

Federal ID: 385K08/0001

Road Name:

Crossing: BRANCH

OVR/UND PASS:

Road Name 2:

BRIDGE MAINTENANCE RECOMMENDATIONS



Tennessee Department
of Transportation

COUNTY: HAYWOOD
LOCATION: 38-SR087-02.30-
CO. SEQ.: 1 SPEC. CASE: 0

CROSSING: BRANCH
FED. BRIDGE NO.: 38SR0870001
MAINT. DIST.: 38

REPAIR LIST NO.: 3
DATE ADDED: 11/16/2017
REVISED: 08/11/2021

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):	27 FT 2 IN	BRIDGE LENGTH (FT):	29
BRIDGE WIDTH (OUT TO OUT):	28 FT 6 IN	MAXIMUM SPAN LENGTH (FT):	28
APPROACH ROADWAY (W/SHOULDERS):	26 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:	08/11/2021	GENERAL CONDITION:	FAIR
EVALUATION DATE:	10/09/2019	STRUCTURALLY DEFICIENT:	NO
PPRM PIN NUMBER:			
H TRUCK RATING @ INV.:	16 TONS	SUFFICIENCY RATING:	76.5

SUGGESTED ROUTINE MAINTENANCE AND COMMENTS

CLEAR DRAINS

CUT AND REMOVE VEGETATION FROM CHANNEL

APPROACH GUARDRAIL TERMINALS ARE SUBSTANDARD

APPROACH GUARDRAILS ARE NON-EXISTENT

BRIDGERAILS ARE SUBSTANDARD

GENERAL COMMENTS:



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

Bridge Condition Coding Form

Revised 08/12/2021

Bridge Number:
(Includes Item 5A)

Feature Intersected:

Evaluation Status:

County:

Route:

Special Case:

County Sequence:

Log Mile:

CODE ONLY THOSE VALUES WHICH HAVE CHANGED

ITEM #	DESCRIPTION	VALUE	CONDITION CODING GUIDELINES
90	LAST INSPECTION DATE	<input type="text" value="08/11/2021"/>	(Values for Coding Items 58, 59, 60 and 62)
	EARLIEST DATE OF NEXT REGULAR INSPECTION	<input type="text" value="06/12/2023"/>	
		<input type="text" value="/ /"/>	
10	MINIMUM V.C. OVER DECK (ROADWAY + SHOULDERS)	99 FT. <input type="text" value="99"/> IN.	N NOT APPLICABLE
520	MINIMUM V.C. OVER DECK (EXCLUDES SHOULDERS)	99 FT. <input type="text" value="99"/> IN.	9 EXCELLENT CONDITION
36	TRAFFIC SAFETY FEATURES		8 VERY GOOD CONDITION - NO PROBLEMS NOTED.
	Br. Rail Trans. Appr. Rail Terminal SPEED LIMIT	0 N N 0 55	7 GOOD CONDITION - SOME MINOR PROBLEMS.
41	STRC OPEN/CLOSED/POSTED	P	6 SATISFACTORY CONDITION - MINOR DETERIORATION OF STRUCTURAL ELEMENTS.
	A K P		5 FAIR CONDITION - ALL PRIMARY STRUCTURAL ELEMENTS ARE SOUND BUT MAY HAVE MINOR SECTION LOSS, CRACKING, SPALLING OR SCOUR.
58	DECK	7	4 POOR CONDITION - ADVANCED SECTION LOSS, DETERIORATION, SPALLING OR SCOUR.
59	SUPERSTRUCTURE	6	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.
60	SUBSTRUCTURE	5	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.
61	CHANL/CHANL PROTECTION	6	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.
62	CULVERT AND RETAIN WALL	N	0 FAILED CONDITION - OUT OF SERVICE AND BEYOND CORRECTIVE ACTION.
71	WATERWAY ADEQUACY	6	
72	APPROACH RDWY ALIGNMENT	8	
521	OVERALL CONDITION	<input type="text" value="FAIR"/>	
16	LATITUDE	17 LONGITUDE	
	N 35° 37.4583'	W 89° 25.8550'	
	<input type="text" value=""/>	<input type="text" value=""/>	
TEAM LEADER SIGNATURE		REVIEW DATE	
<input type="text" value=""/>		<input type="text" value=""/>	

