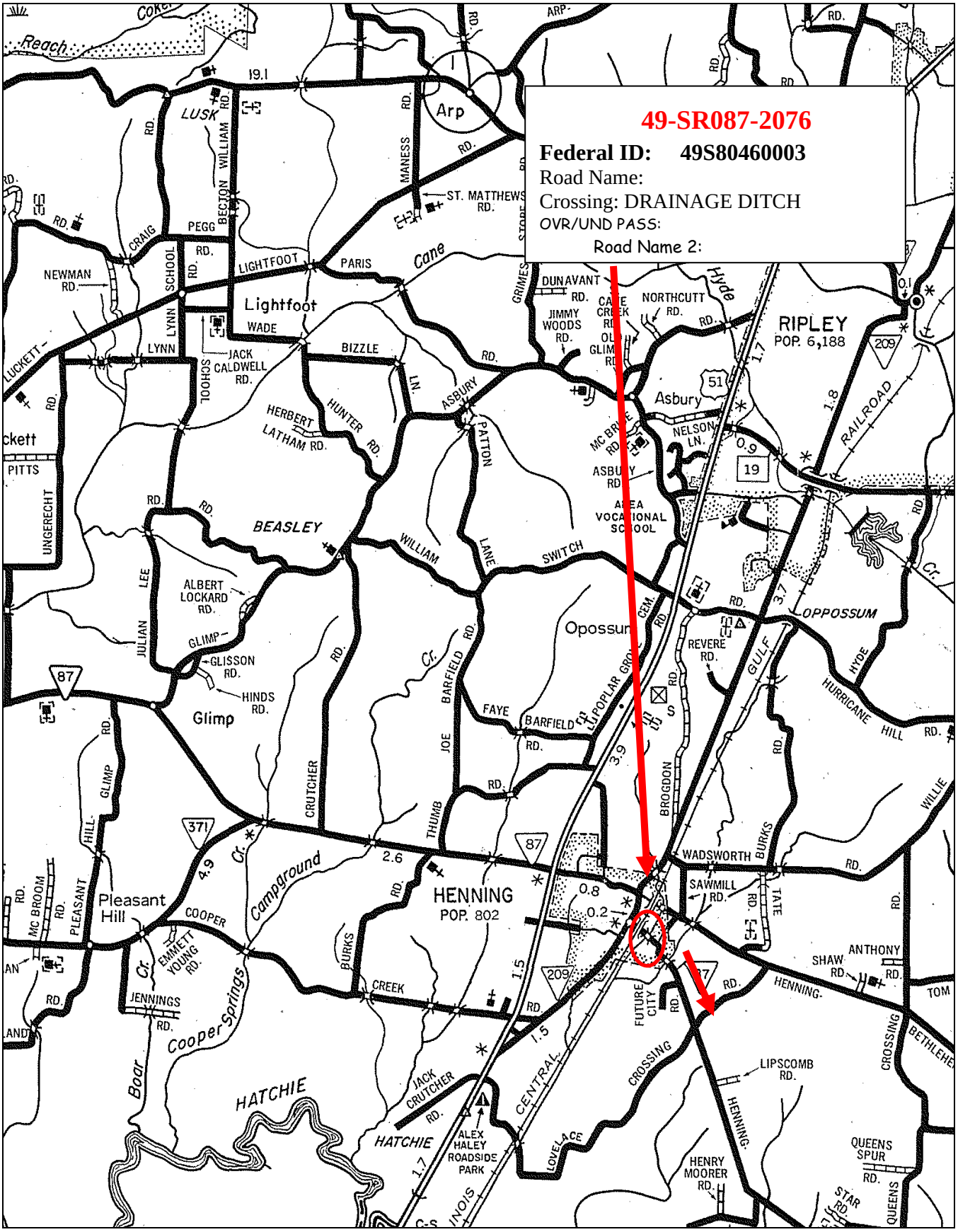
LAUDERDALE COUNTY



BRIDGE MAINTENANCE RECOMMENDATIONS

COUNTY: LAUDERDALE
LOCATION: 49-SR087-20.76-
CO. SEQ.: 1 SPEC. CASE: 0

Tennessee Department of Transportation

CROSSING: DRAINAGE DITCH
FED. BRIDGE NO.: 49S80460003
MAINT. DIST.: 49

REPAIR LIST NO.: N
DATE ADDED:
REVISED: 11/10/2021

FACILITY CARRIED:	FAU 87			NUMBER OF MAIN SPANS:	1
HIGHWAY SYSTEM:	05-STP	RURAL,	STATE	NUMBER OF APPROACH SPANS:	0
BRIDGE WIDTH (CURB TO CURB):	27 FT	10 IN		BRIDGE LENGTH (FT):	28
BRIDGE WIDTH (OUT TO OUT):	28 FT	10 IN		MAXIMUM SPAN LENGTH (FT):	28
APPROACH ROADWAY (W/SHOULDERS):	27 FT	10 IN		SKEW ANGLE (DEGREES):	90

MAINTAINED BY:	STATE HIGHWAY AGENCY
MAIN SPAN MATERIAL:	CONCRETE
MAIN SPAN DESIGN TYPE:	CHANNEL BEAM
APPROACH SPAN MATERIAL:	OTHER OR NOT APPLICABLE
APPROACH SPAN DESIGN TYPE:	OTHER OR NOT APPLICABLE

INSPECTION DATE:	11/10/2021	GENERAL CONDITION:	FAIR
EVALUATION DATE:	01/21/2020	STRUCTURALLY DEFICIENT:	NO
PPRM PIN NUMBER:			
H TRUCK RATING @ INV.:	15 TONS	SUFFICIENCY RATING:	86.2

SUGGESTED ROUTINE MAINTENANCE AND COMMENTS
CLEAR DRAINS
APPROACH GUARDRAILS ARE SUBSTANDARD
BRIDGERAILS ARE SUBSTANDARD

GENERAL COMMENTS:

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

Bridge Condition Coding Form

Revised 11/12/2021

Bridge Number: (Includes Item 5A)	49S804600031
Feature Intersected:	DRAINAGE DITCH
Evaluation Status:	NO CHANGE BUT STILL EVALUATE
County:	49
Route:	SR087
Special Case:	0
County Sequence:	1
Log Mile:	20.76

CODE ONLY THOSE VALUES WHICH HAVE CHANGED

ITEM #	DESCRIPTION	VALUE
90	LAST INSPECTION DATE	11/10/2021
	EARLIEST DATE OF NEXT REGULAR INSPECTION	09/11/2023
