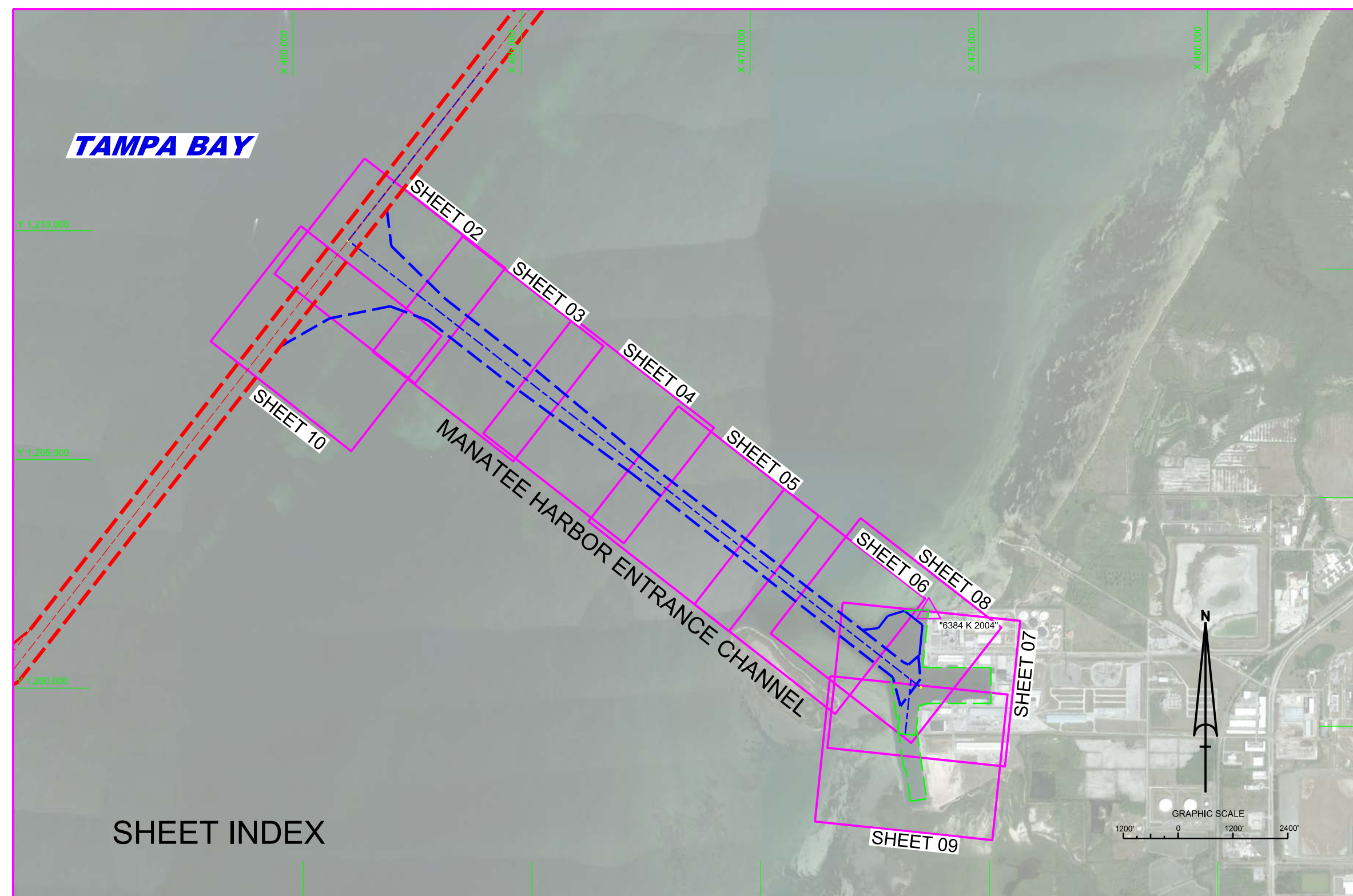


MANATEE HARBOR (TAMPA HARBOR ZONE 10) MANATEE COUNTY, FLORIDA EXAMINATION SURVEY FY16 40-FOOT PROJECT



SURVEY NOTES

- REFER TO SURVEY NO. 16-171.
- ALL ELEVATIONS ARE BELOW THE CHART DATUM UNLESS PRECEDED BY A (+) SIGN.
- PLANE COORDINATES ARE BASED ON THE TRANSVERSE MERCATOR PROJECTION FOR THE WEST ZONE OF FLORIDA AND REFERENCED TO THE NORTH AMERICAN DATUM OF 1983 (NAD83).
- 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 SITE SPECIFIED BELOW:
NOAA TIDAL STATION 872-6384, PORT MANATEE, TAMPA BAY, FL
- TIDAL REDUCTIONS WERE OBTAINED UTILIZING A REAL-TIME KINEMATIC (RTK) GPS AND REFERENCED TO MLLW UTILIZING A HYPACK KINEMATIC TIDAL DATUM (KTD) MODEL. KTD FILE NAME IS: "SPC-FL-WEST-2010-12-07.KTD".
- 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 "6384 K 2004" (OPUS PID: BBBT27)
TIDE STAFF WAS SET IN THE NORTHERN MOST BULKHEAD OF MANATEE HARBOR FROM NOS BM "972 6384 E" (PID: AG7341)
- VERTICAL MEASUREMENTS WERE MADE USING AN EDGETECH 6205 BATHYMETRY AND SIDE-SCAN SYSTEM AS THE PRIMARY SOUNDER AND A ROSS MODEL 835B SMART SOUNDER SINGLE-BEAM SYSTEM OPERATING AT 28 AND 200 KHZ FOR SINGLE-BEAM CHECK LINES. ALL SOUNDINGS SHOWN ARE IN HIGH FREQUENCY. TOPO MEASUREMENTS WERE MADE USING CONVENTIONAL RTK GPS METHODS AND ARE REFERENCED TO NAVD88.
- 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, EM 1110-2-6056, STANDARDS AND PROCEDURES FOR REFERENCING PROJECT ELEVATION GRADES TO NATIONWIDE VERTICAL DATUMS, 31 DEC 10 AND EM 1110-1-1005, CONTROL AND TOPOGRAPHIC SURVEYING, 01 JAN 07.

