

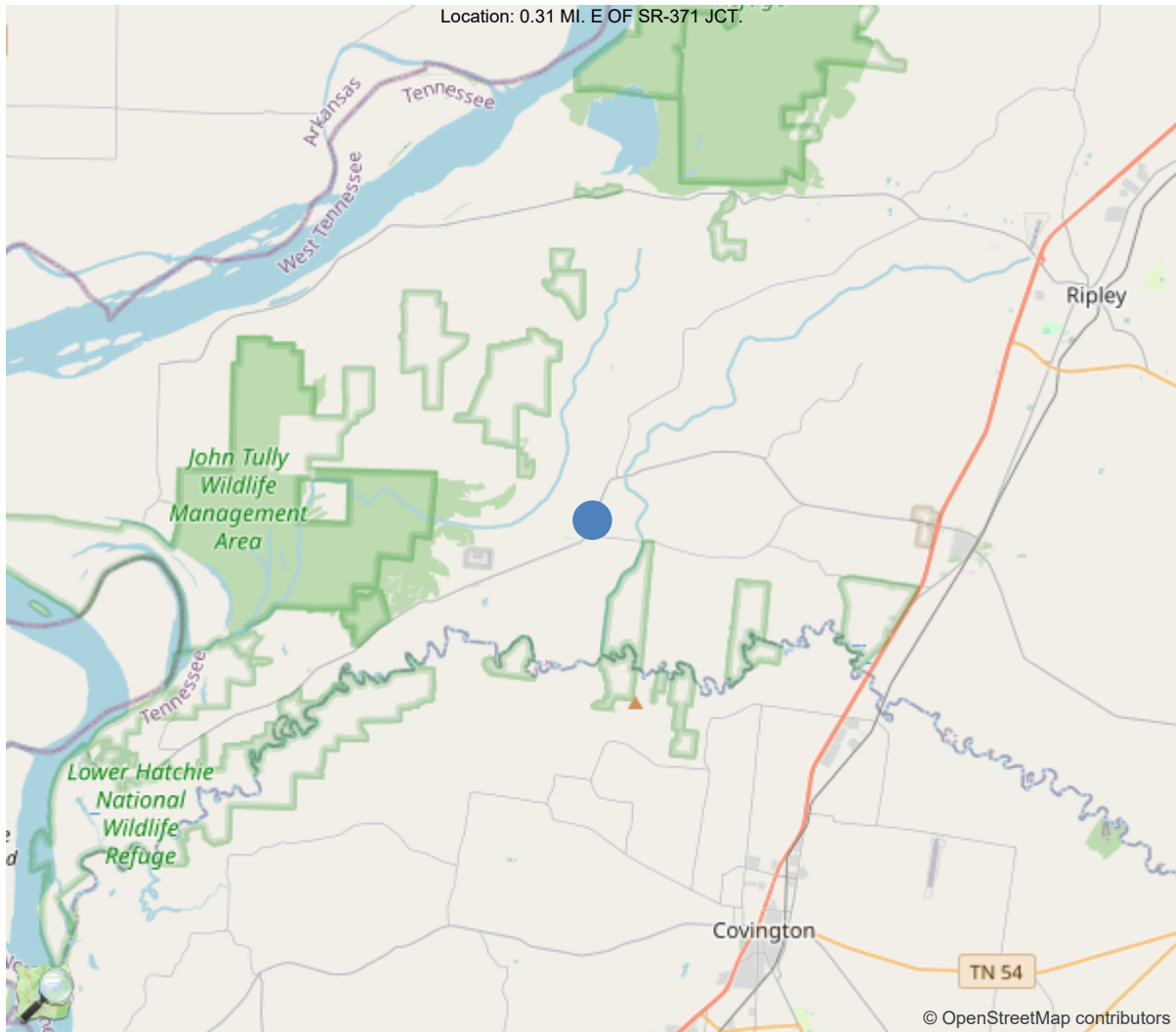


Latitude:35.68061, Longitude:-89.70639

Region 04, 49 - Lauderdale County

Team Leader: Jason Ellison

Inspectors: Jacob Seager, Tonjuanita James, Tyler Prince, Jacob Castellaw



SR-87 Crossing BRANCH

35.68061, -89.70639

90 - LAST INSPECTION DATE 06/13/2024

10 - MIN. V.C. OVER DECK 99.99 FT.
(ROADWAY + SHOULDERS)

520 - MIN. V.C. OVER DECK 99.99 FT.
(EXCLUDES SHOULDERS)

36 - TRAFFIC SAFETY FEATURES

Br. Rail	Trans.	Appr. Rail	Terminal	SPEED LIM.
0	0	0	1	55

41 - STRC OPEN/CLOSED/POSTED P

58 - DECK 6

59 - SUPERSTRUCTURE 6

60 - SUBSTRUCTURE 6

61 - CHANL/CHANL PROTECTION 6

62 - CULVERT AND RETAIN WALL N

71 - WATERWAY ADEQUACY 6

72 - APPROACH RDWY ALIGNMENT 8

521 - OVERALL CONDITION 2 - Fair

16 - LATITUDE	17 - LONGITUDE
35.680611	-89.706388

N NOT APPLICABLE

9 EXCELLENT CONDITION

8 VERY GOOD CONDITION - NO PROBLEMS NOTED.

7 GOOD CONDITION - SOME MINOR PROBLEMS.

6 SATISFACTORY CONDITION - MINOR DETERIORATION OF STRUCTURAL ELEMENTS.

5 FAIR CONDITION - ALL PRIMARY STRUCTURAL ELEMENTS ARE SOUND BUT MAY HAVE MINOR SECTION LOSS, CRACKING, SPALLING OR SCOUR.

