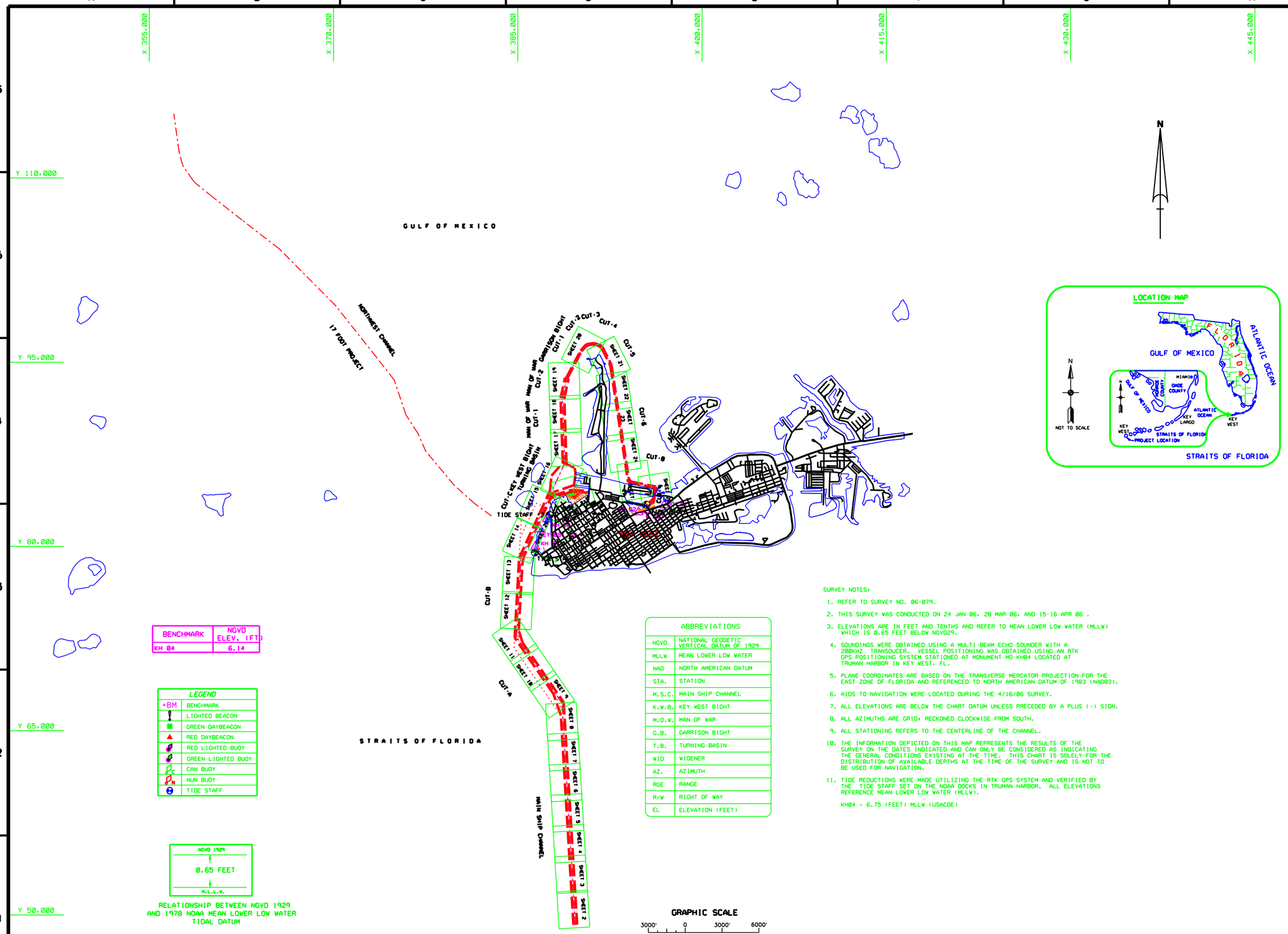

BENCHMARK	NGVD ELEV. (FT)
KH 04	6.14

LEGEND	
•BM	BENCHMARK
	LIGHTED BEACON
	GREEN DAYBEACON
	RED DAYBEACON
	RED LIGHTED BUOY
	GREEN LIGHTED BUOY
C	CAN BUOY
N	NUN BUOY
	TIDE STAFF

NGVD 1929
0.65 FEET
M.L.L.W.

RELATIONSHIP BETWEEN NGVD 1929 AND 1978 NOAA MEAN LOWER LOW WATER TIDAL DATUM

ABBREVIATIONS	
NGVD	NATIONAL GEODETIC VERTICAL DATUM OF 1929
MLLW	MEAN LOWER LOW WATER
NAD	NORTH AMERICAN DATUM
STA.	STATION
M.S.C.	MAIN SHIP CHANNEL
K.W.B.	KEY WEST BIGHT
M.O.W.	MAN OF WAR
G.B.	GARRISON BIGHT
T.B.	TURNING BASIN
WID	WIDENER
AZ.	AZIMUTH
RGE	RANGE
R/W	RIGHT OF WAY
EL	ELEVATION (FEET)

SURVEY NOTES:

1. REFER TO SURVEY NO. 06-079.
2. THIS SURVEY WAS CONDUCTED ON 24 JAN 06, 28 MAR 06, AND 15-16 APR 06 .
3. ELEVATIONS ARE IN FEET AND TENTHS AND REFER TO MEAN LOWER LOW WATER (MLLW) WHICH IS 0.65 FEET BELOW NGVD29.
4. SOUNDINGS WERE OBTAINED USING A MULTI-BEAM ECHO SOUNDER WITH A 200KHZ TRANSDUCER. VESSEL POSITIONING WAS OBTAINED USING AN RTK GPS POSITIONING SYSTEM STATIONED AT MONUMENT MO KH04 LOCATED AT TRUMAN HARBOR IN KEY WEST, FL.
5. PLANE COORDINATES ARE BASED ON THE TRANSVERSE MERCATOR PROJECTION FOR THE EAST ZONE OF FLORIDA AND REFERENCED TO NORTH AMERICAN DATUM OF 1983 (NAD83).
6. AIDS TO NAVIGATION WERE LOCATED DURING THE 4/16/06 SURVEY.
7. ALL ELEVATIONS ARE BELOW THE CHART DATUM UNLESS PRECEDED BY A PLUS (+) SIGN.
8. ALL AZIMUTHS ARE GRID; RECKONED CLOCKWISE FROM SOUTH.
9. ALL STATIONING REFERS TO THE CENTERLINE OF THE CHANNEL.
10. THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF THE SURVEY ON THE DATES INDICATED AND CAN ONLY BE CONSIDERED AS INDICATING THE GENERAL CONDITIONS EXISTING AT THE TIME. THIS CHART IS SOLELY FOR THE DISTRIBUTION OF AVAILABLE DEPTHS AT THE TIME OF THE SURVEY AND IS NOT TO BE USED FOR NAVIGATION.
11. TIDE REDUCTIONS WERE MADE UTILIZING THE RTK GPS SYSTEM AND VERIFIED BY THE TIDE STAFF SET ON THE NOAA DOCKS IN TRUMAN HARBOR. ALL ELEVATIONS REFERENCE MEAN LOWER LOW WATER (MLLW).

KH04 = 6.75 (FEET) MLLW (USACOE)

US Army Corps of Engineers
Jacksonville District

SAFETY ON THIS JOB DEPENDS ON YOU

No.	Symbol	Date	Description	Approved

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

Inv. No. DACW17-XX-X-XXXX
Dated: XX XXX XXXX
Scale: AS SHOWN
Plot date: XX XX XXXX
Plot scale: XXX

Designed by: XXX
Dwn by: WRW
Ckd by: JDMW

Dated: MAY 2006
D.O.FILE NO. XXX-XX.XXX

File name: 06-079SH01.DGN
Reference files: BROOKS.DGN 06-079ZCOM.DGN 06-079BASE.DGN

