

JUNE 19, 2023
INTERPOLATED WATER SURFACE ELEVATIONS


MILE	WSE @ 10:00	WSE @ 12:00	LWRP 2014	LWRP DIF @ 10:00	LWRP DIF @ 12:00
185.3	398.33	398.43	395.64	2.69	2.79
194.4	398.33	398.43	395.81	2.52	2.62
195	398.38	398.47	395.82	2.56	2.65

GAGE RECORD

River Mile	River Gage	Zero NAVD88	Time 1	Stage 1	Time 2	Stage 2
185.3	Lock and Dam 27 Upper IL	349.49	10:00	48.84	12:00	48.94
194.4	L&D27 Upper transferred to 194.4	349.49	10:00	48.84	12:00	48.94
200.5	Mel Price L&D Lower	395.04	10:00	3.79	12:00	3.76

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.



St. Louis District

DATES OF SURVEY: <small>JUNE 19, 2023</small>	FIELD BOOKS: <small>FILE NO.: 195_188F1923 REQUEST NO.: W91P230004</small>
SCALE: <small>1" = 800' (ANSI B)</small>	APPROVED: <small>FIELD CARTOGRAPHER CIVIL ENGINEERING TECHNICIAN ASST. CHIEF OF SURVEY CHIEF OF SURVEY</small>
APPROVED: <small>U.S. ARMY CORPS OF ENGINEERS ST. LOUIS, MISSOURI</small>	APPROVED: <small>BOWEN ENGINEERING AND SURVEYING, P.C. 2121 MEGAN DRIVE CAPE GIRARDEAU, MO 63701</small>
UPPER MISSISSIPPI RIVER BASIN MISSISSIPPI RIVER CHANNEL PATROL RIVER MILES 194.6 - 196.6	
SHEET NO. <small>1 OF 1</small>	



St. Louis District

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 MP865 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.

Chain of Rocks Canal Upper Entrance Lt. (193.5)
ILLINOIS

JUNE 19, 2023
INTERPOLATED WATER SURFACE ELEVATIONS

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200.5	Mel Price L&D Lower	395.04	10:00	3.79	12:00	3.76

DATE	DESCRIPTION

DATES OF SURVEY:
JUNE 19, 2023

FIELD NO.: 195-188F1923
REQUEST NO.: W91P2305004

SCALE:
1" = 800' (ANSI B)

FIELD BOOKS:

Approved: _____
FIELD CARTOGRAPHER

Approved: _____
CIVIL ENGINEERING TECHNICIAN

Approved: _____
ASST. CHIEF OF SURVEY

Approved: _____
CHIEF OF SURVEY

Date: _____

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

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

UPPER MISSISSIPPI RIVER
BASIN
MISSISSIPPI RIVER
CHANNEL PATROL
RIVER MILES 192.6 - 194.6

SHEET NO.
1 OF 1

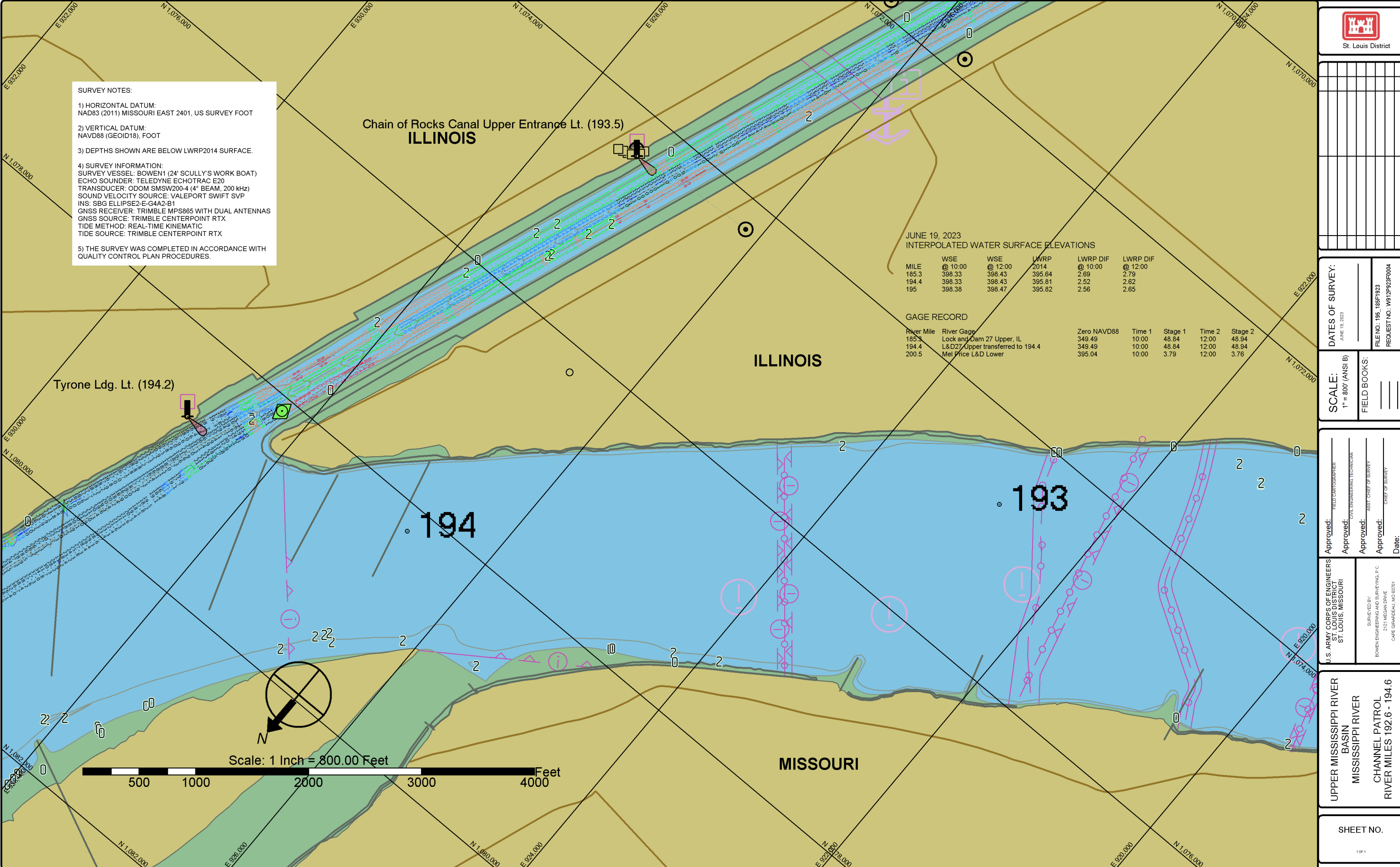
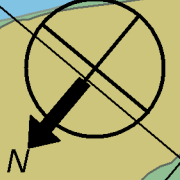
Tyrone Ldg. Lt. (194.2)