4 POOR CONDITION - ADVANCED SECTION LOSS, DETERIORATION, SPALLING OR SCOUR.

3 SERIOUS CONDITION - LOSS OF SECTION, DETERIORATION, SPALLING OR SCOUR HAVE SERIOUSLY AFFECTED PRIMARY STRUCTURAL COMPONENTS. LOCAL FAILURES ARE POSSIBLE. FATIGUE CRACKS IN STEEL OR SHEAR CRACKS IN CONCRETE MAY BE PRESENT.

2 CRITICAL CONDITION - ADVANCED DETERIORATION OF PRIMARY STRUCTURAL ELEMENTS. FATIGUE CRACKS IN STEEL OR SHEAR CRACKS IN CONCRETE MAY BE PRESENT OR SCOUR MAY HAVE REMOVED SUBSTRUCTURE SUPPORT. UNLESS CLOSELY MONITORED IT MAY BE NECESSARY TO CLOSE THE BRIDGE UNTIL CORRECTIVE ACTION IS TAKEN.

1 "IMMINENT" FAILURE CONDITION - MAJOR DETERIORATION OR SECTION LOSS PRESENT IN CRITICAL STRUCTURAL COMPONENTS OR OBVIOUS VERTICAL OR HORIZONTAL MOVEMENT AFFECTING STRUCTURAL STABILITY. BRIDGE IS CLOSED TO TRAFFIC BUT CORRECTIVE ACTION MAY PUT IT BACK IN LIGHT SERVICE.

0 FAILED CONDITION - OUT OF SERVICE AND BEYOND CORREC

TEAM LEADER SIGNATURE

IDENTIFICATION	
(1) State Names	47 - Tennessee
(8) Structure Number	49SR0870025
(5) Inventory Route	1
(2) Highway Agency District	Region 4
(3) County Code	49 - Lauderdale
(4) Place Code	00000
(6) Features Intersected	BRANCH
(7) Facility Carried	FAS 87
(9) Location	0.31 MI. E OF SR-371 JCT.
(11) Mile Point	11.750 mi
(12) Base Highway Network	No
(13) LRS Inventory Rte & Subrte	
(16) Latitude	35.680611
(17) Longitude	-89.706388
(98) Border Bridge State Code	
(99) Border Bridge Structure No.	
STRUCTURE TYPE AND MATERIAL	
(43) Main Structure Type	122
Material	1 - Concrete
Type	22 - Channel beam
(44) Approach Structure Type	00
Material	0 - Other / None
Type	0 - Other / None
(45) No. of Spans in Main Unit	1
(46) No. of Approach Spans	0
(107) Deck Structure Type	1 - Concrete Cast-in-Place
(108) Wearing Surface/Protective System	
Type of Wearing Surface	6 - Bituminous
Type of Membrane	0 - None
Type of Deck Protection	0 - None
AGE AND SERVICE	
(27) Year Built	1986
(106) Year Reconstructed	0
(42) Type of Service	15
On	1 - Highway
Under	5 - Waterway
(28) Lane	
On	2
Under	0
(29) Average Daily Traffic	957
(30) Year of ADT	2021
(109) Truck ADT	5 %
(19) Bypass, Detour Length	10 mi
GEOMETRIC DATA	
(48) Length of Maximum Span	28.5 ft
(49) Structure Length	28.5 ft
(50) Curb or Sidewalk Width	
Left	0.0 ft
Right	0.0 ft
(51) Bridge Roadway Width Curb to Curb	27.7 ft
(52) Deck Width Out to Out	27.7 ft
(32) Approach Roadway Width (W/Shoulders)	22.0 ft
(33) Bridge Median	0 - No median
(34) Skew	90 Deg
(35) Structure Flared	0 - No flare
(10) Inventory Route Min Vert Clear	99.99 ft
(47) Inventory Route Total Horiz Clear	27.7 ft
(53) Min Vert Clear Over Bridge Rdwy	99.99 ft
(54) Min Vert Underclear	0.00 ft
Ref:	
(55) Min Lat Underclear RT	0.0 ft
Ref:	
(56) Min Lat Underclear LT	0.0 ft
NAVIGATION DATA	
(38) Navigation Control	0 - No navigation control on w
(111) Pier Protection	
(39) Navigation Vertical Clearance	0.0 ft
(116) Vert-Lift Bridge Nav Min Vert Clear	ft
(40) Navigation Horizontal Clearance	0.0 ft

