DATE OF PHOTOGRAPHY
19 JULY 1992

PROJECT DEPTH 21 FT.

CHANNEL LIMITS SHOWN THUS:

21 FT. CONTOUR SHOWN THUS:

SURVEYED ON: 16 MAY 2012
POSITIONING SYSTEM: DGPS USING C. G. BEACON CORRECTIONS
VESSEL: LAUNCH 3033

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 OF 0.3 FT. APPLIED

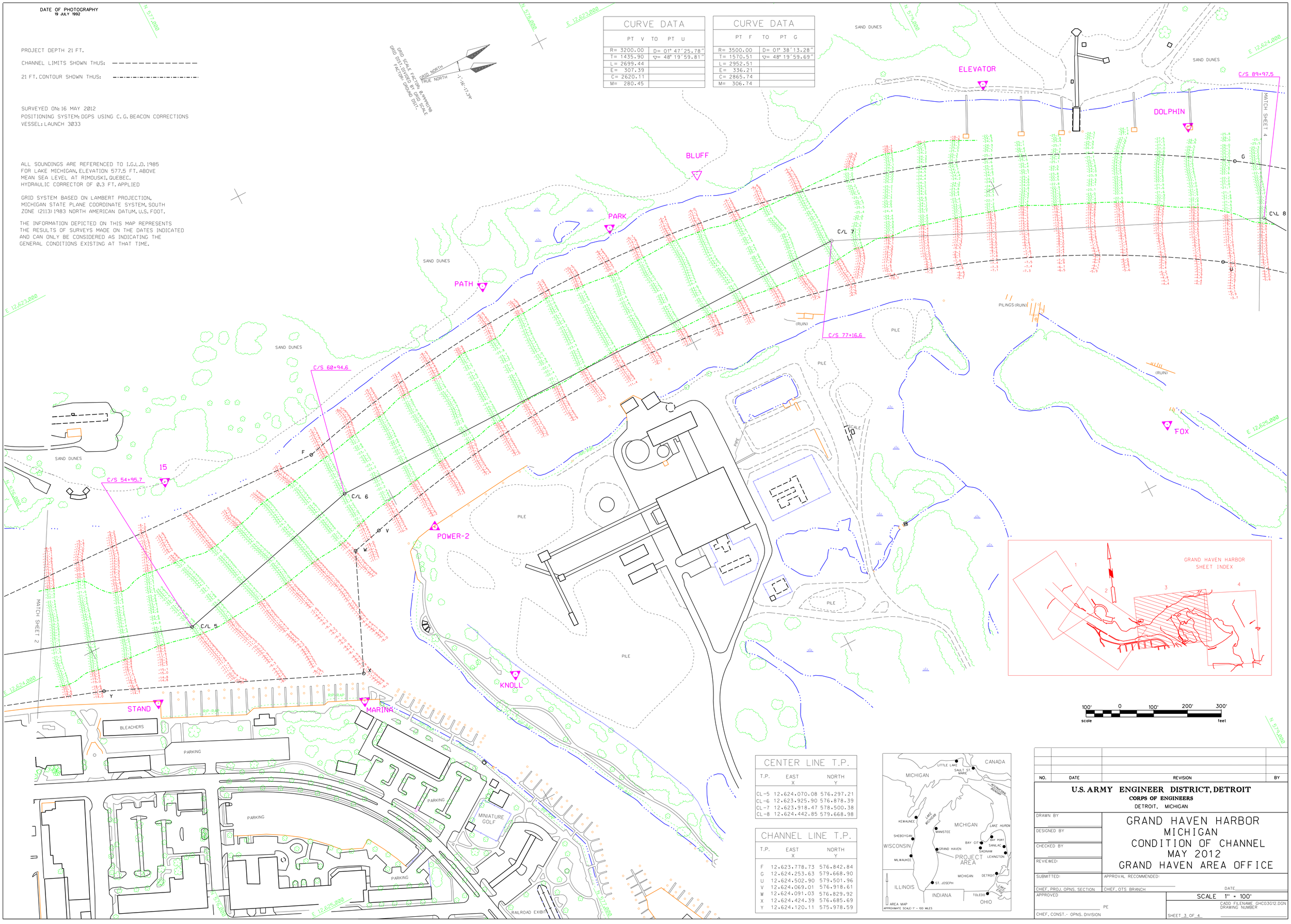
GRID SYSTEM BASED ON LAMBERT PROJECTION, MICHIGAN STATE PLANE COORDINATE SYSTEM, SOUTH ZONE (2113) 1983 NORTH AMERICAN DATUM, U.S. FOOT.

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.

GRID SCALE FACTOR: 0.999968
GRID DISTANCE DIVIDED BY GRID SCALE FACTOR GROUND DIST.
GRID NORTH
TRUE NORTH
1°16'17.39"

CURVE DATA	
PT V TO PT U	
R= 3200.00	D= 01° 47' 25.78"
T= 1435.90	▽= 48° 19' 59.81"
L= 2699.44	
E= 307.39	
C= 2620.11	
M= 280.45	

CURVE DATA	
PT F TO PT G	
R= 3500.00	D= 01° 38' 13.28"
T= 1570.51	▽= 48° 19' 59.69"
L= 2952.51	
E= 336.21	
C= 2865.74	
M= 306.74	



CENTER LINE T.P.		
T.P.	EAST X	NORTH Y
CL-5	12.624.070.08	576.297.21
CL-6	12.623.925.90	576.878.39
CL-7	12.623.918.47	578.500.38
CL-8	12.624.442.85	579.668.98

CHANNEL LINE T.P.		
T.P.	EAST X	NORTH Y
F	12.623.778.73	576.842.84
G	12.624.253.63	579.668.90
U	12.624.502.90	579.501.96
V	12.624.069.01	576.918.61
W	12.624.091.03	576.829.92
X	12.624.424.39	576.685.69
Y	12.624.120.11	575.978.59

NO.	DATE	REVISION	BY

U.S. ARMY ENGINEER DISTRICT, DETROIT
CORPS OF ENGINEERS
DETROIT, MICHIGAN

GRAND HAVEN HARBOR
MICHIGAN
CONDITION OF CHANNEL
MAY 2012
GRAND HAVEN AREA OFFICE

DRAWN BY
DESIGNED BY
CHECKED BY
REVIEWED:
SUBMITTED:
CHIEF, PROJ. OPNS. SECTION

APPROVAL RECOMMENDED:
CHIEF, OTS BRANCH
DATE

APPROVED
PE
CHIEF, CONST.- OPNS. DIVISION

SCALE 1" = 100'
CADD FILENAME GHC03C12.DGN
DRAWING NUMBER
SHEET 3 OF 4