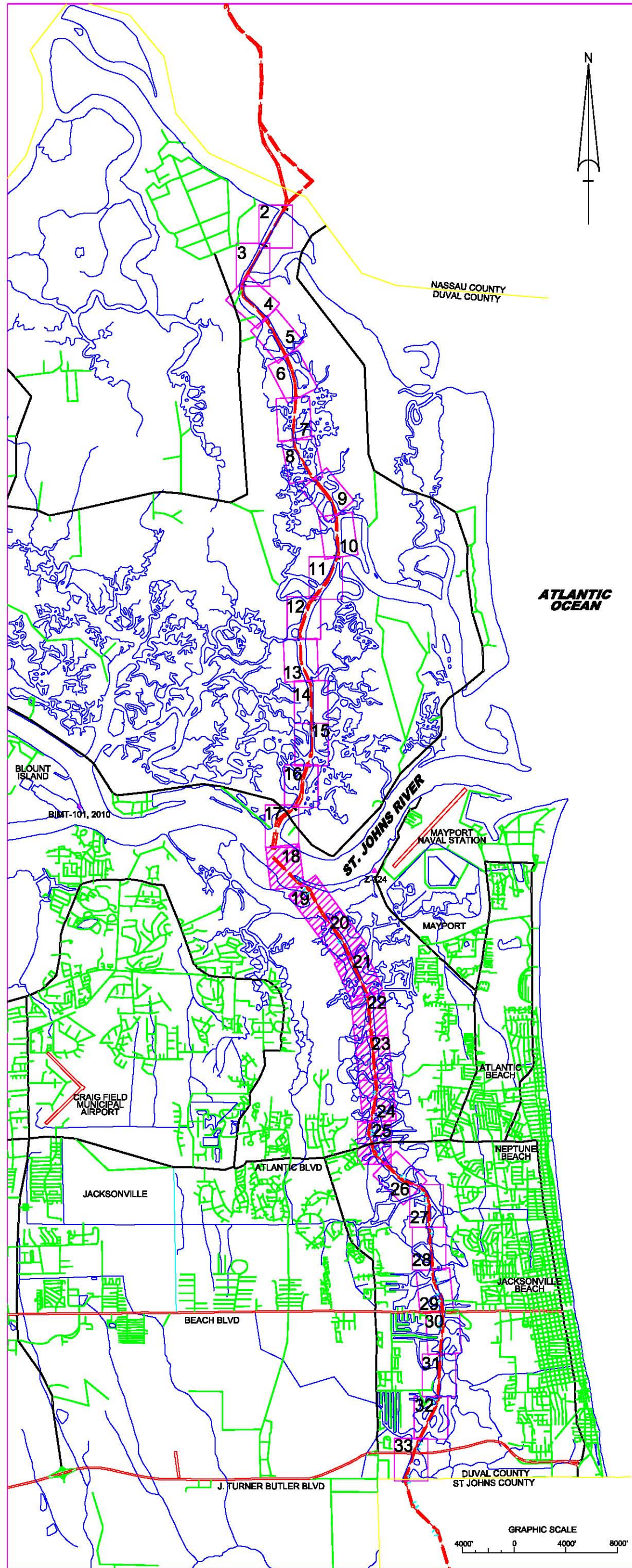


INTRACOASTAL WATERWAY JACKSONVILLE TO MIAMI, FLORIDA 12-FOOT PROJECT CUT DU-1 THRU DU-8 EXAMINATION SURVEY FY11

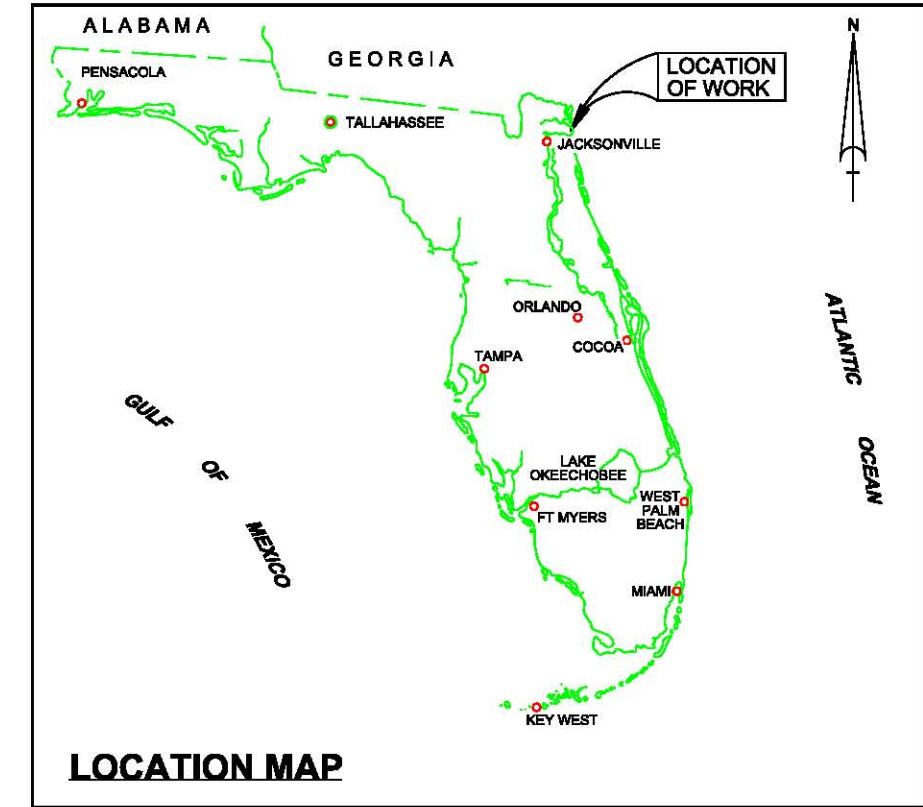


LEGEND	
• BM	BENCHMARK
⚓	LIGHTED BEACON
□	GREEN DAYBEACON
△	RED DAYBEACON
⊕	RED LIGHTED BUOY
⊕	GREEN LIGHTED BUOY
⊕	CAN BUOY
⊕	NUN BUOY
⊕	TIDE STAFF
⊕	PROJECT DEPTH

BENCHMARK	NAVD ELEV. (FT)
BIMT-101_2010	12.00
Z 324	4.53

MAP NOTES:

- ON DWG 2/8, AN APPROXIMATE CENTERLINE WAS DRAWN BETWEEN STA. 0+00 OF AIWW CUT-1 AND STA. 0+00 CUT DU-1. THERE IS NO OFFICIAL CENTERLINE.
- MULTI-BEAM DATA WAS SORTED IN HYPACK USING A 30-FOOT RADIUS FROM THE SHOALEST SOUNDING.



