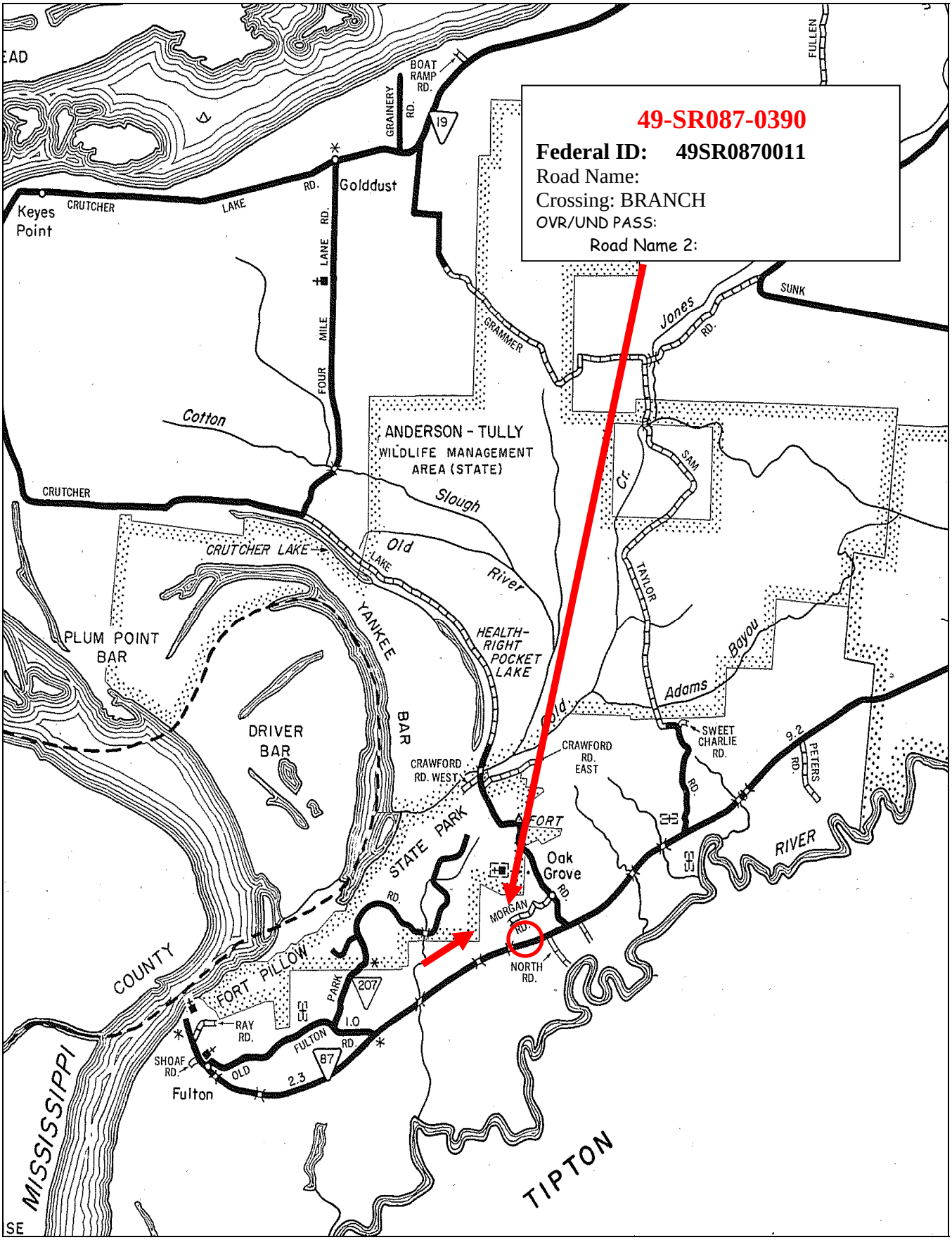
LAUDERDALE COUNTY



BRIDGE MAINTENANCE RECOMMENDATIONS

COUNTY: LAUDERDALE
LOCATION: 49-SR087-03.88-
CO. SEQ.: 1 SPEC. CASE: 0

Tennessee Department of Transportation

CROSSING: OVERFLOW
FED. BRIDGE NO.: 49SR0870011
MAINT. DIST.: 49

REPAIR LIST NO.: N
DATE ADDED: 05/01/2014
REVISED: 03/07/2018

FACILITY CARRIED:	FAS 87			NUMBER OF MAIN SPANS:	1
HIGHWAY SYSTEM:	05-STP RURAL, STATE			NUMBER OF APPROACH SPANS:	0
BRIDGE WIDTH (CURB TO CURB):	25 FT	3 IN		BRIDGE LENGTH (FT):	29
BRIDGE WIDTH (OUT TO OUT):	28 FT	6 IN		MAXIMUM SPAN LENGTH (FT):	29
APPROACH ROADWAY (W/SHOULDERS):	28 FT	10 IN		SKEW ANGLE (DEGREES):	90