Bridge Loc. No: 38-SR087-02.31 Date: 8-11-21



BRIDGE NUMBER



RIGHT SIDE

Bridge Loc. No: 38-SR087-02.31 Date: 8-11-21



VIEW ACROSS TOP OF DECK



LEFT SIDE

Bridge Loc. No: 38-SR087-02.31 Date: 8-11-21



LOOKING AHEAD ON ROUTE



APPROACH # 1 WEIGHT LIMIT

Bridge Loc. No: 38-SR087-02.31 Date: 8-11-21



LOOKING BACK ON ROUTE



APPROACH # 2 WEIGHT LIMIT

Bridge Loc. No: 38-SR087-02.31

Date: 8-11-21



ABUTMENT # 2



BOTTOM DECK

Bridge Loc. No: 38-SR087-02.31 Date: 8-11-21



LEFT ELEVATION



RIGHT ELEVATION

Bridge Loc. No: 38-SR087-02.31 Date: 8-11-21



ABUTMENT # 1



ABUTMENT # 2 PILE "D"

AUG 11 2021

BRIDGE INSPECTION REPORT

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

Field Report No.: 26 Date: 8/11/21
Previous Report No.: 25 Date: 9-12-19
Co. Seq 01 Plans: YES () NO ()

Bridge No. 38SR0870001 Bridge Location No. 38 - SR087 - 0231
Eleven Digit No. Co. Route Log Mile OVER/UNDER PASS

BRANCH
Road Name Feature Intersected CITY
Year Constructed 1990 County Haywood Maint. Dist: 48 Maint. Resp: 02
Year Widened Year Rehabilitated Structure Name (If Named)

FEATURES

Wearing Surface Concrete () Timber () Asphalt ☒ Depth 3.5" (in.)
Flared Width Yes () No () Median Width Open () None () Closed ()
Navigational Control Yes () No () 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 29.0 (**. * ft.)
Total Length 29.0 (**. * ft.)

INSPECTORS

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

WIDTHS (*. * ft.)

Deck Out-to-Out 28.0
Roadway Curb/Curb 27.0
Roadway Rail/Rail _____
Sidewalk Rt. _____ Lt. _____
*Approach Roadway 19.0
*(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 ☒
Change in Structural Condition: Yes () No ☒ Major Repairs Made: Yes () No ☒

COMMENTS:

LATITUDE: N35 ° 37.4583 '

LONGITUDE: W89 ° 25.8550 '

G.P.S. Location

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

Supervising Bridge Inspector: Jared T. Cox

AUG 11 2021

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

Bridge Location No. 38 - SR087 - 0231
Co. Route Log Mile

Date _____

PERFORMANCE EVALUATION

Time of Day Inspected 9:00 a.m. Weather Conditions 85°F ± Sunny
Vehicles Observed Passenger vehicles

LIVE LOAD BEHAVIOR

Substructure	YES	NO	Comments
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	() ()	
Guardrail Terminal	(G) F P C	() (X)	

SIGNING

	YES	NO	NEEDED	Weight Limit Posted
Paddleboards	(X)	()	()	YES (X) NO ()
Vertical Clearance (<14'-6")	()	(X)	()	Gross..... Tons
NARROW ()	()	(X)	()	2 Axle..... 40 Tons
ONE LANE BRIDGE ()	()	(X)	()	3 or more Axles.. 40 Tons
Other Signs or Plaques:	None			
Comments Regarding any Problems with Signing:				

