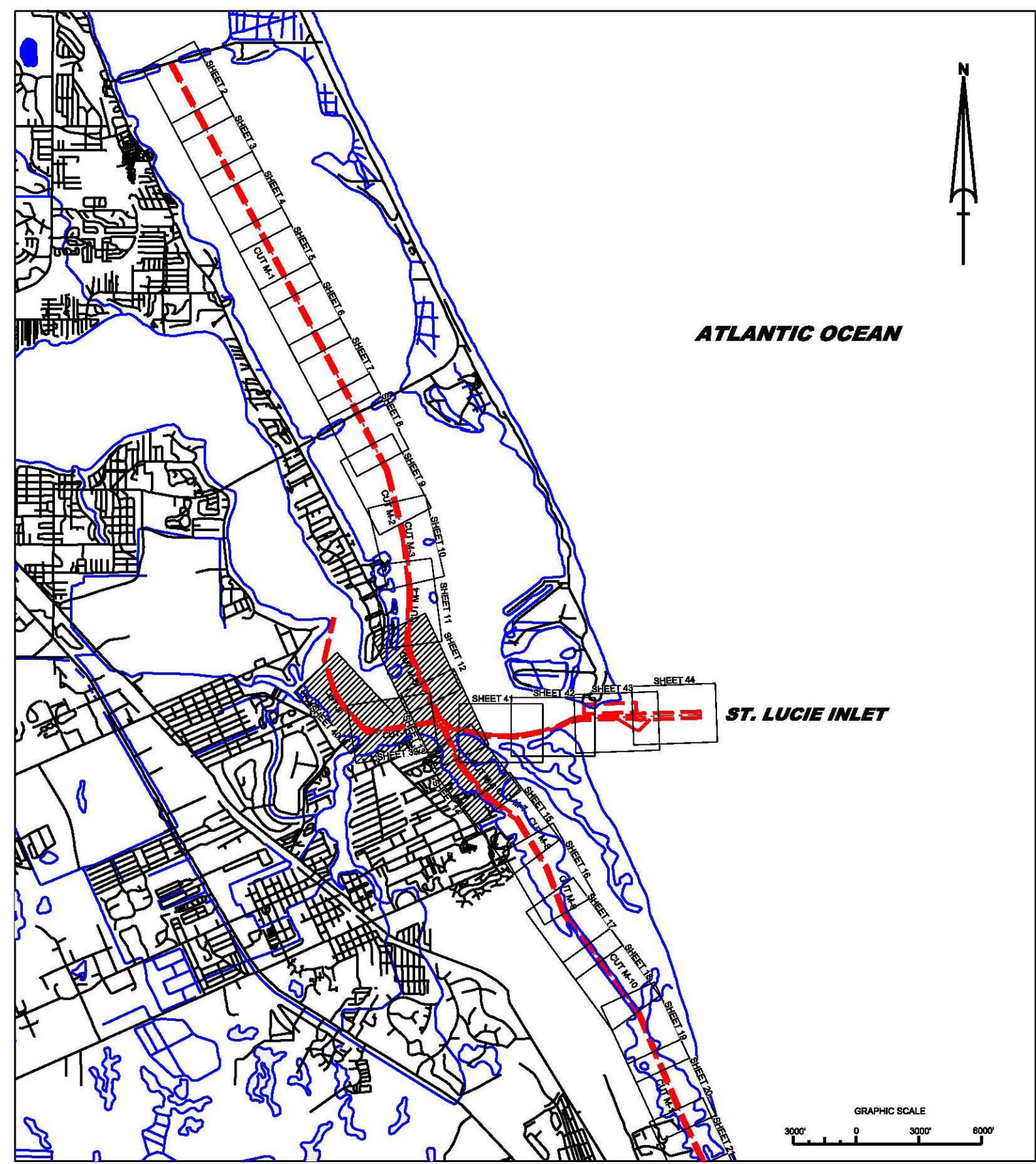
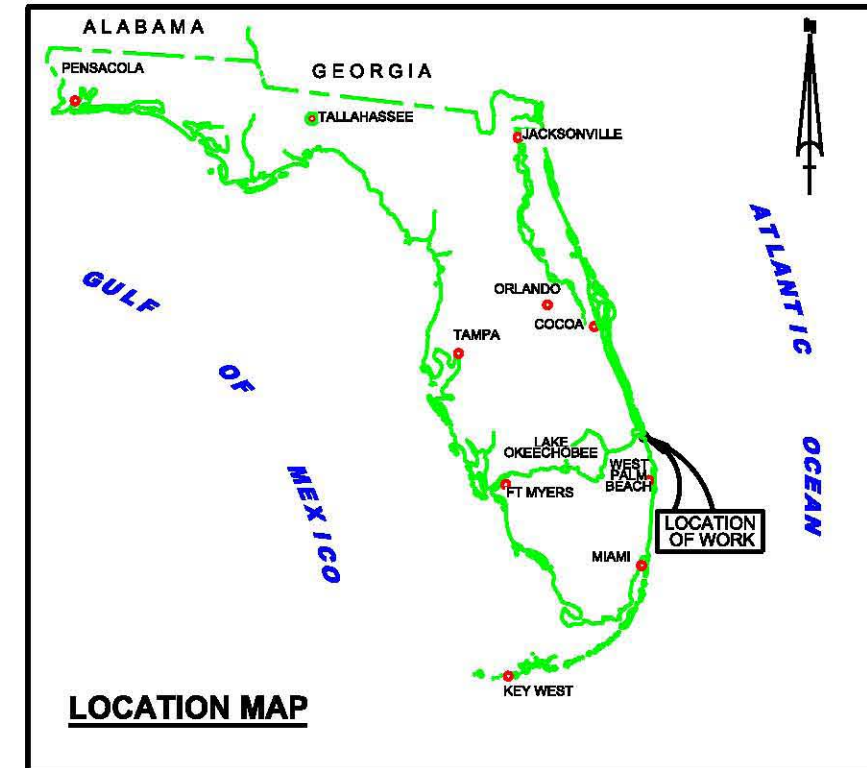


