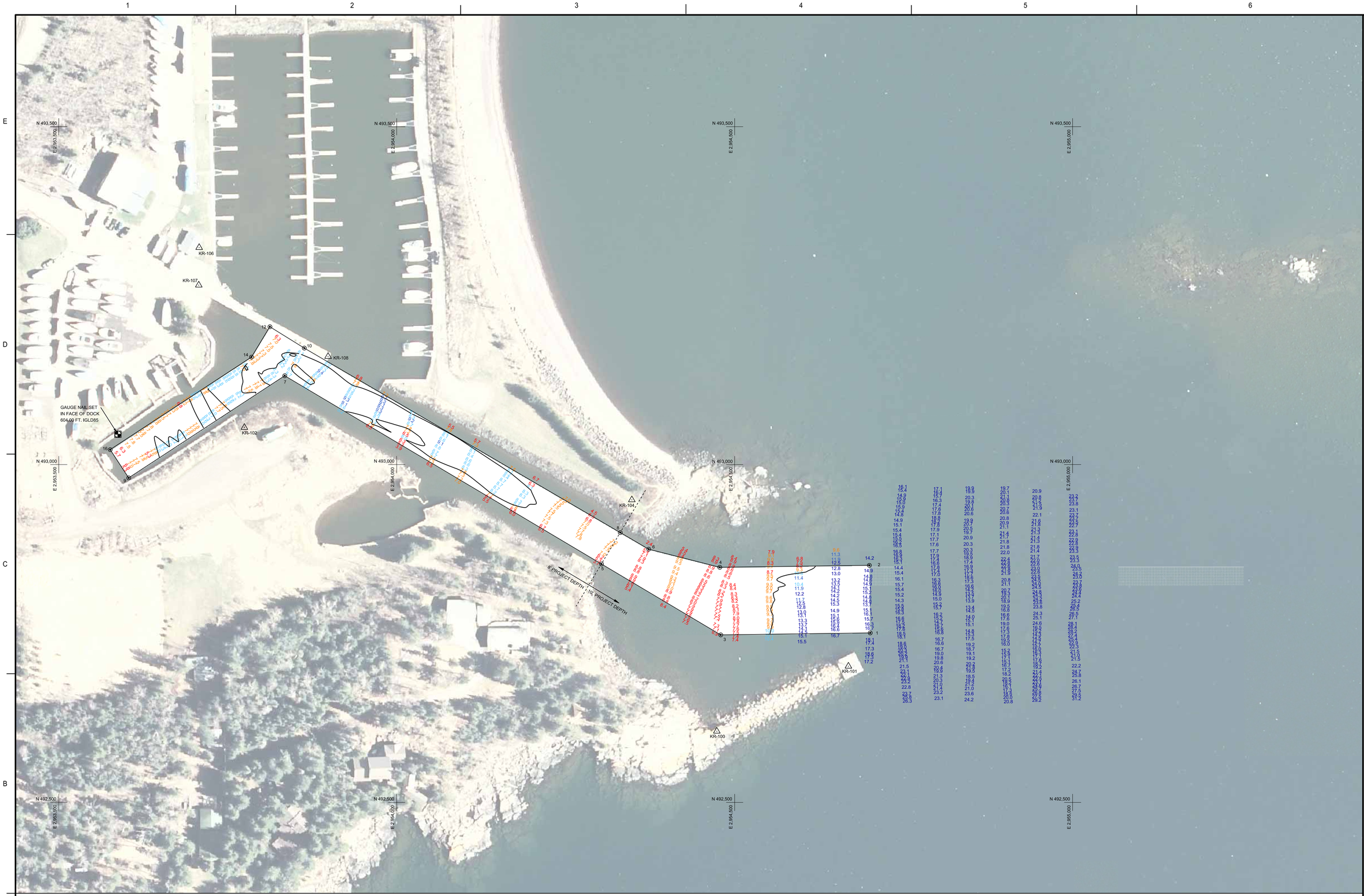

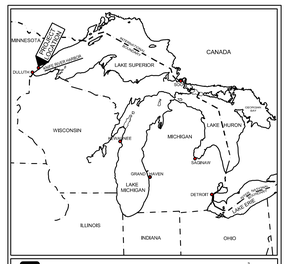

US Army Corps of Engineers
Detroit District

LOCATION MAP

NO SCALE

US Army Corps of Engineers
Detroit District

SHEET INDEX

NO SCALE

CHANNEL CONTROL

STA.	DESCRIPTION	COORDINATES	
		NORTHING	EASTING
PT.1	CHANNEL LINE PT.	492750.870	2954700.447
PT.2	CHANNEL LINE PT.	492850.870	2954699.149
PT.3	CHANNEL LINE PT.	492747.971	2954479.247
PT.4	CHANNEL LINE PT.	492847.970	2954477.849
PT.5	CHANNEL LINE PT.	492852.873	2954302.810
PT.6	CHANNEL LINE PT.	492874.771	2954372.650
PT.7	CHANNEL LINE PT.	493131.470	2953834.232
PT.8	CHANNEL LINE PT.	492899.328	2954330.616
PT.9	CHANNEL LINE PT.	492980.273	2953603.354
PT.10	CHANNEL LINE PT.	493172.370	2953863.159
PT.12	CHANNEL LINE PT.	493203.970	2953812.259
PT.14	CHANNEL LINE PT.	493159.071	2953785.058
PT.16	CHANNEL LINE PT.	493022.072	2953575.955

HORIZONTAL CONTROL

STA.	COORDINATES	
	NORTHING	EASTING
KR-100	492605.32	2954473.59
KR-101	492701.46	2954668.20
KR-102	493054.84	2953774.60
KR-104	492947.72	2954347.85
KR-106	493321.07	2953707.65
KR-107	493265.47	2953707.04
KR-108	493159.80	2953898.39

LEGEND

- WATER ELEVATION GAUGE STAFF
- HORIZONTAL CONTROL POINT
- NO. CHANNEL LINE TURNING POINT
- CHANNEL LINE
- PROJECT DEPTH CONTOUR

8' LEGEND

- 0.0'
- 7.0'
- 8.0'
- 9.0'
- 10.0'
- 11.0'
- 15.0'

10' LEGEND

- 0.0'
- 9.0'
- 10.0'
- 11.0'
- 12.0'
- 13.0'
- 40.0'

N

0 50' 100'

NOTES

