

SAN JUAN HARBOR SAN JUAN, PUERTO RICO POST-HURRICANE MARIA HYDROGRAPHIC EXAM SURVEY FY17 30 THRU 56-FOOT PROJECT

SURVEY NOTES

- REFER TO SURVEY NO. 17-249.
 - SOUNDINGS ARE IN FEET AND TENTHS AND REFER TO NOAA'S REPORTED MEAN LOWER LOW WATER (MLLW) TIDAL DATUM RELATIVE TO THE 1983-2001 TIDAL EPOCH.
 - 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 "SANJUAN-2011APRIL06.KTD".
 - ALL ELEVATIONS ARE BELOW THE CHART DATUM UNLESS PRECEDED BY A (+) SIGN.
 - PLANE COORDINATES ARE BASED ON THE LAMBERT CONFORMAL CONIC PROJECTION FOR PUERTO RICO & THE VIRGIN ISLANDS, ZONE 1, 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 "USCGS SAN JUAN ARP" (PID: BBFN06)
TIDE STAFF LOCATED FROM "975 5371 A TIDAL" (PID: TV1513)
MLLW ELEVATION: 5.15'
A MEASURE DOWN POINT WAS SET FROM SURVEY MONUMENT "975 5371 A TIDAL", LOCATED ON THE EDGE OF USCG BULKHEAD ADJACENT TO THE BASE STATION POINT.
 - DEPTHS DEPICTED BY THIS SURVEY ARE REFERENCED TO MLLW, TIDAL EPOCH 1983-2001 AS REPORTED BY THE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION (NOAA). SURVEY WAS CALIBRATED TO THE PUBLISHED MLLW HEIGHTS OF THE BENCHMARKS ASSOCIATED WITH THE TIDE GAGE SITES SPECIFIED BELOW:
NOAA TIDAL STATION 975-5371 A TIDAL USED FOR ALL CUTS. (PID: TV1513)
VERTICAL MEASUREMENTS WERE MADE USING A ROSS 835 SMARTSOUNDER DUAL-FREQUENCY 28/200 KHZ SINGLE-BEAM TRANSDUCER. ALL SOUNDINGS SHOWN ARE IN HIGH FREQUENCY.
- | VESSEL | DATE OF SURVEY | CUT |
|--------|----------------|---|
| SB-34 | 29 SEP 2017 | SAN ANTONIO CHANNEL |
| SB-34 | 30 SEP 2017 | ANEGADO CHANNEL, GRAVING DOCK CHANNEL, BAR CUTS 5 & 6 |
| SB-34 | 01 OCT 2017 | GRAVING DOCK CHANNEL, SAN ANTONIO APPROACH CHANNEL |
| SB-34 | 02 OCT 2017 | PUERTO NUEVO TURNING BASIN, PUERTO NUEVO CHANNEL |
| SB-34 | 04 OCT 2017 | BAR CUTS 1 THRU 4 |
| SB-34 | 05 OCT 2017 | ARMY TERMINAL CHANNEL, USCG LINES |
- 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.