SURVEY NOTES:

- REFER TO SURVEY NO. 11-062.
- SOUNDINGS ARE IN FEET AND TENTHS AND REFER TO NOAA'S REPORTED MEAN LOWER LOW WATER (MLLW) RELATIVE TO THE 1983-2001 TIDAL EPOCH USING VDATUM.
- ALL ELEVATIONS ARE BELOW THE CHART DATUM UNLESS PRECEDED BY A (+) SIGN.
- TIDAL REDUCTIONS WERE OBTAINED UTILIZING REAL-TIME KINEMATIC GPS WITH A HYPACK KINEMATIC TIDE DATUM MODEL PRODUCED USING VDATUM.
- 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 AZIMUTHS ARE GRID; RECKONED CLOCKWISE FROM SOUTH.
- ALL STATIONING REFERS TO THE CENTERLINE OF THE CHANNEL.

8. SURVEY WAS PERFORMED USING REAL-TIME KINEMATIC GPS FOR POSITIONING WITH THE FOLLOWING REFERENCE BASE LOCATIONS:

"REFERENCE BASE LOCATED AT "BIMT-101, 210"

NORTHING: 2,204,048.873'
EASTING: 495,094.661'
NAVD88 ELEVATION: 12.008'

"TIDE STAFF LOCATED AT "Z 324"

MLLW ELEVATION: 7.06'
NAVD88 ELEVATION: 4.53'

VERTICAL MEASUREMENTS WERE MADE USING AN EDGETECH 4600 SWATH BATHYMETRY SYSTEM FREQUENCY 230 KHZ TRANSDUCER. CUT-14/15 JAX HARBOR WAS SURVEYED USING A RESON 8101 MULTI-BEAM TRANSDUCER OPERATING AT 240 KHZ. ALL DEPTHS SHOWN IN HIGH FREQUENCY.

VESSEL	DATE OF SURVEY	CUT
WB-32	23 FEB 2011	DU-1 THRU DU-8
FLORIDA	15-17 NOV 2010	CUT 14/15 (JAX HARBOR)

9. AIDS TO NAVIGATION WERE LOCATED DURING THIS SURVEY.

10. 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 AND IS NOT TO BE USED FOR NAVIGATION.

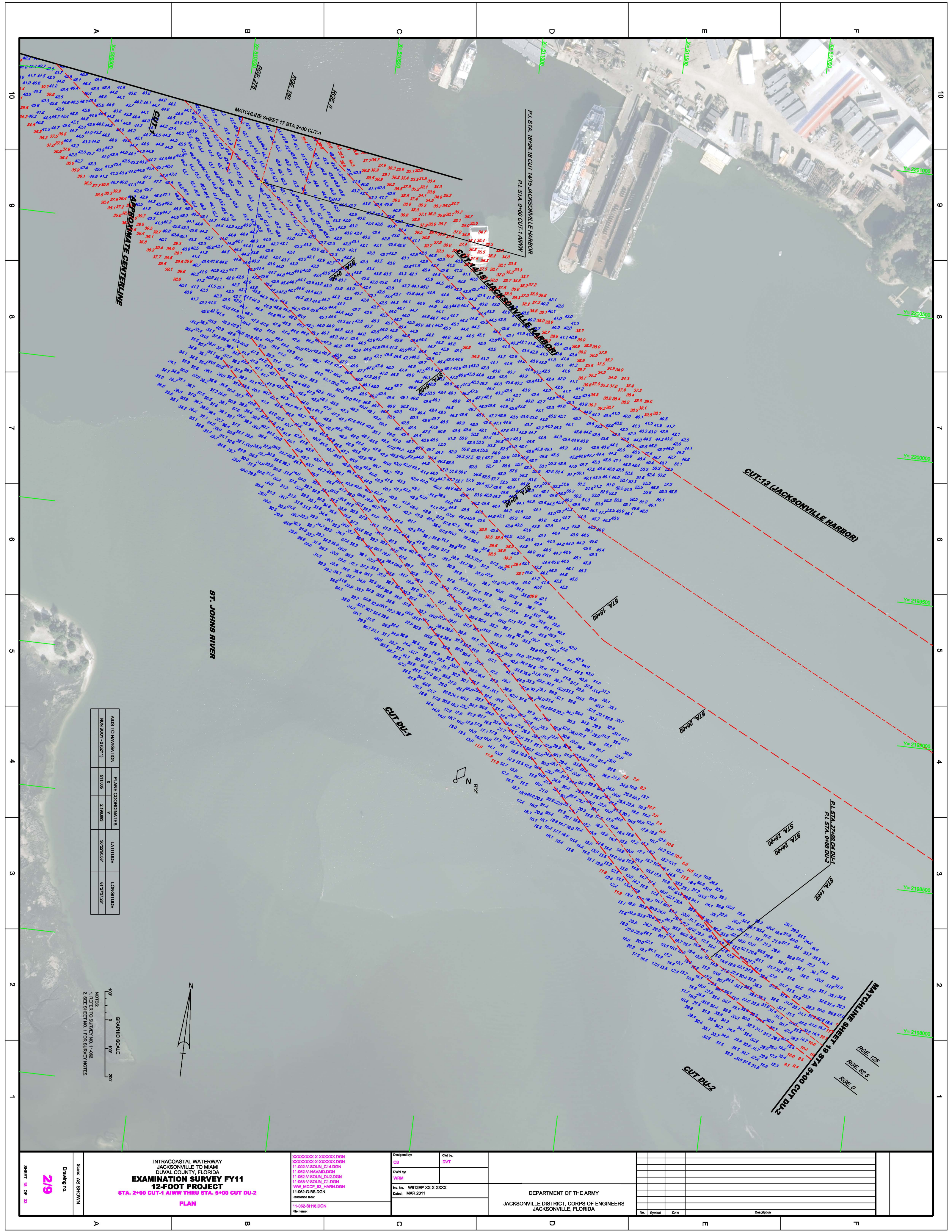
11. SURVEY ACCURACY STANDARDS, QUALITY CONTROL, AND QUALITY ASSURANCE REQUIREMENTS WERE FOLLOWED DURING THIS SURVEY IN ACCORDANCE WITH USACE EM 1110-2-1003, HYDROGRAPHIC SURVEYING, 1 JAN 02.