INTRACOASTAL WATERWAY VICINITY OF CROSSROADS IWW CUT M - 4 & M-5 & OWW CUTS 1 & 2 PROJECT CONDITION SURVEY



SURVEY NOTES:

1. REFER TO SURVEY NO. 10-127
2. ELEVATIONS ARE IN FEET AND TENTHS AND REFER TO NOAA'S VDATUM MODEL FOR FLORIDA, WHICH IS BASED ON MLLW OF THE 1983-2001 TIDAL EPOCH.
3. TIDAL REDUCTIONS WERE OBTAINED UTILIZING REAL-TIME KINEMATIC GPS AND REFERENCED TO MLLW WITH A KINEMATIC TIDAL DATUM MODEL. THIS KINEMATIC TIDAL DATUM MODEL IS NAMED "IndianRiver-StLucie-Martin-06July2010.ktd" AND CAN BE OBTAINED FROM OPERATIONS DIVISION, HYDROGRAPHIC SURVEY SECTION.
4. ALL ELEVATIONS ARE BELOW THE CHART DATUM UNLESS PRECEDED BY A (+) SIGN.
5. PLANE COORDINATES ARE BASED ON THE TRANSVERSE MERCATOR PROJECTION FOR THE EAST ZONE OF FLORIDA AND REFERENCED TO THE NORTH AMERICAN DATUM OF 1983 (NAD 83).
6. THIS SURVEY WAS PERFORMED USING REAL-TIME KINEMATIC GPS POSITIONING WITH THE FOLLOWING REFERENCE BASE LOCATIONS:
 "BURCHFIELD 2010"
 NORTHING: 1,029,810.093'
 EASTING: 918,603.497'
 NAVD88 ELEVATION: 3.55'
 MLLW ELEVATION: N/A
 "872 2383 TIDAL 5 1972"
 NAVD88 ELEVATION: 2.48'
 MLLW ELEVATION: 3.98'
7. VERTICAL MEASUREMENTS WERE MADE USING A ROSS SMARTSOUNDER DUAL FREQUENCY 28/200 KHZ SINGLE BEAM TRANSDUCER
8. SURVEY VESSEL DATE OF SURVEY SOUNDER
 WB-32 28 JULY 2010 ROSS SMARTSOUNDER 28/200 KHZ
9. 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 SURVEY.
10. 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.

LEGEND	
• BM	BENCHMARK
⚓	LIGHTED BEACON
■	GREEN DAYBEACON
▲	RED DAYBEACON
⚓	RED LIGHTED BUOY
⚓	GREEN LIGHTED BUOY
⚓	CAN BUOY
⚓	NUN BUOY
⚓	TIDE STAFF
8	PROJECT DEPTH

