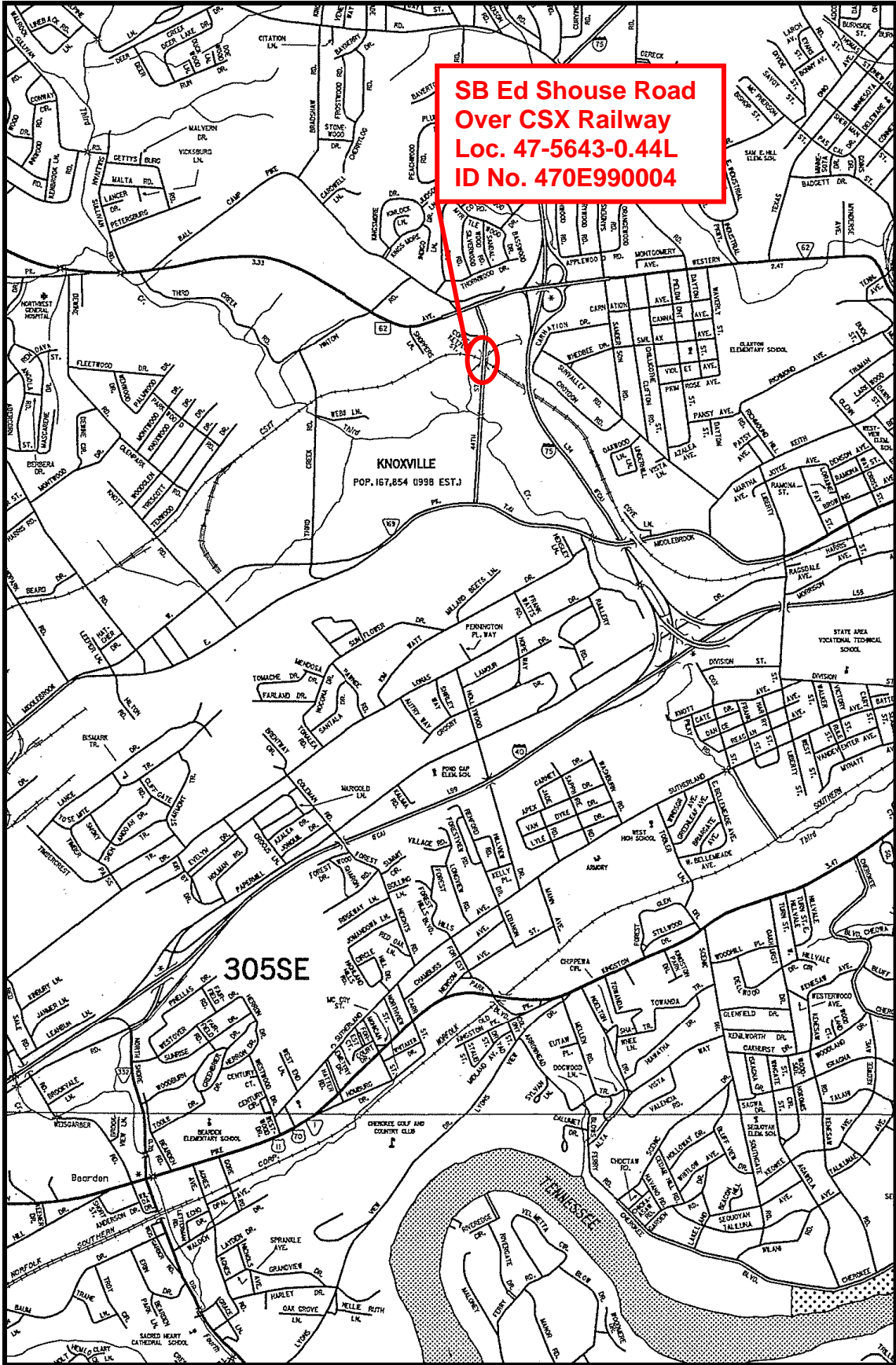


KNOX COUNTY



**SB Ed Shouse Road
Over CSX Railway
Loc. 47-5643-0.44L
ID No. 470E99004**

305SE

BRIDGE MAINTENANCE RECOMMENDATIONS



Tennessee Department of Transportation

COUNTY: KNOX
 CITY: KNOXVILLE
 LOCATION: 47-05643-00.44-L
 CO. SEQ.: 1 SPEC. CASE: 0

CROSSING: CSX RAILROAD

FED BRIDGE NO.: 470E9900004

REVISED:

03/28/2018

FACILITY CARRIED:	FAU 5643 LF LN	NUMBER OF MAIN SPANS:	3
HIGHWAY SYSTEM:	31-NHS PIPELINE CONNECTOR	NUMBER OF APPROACH SPANS:	0
BRIDGE WIDTH (CURB TO CURB):	41 FT 11 IN	BRIDGE LENGTH (FT):	170
BRIDGE WIDTH (OUT TO OUT):	43 FT 11 IN	MAXIMUM SPAN LENGTH (FT):	62
APPROACH ROADWAY (W/SHOULDERS):	76 FT 1 IN	SKEW ANGLE (DEGREES):	64
MAINTAINED BY:	CITY OR MUNICIPAL HIGHWAY AGENCY		
MAIN SPAN MATERIAL:	PRESTRESSED CONCRETE CONTINUOUS		
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:	03/27/2018	GENERAL CONDITION:	POOR
PPRM PIN NUMBER:		STRUCTURALLY DEFICIENT:	NO
H TRUCK RATING @ INV.:	20 TONS	SUFFICIENCY RATING:	69.7

No.	RECOMMENDATIONS	REPAIR DATE	REPAIRED BY
1.	FILL VOIDS UNDER APPROACH SLAB 2 (LEFT)		

SUGGESTED ROUTINE MAINTENANCE AND COMMENTS
REPAIR EMBANKMENTS @ BOTH ABUTMENTS
CUT AND REMOVE VEGETATION FROM AROUND & UNDER BRIDGE
END TERMINALS ARE SUBSTANDARD
GUARDRAIL TRANSITIONS ARE SUBSTANDARD
GUARDRAILS ARE SUBSTANDARD

GENERAL COMMENTS:



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

Bridge Condition Coding Form

Revised 03/28/2018

Bridge Number: 470E99000041
(Includes Item 5A)

Feature Intersected: CSX RAILROAD

Evaluation Status: CONDITION ITEM CHANGE

County: 47

Route: 05643

Special Case: 0

County Sequence: 1

Log Mile: 0.44

CODE ONLY THOSE VALUES WHICH HAVE CHANGED

ITEM #	DESCRIPTION	VALUE	CONDITION CODING GUIDELINES (Values for Coding Items 58, 59, 60 and 62)			
90	LAST INSPECTION DATE	<u>03/27/2018</u>	N NOT APPLICABLE			
	EARLIEST DATE OF NEXT REGULAR INSPECTION	<u>01/26/2020</u>				
		<u>/ /</u>				
10	MINIMUM V.C. OVER DECK (ROADWAY + SHOULDERS)	99 FT. 99 IN.	9 EXCELLENT CONDITION			
		<u> </u> FT. <u> </u> IN.	8 VERY GOOD CONDITION - NO PROBLEMS NOTED.			
520	MINIMUM V.C. OVER DECK (EXCLUDES SHOULDERS)	99 FT. 99 IN.	7 GOOD CONDITION - SOME MINOR PROBLEMS.			
		<u> </u> FT. <u> </u> IN.	6 SATISFACTORY CONDITION - MINOR DETERIORATION OF STRUCTURAL ELEMENTS.			
36	TRAFFIC SAFETY FEATURES		5 FAIR CONDITION - ALL PRIMARY STRUCTURAL ELEMENTS ARE SOUND BUT MAY HAVE MINOR SECTION LOSS, CRACKING, SPALLING OR SCOUR.			
	Br. Rail	Trans.	Appr. Rail	Terminal	SPEED LIMIT	
	<u>1</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>50</u>	
	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	
41	STRC OPEN/CLOSED/POSTED	A	4 POOR CONDITION - ADVANCED SECTION LOSS, DETERIORATION, SPALLING OR SCOUR.			
	A K P	<u> </u>				
58	DECK	7	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.			
59	SUPERSTRUCTURE	7				
60	SUBSTRUCTURE	4				
61	CHANL/CHANL PROTECTION	N	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.			
62	CULVERT AND RETAIN WALL	N				
71	WATERWAY ADEQUACY	N				
72	APPROACH RDWY ALIGNMENT	8				
521	OVERALL CONDITION	POOR	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.			
16	LATITUDE	17 LONGITUDE	0 FAILED CONDITION - OUT OF SERVICE AND BEYOND CORREC			
	<u>N 35° 58.2370'</u>	<u>W 83° 58.9360'</u>				
	<u> </u>	<u> </u>				
	<u> </u>	<u> </u>				
	<u> </u>	<u> </u>				

TEAM LEADER SIGNATURE

REVIEW DATE

PRODUCED PURSUANT TO
PUBLIC RECORDS REQUEST
This document is covered by 23 USC §409
And its production pursuant to a public
document records request does not
waive the provisions of §409

Photographs

Bridge ID#: 470E990004

Date: 03/27/2018



APPROACH FORWARD ON LOG



PAVEMENT RAVELING AT APPROACH 1

Photographs

Bridge ID#: 470E990004

Date: 03/27/2018



VIEW ACROSS DECK



PAVEMENT RAVELING TOP DECK (TYP.)