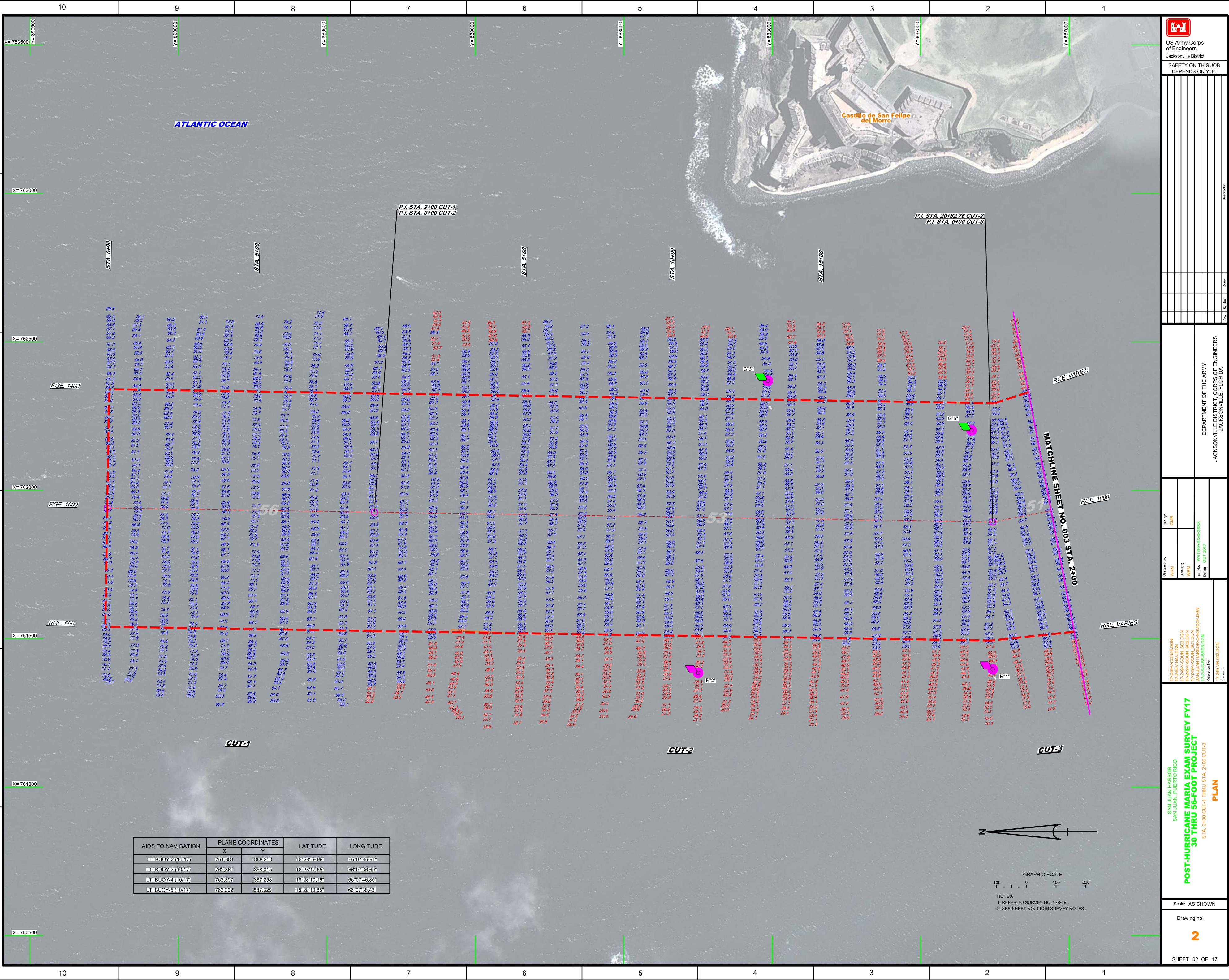
LEGEND	
	MONUMENT
	LIGHTED BEACON
	GREEN DAYBEACON
	RED DAYBEACON
	RED LIGHTED BUOY
	GREEN LIGHTED BUOY
	CAN BUOY
	NUN BUOY
	TIDE STAFF
	PROJECT DEPTH


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

San Juan Harbor
San Juan, Puerto Rico
POST-HURRICANE MARIA EXAM SURVEY FY17
30 THRU 56-FOOT PROJECT
INDEX, LOCATION AND VICINITY
MAP

Scale: AS SHOWN
Drawing no. 1
SHEET 01 OF 17





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Matchline: SHEET NO. 003 STA. 2+00

Matchline: SHEET NO. 004 STA. 2+00

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

Checked By: GHR

Designed By: WRM

Drawn By: WRM

Scale: AS SHOWN

Date: OCT 2017

Project: POST-HURRICANE MARIA EXAM PROJECT
30 THRU 56-FOOT PROJECT
STA. 0+00 CUT-1 THRU STA. 2+00 CUT-3
PLAN

San Juan Harbor
San Juan, Puerto Rico

Reference Map: 17-2494H-R02DEN

AIDS TO NAVIGATION

AIDS TO NAVIGATION	PLANE COORDINATES		LATITUDE	LONGITUDE
	X	Y		
BUOY-2 (10/17)	761.384	888.250	18°28'19.99"	66°07'46.91"
BUOY-3 (10/17)	762.369	888.015	18°28'17.65"	66°07'36.69"
BUOY-4 (10/17)	762.397	887.258	18°28'10.16"	66°07'46.80"
BUOY-5 (10/17)	762.202	887.329	18°28'10.65"	66°07'38.43"