CLASSIFICATION	
(112) NBIS Bridge Length	Y
(104) Highway System	0
(26) Functional Class	7 - Rural Major Collector
(100) Defense Highway	0 - The inventory route is not
(101) Parallel Structure	N - No parallel structure exists
(102) Direction of Traffic	2 - way traffic
(103) Temporary Structure	
(105) Federal Lands Highways	0 - N/A
(110) Designated National Network	0 - The inventory route is not
(20) Toll	3 - On free road. The structure
(21) Maintain	1 - State Highway Agency
(22) Owner	1 - State Highway Agency
(37) Historical Significance	4 - Historical significance is
CONDITION	
(58) Deck	6
(59) Superstructure	6
(60) Substructure	6
(61) Channel & Channel Protection	6
(62) Culverts	N
LOAD RATING AND POSTING	
(31) Design Load	0 - Other or Unknown
(63) Operating Rating Method	7
(64) Operating Rating	
Type	7 - Allowable Stress (AS) rating reported
Rating	5.83
(65) Inventory Rating Method	7 - Allowable Stress (AS) rating
(66) Inventory Rating	
Type	
Rating	4.21
(70) Bridge Posting	0 - > 39.9% below
(41) Structure Open/Posted/Closed	P - Posted for load (may include
APPRAISAL	
(67) Structural Evaluation	3
(68) Deck Geometry	5
(69) Clearances, Vertical/Horizontal	N
(71) Waterway Adequacy	6
(72) Approach Roadway Alignment	8
(36A) Bridge Railings	0 - Inspected feature does not meet
(36B) Transitions	0 - Inspected feature does not meet
(36C) Approach Guardrail	0 - Inspected feature does not meet
(36D) Approach Guardrail Ends	1 - Inspected feature meets current
(113) Scour Critical Bridges	8 - Bridge foundations determined to
PROPOSED IMPROVEMENTS	
(75) Type of Work	35 - Bridge rehabilitation becomes
(76) Length of Structure Improvement	28.9 ft
(94) Bridge Improvement Cost	\$ 156
(95) Roadway Improvement Cost	\$ 16
(96) Total Project Cost	\$ 235
(97) Year of Improvement Cost Estimate	2021
(114) Future ADT	1253
(115) Year of Future ADT	2041

INSPECTIONS *			
(90) Inspection Date	11/30/2023		
(91) Frequency	24		
(92) Critical Feature Inspection	Done	Freq. (Mon)	Date
A: Fracture Critical Detail	No		
B: Underwater Inspection	No		
C: Other Special Inspection	Yes	1	06/13/2024
* The inspection date and frequency information in this box contains the current NBI date and frequency information. Please refer to the report header for the date this inspection was conducted.			

PERFORMANCE EVALUATION

Time of Day Inspected 2:00

Weather Conditions 87 clear

Vehicles Observed All types

LIVE LOAD BEHAVIOR

Sub Horiz./ Vert. Defl (No)

Sub Vibration (Yes)

Super Horiz./ Vert. Defl (No)

Super Vibration (Yes)

APPROACH

Alignment (Good)

Pavement (Fair)

Approach 2 asphalt spalled and settled

Embankment (Good)

TRAFFIC SAFETY FEATURES

Bridge Railing Rating (Good)

Transitions Rating (NA)

Guardrail Rating (Good)

Guardrail Terminal Rating (Good)

SIGNS POSTED ON ROUTE

Paddleboards Yes

Vertical Clearance (<14'-6")

Posted Height

Narrow Bridge Signs

One Lane Bridge Signs

Other Signs or Plaques

Weight Limit Posted Yes

Gross Tons

Single-unit Vehicle 3 Tons

Multi-unit Vehicle 3 Tons

564 Assigned Bridge Name

ATTACHED SIGNS

Sign No	Location	Text on Sign	Noted Defects
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DECK

Wearing Surface Type		Asphalt	Wearing Surface Depth		4
Wearing Surface	(Good)				
Deck - Structural Condition	(NA)				
Curbs	(Good)				
Railing	(Good)				
Deck Drains	(Poor)	Asphalt over			

SUPERSTRUCTURE

Alignment of Members	(Good)	
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TEXTURE COAT

PCCS	(Good)	Hairline cracks, damage
PCCS/CBB Bolts	(Good)	

ABUTMENTS

Abutment Caps	(Fair)	Medium weathering and 1/8" checks
Abutment Breastwall	(Poor)	Decay at abutment 2
Abutment Wings	(Fair)	Medium weathering and decay
Abutment Plumb	(Good)	
Abutment Piles	(Fair)	Medium weathering
Abutment Embankment	(Good)	
Abutment Bearing Surface	(Good)	

PIERS

BENTS

Inspection Team's Summary

This is a BER inspection. This is now a one span PCCS bridge with timber substructure. The safety features are metal approach rails, metal bridge rails, and paddle boards. There is a weight limit posting at Approach 1 and 2(3T/3T). The asphalt roadway has cracks up to 1/4". The PCCSs have hairline cracks and damage. The timber substructure has light to medium weathering and up to 1/8" checks. Abutment 2 breastwall has heavy decay. The scour has no problems.

The superstructure went from a 4 to a 6 due to new superstructure members.

General Inspection Comment

HQ notes to TL

ELEMENTS	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
38	Re Concrete Slab	SF	789	787	2	0	0
1080	Delamination/Spall/Patched Area	SF	2	0	2	0	0
1130	Cracking (RC and Other)	SF	3	3	0	0	0
510	Wearing Surfaces	SF	789	789	0	0	0
216	Timber Abutment	LF	70	70	0	0	0
(216) Element record added 2016-04-06.							
330	Metal Bridge Railing	LF	58	58	0	0	0
(330) Element record added 2016-04-06.							

STREAM CHANNEL DATA AND CONDITIONS

Stream Crossing	BRANCH		
Type of bed material	Mud		
Has channel shifted?	No		
Condition of rip-rap	N/A	Est. % failed	%
Overall condition of channel	Fair		
Underwater Inspection Req?			
Why UW required?			