AUG 11 2021

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

Bridge Location No. 38 - SR087 - 0231

Date _____

Co. _____ Route _____ Log Mile _____

DECK

	Rating	Comments
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	X	Fading	G F P C	
Overall Appearance	G F P C	X	Needs Spot Painting	YES () NO ()	X
Staining Rating	G F P C		Needs Repainting	YES () NO ()	

Comments _____ Scaling Rating G F P C

RECOMMENDATIONS: _____ CLEAN SEAL JOINTS ()

_____ CLEAN DRAINS (X)

AUG 11 2021

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

Bridge Location No. 38 - SR087 - 0231
Co. Route Log Mile

Date _____

SUBSTRUCTURE

PILES TO BE
REPLACED

ABUTMENTS

	Rating	Comments	PILE(S)	ABUTMENT
Caps	G <u>F</u> P C			
Breastwall	G <u>F</u> P C			
Wings	G <u>F</u> P C			
Backwall	G F P C			
Plumb	<u>G</u> F P C			
Footing	G F P C			
Piles	G <u>F</u> P C			
Embankment	G <u>F</u> 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

Bridge Location No. 38 - SR087 - 0231
Co. Route Log Mile

AUG 11 2021
Date

STREAM CHANNEL DATA AND CONDITIONS

Stream Crossing: BRANCH

- 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 (X) b. large timber (X) c. clear banks ()
d. dead trees upstream (X) e. dead trees downstream (X)
4. Sediment or gravel accumulation: YES () NO (X) UNKNOWN ()
5. Channel altered or straightened: YES () NO (X) UNKNOWN ()
6. Stable conditions: a. live growth (X) b. bedrock ()
c. boulders () d. flat slopes ($\leq 2:1$) ()

- 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. (X)
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 () NO (X)
b. debris/drift likely to accumulate YES () NO (X)
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. 38 - SR087 - 02.31

Inspection Date 8/11/21

Bridge Rating Fair

This is a 1 span p.c.c.s bridge with metal rails & 4 paddle boards.

The bridge is posted @ 40/40 ton on each approach.

The asphalt roadway has no issues.

Span # 1 drains are filled with debris.

The p.c.c.s. have up to 1/16" cracks with efflorescence & spalling.

The timber substructure has light to medium weathering & decay.

Vegetation is heavy.

The scour is fair due to abutment # 2 being in the channel.