KEY WEST HARBOR, FLORIDA
PROJECT CONDITION SURVEY
36-FOOT PROJECT
INDEX, LOCATION AND PLAN
PLAN

DRAWING NO.
1/16

SHEET 1 OF XXX

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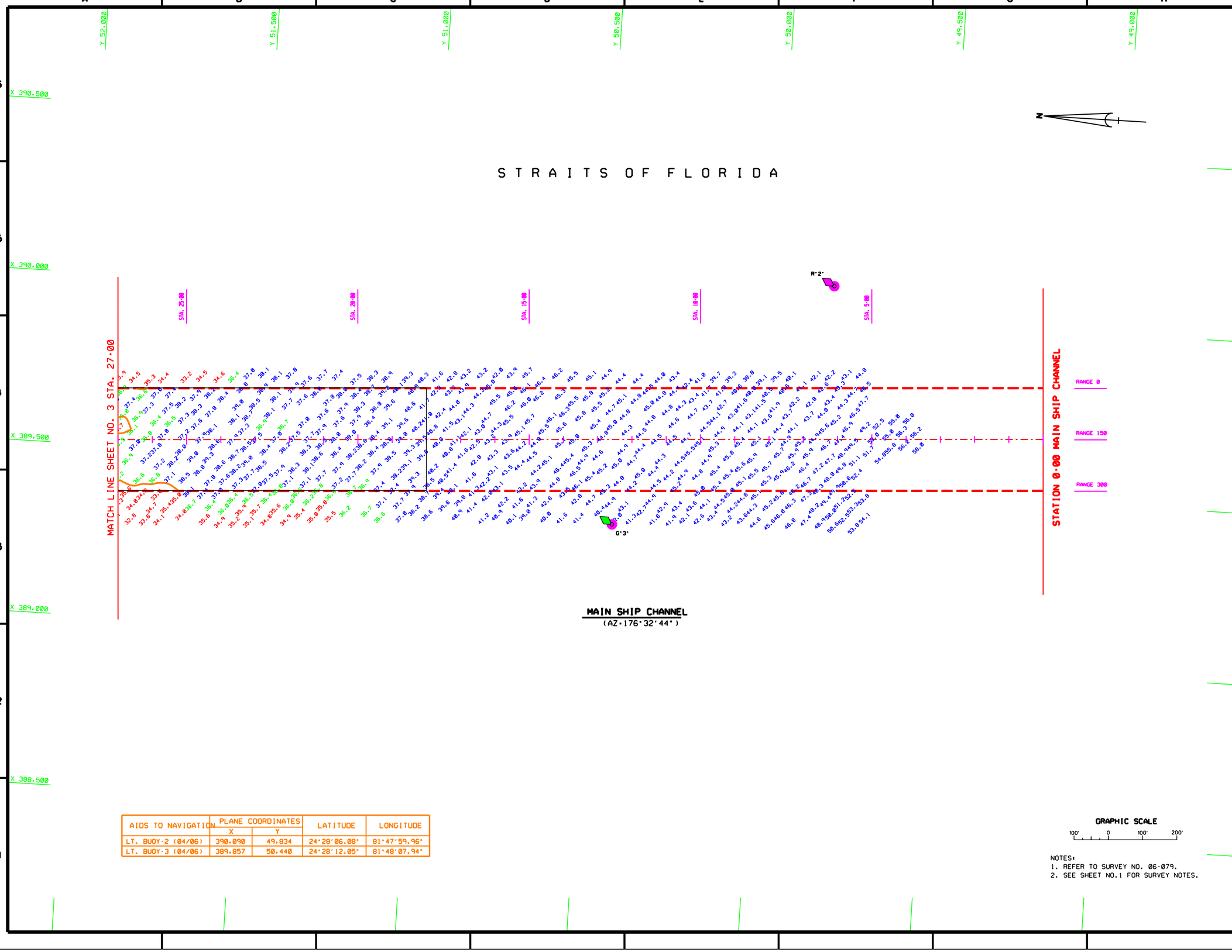

AIDS TO NAVIGATION	PLANE COORDINATES		LATITUDE	LONGITUDE
	X	Y		
LT. BUOY-2 (04/06)	390,090	49,834	24°28'06.08"	81°47'59.96"
LT. BUOY-3 (04/06)	389,857	50,440	24°28'12.05"	81°48'07.94"

NOTES:
1. REFER TO SURVEY NO. 06-079.
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	Approved

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

Designed by: WRM
Dwn by: WRM
Ckd by: WRM
Inv. No. DACW17-XX-X-XXXX
Dated: XX XXX XXXX
Scale: AS SHOWN
Plot date: xx xx xxxx
Plot scale: XX:X
Dated: MAY 2006
D.O.FILE NO. XXX-XX,XXX

File name: 06-079SH02.DGN
Reference files: BRDR98.DGN 06_079GEOM.DGN 06_079ELEV.DGN 06-079NAV.DGN CON36.DGN KW_AS.DGN

KEY WEST HARBOR, FLORIDA
PROJECT CONDITION SURVEY
36-FOOT PROJECT
STA. 0+00 THRU 27+00 MAIN SHIP CHANNEL
PLAN

DRAWING NO.
2/16
SHEET 2 OF XXX

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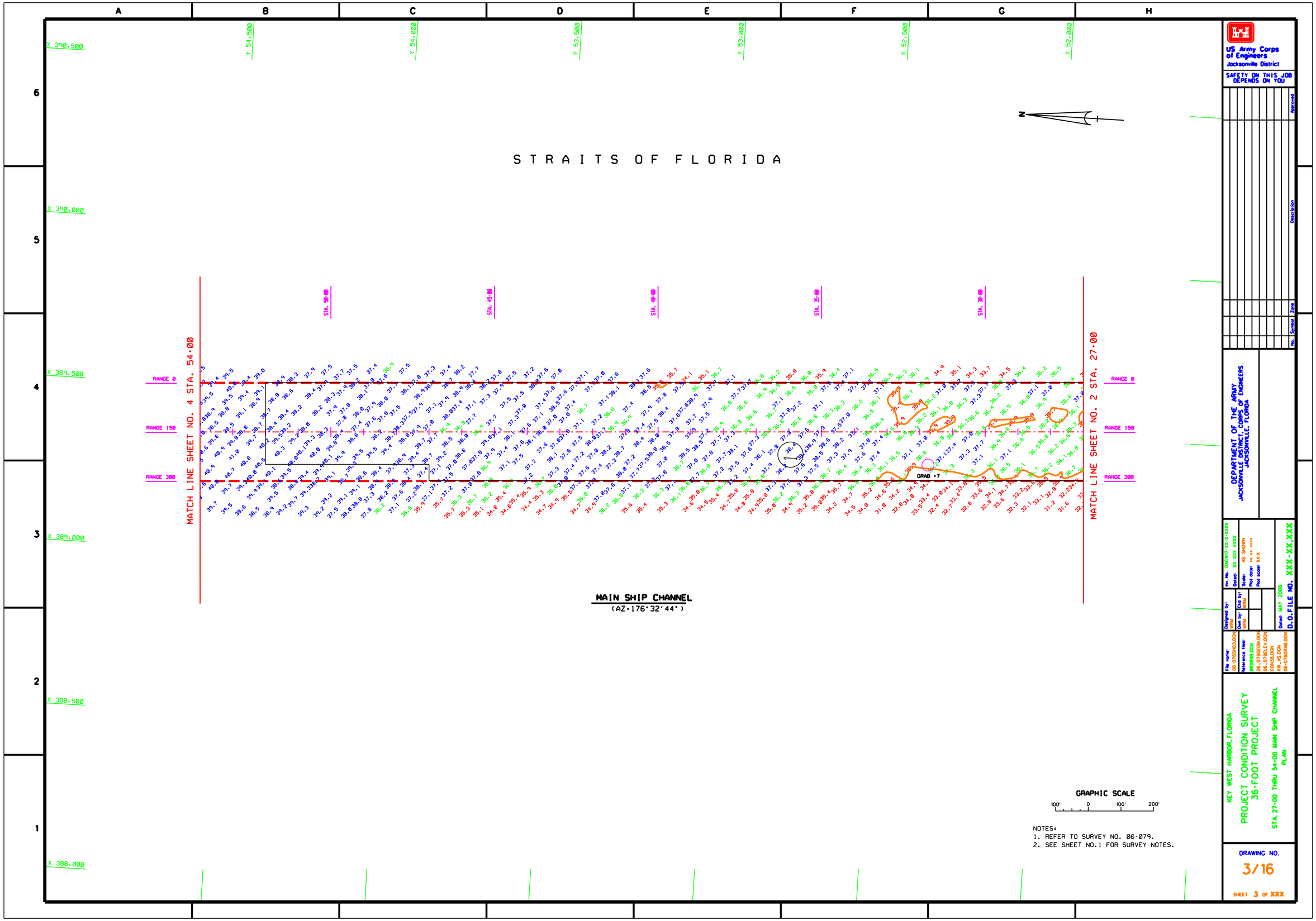

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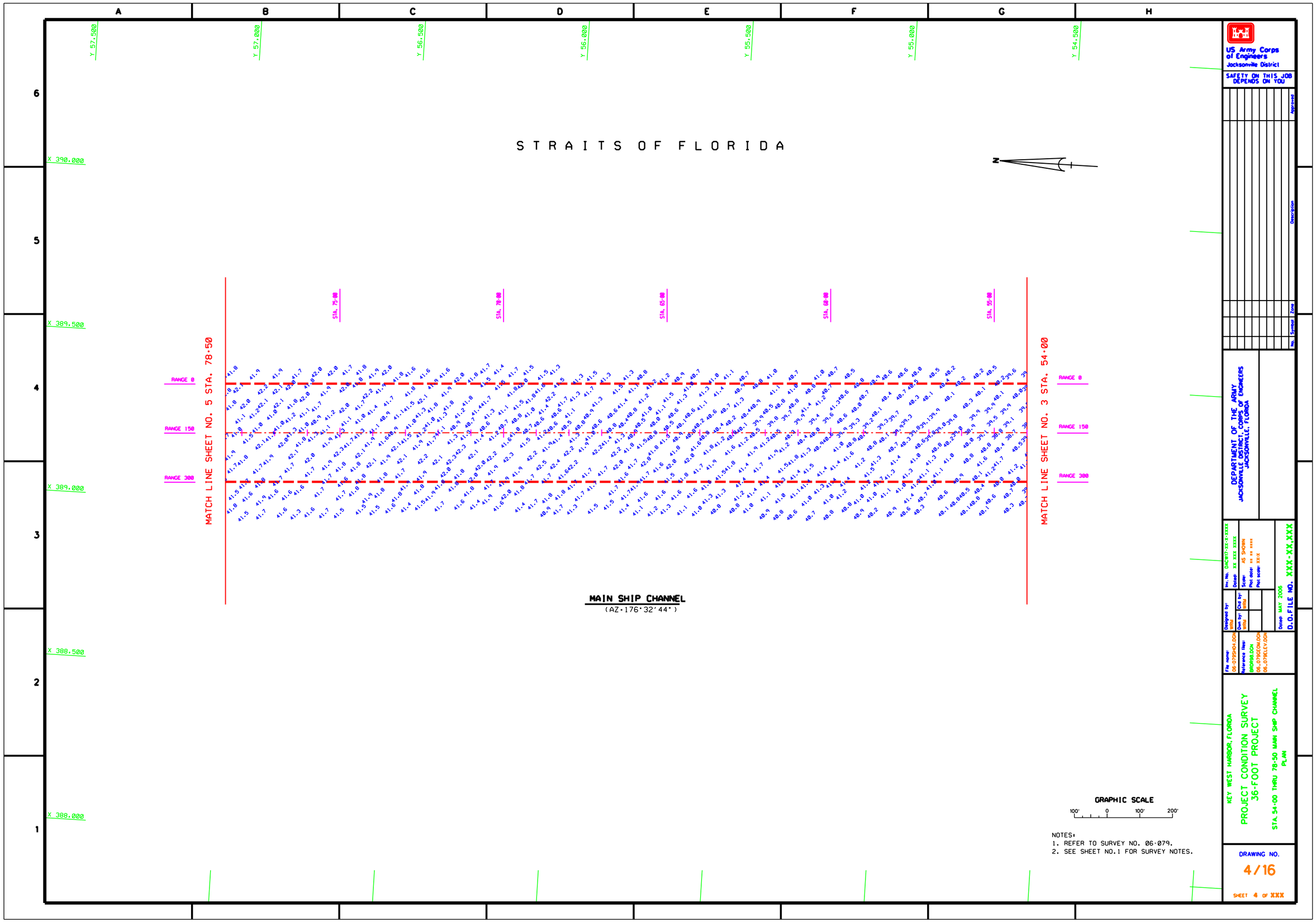