GRAPHIC SCALE

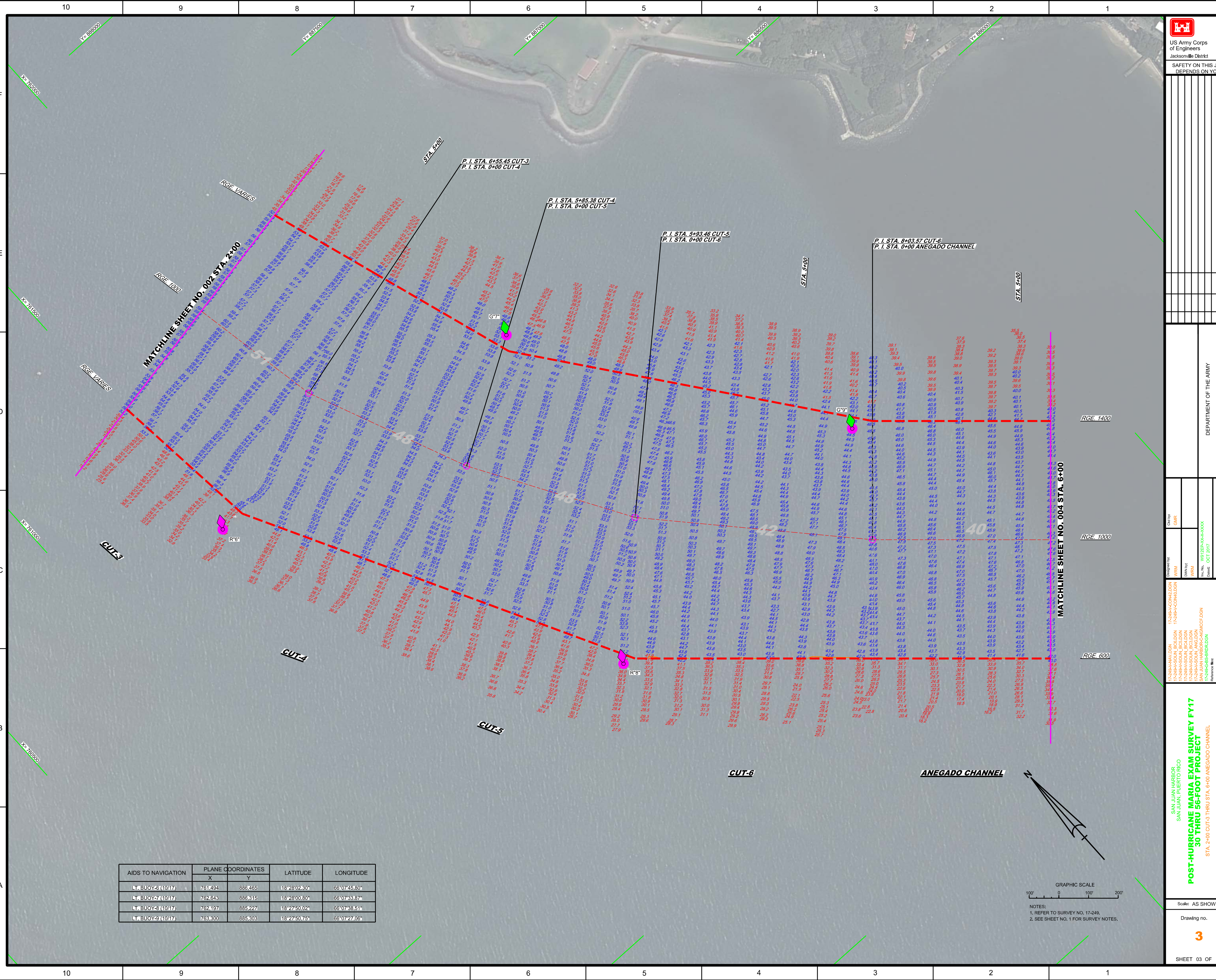
1" = 100'

NOTES:
1. REFER TO SURVEY NO. 17-249.
2. SEE SHEET NO. 1 FOR SURVEY NOTES.