MAINTAINED BY:	STATE HIGHWAY AGENCY
MAIN SPAN MATERIAL:	STEEL
MAIN SPAN DESIGN TYPE:	STRINGER/MULTI-BEAM OR GIRDER
APPROACH SPAN MATERIAL:	OTHER OR NOT APPLICABLE
APPROACH SPAN DESIGN TYPE:	OTHER OR NOT APPLICABLE

INSPECTION DATE:	03/07/2018	GENERAL CONDITION:	FAIR
EVALUATION DATE:	04/11/2016	STRUCTURALLY DEFICIENT:	NO
PPRM PIN NUMBER:			
H TRUCK RATING @ INV.:	17 TONS	SUFFICIENCY RATING:	49.5

SUGGESTED ROUTINE MAINTENANCE AND COMMENTS
REPAIR STEEL BEAM " N " IN SPAN NO.1
CUT AND REMOVE VEGETATION FROM CHANNEL
APPROACH GUARDRAIL TERMINALS ARE SUBSTANDARD
APPROACH GUARDRAILS ARE NON-EXISTENT
BRIDGRAILS ARE SUBSTANDARD

GENERAL COMMENTS:

CAPS REPAIRED AT ABUTMENTS #1 & #2

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

Bridge Condition Coding Form

Revised 03/13/2018

Bridge Number: (Includes Item 5A)	49SR08700111
Feature Intersected:	OVERFLOW
Evaluation Status:	CONDITION ITEM CHANGE

County:	49
Route:	SR087
Special Case:	0
County Sequence:	1
Log Mile:	3.88

CODE ONLY THOSE VALUES WHICH HAVE CHANGED

ITEM #	DESCRIPTION	VALUE
90	LAST INSPECTION DATE	03/07/2018
	EARLIEST DATE OF NEXT REGULAR INSPECTION	01/06/2020
10	MINIMUM V.C. OVER DECK (ROADWAY + SHOULDERS)	99 FT. 99 IN. / FT. IN.
520	MINIMUM V.C. OVER DECK (EXCLUDES SHOULDERS)	99 FT. 99 IN. / FT. IN.
36	TRAFFIC SAFETY FEATURES	Br. Rail: 0; Trans.: 0; Appr. Rail: 0; Terminal: 0; SPEED LIMIT: 55
41	STRC OPEN/CLOSED/POSTED (A K P)	P
58	DECK	7
59	SUPERSTRUCTURE	5
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	FAIR

16	LATITUDE	N 35° 37.6133′
17	LONGITUDE	W 89° 49.5667′

TEAM LEADER SIGNATURE

REVIEW DATE

CONDITION CODING GUIDELINES
(Values for Coding Items 58, 59, 60 and 62)

- 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 CORRECTIVE ACTION.

Bridge Loc. No: 49-SR087-03.90 Date: 03-07-18

BRIDGE NUMBER

APPROACH 1 WEIGHT LIMIT SIGN 40 T - 40 T

Bridge Loc. No: 49-SR087-03.90 Date: 03-07-18

LOOKING AHEAD ON ROUTE

VIEW ACROSS TOP OF DECK

Bridge Loc. No: 49-SR087-03.90 Date: 03-07-18

LOOKING BACK ON ROUTE

APPROACH 2 WEIGHT LIMIT SIGN 40 T- 40 T

Bridge Loc. No: 49-SR087-03.90 Date: 03-07-18

RIGHT SIDE VIEW

SPAN 1 HOLE IN STEEL I BEAM

Bridge Loc. No: 49-SR087-03.90 Date: 03-07-18

ABUTMENT 1

ABUTMENT 2

Bridge Loc. No: 49-SR087-03.90 Date: 03-07-18

ABUTMENT 1

LEFT SIDE INLET END VIEW

Bridge Loc. No: 49-SR087-03.90 Date: 03-07-18

SPAN 1 BOTTOM DECK

MAR 07 2018

BRIDGE INSPECTION REPORT

Form BIR 3.0
(Rev. 9-22-98)
DT-0069

Field Report No.: 24 Date: 3-7-18
Previous Report No.: 23 Date: 4/5/16
Co. Seq 01 Plans: YES ( ) NO ( )

Bridge No. 49SR0870011 (Eleven Digit No.) Bridge Location No. 49 - SR087 - 0390 (Co. - Route - Log Mile) - - (OVER/UNDER PASS)

Road Name | BRANCH (Feature Intersected) | CITY

Year Constructed 1986 County Lauderdale Maint. Dist: 49 Maint.Resp: 02

Year Widened ____ Year Rehabilitated ____ Structure Name (If Named)

FEATURES

Wearing Surface Concrete ( ) Timber ( ) Asphalt (X) Depth 3" (in.)