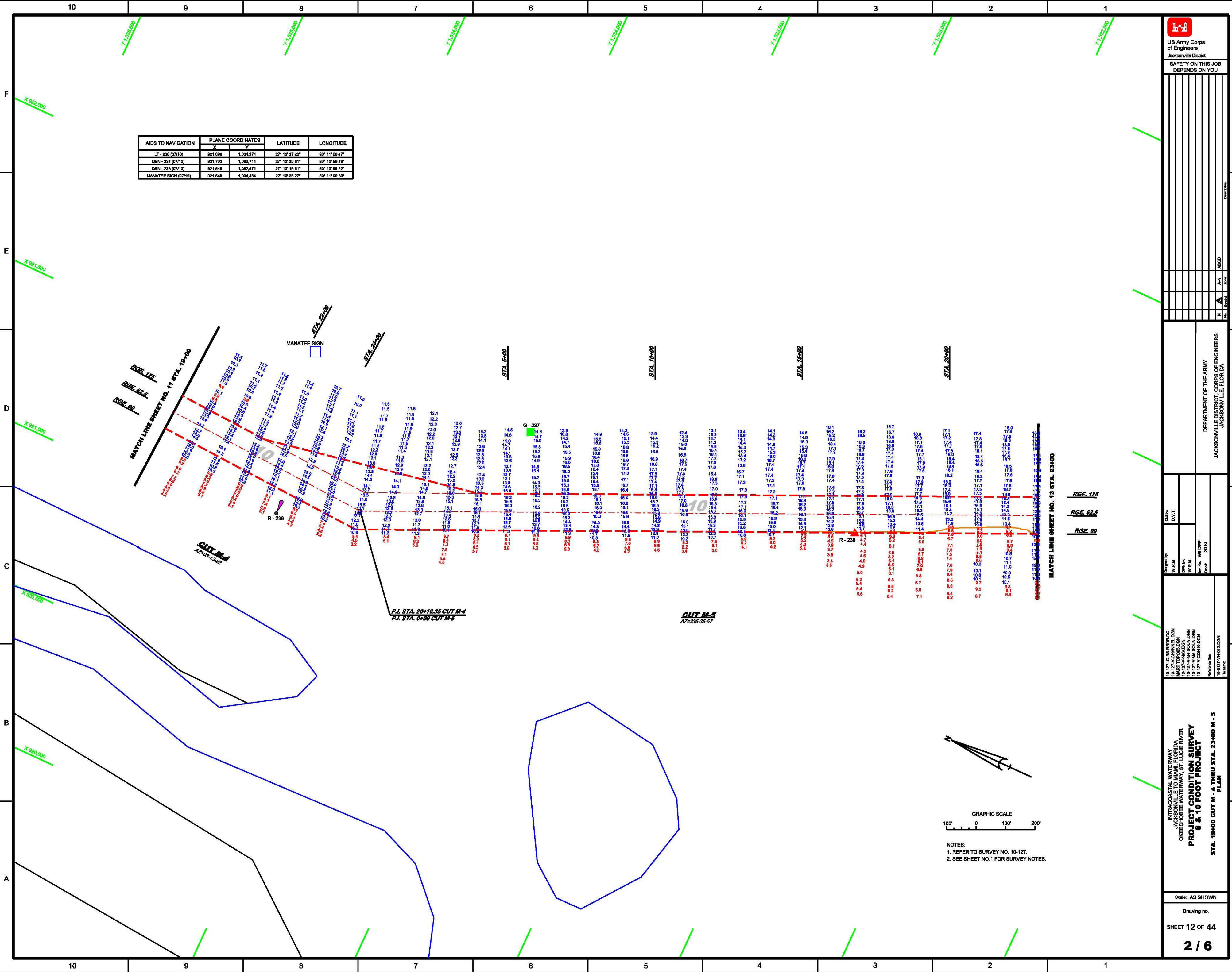
US Army Corps of Engineers
Jacksonville District
SAFETY ON THIS JOB
DEPENDS ON YOU

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

INTRACOASTAL WATERWAY
JACKSONVILLE TO MIAMI, FLORIDA
OKEECHOBEE WATERWAY, ST. LUCIE RIVER
**PROJECT CONDITION SURVEY
8 & 10 FOOT PROJECT**
IWW, CUTS M - 4 & M - 5 AND OWW, CUTS 1 & 2
PLAN

Scale: AS SHOWN
Drawing no.
SHEET 1 OF 44
1 / 6

AIDS TO NAVIGATION	PLANE COORDINATES		LATITUDE	LONGITUDE
	X	Y		
LT-236 (0710)	921,092	1,034,374	27° 10' 37.22"	80° 11' 06.47"
DRN-237 (0710)	921,700	1,033,711	27° 10' 30.61"	80° 10' 59.79"
DRN-238 (0710)	921,846	1,032,571	27° 10' 19.31"	80° 10' 58.22"
MANATEE SIGN (0710)	921,646	1,034,484	27° 10' 38.27"	80° 11' 00.33"



Zone	N	E	Z	Description		
				Symbol	Color	Size
Zone						

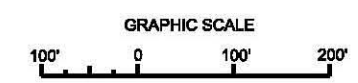
US Army Corps of Engineers
Jacksonville District
SAFETY ON THIS JOB
DEPENDS ON YOU

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

Designed by: W.R.M.
Checked by: W.R.M.
Drawn by: W.R.M.
Scale: AS SHOWN
Date: 2010

10-127-G-BB-BRDLDG
10-127-A-CHANNEL/DON
10-127-A-NAV/DON
10-127-A-M-SOUND/DON
10-127-A-CON/DON

INTRACOASTAL WATERWAY
JACKSONVILLE TO MIAMI, FLORIDA
OKEECHOBEE WATERWAY, ST. LUCIE RIVER
**PROJECT CONDITION SURVEY
8 & 10 FOOT PROJECT**
STA. 18+00 CUT M - 4 THRU STA. 23+00 M - 5
PLAN



NOTES:
1. REFER TO SURVEY NO. 10-127.
2. SEE SHEET NO.1 FOR SURVEY NOTES.