Scale: AS SHOWN

Drawing no. **2**

SHEET 02 OF 17



US Army Corps of Engineers

 Jacksonville District

 SAFETY ON THIS JOB

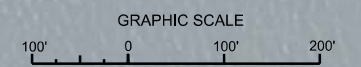
 DEPENDS ON YOU

Department of the Army Jacksonville District, Corps of Engineers Jacksonville, Florida	Date: 10/2017 Project: 17-249-ANEGADO CHAN
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SAN JUAN HARBOR
 SAN JUAN, PUERTO RICO
POST-HURRICANE MARIA EXAM SURVEY FY17
30 THRU 56-FOOT PROJECT
 STA. 2+00 CUT-3 THRU STA. 6+00 ANEGADO CHANNEL
PLAN

Scale: AS SHOWN
 Drawing no. **3**
 SHEET 03 OF 17

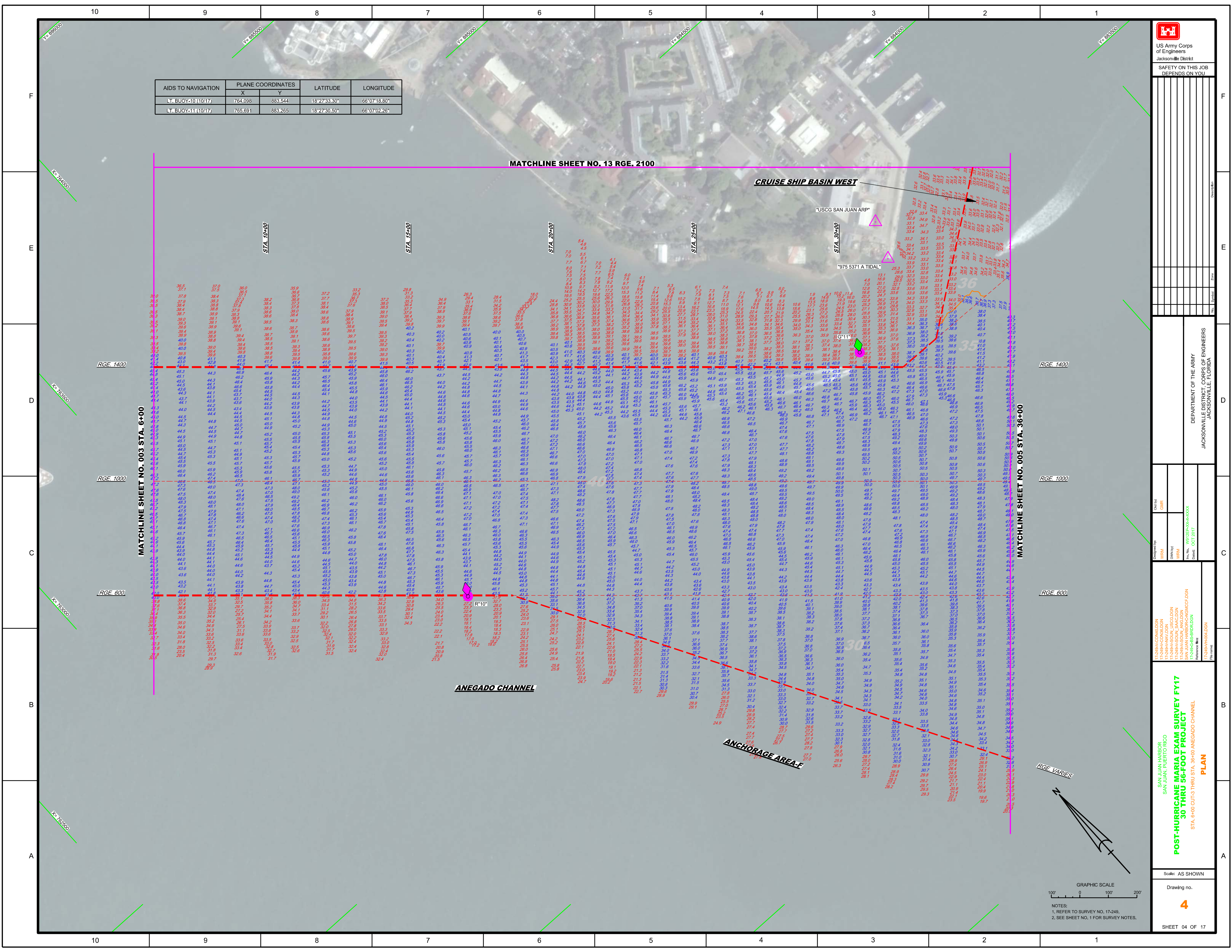
AIDS TO NAVIGATION	PLANE COORDINATES		LATITUDE	LONGITUDE
	X	Y		
LT BUOY-6 (10/17)	761494	886465	18°28'02.30"	66°07'45.80"
LT BUOY-7 (10/17)	762643	886315	18°28'00.80"	66°07'33.87"
LT BUOY-8 (10/17)	762197	885227	18°27'50.02"	66°07'38.51"
LT BUOY-9 (10/17)	763300	885303	18°27'50.75"	66°07'27.06"