Photographs

Bridge ID#: 470E990004

Date: 03/27/2018



PAVEMENT RAVELING AT APPROACH 2



APPROACH BACK ON LOG

Photographs

Bridge ID#: 470E990004

Date: 03/27/2018



VOID UNDER APPROACH 2



ERROSION WITH EXPOSED PILINGS - ABUTMENT 2

Photographs

Bridge ID#: 470E990004

Date: 03/27/2018



VIEW UNDERNEATH



ELEVATION RIGHT

Photographs

Bridge ID#: 470E990004

Date: 03/27/2018



ELEVATION LEFT



ERROSION WITH EXPOSED PILINGS - ABUTMENT 1

Photographs

Bridge ID#: 470E990004

Date: 03/27/2018



BRIDGE NUMBER

BRIDGE INSPECTION REPORT

FORM BIR 3.0
Rev. 9-22-98
DT-0069

FIELD REPORT NO. 19 DATE 03-27-18
PREVIOUS REPORT NO. 18 DATE 05-02-16
PLANS --- YES [X] NO []

BRIDGE NO. 470E9900004 BRIDGE LOCATION NO. 47 - 5643 - 00.44L
ELEVEN DIGIT NO. CO. ROUTE L.M.

SB ED SHOUSE ROAD OVER CSX RAILWAY
ROAD NAME FEATURE INTERSECTED STRUCTURE NAME(IF NAMED)

YEAR CONSTRUCTED 1981 COUNTY KNOX MAINTENANCE DISTRICT NO. 18
(ESTIMATED OR ACTUAL)

YEAR WIDENED N/A YEAR REHABILITATED N/A
ESTIMATED OR ACTUAL ESTIMATED OR ACTUAL

FEATURES

WEARING SURFACE-- CONCRETE [] TIMBER [] ASPHALT [X] (DEPTH= 6 in.)
FLARED WIDTH ----- YES [] NO [X]
NAVIGATIONAL CONTROL-- YES [] NO [X]
MEDIAN WIDTH ----- OPEN [] NONE [X] CLOSED []
BRIDGE SKEW 64 degrees LT [X] RT []

INSPECTORS

- 1. BROOKS-TL
2. MUSTAIN
3. CARICO
4. SAUTNER
5.
6.
7.
8.
9.

STRUCTURE TYPE PCIB NO. SPANS 3
Main Span Main Span
STRUCTURE TYPE N/A NO. SPANS N/A
Approach Spans Approach Spans

MAXIMUM SPAN LENGTH 61.6' TOTAL LENGTH 170.2'
(**.*ft.) (**.*ft.)

WIDTHS (*.ft.) CLEARANCES
DECK OUT-TO-OUT 44.0' MIN. VERTICAL OVER DECK N/A
ROADWAY CURB/CURB 42.0' MIN. VERTICAL UNDER CL. 24'-08"
SIDEWALK N/A RT N/A LT MIN. LAT. UNDER CLEAR. 25.0' RT.
*APPROACH ROADWAY 24.0' 25.0' LT.
APP. SHDR. 4.0' RT 10' LT

(< 25 ft.)

*DOES NOT INCLUDE SHOULDERS FRACTURE CRITICAL NBIS BRIDGE
DETAILS: YES [] NO [X] LENGTH N/A
IF YES, INCLUDE BIR 3.9 (ft.)(in.)

UNDERWATER INSPECTION

INSPECTION PERFORMED BY:
DOT FIELD TEAM [] DATE: CHANGE IN STRUCTURAL CONDITION:
CONTRACT DIVERS [] DATE: YES [] NO [X]
NONE REQUIRED [X] MAJOR REPAIRS MADE: YES [] NO [X]

COMMENTS: UPDATE IN ELEMENTS

SUPERVISING BRIDGE INSPECTOR BRIDGE RATING [] [] [X] []
GOOD FAIR POOR CRITICAL

PERFORMANCE EVALUATION

Time of day inspected 9:30AM Weather conditions 50°, OVERCAST
Vehicles observed ALL TYPES

