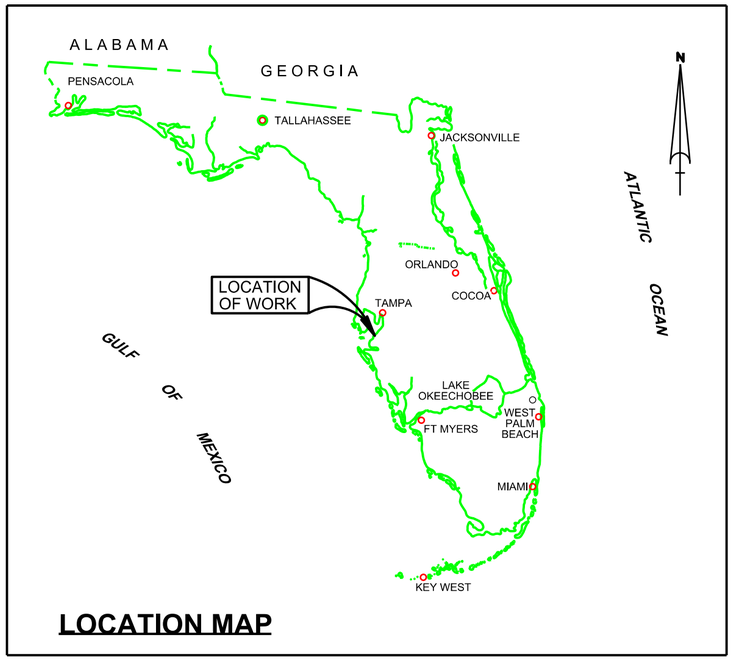
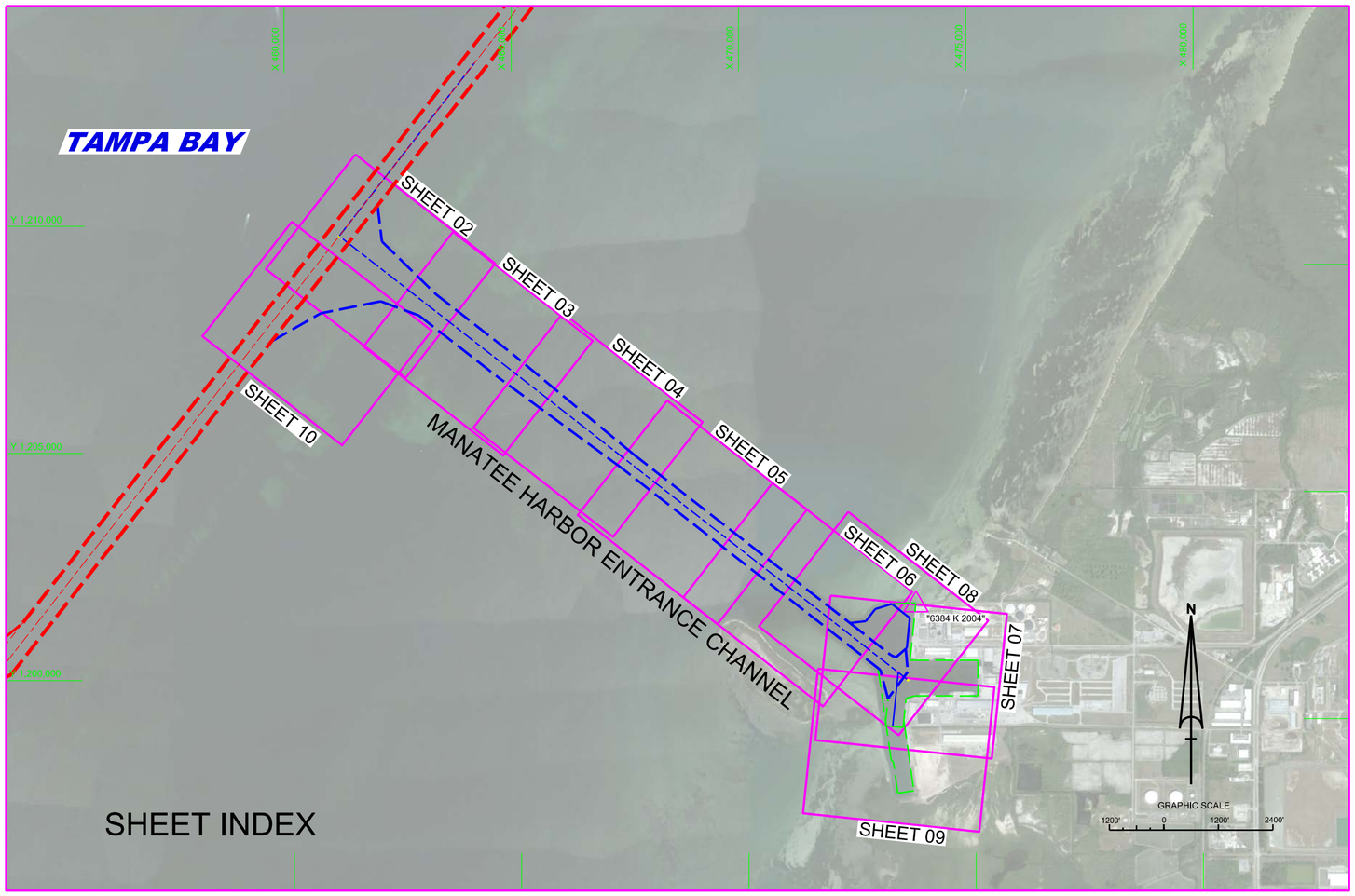
MANATEE HARBOR (TAMPA HARBOR ZONE 10) MANATEE COUNTY, FLORIDA EXAMINATION SURVEY FY19 40-FOOT PROJECT



LOCATION MAP



SURVEY NOTES

1. REFER TO SURVEY NO. 19-098.
2. ALL ELEVATIONS ARE BELOW THE CHART DATUM UNLESS PRECEDED BY A (+) SIGN.
3. 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).
4. 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 GAUGE SITE SPECIFIED BELOW:

   NOAA TIDAL STATION 872-6384, PORT MANATEE, TAMPA BAY, FL
5. 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".
6. ALL STATIONING REFERS TO THE CENTERLINE OF THE CHANNEL.
7. 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 "872 6384 C" (PID: AG7340)
8. VERTICAL MEASUREMENTS WERE MADE USING AN EDGETECH 6205 BATHYMETRY AND SIDE-SCAN SYSTEM AS THE PRIMARY SOUNDER AND A ROSS MODEL 835 SMARTSOUNDER SINGLE-BEAM SYSTEM OPERATING AT 28 AND 200 KHZ FOR SINGLE-BEAM CHECK LINES. ALL SOUNDINGS SHOWN ARE IN HIGH FREQUENCY.

VESSEL	DATE OF SURVEY	CUT
R. WITMER	29 JAN 2019	PORT MANATEE
R. WITMER	01 FEB 2019	PORT MANATEE

9. AIDS TO NAVIGATION WERE LOCATED DURING THIS SURVEY.
10. THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF 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.
11. 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 2013.