Channel and bank stability conditions

Steep bank cond - Failure US	No	Moderate Bank Erosion	Yes
Steep bank cond - Failure DS	No	Sediment or Gravel Accumulation	Yes
Bank Vegetation:		Channel Altered or Straightened	No
Low Growth	Yes	Stable Conditions:	
Large Timber	No	Live Growth	Yes
Clear Banks	No	Bedrock	No
Dead Trees - US	Yes	Boulders	No
Dead Trees - DS		FlatSlopes (<=2:1)	No

Waterway adequacy and debris characteristics

Bridge deck elevations:		Large Scour Under Bridge	No
Level with Approach Roadway	Yes	Indications Flood Overtop Bridge	Occasionally
Higher than Approach Roadway	No	Debris / Drift - Present	No
Road Appr >2' Above Natural Ground	No	Debris / Drift - Likely to Accumulate	Yes
Abutment Encroaches into Channel	Yes		

Substructure Exposure

Last Exposure	Abut/Bent/Pier Number	Total height	Footing Thickness	Exposure
1.9	ABUT 1			2.5
5.3	ABUT 2			6.6

Last Exposure Upstream

Rip-Rap

Y

Last Exposure
Downstream

@ Abutment

2

Top of cap to top of water

@ Bents

Upstream Distance

@ Piers

Upstream Depth

Upstream

Thru structure

Downstream

Downstream Distance

Thru Structure

Downstream Depth

Equipment List

General Inspection

- ☐ Pocket knife
☒ Sounding/chipping hammer
☐ Chain drag
☐ Range pole
☒ 25' rod - depth and clearance

Visual Aid

- ☐ Binoculars
☐ Flashlight
☐ Magnifying glass
☐ Hand mirror

Cleaning

- ☐ Wisk broom
☒ Wire brush
☐ Flat bladed screwdriver
☐ Hand shovel
☐ Penetrating oil (WD-40, etc.)

Tools For Access

- ☐ Ladders
☐ Rope
☒ Waders
☐ Machete or bush axe

Comment

Tools For Measuring

- ☒ Masonry/Wood Ruler
☐ 6' Pocket Tape
☒ 25' and 100' Tape
☐ Calipers
☒ Thermometer
☐ Carpenter's Level
☐ String and Weighted line (plumb bob)

Special Purpose Equipment

- ☐ Reach All
☐ Bucket Truck
☐ Traffic control
☐ Boat
☐ Sonar depth finder
☐ Increment borer
☐ Survey equipment
☐ Safety Harness
☐ Climbing equipment
☐ Dye penetrant
☐ Drone
☐ Air Meter