AIDS TO NAVIGATION	PLANE COORDINATES		LATITUDE	LONGITUDE
	X	Y		
G CAN BUOY - 238 (0710)	822,393	1,032,063	27° 10' 14.54"	80° 10' 53.25"
LT - 242 (0710)	822,553	1,030,973	27° 10' 03.44"	80° 10' 59.54"
NUN BUOY - 2 (0710)	822,418	1,030,714	27° 09' 57.28"	80° 10' 51.41"
CAN BUOY - 3 (0710)	821,987	1,030,389	27° 09' 57.28"	80° 10' 51.41"
GAN BUOY - 3A (0710)	821,987	1,030,439	27° 09' 58.19"	80° 10' 57.27"
SHOAL WARNING SIGN (0710)	822,905	1,029,860	27° 09' 52.39"	80° 10' 46.73"

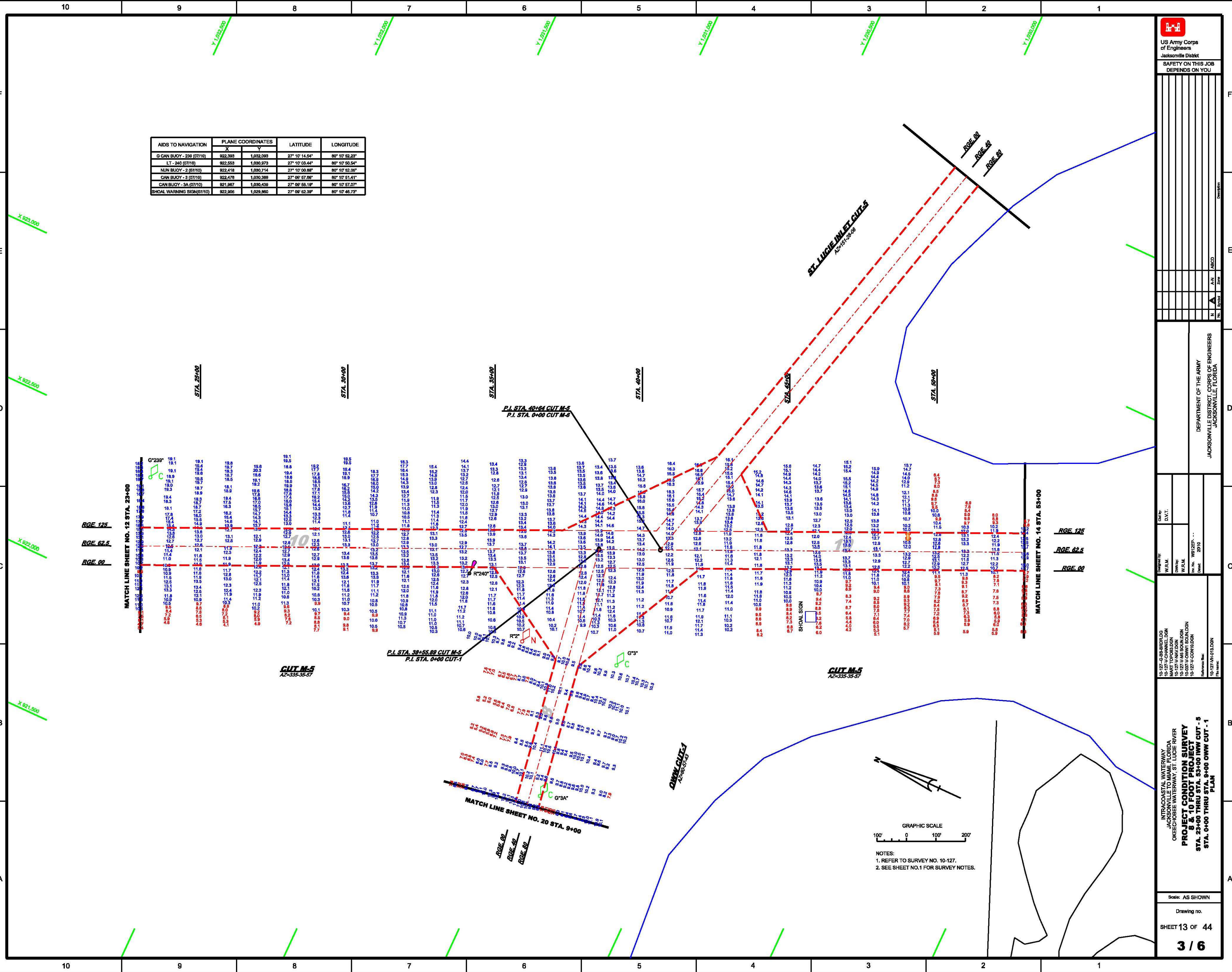
US Army Corps of Engineers
 Jacksonville District
 SAFETY ON THIS JOB
 DEPENDS ON YOU

