TAMPA HARBOR
(ZONE 2)
HILLSBOROUGH / PINELLAS COUNTIES, FLORIDA
EXAMINATION SURVEY FY19
43-FOOT PROJECT

SURVEY ZONE	CUTS
2	MULLET KEY CHANNEL, CUT-A (TB), CUT-B)TB)
3	CUT-C (TB), CUT-D (TB), CUT-E (TB)
4	CUT-F, CUT-G, GADSDEN POINT CUT
5	CUT-J, CUT-J2, CUT-K
6	CUT-A (HB), CUT-C (HB), CUT-D (HB)

LEGEND	
△	MONUMENT
	LIGHTED BEACON
■	GREEN DAYBEACON
▲	RED DAYBEACON
	RED LIGHTED BUOY
	GREEN LIGHTED BUOY
C	CAN BUOY
N	NUN BUOY
	TIDE STAFF
8	PROJECT DEPTH

SURVEY NOTES

1. REFER TO SURVEY NO. 19-087.
2. ELEVATIONS ARE IN FEET AND TENTHS AND REFER TO THE NOAA REPORTED MLLW TIDAL DATUM RELATIVE TO THE 1983-2001 TIDAL EPOCH.
3. TIDAL REDUCTIONS WERE OBTAINED UTILIZING A REAL-TIME KINEMATIC (RTK) GPS AND REFERENCED TO MLLW UTILIZING A HYPACK KINEMATIC TIDE DATUM (KTD) MODEL NAMED "SPC-FL-WEST-2010-12-07.KTD."
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 WEST ZONE OF FLORIDA AND REFERENCED TO NORTH AMERICAN DATUM OF 1983 (NAD83).
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 LOCATIONS:

   REFERENCE BASE LOCATED AT "TH-89 USE" (OPUS PID: AG0988)

   TIDESTAFF LOCATED FROM "872 6364 B " (NGS PID: AG9426)

   REFERENCE BASE LOCATED AT "872 6384 K 2004" (OPUS PID: BBBT27)

   TIDESTAFF LOCATED FROM "872 6364 C" (NGS PID: AG7340)
8. 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 BENCH MARKS ASSOCIATED WITH THE TIDE GAGE SITES SPECIFIED BELOW:

   NOAA TIDAL STATION "872 6364" AND "872 6384" USED FORALL CUTS
9. VERTICAL MEASUREMENTS WERE MADE USING A ROSS MODEL 835C SMART SOUNDER DUAL-FREQUENCY 28/200 KHZ SINGLE-BEAM TRANSDUCER AND A R2 SONIC 2024 MULTI-BEAM SYSTEM. SOUNDINGS SHOWN ARE IN HIGH FREQUENCY.

VESSEL	DATE OF SURVEY	CUT
SB-52	7 MAR - 17 APR 2019	MULLET KEY CUT CUTS A & B

10. AIDS TO NAVIGATION WERE LOCATED DURING THIS SURVEY.
11. 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.
12. 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.

US Army Corps of Engineers
Jacksonville District

SAFETY ON THIS JOB DEPENDS ON YOU

No.	Symbol	Zone

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

Designed by: VRM
Drn by: VRM
Chk by: GMR
Trv. No.:
Date: MAR 2019

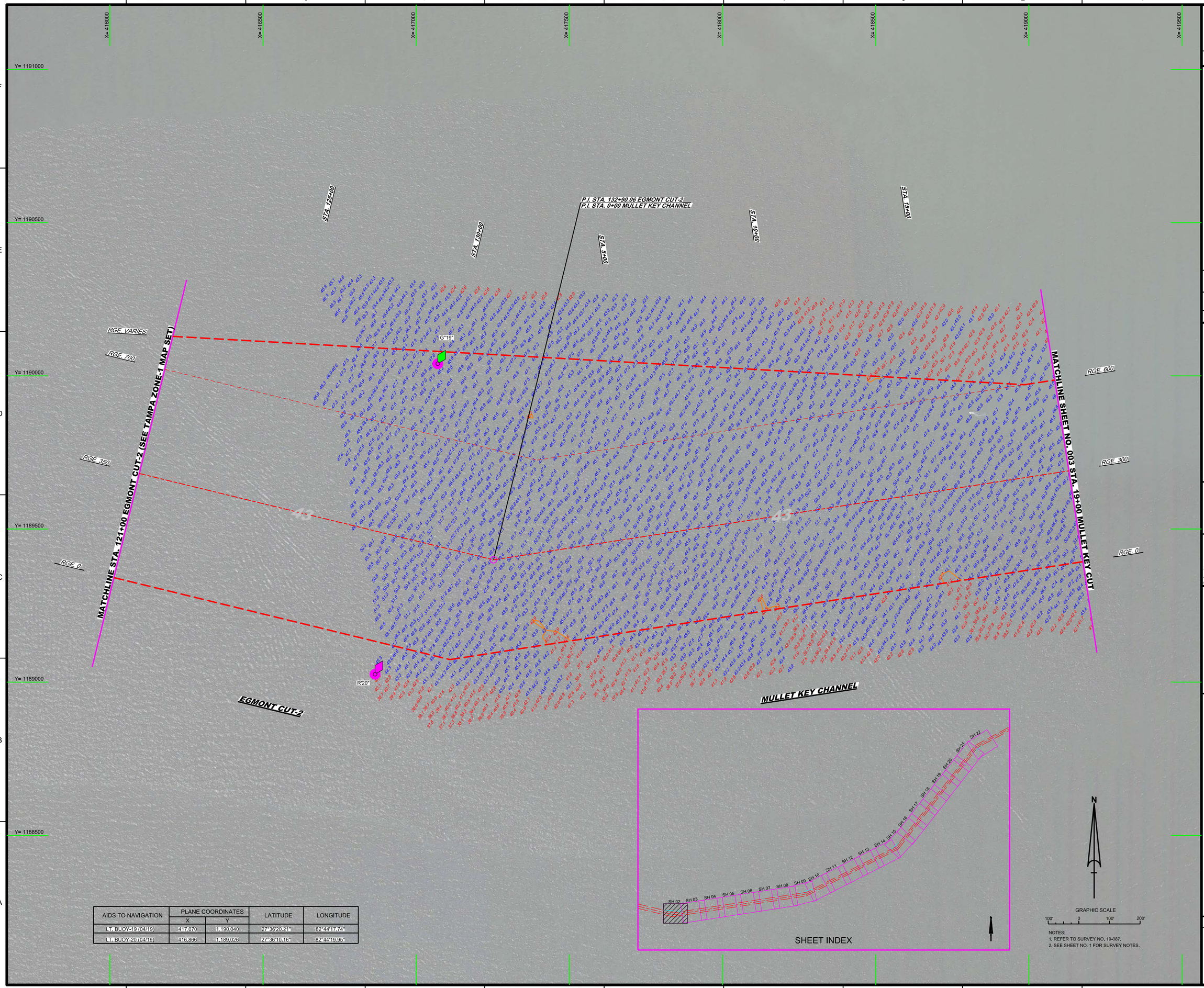
XXXXXXXXXXXXXXXXXX.DGN
XXXXXXXXXXXXXXXXXX.DGN
XXXXXXXXXXXXXXXXXX.DGN
XXXXXXXXXXXXXXXXXX.DGN
XXXXXXXXXXXXXXXXXX.DGN
19-087-A-IND2_ZONE2.DGN
TAMPA HARBOR-CANGMCCF.DGN
19-087-C-BS-BRDR.DGN
Reference files
19-087-VH-001_ZZ.DGN
No warnings