Flared Width Yes ( ) No (X) Median Width Open ( ) None (X) Closed ( )

Navigational Control Yes ( ) No (X) Bridge Skew 90 ° LT ( ) RT ( )

Structure Type (Main Span) STEEL I. BEAM

Structure Type (Appr.Spans) ____

No. Main Spans 1 No. Approach Spans ____

Maximum Span Length 29.0 (**.* ft.)

Total Length 29.0 (**.* ft.)

INSPECTORS

1. Ellison (T&L)
2. Wood
3. Haynes
4. Johnston
5. Gillispie
6. ____
7. ____
8. ____

WIDTHS (*.* ft.)

Deck Out-to-Out 27.8

Roadway Curb/Curb 26.8

Roadway Rail/Rail ____

Sidewalk Rt. ____ Lt. ____

*Approach Roadway 20.0
*(Does Not Include Shoulders)

Approach Shoulder Rt. 4.0
Lt. 4.0

CLEARANCES

Min. Vertical Clearance over Deck ____ (ft.-in.)

Min. Vertical Under Clearance ____ (ft.-in.)

Min. Lateral Under Clearance Rt. ____ (*.* ft.)

Min. Lateral Under Clearance Lt. ____ (*.* ft.)

FRACTURE CRITICAL: ____
(If Yes, Include BIR 3.9)

NBIS Bridge Length (<25 ft.) ____ (ft.-in.)

UNDERWATER INSPECTION

To Be Performed By: ____ Date ____

DOT FIELD TEAM ( ) CONTRACT DIVERS ( ) NONE REQUIRED (X)

Change in Structural Condition: Yes ( ) No (X) Major Repairs Made: Yes (X) No ( )

COMMENTS:

caps repaired at Abut 1 & 2

JASON ELLISON

Digitally signed by JASON ELLISON
DN: cn=JASON ELLISON, o=TDOT, ou=BRIDGE INSPECTION, email=jason.ellison@tn.gov, c=US
Date: 2018.03.13 14:45:54 -05'00'

LATITUDE: N35 ° 37.6133 '

LONGITUDE: W89 ° 49.5666 '

G.P.S. Location

BRIDGE RATING: ( ) (X) ( ) ( )
GOOD FAIR POOR CRITICAL

Supervising Bridge Inspector: Jason Ellison

Form BIR 3.1
(Rev. 9-22-98)
DT-0080

MAR 07 2018

Bridge Location No. 49 - SR087 - 3.90 (Co. - Route - Log Mile) Date _____

PERFORMANCE EVALUATION

Time of Day Inspected 10:35 Weather Conditions Cloudy 45°

Vehicles Observed All types

LIVE LOAD BEHAVIOR

	YES	NO	Comments
Substructure			
Horiz./ Vert. Defl.	( )	(Y)	
Vibration	( )	(Y)	
Superstructure			
Horiz./ Vert. Defl.	( )	(Y)	
Vibration	( )	(Y)	

APPROACH

	Rating	Comments
Alignment	(G) F P C	
Slab	G F P C	—
Joints	G F P C	—
Pavement	G (F) P C	
Embankment	(G) F P C	
Drains	G F P C	—

TRAFFIC SAFETY FEATURES

	Rating	STANDARD/ SUB-STANDARD		Comments
Bridgerailing	(G) F P C	( )	(X)	
Transitions	G F P C	( )	( )	—
Guardrail	G F P C	( )	( )	—
Guardrail Terminal	(G) F P C	( )	(X)	

SIGNING

	YES	NO	NEEDED
Paddleboards	(X)	( )	( )
Vertical Clearance (<14'-6")	( )	(X)	( )
NARROW ( )	( )	(X)	( )
ONE LANE BRIDGE ( )	( )	(X)	( )

Weight Limit Posted
YES (X) NO ( )

Gross..... _____ Tons
2 Axle..... 40 Tons
3 or more Axles.. 40 Tons

Other Signs or Plaques: _____

Comments Regarding any Problems with Signing: _____

MAR 0 7 2018

Form BIR 3.2
(Rev. 9-22-98)
DT-0081

Bridge Location No. 49 - SR087 - 0390 (Co. - Route - Log Mile)