NOTES:
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AIDS TO NAVIGATION	PLANE COORDINATES		LATITUDE	LONGITUDE
	X	Y		
LT. BUOY-10 (10/17)	764,098	883,544	18°27'33.30"	66°07'18.80"
LT. BUOY-11 (10/17)	765,691	883,265	18°27'30.50"	66°07'02.26"

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SAFETY ON THIS JOB
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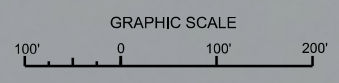
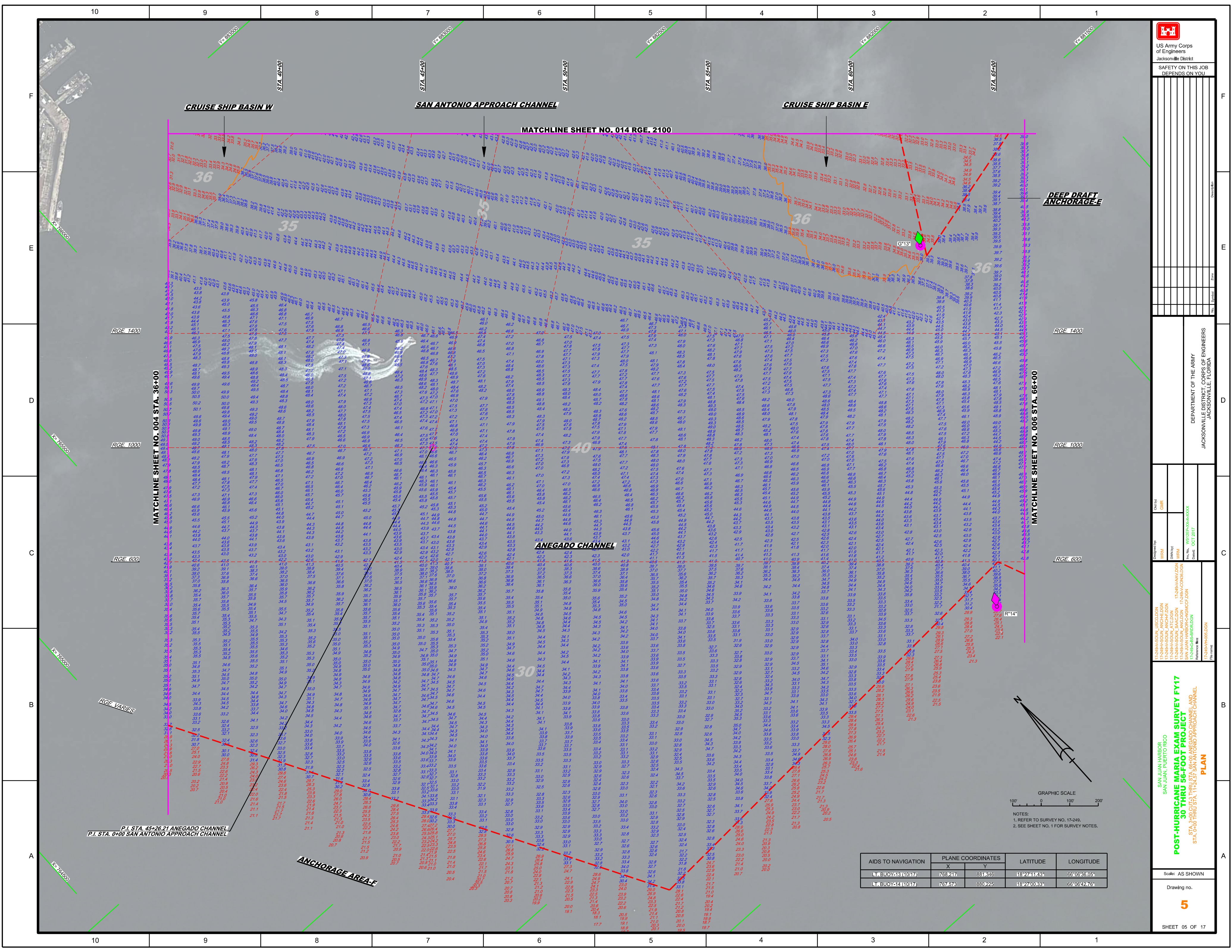