TAMPA HARBOR
HILLSBOROUGH COUNTY, FLORIDA
HYDROGRAPHIC EXAM SURVEY FY19
43-FOOT PROJECT
INDEX, LOCATION AND VICINITY
MAP

Scale: AS SHOWN

Drawing no.
1

SHEET 01 OF 22



AIDS TO NAVIGATION	PLANE COORDINATES		LATITUDE	LONGITUDE
	X	Y		
LT. BUOY-19 (04/19)	417,070	1,190,040	27° 36'20.21"	82° 44'17.74"
LT. BUOY-20 (04/19)	416,866	1,189,026	27° 36'10.16"	82° 44'19.95"

NOTES:
1. REFER TO SURVEY NO. 19-087.
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

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

Designed by: VIRM
DWN by: VIRM
Ckd by: CMR
Rev. No.
Date: MAR 2019

XXXXXXXXXX-XXXXXXX.DGN
XXXXXXXXXX-XXXXXXX.DGN
XXXXXXXXXX-XXXXXXX.DGN
19-087-X-NAV.DGN
19-087-X-SOUN.DGN
19-087-X-SOUN_MKC.DGN
TAMPA HARBOR-C-NGMCF.DGN
19-087-X-SB-BKR.DGN
Reference files:
19-087-VH-002_Z2.DGN
File name:

TAMPA HARBOR
HILLSBOROUGH COUNTY, FLORIDA

HYDROGRAPHIC EXAM SURVEY FY19
43-FOOT PROJECT

STA. 121+00 EGMONT CUT-2 THRU STA. 19+00 MULLET KEY CHANNEL

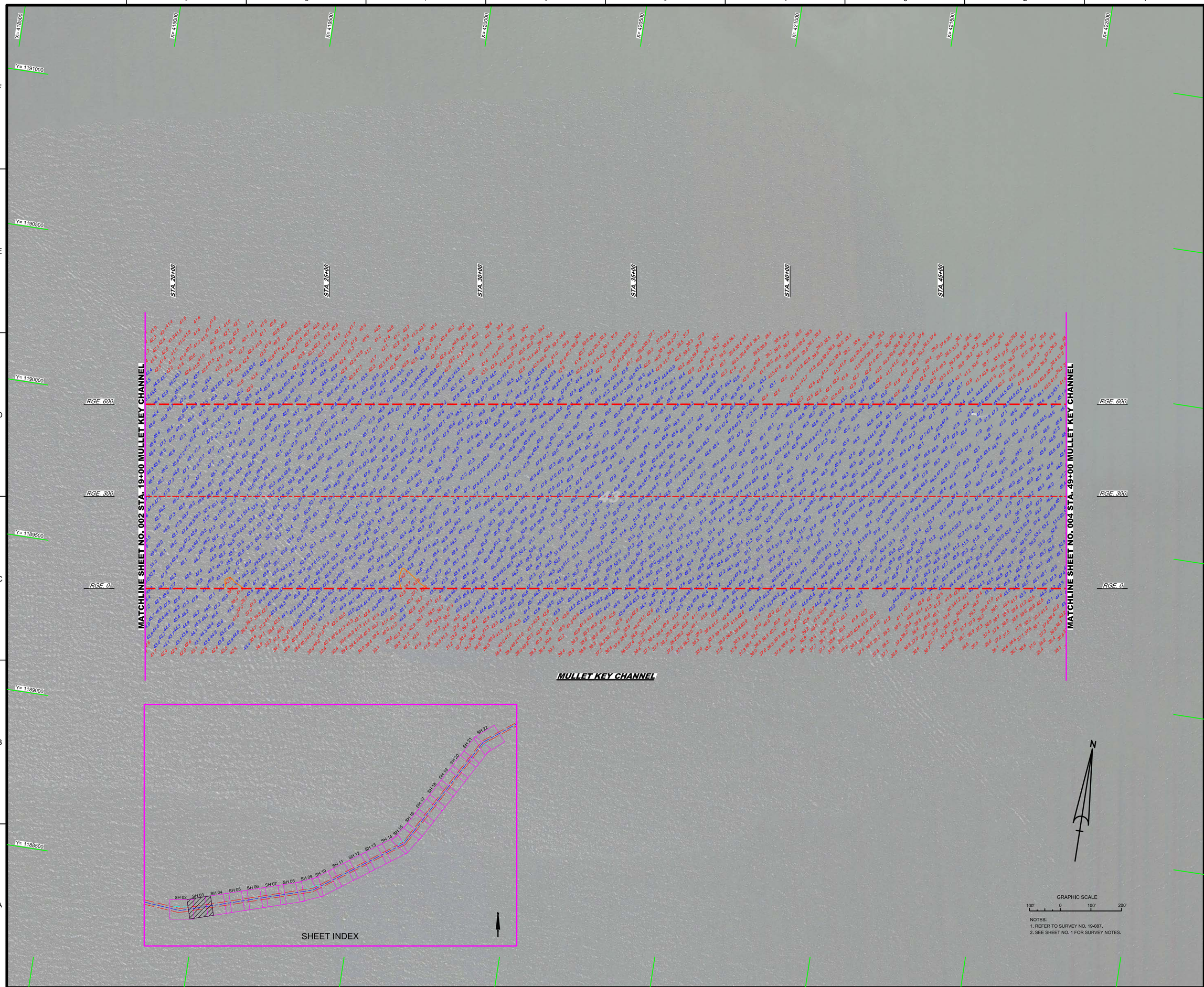
PLAN

Scale: AS SHOWN

Drawing no.