Special Purpose Equipment

Reach-All Approval and Comments



Abutment 2



Approach 2



Opposite Direction of Route



Weight limit sign, Approach 2



View from top, looking left



View from top, looking right



View across Deck



Approach 1



Approach 1 weight limit sign



Direction of Route



Left elevation



Span 1 slab A, damage



Span 1



Right elevation



Span 1 slab H, hairline cracks



Breast wall at abutment 2 decay



Abutment 1

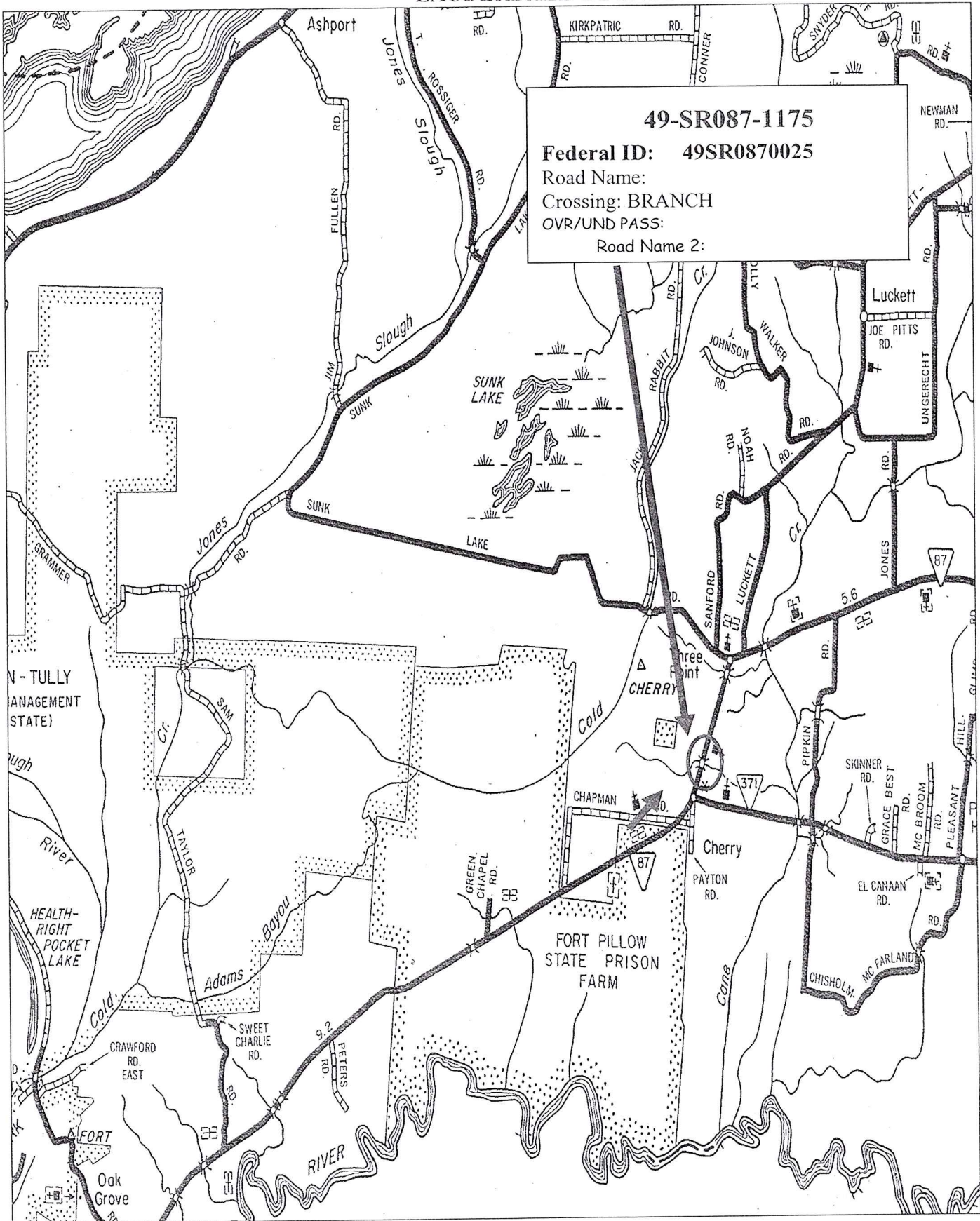
Maintenance Recommendations

525 - Repair List # 1 523 - Repair List Add Date 524 - Repair List Revise Date 6/5/2024 1

Date Added	Recommendation	Priority
06/13/2024	BRIDGERAILS ARE SUBSTANDARD	
06/13/2024	APPROACH GUARDRAILS ARE SUBSTANDARD	

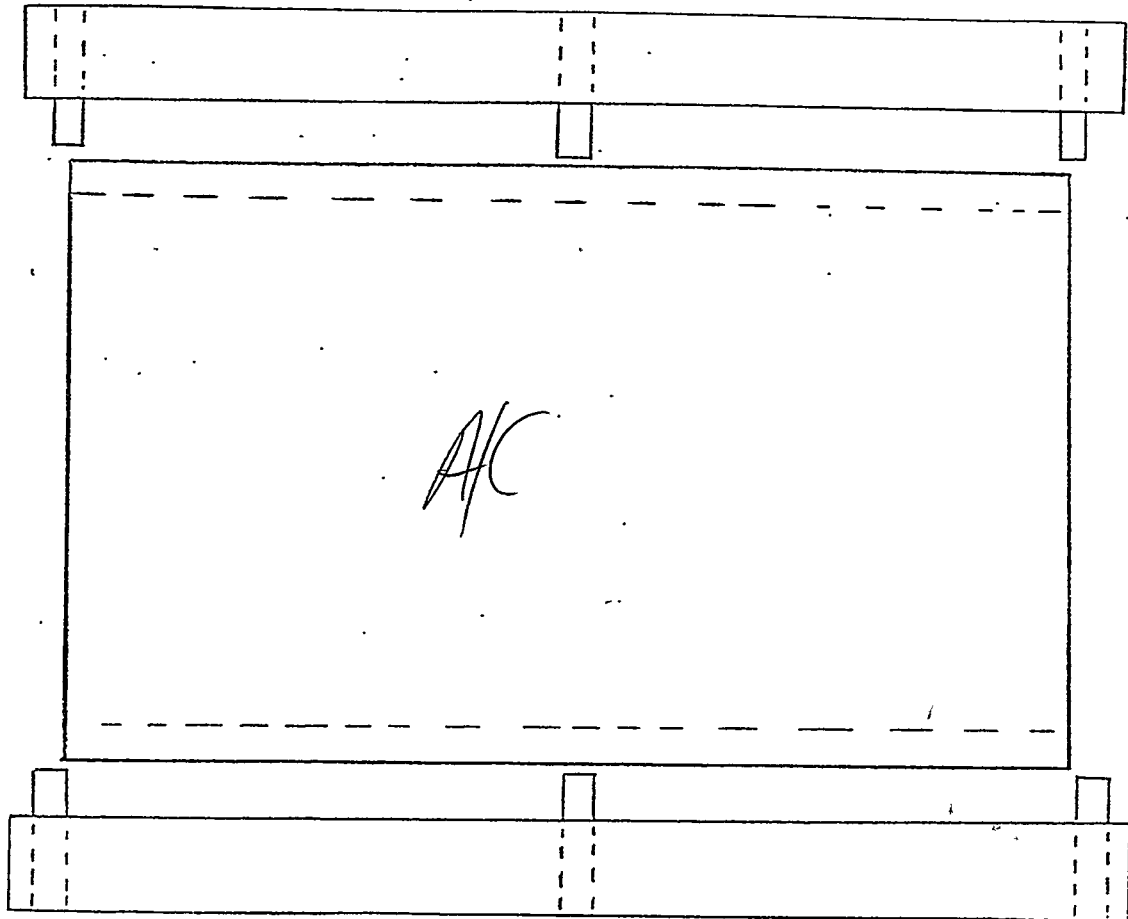
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LAUDERDALE COUNTY