LEGEND
MONUMENT
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

No.	Symbol	Zone	Description
N	△	A-N	ABCD

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

Designed by: D.M.W.
Drawn by: WRM
Cad by: GMR
Rev. No. - - -
Date: FEB 2019

Reference files: 19-098-C-HB-REPORT.DGN, MANATEE-HARBOR-CNGMCCF.DGN, TAMPA HARBOR-CNGMCCF.DGN, BERTHING AREA CONTROL POINTS.DGN

Title name: 19-098-VH-001.DGN

MANATEE HARBOR
MANATEE COUNTY, FLORIDA

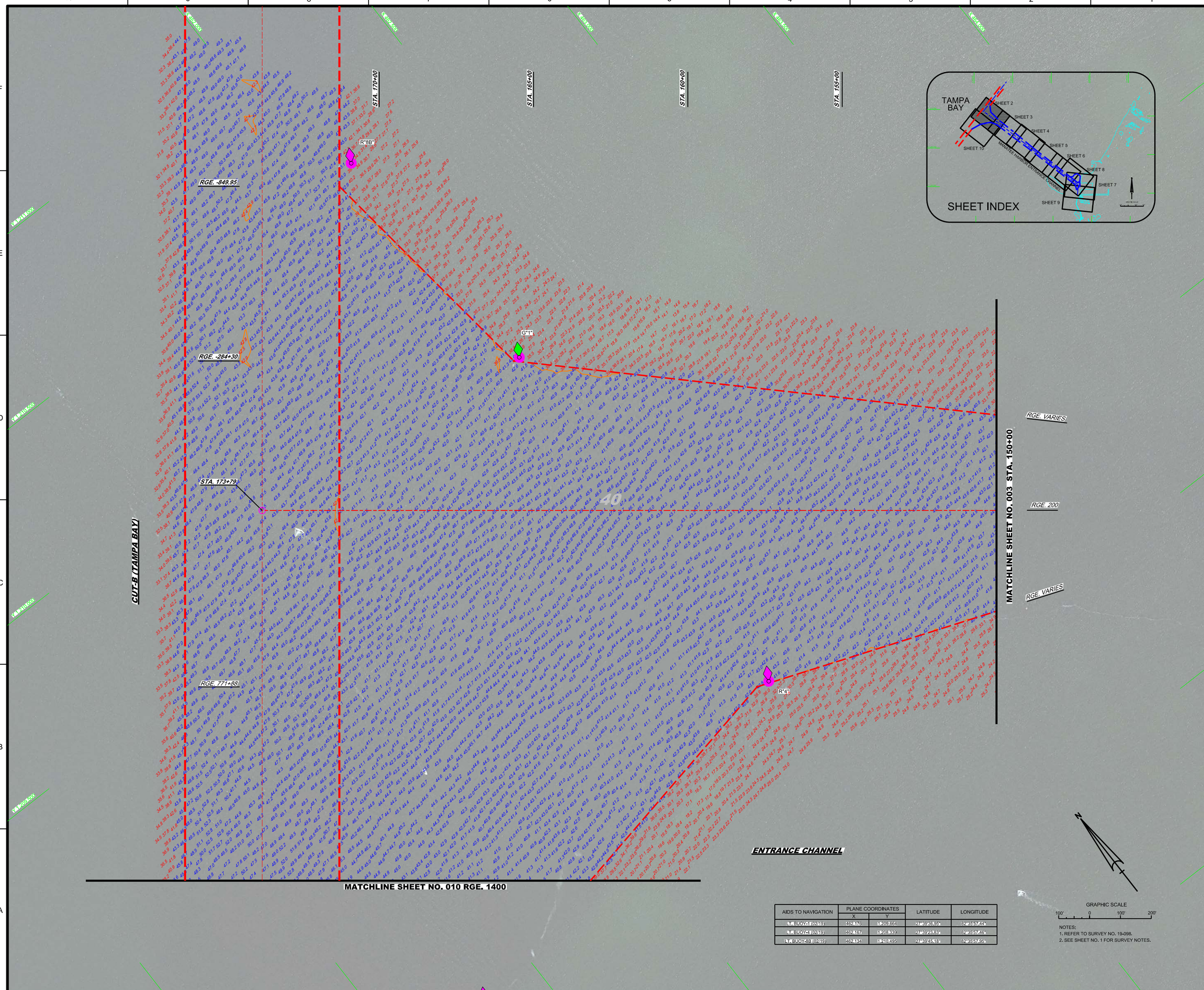
HYDROGRAPHIC EXAMINATION SURVEY FY19
40-FOOT PROJECT
INDEX, LOCATION AND VICINITY MAP

Scale: AS SHOWN

Drawing no.

1

SHEET 01 OF 10



AIDS TO NAVIGATION	PLANE COORDINATES		LATITUDE	LONGITUDE
	X	Y		
LT. BUOY-1 (02/19)	462,476	1,209,664	27°39'38.95"	82°35'57.44"
LT. BUOY-4 (02/19)	462,167	1,208,339	27°39'23.93"	82°35'57.40"
LT. BUOY-8B (02/19)	462,184	1,210,495	27°39'45.18"	82°35'57.95"

GRAPHIC SCALE

100' 0 100' 200'

NOTES:
1. REFER TO SURVEY NO. 19-098.
2. SEE SHEET NO. 1 FOR SURVEY NOTES.

US Army Corps of Engineers
Jacksonville District

SAFETY ON THIS JOB DEPENDS ON YOU

No.	Symbol	Zone	Description
N		AAN	ABCD

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

Designed by: D.M.W.
DWN by: VRM
Cat by: GMR
Rev. No. ---
Date: FEB 2019

19-098-C-DE-INTA.DGN
MANATEE HARBOR-C-NGMCCF.DGN
TAMPA HARBOR-C-NGMCCF.DGN
19-098-A-SOUN_EC.DGN
19-098-A-VUNDEX.DGN
19-098-V-INDEX.DGN
19-098-V-C-DGN40.DGN
19-098-A-C-DGN43.DGN
Reference files:
19-098-VH-002.DGN
(Attached)