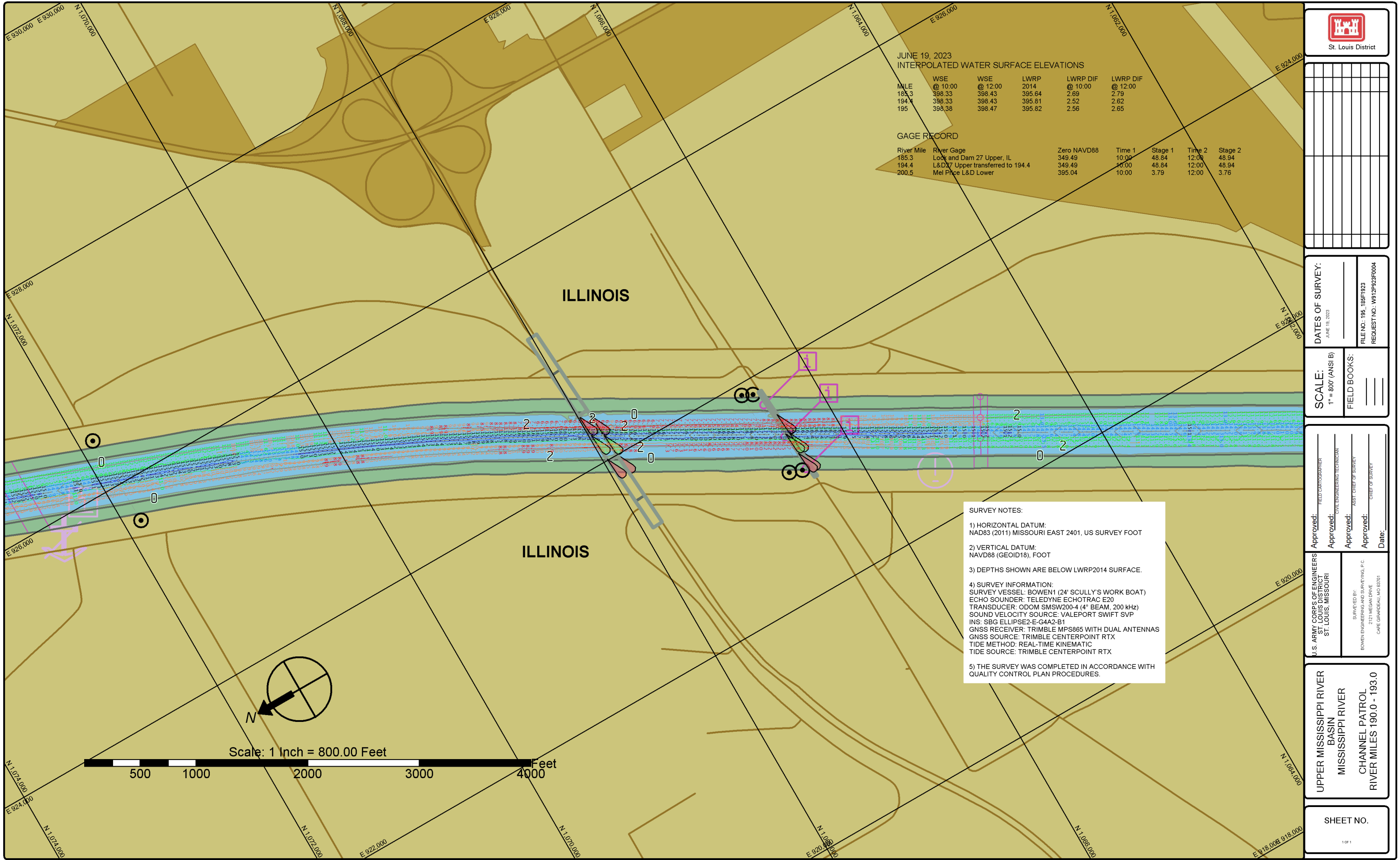
194

193

MISSOURI

Scale: 1 Inch = 800.00 Feet





JUNE 19, 2023
INTERPOLATED WATER SURFACE ELEVATIONS

MLE	WSE @ 10:00	WSE @ 12:00	LWRP 2014	LWRP DIF @ 10:00	LWRP DIF @ 12:00
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200.5	Mel Price L&D Lower	395.04	10:00	3.79	12:00	3.76

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.



St. Louis District

DATES OF SURVEY:
JUNE 19, 2023

FIELD BOOKS:
FILE NO.: 195-188F1923
REQUEST NO.: W91P23ZF004

SCALE:
1" = 800' (ANSI B)