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 1 / SPEED LIMIT 35
41	STRC OPEN/CLOSED/POSTED (A K P)	P
58	DECK	7
59	SUPERSTRUCTURE	7
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° 40.3417′

17 LONGITUDE W 89° 34.3617′

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-SR087-20.76 Date: 11-10-21

BRIDGE NUMBER

DIRECTION OF ROUTE

Bridge Loc. No: 49-SR087-20.76 Date: 11-10-21

APPROACH # 1 WEIGHT LIMIT SIGN

VIEW ACROSS TOP OF DECK

Bridge Loc. No: 49-SR087-20.76 Date: 11-10-21

OPPOSITE DIRECTION OF ROUTE

APPROACH # 2 WEIGHT LIMIT SIGN

Bridge Loc. No: 49-SR087-20.76 Date: 11-10-21

ABUTMENT # 2

ABUTMENT # 1

Bridge Loc. No: 49-SR087-20.76 Date: 11-10-21

BOTTOM DECK OF SPAN # 1

RIGHT ELEVATION

Bridge Loc. No: 49-SR087-20.76 Date: 11-10-21

LEFT ELEVATION

DIRFT CAUGHT ON PIPE IN MIDDLE OF CHANNEL

NOV 10 2021

BRIDGE INSPECTION REPORT

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

Field Report No.: 26 Date: 11/10/21
Previous Report No.: 25 Date: 12/30/19
Co. Seq 01 Plans: YES ( ) NO ( )

Bridge No. 49S80460003 (Eleven Digit No.) Bridge Location No. 49 - SR087 - 2076 (Co. Route Log Mile) - - (OVER/UNDER PASS)

(Road Name) DRAINAGE DITCH (Feature Intersected) (CITY)

Year Constructed 1992 County Lauderdale Maint. Dist: 49 Maint.Resp: 02

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

FEATURES

Wearing Surface Concrete ( ) Timber ( ) Asphalt (X) Depth 1" (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) P. C. C. S.
Structure Type (Appr.Spans) _____
No. Main Spans 1 No. Approach Spans _____
Maximum Span Length 28.0 (**.* ft.)
Total Length 28.0 (**.* ft.)