Jacob Kee

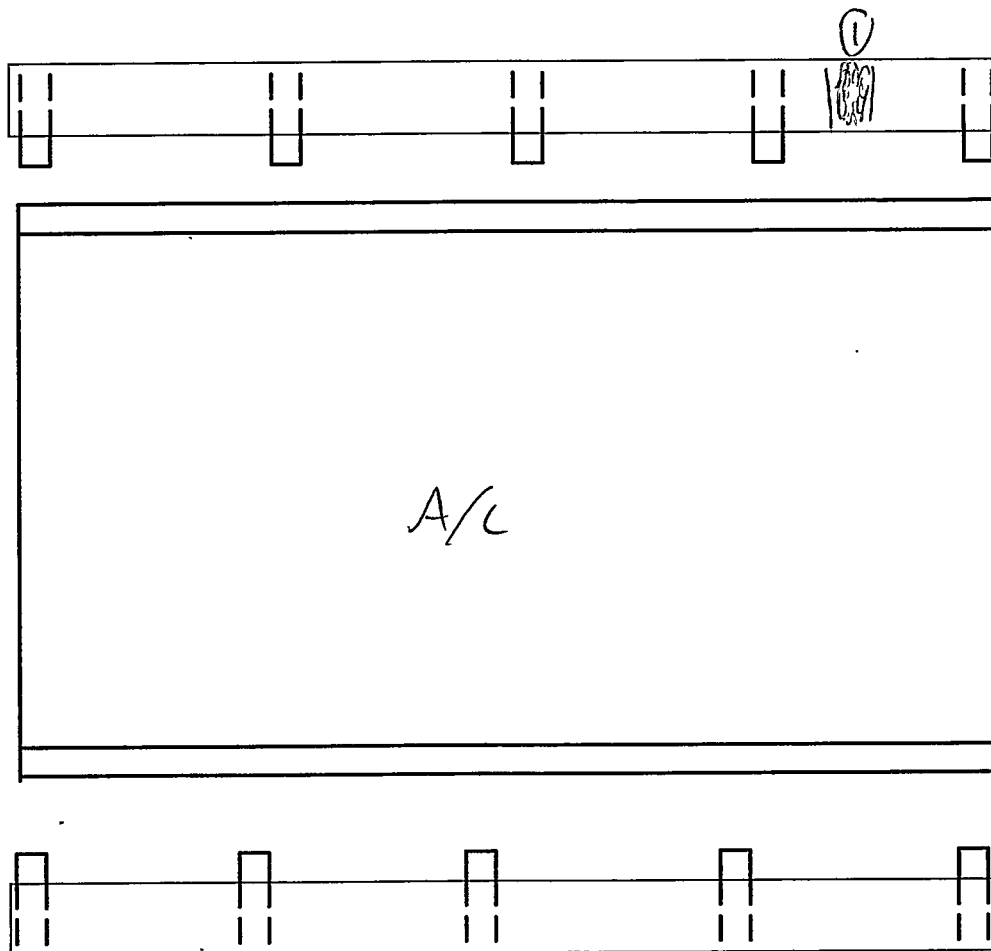
INSPECTOR

CROSS SECTION: YES ☐ NO ☒ BRM: YES ☒ NO ☐

Bridge No. 38-SR87-2.31

Skew 90 RT.

SPAN. NO. 11 ^{AUG 11 2021}



① Damage 4' L

DOR →