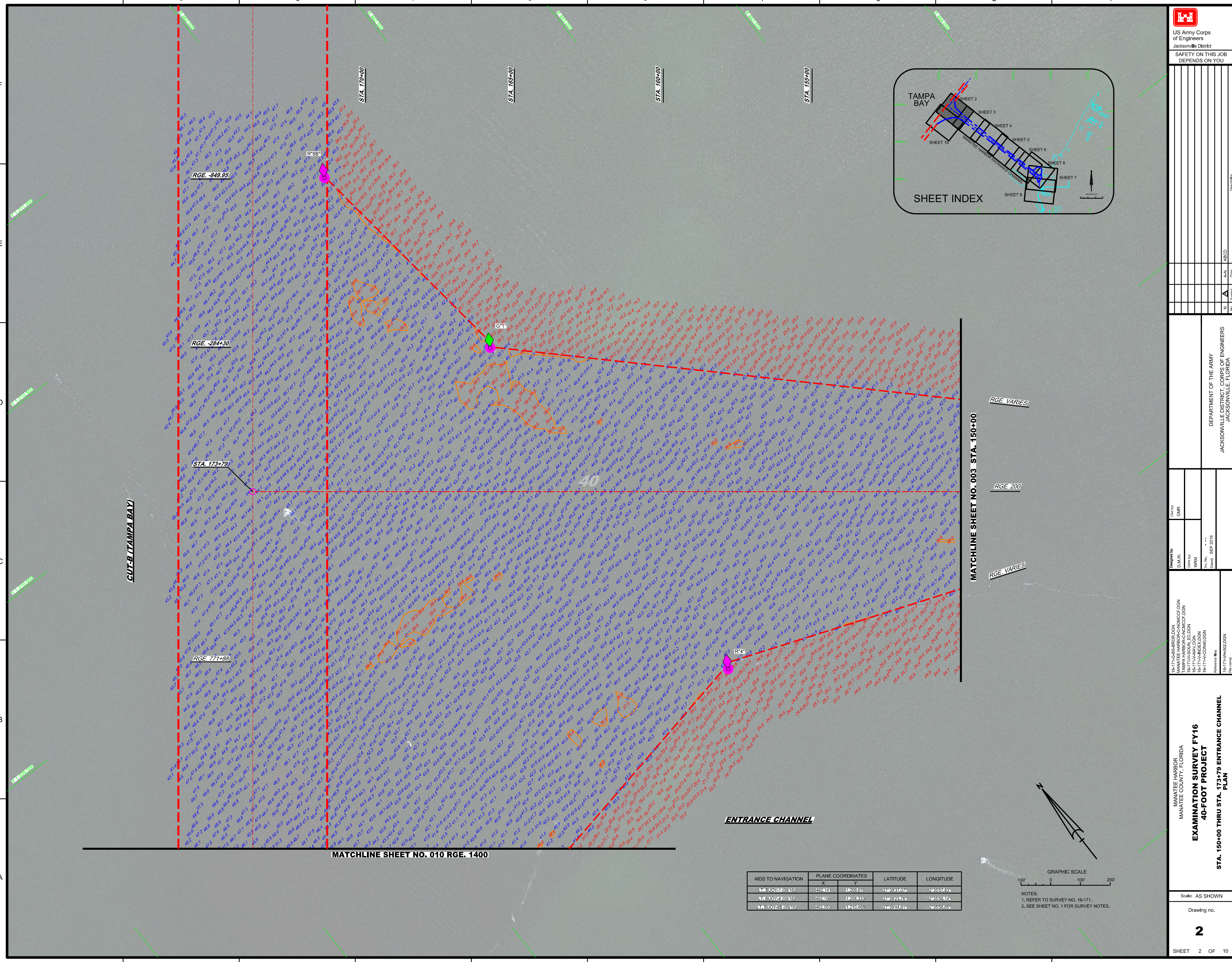
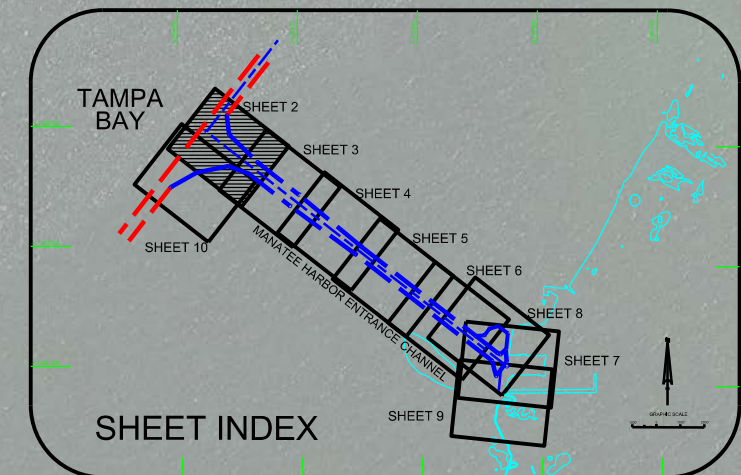
LEGEND	
	MONUMENT
	LIGHTED BEACON
	GREEN DAYBEACON
	RED DAYBEACON
	RED LIGHTED BUOY
	GREEN LIGHTED BUOY
	CAN BUOY
	NUM BUOY
	TIDE STAFF
	PROJECT DEPTH

