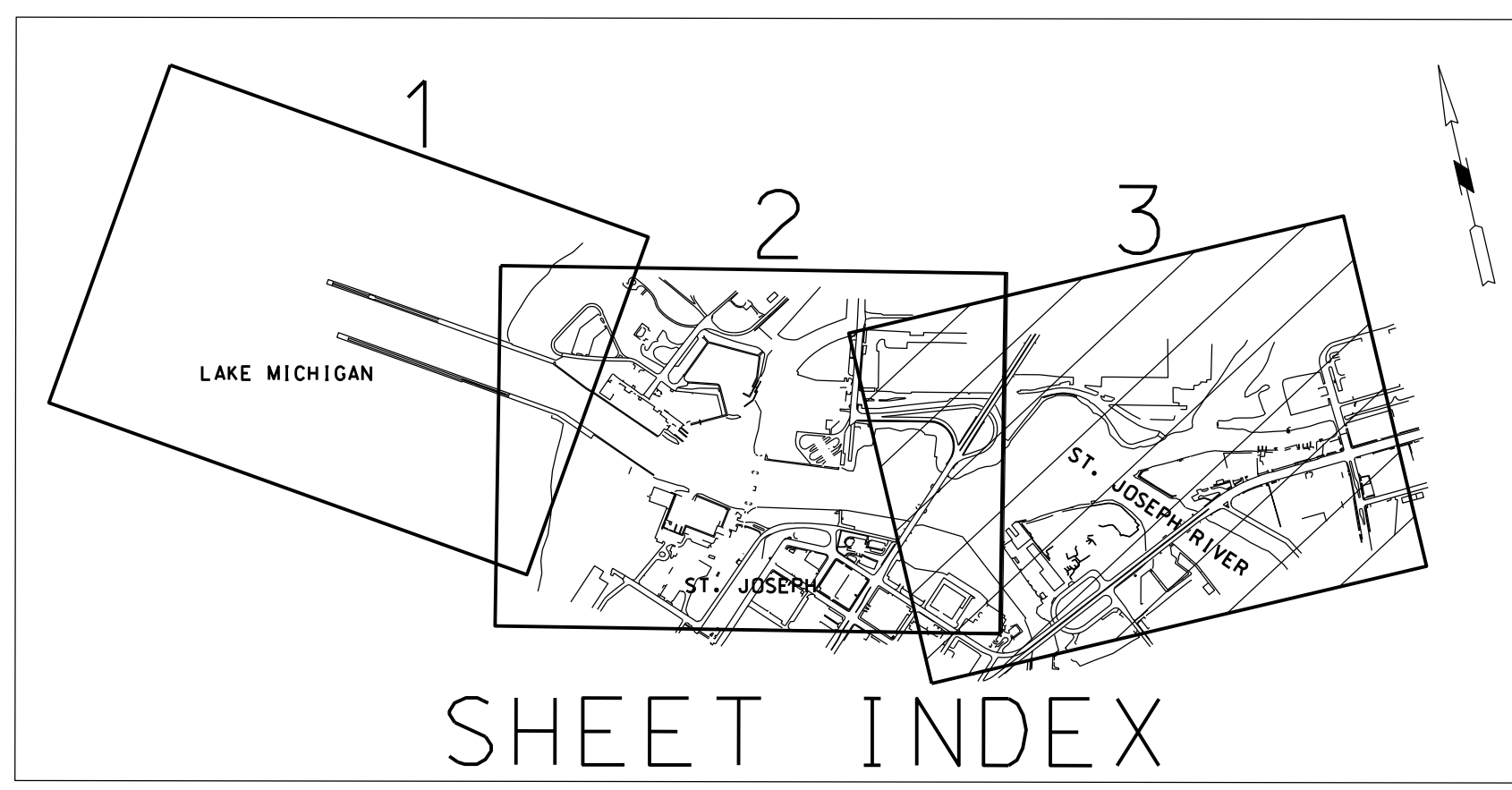
