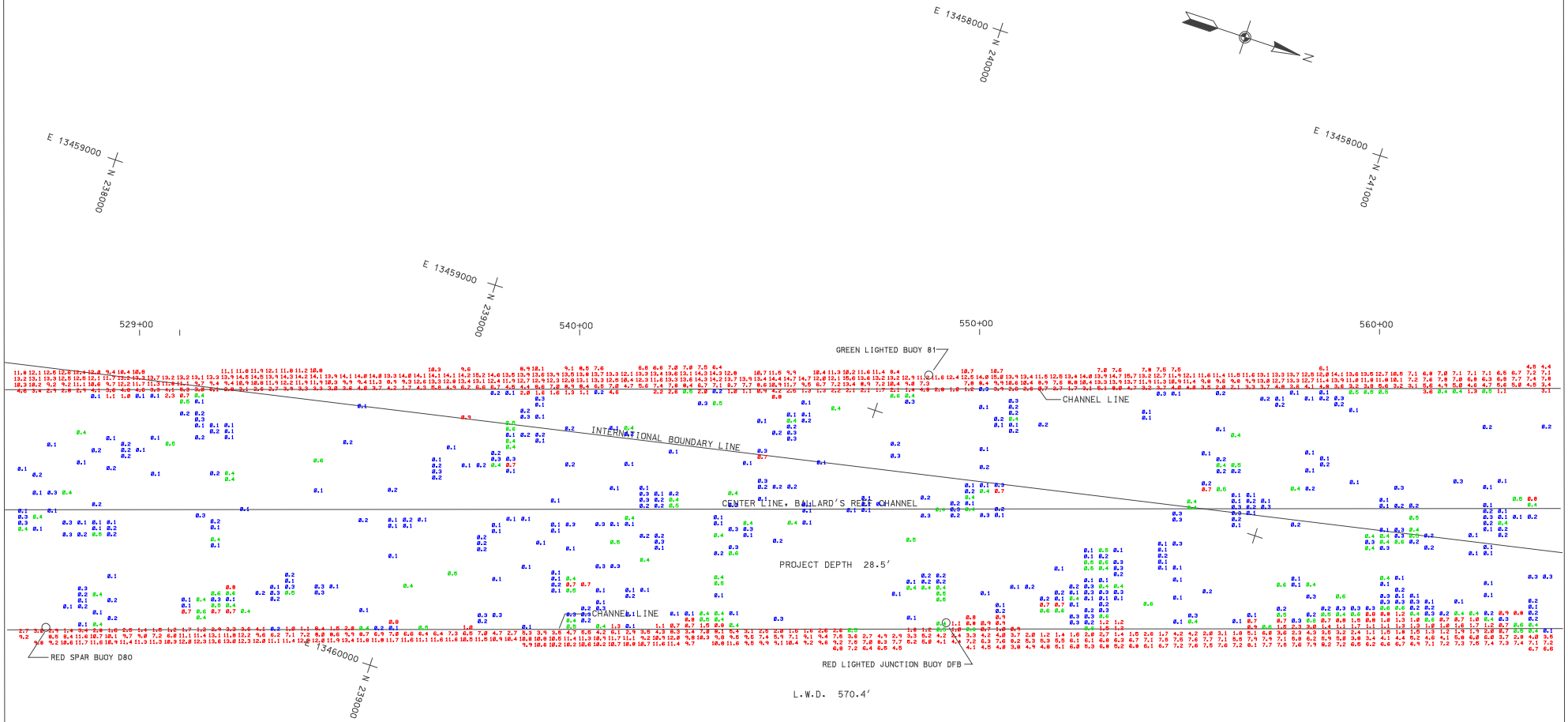

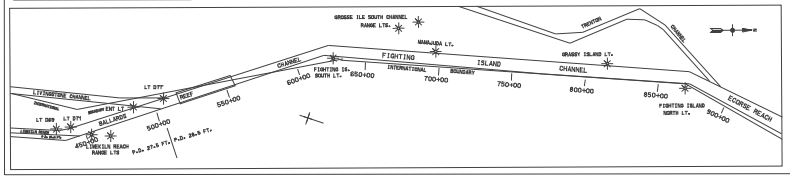

LEGEND

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 AT THE TIME.

LOW WATER DATUM

ELEVATIONS AND PROJECT DEPTHS ARE AS SHOWN ON THE SHEET. THEY ARE REFERRED TO INTERNATIONAL GREAT LAKES DATUM. (1985) .

GRID COORDINATES

GRIDS SHOWN ARE BASED ON NATIONAL GEODETIC SURVEY PROJECTION TABLES. STATE OF MICHIGAN. SOUTH ZONE (2113). LAMBERT PROJECTION. 1983 NORTH AMERICAN DATUM.

DIRECTIONS

ALL DIRECTIONS ARE GRID AZIMUTHS REFERRED TO NORTH ZERO.

PROJECT DEPTHS ARE AS SHOWN ON DRAWING.

THE AUTOMATED ELECTRONIC SURVEY WAS CONDUCTED BY FRED LEECH. PARTY CHIEF. ABOARD THE USACOE SURVEY VESSEL WHEELER

AUTOMATED EQUIPMENT USED

POSITIONING:	TSS POS-MV
DATA PROCESSOR:	DELL 330 PC
SOFTWARE:	HYPACK
PLOTTER:	ENCAD CADJET 2
SONIC SOUNDER:	RESON SEABAT 8125

NOTES:

1. GAGES USED WERE OBTAINED ELECTRONICALLY FROM NOAA GAGE HOUSE AT WYANDOTTE VIA THE INTERNET.
2. POSITIONS WERE DETERMINED BY GPS REFERENCE BEACON 838. LOCATED AT FORT WAYNE DETROIT, MICHIGAN - FREQUENCY 319 KHZ. 200 BPS
3. DEPTH MEASURED USING SEABAT 8125 ULTRA HIGH RESOLUTION FOCUSED MULTIBEAM ECHOSOUNDER SYSTEM

100 50 0 100 200FT

SCALE: 1"= 100'

NO.	DATE	REVISION	BY

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

DETROIT AREA OFFICE — 9 JUNE 2004

DETROIT RIVER, MICHIGAN

BALLARD'S REEF CHANNEL
CS 529+00 TO CS 560+00
MULTI-BEAM SURVEY RESULTS
MINIMUM STRIKE PLOT

DESIGNED BY:
DRAWN BY:
CHECKED BY:
REVIEWED BY:
SUBMITTED BY: P.E.
CHIEF, PROJ DPNS SEC
APPROVED: P.E.
CHIEF, CONSTRUCTION - OPERATIONS DIVISION

APPROVAL RECOMMENDED: P.E. DATE
CHIEF, OPERATIONS MAINT BRANCH

SCALE AS SHOWN

SHEET 4 OF 6

DRAWING NUMBER Br4s0604.dgn