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

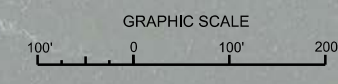
DEPARTMENT OF THE ARMY
JACKSONVILLE DISTRICT, CORPS OF ENGINEERS
JACKSONVILLE, FLORIDA

MANATEE HARBOR
MANATEE COUNTY, FLORIDA
EXAMINATION SURVEY FY16
40-FOOT PROJECT
INDEX, LOCATION AND VICINITY
MAP

Scale: AS SHOWN
Drawing no. **1**
SHEET 01 OF 10



AIDS TO NAVIGATION	PLANE COORDINATES		LATITUDE	LONGITUDE
	X	Y		
16-BUOY-1 (0916)	462444	1263676	27°43'37.01"	82°45'57.83"
16-BUOY-2 (0916)	462406	1263333	27°43'23.76"	82°45'58.14"
16-BUOY-3 (0916)	462053	1262468	27°43'47.91"	82°45'58.85"



NOTES:
1. REFER TO SURVEY NO. 16-171.
2. SEE SHEET NO. 1 FOR SURVEY NOTES.

Zone	AN	ABCD	Zone
N	A	ABCD	N

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

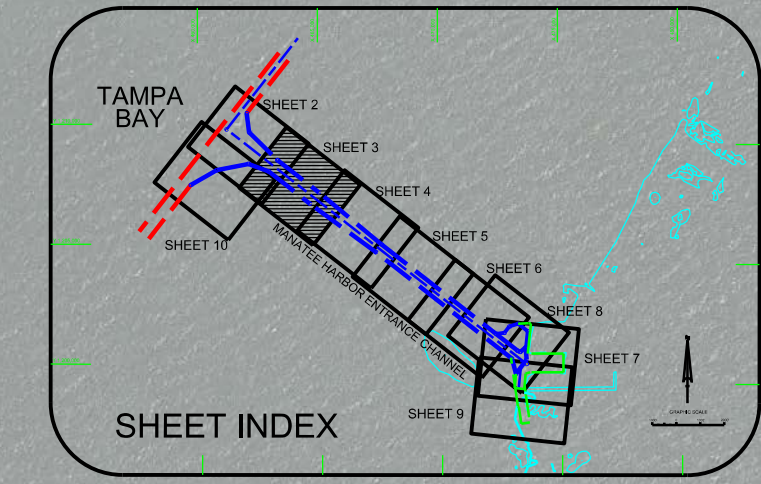
Designed by:
D.M.W.
GHR
Checked by:
WRM
Date:
SEP 2016

MANATEE HARBOR
MANATEE COUNTY, FLORIDA
EXAMINATION SURVEY FY16
40-FOOT PROJECT
PLAN
STA. 150+00 THRU STA. 173+79 ENTRANCE CHANNEL



US Army Corps of Engineers
Jacksonville District

SAFETY ON THIS JOB
DEPENDS ON YOU



No.	Symbol	Zone
N		AN
A		ABC

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

Checked by: GHR
Designed by: DMW,
DWY/PC
WRM
As. No. 16-171-AR-001
Date: SEP 2016

16-171-AR-001-DON
MANATEE HARBOR/CANAL/ENRANCE CHANNEL
EXAMINATION SURVEY
Reference files:
16-171-AR-001-DON
File name:
STA. 120+00 THRU STA. 150+00 ENTRANCE CHANNEL
PLAN