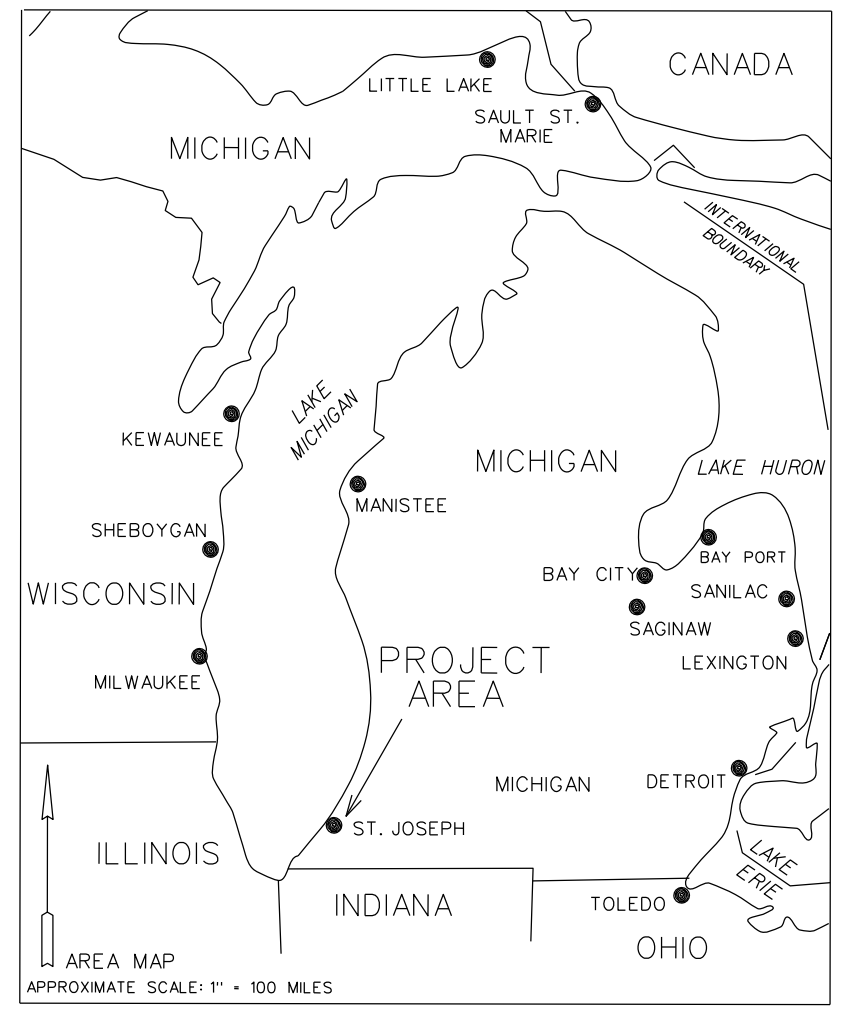