2

SHEET 02 OF 22



NOTES:
1. REFER TO SURVEY NO. 19-087.
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

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

Designed by: VIRM
DWN by: VIRM
Chd by: CMR
Rev. No.
Date: MAR 2019

XXXXXXXXXXXXXXXXX.DGN
XXXXXXXXXXXXXXXXX.DGN
XXXXXXXXXXXXXXXXX.DGN
XXXXXXXXXXXXXXXXX.DGN
XXXXXXXXXXXXXXXXX.DGN
19-087-A-SOUN_MKC.DGN
TAMPA HARBOR-C-NGMCF.DGN
19-087-A-BS-BRDR.DGN
Reference files:
19-087-VH-003_22.DGN
File name:

TAMPA HARBOR
HILLSBOROUGH COUNTY, FLORIDA

HYDROGRAPHIC EXAM SURVEY FY19
43-FOOT PROJECT

STA. 19+00 THRU STA. 49+00 MULLET KEY CHANNEL

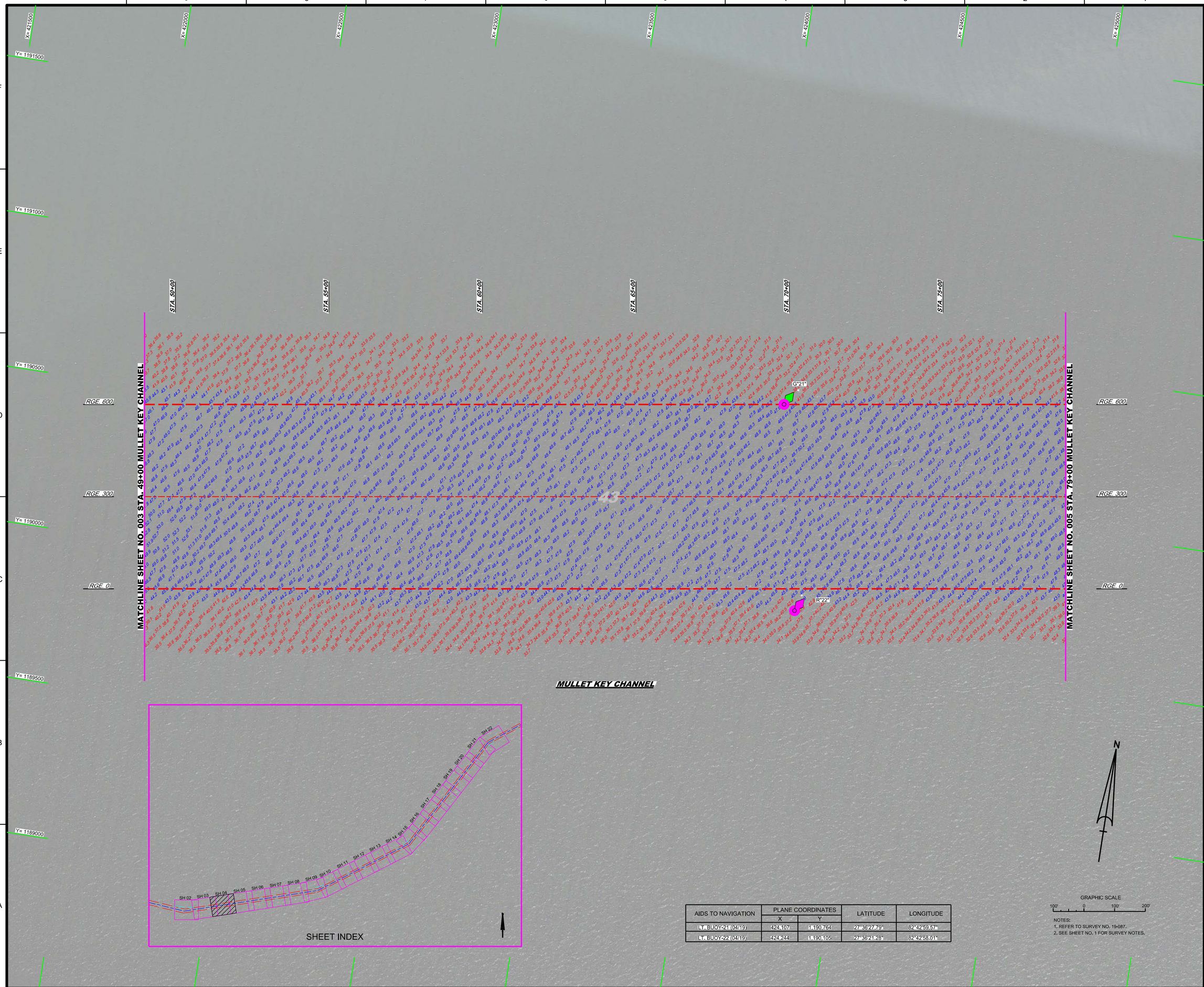
PLAN

Scale: AS SHOWN

Drawing no.

3

SHEET 03 OF 22



AIDS TO NAVIGATION	PLANE COORDINATES		LATITUDE	LONGITUDE
	X	Y		
LT. BUOY-21 (04/19)	424,107	1,190,764	27° 36' 27.79"	82° 42' 59.57"
LT. BUOY-22 (04/19)	424,244	1,190,105	27° 36' 21.28"	82° 42' 58.01"

NOTES:
1. REFER TO SURVEY NO. 19-087.
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

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

Designed by: VIRM
DWN by: VIRM
Ckd by: GMB
Rev. No.
Date: MAR 2019

XXXXXXXXXXXXXXXXX.DGN
XXXXXXXXXXXXXXXXX.DGN
XXXXXXXXXXXXXXXXX.DGN
XXXXXXXXXXXXXXXXX.DGN
XXXXXXXXXXXXXXXXX.DGN
19-087-A-SOUN_MKC.DGN
TAMPA HARBOR-C-NGMCF.DGN
19-087-A-CES-BRDR.DGN
Reference files:
19-087-VH-004_22.DGN
File name:

TAMPA HARBOR
HILLSBOROUGH COUNTY, FLORIDA

HYDROGRAPHIC EXAM SURVEY FY19
43-FOOT PROJECT

STA. 49+00 THRU STA. 79+00 MULLET KEY CHANNEL

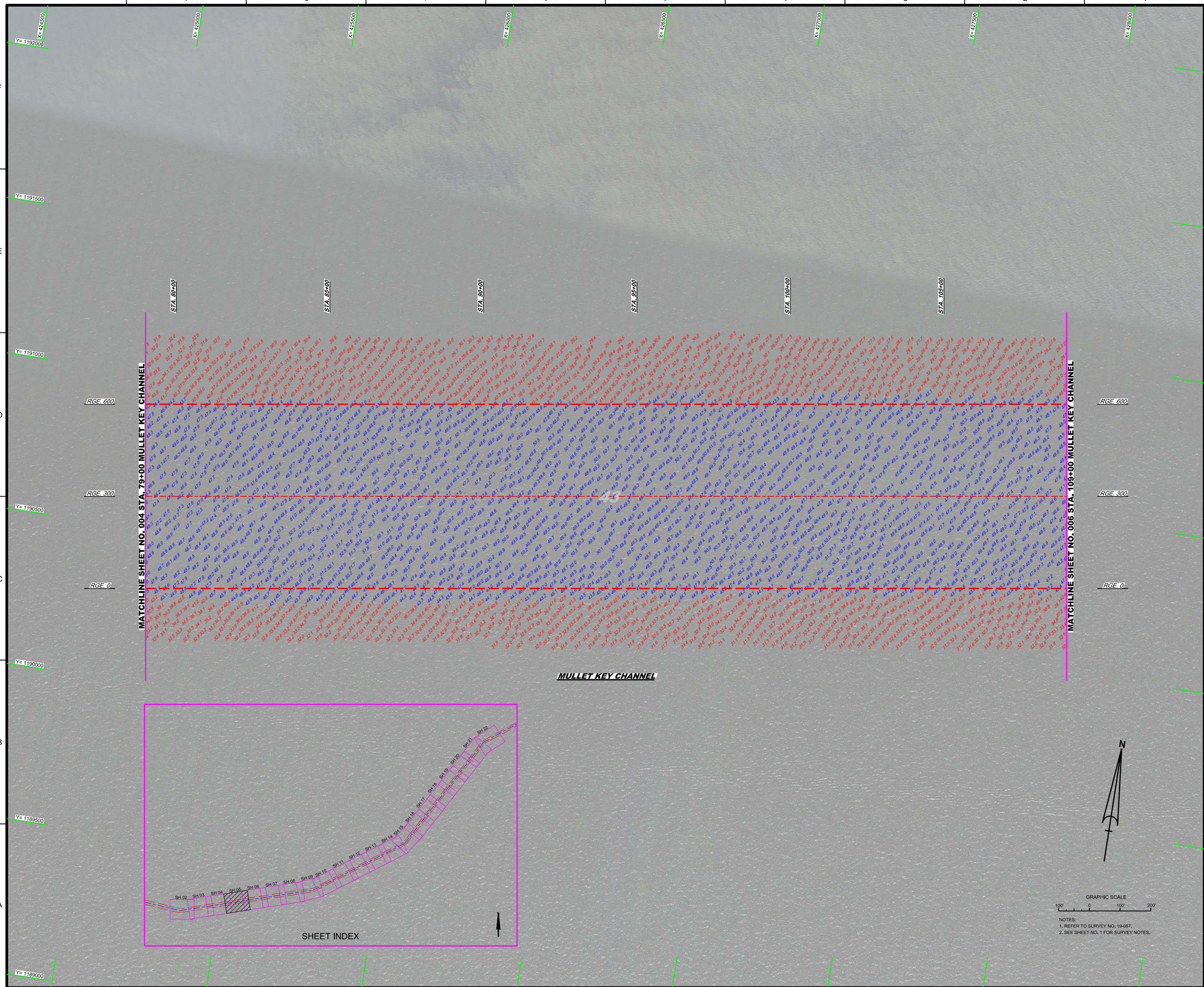
PLAN

Scale: AS SHOWN

Drawing no.

4

SHEET 04 OF 22



NOTES:
1. REFER TO SURVEY NO. 19-087.
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

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

Designed by: VIRM
DWN by: VIRM
CHK by: CMR
Rev. No.
Date: MAR 2019

XXXXXXXXXXXXXXXX.DGN
XXXXXXXXXXXXXXXX.DGN
XXXXXXXXXXXXXXXX.DGN
XXXXXXXXXXXXXXXX.DGN
XXXXXXXXXXXXXXXX.DGN
19-087-A-SOUN_MKC.DGN
TAMPA HARBOR-C-NGMCF.DGN
19-087-A-CBS-BRDR.DGN
Reference files:
19-087-VH-005_Z2.DGN
File name:

TAMPA HARBOR
HILLSBOROUGH COUNTY, FLORIDA

HYDROGRAPHIC EXAM SURVEY FY19
43-FOOT PROJECT

STA. 79+00 THRU STA. 109+00 MULLET KEY CHANNEL

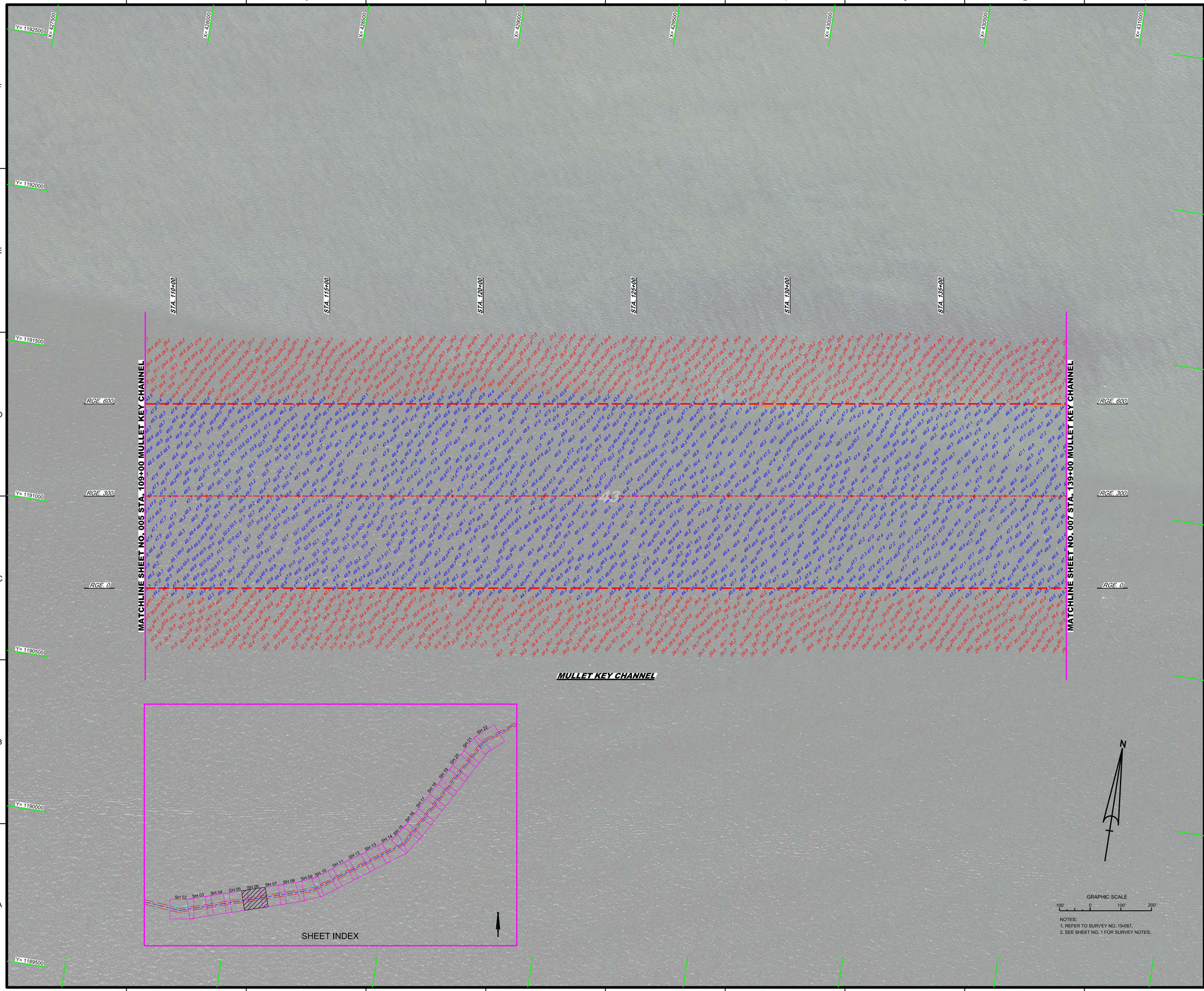
PLAN

Scale: AS SHOWN

Drawing no.