INSPECTORS

1. Kee (JL)
2. S. Hayes
3. A. Hayes
4. Cox
5. _____
6. _____
7. _____
8. _____

WIDTHS (*.* ft.)

Deck Out-to-Out 29.1
Roadway Curb/Curb 27.9
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 ( ) No (X)

COMMENTS:

JACOB KEE
Digitally signed by JACOB KEE
Date: 2021.11.16 08:22:06 -06'00'

LATITUDE: N35 ° 40.3416 '
LONGITUDE: W89 ° 34.3616 '
G.P.S. Location

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

Supervising Bridge Inspector: Jacob Kee

NOV 10 2021

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

Bridge Location No. 49 - SR087 - 2076 (Co. - Route - Log Mile)

Date _____

PERFORMANCE EVALUATION

Time of Day Inspected 3:00 p.m. Weather Conditions 70° F & Sunny

Vehicles Observed All types

LIVE LOAD BEHAVIOR

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

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	( )	(X)	
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: None

Comments Regarding any Problems with Signing: 2 Paddleboards on App #2 only

NOV 10 2021

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

Bridge Location No. 49 - SR087 - 2076 (Co. - Route - Log Mile) Date _____

	Rating	Comments
DECK		
Wearing Surface	(G) F P C	
Deck - Structural Condition	G F P C	
Curbs	(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	All drains (043)
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	G F P C	
Girders	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	Fading	G F P C
Overall Appearance	G F P C	Needs Spot Painting	YES ( ) NO ( )
Staining Rating	G F P C	Needs Repainting	YES ( ) NO ( )

Comments _____ Scaling Rating G F P C

RECOMMENDATIONS: _____ CLEAN SEAL JOINTS ( )

CLEAN DRAINS (X)

NOV 10 2021

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

Bridge Location No. 49 - SR087 - 2076 (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	G F P C			
Piles	G (F) P C			
Embankment	G (F) P C			
~~Bearing~~ Ret. wall	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 (X) YES ( )

CLEAR DRIFT NO (X) YES ( )

RECOMMENDATIONS: _____

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

NOV 10 2021

Bridge Location No. 49 - SR087 - 2076 (Co. - Route - Log Mile)

Date _____

STREAM CHANNEL DATA AND CONDITIONS

Stream Crossing: DRAINAGE DITCH

I. 1. Type of bed material? Sand & Silt

2. Has channel shifted? YES ( ) NO (X) 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 ( ) 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 ( ) 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 (X) YES ( ) OCCASIONALLY ( ) 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 (X)

II. Reason for special inspection: _____

Inspection Team's Summary

Bridge Location No. **49 - SR087 - 20.76**

Inspection Date 11/10/21

Bridge Rating **Fair**

This is a 1 span p.c.c.s. & timber bridge with metal bridge rails, metal approach rails, 2 paddle boards on approach # 2 only & 40 ton weight limit signs on both approaches.
Approach roadway has up to 1/16" cracks, light settlement & patched areas.
Drains are filled with debris.
The superstructure has up to 1/16" cracks & spalling.
The substructure has light to medium weathering & up to ¼" checks.