MANATEE HARBOR
MANATEE COUNTY, FLORIDA

HYDROGRAPHIC EXAMINATION SURVEY FY19
40-FOOT PROJECT

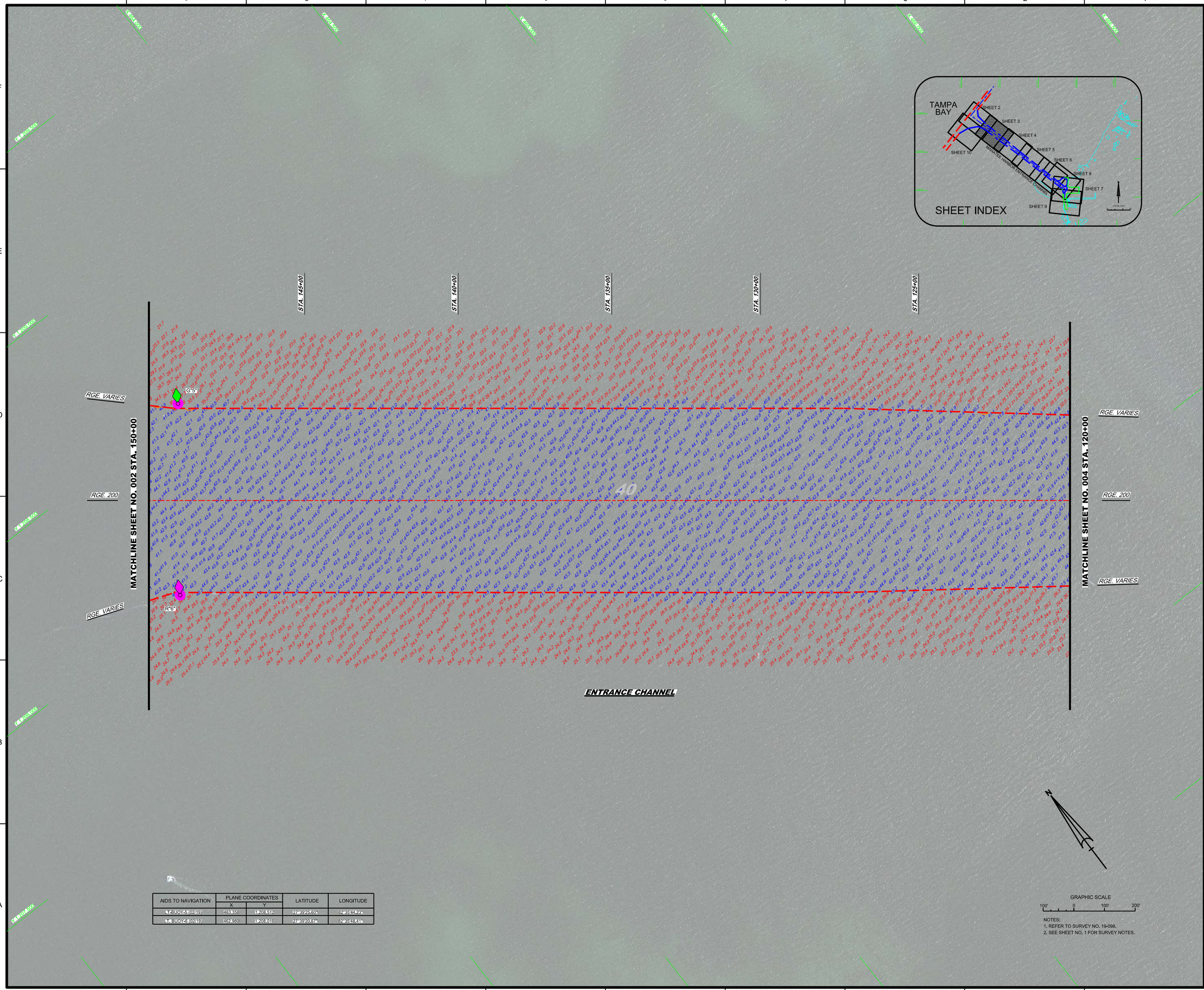
STA. 150+00 THRU STA. 173+79 ENTRANCE CHANNEL PLAN

Scale: AS SHOWN

Drawing no.

2

SHEET 2 OF 10



AIDS TO NAVIGATION	PLANE COORDINATES		LATITUDE	LONGITUDE
	X	Y		
⊥ BUOY-5 (0219)	463,358	1,208,512	27°39'25.60"	82°35'44.23"
⊥ BUOY-5 (0219)	462,980	1,208,016	27°39'20.57"	82°35'48.41"

NOTES:
1. REFER TO SURVEY NO. 19-098.
2. SEE SHEET NO. 1 FOR SURVEY NOTES.

US Army Corps of Engineers
Jacksonville District

SAFETY ON THIS JOB DEPENDS ON YOU

No.	Symbol	Zone	Description
N		A-N	ABCD

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

Designed by: D.M.W.L.
Drawn by: WRM
Checked by: GMR
Proj. No. - - -
Date: FEB 2019

Reference files:
1-s-025-C-25-REV2.DGN
MANATEE-HARBOR-ALIGN.DGN
19-098-V-SOUN_GCMCCF.DGN
19-098-V-SOUN_EC.DGN
19-098-V-MAV.DGN
19-098-V-TIDE.DGN
19-098-V-RIDEX.DGN

File name: 19-098-VH-003.DGN

MANATEE HARBOR
MANATEE COUNTY, FLORIDA

HYDROGRAPHIC EXAMINATION SURVEY FY19
40-FOOT PROJECT

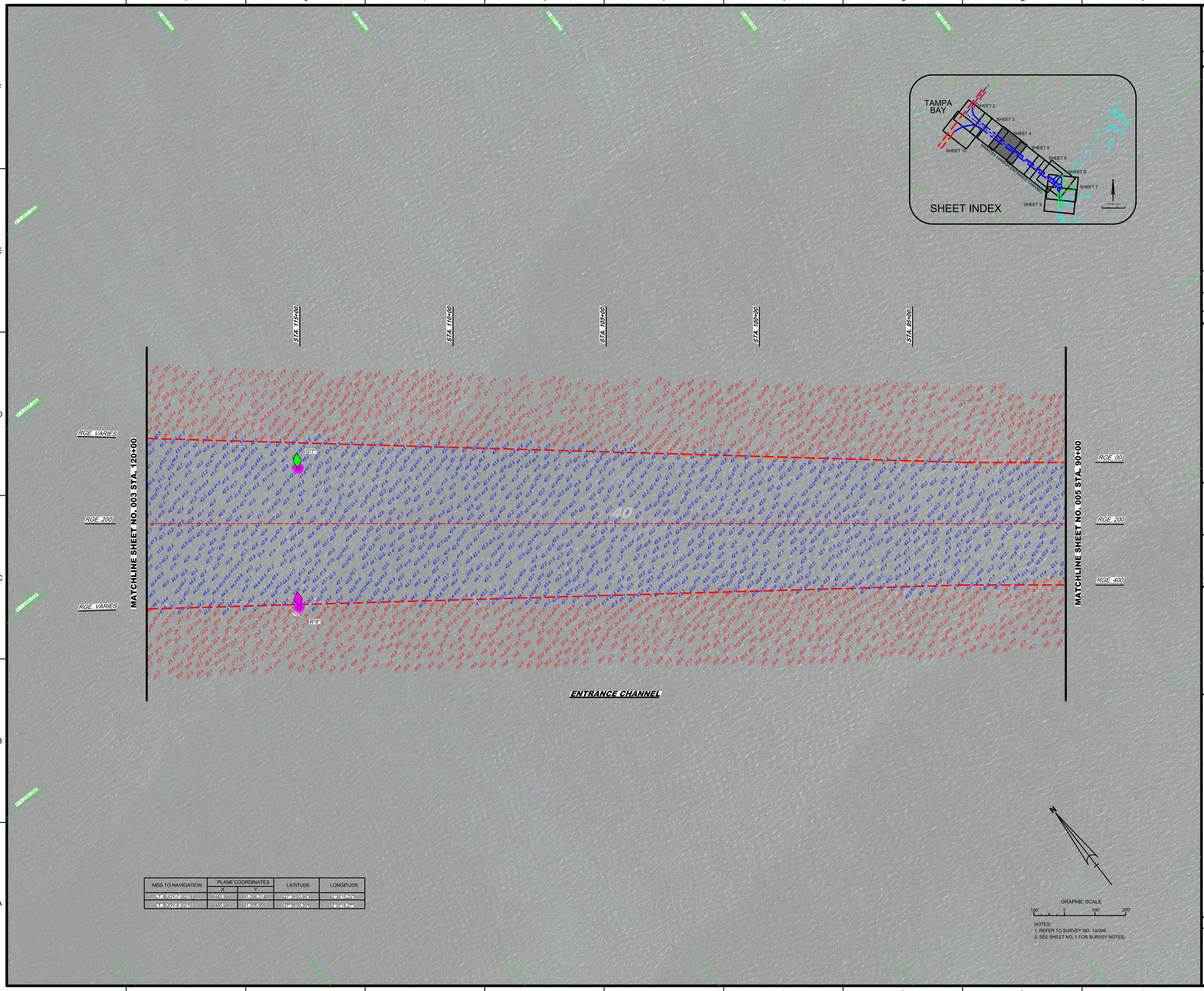
STA. 120+00 THRU STA. 150+00 ENTRANCE CHANNEL PLAN

