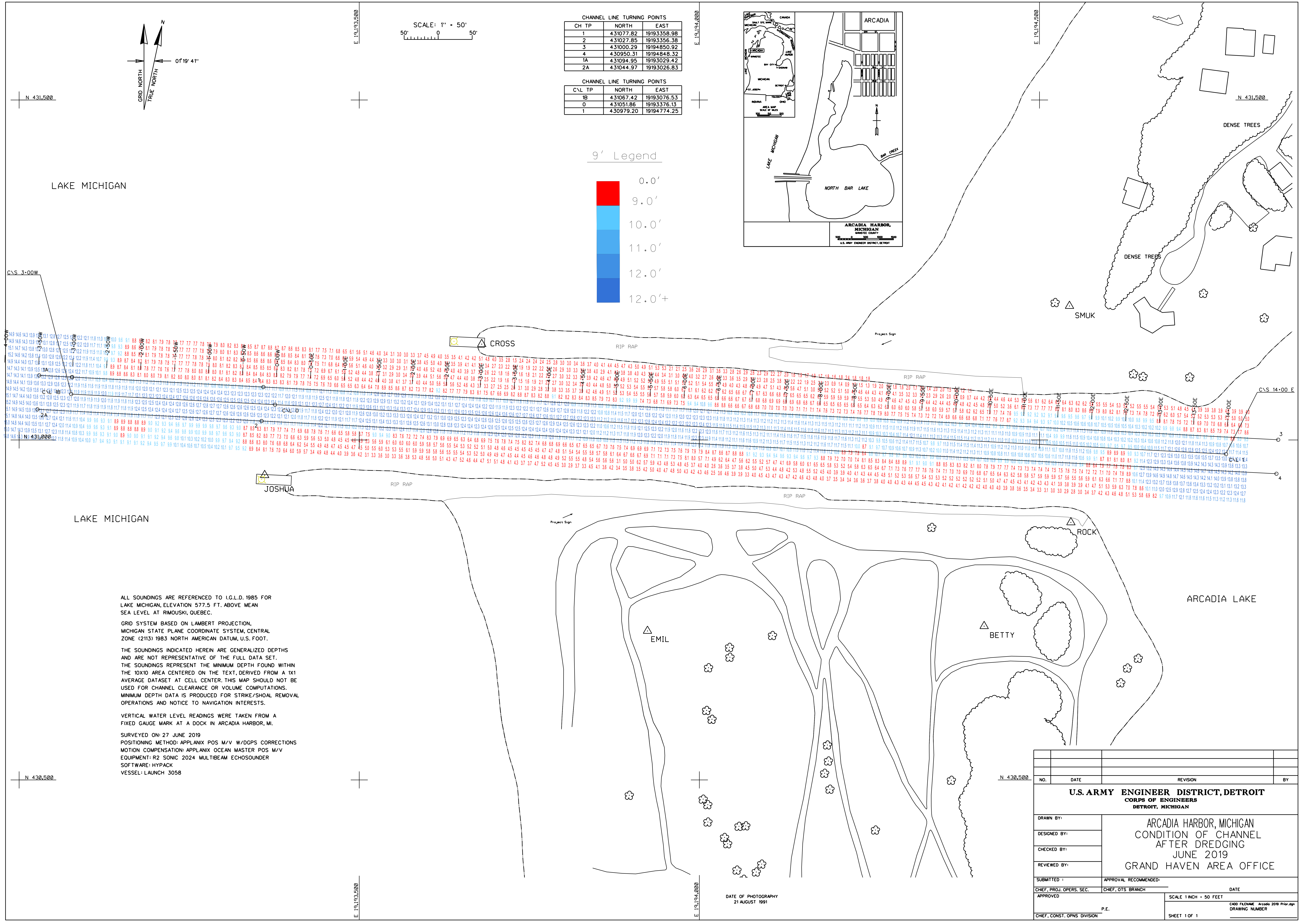
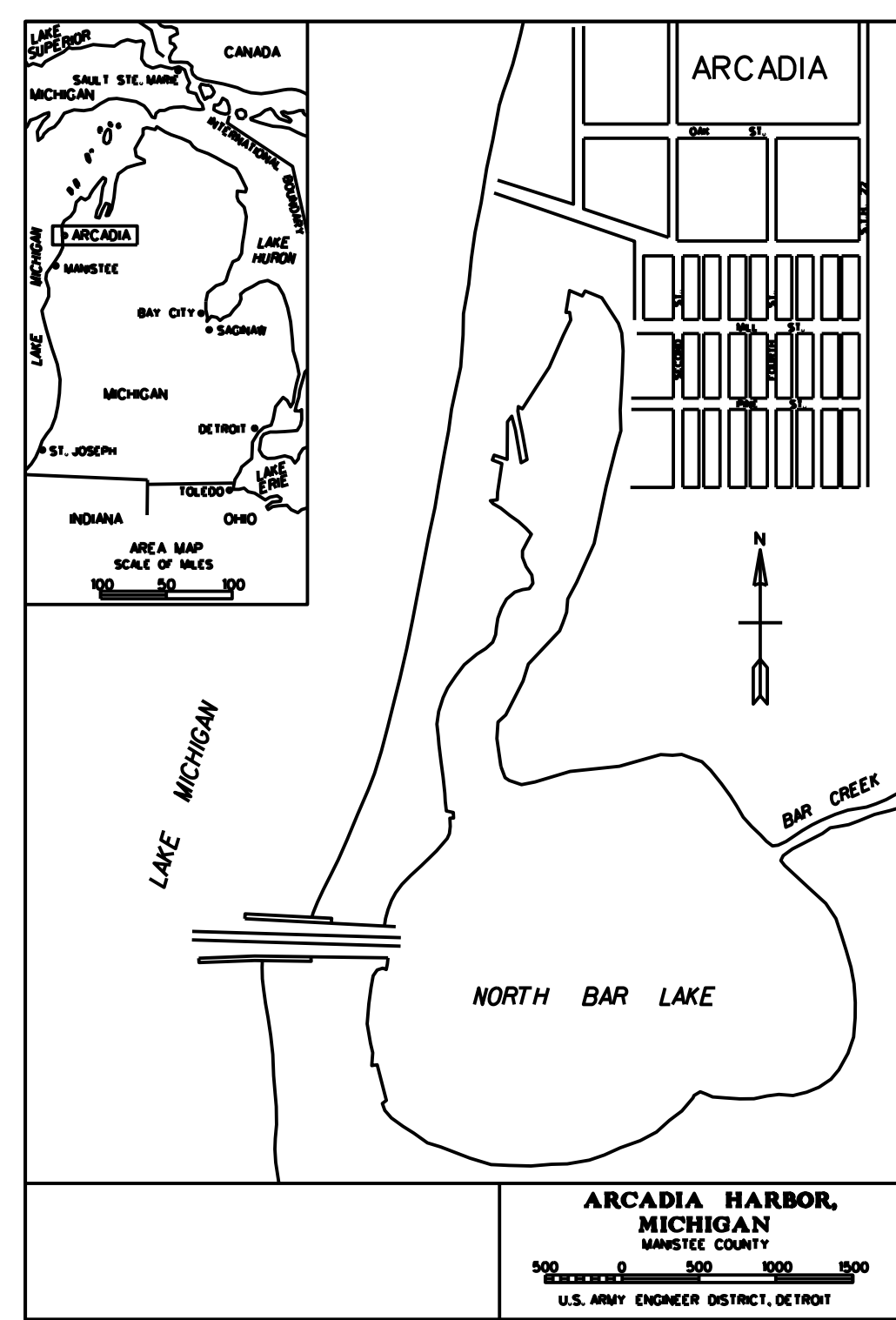