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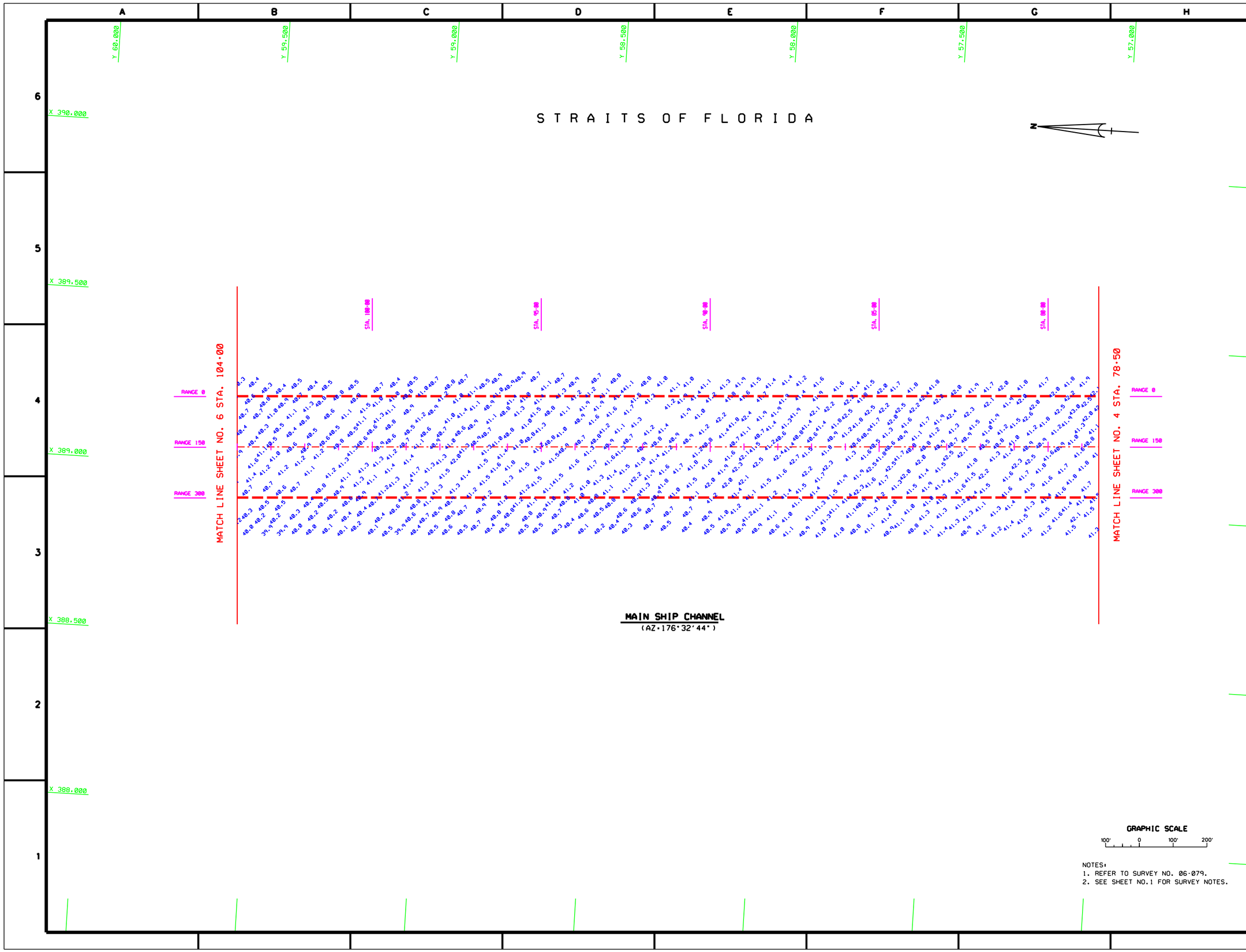

NOTES:
1. REFER TO SURVEY NO. 06-079.
2. SEE SHEET NO.1 FOR SURVEY NOTES.

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: WRM
Dwn by: WRM
Ckd by: WRM
Dated: MAY 2006
D.O.FILE NO. XXX-XX,XXX

KEY WEST HARBOR, FLORIDA
PROJECT CONDITION SURVEY
36-FOOT PROJECT
STA. 78+50 THRU 104+00 MAIN SHIP CHANNEL
PLAN

DRAWING NO.
5/16
SHEET 5 OF XXX

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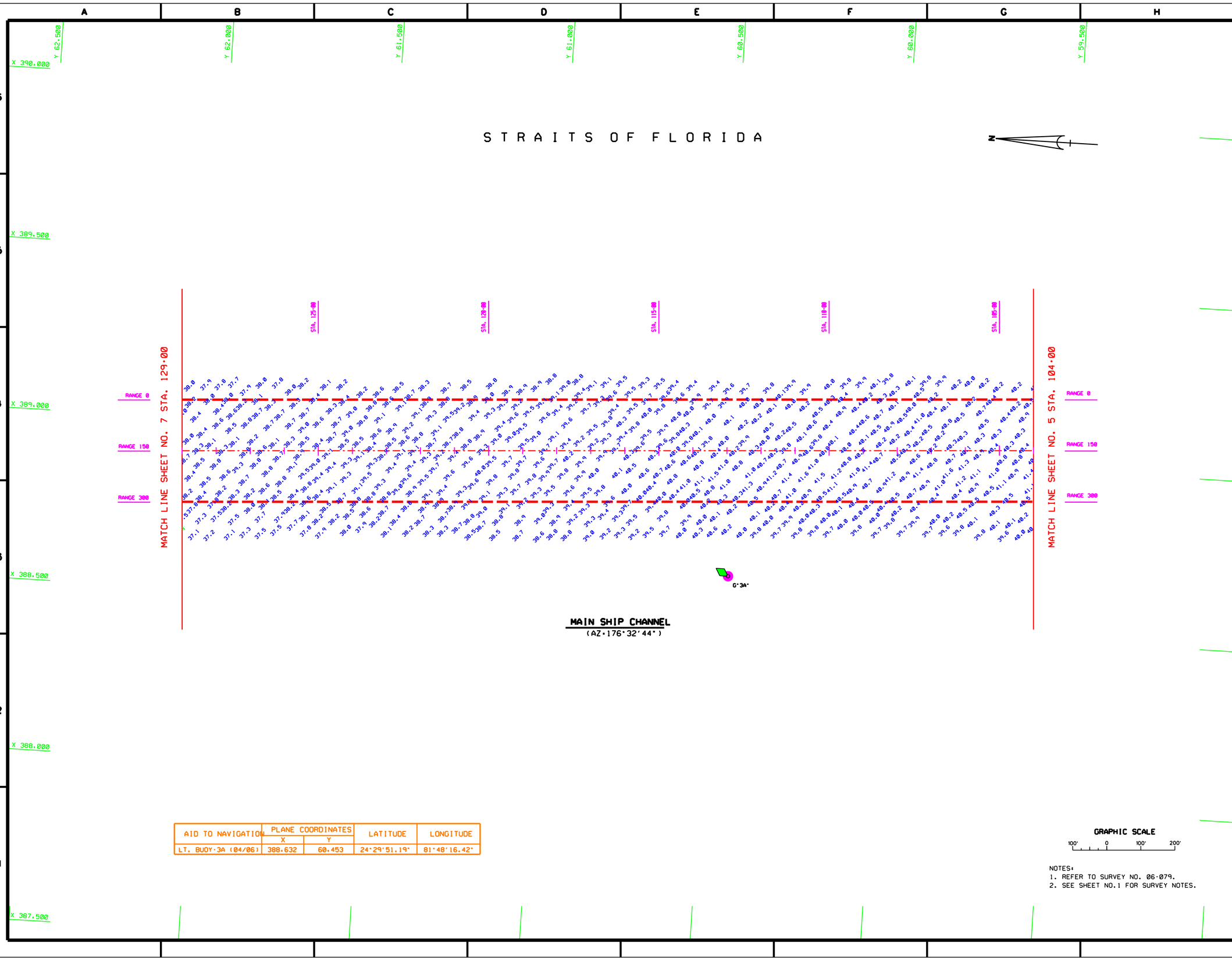

AID TO NAVIGATION	PLANE COORDINATES		LATITUDE	LONGITUDE
	X	Y		
LT. BUOY-3A (04/06)	388.632	60.453	24°29'51.19"	81°48'16.42"

NOTES:
1. REFER TO SURVEY NO. 06-079.
2. SEE SHEET NO.1 FOR SURVEY NOTES.