5

SHEET 05 OF 22



NOTES:
1. REFER TO SURVEY NO. 19-087.
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

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

Designed by: VIRM
DWN by: VIRM
Ckd by: GMR
Rev. No.
Date: MAR 2019

XXXXXXXXXXXXXXXX.DGN
XXXXXXXXXXXXXXXX.DGN
XXXXXXXXXXXXXXXX.DGN
XXXXXXXXXXXXXXXX.DGN
19-087-XXXXX.DGN
19-087-A-SUN_MKC.DGN
TAMPA HARBOR-C-NGMCF.DGN
19-087-A-CES-BRDR.DGN
Reference files:
19-087-VH-006_Z2.DGN
File name:

TAMPA HARBOR
HILLSBOROUGH COUNTY, FLORIDA

HYDROGRAPHIC EXAM SURVEY FY19
43-FOOT PROJECT
STA. 109+00 THRU STA. 139+00 MULLET KEY CHANNEL

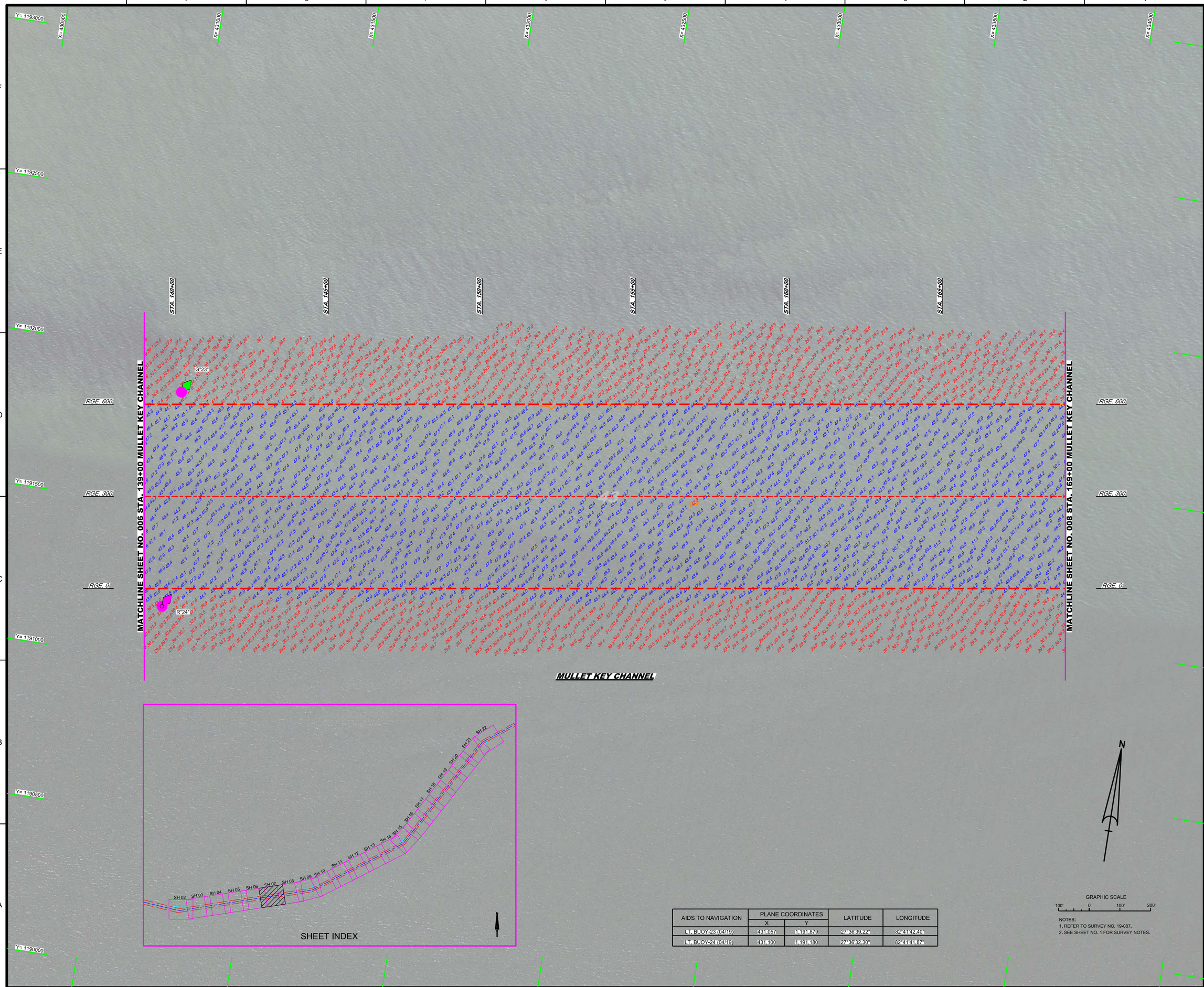
PLAN

Scale: AS SHOWN

Drawing no.

6

SHEET 06 OF 22



AIDS TO NAVIGATION	PLANE COORDINATES		LATITUDE	LONGITUDE
	X	Y		
LT. BUOY-23 (04/19)	431,057	1,191,879	27°36'39.22"	82°41'42.40"
LT. BUOY-24 (04/19)	431,100	1,191,180	27°36'32.30"	82°41'41.87"

NOTES:
1. REFER TO SURVEY NO. 19-087.
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

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

Designed by: VIRM
DWN by: VIRM
Ckd by: GMR
Rev. No.
Date: MAR 2019

XXXXXXXXXXXXXXXXXXXX.DGN
XXXXXXXXXXXXXXXXXXXX.DGN
XXXXXXXXXXXXXXXXXXXX.DGN
19-087-A-CON43.DGN
19-087-A-SOUN.DGN
19-087-A-SOUN_MKC.DGN
TAMPA HARBOR-C-NGMCF.DGN
19-087-A-CS-BRDR.DGN
Reference files:
19-087-VH-097_22.DGN
File name:

