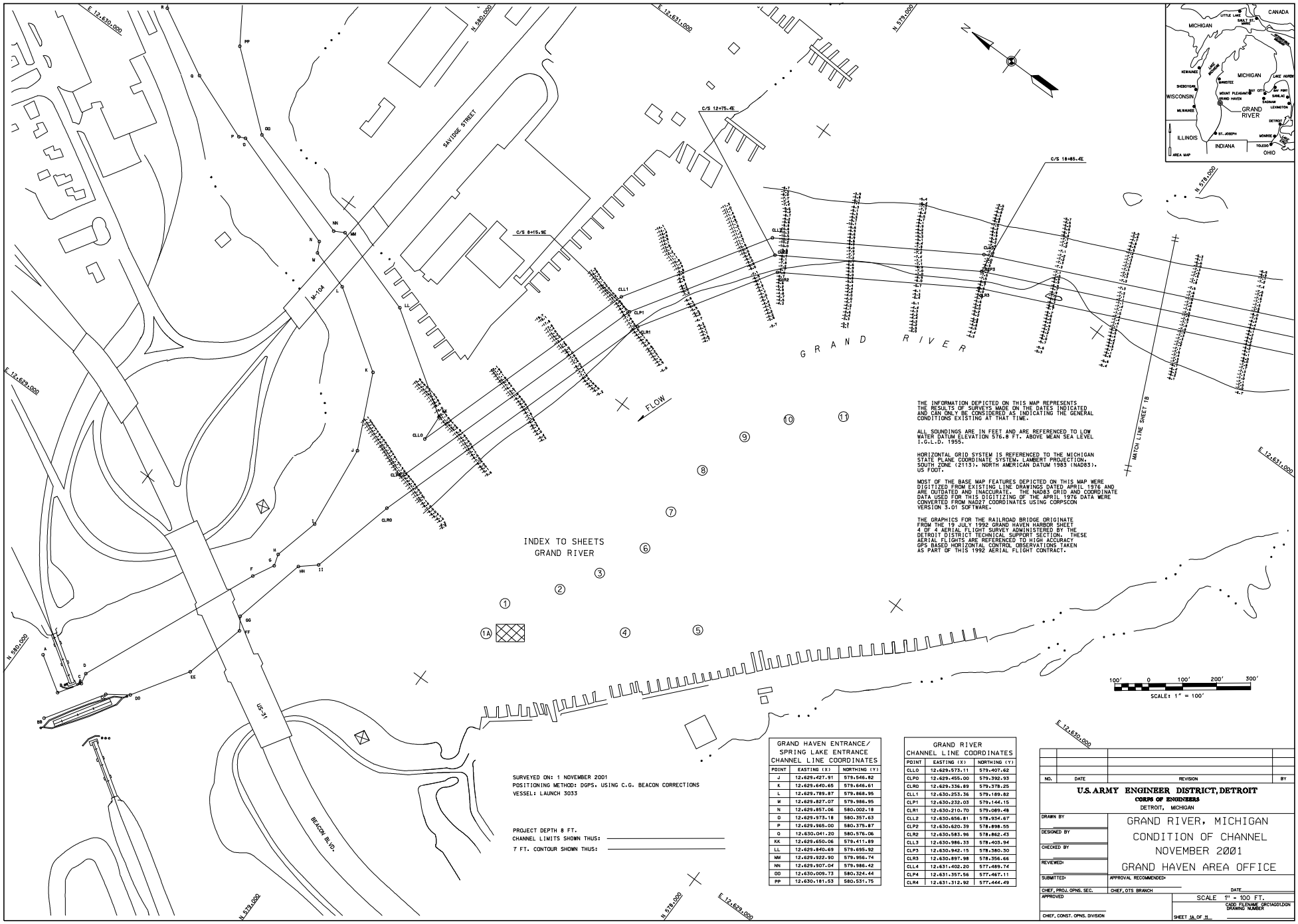

THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF SURVEYS MADE ON THE DATES INDICATED AND CAN ONLY BE CONSIDERED AS INDICATING THE GENERAL CONDITIONS EXISTING AT THAT TIME.