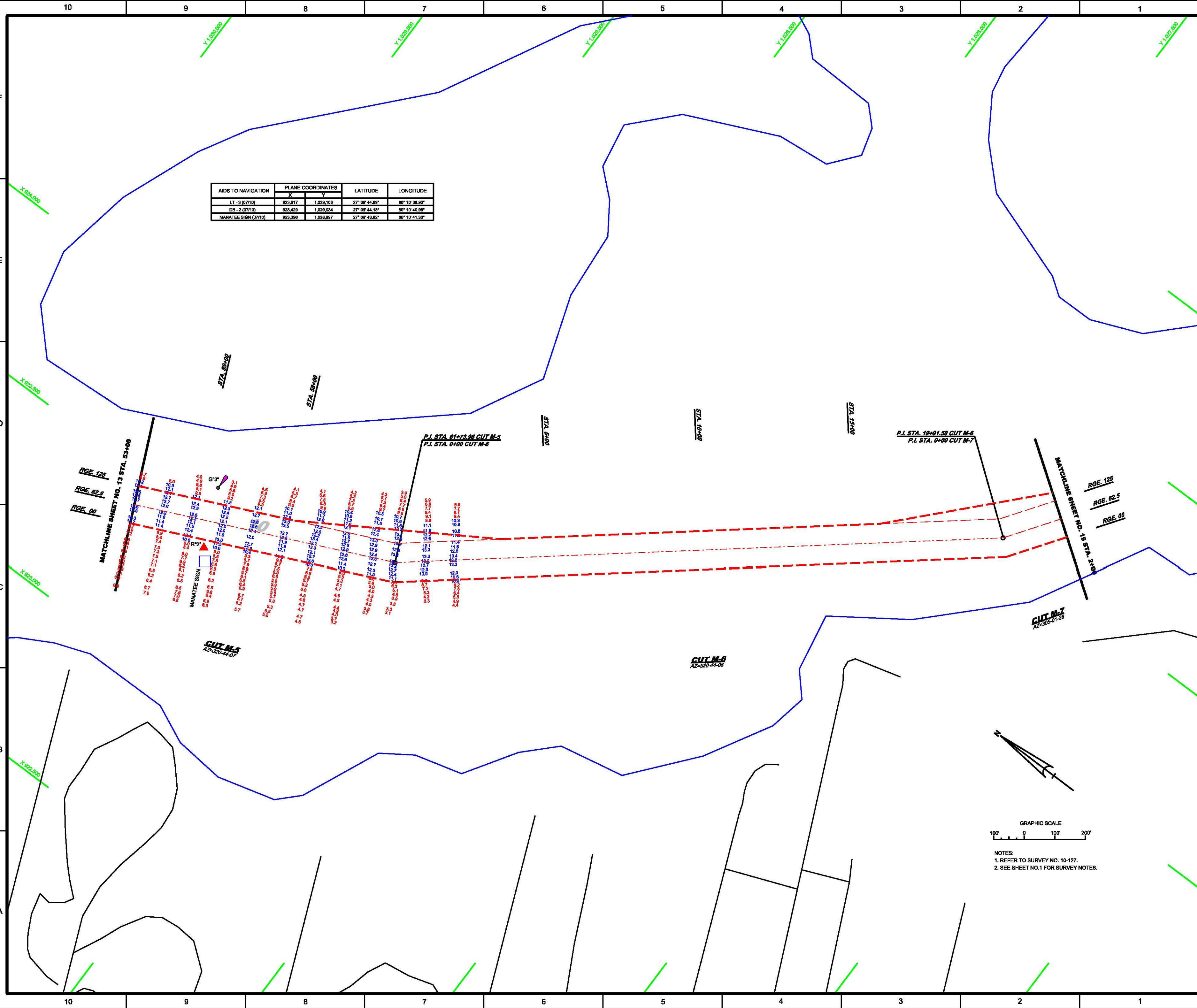
DEPARTMENT OF THE ARMY
 JACKSONVILLE DISTRICT, CORPS OF ENGINEERS
 JACKSONVILLE, FLORIDA