1) 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 PRESENT AT THAT TIME.

2) ALL SOUNDINGS ARE IN FEET AND ARE REFERENCED TO LOW WATER DATUM ELEVATION 601.1 FEET ABOVE MEAN SEA LEVEL, IGLD 1985.

3) SOUNDING DEPTHS ARE REFERENCED TO A NAIL LOCATED ON THE FACE OF THE MOST WESTERLY DOCK WALL AS SHOWN HEREON, ELEVATION 604.00 FEET IGLD 1985.

4) PROJECT DEPTHS FOR THIS AREA ARE 8' & 10'.

5) THE GRID COORDINATE SYSTEM SHOWN IS REFERENCED TO THE MINNESOTA STATE PLANE COORDINATE SYSTEM, LAMBERT PROJECTION, NORTH ZONE (2201), NORTH AMERICAN DATUM 1983 (NAD 83), US SURVEY FOOT.

6) THE LOCATION OF NAVIGATION BUOYS REPRESENTS THEIR GENERAL LOCATION ON THE DATE OF THE SURVEY AND CANNOT BE CONSIDERED FOR NAVIGATION.

7) THE SURVEY SHOWN WAS CONDUCTED BY K.COOK & A.ALBERTSON ON 07 JUN 2016, USING DGPS POSITIONING, A ROSS 825C SOUNDER AND A HYPACK AUTOMATED HYDROGRAPHIC SURVEY SYSTEM.

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE	APPR.	MARK	DESCRIPTION	DATE	APPR.

SURVEYOR: ERIC & A.I.A.
REVIEWED BY:
APPROVED BY:
PLOT SCALE: 1" = 50'
SIZE: ANSI E
DATE OF SURVEY: 07-JUN-16
SUBMITTED BY:
CONTRACT NO.:
IMAGE DATE: MAY 2009
IMAGE SOURCE: USGS
FILE NUMBER: 7570 rsg
FILE NAME: KNF101SHEET001.dgn

U.S. ARMY CORPS OF ENGINEERS
DETROIT DISTRICT
DETROIT, MI

DULUTH AREA OFFICE
600 LAKE AVENUE SOUTH
DULUTH, MN 55802

KNIFE RIVER
MINNESOTA
HARBOR OF REFUGE

CONDITION OF CHANNEL
JUNE 2016

SHEET IDENTIFICATION
KNF101
SHEET 1 OF 1