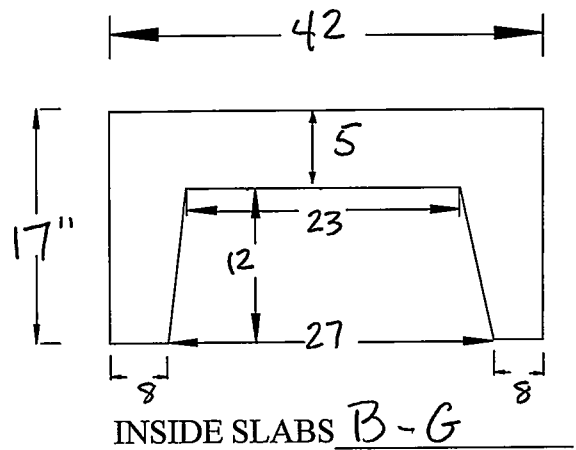
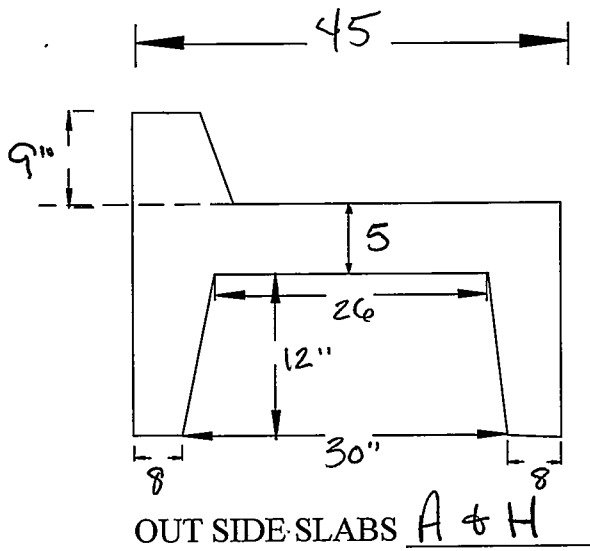
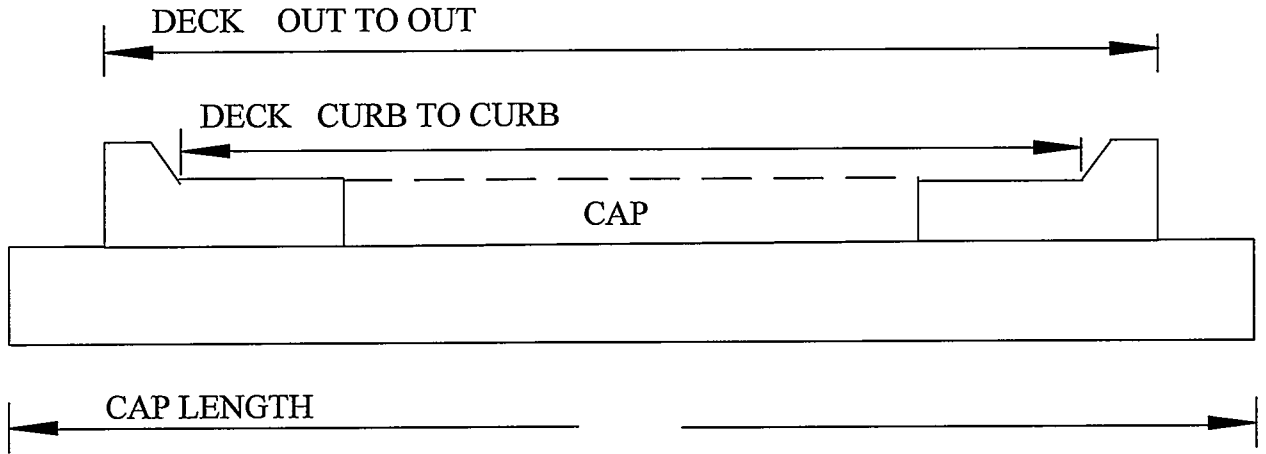


BR. NO. 49 87 11 25 SK. 90°SPAN NO. 1

DIR. OF ROUTE →



ELEMENT	RATING	COMMENT
TOP DECK	(G) F P C	
RAILS & POST	(G) F P C	
PAINT	G F P C	
DRAINS	G F P C	
JOINTS	G F P C	
CURBS	(G) F P C	

