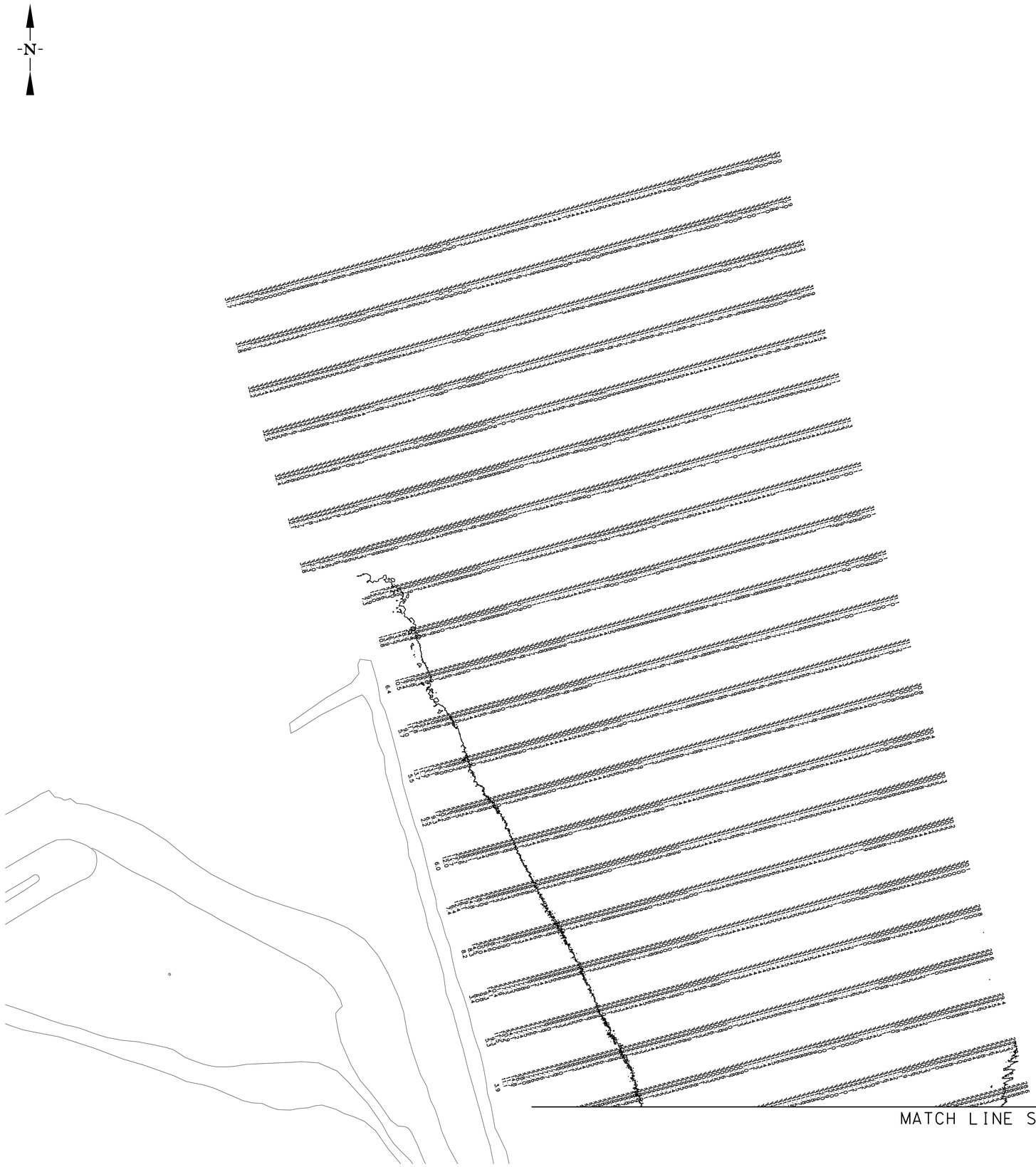

MATCH LINE SEE C-02

NOTES:

1. ALL DEPTHS ARE IN FEET AND ARE REFERENCED TO LOW WATER DATUM (LWD) FOR LAKE MICHIGAN BASED ON BENCHMARK "80-5" WHICH HAS AN ELEVATION OF 585.84 FEET INTERNATIONAL GREAT LAKES DATUM (IGLD 1985) AS PROVIDED BY THE U.S. ARMY CORPS OF ENGINEERS. LOW WATER DATUM HAS AN ELEVATION OF 577.5 FEET PLUS A HYDRAULIC CORRECTOR OF 0.34 FEET ABOVE THE REFERENCE PLANE AT RIMOUSKY, QUEBEC, INTERNATIONAL GREAT LAKES DATUM, IGLD 1985. DEPTHS WERE DEVELOPED FROM ONE FOOT BY ONE FOOT BINNED DATA WITH THE AVERAGE DEPTH WITHIN EACH BIN POSTED IN THE CENTER OF THE BIN.

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4. THE SURVEY SHOWN WAS CONDUCTED BY OCEAN SURVEYS, INC. USING THE FOLLOWING:
   SURVEY VESSEL: R/V ABLE
   MULTIBEAM ECHOSOUNDER: RESON SEABAT 8125
   NAVIGATION SYSTEM: APPLANIX POS MV IN REAL TIME KINEMATIC MODE
   SURVEY ACQUISITION SOFTWARE: HYPACK VERSION 4.3
   SURVEY PROCESSING SOFTWARE: HYPACK MULTIBEAM EDITOR VERSION 2008

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100 50 0 100 200
1 INCH = 100 FEET

US Army Corps of Engineers
Chicago District

SYMBOL	AMENDMENT DESCRIPTION	DATE APPROVED	SYMBOL	DESCRIPTION	DATE APPROVED

DESIGNED BY: GA
DATE: 12 NOVEMBER 2008
DRAWN BY: AR
SCALE: AS SHOWN
CHECKED BY: ME
CONTRACT NUMBER: CELRC TS-C-T
MICHAEL ENGELS
SUBMITTED BY:
DATE: 11/12/08