US Army Corps of Engineers
Jacksonville District
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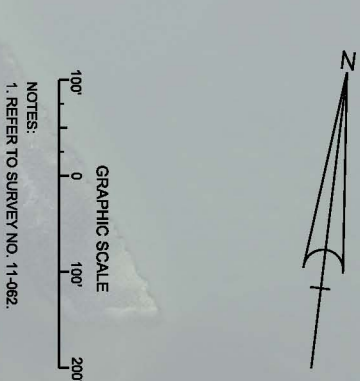
DEPARTMENT OF THE ARMY
JACKSONVILLE DISTRICT, CORPS OF ENGINEERS
JACKSONVILLE, FLORIDA

INTRACOASTAL WATERWAY
DUVAL COUNTY, FLORIDA
EXAMINATION SURVEY FY11
12-FOOT PROJECT
INDEX, LOCATION AND VERTICAL
PLAN

Scale: AS SHOWN
Drawing no.
1/9
SHEET 01 OF 33



AIDS TO NAVIGATION	PLANE COORDINATES		LATITUDE	LONGITUDE
	X	Y		
NW 1/4 - E (20211)	511086	2198883	30°27'52.86"	81°27'32.28"



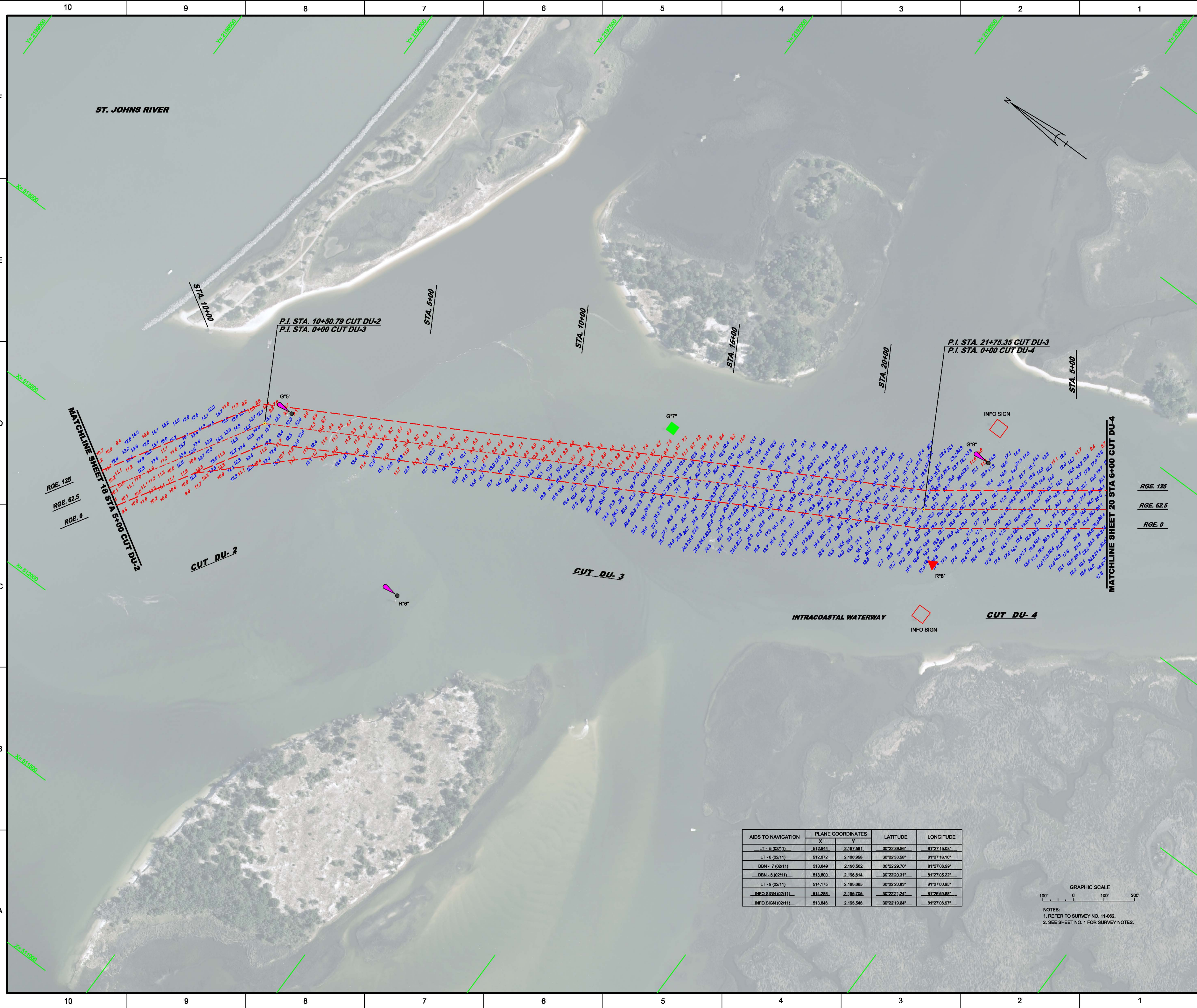
INTRACOASTAL WATERWAY
JACKSONVILLE TO MIAMI
DUVAL COUNTY, FLORIDA
**EXAMINATION SURVEY FY11
12-FOOT PROJECT**
STA. 2+00 CUT-1 AIWW THRU STA. 5+00 CUT-DU-2

Designed by: CB	Chd by: DVT
DWN by: WRM	
Inv. No. W912P-XXX-XXXX Date: MAR 2011	

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

No.	Symbol	Zone	Description

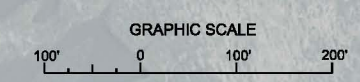
2/19



P.I. STA. 10+50.79 CUT DU-2
P.I. STA. 0+00 CUT DU-3

P.I. STA. 21+75.35 CUT DU-3
P.I. STA. 0+00 CUT DU-4

AIDS TO NAVIGATION	PLANE COORDINATES		LATITUDE	LONGITUDE
	X	Y		
LT - 5 (02/11)	512.944	2,197,591	30°22'39.66"	81°27'15.08"
LT - 6 (02/11)	512.672	2,196,958	30°22'33.58"	81°27'18.16"
DBN - 7 (02/11)	513.849	2,196,562	30°22'29.70"	81°27'06.99"
DBN - 8 (02/11)	513.800	2,196,614	30°22'30.31"	81°27'08.22"
LT - 8 (02/11)	514.175	2,195,865	30°22'20.83"	81°27'00.95"
INFO SIGN (02/11)	514.286	2,196,706	30°22'21.24"	81°26'59.68"
INFO SIGN (02/11)	513.646	2,195,548	30°22'19.84"	81°27'08.97"



NOTES:
1. REFER TO SURVEY NO. 11-062.
2. SEE SHEET NO. 1 FOR SURVEY NOTES.