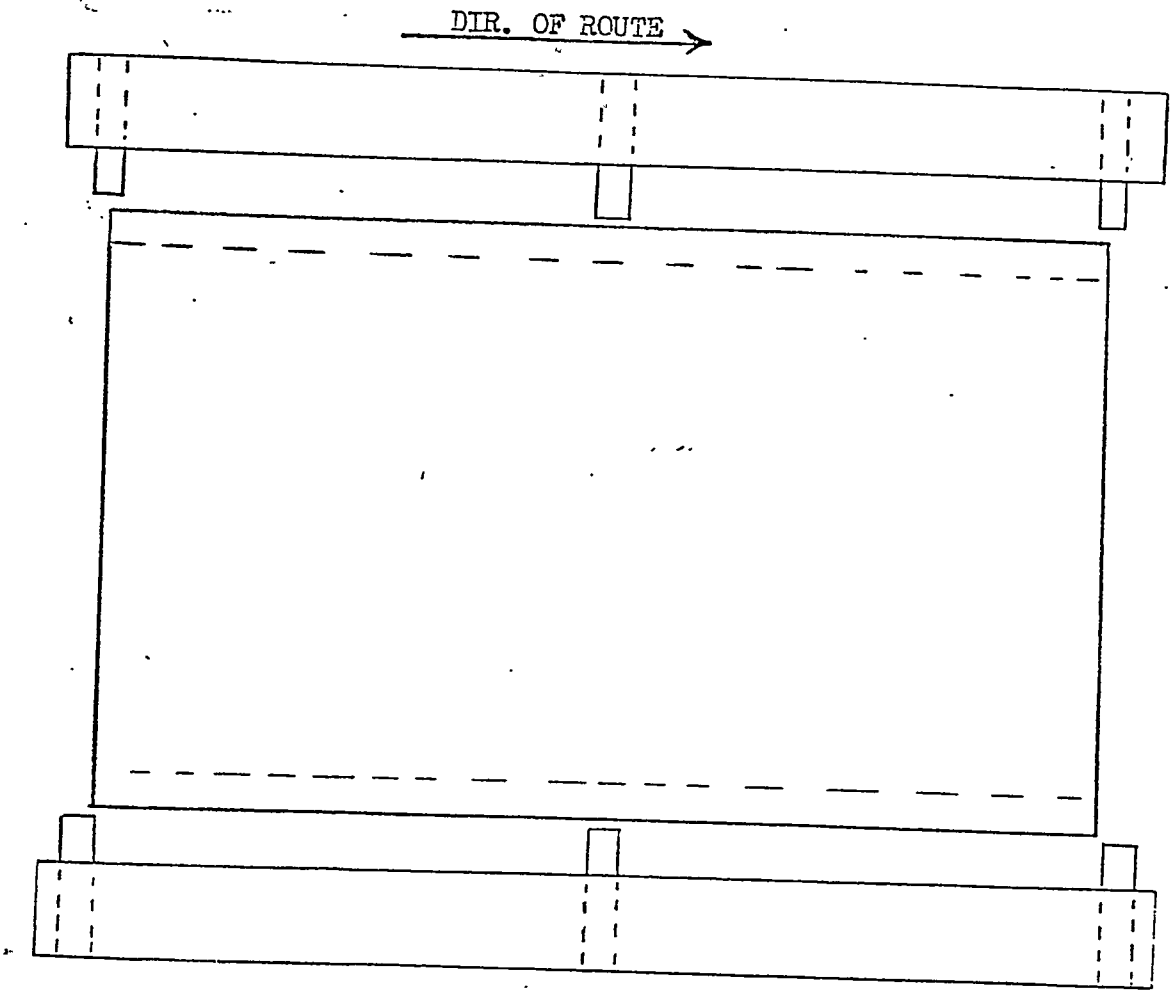
Jaylan Cox

INSPECTOR

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

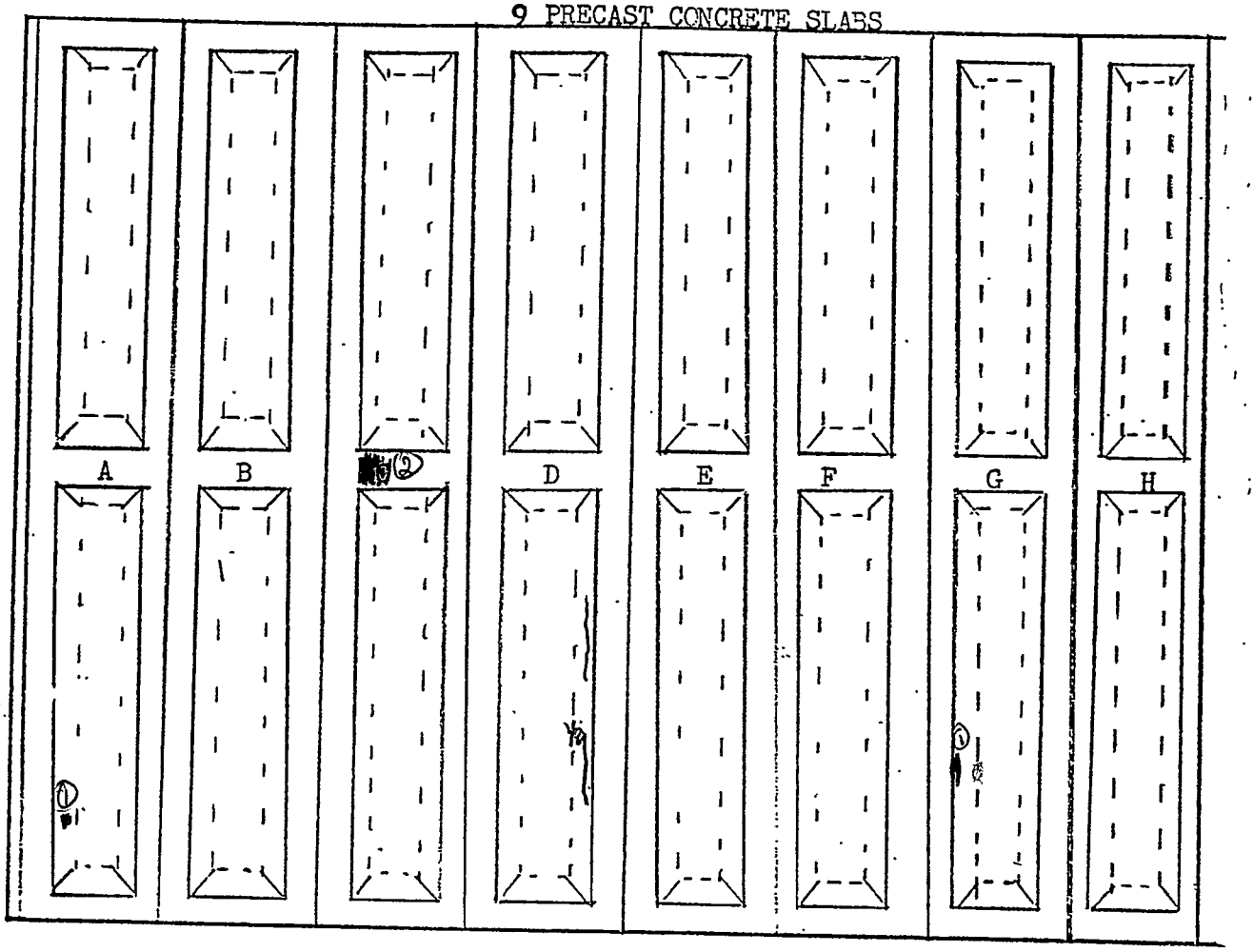
NOV 10 2021

BR. NO. 49 87 20.76 SK. 90° SPAN NO. 1



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	filled w/debris
JOINTS	G F P C	
CURBS	(G) F P C	

BRIDGE NO. 49 87 ~~20.7~~ SKEW 90° SPAN NO. 1



Element		Rating				Comment
SLAB	A	G	F	P	C	See ①
	B	G	F	P	C	
	C	G	F	P	C	See ②
	D	G	F	P	C	upto 1/8" cracks
	E	G	F	P	C	
	F	G	F	P	C	
	G	G	F	P	C	See ①
	H	G	F	P	C	
BOLTS Btm Deck		G	F	P	C	

① Spalling 5" Dia x 1/8" D
② Spalling 1" W x 7" L x 3/4" D

Rev. 08/03/00

Date:_____

BRIDGE NUMBER: 49S80460003 **49 SR087 2076**

CROSSING: DRAINAGE DITCH

Pg. # _____ of _____

DATE 12/30/19

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
4.8'	A-1				4.6'
9.5'	A2				9.2'

TOP OF CAP TO TOP OF WATER: _____ RIP-RAP: YES: ( ) NO: (X)