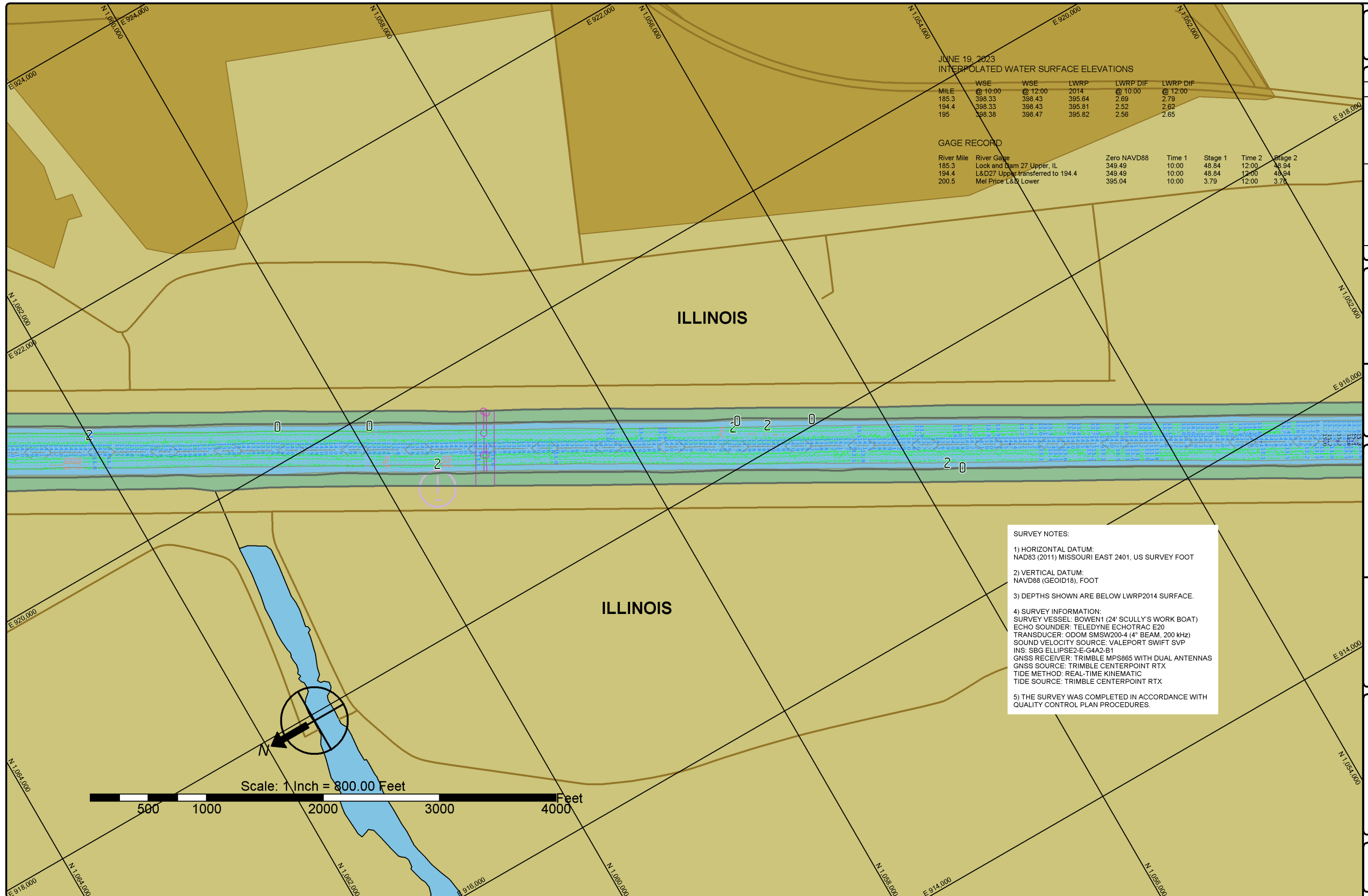
Approved:	FIELD CARTOGRAPHER
Approved:	CIVIL ENGINEERING TECHNICIAN
Approved:	ASST. CHIEF OF SURVEY
Approved:	CHIEF OF SURVEY
Date:	

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

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

UPPER MISSISSIPPI RIVER
BASIN
MISSISSIPPI RIVER
CHANNEL PATROL
RIVER MILES 190.0 - 193.0

SHEET NO.



JUNE 19, 2023
INTERPOLATED WATER SURFACE ELEVATIONS

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NAVD88 (GEOID18), FOOT
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St. Louis District

DATES OF SURVEY: JUNE 19, 2023	FIELD BOOKS: _____ _____ _____
SCALE: 1" = 800' (ANSI B)	FILE NO.: 195_188F1923 REQUEST NO.: W91P23R004

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

APPROVED: _____
FIELD CARTOGRAPHER

APPROVED: _____
CIVIL ENGINEERING TECHNICIAN

APPROVED: _____
ASST. CHIEF OF SURVEY

APPROVED: _____
CHIEF OF SURVEY

DATE: _____

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

UPPER MISSISSIPPI RIVER
MISSISSIPPI BASIN
MISSISSIPPI RIVER
CHANNEL PATROL
RIVER MILES 185.1 - 190.0

SHEET NO.