US Army Corps of Engineers
Jacksonville District

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DEPENDS ON YOU**

DESIGNED BY: CB

CHECKED BY: DVT

DRAWN BY: WRM

DATE: MAR 2011

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

11-062-G-08.DGN
11-062-G-08.DWG
11-062-G-08.DAT
11-062-G-08.DIM
11-062-G-08.DSC
11-062-G-08.DSD
11-062-G-08.DST
11-062-G-08.DTA
11-062-G-08.DTB
11-062-G-08.DTC
11-062-G-08.DTD
11-062-G-08.DTE
11-062-G-08.DTF
11-062-G-08.DTG
11-062-G-08.DTH
11-062-G-08.DTI
11-062-G-08.DTJ
11-062-G-08.DTK
11-062-G-08.DTL
11-062-G-08.DTM
11-062-G-08.DTN
11-062-G-08.DTO
11-062-G-08.DTP
11-062-G-08.DTP
11-062-G-08.DTQ
11-062-G-08.DTR
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11-062-G-08.DTY
11-062-G-08.DTZ

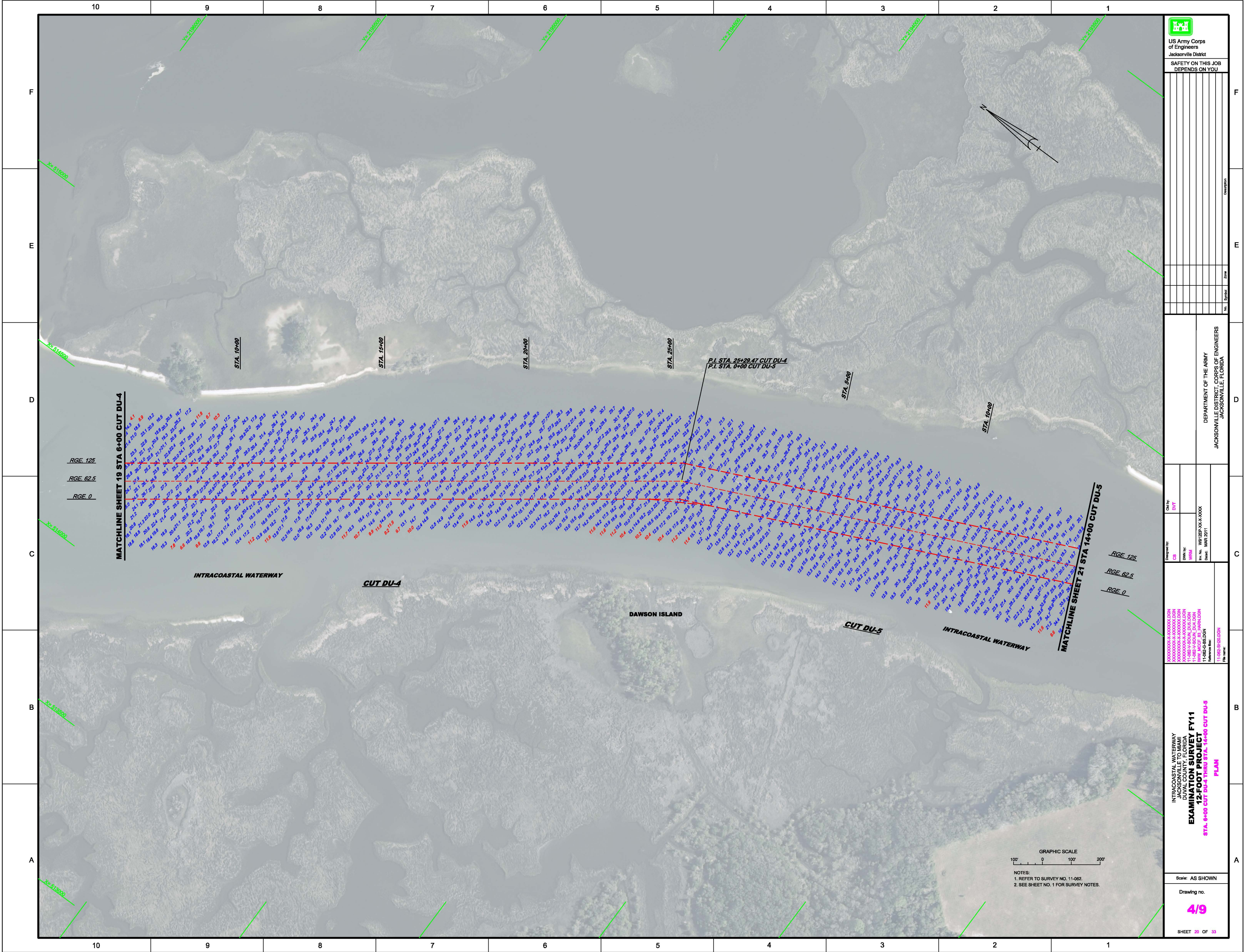
INTRACOASTAL WATERWAY
DUVAL COUNTY, FLORIDA
**EXAMINATION SURVEY FY11
12-FOOT PROJECT**
STA. 5+00 CUT DU-2 THRU STA. 8+00 CUT DU-4
PLAN

Scale: AS SHOWN

Drawing no.
3/9

SHEET 18 OF 33

File name:
11-062-G-08.DGN



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

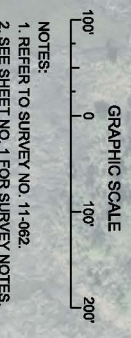
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Designed by: CB
Drawn by: WRM
For Use: W&S/REP/OC/ROCK
Date: MAR 2011
Reference File: 11-082-S-02.DGN
File Name: 11-082-S-02.DGN

GRAPHIC SCALE
100' 0 100' 200'
NOTES:
1. REFER TO SURVEY NO. 11-062.
2. SEE SHEET NO. 1 FOR SURVEY NOTES.