Scale: AS SHOWN
Drawing no.
3
SHEET 3 OF 10

10 9 8 7 6 5 4 3 2 1

F

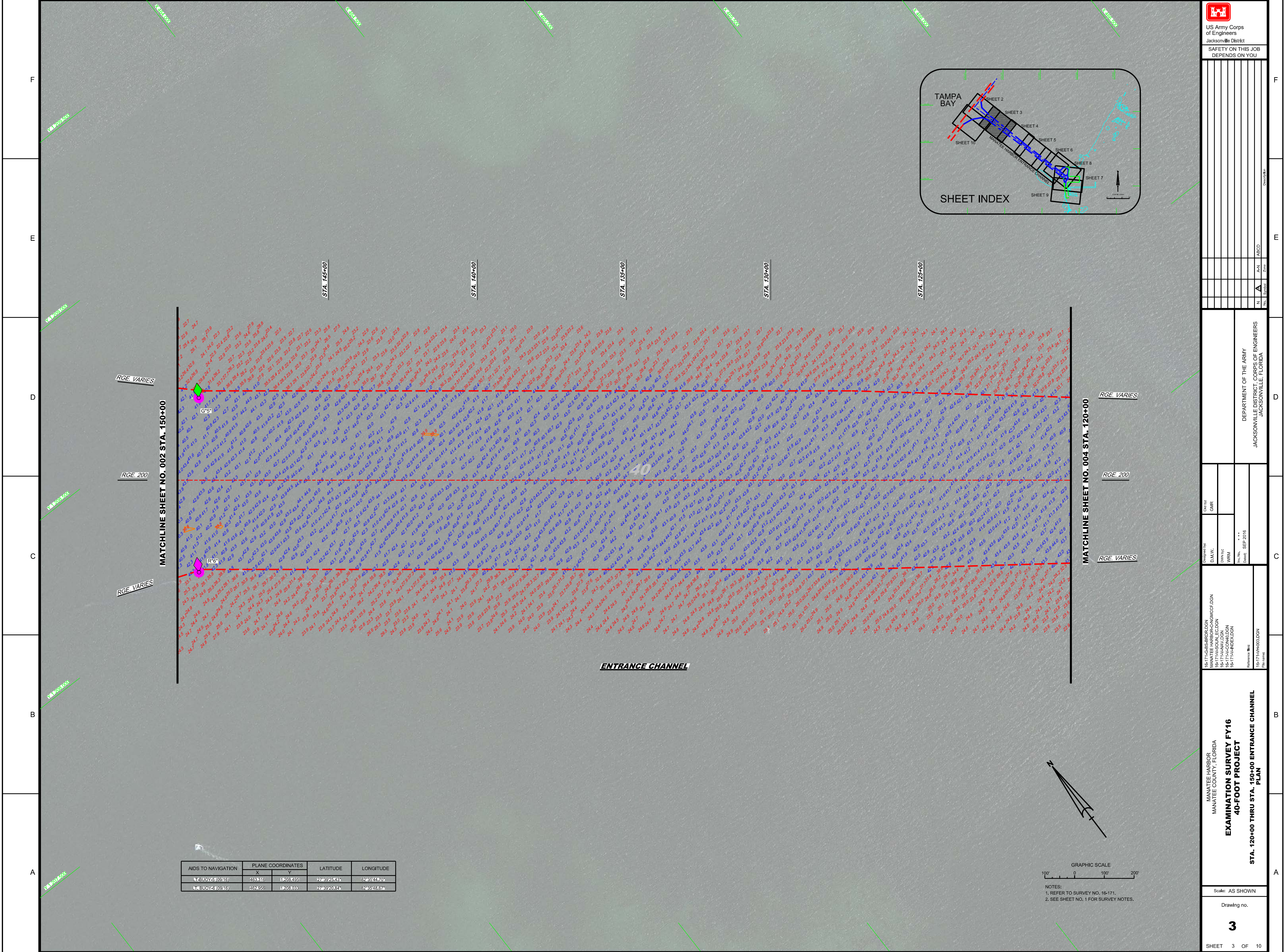
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D

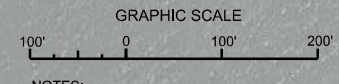
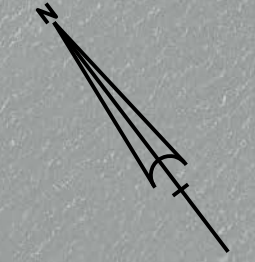
C

B

A



AIDS TO NAVIGATION	PLANE COORDINATES		LATITUDE	LONGITUDE
	X	Y		
T-BOUY-5 (0915)	483.816	11208.496	27°28'23.43N	82°45'44.70W
T-BOUY-6 (0916)	482.656	11208.038	27°28'20.84N	82°45'43.67W



NOTES:
1. REFER TO SURVEY NO. 16-171.
2. SEE SHEET NO. 1 FOR SURVEY NOTES.

F

E

D

C

B

A

10 9 8 7 6 5 4 3 2 1



US Army Corps
of Engineers
Jacksonville District

SAFETY ON THIS JOB
DEPENDS ON YOU

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

Check by:	GMR
Designed by:	DMV
Drawn by:	WRM
File No.:	16-171-A-0001.DGN
Issue:	
Scale:	AS SHOWN
Date:	SEP 2016

16-171-A-0001.DGN
MANATEE HARBOR-CHIMCOF.DGN
MANATEE HARBOR-CHIMCOF.DGN
16-171-A-0001.DGN
16-171-A-0001.DGN
16-171-A-0001.DGN