ALL SOUNDINGS ARE IN FEET AND ARE REFERENCED TO LOW WATER DATUM ELEVATION 576.8 FT. ABOVE MEAN SEA LEVEL I.G.L.D. 1955.

HORIZONTAL GRID SYSTEM IS REFERENCED TO THE MICHIGAN STATE PLANE COORDINATE SYSTEM- LAMBERT PROJECTION, SOUTH ZONE (2113), NORTH AMERICAN DATUM 1983 (NAD83), US FOOT.

MOST OF THE BASE MAP FEATURES DEPICTED ON THIS MAP WERE DIGITIZED FROM EXISTING LINE DRAWINGS DATED APRIL 1976 AND ARE OUTDATED AND INACCURATE. THE NAD83 GRID AND COORDINATE DATA USED FOR THIS DIGITIZING OF THE APRIL 1976 DATA WERE CONVERTED FROM NAD27 COORDINATES USING CORPSCON VERSION 3.01 SOFTWARE.

THE GRAPHICS FOR THE RAILROAD BRIDGE ORIGINATE FROM THE 19 JULY 1992 GRAND HAVEN HARBOR SHEET 4 OF 4 AERIAL FLIGHT SURVEY ADMINISTERED BY THE DETROIT DISTRICT TECHNICAL SUPPORT SECTION. THESE AERIAL FLIGHTS ARE REFERENCED TO HIGH ACCURACY GPS BASED HORIZONTAL CONTROL OBSERVATIONS TAKEN AS PART OF THIS 1992 AERIAL FLIGHT CONTRACT.

SURVEYED ON: 1 NOVEMBER 2001
POSITIONING METHOD: DGPS, USING C.G. BEACON CORRECTIONS
VESSEL: LAUNCH 3033

PROJECT DEPTH 8 FT.
CHANNEL LIMITS SHOWN THUS: _____
7 FT. CONTOUR SHOWN THUS: _____

GRAND HAVEN ENTRANCE/ SPRING LAKE ENTRANCE CHANNEL LINE COORDINATES

POINT	EASTING (X)	NORTHING (Y)
J	12,629,427.51	579,546.82
K	12,629,640.65	579,646.61
L	12,629,789.87	579,868.95
M	12,629,827.07	579,986.95
N	12,629,857.06	580,002.18
O	12,629,973.18	580,357.63
P	12,629,965.00	580,375.87
Q	12,630,041.20	580,576.06
KK	12,629,650.06	579,411.89
LL	12,629,840.69	579,695.92
MM	12,629,922.90	579,956.74
NN	12,629,907.04	579,986.42
OO	12,630,009.73	580,324.44
PP	12,630,181.53	580,531.75

GRAND RIVER CHANNEL LINE COORDINATES

POINT	EASTING (X)	NORTHING (Y)
CLL0	12,629,573.11	579,407.62
CLP0	12,629,455.00	579,392.93
CLR0	12,629,336.89	579,378.25
CLL1	12,630,253.36	579,189.82
CLP1	12,630,232.03	579,144.15
CLR1	12,630,210.70	579,089.48
CLL2	12,630,656.81	578,934.67
CLP2	12,630,620.39	578,898.55
CLR2	12,630,583.96	578,862.43
CLL3	12,630,986.33	578,403.94
CLP3	12,630,942.15	578,360.30
CLR3	12,630,897.98	578,356.66
CLL4	12,631,402.20	577,489.74
CLP4	12,631,357.56	577,467.11
CLR4	12,631,312.92	577,444.49

NO.	DATE	REVISION	BY

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

GRAND RIVER, MICHIGAN
CONDITION OF CHANNEL
NOVEMBER 2001
GRAND HAVEN AREA OFFICE

DRAWN BY
DESIGNED BY
CHECKED BY
REVIEWED:
SUBMITTED:
CHIEF, PROJ. OPNS. SEC.
APPROVED
CHIEF, CONST. OPNS. DIVISION
APPROVAL RECOMMENDED:
CHIEF, OTS BRANCH
DATE
SCALE 1" = 100 FT.
CADD FILENAME GRC1A001.DGN
DRAWING NUMBER
SHEET 1A OF 11