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: WRM
Dwn by: WRM
Ckd by: WRM
Inv. No. DACW17-XX-X-XXXX
Dated: XX XXX XXXX
Scale: AS SHOWN
Plot date: xx xx xxxx
Plot scale: XX:X
Date: MAY 2006
D.O. FILE NO. XXX-XX,XXX

File name: 06-079SH06.DGN
Reference files: BRDR98.DGN 06_079CEOM.DGN 06_079ELEV.DGN 06_079NAV.DGN

KEY WEST HARBOR, FLORIDA
PROJECT CONDITION SURVEY
36-FOOT PROJECT
STA. 104+00 THRU 129+00 MAIN SHIP CHANNEL
PLAN

DRAWING NO.
6/16
SHEET 6 OF XXX

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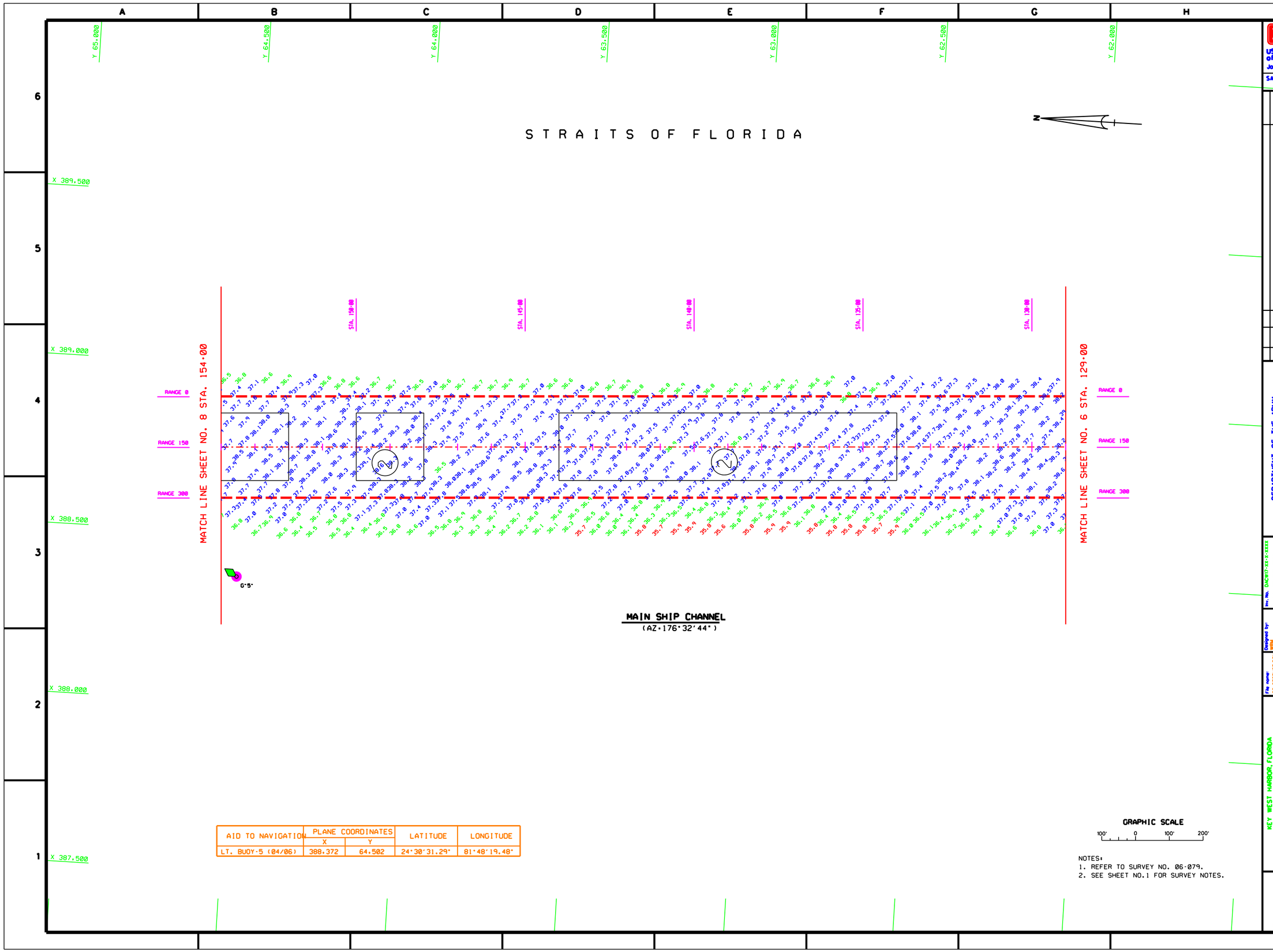

AID TO NAVIGATION	PLANE COORDINATES X	PLANE COORDINATES Y	LATITUDE	LONGITUDE
LT. BUOY-5 (04/06)	388.372	64.502	24°30'31.29"	81°48'19.48"

NOTES:
1. REFER TO SURVEY NO. 06-079.
2. SEE SHEET NO.1 FOR SURVEY NOTES.

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

Inv. No. DACW17-XX-X-XXXX
Dated: XX XXX XXXX
Scale: AS SHOWN
Plot date: XX XX XXXX
Plot scale: XX:X

Designed by: WRM
Dwn by: WRM
Ckd by: WRM

File name: 06-079SH07.DGN
Reference files: BRDR98.DGN 06_079GEOM.DGN 06_079ELEV.DGN 06_079NAV.DGN KW_AS.DGN

Dated: MAY 2006
D.O.FILE NO. XXX-XX,XXX

KEY WEST HARBOR, FLORIDA
PROJECT CONDITION SURVEY
36-FOOT PROJECT
STA. 129+00 THRU 154+00 MAIN SHIP CHANNEL
PLAN

DRAWING NO.
7/16

SHEET 7 OF XXX

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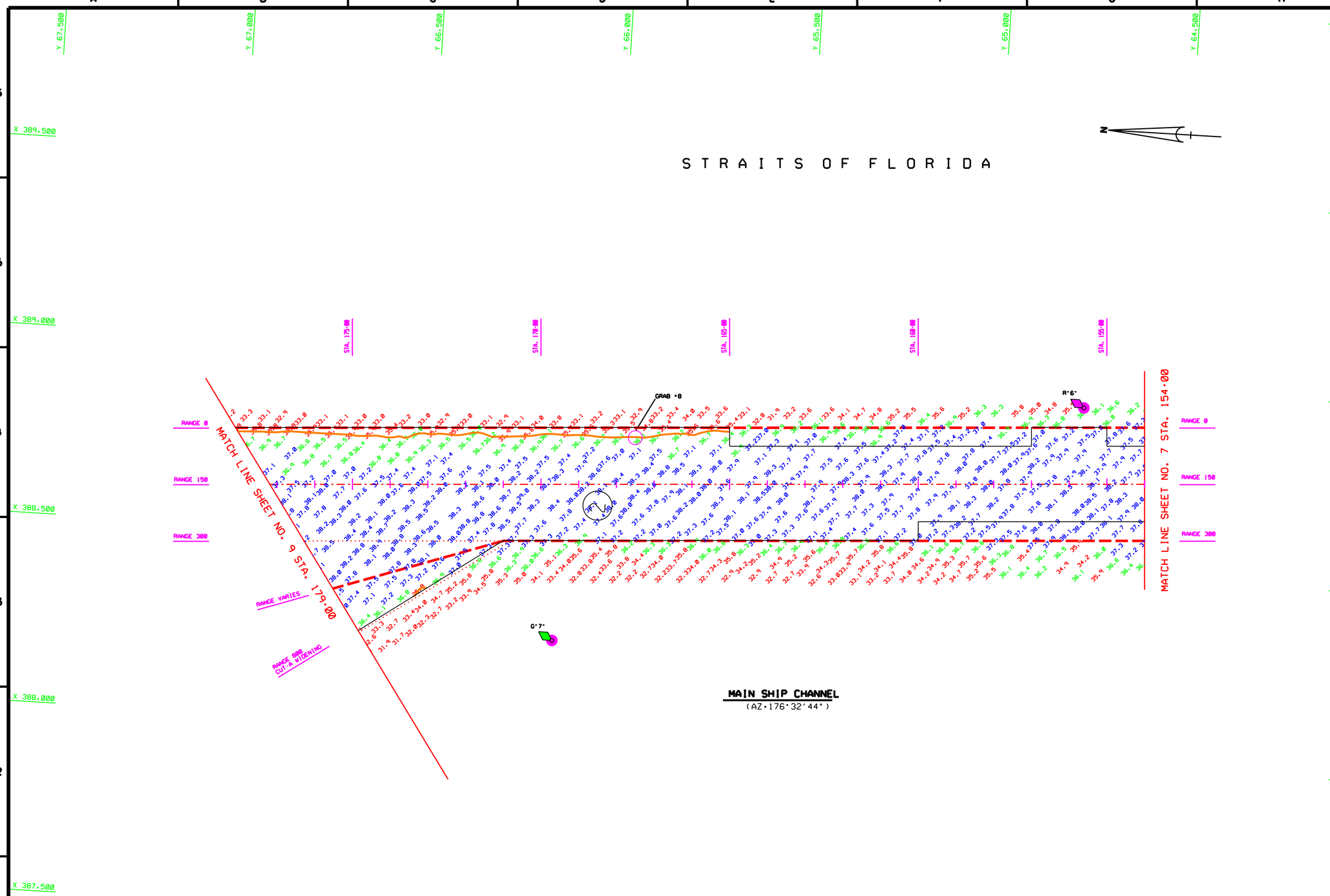