AIDS TO NAVIGATION		PLANE COORDINATES		LATITUDE	LONGITUDE
LT. (0.0211)	X	Y			
31728	218884	3071927		30°21'27"	81°28'27"

MATCHLINE SHEET 20 STA 14+00 CUT DU-5

MATCHLINE SHEET 22 STA 47+00 CUT DU-5



NOTES:
 1. REFER TO SURVEY NO. 11-082
 2. SEE SHEET NO. 1 FOR SURVEY NOTES.

INTRACOASTAL WATERWAY
 JACKSONVILLE TO MIAMI
 DUVAL COUNTY, FLORIDA
EXAMINATION SURVEY FY11
12-FOOT PROJECT
STA. 14+00 THRU STA. 47+00 CUT DU-5

XXXXXXXXXX-K-XXXXXXXX.DGN
 XXXXXXXXX-K-XXXXXXXX.DGN
 XXXXXXXXX-K-XXXXXXXX.DGN
 XXXXXXXXX-K-XXXXXXXX.DGN
 11-082-V-NAVAID.DGN
 11-082-V-SCUL_DUS.DGN
 11-082-G-BB.DGN
 11-082-SH21.DGN
 File name:

Designed by: CB
 DWN by: WRM
 Inv. No: W912EP-XX-XXXX
 Date: MAR 2011

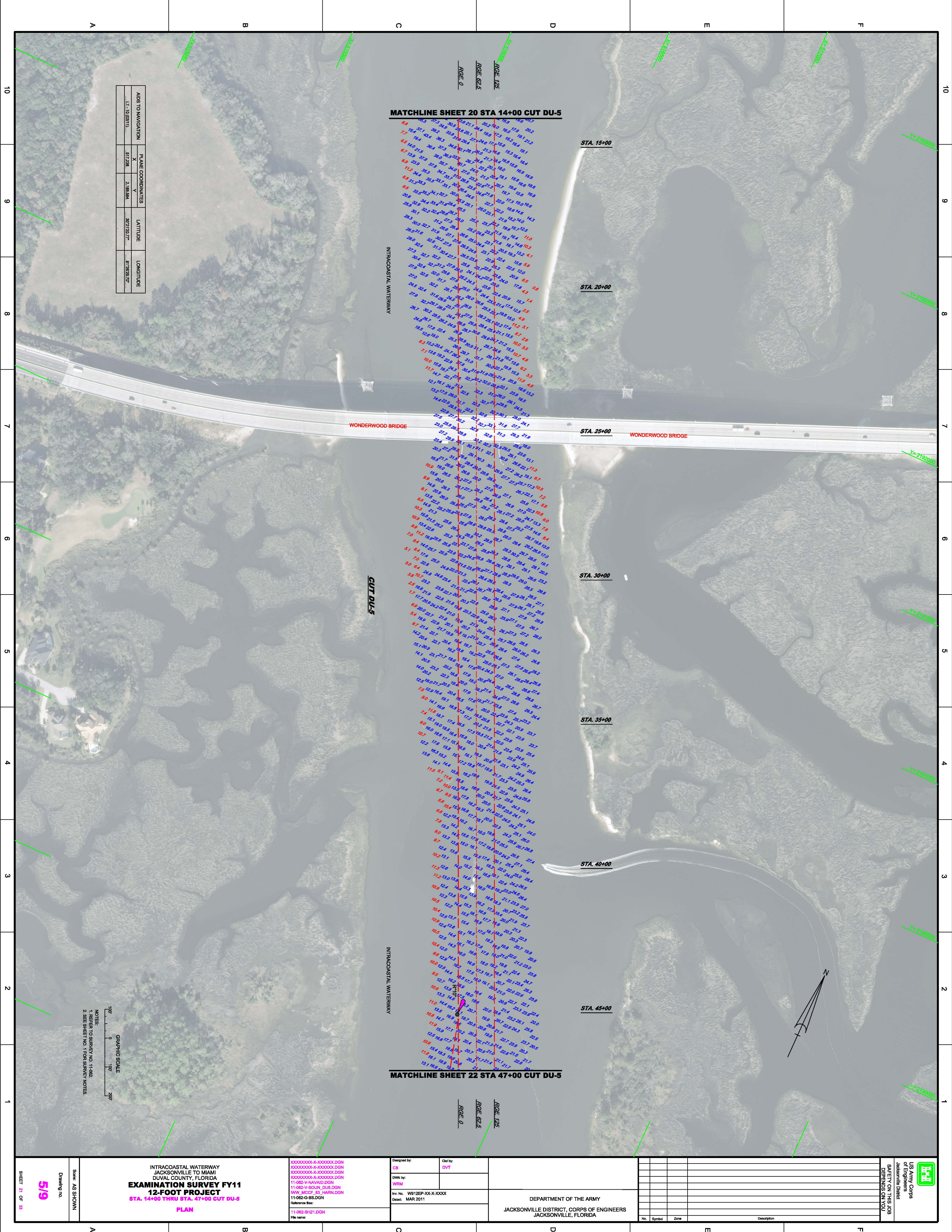
Checked by: DVT
 DEPARTMENT OF THE ARMY
 JACKSONVILLE DISTRICT, CORPS OF ENGINEERS
 JACKSONVILLE, FLORIDA