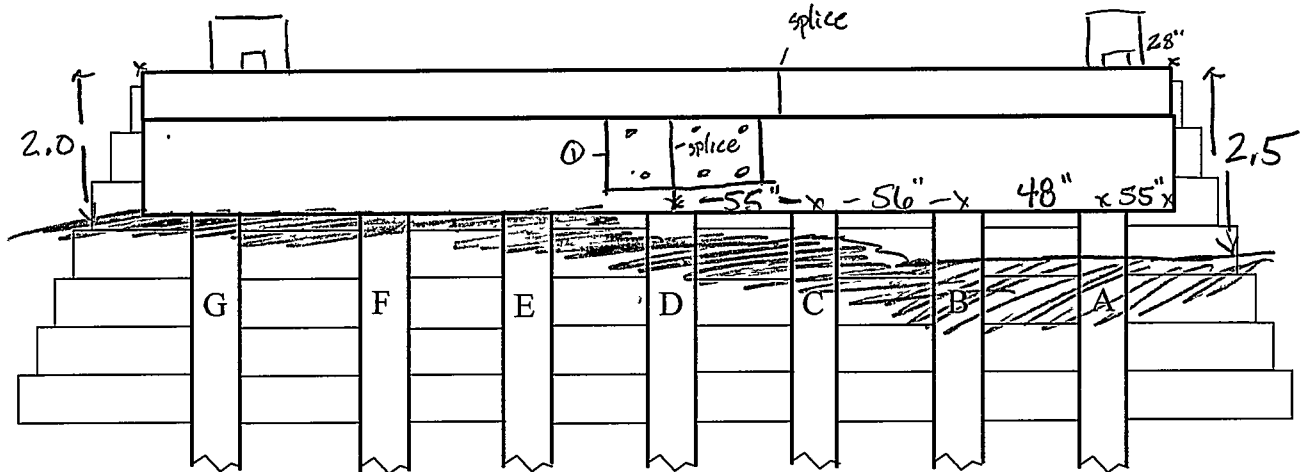


Bridge No. 49 -- SR087 -- 11.75

SPAN. NO. 1

A	B	C	D	E	F	G	H
							
							

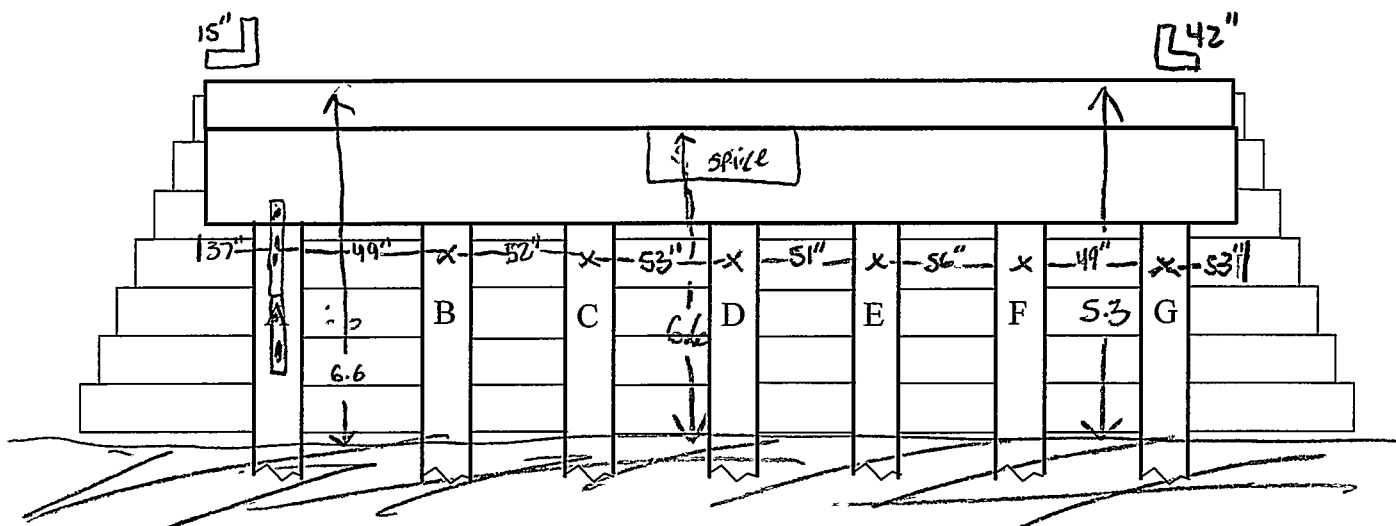
ELEMENT		RATING	COMMENT
SLABS	A	G F P C	See (1), (2)
	B	G F P C	
	C	G F P C	(3) Damage 6" L x 3" H x 1/8" D
	D	G F P C	
	E	G F P C	
	F	G F P C	
	G	G F P C	
	H	G F P C	Horizontal Cracks
BOLTS		G F P C	



① 4x12x48"

LOOKING BACK

ELEMENT	RATING	COMMENT
new CAP A 8" X 16"	G F P C	
new CAP B 12" X 14"	G F P C	
PILES A 11"	G (F) P C	Medium weathering
B 12"	G (F) P C	
C 12"	G (F) P C	
D 12"	G (F) P C	
E	G F P C	N-V
F	G F P C	
G	G F P C	
BREASTWALL	G (F) P C	light weathering
WINGS	G (F) P C	Medium weathering
EMB.	G F P C	
VEG.	G F P C	
RIP-RAP	G F P C	
	G F P C	



pile A Spliced

248' from bottom of cap

LOOKING AHEAD

ELEMENT	RATING	COMMENT
CAP A 8" X 16"	G (F) P C	medium weathering & 1/8" checks
CAP B 10" X 14"	G (F) P C	medium weathering & 1/8" checks
PILES A 12"	G (F) P C	}
B 12"	G (F) P C	
C 13"	G (F) P C	
D 12"	G (F) P C	
E 12"	G (F) P C	
F 11"	G (F) P C	
G 12"	G (F) P C	
BREASTWALL	G (F) P C	Decay Areas
WINGS	G (F) P C	medium weathering
EMB.	(G) F P C	Light growth
VEG.	G (F) P C	
RIP - RAP	(G) F P C	
	G F P C	