MAIN SHIP CHANNEL
(AZ=176°32'44")

AIDS TO NAVIGATION	PLANE COORDINATES X	PLANE COORDINATES Y	LATITUDE	LONGITUDE
LT. BUOY-6 (04/06)	388,244	66,114	24°30'47.25"	81°48'20.97"
LT. BUOY-7 (04/06)	388,646	67,324	24°30'59.26"	81°48'16.69"

GRAPHIC SCALE
100' 0 100' 200'

NOTES:
1. REFER TO SURVEY NO. 06-079.
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	Approved

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

Inv. No. DACW17-XX-X-XXXX
Dated: XX XXX XXXX
Scale: AS SHOWN
Plot date: XX XX XXXX
Plot scale: XX:X

Designed by: WRM
Dwn by: WRM
Ckd by: WRM

Dated: MAY 2006
D.O.FILE NO. XXX-XX,XXX

File name: 06-079SH08.DGN
Reference files: BRDR98.DGN 06_079GEOM.DGN 06_079ELEV.DGN 06-079NAV.DGN CON36.DGN KW_AS.DGN 06-079GRAB.DGN

KEY WEST HARBOR, FLORIDA
PROJECT CONDITION SURVEY
36-FOOT PROJECT
STA. 154+00 THRU 179+00 MAIN SHIP CHANNEL
PLAN

DRAWING NO.
8/16
SHEET 8 OF XXX

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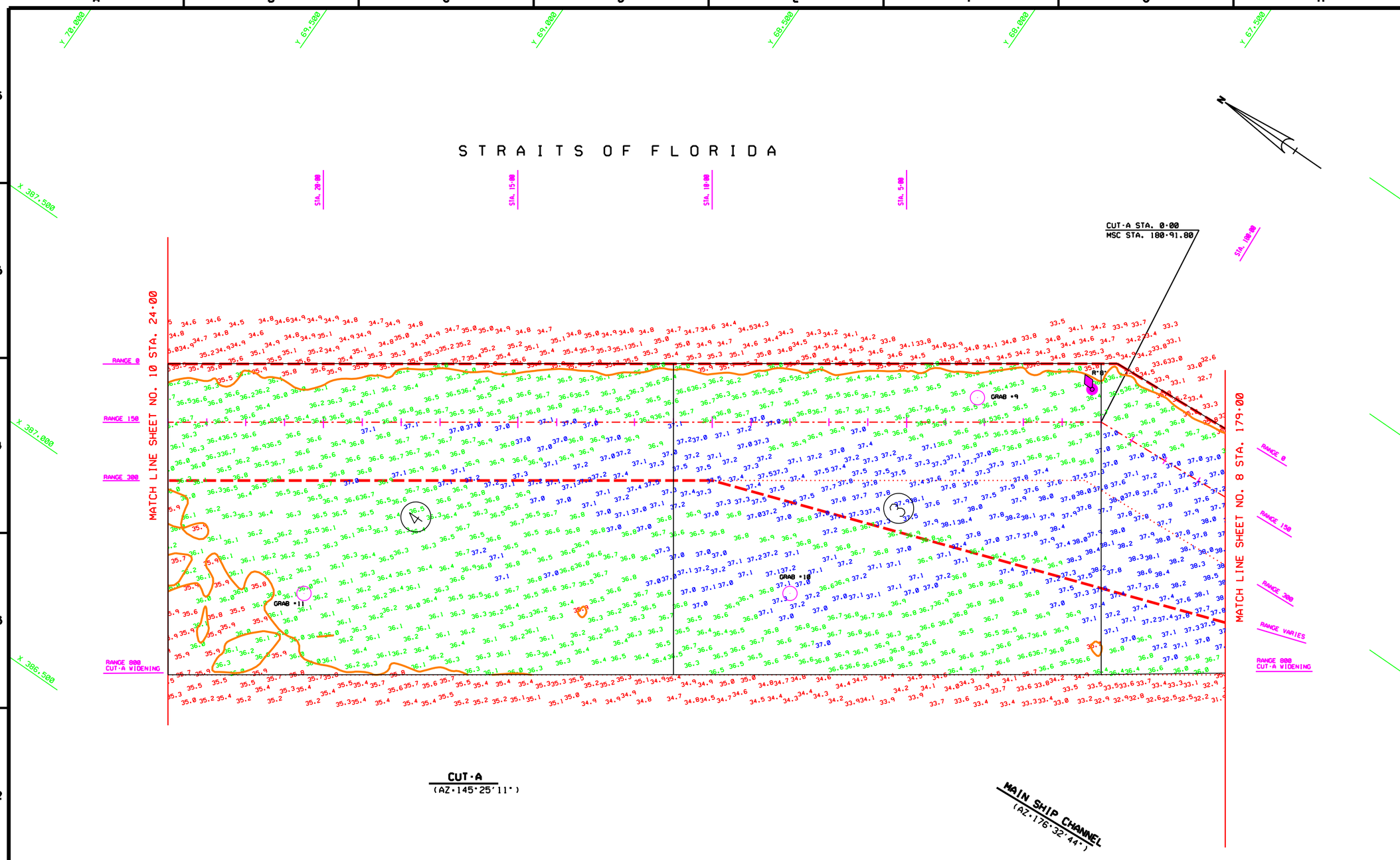


AID TO NAVIGATION	PLANE COORDINATES		LATITUDE	LONGITUDE
	X	Y		
LT. BUOY-8 (04/06)	388.646	67.324	24°30'59.26"	81°48'16.69"

GRAPHIC SCALE

100' 0 100' 200'

NOTES:
1. REFER TO SURVEY NO. 06-079.
2. SEE SHEET NO.1 FOR SURVEY NOTES.

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

Inv. No. DACW17-XX-X-XXXX
Dated: XX XXX XXXX
Scale: AS SHOWN
Plot date: xx xx xxxx
Plot scale: XX:X

Designed by: WRM
Dwn by: WRM
Ckd by: WRM

File name: 06-079SH09.DGN
Reference files: BRDR98.DGN 06_079GEOM.DGN 06_079ELEV.DGN 06-079NAV.DGN CONJ6.DGN KW_AS.DGN 06-079GRAB.DGN

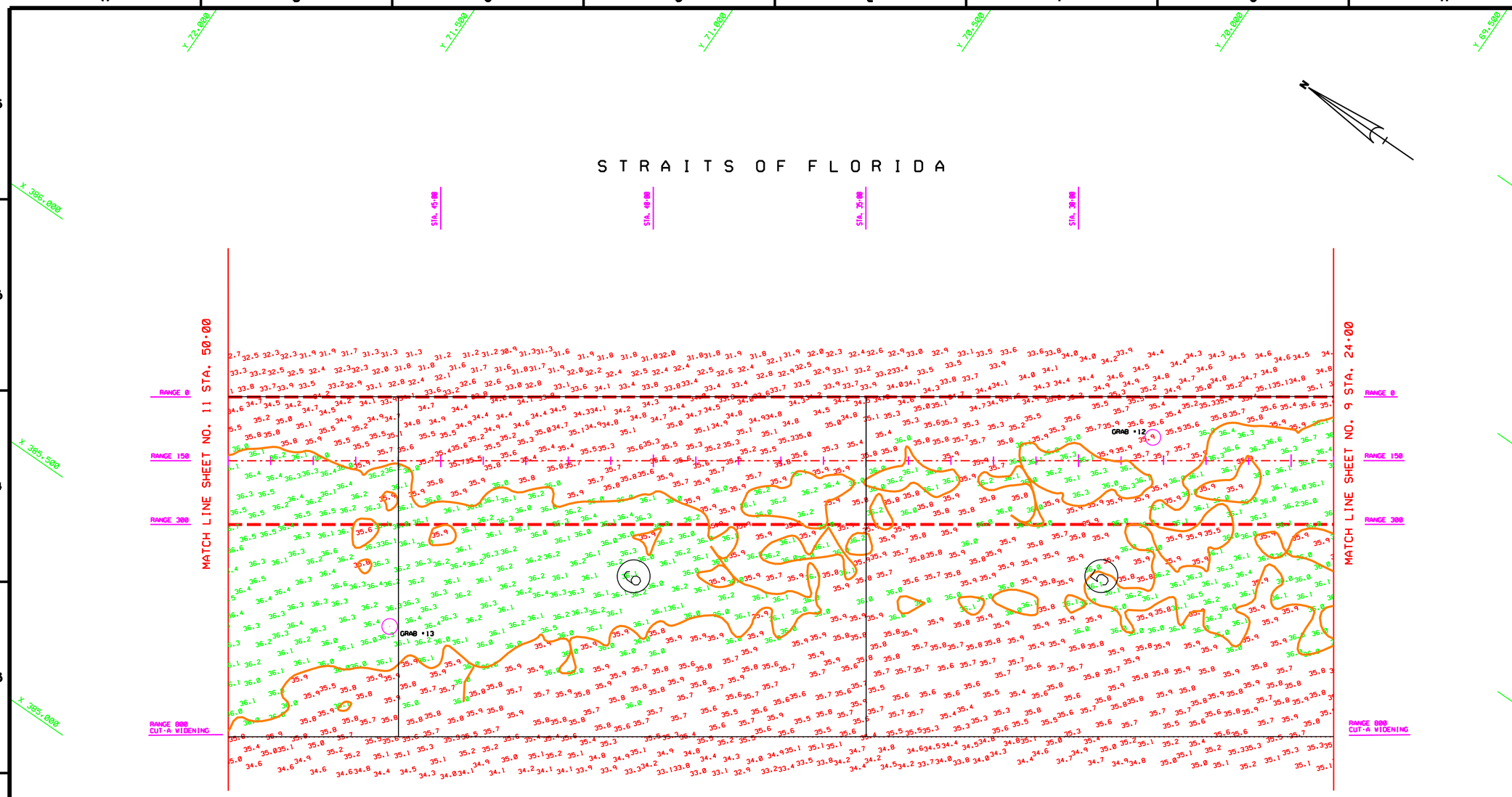
Dated: MAY 2006
D.O.FILE NO. XXX-XX,XXX

KEY WEST HARBOR, FLORIDA
PROJECT CONDITION SURVEY
36-FOOT PROJECT
STA. 179+00 MAIN SHIP CHANNEL THRU
STA. 24+00 CUT-A
PLAN

