRAPHIC SCALE

NOTES:
 1. REFER TO SURVEY NO. 17-0009.
 2. SEE SHEET NO.1 FOR SURVEY NOTES.