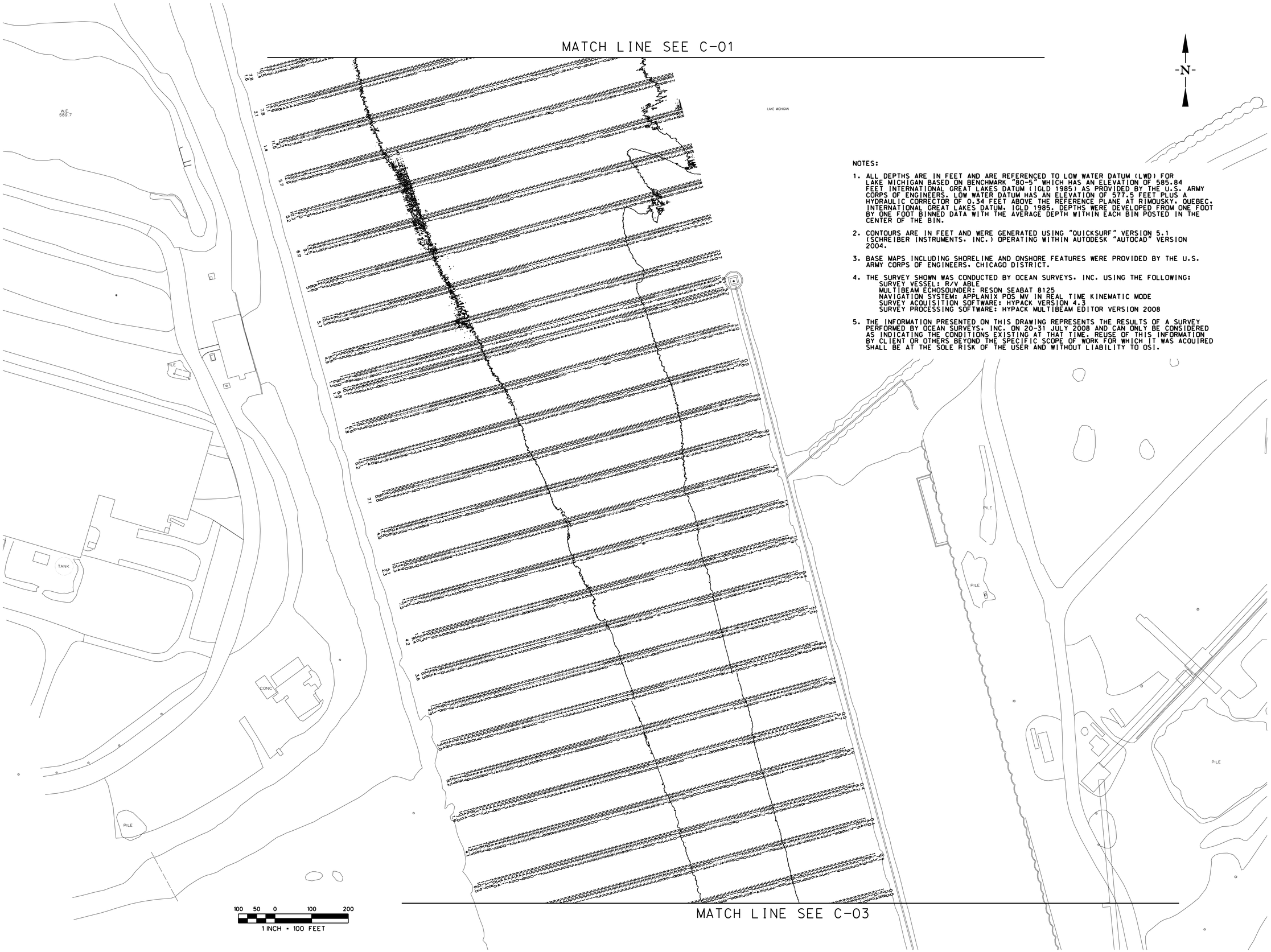
U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
CHICAGO, ILLINOIS

INDIANA HARBOR
CONDITION SURVEY
EAST CHICAGO, INDIANA

SOUNDINGS

SHEET REFERENCE NUMBER:
C-01
SHEET 01 OF 10

PLOT DATE: $DATE$
FILENAME: $FILENAME$



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   SURVEY ACQUISITION SOFTWARE: HYPACK VERSION 4.3
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US Army Corps of Engineers
Chicago District