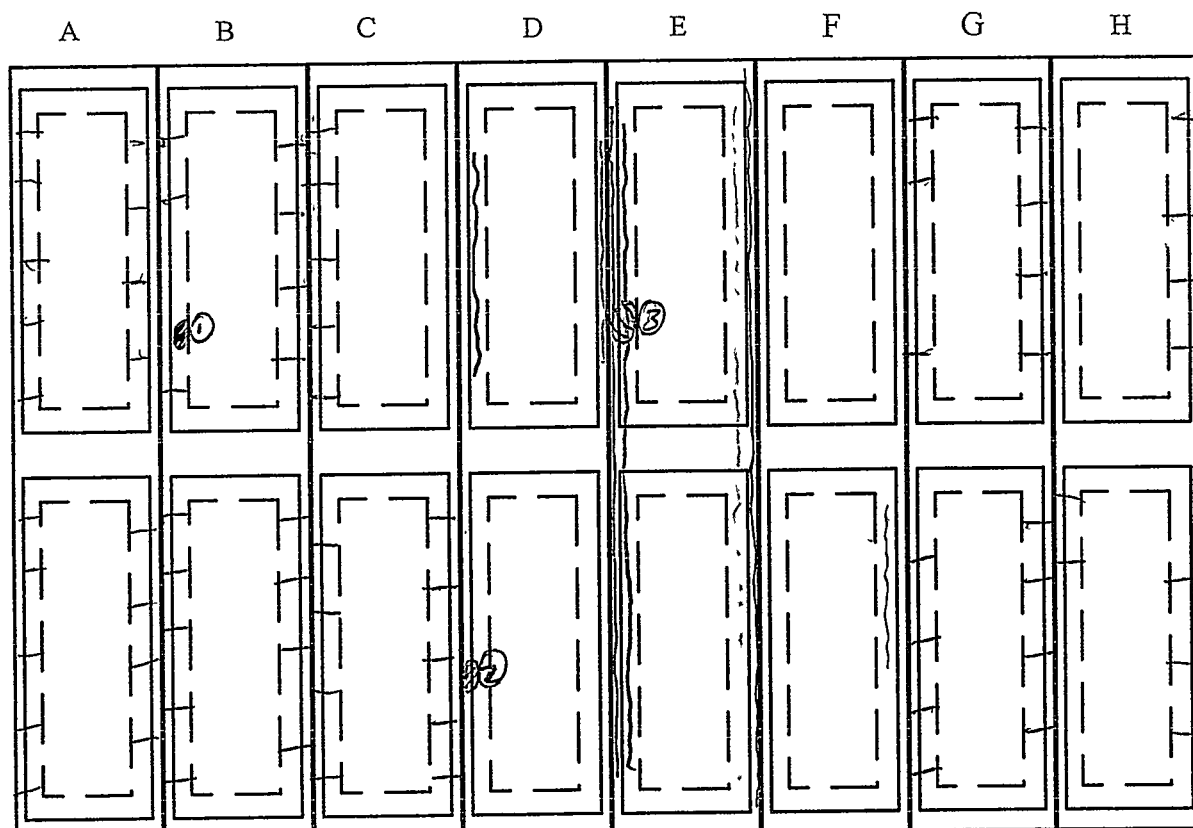
ELEMENT	RATING	COMMENT
TOP DECK	(G) F P C	
CURBS	(G) F P C	
RAIL & POST	G (F) P C	See ①
PAINT	G F P C	
DRAINS	G F (P) C	Filled with debris
JOINT	G F P C	
	G F P C	