Scale: AS SHOWN

Drawing no.

3

SHEET 3 OF 10



AIDS TO NAVIGATION	PLANE COORDINATES		LATITUDE	LONGITUDE
	X	Y		
⊔, BUOY-7 (02/19)	465,956	1,206,314	27°39'03.95"	82°35'15.23"
⊔, BUOY-8 (02/19)	465,680	1,205,955	27°39'00.39"	82°35'18.27"

NOTES:
1. REFER TO SURVEY NO. 19-098.
2. SEE SHEET NO. 1 FOR SURVEY NOTES.

US Army Corps of Engineers
Jacksonville District

SAFETY ON THIS JOB DEPENDS ON YOU

No.	Symbol	Zone	ABCD	Description
1		A-N		

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

Designed by: D.M.M.
Drawn by: WRM
Checked by: GMR
Rev. No. - - -
Date: FEB 2019

19-098-S-HB-RNDB.DGN
MANATEE-HARBOR-AONSMCCF.DGN
19-098-V-SOUN_EC.DGN
19-098-V-NAV.DGN
19-098-V-SOUN.DGN
19-098-V-RIDEX.DGN

Reference files:
19-098-VH-004.DGN
File name:

MANATEE HARBOR
MANATEE COUNTY, FLORIDA

HYDROGRAPHIC EXAMINATION SURVEY FY19
40-FOOT PROJECT

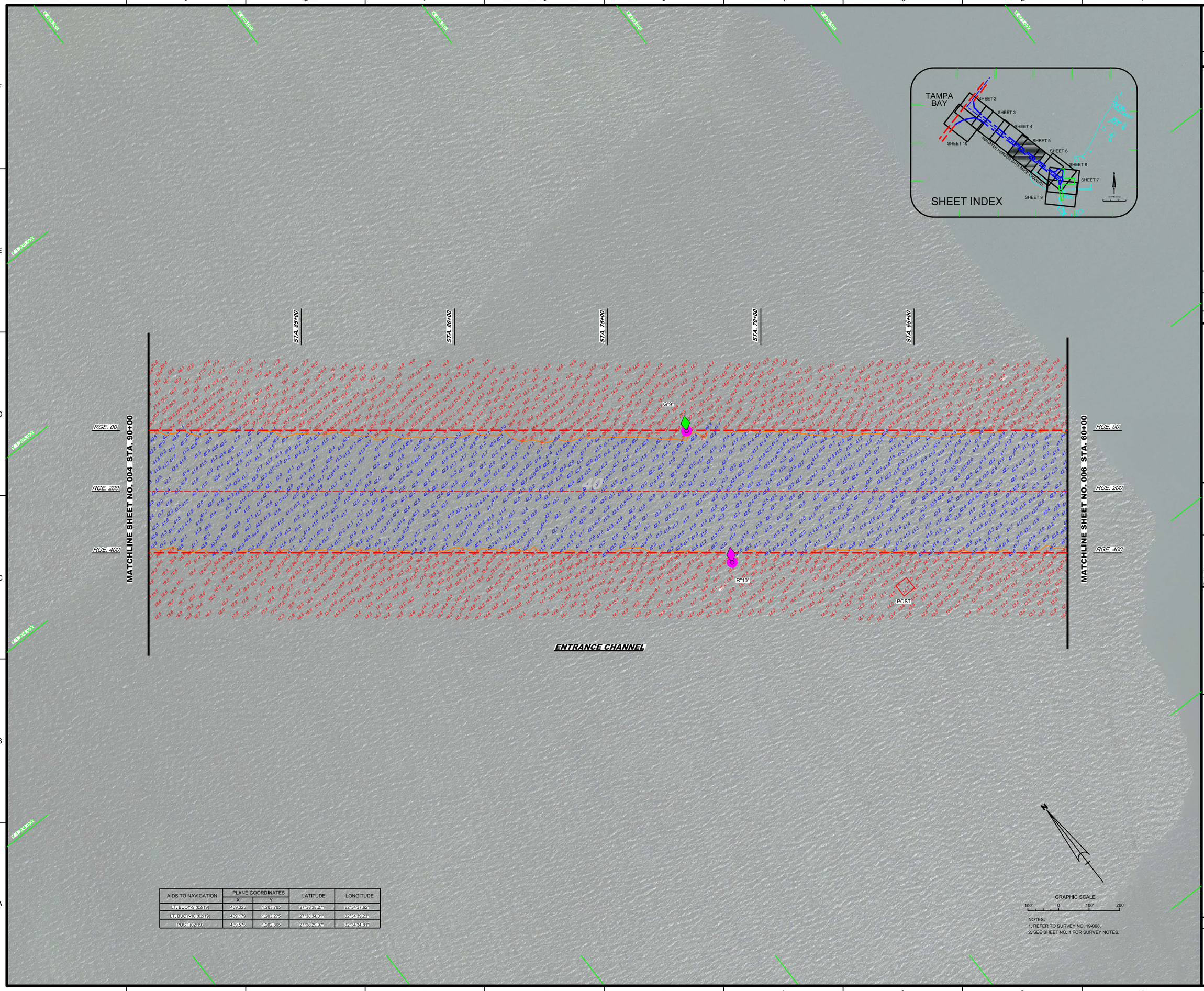
STA. 90+00 THRU STA. 120+00 ENTRANCE CHANNEL PLAN

Scale: AS SHOWN

Drawing no.