Date _____

	Rating	Comments
DECK		
Wearing Surface	G (F) P C	
Deck - Structural Condition	G (F) P C	
Curbs- Wheelguards	G (F) P C	
Median	G F P C	
Sidewalks	G F P C	
Parapet	G F P C	
Railing	(G) F P C	
Paint	G F P C	—
Drains	G F P C	
Lighting Standards	G F P C	
Utilities	G F P C	
Joint Leakage	G F P C	
Expansion Joints	G F P C	
SUPERSTRUCTURE		
Bearing Devices	G F P C	
Beams S.I.B	G F (P) C	Span #1 "N" (244)
~~Girders~~ Wading Timber	G (F) P C	
P C C S	G F P C	
BOLTS (PCCS)	G F P C	
Floor Beams	G F P C	
Stringers	G F P C	
Diaphragms	G F P C	
Bracing	G F P C	
Trusses - General	G F P C	
Portals	G F P C	
Bracing	G F P C	
Paint	G (F) P C	
Alignment of Members	(G) F P C	

TEXTURE COAT

Condition Rating G F P C
Overall Appearance G F P C
Staining Rating G F P C

Fading G F P C
Needs Spot Painting YES ( ) NO ( )
Needs Repainting YES ( ) NO ( )

Comments _____ Scaling Rating G F P C

RECOMMENDATIONS: _____ CLEAN SEAL JOINTS ( )

_____ CLEAN DRAINS ( )

Form BIR 3.3
(Rev. 9-22-98)
DT-0082

MAR 0 7 2018

Bridge Location No. 49 - SR087 - 3.90
Co. Route Log Mile

Date _____

SUBSTRUCTURE

ABUTMENTS

	Rating	Comments	PILES TO BE REPLACED PILE(S)	ABUTMENT
Caps	G (F) P C			
Breastwall	G (F) P C			
Wings	G (F) P C			
Backwall	G (F) P C			
Plumb	G (F) P C			
~~Footing~~ Ret. wall	G (F) P C			
Piles	G (F) P C			
Embankment	(G) F P C			
Bearing	G F P C	—		
Slope Paving	G F P C			
Rip Rap	G F P C	—		
Earthquake Devices	G F P C			

PIERS

		PILE(S)	PIER
Caps	G F P C		
Columns	G F P C		
Plumb	G F P C		
Footings	G F P C		
Piles	G F P C		
Bearing	G F P C		
Web	G F P C		
Earthquake Devices	G F P C		

BENTS

		PILE(S)	BENT
Caps	G F P C		
Columns	G F P C		
Plumb	G F P C		
Footings	G F P C		
Piles	G F P C		
Bearing	G F P C		
Bracing	G F P C		
Earthquake Devices	G F P C		

Piles Need Replacement: NO (X) YES ( )

CUT VEGETATION NO ( ) YES (X) (204)

CLEAR DRIFT NO (X) YES ( )

RECOMMENDATIONS: _____

Form BIR 3.8
(Rev. 9-22-98)
DT-1508

MAR 0 7 2018

Bridge Location No. 49 - SR087 - 0390 (Co. Route Log Mile)

Date _____

STREAM CHANNEL DATA AND CONDITIONS

Stream Crossing: BRANCH

I. 1. Type of bed material? SAND, SILT

2. Has channel shifted? YES ( ) NO ( ) NOT APPARENT ( )

3. Condition of rip-rap? G F P C Est. % failed _____ % N/A (X)

4. Overall condition of channel? G (F) P C

5. Item 61 - Code values 0 thru 9 according to the recording and coding guide currently in effect: 6

6. Underwater diver inspection recommended? YES ( ) NO (X)
If yes, why? _____

II. Channel and bank stability conditions: (check if applicable)

1. Steep bank conditions: - Failures upstream ( ) Failures downstream ( )

2. Moderate bank erosion (X)

3. Bank vegetation: a. low growth ( ) b. large timber (X) c. clear banks ( )
d. dead trees upstream (X) e. dead trees downstream (X)

4. Sediment or gravel accumulation: YES (X) NO ( ) UNKNOWN ( )

5. Channel altered or straightened: YES ( ) NO (X) UNKNOWN ( )

6. Stable conditions: a. live growth (X) b. bedrock ( )
c. boulders ( ) d. flat slopes (<=2:1) ( )

III. Waterway adequacy and debris characteristics: (check if applicable

1. Bridge deck elevations:
a. level with approach roadway. . . . . (X)
b. higher than approach roadway. . . . . ( )
c. roadway approach >= 2 ft. above natural ground line. . (X)