LIVE LOAD BEHAVIOR

COMMENTS

Substructure YES NO
Horiz. & Vert. Defl.-[] [X]
Vibration - - - - - [] [X]
Superstructure
Horiz. & Vert. Defl.-[] [X]
Vibration - - - - - [] [X]

APPROACH

Alignment G F P C _____
Slab G F P C PAVED OVER
Joints G F P C N/A
Pavement G F P C _____
Embankment G F P C SETTLEMENT UNDER APPROACH SLAB #2
Drains G F P C _____

TRAFFIC SAFETY FEATURES

STANDARD SUB-STANDARD

Bridgerailing G F P C [X] [] _____
Transitions G F P C [] [X] _____
Guardrail G F P C [] [X] _____
Guardrail Terminal G F P C [] [X] _____

SIGNING

YES NO NEEDED

Paddleboard - - - - - [X] [] [] WEIGHT LIMIT POSTED:
Vertical Clearance (< 14'-6") - - [] [X] [] YES [] NO [X]
Narrow [] One Lane Bridge [] - [] [X] [] GROSS--- TONS
2 AXLE-- TONS
3 OR MORE
AXLES--- TONS

Other Signs or Plaques _____
Comments Regarding Any _____
Problems With Signing _____

DECK

COMMENTS

WEARING SURFACE	<u>G</u>	F	P	C	_____
DECK - STRUCTURAL CONDITION	<u>G</u>	F	P	C	_____
CURBS	G	F	P	C	N/A
MEDIAN	G	F	P	C	N/A
SIDEWALKS	G	F	P	C	N/A
PARAPET	<u>G</u>	F	P	C	_____
RAILING	G	F	P	C	N/A
PAINT	G	F	P	C	N/A
DRAINS	G	F	P	C	N/A
LIGHTING STD'S	G	F	P	C	N/A
UTILITIES	G	F	P	C	N/A
JOINT LEAKAGE	G	F	P	C	N/A
EXPANSION JOINTS	G	F	P	C	N/A

SUPERSTRUCTURE

COMMENTS

BEARING DEVICES	<u>G</u>	F	P	C	_____
GIRDERS OR BEAMS	<u>G</u>	F	P	C	_____
FLOOR BEAMS	G	F	P	C	N/A
STRINGERS	G	F	P	C	N/A
DIAPHRAGMS	<u>G</u>	F	P	C	_____
TRUSSES - GENERAL	G	F	P	C	N/A
- PORTALS	G	F	P	C	N/A
- BRACING	G	F	P	C	N/A
PAINT	<u>G</u>	F	P	C	_____
ALIGNMENT OF MEMBERS	<u>G</u>	F	P	C	_____

TEXTURE COAT

CONDITION RATING	G	F	P	C	NEEDS SPOT PAINTING?	YES []	NO []
OVERALL APPEARANCE	G	F	P	C	NEEDS REPAINTING?	YES []	NO []
STAINING	G	F	P	C	COMMENTS	_____	
FADING	G	F	P	C	_____		
SCALING	G	F	P	C	_____		

SUBSTRUCTURE

ABUTMENTS

COMMENTS

CAPS	<u>G</u>	F	P	C	_____
BREASTWALL	G	F	P	C	N/A
WINGS	<u>G</u>	F	P	C	_____
BACKWALL	<u>G</u>	F	P	C	_____
PLUMB	<u>G</u>	F	P	C	_____
FOOTING	G	F	P	C	N/V
PILES	G	<u>F</u>	P	C	FLAKING, PITTING
EMBANKMENT	G	F	<u>P</u>	C	SETTLEMENT AT BOTH ABUTMENTS HAS EXPOSED STEEL PILINGS
BEARING SURFACE	<u>G</u>	F	P	C	_____
SLOPE PAVING	G	F	P	C	N/A
RIP RAP	G	F	P	C	N/A

PIERS

CAPS	G	F	P	C	N/A
COLUMNS	G	F	P	C	N/A
PLUMB	G	F	P	C	N/A
FOOTINGS	G	F	P	C	N/A
PILES	G	F	P	C	N/A
BEARING SURFACE	G	F	P	C	N/A

BENTS

CAPS	<u>G</u>	F	P	C	_____
COLUMNS	<u>G</u>	F	P	C	_____
PLUMB	<u>G</u>	F	P	C	_____
FOOTINGS	G	F	P	C	N/V
PILES	G	F	P	C	N/V
BEARING SURFACE	<u>G</u>	F	P	C	_____

PILES NEED REPLACEMENT NO [] YES []

<u>PILES TO BE REPLACED:</u>	PILE	BENT	PILE	BENT	PILE	BENT	PILE	BENT	PILE	BENT
_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____