No.	Symbol	Zone	Description

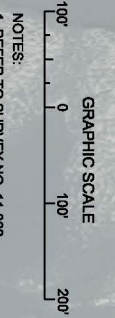
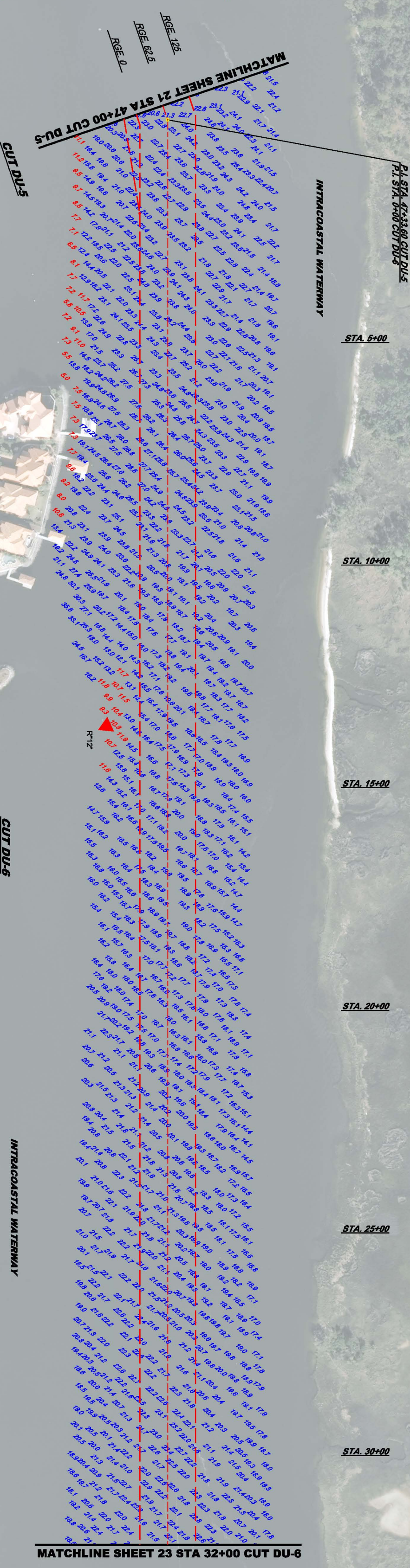
US Army Corps of Engineers Jacksonville District
 SAFETY ON THIS JOB DEPENDS ON YOU

Drawing no. **5/9**

Scale: AS SHOWN



AIDS TO NAVIGATION	PLANE COORDINATES	LATITUDE	LONGITUDE
ORNL-14 (02/11)	X 517,988	Y 2,188,088	97°21'55.44"
			81°29'23.87"



NOTES:
 1. REFER TO SURVEY NO. 11-082.
 2. SEE SHEET NO. 1 FOR SURVEY NOTES.

XXXXXXXXX-K-XXXXXX.DGN
 XXXXXXXXX-K-XXXXXX.DGN
 XXXXXXXXX-K-XXXXXX.DGN
 11-082-V-NAVAID.DGN
 11-082-V-SOUN_DUB.DGN
 11-082-V-SOUN_DUB.DGN
 HWY MICCF B3 HARLDGN
 11-082-G-BB.DGN
 Reference file:
 11-082-SH22.DGN
 File name:

Designed by: CB
 DWT
 DWN by: WRM
 Rev. No: W912EP-XXX-XXXX
 Date: MAR 2011

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

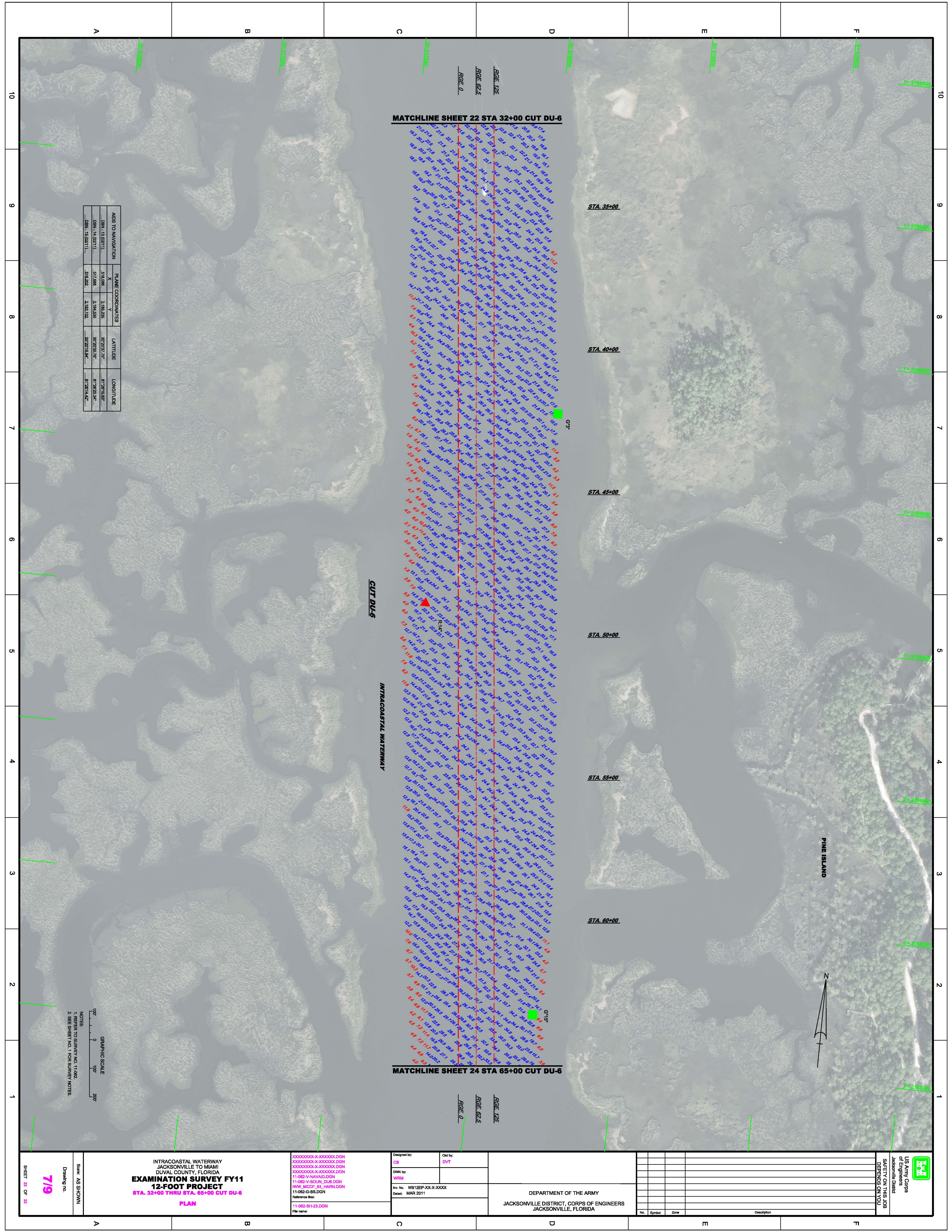
No.	Symbol	Zone	Description

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

INTRACOASTAL WATERWAY
 JACKSONVILLE TO MIAMI
 DUVAL COUNTY, FLORIDA
EXAMINATION SURVEY FY11
12-FOOT PROJECT
STA. 47+00 CUT DU-5 THRU STA. 32+00 CUT DU-6
PLAN