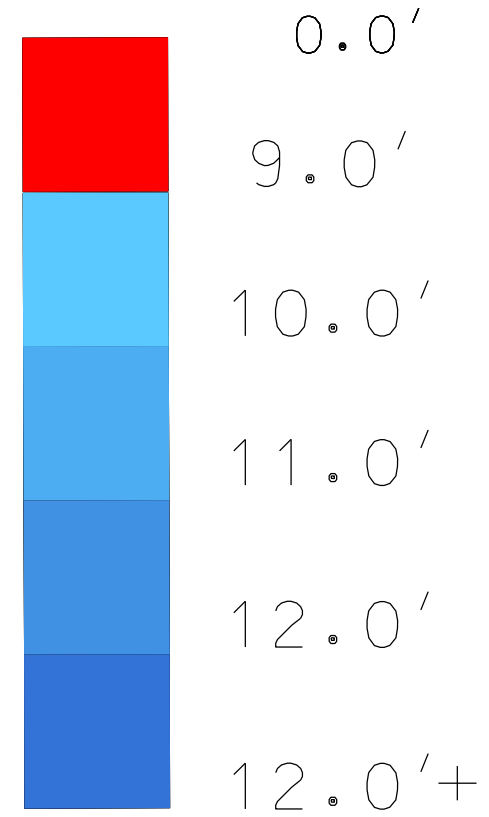