4

SHEET 4 OF 10



AIDS TO NAVIGATION	PLANE COORDINATES		LATITUDE	LONGITUDE
	X	Y		
LT. BUOY-9 (0219)	469,325	1,203,705	27°38'38.27"	82°34'37.62"
LT. BUOY-10 (0219)	469,179	1,203,275	27°38'34.01"	82°34'39.23"
POST (0219)	469,575	1,202,865	27°38'29.97"	82°34'34.81"

NOTES:
1. REFER TO SURVEY NO. 19-098.
2. SEE SHEET NO. 1 FOR SURVEY NOTES.

US Army Corps of Engineers
Jacksonville District

SAFETY ON THIS JOB DEPENDS ON YOU

No.	Symbol	Zone	Description
N		A-N	ABCD

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

Designed by: D.M.M.
Drawn by: WRM
Checked by: GMR
Rev. No. - - -
Date: FEB 2019

19-098-S-R-BR25.DGN
MANATEE-HARBOR-CONSMCCF.DGN
19-098-V-SOUN_EC.DGN
19-098-V-NAV.DGN
19-098-V-MOD-TOTAL.DGN
19-098-V-CONWLD.DGN
Reference files:

19-098-VH-005.DGN
File name:

MANATEE HARBOR
MANATEE COUNTY, FLORIDA

HYDROGRAPHIC EXAMINATION SURVEY FY19
40-FOOT PROJECT

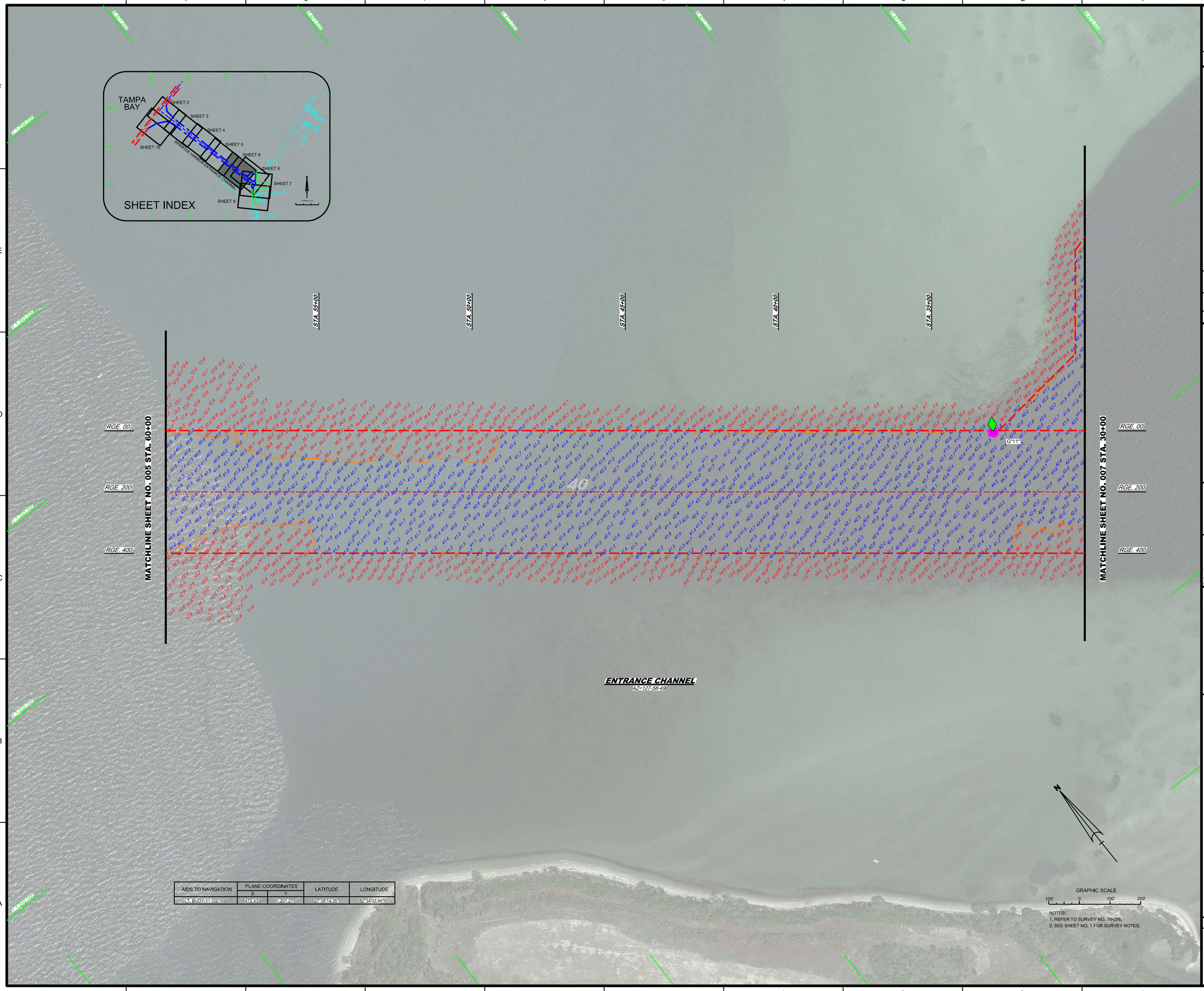
STA. 60+00 THRU STA. 90+00 ENTRANCE CHANNEL PLAN

Scale: AS SHOWN

Drawing no.

5

SHEET 5 OF 10



AIDS TO NAVIGATION	PLANE COORDINATES		LATITUDE	LONGITUDE
	X	Y		
LT. BUOY-11 (02/19)	472,433	1,201,275	27°38'14.35"	82°34'02.94"

NOTES:
1. REFER TO SURVEY NO. 19-098.
2. SEE SHEET NO. 1 FOR SURVEY NOTES.

US Army Corps of Engineers
Jacksonville District

SAFETY ON THIS JOB DEPENDS ON YOU

No.	Symbol	Zone	Description
		A-N	ABCD

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

Designed by: D.M.M.
Drawn by: WRM
Checked by: GMR
Rev. No. ---
Date: FEB 2019

19-098-S-HB-ENTR.DGN
MANATEE-HARBOR-CONSMCCF.DGN
19-098-V-SOUN_EC.DGN
19-098-V-SOUN_NTB.DGN
19-098-V-NAV-TOP.DGN
19-098-V-CONM.DGN
19-098-V-NAV.DGN

Reference files:
19-098-VH-006.DGN
File name:

MANATEE HARBOR
MANATEE COUNTY, FLORIDA

HYDROGRAPHIC EXAMINATION SURVEY FY19
40-FOOT PROJECT

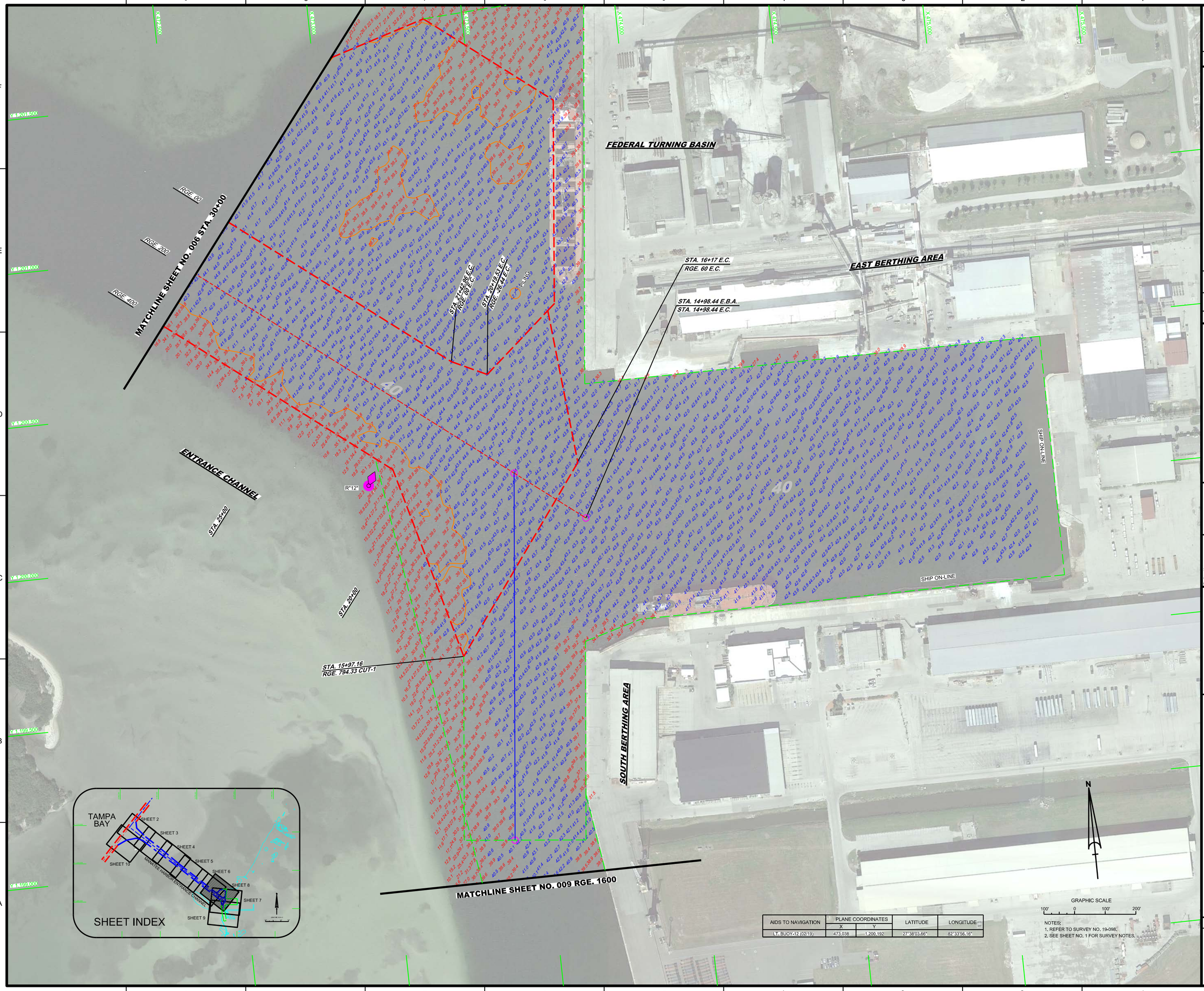
STA. 30+00 THRU STA. 60+00 ENTRANCE CHANNEL PLAN

Scale: AS SHOWN

Drawing no.

6

SHEET 6 OF 10



AIDS TO NAVIGATION	PLANE COORDINATES		LATITUDE	LONGITUDE
	X	Y		
LT. BUOY-12 (02/19)	473,038	1,200,192	27° 38'03.66"	82° 33'56.16"

NOTES:
1. REFER TO SURVEY NO. 19-098.
2. SEE SHEET NO. 1 FOR SURVEY NOTES.

US Army Corps of Engineers
Jacksonville District

SAFETY ON THIS JOB DEPENDS ON YOU

No.	Symbol	Zone	Description
		A-N	ABCD

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

Designed by: D.M.W.
Drawn by: WRM
Checked by: GMR
Proj. No.: - - -
Date: FEB 2019

1:\dgn_C-D-SHEETS\1-GCM\CCF.DGN
1:\MANATEE-HARBOR\1-GCM\CCF.DGN
BERTHING AREA CONTROL POINTS.DGN
19-098A-V-SOUN_TB_SBA_EBA.DGN
19-098A-V-SOUN.DGN
19-098A-V-NAV1.DGN
19-098A-V-INDEX.DGN

Reference files:
19-098A-VH-007.DGN
File name:

MANATEE HARBOR
MANATEE COUNTY, FLORIDA

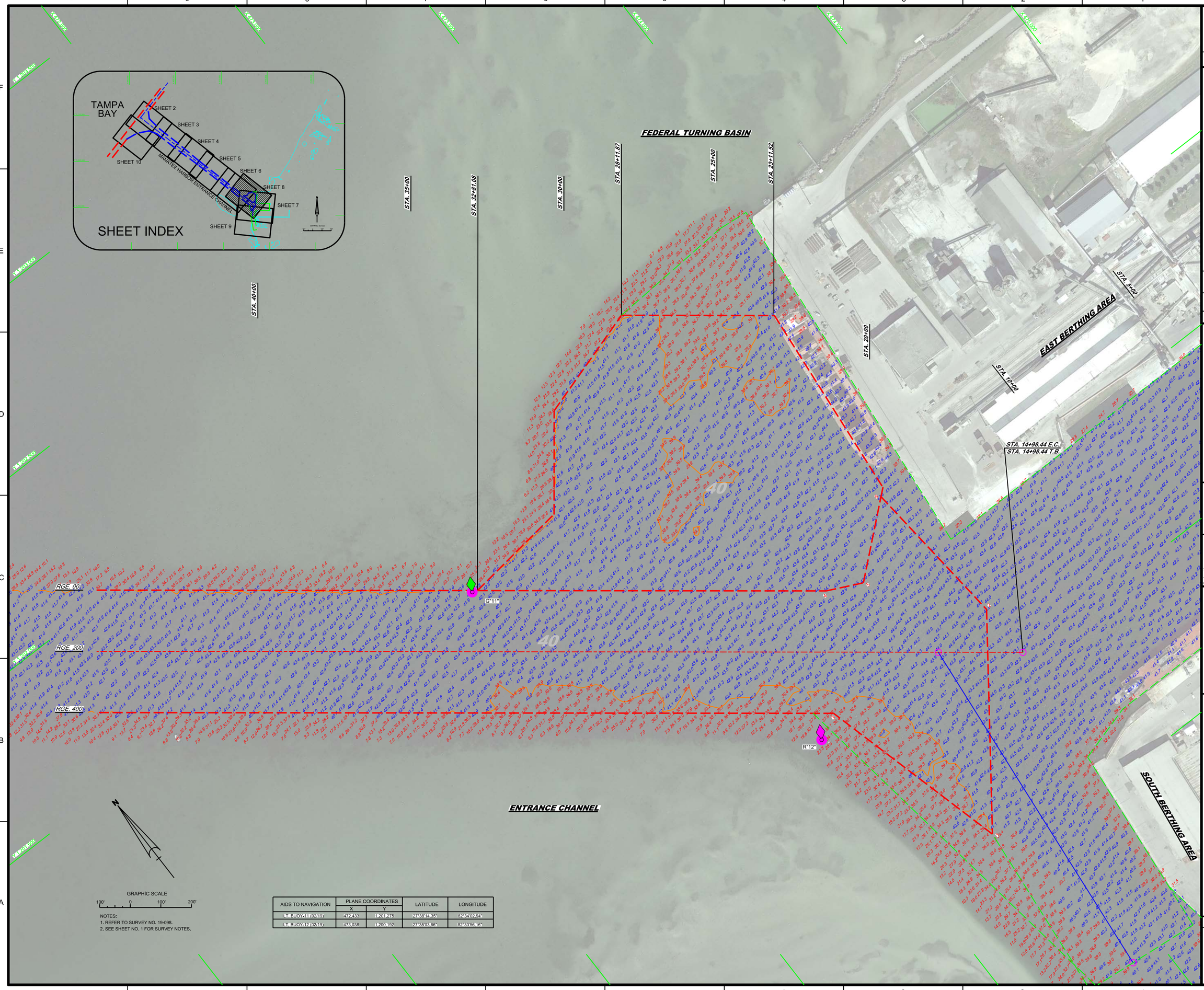
HYDROGRAPHIC EXAMINATION SURVEY FY19
40-FOOT PROJECT
STA. 0+00 TURNING BASIN THRU STA. 30+00 ENTRANCE CHANNEL
PLAN