GRID SCALE FACTOR: 0.99999696  
 GRID DIST. DIVIDED BY GRID  
 SCALE FACTOR = GROUND DIST.



ALL SOUNDINGS ARE REFERENCED TO I.G.L.D. 1985 FOR LAKE MICHIGAN, ELEVATION 577.5 FT. ABOVE MEAN SEA LEVEL AT RIMOUSKI, QUEBEC. HYDRAULIC CORRECTOR APPLIED 0.3 FT.

STATE PLANE COORDINATE SYSTEM, SOUTH ZONE (2113) 1983 NORTH AMERICAN DATUM, U.S. SURVEY FOOT.

THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF SURVEYS MADE ON THE DATES INDICATED AND CAN ONLY BE CONSIDERED AS INDICATING THE GENERAL CONDITIONS EXISTING AT THAT TIME.

VERTICAL WATER LEVEL READINGS WERE TAKEN FROM A FIXED GAUGE MARK ALONG THE SHEET STEEL WALL NEAR CROSS SECTION 35+50E IN ST. JOSEPH HARBOR, MI.

CHANNEL LINE T.P.			
T.P.	EAST X	NORTH Y	
9	12,550,274.71	230,442.84	
11	12,550,506.19	230,367.29	
12	12,550,256.82	230,228.37	
13	12,550,559.42	230,332.78	
14	12,550,407.60	230,295.32	
15	12,550,606.81	230,326.50	
16	12,550,459.98	230,288.39	
17	12,551,066.12	230,387.91	
18	12,550,627.35	230,180.90	
19	12,551,929.24	230,612.93	
20	12,550,974.26	230,136.81	
21	12,552,550.19	230,775.79	
22	12,551,794.52	230,319.96	
23	12,551,863.28	230,450.57	
24	12,551,971.49	230,566.60	
25-A	12,552,573.43	230,734.91	
26	12,551,931.69	230,297.31	
27	12,552,169.36	230,151.82	
28	12,552,268.56	230,313.86	
30	12,551,991.36	230,483.55	
32	12,552,013.74	230,520.27	
34	12,552,652.30	230,689.81	
36	12,553,257.46	230,729.17	
36-A	12,553,562.77	230,818.83	
TB-2	12,551,452.36	230,981.58	
TB-3	12,551,549.45	231,005.81	
PT. D	12,550,901.09	230,146.16	
PT. E	12,551,789.02	230,344.35	
PT. F	12,551,944.74	230,318.63	
PT. G	12,551,997.33	230,286.44	
PT. H	12,551,984.28	230,265.12	
PT. I	12,552,083.47	230,427.16	

CENTER LINE T.P.			
T.P.	EAST X	NORTH Y	
CL-3	12,550,265.77	230,335.61	
CL-4	12,550,488.32	230,337.16	
CL-5	12,550,617.08	230,253.70	
CL-6	12,551,020.19	230,262.39	
CL-7	12,551,863.28	230,450.57	
CL-8	12,551,971.49	230,566.60	
CL-9	12,552,573.43	230,734.91	
CL-10	12,553,250.73	230,768.88	
CL-11	12,553,551.50	230,857.27	
CL-7A	12,552,218.96	230,232.84	

21' Legend		18' Legend	
0.0'	21.0'	0.0'	18.0'
22.0'	23.0'	19.0'	20.0'
24.0'	25.0'+	21.0'	21.0'+

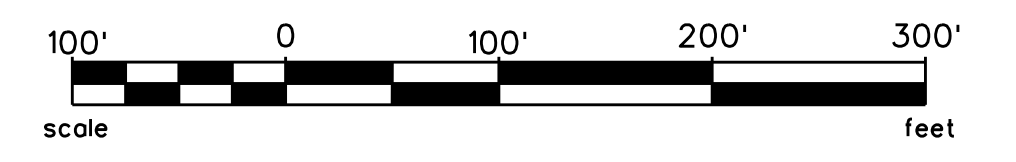
CROSS SECTION 30+50 THROUGH 45+25 SURVEYED ON: 6 APRIL 2015  
 CROSS SECTION 45+50 THROUGH 4+00 SURVEYED ON: 22 APRIL 2015  
 POSITIONING METHOD: DGPS, USING C.G. BEACON CORRECTIONS  
 VESSEL: LAUNCH 3033

PROJECT DEPTH 18 FT.  
 PROJECT DEPTH 21 FT.

CHANNEL LIMITS SHOWN THUS: ---  
 18 FT. CONTOUR SHOWN THUS: ---  
 21 FT. CONTOUR SHOWN THUS: ---



DATE OF PHOTOGRAPHY  
 19 JULY 1992



NO.	DATE	REVISION	BY
<b>U.S. ARMY ENGINEER DISTRICT, DETROIT</b> CORPS OF ENGINEERS DETROIT, MICHIGAN			
DRAWN BY ERIC SCHMIDT		<b>ST. JOSEPH HARBOR, MICHIGAN</b> <b>CONDITION OF CHANNEL</b>  APRIL 2015 GRAND HAVEN AREA OFFICE	
DESIGNED BY			
CHECKED BY			
REVIEWED:			
SUBMITTED:			
APPROVAL RECOMMENDED:		DATE	
CHEF, PROJ. OPERS. SEC.		CHEF, OTS BRANCH	
APPROVED		SCALE 1" = 100'	
CHEF, CONST. OPNS. DIVISION		SHEET 3 OF 3	