Station	Depth	Station	Depth	Station	Depth
30.0	37.9	30.1	38.0	30.2	38.1
30.1	38.0	30.2	38.1	30.3	38.2
30.2	38.1	30.3	38.2	30.4	38.3
30.3	38.2	30.4	38.3	30.5	38.4
30.4	38.3	30.5	38.4	30.6	38.5
30.5	38.4	30.6	38.5	30.7	38.6
30.6	38.5	30.7	38.6	30.8	38.7
30.7	38.6	30.8	38.7	30.9	38.8
30.8	38.7	30.9	38.8	31.0	38.9
30.9	38.8	31.0	38.9	31.1	39.0
31.0	38.9	31.1	39.0	31.2	39.1
31.1	39.0	31.2	39.1	31.3	39.2
31.2	39.1	31.3	39.2	31.4	39.3
31.3	39.2	31.4	39.3	31.5	39.4
31.4	39.3	31.5	39.4	31.6	39.5
31.5	39.4	31.6	39.5	31.7	39.6
31.6	39.5	31.7	39.6	31.8	39.7
31.7	39.6	31.8	39.7	31.9	39.8
31.8	39.7	31.9	39.8	32.0	39.9
31.9	39.8	32.0	39.9	32.1	40.0
32.0	39.9	32.1	40.0	32.2	40.1
32.1	40.0	32.2	40.1	32.3	40.2
32.2	40.1	32.3	40.2	32.4	40.3
32.3	40.2	32.4	40.3	32.5	40.4
32.4	40.3	32.5	40.4	32.6	40.5
32.5	40.4	32.6	40.5	32.7	40.6
32.6	40.5	32.7	40.6	32.8	40.7
32.7	40.6	32.8	40.7	32.9	40.8
32.8	40.7	32.9	40.8	33.0	40.9
32.9	40.8	33.0	40.9	33.1	41.0
33.0	40.9	33.1	41.0	33.2	41.1
33.1	41.0	33.2	41.1	33.3	41.2
33.2	41.1	33.3	41.2	33.4	41.3
33.3	41.2	33.4	41.3	33.4	41.3

