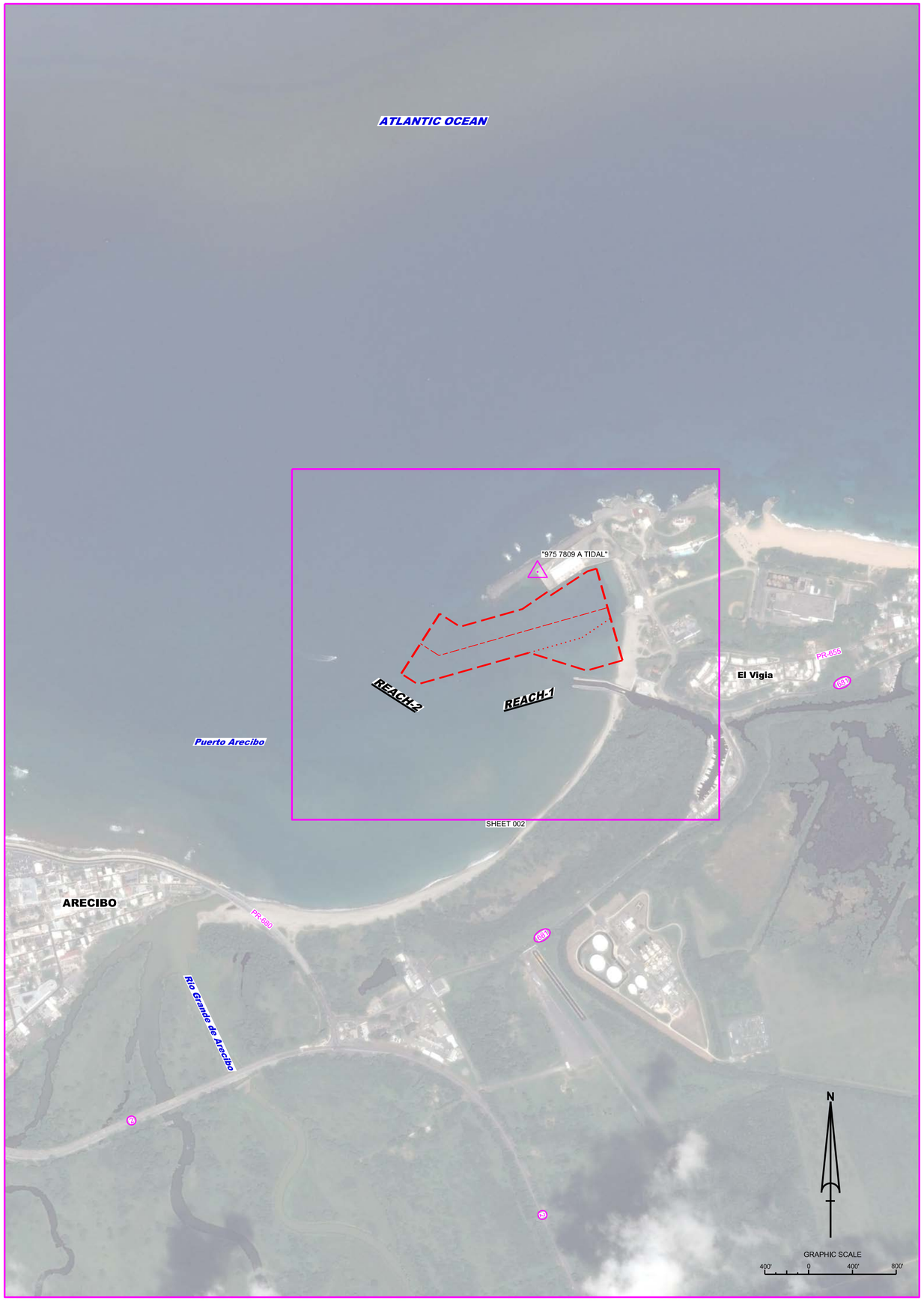
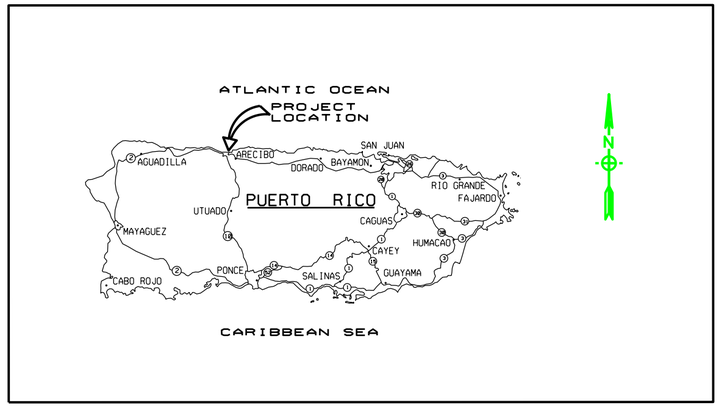