2. Abutment encroaches into channel. . . . . ( )

3. Large scour (blowhole) under bridge. . . . . ( )

4. Indications that flood waters overtop bridge:
NO ( ) YES (X) OCASSIONALLY (X) FREQUENTLY ( ) UNKNOWN ( )

5. Debris characteristics:
a. debris/drift present YES (X) NO ( )
b. debris/drift likely to accumulate YES (X) NO ( )
c. dead trees upstream (X) dead trees downstream (X)

IV. Comments: _____

SPECIAL INSPECTION DATA - FOR REASONS OTHER THAN FC OR SCOUR

I. Does this bridge need a special inspection? YES ( ) NO ( )

II. Reason for special inspection: _____

Inspection Team's Summary

Bridge Location No. **49 - SR087 - 03.90**

Inspection Date 03-07-18

Bridge Rating **FAIR**

THIS IS A 1 SPAN STEEL I BEAM BRIDGE WITH BRIDGE RAILS, 4 PADDLE BOARD SIGNS & 40 TON WEIGHT LIMIT SIGNS POSTED ON APPROACH # 1 & 2
THE SUPERSTRUCTURE IS STEEL
THE SUBSTRUCTURE IS TIMBER
APPROACH # 1 & 2 A/C HAS 1/8" CRACKS & PATCHING
THE A/C WEARING SURFACE HAS 1/8"CRACKS
THE BOTTOM DECK HAS MEDIUM WEATHERING
THE SUPERSTRUCTURE HAS LIGHT TO HEAVY CORROSION
STEEL I BEAM "N" HAS A HOLE IN THE FLANGE OVER ABUTMENT # 2 BUT IS 52" OUT SIDE THE WHITE LINE
THE SUBSTRUCTURE HAS UPTO MEDIUM WEATHERING