TAMPA HARBOR
HILLSBOROUGH COUNTY, FLORIDA

HYDROGRAPHIC EXAM SURVEY FY19
43-FOOT PROJECT

STA. 139+00 THRU STA. 169+00 MULLET KEY CHANNEL

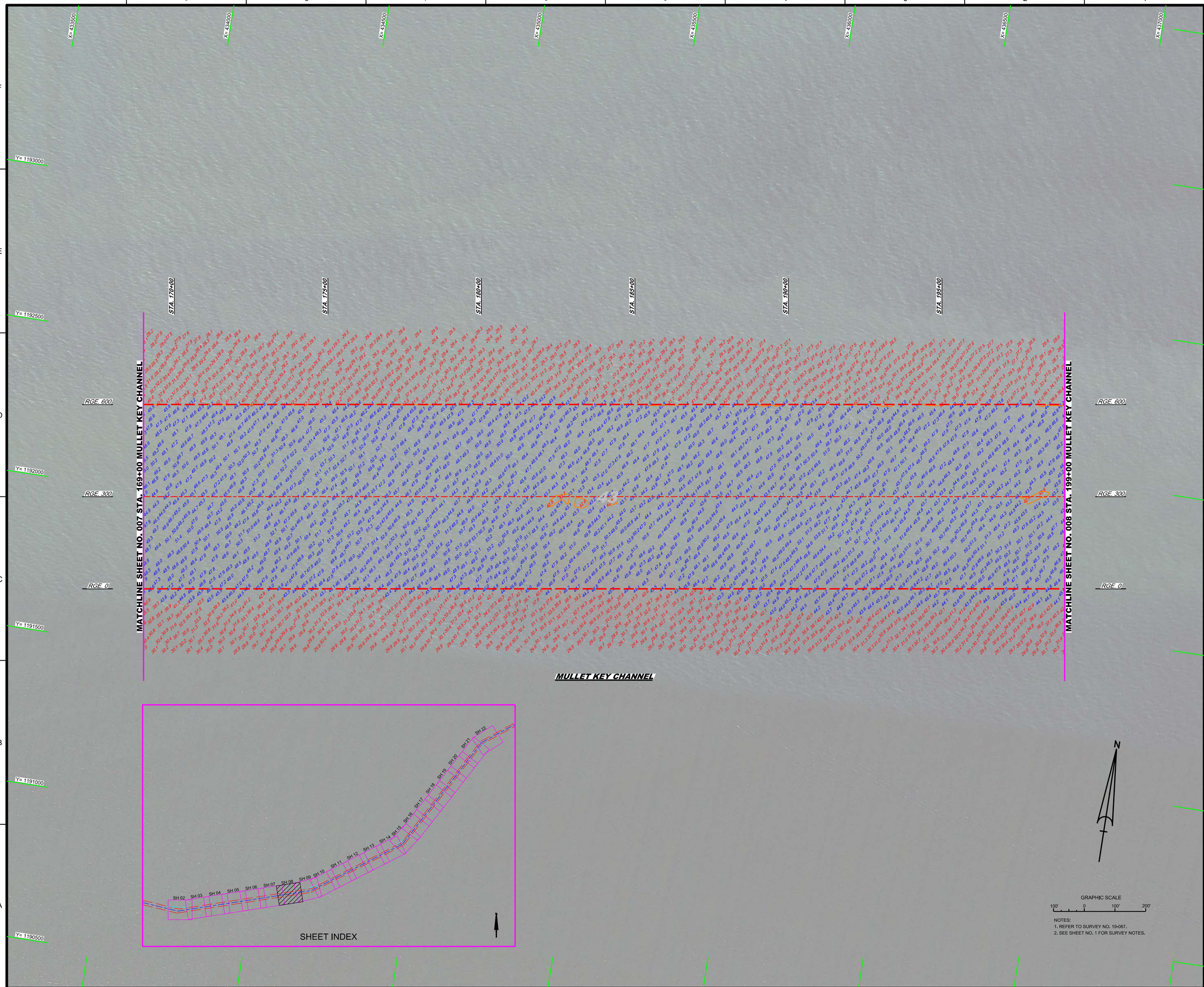
PLAN

Scale: AS SHOWN

Drawing no.

7

SHEET 07 OF 22



NOTES:
1. REFER TO SURVEY NO. 19-087.
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

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

Designed by: VIRM
DWN by: VIRM
Ckd by: CMR
Rev. No.
Date: MAR 2019

XXXXXXXXXXXXXXXXX.DGN
XXXXXXXXXXXXXXXXX.DGN
XXXXXXXXXXXXXXXXX.DGN
XXXXXXXXXXXXXXXXX.DGN
19-087-A-SOUN_MKC.DGN
19-087-A-SOUN_MKC.DGN
TAMPA HARBOR-C-NGMCF.DGN
19-087-A-SBSR-BDR.DGN
Reference files:
19-087-VH-036_22.DGN
File name:

TAMPA HARBOR
HILLSBOROUGH COUNTY, FLORIDA

HYDROGRAPHIC EXAM SURVEY FY19
43-FOOT PROJECT

STA. 169+00 THRU STA. 199+00 MULLET KEY CHANNEL

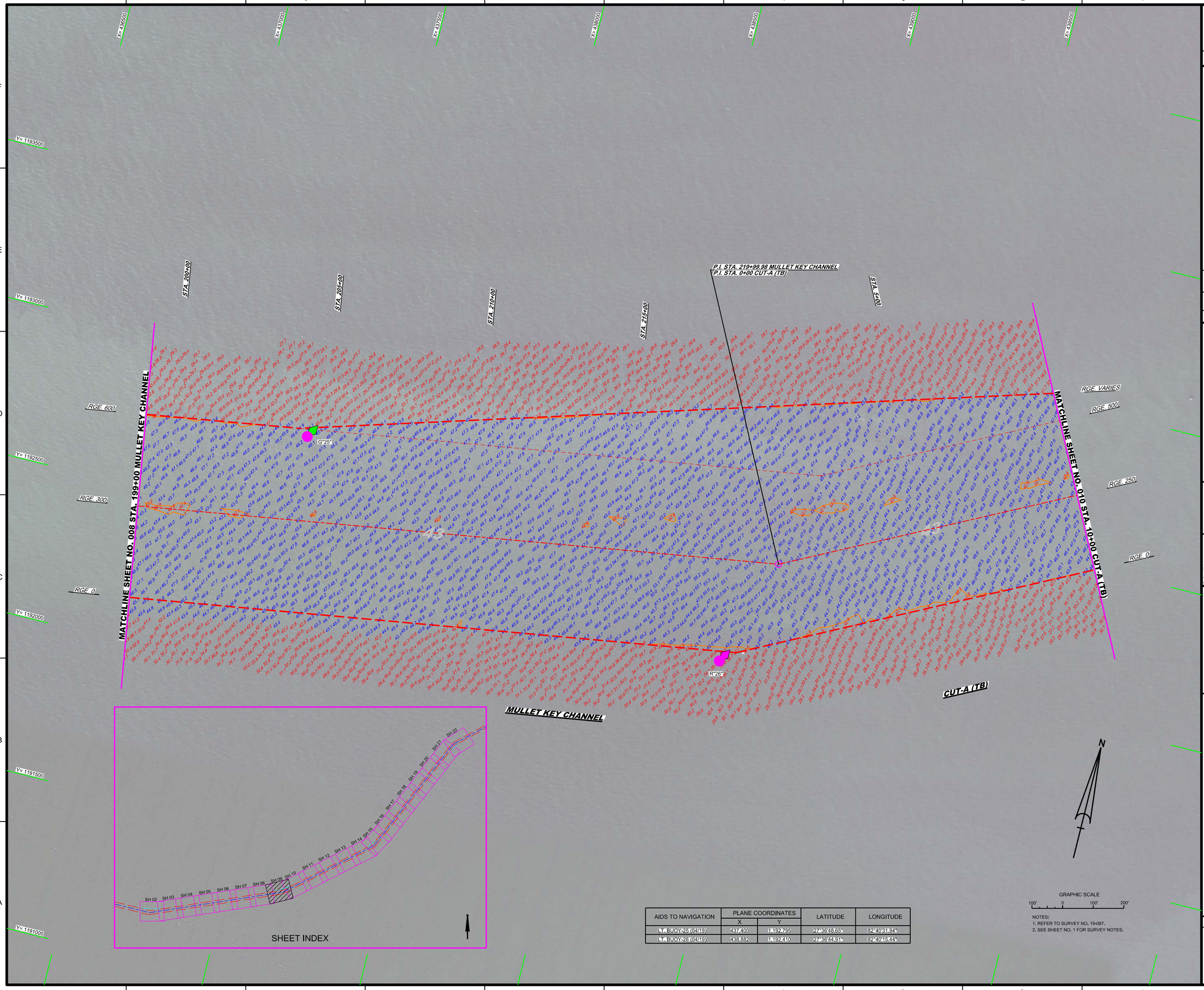
PLAN

Scale: AS SHOWN

Drawing no.

8

SHEET 08 OF 22



AIDS TO NAVIGATION	PLANE COORDINATES		LATITUDE	LONGITUDE
	X	Y		
LT. BUOY-25 (04/19)	437,400	1,192,795	27°36'48.65"	82°40'31.94"
LT. BUOY-26 (04/19)	438,882	1,192,410	27°36'44.91"	82°40'15.44"

NOTES:
1. REFER TO SURVEY NO. 19-087.
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

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

Designed by: VIRM
Drawn by: VIRM
Checked by: CMR
Date: MAR 2019
Rev. No.

XXXXXXXXXX-XXXXXXX.DGN
19-087-V-CON-N3.DGN
19-087-V-NAV.DGN
19-087-V-SOUN_TLA.DGN
19-087-A-SOUN_MKC.DGN
TAMPA HARBOR-C-NGMCF.DGN
19-087-V-HS-09DR.DGN
Reference files:

19-087-V-H-009_22.DGN
File name:

TAMPA HARBOR
HILLSBOROUGH COUNTY, FLORIDA

HYDROGRAPHIC EXAM SURVEY FY19
43-FOOT PROJECT

STA. 199+00 MULLET KEY CHANNEL THRU STA. 10+00 CUT-A (TB)

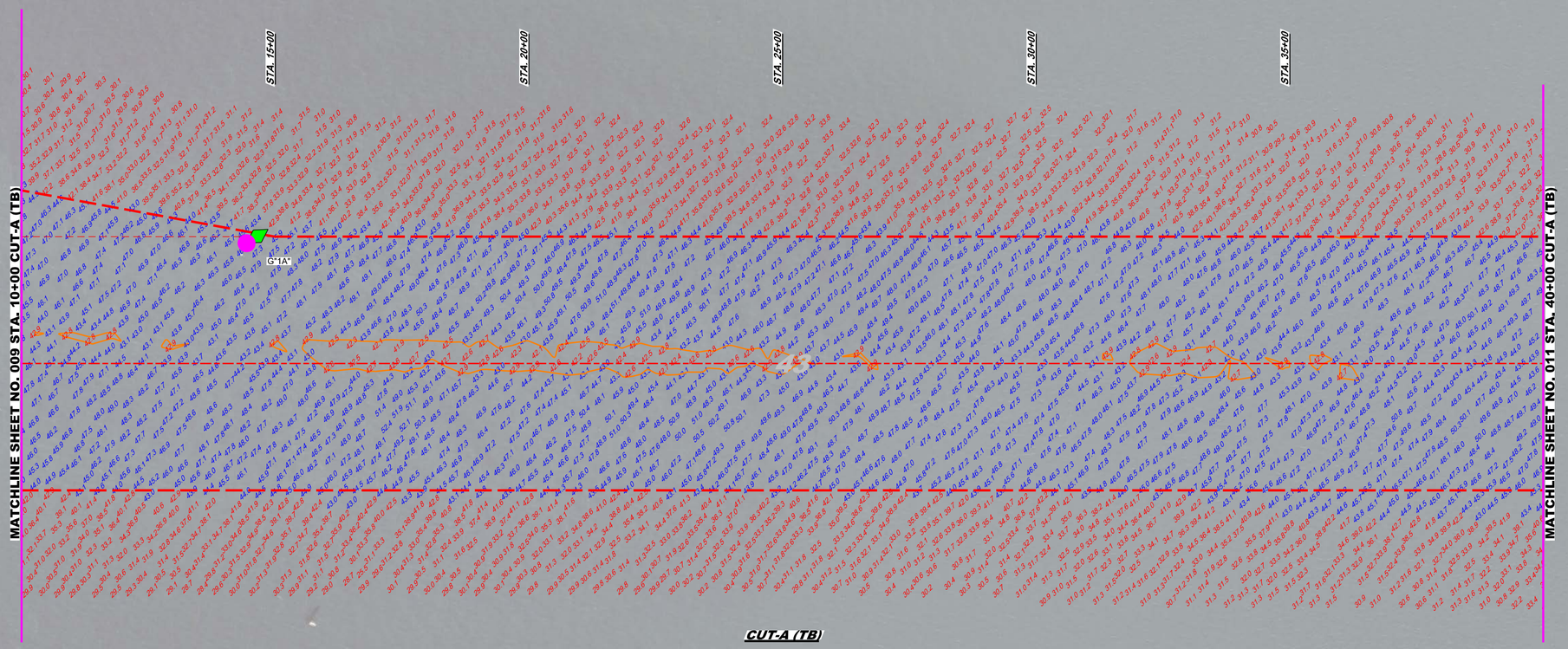
PLAN

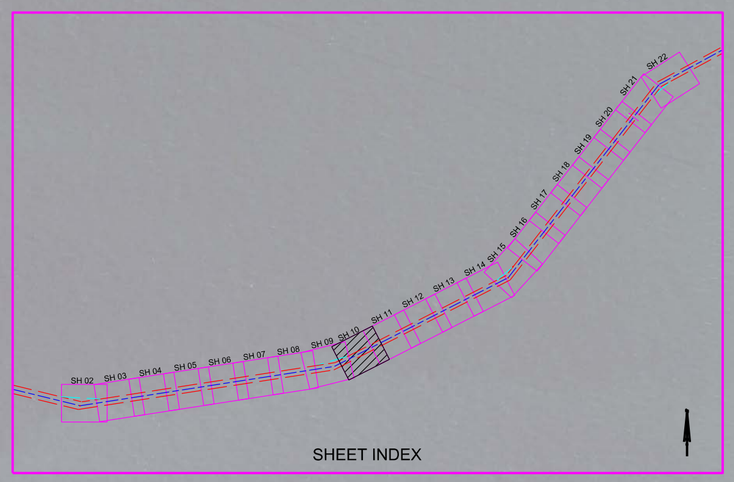
Scale: AS SHOWN

Drawing no.