AUG 11 2021

38 87 231

Bridge No. Co. Route Log Mile R/L Skew

SPAN. NO. 1



① 1' in dia x 3/4" D Spalling
② 5" in dia x 1" D Spall to steel
③ 1' x 6" H x 1" D Spall to steel

ELEMENT	RATING	COMMENT
SLABS A	G (F) P C	hairline cracks w/eff
B	G (F) P C	hairline cracks w/eff, see ①
C	G (F) P C	hairline cracks w/eff
D	G (F) P C	1/16" cracks, see ②
E	G (F) P C	1/16" cracks w/eff see ③
F	G (F) P C	hairline cracks w/eff
G	G (F) P C	hairline cracks w/eff
H	G (F) P C	hairline cracks w/eff
BOLTS	G (F) P C	

Date: 8/11/21

Pg. # _____ of _____

[illegible]

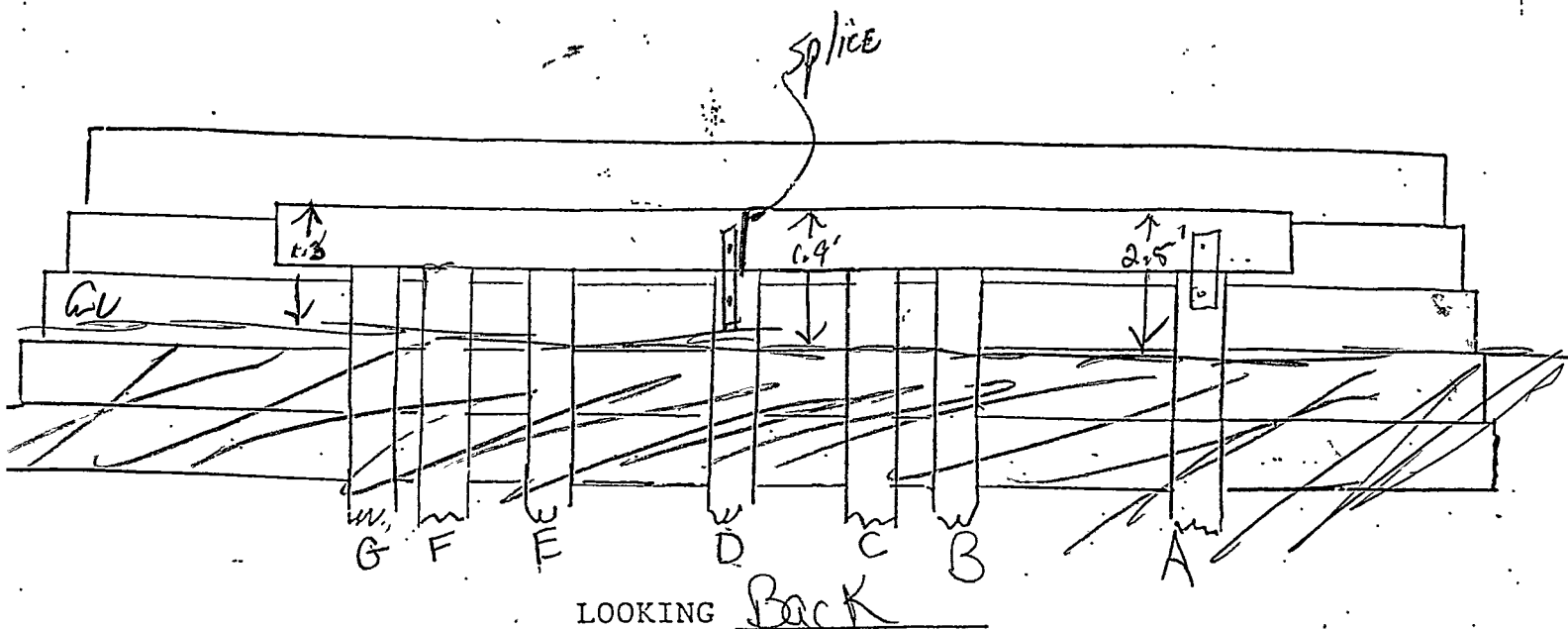
UPSTREAM	<input type="checkbox"/>	—
DOWNSTREAM	<input type="checkbox"/>	—
THRU STRUCTURE	<input type="checkbox"/>	—