100.00' UPSTREAM: _____ @ ABUTMENTS:_____

THRU STRUCTURE: _____ @ BENTS/PIERS:_____

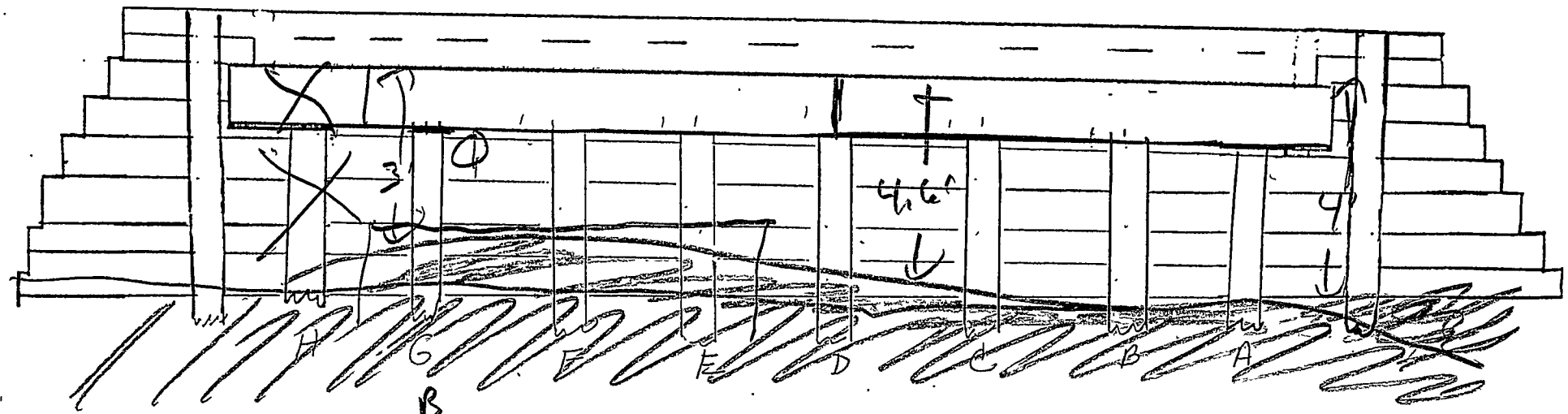
100.00' DOWNSTREAM:_____

UPSTREAM [ ]

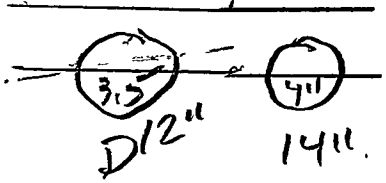
DOWNSTREAM [ ]

THRU STRUCTURE [ ]

COMMENTS: _____



BR. NO. 47 817 20.78



LOOKING Back

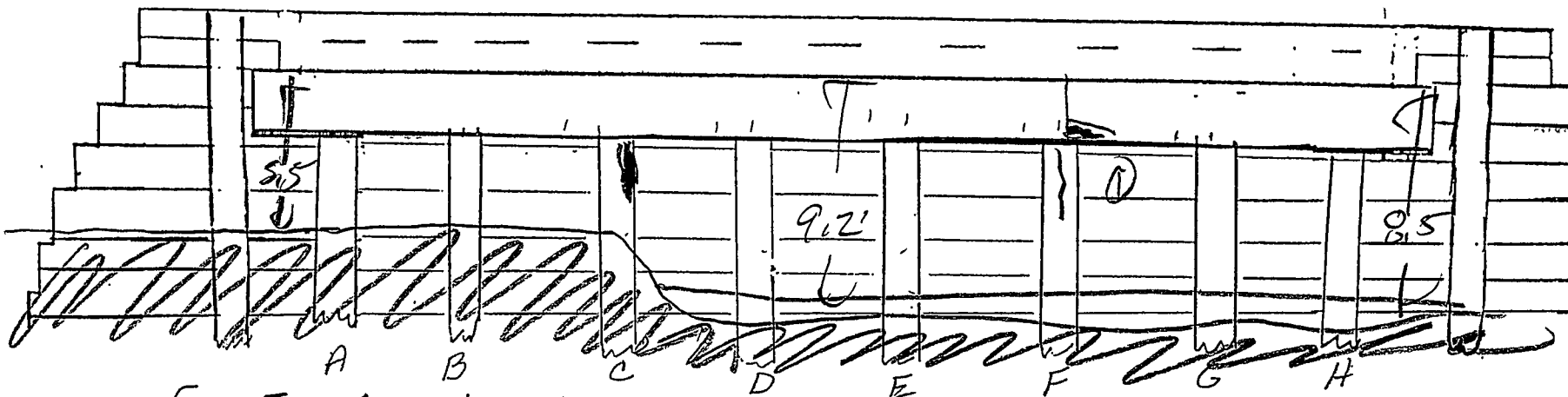
① 3/4" shim

ABUT. NO. 1

NOV 10 2021

ELEMENT	RATING	COMMENT
CAP	G (F) P C	Med. weathering
PILING A ~~A~~ G	G (F) P C	Med. weathering
BREASTWALL Ret wall	G (F) P C	Med weathering
WINGS & PILE F	G (F) P C	Med weathering Med weathering
EMB.	(G) F P C	
VEG.	G (F) P C	Light growth
_____	G F P C	
_____	G F P C	
_____	G F P C	