DRAWING NO.
9/16

SHEET 9 OF XXX

...\Key West\06-079\06-079SH09.dgn 6/2/2006 3:52:25 PM



CUT-A
(AZ=145°25'11")

GRAPHIC SCALE
100' 0 100' 200'

NOTES:
1. REFER TO SURVEY NO. 06-079.
2. SEE SHEET NO.1 FOR SURVEY NOTES.

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

Inv. No. DACW17-XX-X-XXXX
Dated: XX XXX XXXX
Scale: AS SHOWN
Plot date: xx xx xxxx
Plot scale: XX:X

Designed by: WRM
Dwn by: WRM
Ckd by: WRM

File name: 06-079SH10.DGN
Reference files: BRDR98.DGN 06_079CEOM.DGN 06_079ELEV.DGN CON36.DGN KW_AS.DGN 06-079GRAB.DGN

Dated: MAY 2006
D.O.FILE NO. XXX-XX,XXX

KEY WEST HARBOR, FLORIDA
PROJECT CONDITION SURVEY
36-FOOT PROJECT
STA.24+00 THRU 50+00 CUT-A
PLAN

DRAWING NO.
10/16
SHEET 10 OF XXX

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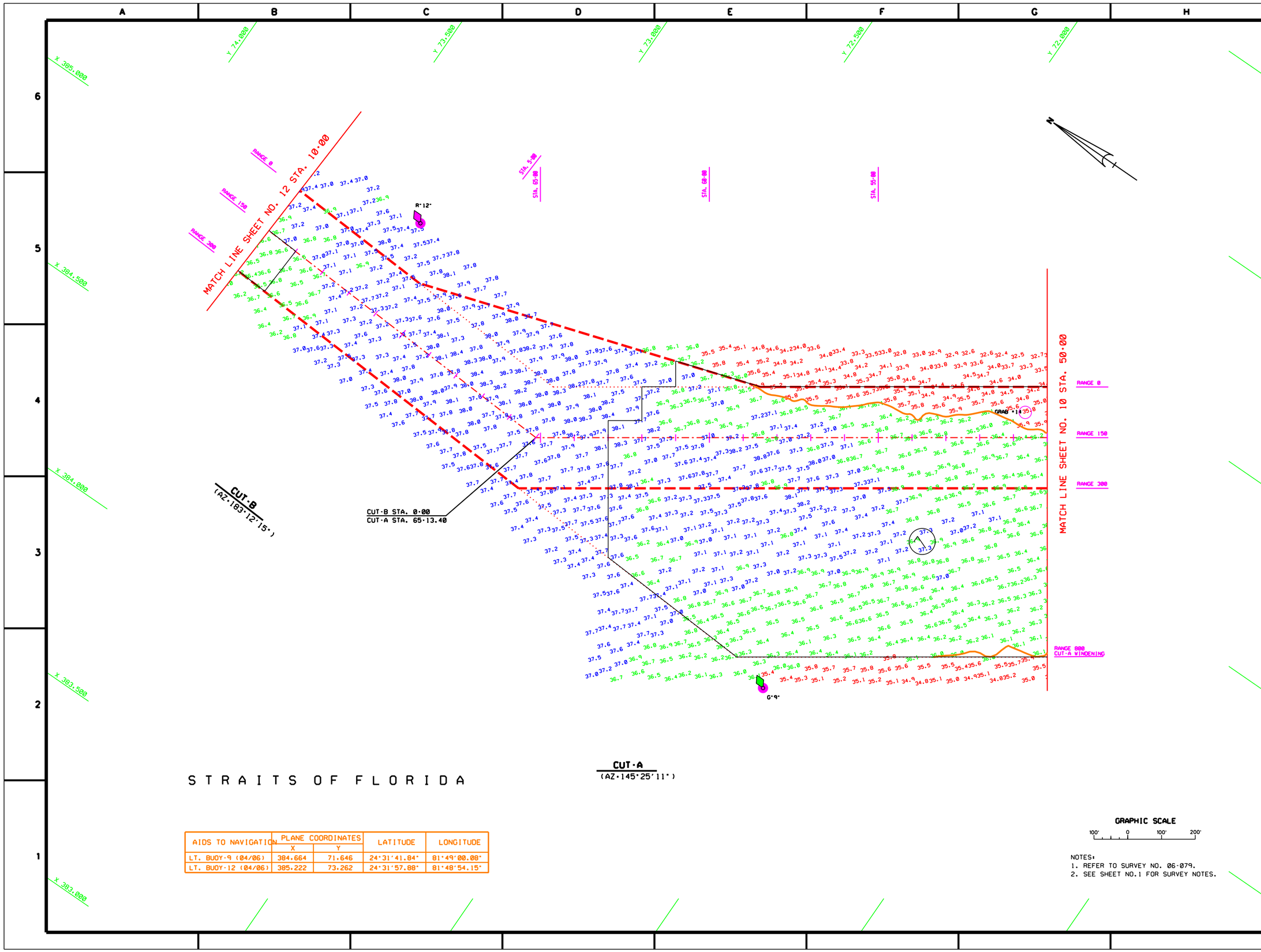

AIDS TO NAVIGATION	PLANE COORDINATES X	PLANE COORDINATES Y	LATITUDE	LONGITUDE
LT. BUOY-9 (04/06)	384.664	71.646	24°31'41.84"	81°49'00.08"
LT. BUOY-12 (04/06)	385.222	73.262	24°31'57.88"	81°48'54.15"

NOTES:
1. REFER TO SURVEY NO. 06-079.
2. SEE SHEET NO.1 FOR SURVEY NOTES.

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: WRM
Dwn by: WRM
Ckd by: WRM
Inv. No. DACW17-XX-X-XXXX
Dated: XX XXX XXXX
Scale: AS SHOWN
Plot date: XX XX XXXX
Plot scale: XX:X

Dated: MAY 2006
D.O. FILE NO. XXX-XX,XXX

File name: 06-079SH11.DGN
Reference files: BRDR98.DGN, 06_079GEOM.DGN, 06_079ELEV.DGN, 06-079NAV.DGN, CON36.DGN, KW_AS.DGN, 06-079GRAB.DGN

KEY WEST HARBOR, FLORIDA
PROJECT CONDITION SURVEY
36-FOOT PROJECT
STA. 50+00 CUT-A THRU STA. 10+00 CUT-B
PLAN

DRAWING NO.
11/16
SHEET 11 OF XXX

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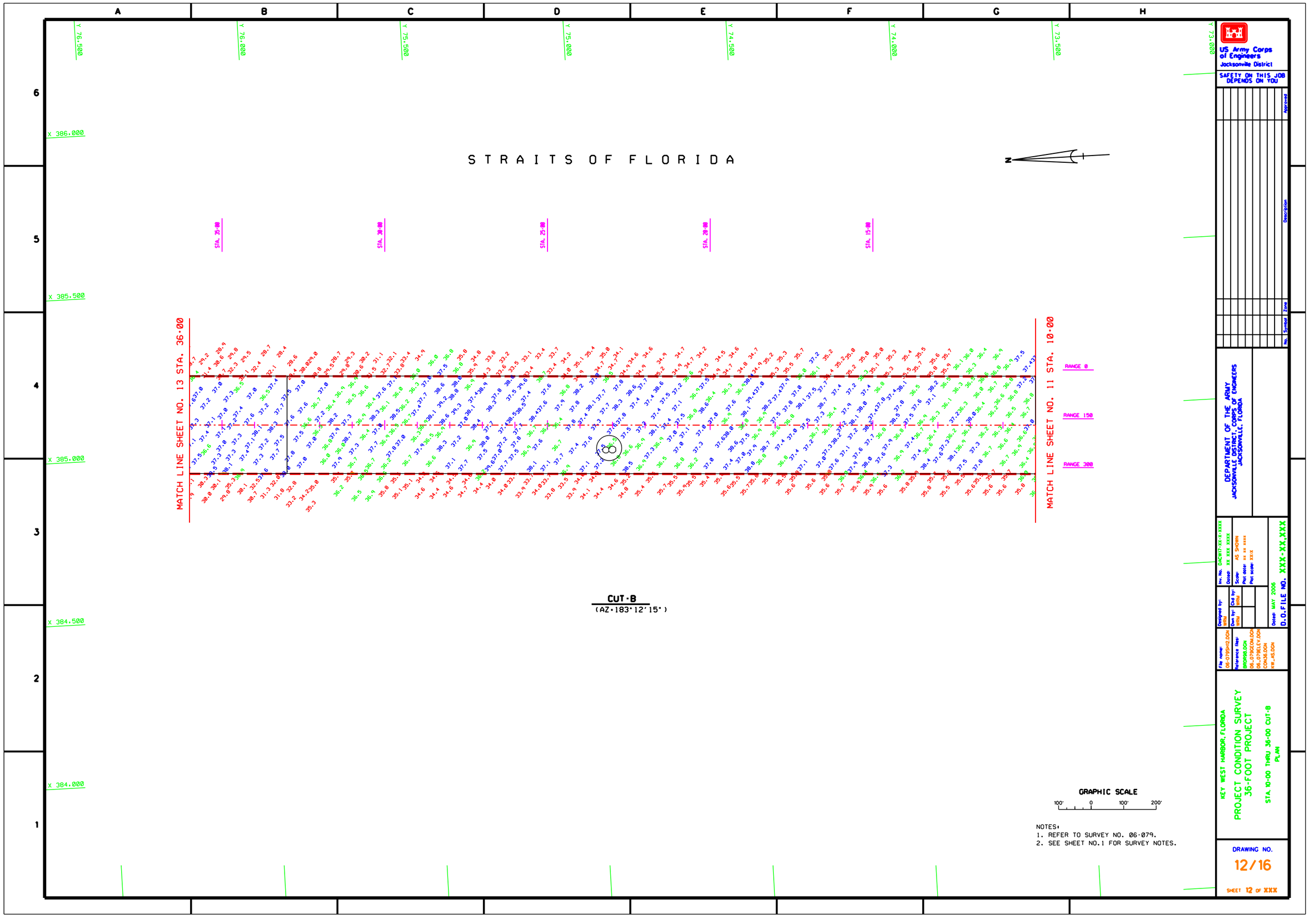