GROUND ELEVATIONS

FEDERAL NUMBER ----- 49SR0870025

BRIDGE NO. ----- 49-SR087-11.75

DATE : 6/13/2024

CROSSING ----- BRANCH

NUMBER OF PIERS -----

LOCATION OF PIERS -----

BENCH MARK ELEV. ----- 102.1

INSPECTORS
ELLISON CREW

BENCH MARK LOC. ---- TOP CAP RT. A-1

WATER ELEVATION -----

DISTANCE OF 0.00 = TOP OF BANK APPROACH 1 SIDE

DISTANCE AND ELEVATIONS ARE IN STANDARD MEASUREMENT

UPSTREAM GROUND ELEVATION @ EDGE OF BRIDGE

6/13/2024	
Distance from B.M.	Elevation
-5	101.7
0	101.1
2	98.1
7	97.3
11	93.3
16	93.2
21	95
26	94.8
28	101.6
33	101.7

BRIDGE NO. -----

49-SR087-11.75

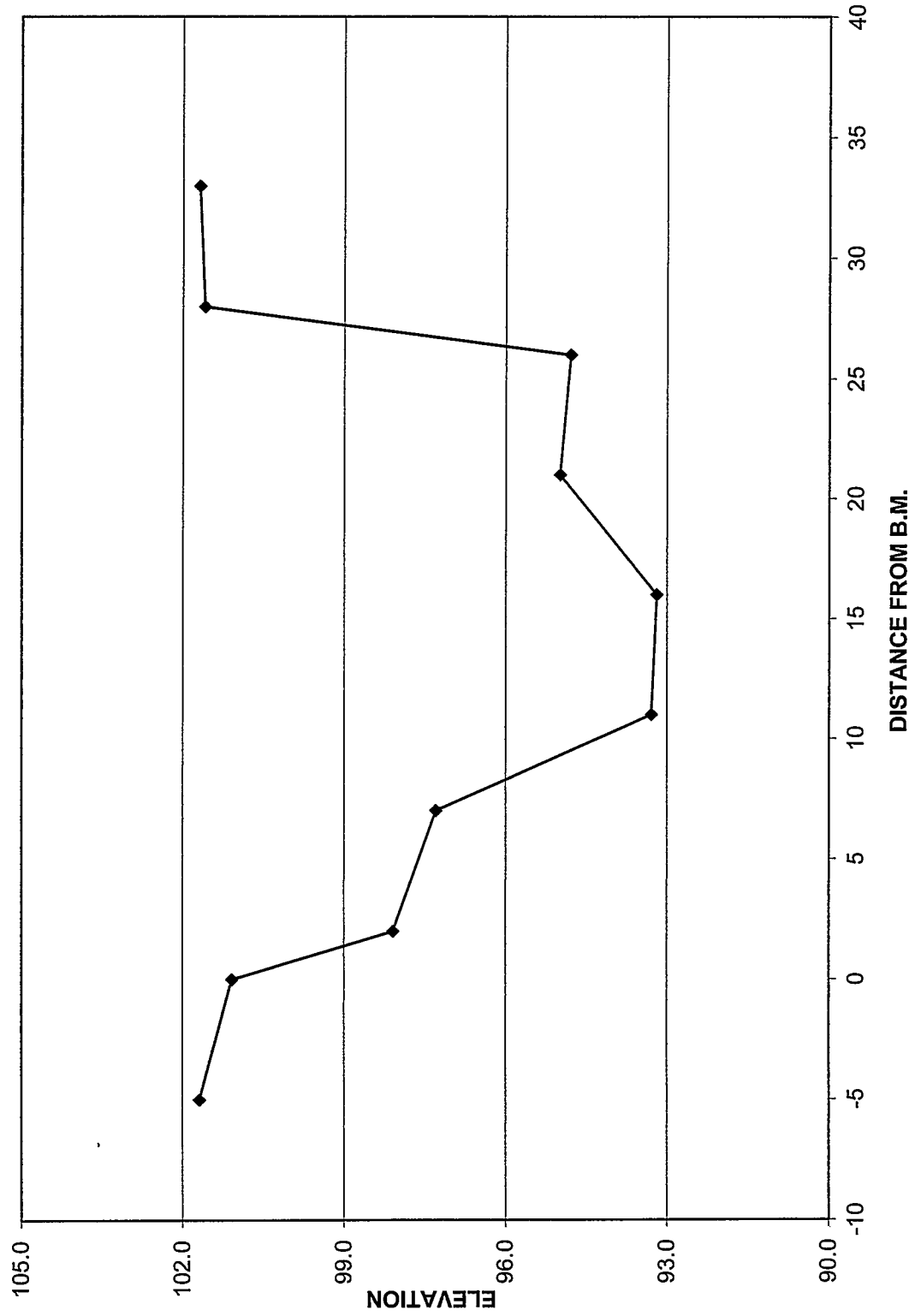
DATE :

6/13/2024

DOWNSTREAM GROUND ELEVATION @ EDGE OF BRIDGE

6/13/2024	
Distance from B.M.	Elevation
-5	101.8
0	101.7
2	97.2
7	97.2
11	95.2
16	93.1
21	93
26	93.4
28	101.7
33	101.7

49SR0870025 UPSTREAM D.L.



49SR0870025 DOWNSTREAM D.I.L.