SYMBOL	AMENDMENT DESCRIPTION	DATE APPROVED	SYMBOL	DESCRIPTION	DATE APPROVED

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
CHICAGO, ILLINOIS

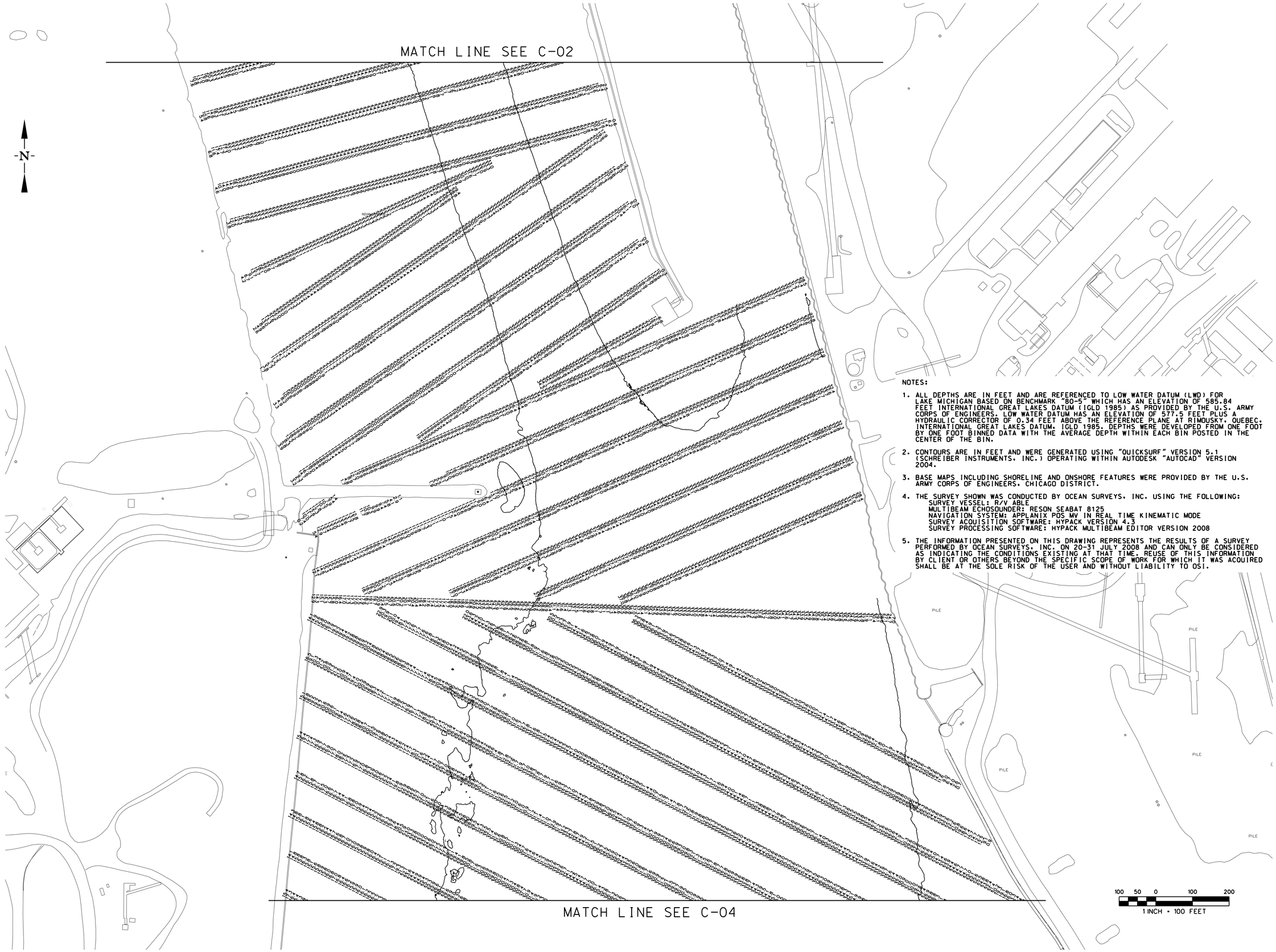
DESIGNED BY: GA
DATE: 12 NOVEMBER 2008
DRAWN BY: AR
SCALE: AS SHOWN
CHECKED BY: ME
CONTRACT NUMBER: CELRC TS-C-T
MICHAEL ENGELS
SUBMITTED BY:
DATE: 11/12/08

INDIANA HARBOR
CONDITION SURVEY
EAST CHICAGO, INDIANA

SOUNDINGS

SHEET REFERENCE NUMBER:
C-02
SHEET 02 OF 10

PLOT DATE: $DATE$
FILENAME: $FILENAME$



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   SURVEY PROCESSING SOFTWARE: HYPACK MULTIBEAM EDITOR VERSION 2008

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US Army Corps of Engineers
Chicago District

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DRAWN BY: AR — SCALE: AS SHOWN
CHECKED BY: ME — CONTRACT NUMBER: CELRC TS-C-T
SUBMITTED BY: MICHAEL ENGELS — DATE: 11/12/08

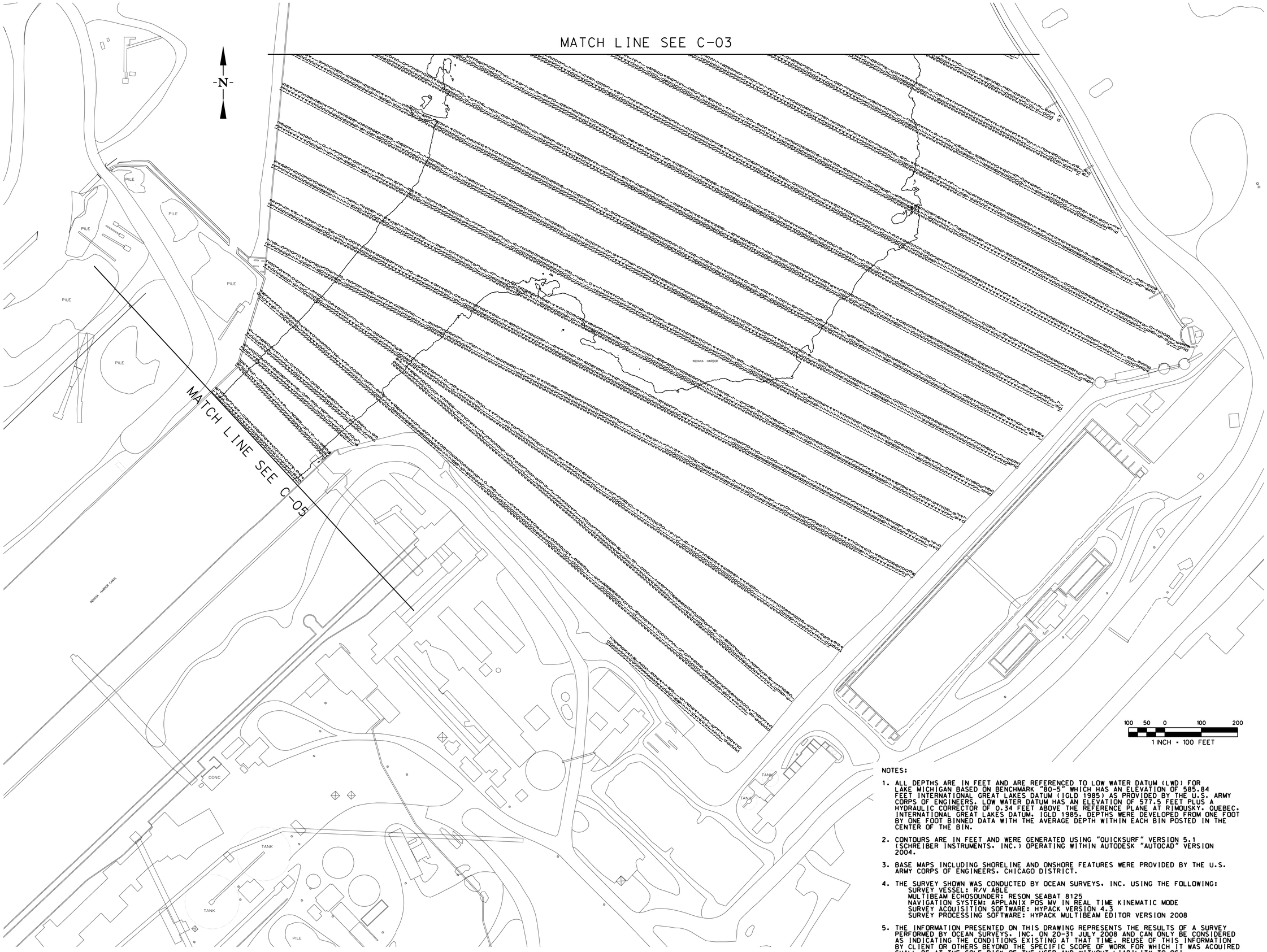
U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
CHICAGO, ILLINOIS