1 OF 1



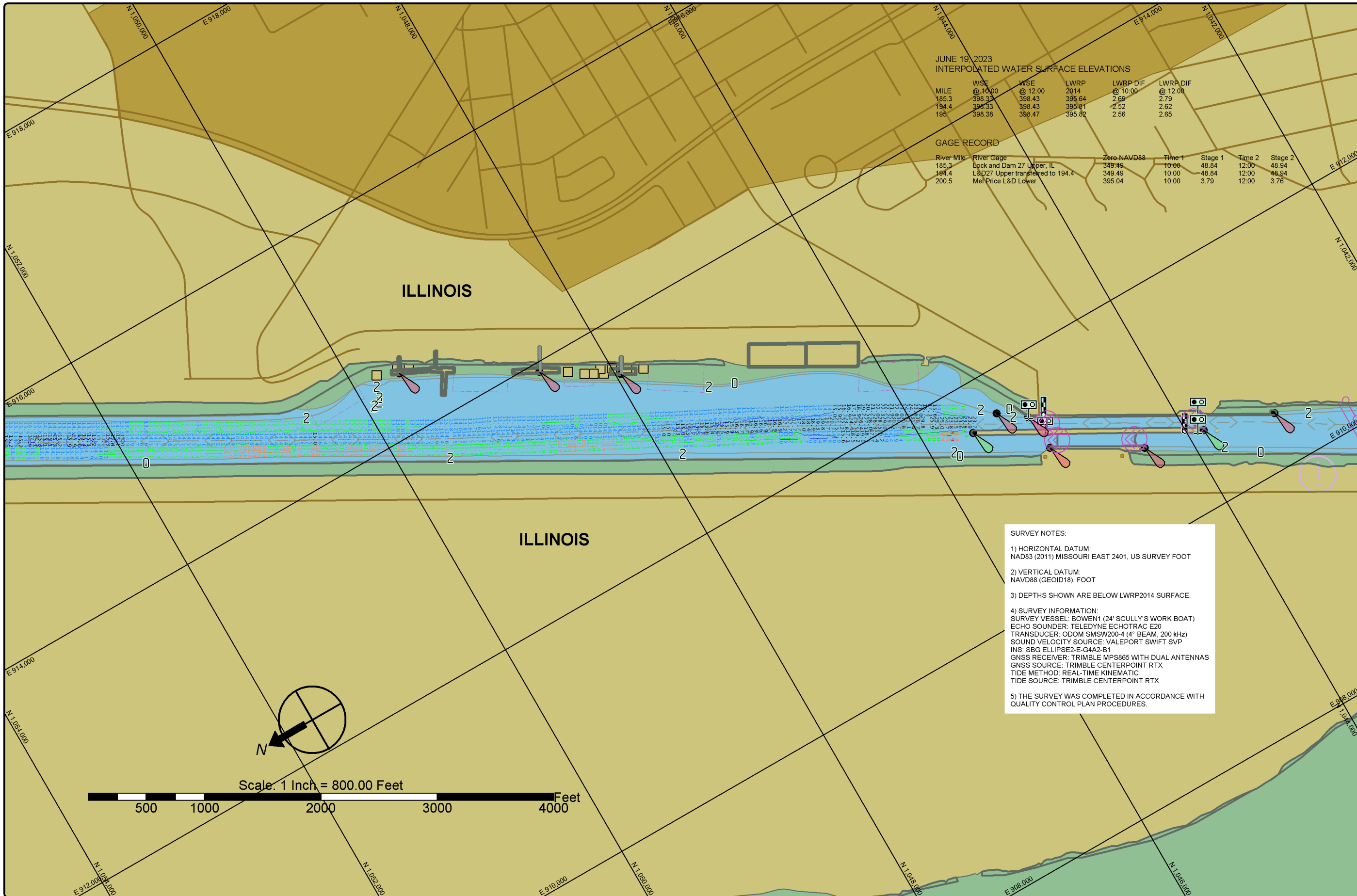
St. Louis District

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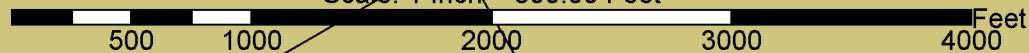


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Scale: 1 Inch = 800.00 Feet



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FILE NO.: 195-188F1923
REQUEST NO.: W912P23E004

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1" = 800' (ANSI B)

FIELD BOOKS:

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			Date: _____

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

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

UPPER MISSISSIPPI RIVER
BASIN
MISSISSIPPI RIVER
CHANNEL PATROL
RIVER MILES 184.5 - 185.1

SHEET NO.