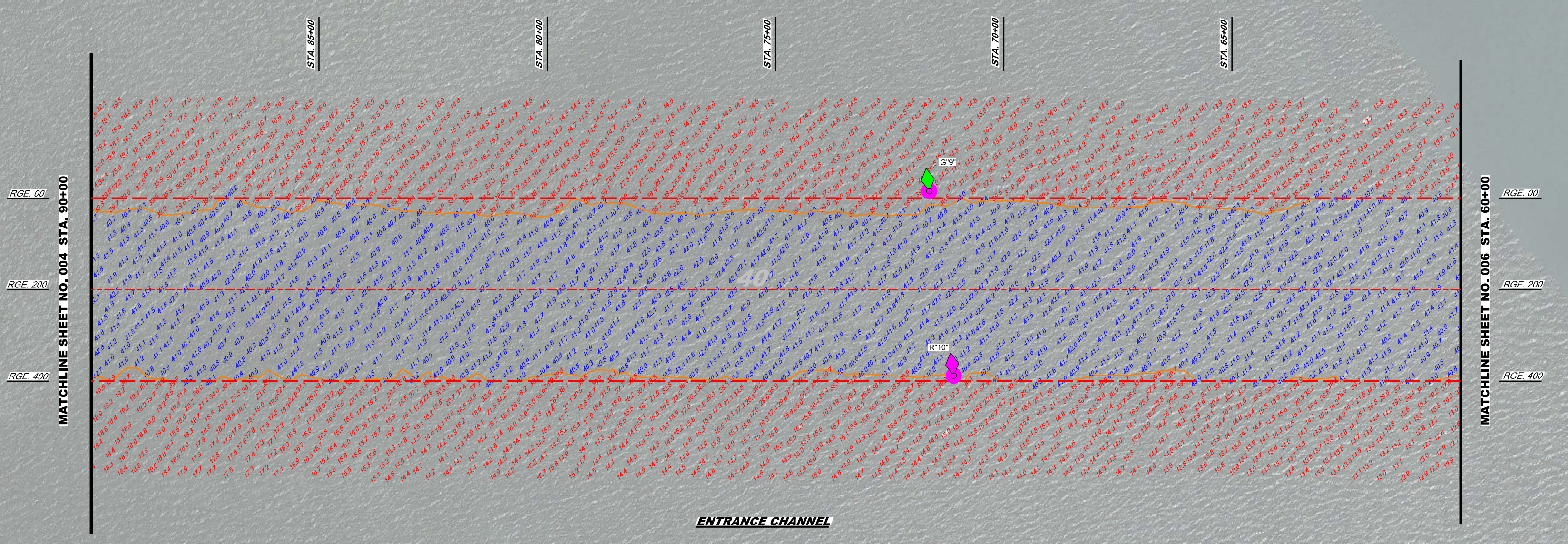
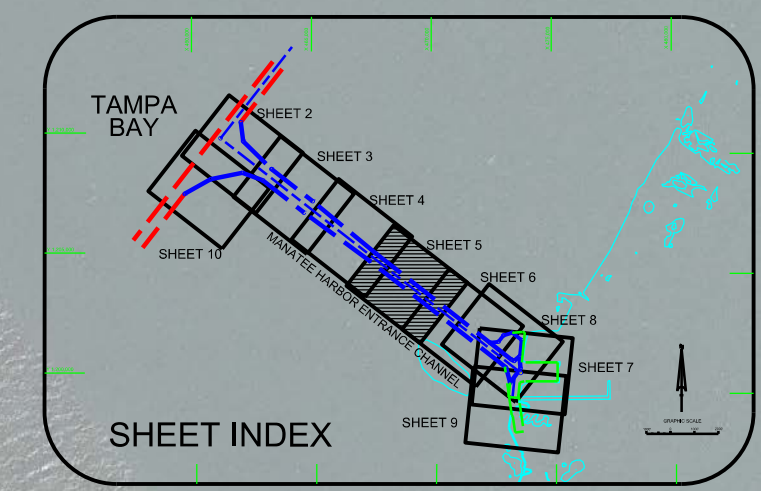
MANATEE HARBOR
MANATEE COUNTY, FLORIDA
EXAMINATION SURVEY FY16
40-FOOT PROJECT
PLAN
STA. 60+00 THRU STA. 90+00 ENTRANCE CHANNEL

Scale: AS SHOWN

Drawing No.

5

SHEET 5 OF 10



AIDS TO NAVIGATION	PLANE COORDINATES		LATITUDE	LONGITUDE
	X	Y		
N BUOY (10216)	488,935	11203,660	27°43'37.92N	82°43'54.20W
L BUOY (10216)	488,182	11203,816	27°43'34.44N	82°43'32.05W



- NOTES:
1. REFER TO SURVEY NO. 16-171.
 2. SEE SHEET NO. 1 FOR SURVEY NOTES.