INDIANA HARBOR
CONDITION SURVEY
EAST CHICAGO, INDIANA

SOUNDINGS

SHEET REFERENCE NUMBER:
C-03
SHEET 03 OF 10

PLOT DATE: $DATE$
FILENAME: $FILENAME$



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US Army Corps of Engineers
Chicago District

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DRAWN BY: AR
SCALE: AS SHOWN
CHECKED BY: ME
CONTRACT NUMBER: CELRC TS-C-T
MICHAEL ENGELS
DATE: 11/12/08
SUBMITTED BY:

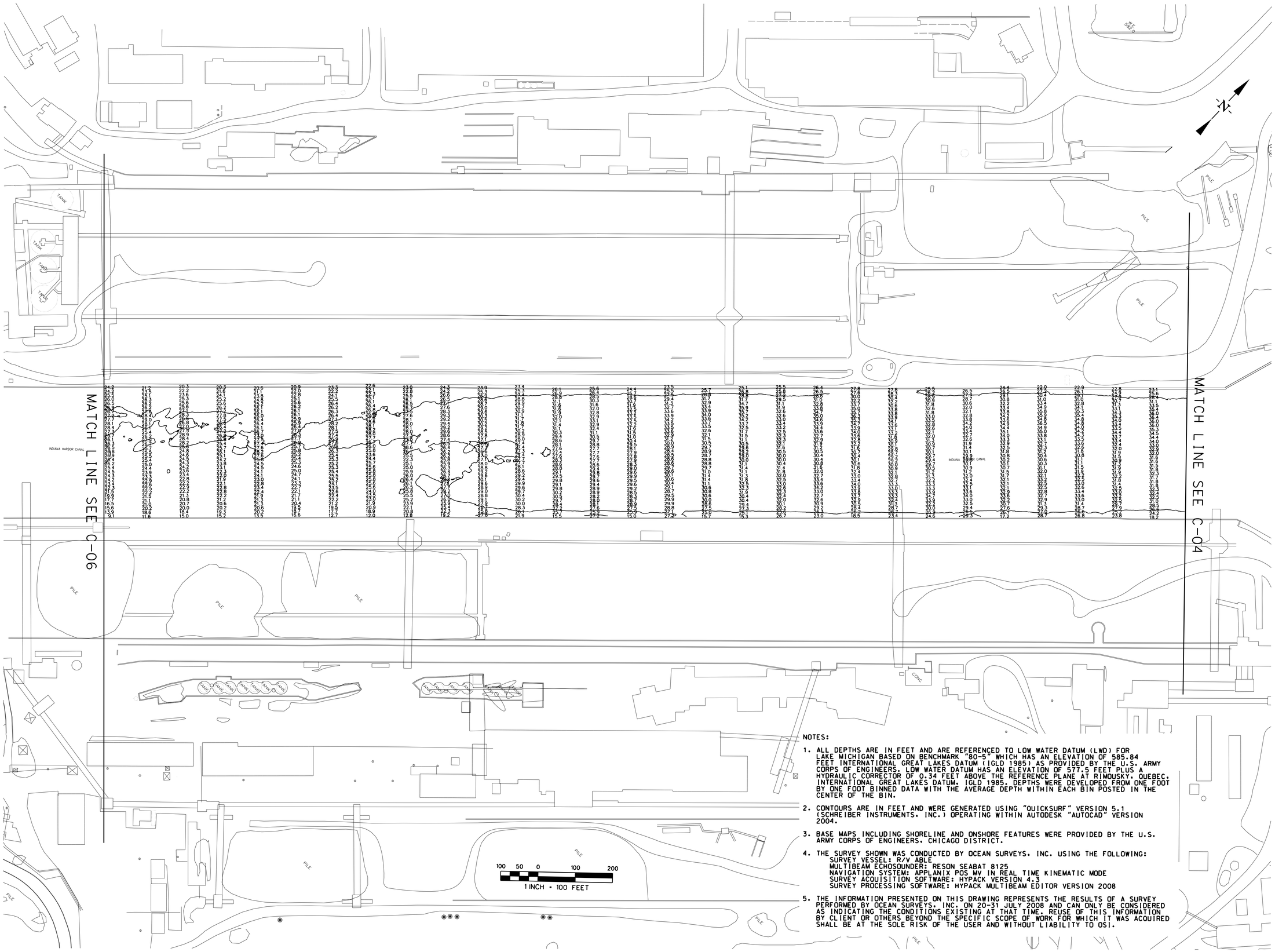
U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
CHICAGO, ILLINOIS

INDIANA HARBOR
CONDITION SURVEY
EAST CHICAGO, INDIANA

SOUNDINGS

SHEET REFERENCE NUMBER:
C-04
SHEET 04 OF 10

PLOT DATE: $DATE$
FILENAME: $FILENAME$



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US Army Corps of Engineers
Chicago District

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SUBMITTED BY: MICHAEL ENGELS
DATE: 11/12/08