Drawing no.
 Sheet AS 910WN
6/9

SHEET 22 OF 33



MATCHLINE SHEET 22 STA 32+00 CUT DU-6

MATCHLINE SHEET 24 STA 65+00 CUT DU-6

AIDS TO NAVIGATION	PLANE COORDINATES	LATITUDE	LONGITUDE
DBN-13 (02/11)	518,098	30°20'27.75"	81°28'18.85"
DBN-14 (02/11)	517,888	30°20'20.78"	81°28'20.34"
DBN-15 (02/11)	518,202	30°20'18.84"	81°28'14.42"

GRAPHIC SCALE

100' 0 100' 200'

NOTES:
1. REFER TO SURVEY NO. 11-082.
2. SEE SHEET NO. 1 FOR SURVEY NOTES.

INTRACOASTAL WATERWAY
JACKSONVILLE TO MIAMI
DUVAL COUNTY, FLORIDA
EXAMINATION SURVEY FY11
12-FOOT PROJECT
STA. 32+00 THRU STA. 65+00 CUT DU-6
PLAN

File name: 11-082-SH-23.DGN
Reference file: 11-082-G-B8.DGN
11-082-V-NAVAID.DGN
11-082-V-SCAL-DUB.DGN
HW-000000-K-000000.DGN
11-082-V-NAVAID.DGN
00000000-K-000000.DGN
00000000-K-000000.DGN
00000000-K-000000.DGN
00000000-K-000000.DGN

Designed by: CB	Clad by: DVT
DWN by: WRM	
Inv. No: W912EP-XX-X-XXXX	
Date: MAR 2011	

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

US Army Corps of Engineers Jacksonville District SAFETY ON THIS JOB DEPENDS ON YOU			
No.	Symbol	Zone	Description

10
9
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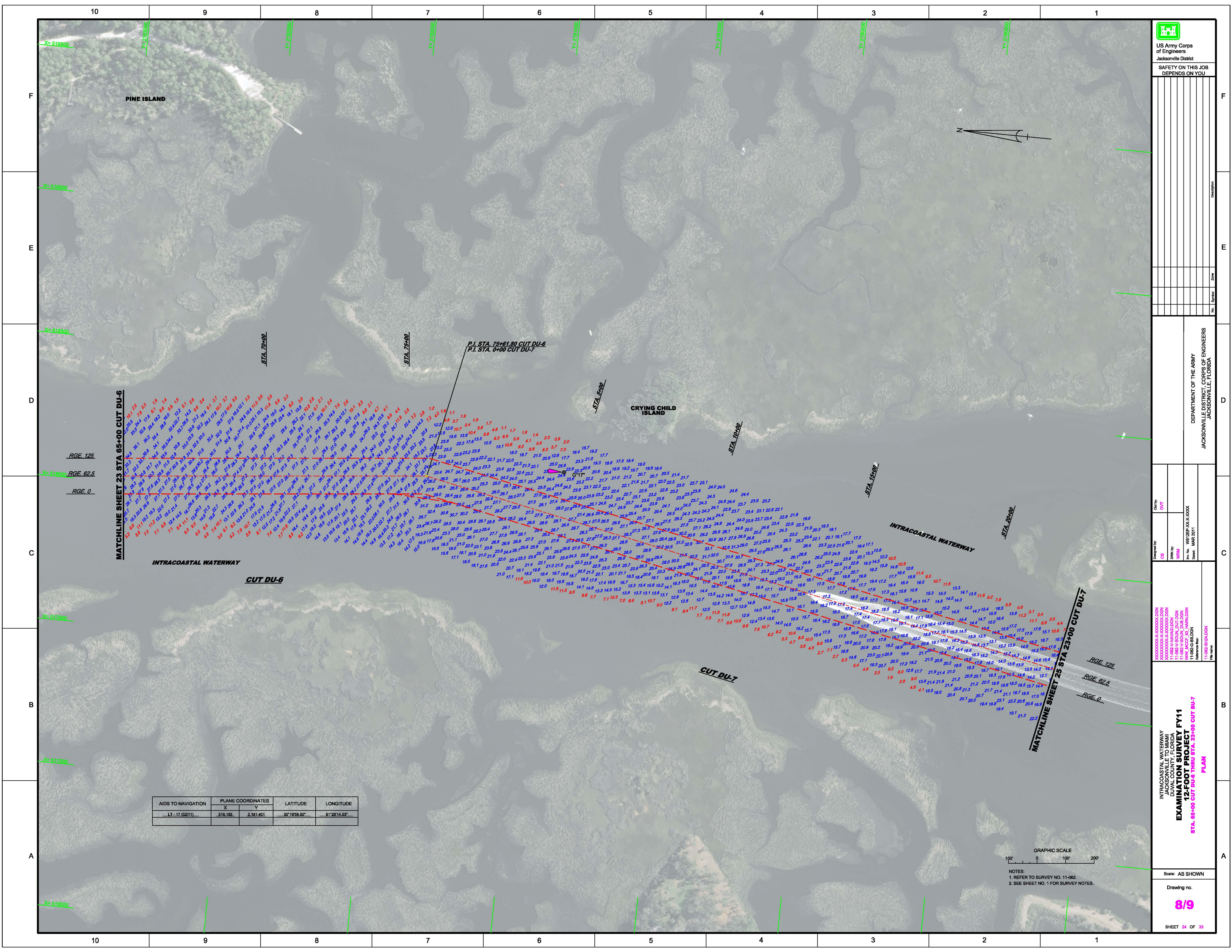
10
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A B C D E F

A B C D E F

7/9

SHEET 23 OF 33



MATCHLINE SHEET 23 STA 65+00 CUT DU-6


MATCHLINE SHEET 25 STA 23+00 CUT DU-7

P.I. STA. 75+61.80 CUT DU-6
P.I. STA. 0+00 CUT DU-7

AIDS TO NAVIGATION	PLANE COORDINATES		LATITUDE	LONGITUDE
	X	Y		
LT-17 (0211)	518,185	2,181,401	30°19'58.80"	81°26'14.53"

GRAPHIC SCALE
100' 0 100' 200'

NOTES:
1. REFER TO SURVEY NO. 11-062.
2. SEE SHEET NO. 1 FOR SURVEY NOTES.