Designed by: W.F.M.L. / D.V.T.
 Drawn by: W.F.M.L. / W.F.M.L.
 Date: 05/20/10

INTRACOASTAL WATERWAY
 JACKSONVILLE TO MIAMI, FLORIDA
 OKEECHOBEE WATERWAY, ST. LUCIE RIVER
**PROJECT CONDITION SURVEY
 8 & 10 FOOT PROJECT**
 STA. 23+00 THRU STA. 53+00 IWW CUT - 5
 STA. 0+00 THRU STA. 9+00 OWW CUT - 1
 PLAN

Scale: AS SHOWN
 Drawing no.
 SHEET 13 OF 44
3 / 6





AIDS TO NAVIGATION	PLANE COORDINATES		LATITUDE	LONGITUDE
	X	Y		
LT - 3 (07/10)	923,817	1,028,108	27° 09' 44.88"	80° 10' 38.90"
DB - 2 (07/10)	923,429	1,028,034	27° 09' 44.18"	80° 10' 40.96"
MANATEE SIGN (07/10)	923,398	1,028,997	27° 09' 43.82"	80° 10' 41.33"

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

Date:	W.R.M.	D.V.T.	Checked:	Date:
Designed by:	W.R.M.	D.V.T.	Drawn by:	W.R.M.
Checked by:	W.R.M.	D.V.T.	Scale:	AS SHOWN

**PROJECT CONDITION SURVEY
8 & 10 FOOT PROJECT**

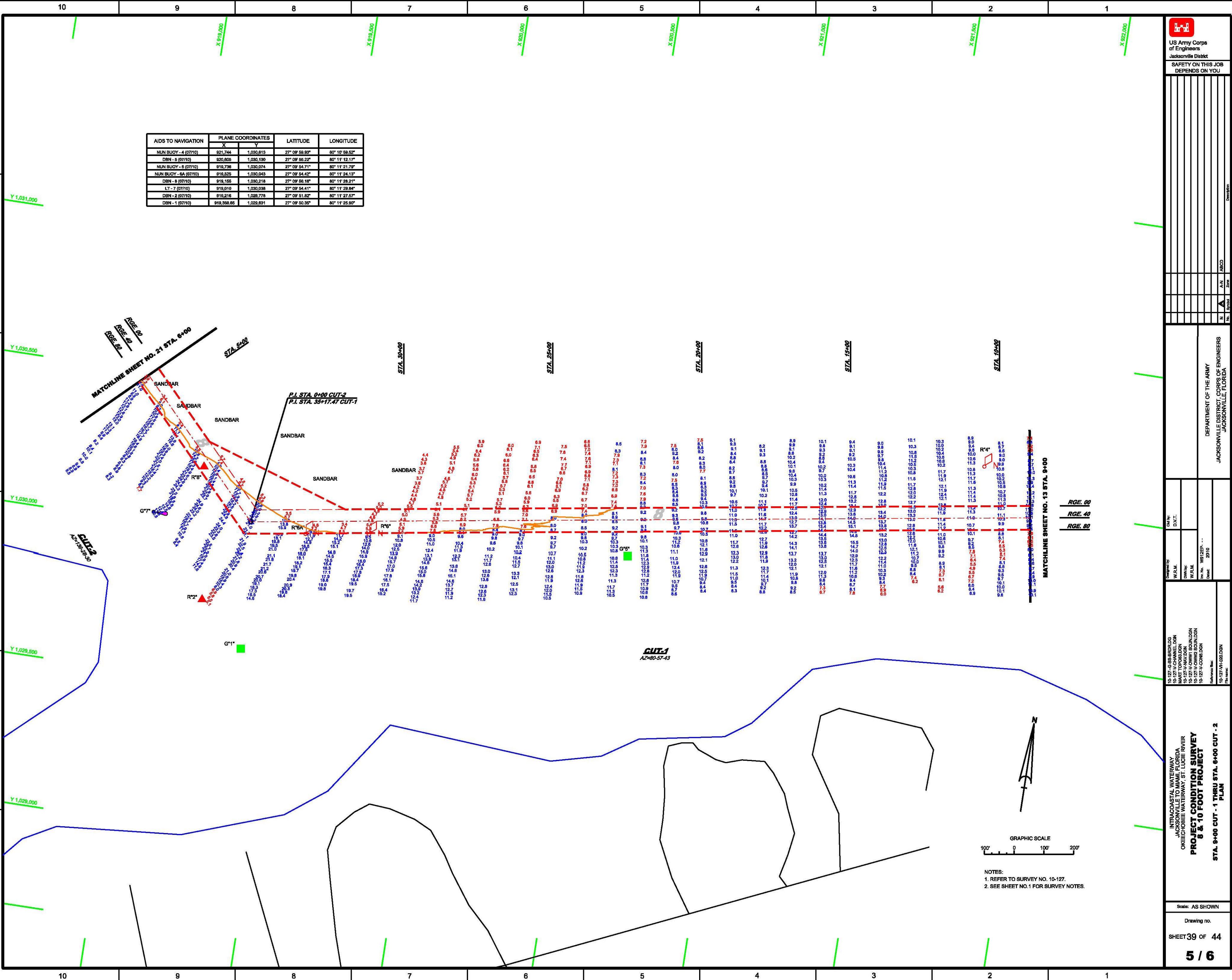
**STA. 53+00 CUT M - 5 THRU STA. 2+00 CUT M - 7
PLAN**