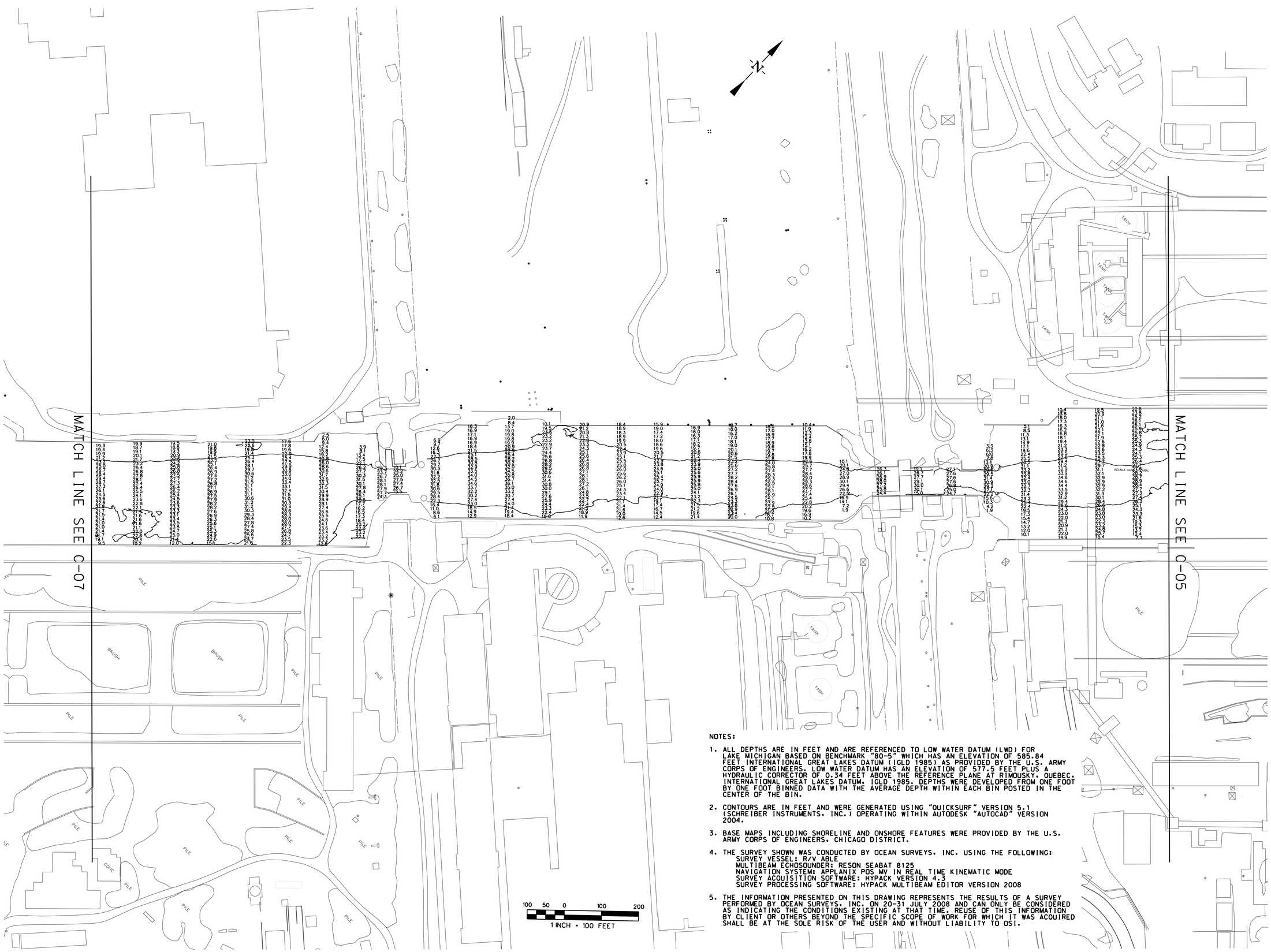
U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
CHICAGO, ILLINOIS

INDIANA HARBOR
CONDITION SURVEY
EAST CHICAGO, INDIANA

SOUNDINGS

SHEET REFERENCE NUMBER:
C-05
SHEET 05 OF 10

PLOT DATE: $DATE$
FILENAME: $FILENAME$



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US Army Corps of Engineers
Chicago District

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DATE: 12 NOVEMBER 2008
DRAWN BY: AR
SCALE: AS SHOWN
CHECKED BY: ME
CONTRACT NUMBER: CELRC TS-C-T
SUBMITTED BY: MICHAEL ENGELS
DATE: 11/12/08

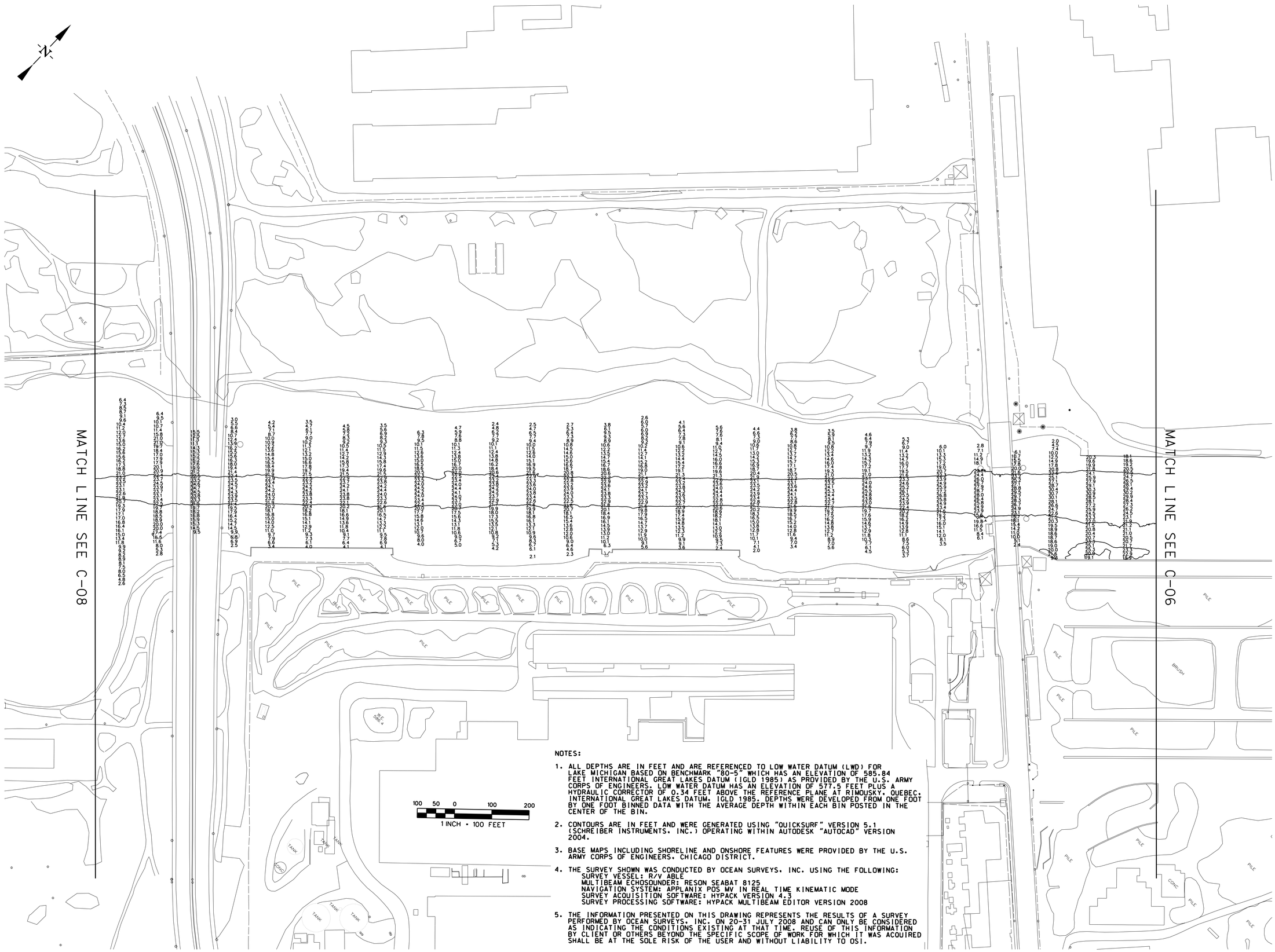
U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
CHICAGO, ILLINOIS