US Army Corps
of Engineers
Jacksonville District

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DEPENDS ON YOU

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

Drawn by: **DVT**
Checked by: **CB**
Date: **MAR 2011**

PROJECT: **INTRACOASTAL WATERWAY
DUVAL COUNTY, FLORIDA
EXAMINATION SURVEY FY11
12-FOOT PROJECT
STA. 65+00 CUT DU-6 THRU STA. 23+00 CUT DU-7**

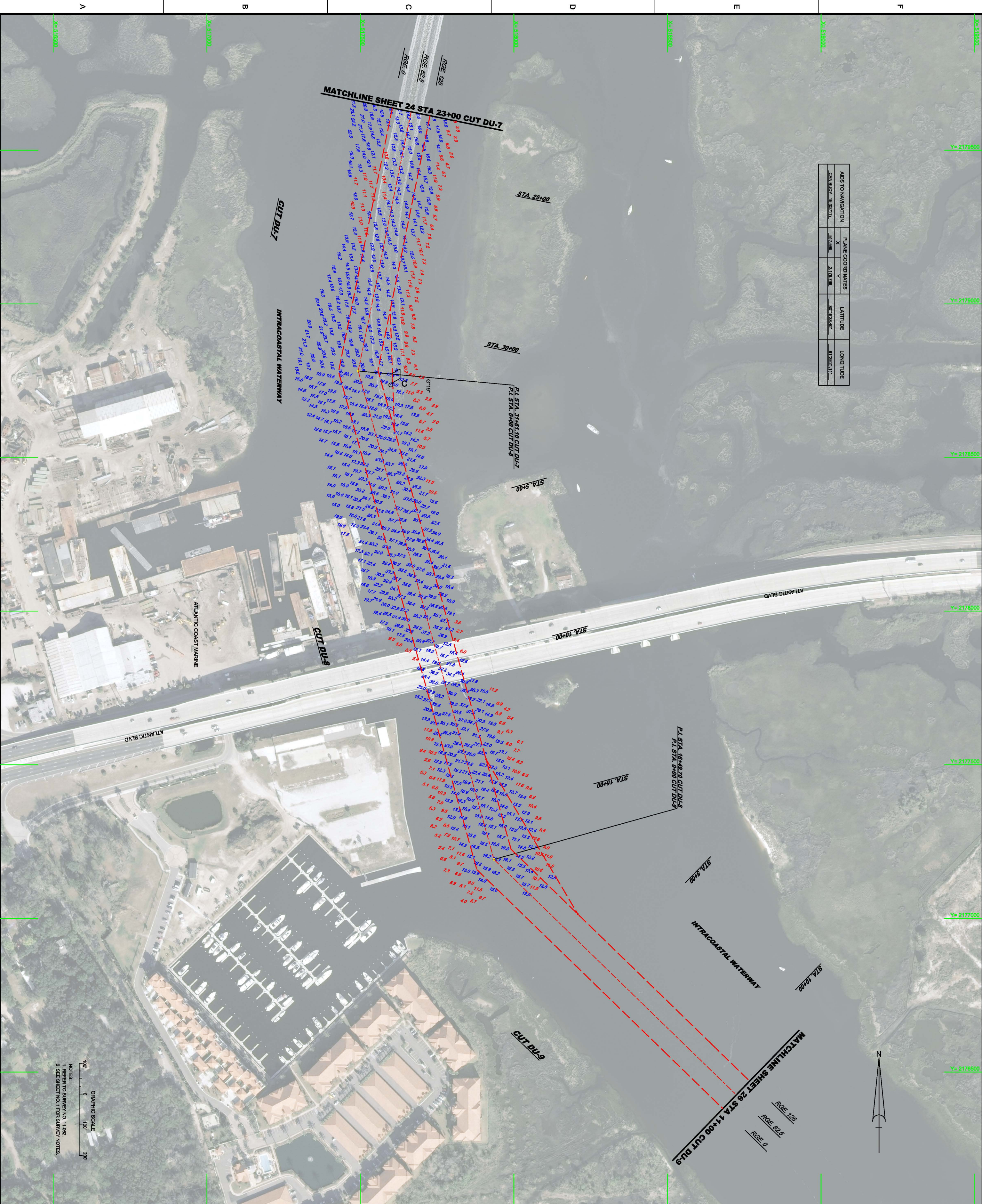
PLAN

Scale: AS SHOWN

Drawing no. **8/9**

SHEET 24 OF 33

AIDS TO NAVIGATION		PLANE COORDINATES		LATITUDE	LONGITUDE
CAN BUOY - (B02011)	X	Y			
	517588	217828	30°19'34.40"	81°28'21.11"	



GRAPHIC SCALE
 100' 0' 100'
 NOTES:
 1. REFER TO SURVEY NO. 11-082
 2. SEE SHEET NO. 1 FOR SURVEY NOTES.

INTRACOASTAL WATERWAY JACKSONVILLE TO MIAMI DUVAL COUNTY, FLORIDA EXAMINATION SURVEY FY11 12-FOOT PROJECT STA. 23+00 CUT DU-7 THRU STA. 11+00 DU-9 PLAN	XXXXXXXXX-K-XXXXXX.DGN XXXXXXXXX-K-XXXXXX.DGN XXXXXXXXX-K-XXXXXX.DGN 11-082-V-NAVDAT.DGN 11-082-V-SOUN_DUB.DGN 11-082-V-SOUN_DUT.DGN HWY MICE 83 HARLOND 11-082-G-BSD.DGN Reference file: 11-082-SH25.DGN File name:	Designed by: CB	Cld by: DVT	DEPARTMENT OF THE ARMY JACKSONVILLE DISTRICT, CORPS OF ENGINEERS JACKSONVILLE, FLORIDA	US Army Corps of Engineers Jacksonville District SAFETY ON THIS JOB DEPENDS ON YOU
		DWN by: WRM	Inv. No.: W912EP-XX-XXXX Date: MAR 2011		

Drawing no.
9/9

SHEET 28 OF 33