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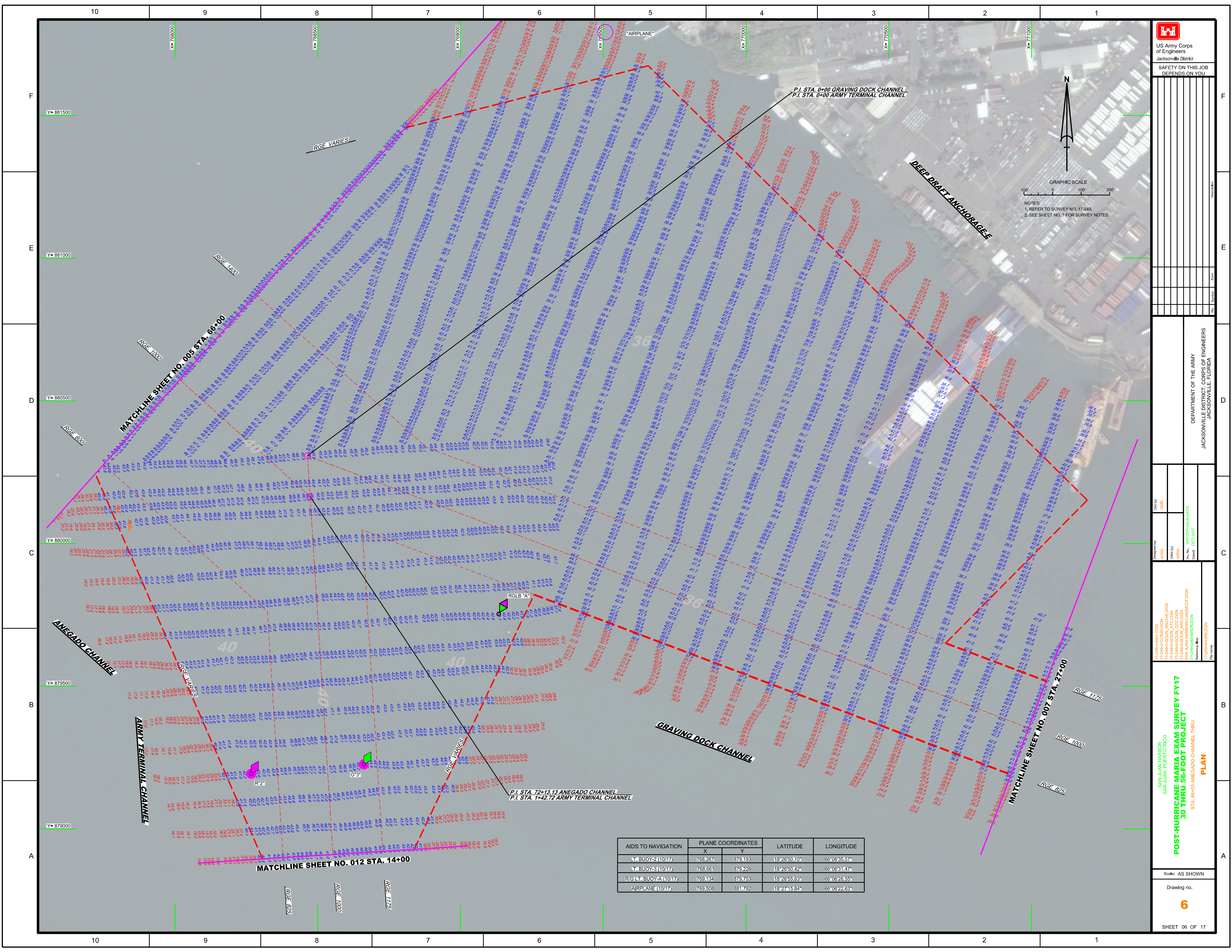
San Juan Harbor
San Juan, Puerto Rico
Post-Hurricane Maria Exam Survey FY17
30 THRU 56-FOOT PROJECT
STA. 6+00 CUT-3 THRU STA. 36+00 ANEGADO CHANNEL


Scale: AS SHOWN
Drawing no. 4
SHEET 04 OF 17



NOTES:
1. REFER TO SURVEY NO. 17-249.
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AIDS TO NAVIGATION	PLANE COORDINATES		LATITUDE	LONGITUDE
	X	Y		
17 BUOY 13 (10/17)	768247	881836	18°27'16.33"	86°08'38.05"
17 BUOY 14 (10/17)	767573	880225	18°27'00.33"	86°08'42.76"