Scale: AS SHOWN

Drawing no.

7

SHEET 7 OF 10



AIDS TO NAVIGATION	PLANE COORDINATES		LATITUDE	LONGITUDE
	X	Y		
LT. BUOY-11 (02/19)	472,433	1,201,275	27°38'14.35"	82°34'02.94"
LT. BUOY-12 (02/19)	473,038	1,200,192	27°38'03.66"	82°33'56.16"

NOTES:
1. REFER TO SURVEY NO. 19-098.
2. SEE SHEET NO. 1 FOR SURVEY NOTES.

US Army Corps of Engineers
Jacksonville District

SAFETY ON THIS JOB DEPENDS ON YOU

No.	Symbol	Zone	Description
N		A-N	ABCD

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

Designed by: D.M.W.
Drawn by: WRM
Checked: GMR
Proj. No.: - - -
Date: FEB 2019

Filename: 19-098-A-B-C-D-REF-N-A.DGN
19-098-A-E-F-H-BRG-CONV-CGMCCF.DGN
BERTHING AREA CONTROL POINTS.DGN
19-098-A-V-SOUL_TB.DGN
19-098-A-V-SOUL_TC.DGN
19-098-A-V-CONV-ALL.DGN
19-098-A-V-NAV.DGN

Reference files:

Filename: 19-098-VH-H08.DGN

MANATEE HARBOR
MANATEE COUNTY, FLORIDA

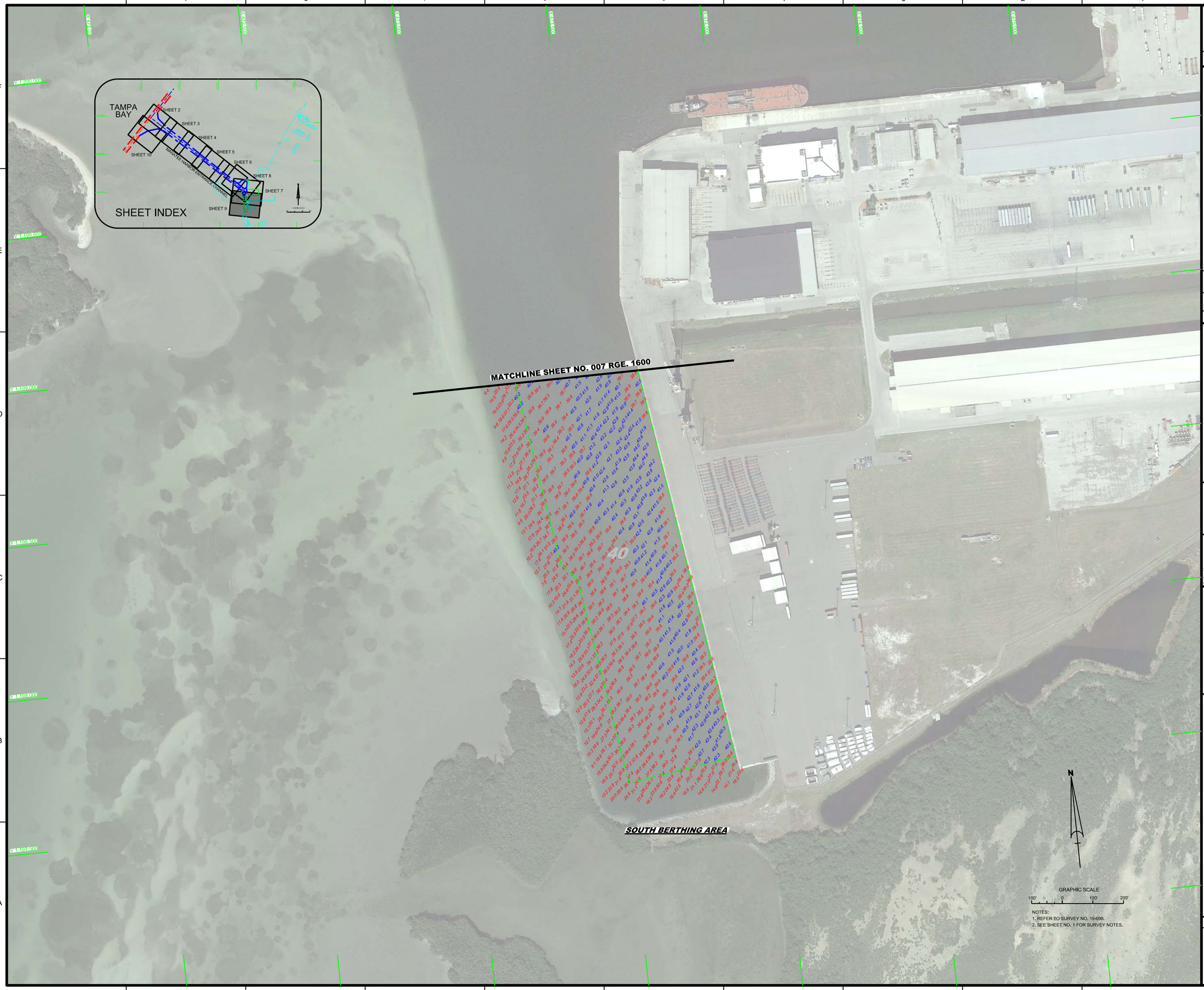
HYDROGRAPHIC EXAMINATION SURVEY FY19
40-FOOT PROJECT
FEDERAL TURNING BASIN
PLAN

Scale: AS SHOWN

Drawing no.