10-127-G-BB-BRDLDG
10-127-V-CANAL/DGN
10-127-V-NAV/DGN
10-127-V-MS SOUN/DGN
10-127-V-MS SOUN/DGN
10-127-VH-01-L/DGN
10-127-VH-01-L/DGN

Department of the Army
Jacksonville District, Corps of Engineers
Jacksonville, Florida

SHEET 14 OF 44
4 / 6

AIDS TO NAVIGATION	PLANE COORDINATES		LATITUDE	LONGITUDE
	X	Y		
NUN BUOY - 4 (07/10)	821,744	1,030,813	27° 09' 59.93"	80° 10' 59.52"
DBN - 5 (07/10)	820,805	1,030,130	27° 09' 56.22"	80° 11' 12.17"
NUN BUOY - 6 (07/10)	819,736	1,030,074	27° 09' 54.71"	80° 11' 21.79"
NUN BUOY - 6A (07/10)	819,825	1,030,043	27° 09' 54.42"	80° 11' 24.13"
DBN - 8 (07/10)	819,156	1,030,216	27° 09' 56.18"	80° 11' 28.21"
LT - 7 (07/10)	819,010	1,030,036	27° 09' 54.41"	80° 11' 29.84"
DBN - 2 (07/10)	819,216	1,029,776	27° 09' 51.82"	80° 11' 27.57"
DBN - 1 (07/10)	819,388.05	1,029,631	27° 09' 50.35"	80° 11' 25.90"



AIDS TO NAVIGATION	PLANE COORDINATES		LATITUDE	LONGITUDE
	X	Y		
NUN BUOY - 4 (07/10)	821,744	1,030,813	27° 09' 59.93"	80° 10' 59.52"
DBN - 5 (07/10)	820,805	1,030,130	27° 09' 56.22"	80° 11' 12.17"
NUN BUOY - 6 (07/10)	819,736	1,030,074	27° 09' 54.71"	80° 11' 21.79"
NUN BUOY - 6A (07/10)	819,825	1,030,043	27° 09' 54.42"	80° 11' 24.13"
DBN - 8 (07/10)	819,156	1,030,216	27° 09' 56.18"	80° 11' 28.21"
LT - 7 (07/10)	819,010	1,030,036	27° 09' 54.41"	80° 11' 29.84"
DBN - 2 (07/10)	819,216	1,029,776	27° 09' 51.82"	80° 11' 27.57"
DBN - 1 (07/10)	819,388.05	1,029,631	27° 09' 50.35"	80° 11' 25.90"

US Army Corps of Engineers
Jacksonville District

SAFETY ON THIS JOB
DEPENDS ON YOU

MATCHLINE SHEET NO. 21 STA. 0+00

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

PROJECT CONDITION SURVEY
8 & 10 FOOT PROJECT

STA. 9+00 CUT - 1 THRU STA. 6+00 CUT - 2
PLAN

Designed by:	W.R.M.	D.V.T.
Checked by:	W.R.M.	D.V.T.
Drawn by:	W.R.M.	D.V.T.
Date:	10/12/2010	

INTRACOASTAL WATERWAY
JACKSONVILLE TO MIAMI, FLORIDA
OKEECHOBEE WATERWAY, ST. LUCIE RIVER
PROJECT CONDITION SURVEY
8 & 10 FOOT PROJECT

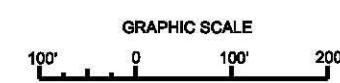
STA. 9+00 CUT - 1 THRU STA. 6+00 CUT - 2
PLAN

Scale: AS SHOWN

Drawing no.