US Army Corps
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Jacksonville District

SAFETY ON THIS JOB
DEPENDS ON YOU

Zone	Symbol	Dist.
N	▲	N
ABCD		ABCD
1		1
2		2
3		3
4		4
5		5
6		6
7		7
8		8
9		9
10		10

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

Checked by: GHR
Designed by: D.M.W.
Drawn by: WRM
File No.: 16-171-0000-000
Date: SEP 2016

16-171-CBS-BRDLDGN
MANATEE HARBOR CANAL PROJECT
16-171-A-SOUND-TBLDGN
16-171-A-ENTRANCE CHANNEL
16-171-A-NAV-DGN
Reference files:
16-171-A-HARBOR-DGN
File name:

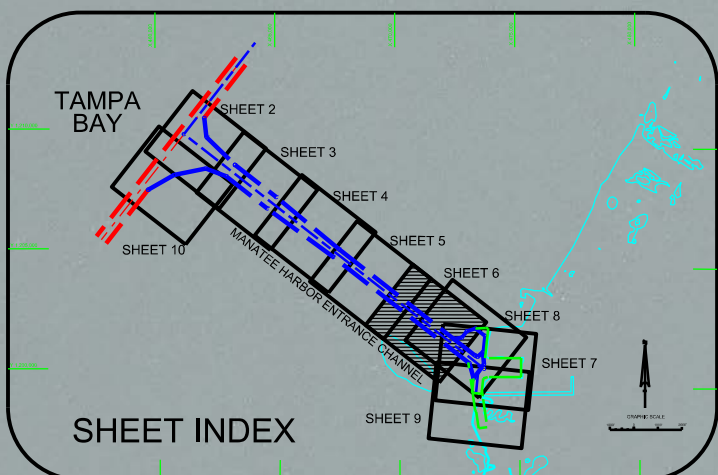
MANATEE HARBOR
MANATEE COUNTY, FLORIDA
**EXAMINATION SURVEY FY16
40-FOOT PROJECT**
**STA. 30+00 THRU STA. 60+00 ENTRANCE CHANNEL
PLAN**

Scale: AS SHOWN

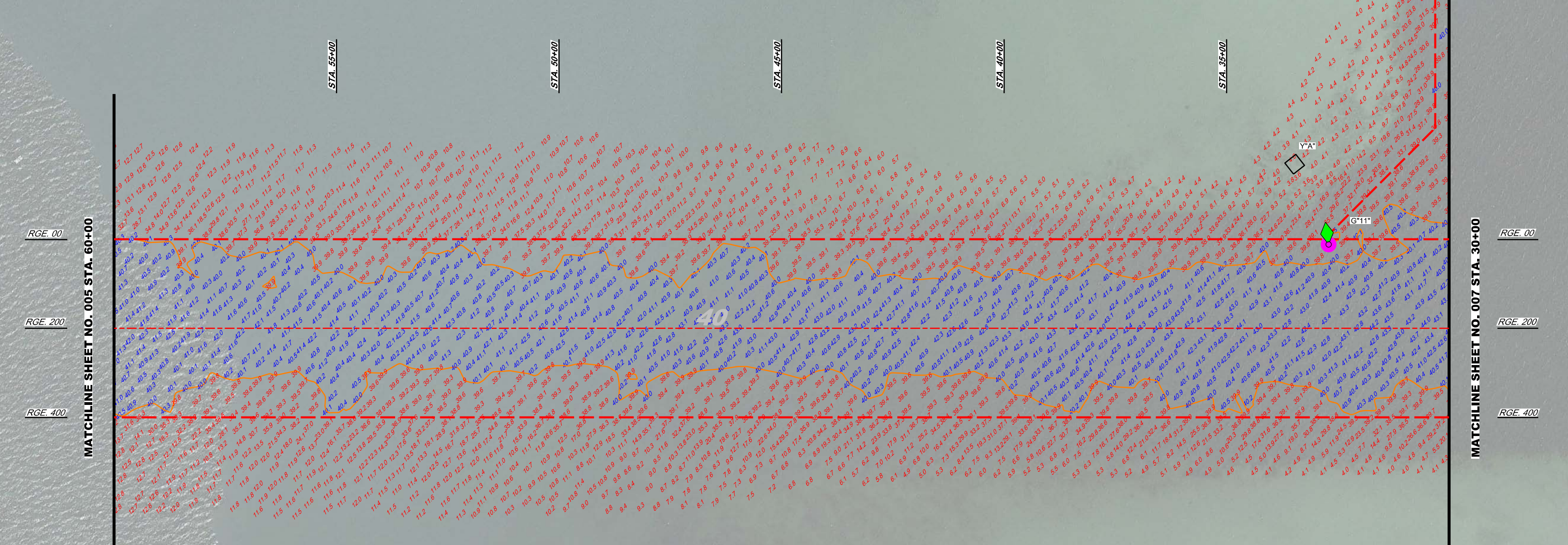
Drawing no.

