E 1,084,000 N 690,000 E 1,086,000 E 1,088,000 E 1,090,000 N 688,000 E 1,092,000 E 1,094,000

MISSOURI

ILLINOIS

SURVEY NOTES:

1) HORIZONTAL DATUM:
NAD83 (2011) MISSOURI EAST 2401, US SURVEY FOOT

2) VERTICAL DATUM:
NAVD88 (GEOID18), FOOT

3) DEPTHS SHOWN ARE BELOW LWRP2014 SURFACE.

4) SURVEY INFORMATION:
SURVEY VESSEL: BOWEN1 (24' SCULLY'S WORK BOAT)
ECHO SOUNDER: TELEDYNE ECHOTRAC E20
TRANSDUCER: ODOM SMSW200-4 (4° BEAM, 200 kHz)
SOUND VELOCITY SOURCE: VALEPORT SWIFT SVP
INS: SBG ELLIPSE2-E-G4A2-B1
GNSS RECEIVER: TRIMBLE MPS865 WITH DUAL ANTENNAS
GNSS SOURCE: TRIMBLE CENTERPOINT RTX
TIDE METHOD: REAL-TIME KINEMATIC
TIDE SOURCE: TRIMBLE CENTERPOINT RTX

5) THE SURVEY WAS COMPLETED IN ACCORDANCE WITH QUALITY CONTROL PLAN PROCEDURES.

JANUARY 19, 2023
INTERPOLATED WATER SURFACE ELEVATIONS

MILE	WSE @ 9:00	WSE @ 12:00	LWRP 2014	LWRP DIF @ 9:00	LWRP DIF @ 12:00
87	333.55	333.83	327.72	5.83	6.11
88	333.97	334.25	328.17	5.80	6.08
89	334.39	334.67	328.60	5.79	6.07

GAGE RECORD

River Mile	River Gage	Zero NAVD88	Time 1	Stage 1	Time 2	Stage 2
81.9	Grand Tower, IL	321.43	9:00	9.98	12:00	10.28
94.1	Red Rock Landing, MO	328.38	9:00	8.15	12:00	8.41

87 88 89

N

Scale: 1 Inch = 800.00 Feet

500 1000 2000 3000 4000 Feet

E 1,082,000 E 1,084,000 N 682,000 E 1,086,000 E 1,088,000 E 1,090,000 E 1,092,000 N 680,000

St. Louis District

DATES OF SURVEY: JANUARY 19, 2023

FILE NO: 088A1923
REQUEST NO.: W912P923F0004

SCALE: 1" = 800' (ANSI B)

FIELD BOOKS:

Approved: FIELD HYDROGRAPHER
Approved: CIVIL ENGINEERING TECHNICIAN
Approved: ASST. CHIEF OF SURVEY
Approved: CHIEF OF SURVEY
Date:

U.S. ARMY CORPS OF ENGINEERS
ST. LOUIS DISTRICT
ST. LOUIS, MISSOURI

SURVEYED BY:
BOWEN ENGINEERING AND SURVEYING, P.C.
2121 MEGAN DRIVE
CAPE GIRARDEAU, MO 63701

UPPER MISSISSIPPI RIVER BASIN
MISSISSIPPI RIVER
PRE DREDGE SURVEY
RIVER MILES 88.4 - 87.3

SHEET NO.
1 OF 1