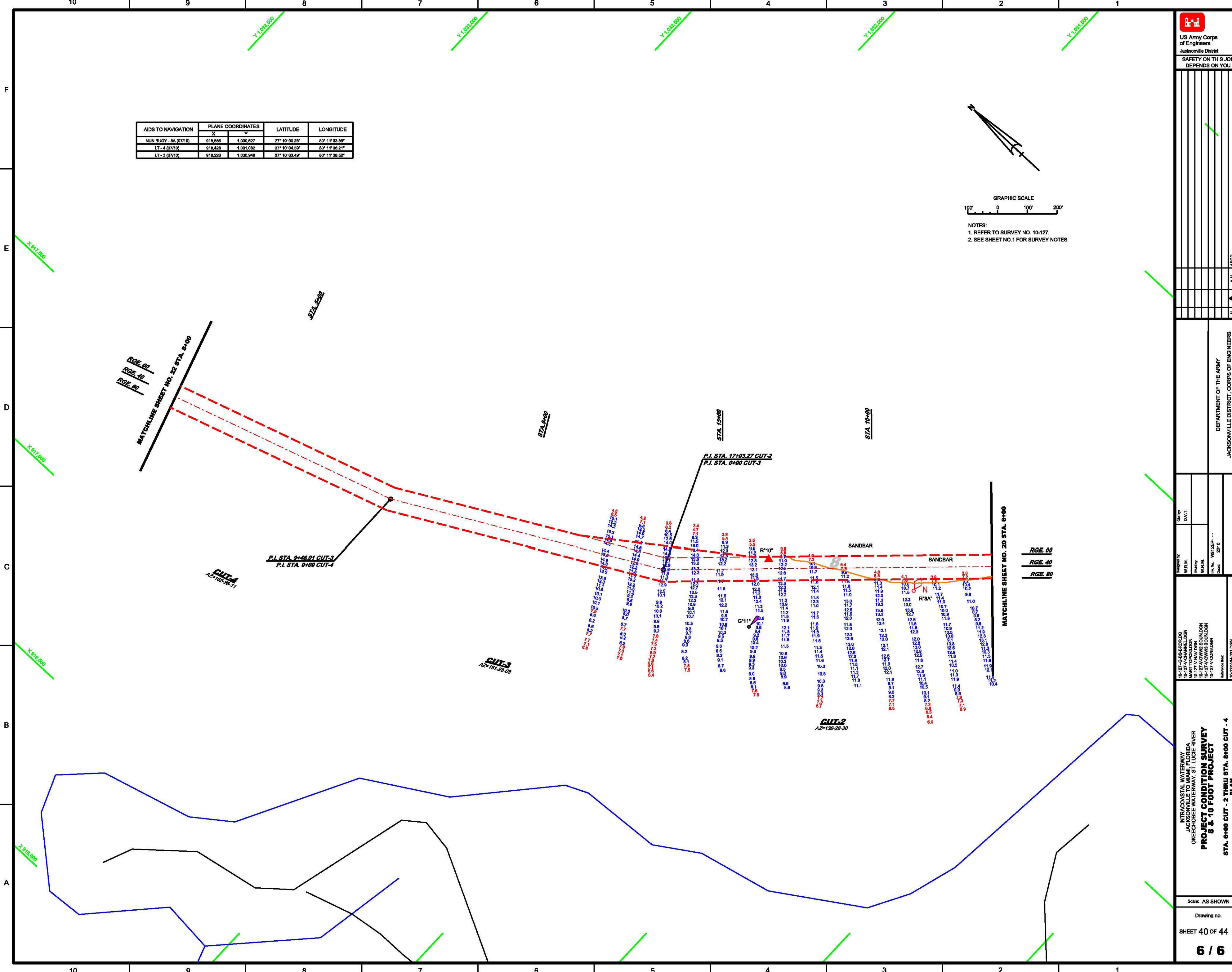
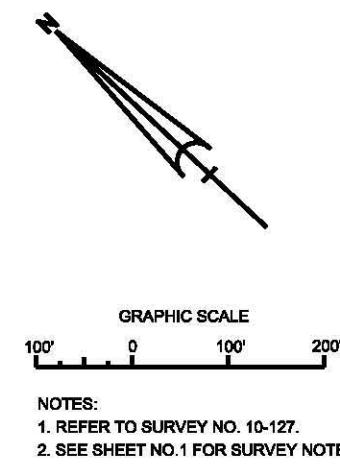
SHEET 39 OF 44

5 / 6



- NOTES:
- REFER TO SURVEY NO. 10-127.
 - SEE SHEET NO.1 FOR SURVEY NOTES.

AIDS TO NAVIGATION	PLANE COORDINATES		LATITUDE	LONGITUDE
	X	Y		
NUN BUOY - 8A (07710)	918,665	1,030,827	27° 10' 00.26"	80° 11' 33.39"
LT - 4 (07710)	918,428	1,031,082	27° 10' 04.69"	80° 11' 35.21"
LT - 3 (07710)	918,220	1,030,949	27° 10' 03.46"	80° 11' 35.52"



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

No.	Zone	A-N	ABCD	Description

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

Designed by: W.F.M.J.	Checked by: D.V.T.
Drawn by: W.F.M.J.	For No.: W101255-...
Date: 2010	Sheet: 40 of 44

**PROJECT CONDITION SURVEY
8 & 10 FOOT PROJECT**

STA. 6+00 CUT - 2 THRU STA. 8+00 CUT - 4
PLAN

Scale: AS SHOWN

Drawing no.
SHEET 40 OF 44

6 / 6