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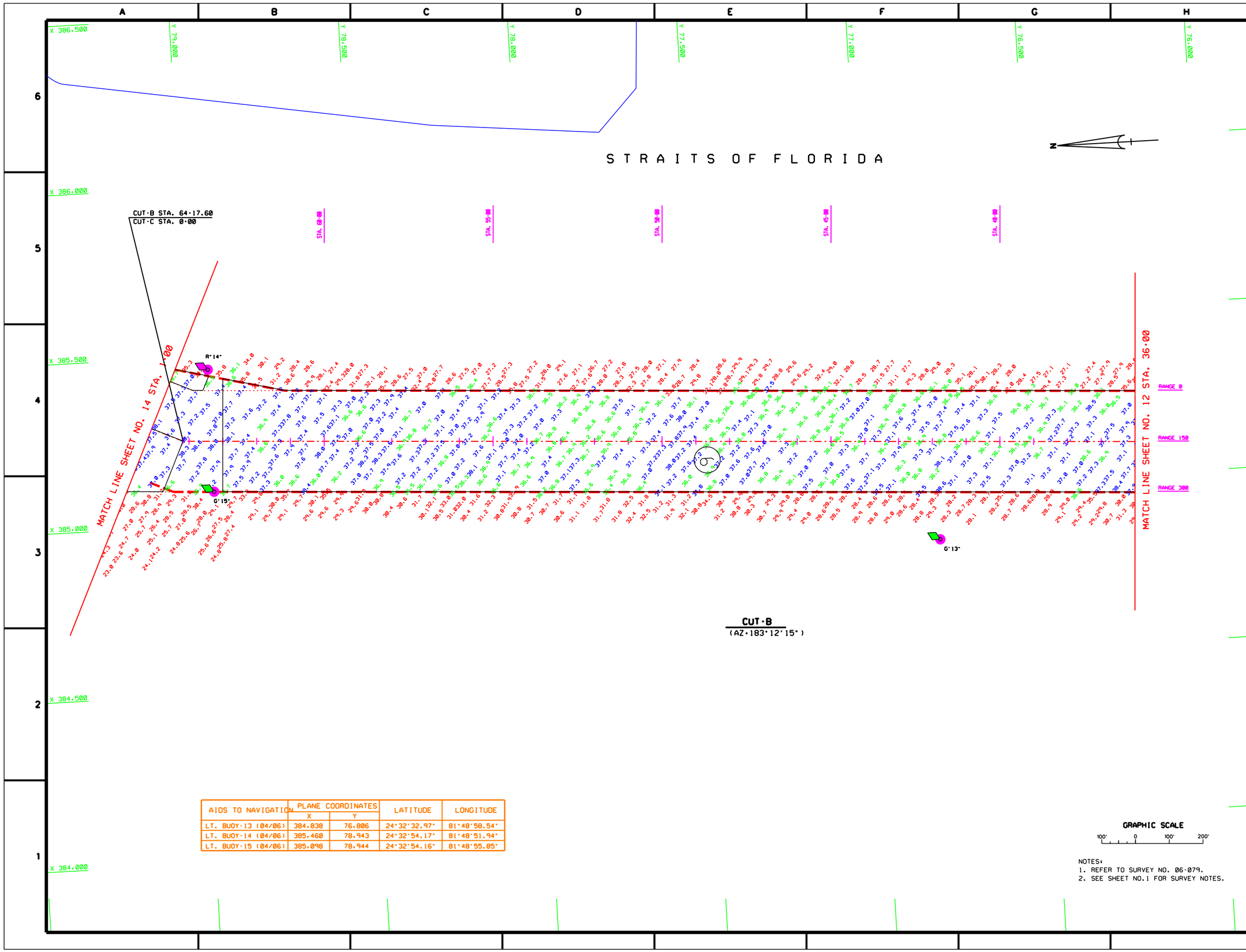

AIDS TO NAVIGATION	PLANE COORDINATES X	PLANE COORDINATES Y	LATITUDE	LONGITUDE
LT. BUOY-13 (04/06)	384.838	76.806	24°32'32.97"	81°48'58.54"
LT. BUOY-14 (04/06)	385.460	78.943	24°32'54.17"	81°48'51.94"
LT. BUOY-15 (04/06)	385.098	78.944	24°32'54.16"	81°48'55.85"

NOTES:
1. REFER TO SURVEY NO. 06-079.
2. SEE SHEET NO.1 FOR SURVEY NOTES.

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: WRM
Dwn by: WRM
Ckd by: WRM
Dated: MAY 2006
D.O.FILE NO. XXX-XX,XXX

KEY WEST HARBOR, FLORIDA
PROJECT CONDITION SURVEY
36-FOOT PROJECT
STA. 36+00 CUT-B THRU STA. 1+00 CUT-C
PLAN

DRAWING NO.
13/16
SHEET 13 OF XXX

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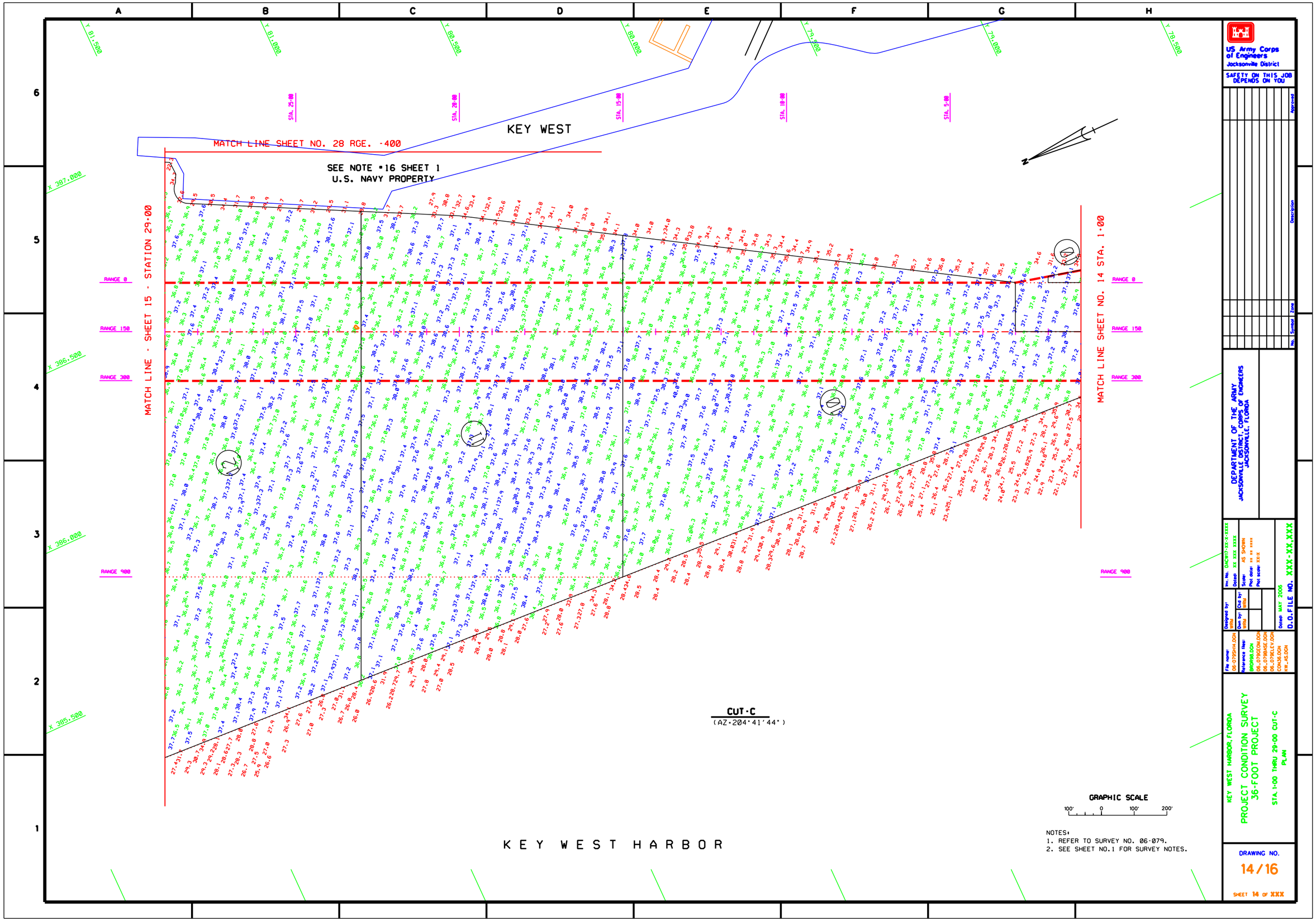