COMMENTS: _____

AUG 11 2021

BRIDGE NO. 38 87 231

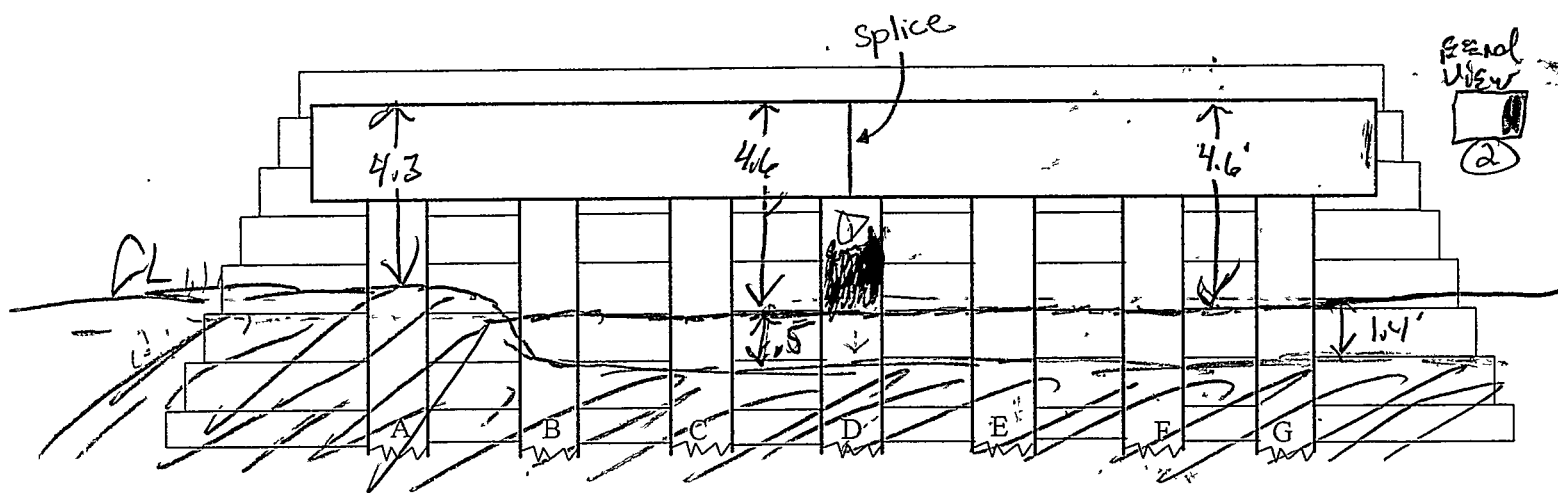
ABUT. NO. 1



ELEMENT	RATING	COMMENT
CAP.	G F P C	light to med weathering
BREASTWALL	G F P C	
WINGS	G F P C	
PILING 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	
RIP RAP	G F P C	
VEG.	G F P C	Heavy
Embankment	G F P C	

38 87-2.31
Bridge No. Co. Route Log Mile

AUG 11 2021
ABUT. NO. 2



1 1/2" (1) 10" 13" pile

LOOKING Ahead

6.0

ELEMENT	RATING	COMMENT
CAP	G (E) P C	light to med weathering
WINGS	G (E) P C	
PILES A	G (E) P C	
B	G (E) P C	
C	G (E) P C	
D	G (E) P C	see (1) light to med weathering
E	G (E) P C	
F	G (E) P C	
G	G (E) P C	
RIP RAP	G F P C	
EMB.	G (E) P C	In Channel
VEG.	G F (E) C	Heavy
BREASTWALL	G (E) P C	light to med weathering
	G F P C	
	G F P C	

AUG 11 2021

38SR0870001 38 SR087 0231 _____ SKEW: 90
BRIDGE NO.: CO. ROUTE L.M. L/R

Direction of Route



A1

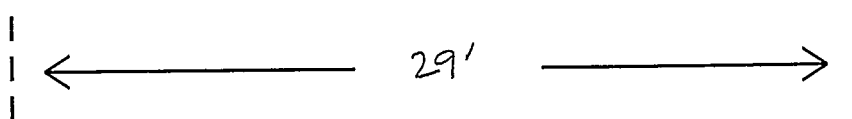
A2

F = FIXED

E = EXPANSION

S = SIMPLE

C = CONTINUOUS



A1



A2

AUG 11 2021

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	16/3	Re Conc Top Flange	sq.ft	841.00	100%	841.00	0%	0.00	0%	0.00	0%	0.00
0	510/3	Wearing Surfaces	sq.ft	812.00	100%	812.00	0%	0.00	0%	0.00	0%	0.00
0	116/3	Re Conc Stringer	ft	232.00	38%	89.00	62%	143.00	0%	0.00	0%	0.00
0	1080/3	Delamination/Spall/Patched Area	ft	1.00	0%	0.00	100%	1.00	0%	0.00	0%	0.00
0	1090/3	Exposed Rebar	ft	2.00	0%	0.00	100%	2.00	0%	0.00	0%	0.00
0	1120/3	Efflorescence/Rust Staining	ft	60.00	0%	0.00	100%	60.00	0%	0.00	0%	0.00
0	1130/3	Cracking (RC and Other)	ft	80.00	0%	0.00	100%	80.00	0%	0.00	0%	0.00
0	216/3	Timber Abutment	ft	56.00	95%	53.00	0%	0.00	5%	3.00	0%	0.00
0	1140/3	Decay/Section Loss	ft	3.00	0%	0.00	0%	0.00	100%	3.00	0%	0.00
0	330/3	Metal Bridge Railing	ft	58.00	93%	54.00	7%	4.00	0%	0.00	0%	0.00
0	7000/3	Damage	ft	4.00	0%	0.00	100%	4.00	0%	0.00	0%	0.00