8

SHEET 8 OF 10



NOTES:
1. REFER TO SURVEY NO. 19-098.
2. SEE SHEET NO. 1 FOR SURVEY NOTES.

US Army Corps of Engineers
Jacksonville District

SAFETY ON THIS JOB DEPENDS ON YOU

No.	Symbol	Zone	Description
N		A-N	ABCD

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

Designed by: D.M.W.
Drawn by: WRM
Checked by: GMR
Proj. No.: - - -
Date: FEB 2019

File name: 19-098-A-SB-PROF-D.DGN
MANATEE-HARBOR-CHANNEL-GMCOF.DGN
BERTHING AREA CONTROL POINTS.DGN
19-098A-V-SOUN_TB_SBA_EBA.DGN
19-098A-I-INDEX.DGN

Reference files:

19-098-VH-009.DGN
File name:

MANATEE HARBOR
MANATEE COUNTY, FLORIDA

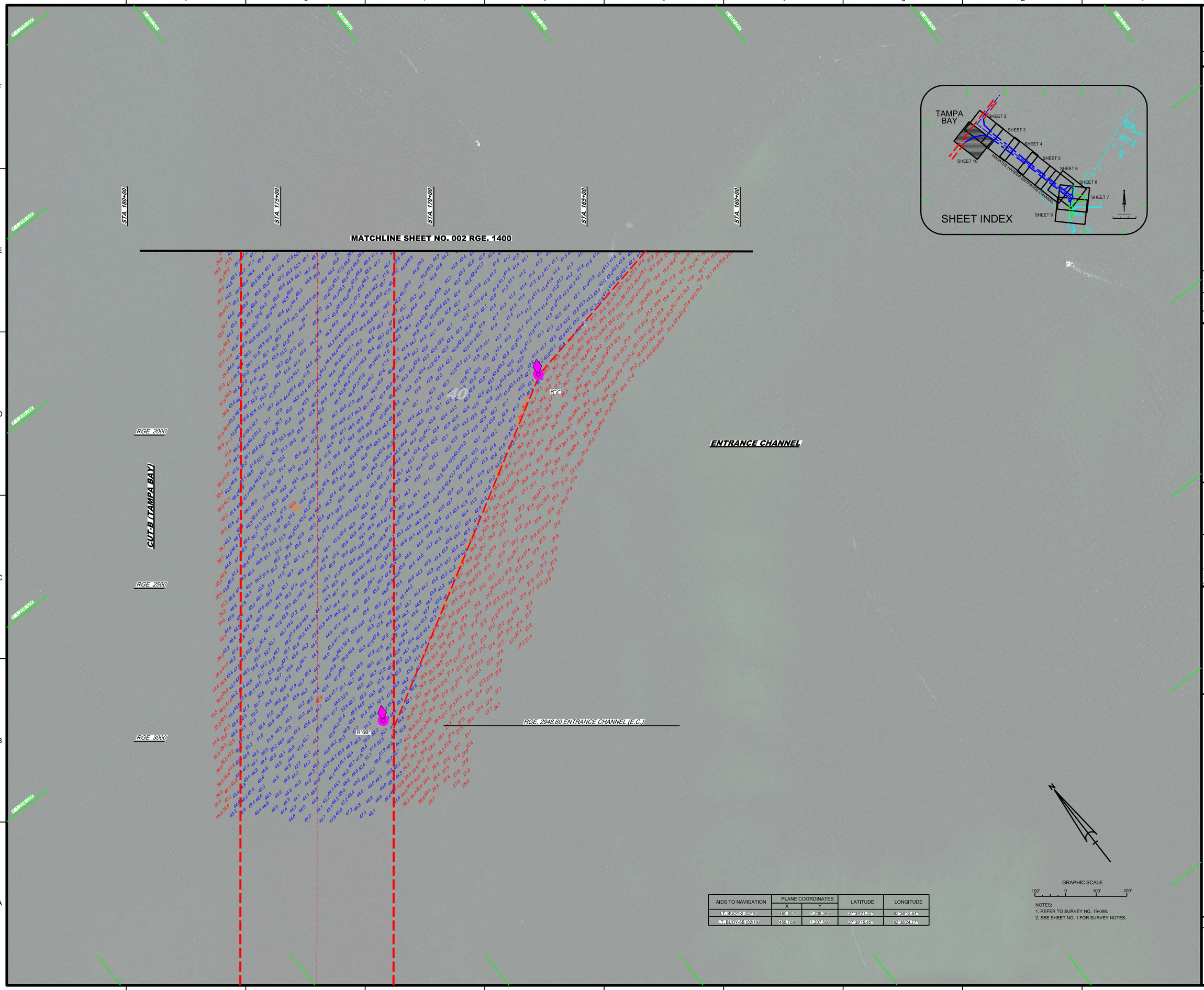
HYDROGRAPHIC EXAMINATION SURVEY FY19
40-FOOT PROJECT
SOUTH BERTHING AREA
PLAN

Scale: AS SHOWN

Drawing no.

9

SHEET 9 OF 10



AIDS TO NAVIGATION	PLANE COORDINATES		LATITUDE	LONGITUDE
	X	Y		
LT. BUOY-2 (02/19)	460,802	1,208,086	27°39'21.25"	82°36'12.64"
LT. BUOY-6B (02/19)	459,708	1,207,506	27°39'15.45"	82°36'24.77"

NOTES:
1. REFER TO SURVEY NO. 19-098.
2. SEE SHEET NO. 1 FOR SURVEY NOTES.

US Army Corps of Engineers
Jacksonville District

SAFETY ON THIS JOB DEPENDS ON YOU

No.	Symbol	Zone	Description
N		A-N	ABCD

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

Designed by: D.M.W.
Drawn by: WRM
Checked by: GMR
Proj. No.: - - -
Date: FEB 2019

Filename: 19-098-A-2-MERGE.DGN
19MANATEE-HARBOR-CONGMCCF.DGN
TAMPA HARBOR-C-NGMCCF.DGN
19-098A-SQUA_ECC.DGN
19-098A-VAR_ECC.DGN
19-098A-VAREC.DGN
19-098A-CON40.DGN
19-098A-CON43.DGN
Reference files:
19-098-VH-010.DGN
File name:

MANATEE HARBOR
MANATEE COUNTY, FLORIDA

HYDROGRAPHIC EXAMINATION SURVEY FY19
40-FOOT PROJECT

ENTRANCE CHANNEL PLAN

Scale: AS SHOWN

Drawing no.

10

SHEET 10 OF 10