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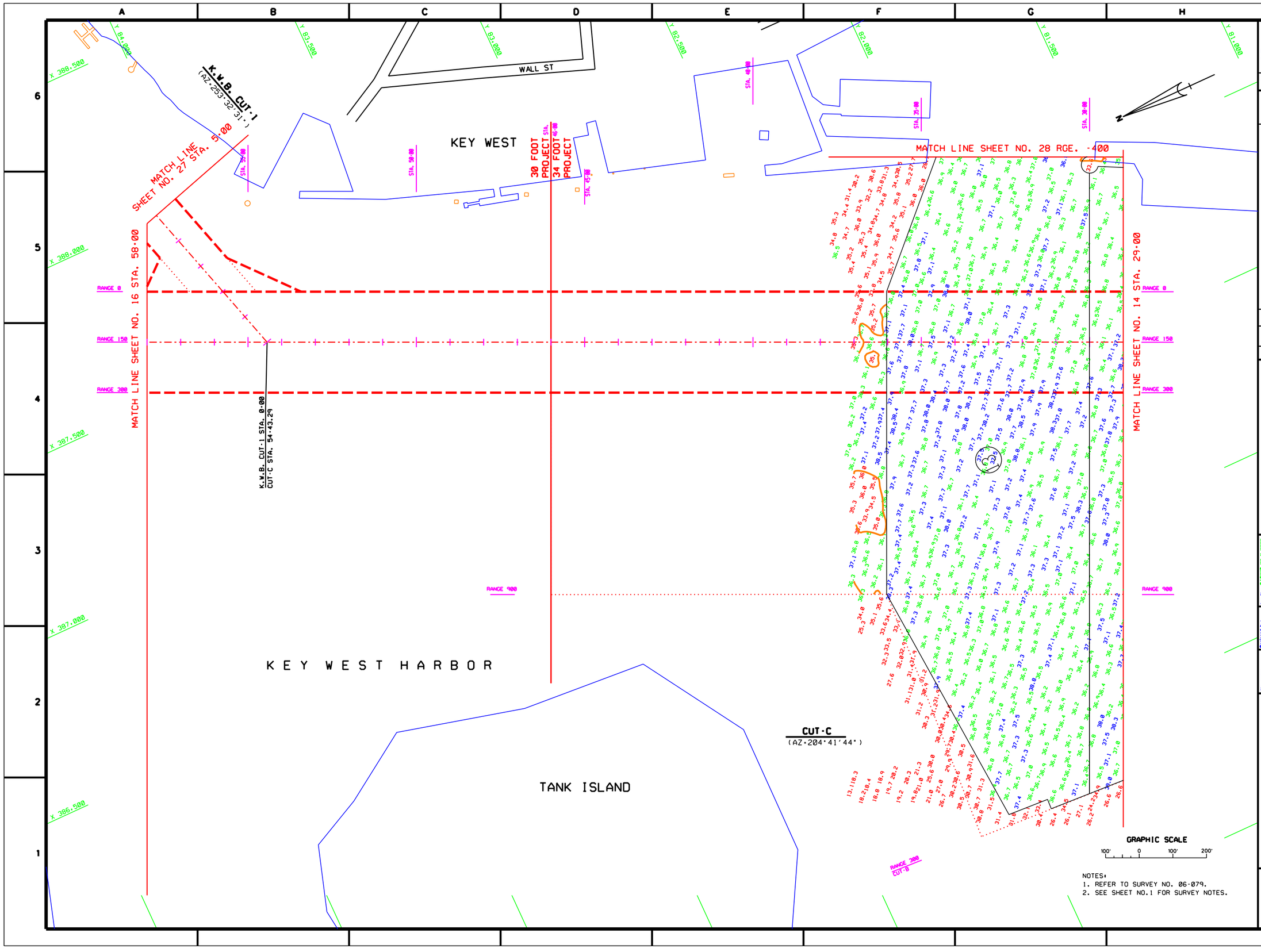

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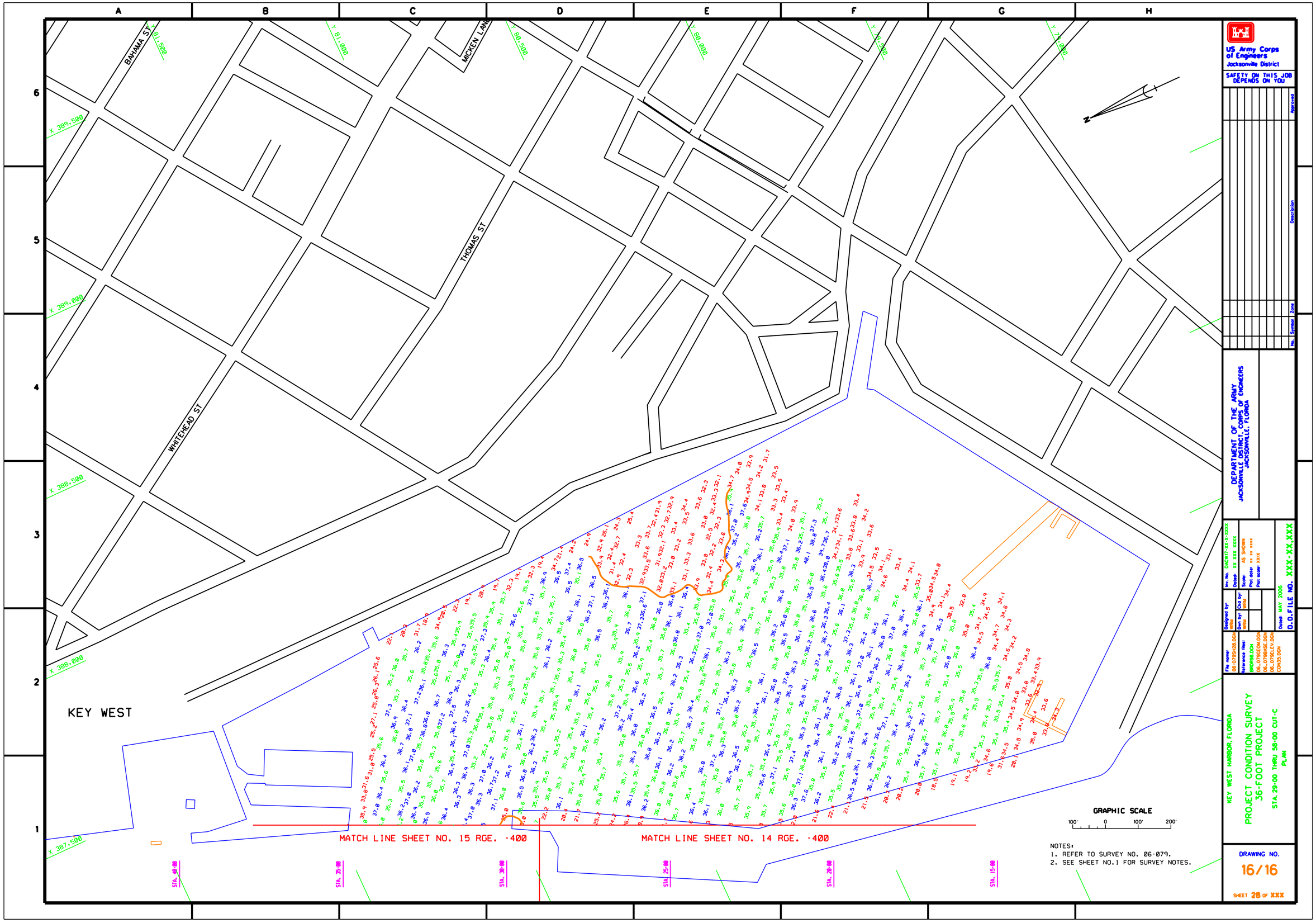

NOTES:
1. REFER TO SURVEY NO. 06-079.
2. SEE SHEET NO.1 FOR SURVEY NOTES.

US Army Corps of Engineers
Jacksonville District

SAFETY ON THIS JOB DEPENDS ON YOU

No.	Symbol	Zone	Description	Approved

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

Designed by: WRM
Dwn by: WRM
Ckd by: WRM
Inv. No. DACW17-XX-X-XXXX
Dated: XX XXX XXXX
Scale: AS SHOWN
Plot date: xx xx xxxx
Plot scale: XX:X

File name: 06-079SH28.DGN
Reference files: BRDR98.DGN 06_079GEOM.DGN 06_079BASE.DGN 06_079ELEV.DGN CON35.DGN

Dated: MAY 2006
D.O.FILE NO. XXX-XX,XXX

KEY WEST HARBOR, FLORIDA
PROJECT CONDITION SURVEY
36-FOOT PROJECT
STA. 29+00 THRU 58+00 CUT-C
PLAN

DRAWING NO.
16/16
SHEET 28 OF XXX

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