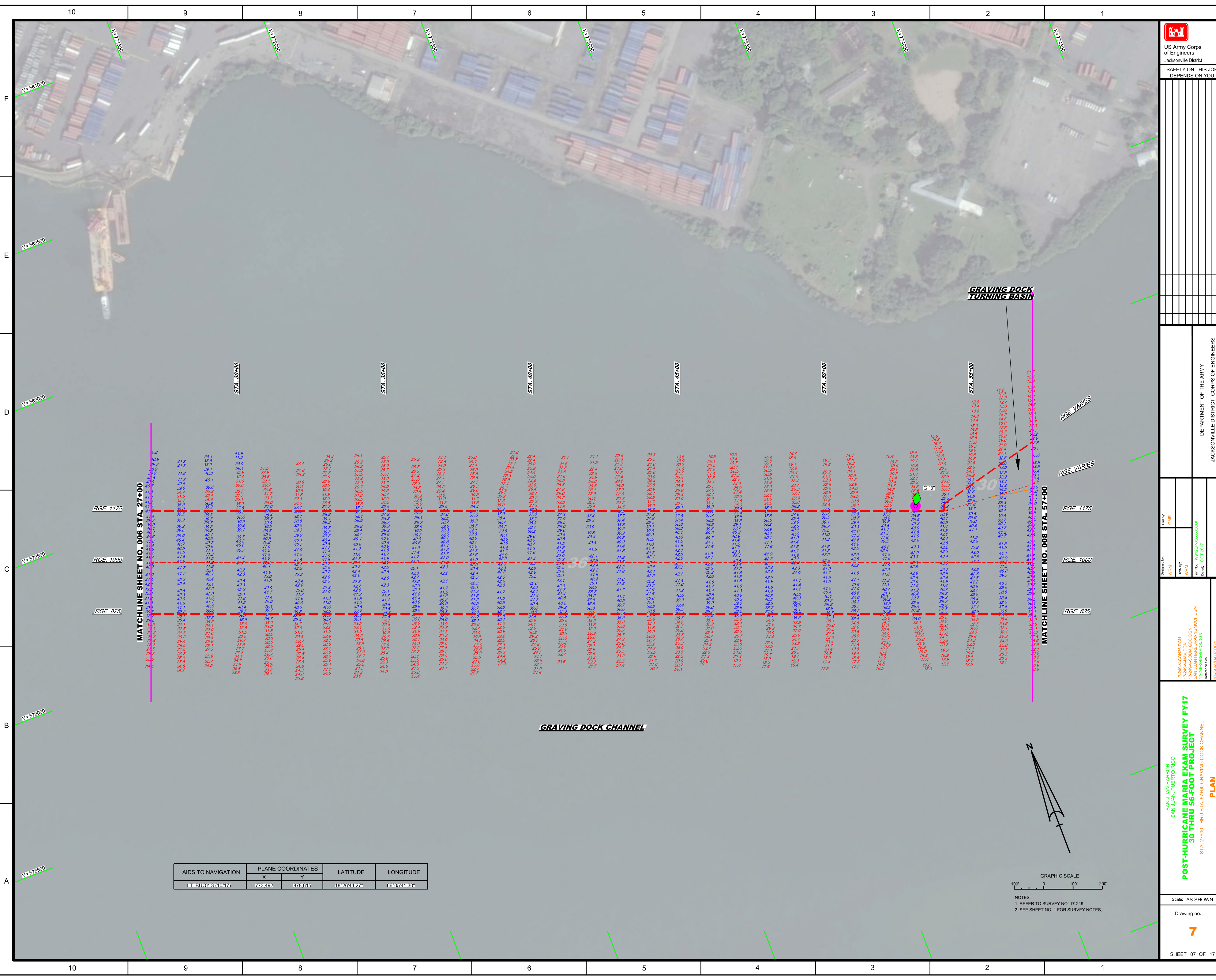



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Project: 17-249-ANAV.DGN
 Title: 17-249-ANAV.DGN
 Author: 17-249-ANAV.DGN
 Date: 17-249-ANAV.DGN
 Date: 17-249-ANAV.DGN
 Date: 17-249-ANAV.DGN

SAN JUAN HARBOR
 SAN JUAN, PUERTO RICO
POST-HURRICANE MARIA EXAM SURVEY FY17
30 THRU 56-FOOT PROJECT
 STA. 66+00 ANEGADO CHANNEL THRU
PLAN

AIDS TO NAVIGATION	PLANE COORDINATES		LATITUDE	LONGITUDE
	X	Y		
LT BUOY 2 (10/17)	768.267	879.193	18°26'50.42"	66°06'35.57"
LT BUOY 3 (10/17)	768.661	879.226	18°26'50.42"	66°06'31.47"
R/G LT BUOY 4 (10/17)	769.134	879.753	18°26'55.63"	66°06'25.55"
AIRPLANE (10/17)	769.508	881.792	18°27'15.84"	66°06'22.63"



MATCHLINE SHEET NO. 006 STA. 27+00

MATCHLINE SHEET NO. 008 STA. 57+00

AIDS TO NAVIGATION	PLANE COORDINATES		LATITUDE	LONGITUDE
	X	Y		
(LT. BUOY-3 (1017))	773,492	876,615	18°26'44.27"	66°05'41.30"

GRAPHIC SCALE
0 100 200

NOTES:
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