SCALE: 1" = 50'

CHANNEL LINE TURNING POINTS			
CH TP	NORTH	EAST	
1	4.31077.82	19193358.98	
2	4.31027.85	19193356.38	
3	4.31000.29	19194850.92	
4	4.30950.31	19194848.32	
1A	4.31094.95	19193029.42	
2A	4.31044.97	19193026.83	

CHANNEL LINE TURNING POINTS			
C/L TP	NORTH	EAST	
0	4.31051.86	19193376.13	
1	4.30979.20	19194774.25	

9' Legend



ALL SOUNDINGS ARE REFERENCED TO I.G.L.D. 1985 FOR LAKE MICHIGAN, ELEVATION 577.5 FT. ABOVE MEAN SEA LEVEL AT RIMOUSKI, QUEBEC.

GRID SYSTEM BASED ON LAMBERT PROJECTION, MICHIGAN STATE PLANE COORDINATE SYSTEM, CENTRAL ZONE (2113) 1983 NORTH AMERICAN DATUM, U.S. FOOT.

THE SOUNDINGS INDICATED HEREIN ARE GENERALIZED DEPTHS AND ARE NOT REPRESENTATIVE OF THE FULL DATA SET. THE SOUNDINGS REPRESENT THE MINIMUM DEPTH FOUND WITHIN THE 10X10 AREA CENTERED ON THE TEXT, DERIVED FROM A 1X1 AVERAGE DATASET AT CELL CENTER. THIS MAP SHOULD NOT BE USED FOR CHANNEL CLEARANCE OR VOLUME COMPUTATIONS. MINIMUM DEPTH DATA IS PRODUCED FOR STRIKE/SOHAL REMOVAL OPERATIONS AND NOTICE TO NAVIGATION INTERESTS.

VERTICAL WATER LEVEL READINGS WERE TAKEN FROM A FIXED GAUGE MARK AT A DOCK IN ARCADIA HARBOR, M.

SURVEYED ON: 27 JUNE 2019  
 POSITIONING METHOD: APPLANIX POS M/V W/DGPS CORRECTIONS  
 MOTION COMPENSATION: APPLANIX OCEAN MASTER POS M/V  
 EQUIPMENT: R2 SONIC 2024 MULTIBEAM ECHOSOUNDER  
 SOFTWARE: HYPACK  
 VESSEL: LAUNCH 3058

NO.	DATE	REVISION	BY
<b>U.S. ARMY ENGINEER DISTRICT, DETROIT</b> CORPS OF ENGINEERS DETROIT, MICHIGAN			
DRAWN BY:		<b>ARCADIA HARBOR, MICHIGAN</b> CONDITION OF CHANNEL AFTER DREDGING JUNE 2019 GRAND HAVEN AREA OFFICE	
DESIGNED BY:			
CHECKED BY:			
REVIEWED BY:			
SUBMITTED:		APPROVAL RECOMMENDED:	
CHIEF, PROJ. OPERS. SEC.		CHIEF, OTS BRANCH	
APPROVED		DATE	
P.E.		SCALE 1 INCH = 50 FEET	
CHIEF, CONST. OPNS DIVISION		SHEET 1 OF 1	

DATE OF PHOTOGRAPHY  
21 AUGUST 1991