BR. NO. 49 87 20[illegible]



E F G H

(4) (4) (4) (4.5) (2)

13" 14 13 15

LOOKING Ahead

(1) Splinter 1'w 3"tall

ABUT. NO. 2

NOV 10 2021

ELEMENT	RATING	COMMENT
CAP	G (F) P C	(1) Light to mod weathering
PILING B	G (F) P C	Mod weathering
BREASTWALL	G (F) P C	Light weathering
WINGS & PILE	G F P C	E-H piles up to 4" out under (2)
Plumb EMB.	G (E) P C	About in channel cap
VEG. Pulled	(G) F P C	
C-H	G (F) P C	Light to mod. weathering
E	G F P C	
F	G (F) P C	Splinter 2.5 high 6"w 1/2" deep
	F	1/4" check

49S80460003	49	SR087	2076	
BRIDGE NO.:	CO.	ROUTE	L.M.	L/R

SKEW: 90

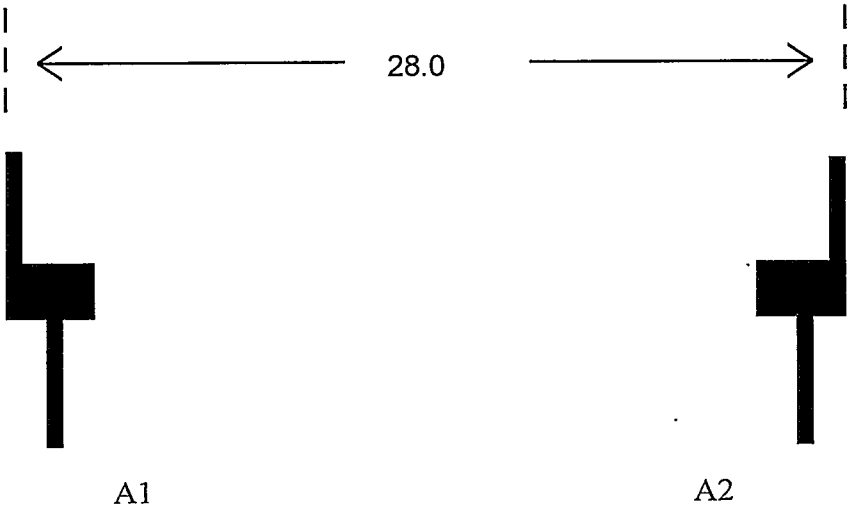
No. of Spans: 1

No. of Approach Spans:

Direction of Route →

A1 A2

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



Your Agency Name

Your Office Name
Your Department Name

Structure Inventory and Appraisal Sheet (English Units)

ELEMENT CONDITION STATE DATA

Str Unit	Elm/Env	Description	Unit	Total Qty	% in 1	Qty. St. 1	% in 2	Qty. St. 2	% in 3	Qty. St. 3	% in 4	Qty. St. 4
0	12/3	Re Concrete Deck	sq.ft	815.00	100%	815.00	0%	0.00	0%	0.00	0%	0.00
0	510/3	Wearing Surfaces	sq.ft	782.00	100%	782.00	0%	0.00	0%	0.00	0%	0.00
0	116/3	Re Conc Stringer	ft	224.00	98%	219.00	2%	5.00	0%	0.00	0%	0.00
0	1080/3	Delamination/Spall/Patched Area	ft	2.00	0%	0.00	100%	2.00	0%	0.00	0%	0.00
0	1130/3	Cracking (RC and Other)	ft	3.00	0%	0.00	100%	3.00	0%	0.00	0%	0.00
0	216/3	Timber Abutment	ft	62.00	100%	62.00	0%	0.00	0%	0.00	0%	0.00
0	330/3	Metal Bridge Railing	ft	56.00	100%	56.00	0%	0.00	0%	0.00	0%	0.00