9

SHEET 09 OF 22





AIDS TO NAVIGATION	PLANE COORDINATES		LATITUDE	LONGITUDE
	X	Y		
LT. BUOY-1A (04/19)	440,172	1,193,630	27°36'57.06"	82°40'01.18"

GRAPHIC SCALE

100' 0 100' 200'

NOTES:
1. REFER TO SURVEY NO. 19-087.
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

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

Designed by: VIRM
DWN by: VIRM
Ckd by: GMR
Rev. No.
Date: MAR 2019

XXXXXXXXXXXXXXXX.DGN
XXXXXXXXXXXXXXXX.DGN
XXXXXXXXXXXXXXXX.DGN
19-087-A-CON43.DGN
19-087-A-XS-01.DGN
19-087-A-SOUN_CT-A.DGN
TAMPA HARBOR-C-NGMCF.DGN
19-087-A-CESHIPDR.DGN
Reference files:
19-087-A-VH-010_Z2.DGN
File name:

TAMPA HARBOR
HILLSBOROUGH COUNTY, FLORIDA

HYDROGRAPHIC EXAM SURVEY FY19
43-FOOT PROJECT

STA. 10+00 THRU STA. 40+00 CUT-A (TB)

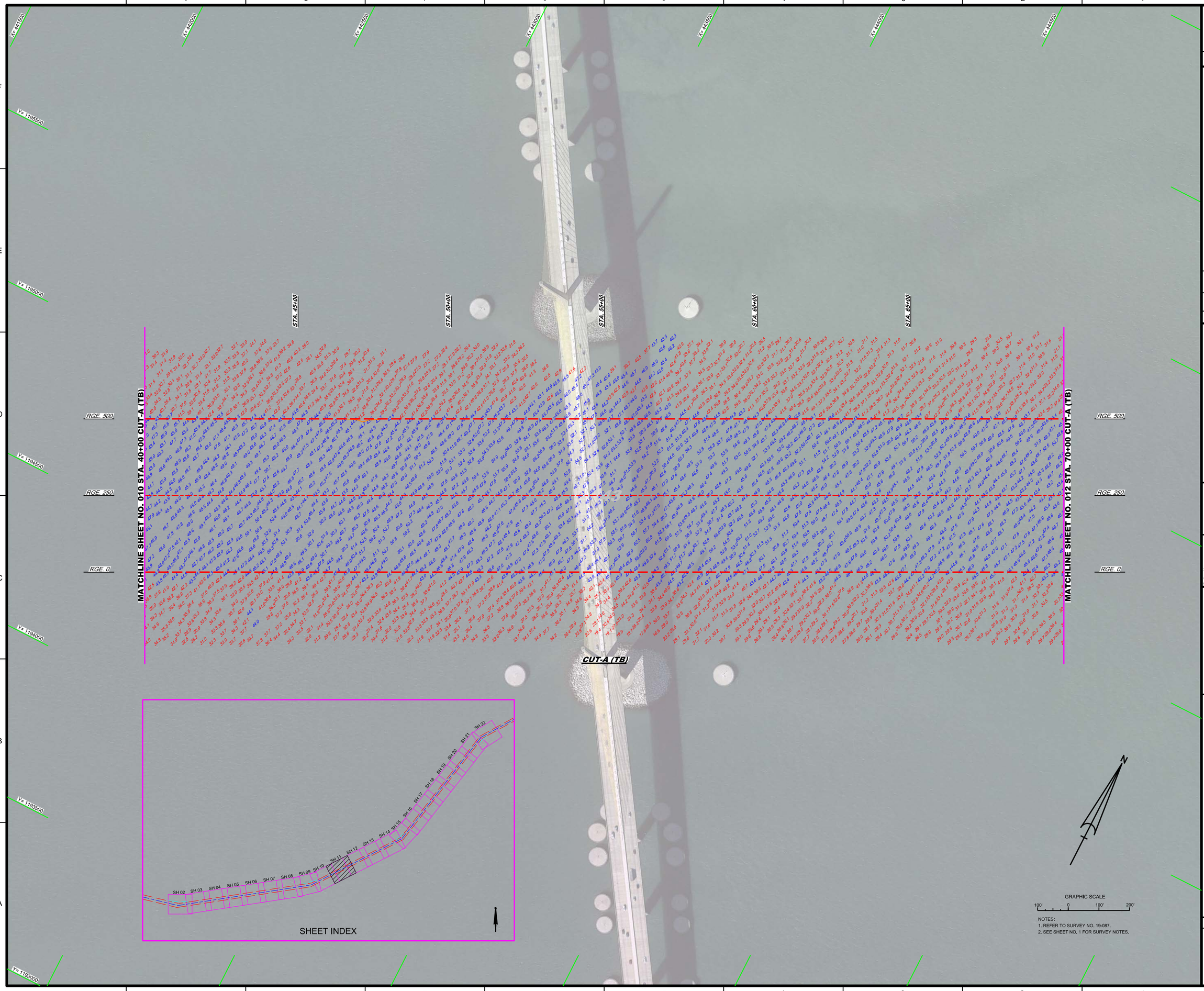
PLAN

Scale: AS SHOWN

Drawing no.

10

SHEET 10 OF 22



NOTES:
1. REFER TO SURVEY NO. 19-087.
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

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

Cad by: GMR
Designed by: VIRM
DWN by: VIRM
Rev. No.
Date: MAR 2019

XXXXXXXXXXXXXXXX.DGN
XXXXXXXXXXXXXXXX.DGN
XXXXXXXXXXXXXXXX.DGN
XXXXXXXXXXXXXXXX.DGN
XXXXXXXXXXXXXXXX.DGN
19-087-A-SOUN_CTLADGN
TAMPA HARBOR-C-NGMCF.DGN
19-087-A-CESHEDR.DGN
Reference files:
19-087A1H011_Z2.DGN
File name:

TAMPA HARBOR
HILLSBOROUGH COUNTY, FLORIDA

HYDROGRAPHIC EXAM SURVEY FY19
43-FOOT PROJECT

STA. 40+00 THRU STA. 70+00 CUT-A (TB)

PLAN

Scale: AS SHOWN

Drawing no.

11

SHEET 11 OF 22