VEGETATION IS POOR HEAVY GROWTH

SCOUR IS FAIR @ THIS TIME

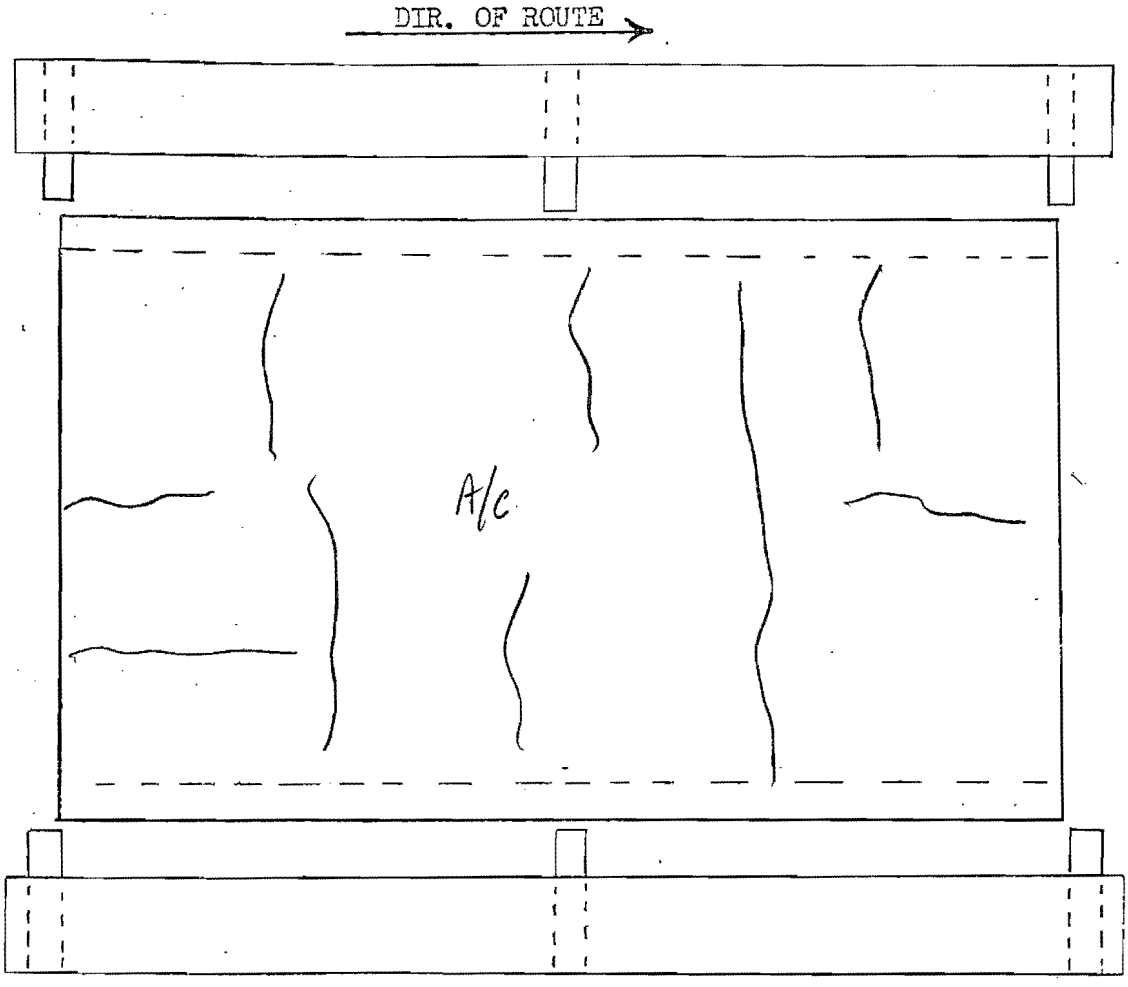
JASON ELLISON

INSPECTOR

CROSS SECTION: YES () NO (X) BRM: YES (X) NO ()

MAR 0 7 2018

BR. NO. 49 57 ~~3.98~~ 390 SK. 90° SPAN NO. 1



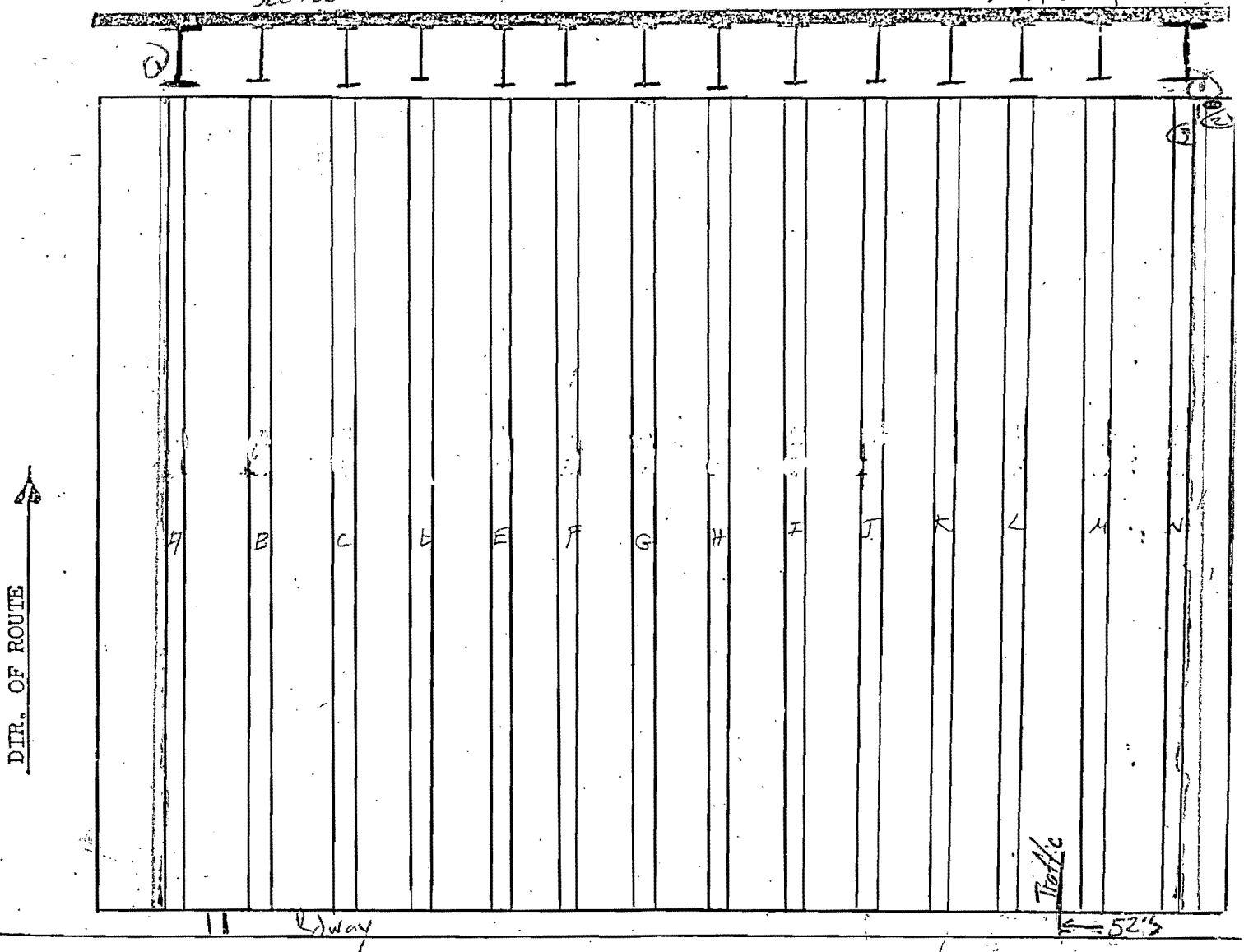
ELEMENT	RATING	COMMENT
TOP DECK	G (F) P C	1/8" cracks
RAILS & POST	(G) F P C	
~~PAINT~~	G F P C	
~~DRAINS~~	G F P C	
~~JOINTS~~	G F P C	
W6	G (F) P C	light weathering

