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 SMSV200-4 (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
90	334.81	335.08	328.99	5.82	6.09
91	335.23	335.50	329.46	5.77	6.04
92	335.66	335.92	329.91	5.74	6.01

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

MISSOURI

MISSOURI

E 1,074,000
N 696,000
E 1,076,000
N 694,000
E 1,080,000
N 692,000
E 1,070,000
N 690,000
E 1,072,000
N 688,000
E 1,074,000
E 1,076,000
N 686,000

92
91
90

N

Scale: 1 Inch = 800.00 Feet

500 1000 2000 3000 4000 Feet

St. Louis District

DATES OF SURVEY:
JANUARY 19, 2023

SCALE:
1" = 800' (ANSI B)

FIELD BOOKS:

FILE NO: 091A1923
REQUEST NO.: W912P923F0004

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 91.3 - 90.3

SHEET NO.
1 OF 1