L O C A T I O N M A P

ARECIBO HARBOR
ARECIBO, PUERTO RICO
PROJECT CONDITION SURVEY FY19
25-FOOT PROJECT

SURVEY NOTES

1. REFER TO SURVEY NO. 19-085.
2. TIDAL REDUCTIONS WERE OBTAINED UTILIZING REAL-TIME KINEMATIC (RTK) GPS AND REFERENCED TO MLLW USING AN ORTHOMETRIC HEIGHT OF 0.81'. A MEASURE DOWN POINT FROM SURVEY MONUMENT "975 7809 B TIDAL" (PID: DO1528), LOCATED AT THE SW CORNER OF THE SEAWALL, WAS USED TO VERIFY RTK TIDES PRIOR TO SURVEYING.
3. ALL ELEVATIONS ARE BELOW THE CHART DATUM UNLESS PRECEDED BY A (+) SIGN.
4. PLANE COORDINATES ARE BASED ON THE LAMBERT CONIC PROJECTION FOR PUERTO RICO AND THE U.S. VIRGIN ISLANDS AND REFERENCED TO THE NORTH AMERICAN DATUM OF 1983 (NAD83).
5. THE NGS FIRST-ORDER ELEVATION AT "872 7809 B TIDAL" AND THE KTD FILE "ARECIBO-20180607.KTD" WAS USED TO CALCULATE THE MLLW ELEVATION AT THE STATION (5.76' NAVD88 ELEV. + 0.81' ORTHOMETRIC HEIGHT CORRECTION = 6.57')
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 "975-7809 A TIDAL" (PID: DO1529)
8. DEPTHS DEPICTED BY THIS SURVEY ARE REFERENCED TO MLLW, TIDAL EPOCH 1983-2001, AS REPORTED BY THE NATIONAL OCEANIC AND ATMOSPHERIC ADMIONISTRATION (NOAA). NOAA'S VDATUM MODEL WAS USED AND CALIBRATED TO THE PUBLISHED MLLW HEIGHTS OF THE BENCH MARK ASSOCIATED WITH THE TIDE GAUGE SITE SPECIFIED BELOW:

   NOAA TIDAL STATION 975-7809 B TIDAL FOR REACH 1 AND 2 (PID: DO1528)
9. VERTICAL MEASUREMENTS WERE MADE USING A ROSS SMART SOUNDER DUAL-FREQUENCY 28/200 KHZ SINGLE-BEAM TRANSDUCER. SOUNDINGS SHOWN ARE IN HIGH FREQUENCY (200KHZ).

VESSEL	DATE OF SURVEY	CUT
SB-34	01 FEB 2019	REACH 1 & 2

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.

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

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: WRM
Dwn by: WRM
Ckd by: GMR
Inv. No. W912EP-XX-X-XXXX
Dated: FEB 2019

XXXXXXXXXXXXXXXXXX.DGN
XXXXXXXXXXXXXXXXXX.DGN
XXXXXXXXXXXXXXXXXX.DGN
XXXXXXXXXXXXXXXXXX.DGN
XXXXXXXXXXXXXXXXXX.DGN
XXXXXXXXXXXXXXXXXX.DGN
ARECIBO HARBOR-C-NGMCCF.DGN
19-085-C-BS-BROR.DGN
Reference files:
19-085-VP-001.DGN
File series:

ARECIBO HARBOR
ARECIBO, PUERTO RICO

PROJECT CONDITION SURVEY FY19
25-FOOT PROJECT

INDEX, LOCATION AND VICINITY

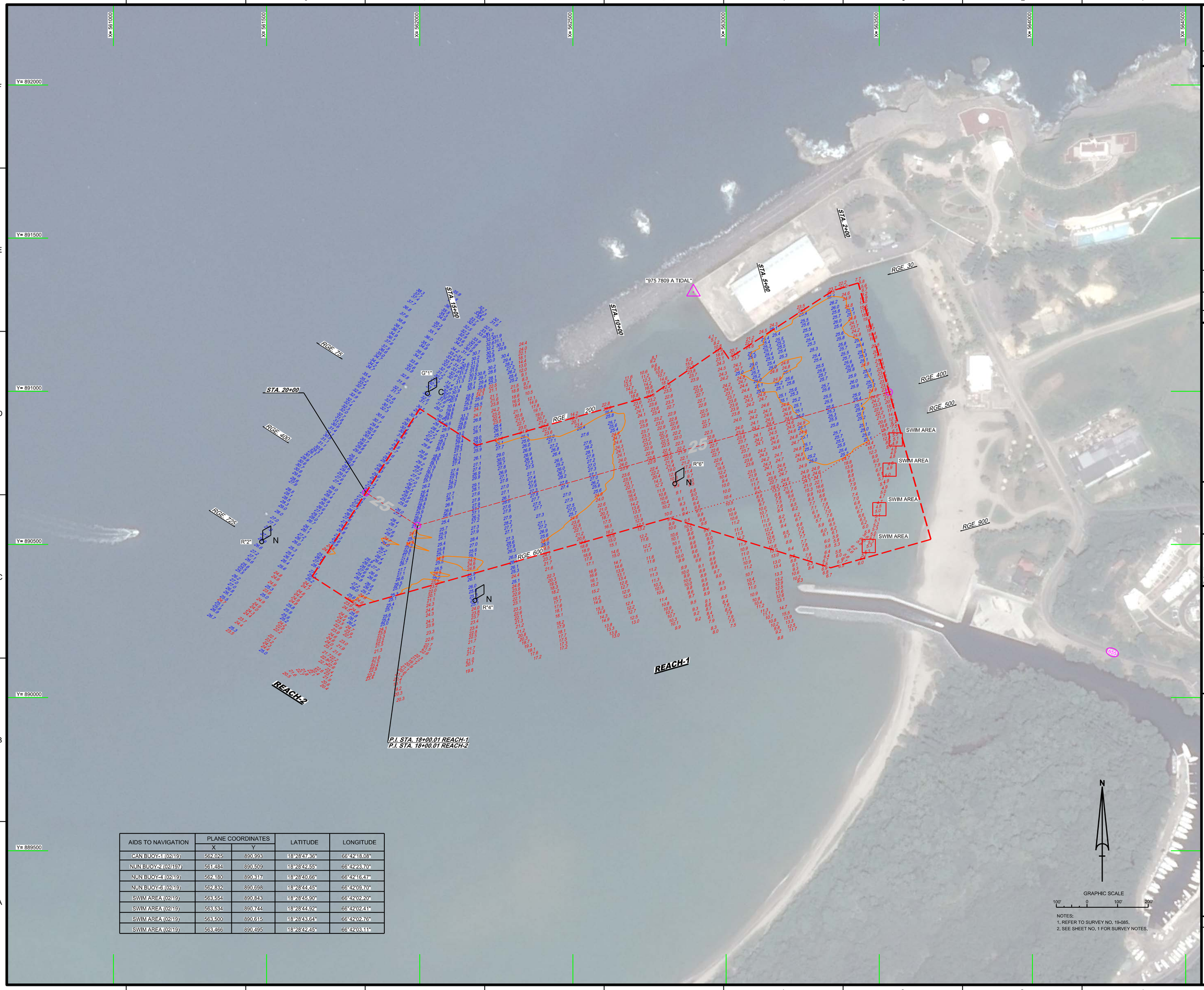
MAP

Scale: AS SHOWN

Drawing no.

1

SHEET 01 OF 02



AIDS TO NAVIGATION	PLANE COORDINATES		LATITUDE	LONGITUDE
	X	Y		
CAN BUOY-1 (02/19)	562,025	890,993	18°28'47.36"	66°42'18.08"
NUN BUOY-2 (02/197)	561,484	890,509	18°28'42.55"	66°42'23.70"
NUN BUOY-4 (02/19)	562,180	890,317	18°28'40.66"	66°42'16.47"
NUN BUOY-6 (02/19)	562,832	890,698	18°28'44.45"	66°42'09.70"
SWIM AREA (02/19)	563,554	890,843	18°28'45.90"	66°42'02.20"
SWIM AREA (02/19)	563,534	890,744	18°28'44.92"	66°42'02.41"
SWIM AREA (02/19)	563,500	890,615	18°28'43.64"	66°42'02.76"
SWIM AREA (02/19)	563,466	890,495	18°28'42.45"	66°42'03.11"

GRAPHIC SCALE

100' 0 100' 200'

NOTES:
1. REFER TO SURVEY NO. 19-085.
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
Rev. No.: V0912EP-XX-X-XXXX
Date: FEB 2019

XXXXXXXXXX-XXXXXX.DGN
19-085-V-NAV.DGN
19-085-V-C-CONZ.DGN
19-085-V-C-CONZ_REACH-1.DGN
19-085-V-SOUN_REACH2.DGN
ARECIBO HARBOR-C-XSGMCCF.DGN
19-085-C-ES-BNDR.DGN
Reference files:
19-085-V-H-002.DGN
File name:

ARECIBO HARBOR
ARECIBO, PUERTO RICO

PROJECT CONDITION SURVEY FY19
25-FOOT PROJECT

STA. 2+00 REACH-1 THRU STA. 20+00.01 REACH-2

PLAN

Scale: AS SHOWN

Drawing no.

2

SHEET 02 OF 02