INDIANA HARBOR
CONDITION SURVEY
EAST CHICAGO, INDIANA

SOUNDINGS

SHEET REFERENCE NUMBER:
C-06
SHEET 06 OF 10

PLOT DATE: $DATE$
FILENAME: $FILENAME$



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US Army Corps of Engineers
Chicago District

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MICHAEL ENGELS
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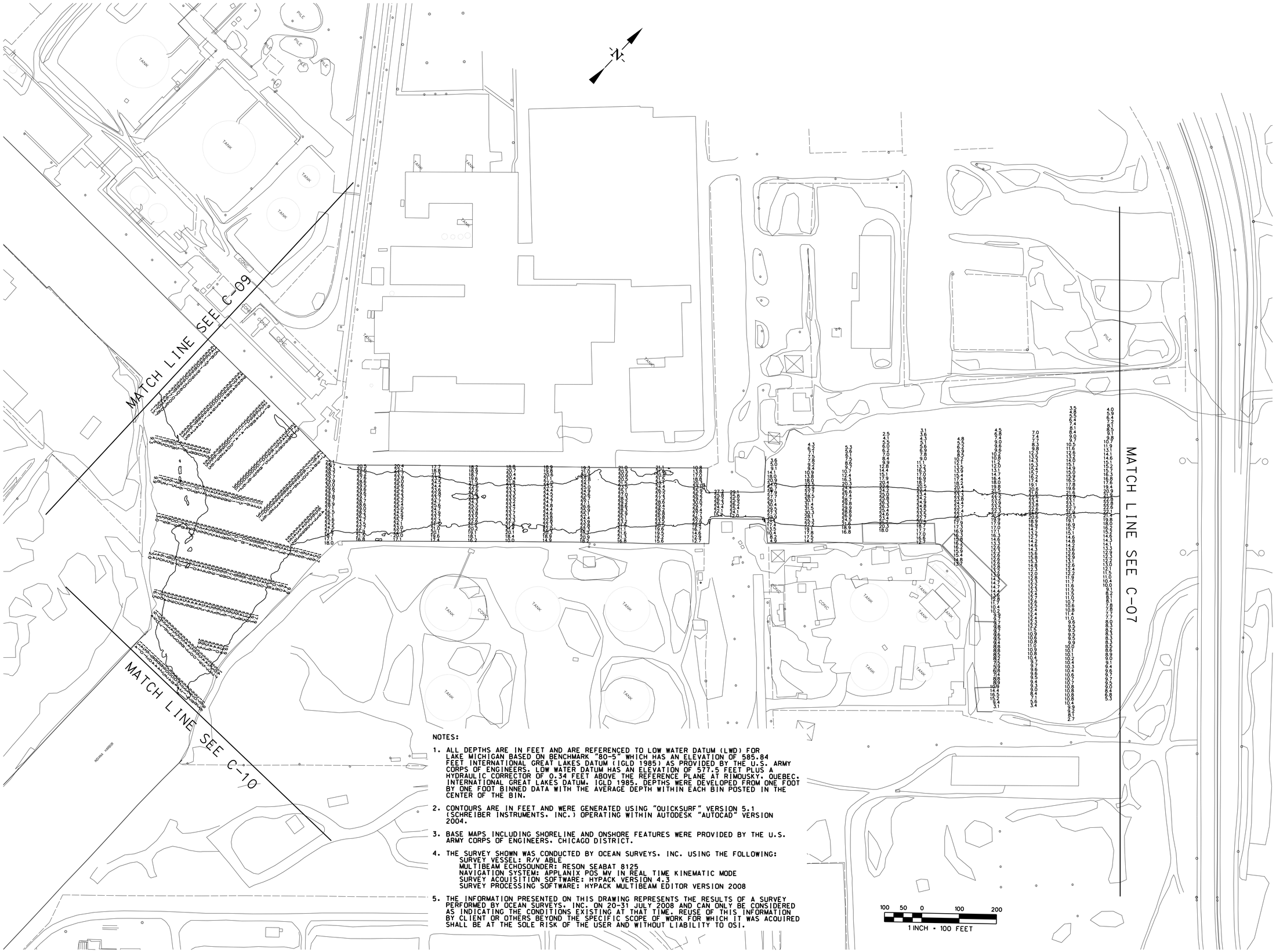
U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
CHICAGO, ILLINOIS

INDIANA HARBOR
CONDITION SURVEY
EAST CHICAGO, INDIANA

SOUNDINGS

SHEET REFERENCE NUMBER:
C-07
SHEET 07 OF 10

PLOT DATE: $DATE$
FILENAME: $FILENAME$



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US Army Corps of Engineers
Chicago District

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SCALE: AS SHOWN
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CONTRACT NUMBER: CELRC TS-C-T
MICHAEL ENGELS
DATE: 11/12/08
SUBMITTED BY:

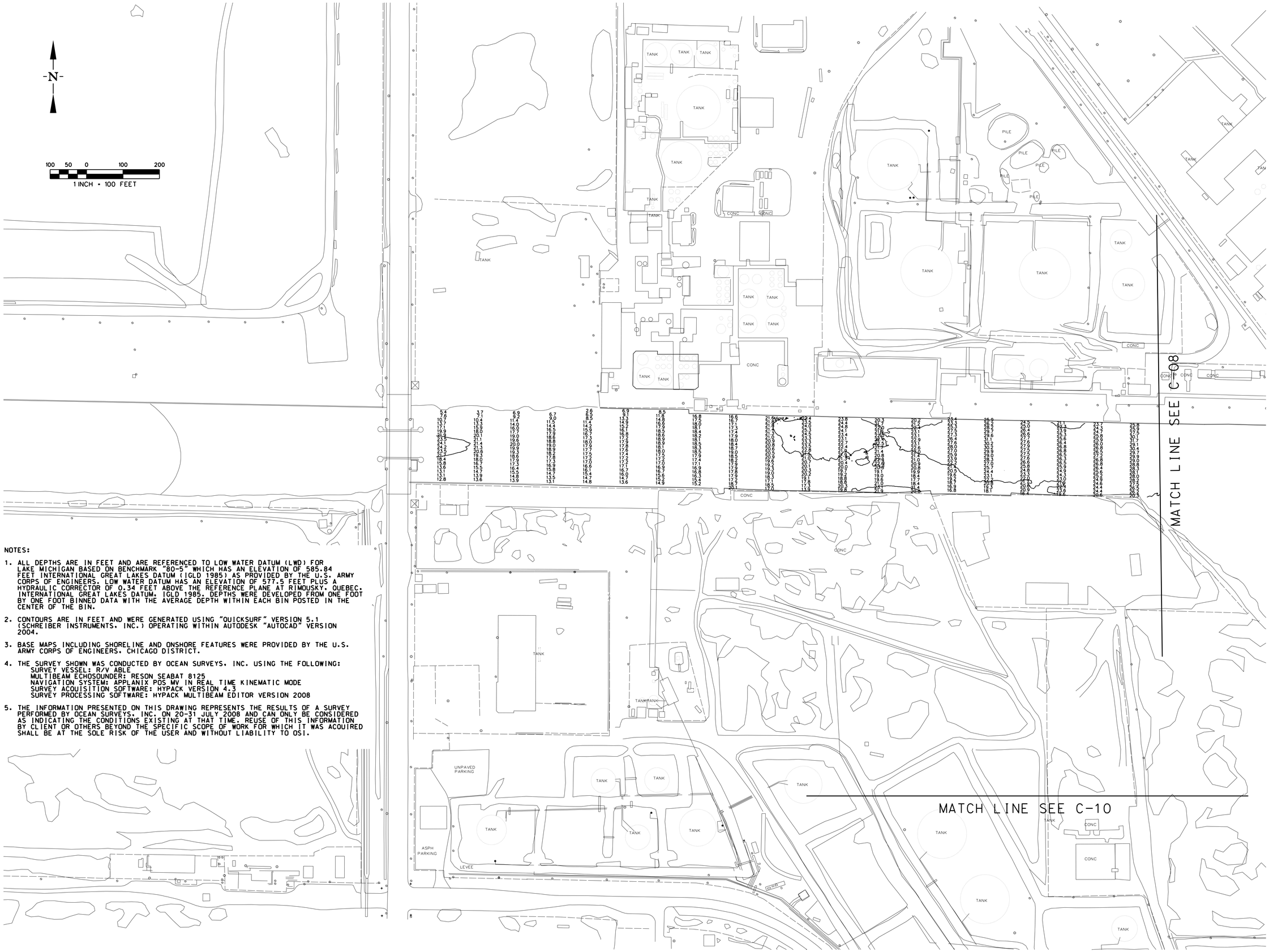
U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
CHICAGO, ILLINOIS

INDIANA HARBOR
CONDITION SURVEY
EAST CHICAGO, INDIANA

SOUNDINGS

SHEET REFERENCE NUMBER:
C-08
SHEET 08 OF 10

PLOT DATE: $DATE$
FILENAME: $FILENAME$



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   SURVEY ACQUISITION SOFTWARE: HYPACK VERSION 4.3
   SURVEY PROCESSING SOFTWARE: HYPACK MULTIBEAM EDITOR VERSION 2008

5. THE INFORMATION PRESENTED ON THIS DRAWING REPRESENTS THE RESULTS OF A SURVEY PERFORMED BY OCEAN SURVEYS, INC. ON 20-31 JULY 2008 AND CAN ONLY BE CONSIDERED AS INDICATING THE CONDITIONS EXISTING AT THAT TIME. REUSE OF THIS INFORMATION BY CLIENT OR OTHERS BEYOND THE SPECIFIC SCOPE OF WORK FOR WHICH IT WAS ACQUIRED SHALL BE AT THE SOLE RISK OF THE USER AND WITHOUT LIABILITY TO OSI.

US Army Corps of Engineers
Chicago District

SYMBOL	AMENDMENT DESCRIPTION	DATE APPROVED	SYMBOL	DESCRIPTION	DATE APPROVED

DESIGNED BY: GA
DATE: 12 NOVEMBER 2008
DRAWN BY: AR
SCALE: AS SHOWN
CHECKED BY: ME
CONTRACT NUMBER: CELRC TS-C-T
MICHAEL ENGELS
SUBMITTED BY:
DATE: 11/12/08