MAR 07 2018

BR. NO. 49 87 ~~3.98~~ 3.90 SKEW 90° SPAN NO. 1

(1) Light Corrosion w/ no Section Loss @ Top Flange

(2) Hole

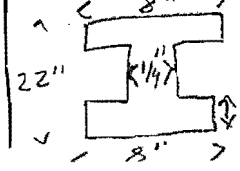


ELEMENT	RATING	COMMENT
BOTTOM DECK	G (F) P C	Med. Weathering
S. I. B.		
~~A - B - M~~	G (F) P C	Light Surface Rust ↓ (see (1) + (2))
A	G (F) P C	
N	G F (P) C	
DIA.	G F P C	
PAINT	G F P C	
Tim. Nailers	G F P C	

(3) Heavy Corrosion @ Top Flange (SZB "N") 1/2" Sec Loss (1' Length)

(4) Beam "N" is * 52" from Note. Eastbound Lane (White Line)

Cross Section of Beam "N"



Rev. 08/03/00

Date: MAR 07 2018

BRIDGE NUMBER: 49SR0870011 **49 SR087 0390**

CROSSING: BRANCH

Pg. # _____ of _____

DATE 4/5/16

LAST EXPOSURE	ABUT/BENT/ PIER NUMBER	TOTAL HEIGHT TOP OF CAP TO (OR GROUND LINE/ DATE FOR PILES	(t) FOOTING THICKNESS	W/FTG @ H= TOP OF CAP TO TOP OF FOOTING	EXPOSURE
3.7'	Abut 1				4.0'
1.5'	Abut 2				1.9'