6

SHEET 6 OF 10



SHEET INDEX

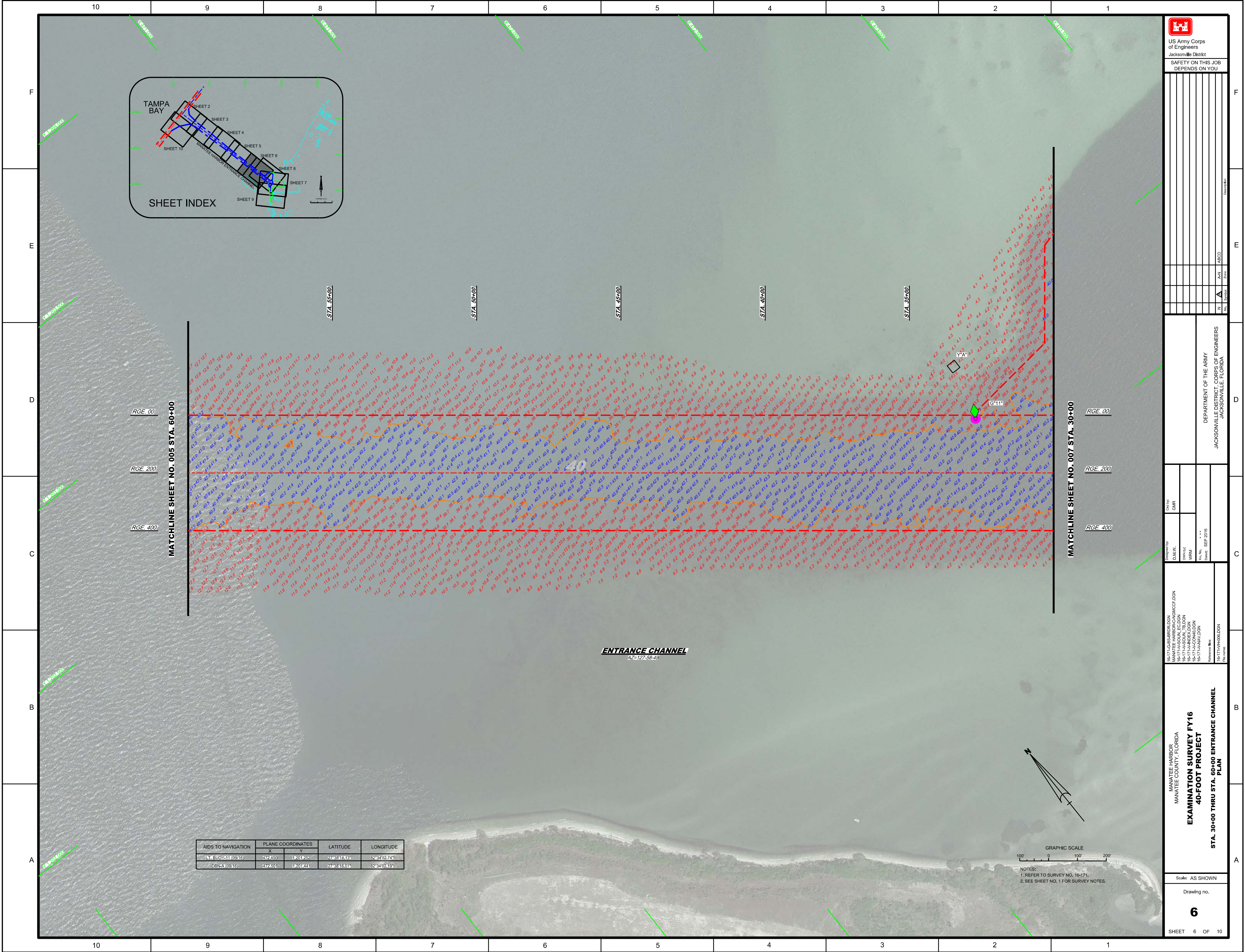


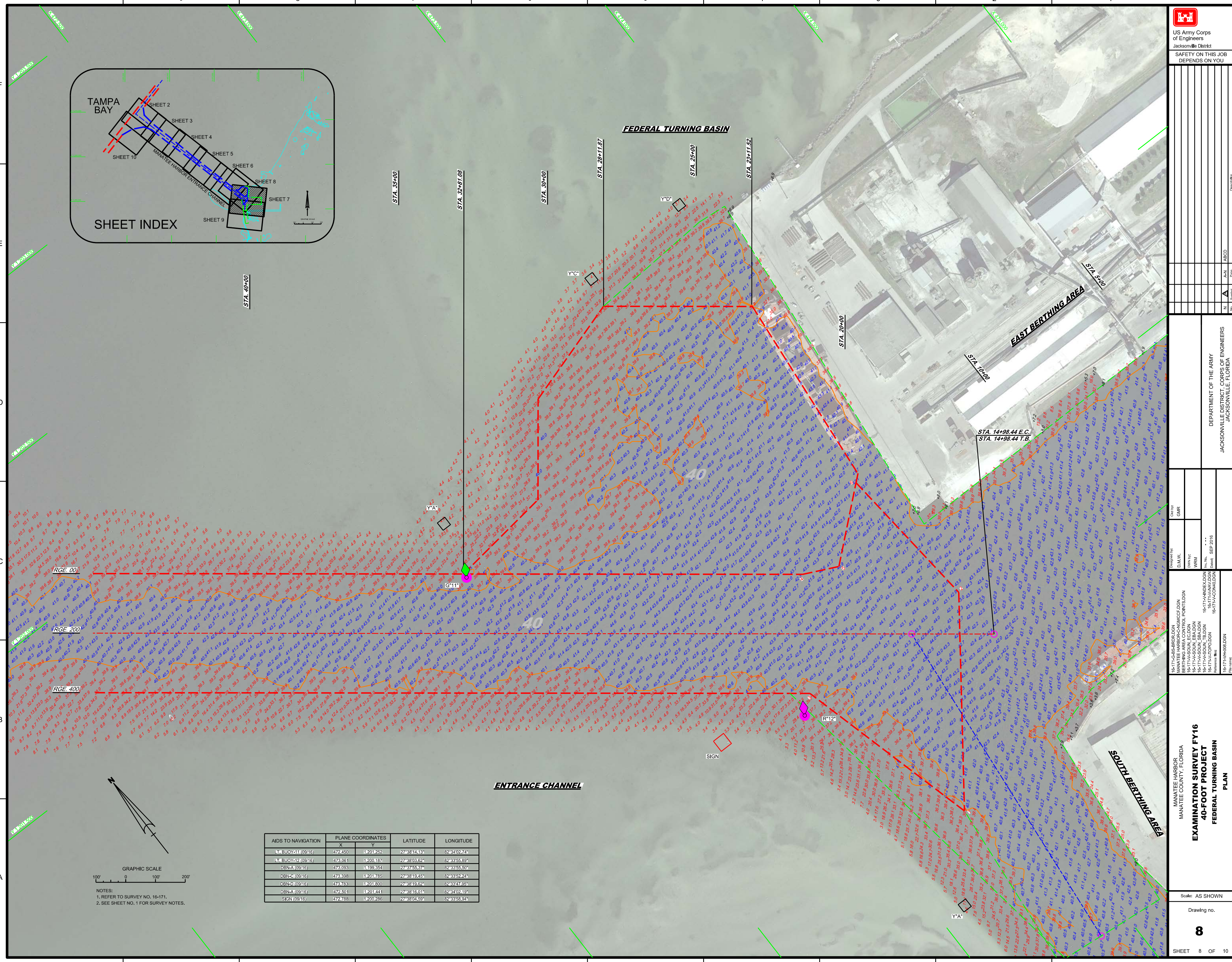
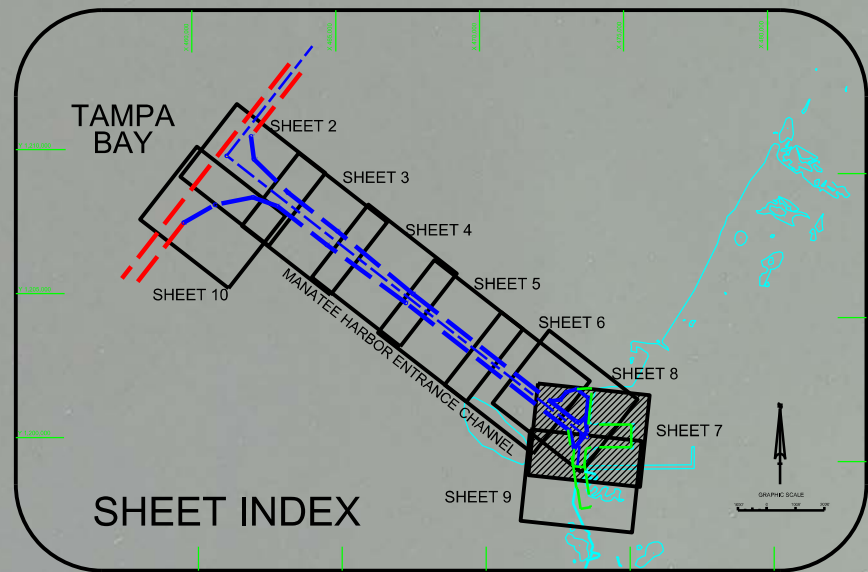
ENTRANCE CHANNEL
AZ=127-58-49

AIDS TO NAVIGATION	PLANE COORDINATES		LATITUDE	LONGITUDE
	X	Y		
LT BUOY#11 (09416)	472450	1261262	27°58'14.33"	82°34'02.74"
DLTA (0916)	472531	1261441	27°58'16.01"	82°34'02.19"



NOTES:
1. REFER TO SURVEY NO. 16-171.
2. SEE SHEET NO. 1 FOR SURVEY NOTES.





AIDS TO NAVIGATION	PLANE COORDINATES		LATITUDE	LONGITUDE
	X	Y		
LT- BUOY 11 (0916)	472450	1201252	27°38'14.13"	82°40'02.74"
LT- BUOY 42 (0916)	473061	1200487	27°38'03.63"	82°43'55.69"
DBN-A (0916)	473093	1199354	27°37'55.97"	82°43'55.50"
DBN-C (0916)	473338	1201765	27°38'16.45"	82°43'58.24"
DBN-D (0916)	473763	1201800	27°38'19.62"	82°43'47.66"
DBN-E (0916)	472551	1201441	27°38'16.01"	82°43'02.19"
SIGN (0916)	472783	1200286	27°38'04.69"	82°43'58.64"

GRAPHIC SCALE
 100' 0 100' 200'
 NOTES:
 1. REFER TO SURVEY NO. 16-171.
 2. SEE SHEET NO. 1 FOR SURVEY NOTES.

DESIGNED BY: DMW	CHECKED BY: GHR
PROJECT MANAGER: WRM	DRAWN BY: [blank]
DATE: SEP 2016	SCALE: AS SHOWN
DEPARTMENT OF THE ARMY JACKSONVILLE DISTRICT, CORPS OF ENGINEERS JACKSONVILLE, FLORIDA	
EXAMINATION SURVEY FY16 40-FOOT PROJECT FEDERAL TURNING BASIN PLAN	
Drawing no. 8 SHEET 8 OF 10	