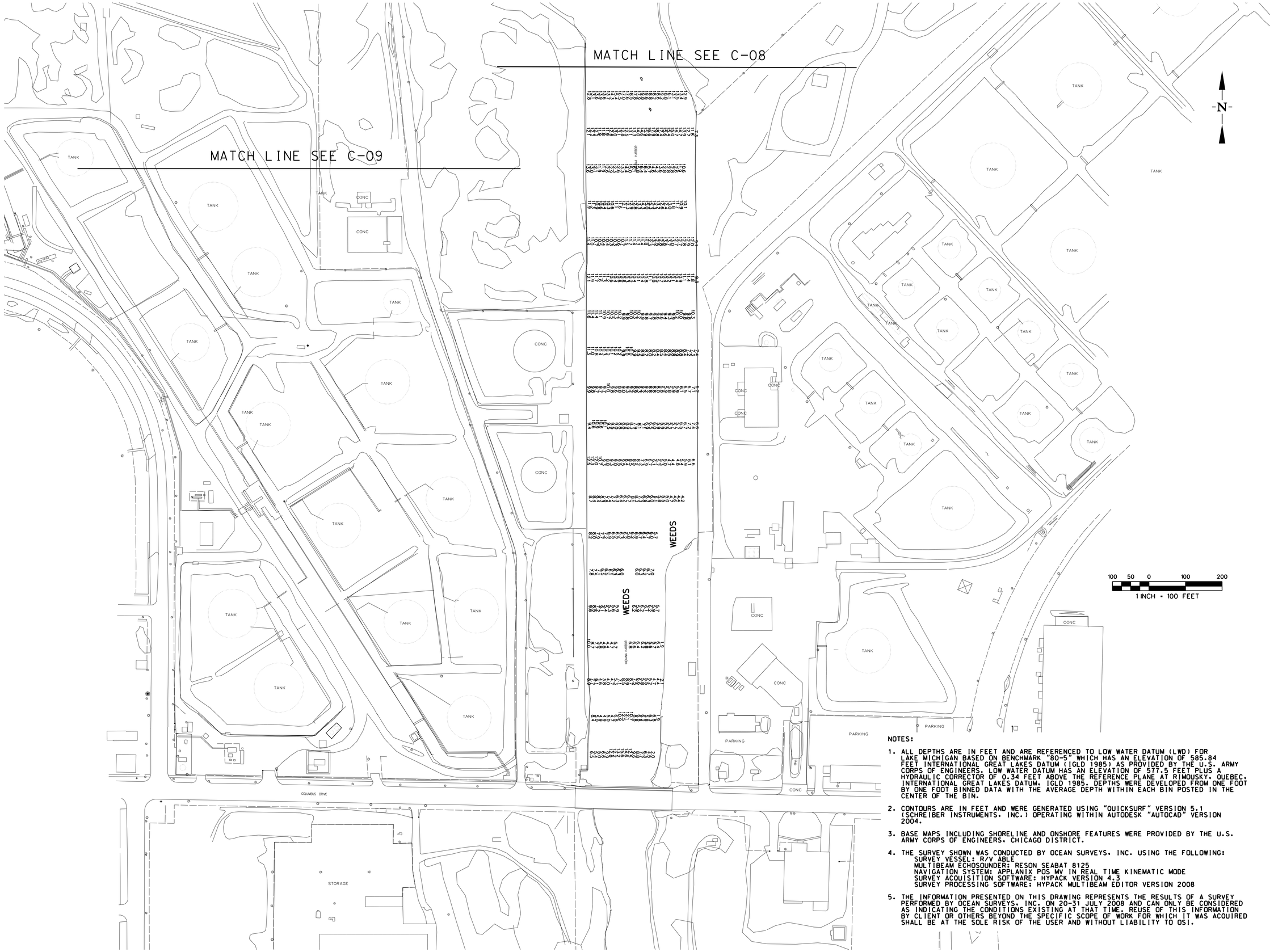
U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
CHICAGO, ILLINOIS

INDIANA HARBOR
CONDITION SURVEY
EAST CHICAGO, INDIANA

SOUNDINGS

SHEET REFERENCE NUMBER:
C-09
SHEET 09 OF 10

PLOT DATE: $DATE$
FILENAME: $FILENAME$



NOTES:

1. ALL DEPTHS ARE IN FEET AND ARE REFERENCED TO LOW WATER DATUM (LWD) FOR LAKE MICHIGAN BASED ON BENCHMARK "80-5" WHICH HAS AN ELEVATION OF 585.84 FEET INTERNATIONAL GREAT LAKES DATUM (IGLD 1985) AS PROVIDED BY THE U.S. ARMY CORPS OF ENGINEERS. LOW WATER DATUM HAS AN ELEVATION OF 577.5 FEET PLUS A HYDRAULIC CORRECTOR OF 0.34 FEET ABOVE THE REFERENCE PLANE AT RIMOUSKY, QUEBEC, INTERNATIONAL GREAT LAKES DATUM, IGLD 1985. DEPTHS WERE DEVELOPED FROM ONE FOOT BY ONE FOOT BINNED DATA WITH THE AVERAGE DEPTH WITHIN EACH BIN POSTED IN THE CENTER OF THE BIN.

2. CONTOURS ARE IN FEET AND WERE GENERATED USING "QUICKSURF" VERSION 5.1 (SCHREIBER INSTRUMENTS, INC.) OPERATING WITHIN AUTODESK "AUTOCAD" VERSION 2004.

3. BASE MAPS INCLUDING SHORELINE AND ONSHORE FEATURES WERE PROVIDED BY THE U.S. ARMY CORPS OF ENGINEERS, CHICAGO DISTRICT.

4. THE SURVEY SHOWN WAS CONDUCTED BY OCEAN SURVEYS, INC. USING THE FOLLOWING:
   SURVEY VESSEL: R/V ABLE
   MULTIBEAM ECHOSOUNDER: RESON SEABAT 8125
   NAVIGATION SYSTEM: APPLANIX POS MV IN REAL TIME KINEMATIC MODE
   SURVEY ACQUISITION SOFTWARE: HYPACK VERSION 4.3
   SURVEY PROCESSING SOFTWARE: HYPACK MULTIBEAM EDITOR VERSION 2008

5. THE INFORMATION PRESENTED ON THIS DRAWING REPRESENTS THE RESULTS OF A SURVEY PERFORMED BY OCEAN SURVEYS, INC. ON 20-31 JULY 2008 AND CAN ONLY BE CONSIDERED AS INDICATING THE CONDITIONS EXISTING AT THAT TIME. REUSE OF THIS INFORMATION BY CLIENT OR OTHERS BEYOND THE SPECIFIC SCOPE OF WORK FOR WHICH IT WAS ACQUIRED SHALL BE AT THE SOLE RISK OF THE USER AND WITHOUT LIABILITY TO OSI.

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SHEET 10 OF 10

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