TOP OF CAP TO TOP OF WATER: ~

RIP-RAP: YES: ( ) NO: ~~X~~

100.00' UPSTREAM: ~

@ ABUTMENTS: ~

THRU STRUCTURE: ~

@ BENTS/PIERS: ~

100.00' DOWNSTREAM: ~

UPSTREAM ☐ ~

DOWNSTREAM ☐ ~

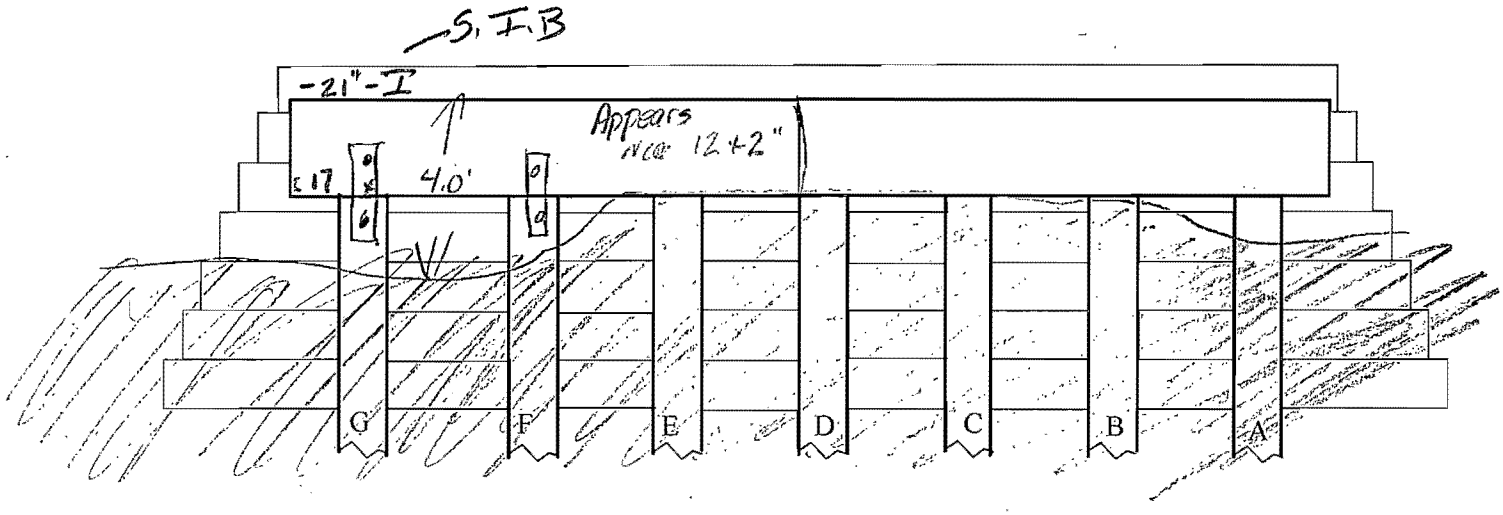
THRU STRUCTURE ☐ ~

COMMENTS: _____

49-SR87-3.90
Bridge No. Co. Route Log Mile

ABUT. NO. 1

MAR 07 2018



LOOKING BACK

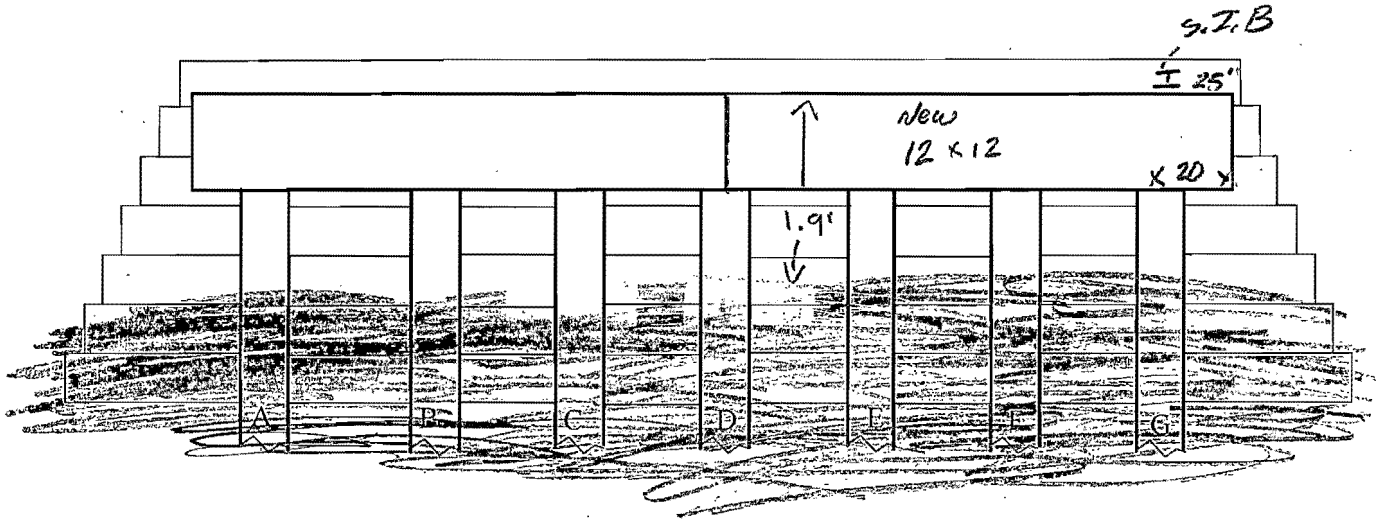
ELEMENT	RATING	COMMENT
CAP	G (F) P C	med weather
WINGS	G (F) P C	
PILES A	G (F) P C	med weather
B	G F P C	
C	G F P C	N/V
D	G F P C	
E	G F P C	
F	G F P C	
G	G (F) P C	med weather
BREASTWALL	G (F) P C	med weather
EMB.	(G) F P C	
VEG.	G F (P) C	Heavy growth
RIP - RAP	G F P C	n/v
retwall	G (F) P C	med weather
	G F P C	
	G F P C	

49-SR87-3.90

Bridge No. Co. Route Log Mile

ABUT. NO. 2

MAR 07 2018



LOOKING AHEAD

ELEMENT	RATING	COMMENT
CAP	G (F) P C	up to med weathering
WINGS	G (F) P C	
PILES A	G (F) P C	
B	G (F) P C	
C	G (F) P C	
D	G (F) P C	
E	G (F) P C	
F	G (F) P C	
G	G (F) P C	
BREASTWALL	G (F) P C	
EMB.	(G) F P C	
VEG.	G (F) P C	light growth
RIP - RAP	G F P C	N/A
	G F P C	
	G F P C	
	G F P C	

MAR 0 7 2018

49SR0870011	49	SR087	0390		SKEW: 90
BRIDGE NO.:	CO.	ROUTE	L.M.	L/R	

Direction of Route →

A1 A2

F = FIXED
E = EXPANSION
S = SIMPLE
C = CONTINUOUS