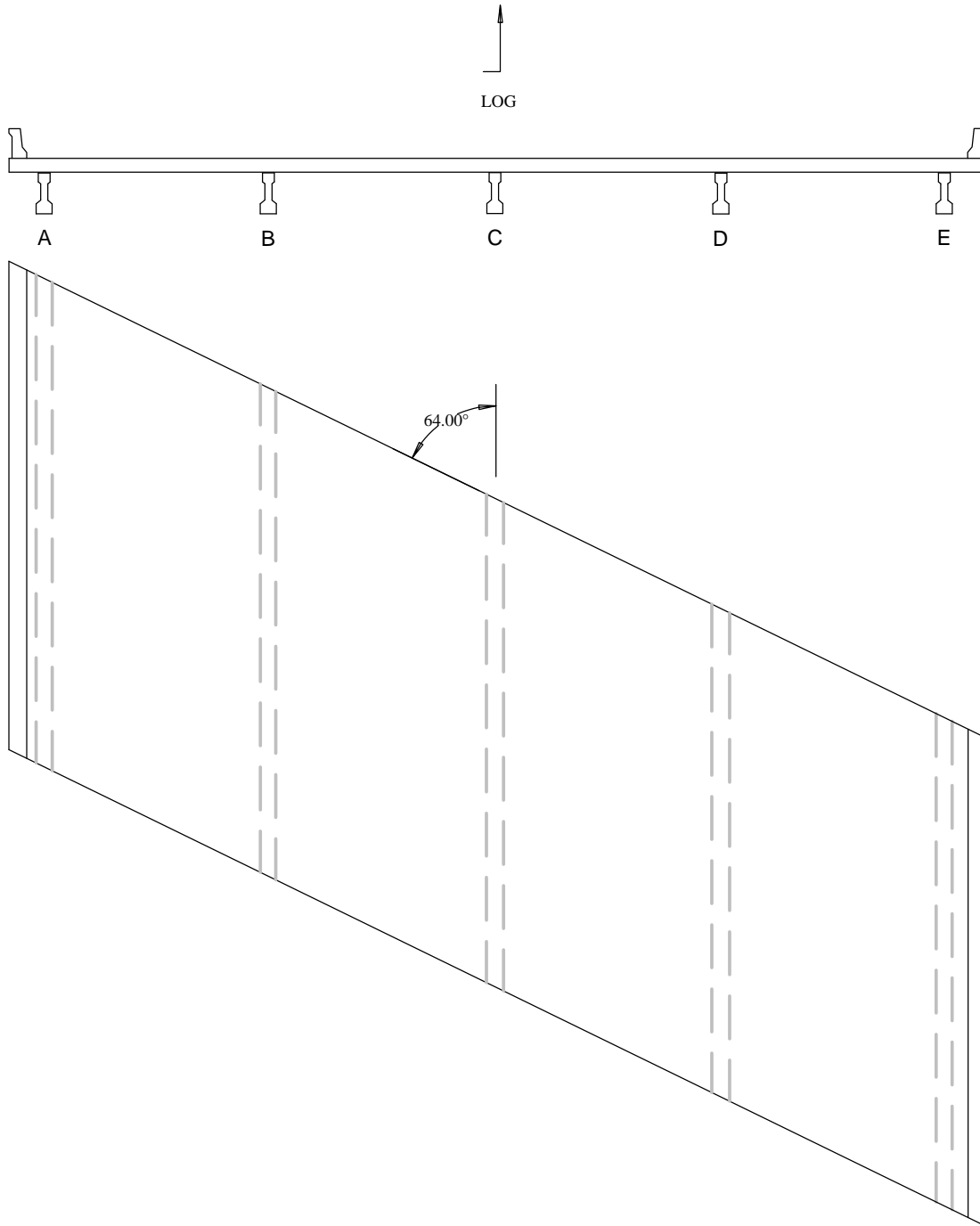
INSPECTION TEAM'S SUMMARY
BRIDGE NO. 47-5643-00.44L

March 27, 2018

The subject bridge was inspected on the above date and found to be in generally poor condition. Roadway alignment is good. Continuous asphalt overlay across the approaches and the top of the bridge is in good condition. There is a large area of erosion under the approach slab at the No. 2 end. Bridgerails are the only traffic safety feature that meets code. Paddleboard signs are in place.

The bottom of the deck, as well as the girders and diaphragms, is in good condition. Abutment caps, backwalls and wings are in good condition. The embankment below both abutments have settled, exposing steel pilings with corrosion and pitting. Bent caps and columns are in good condition.

RB
TPS-SPV1



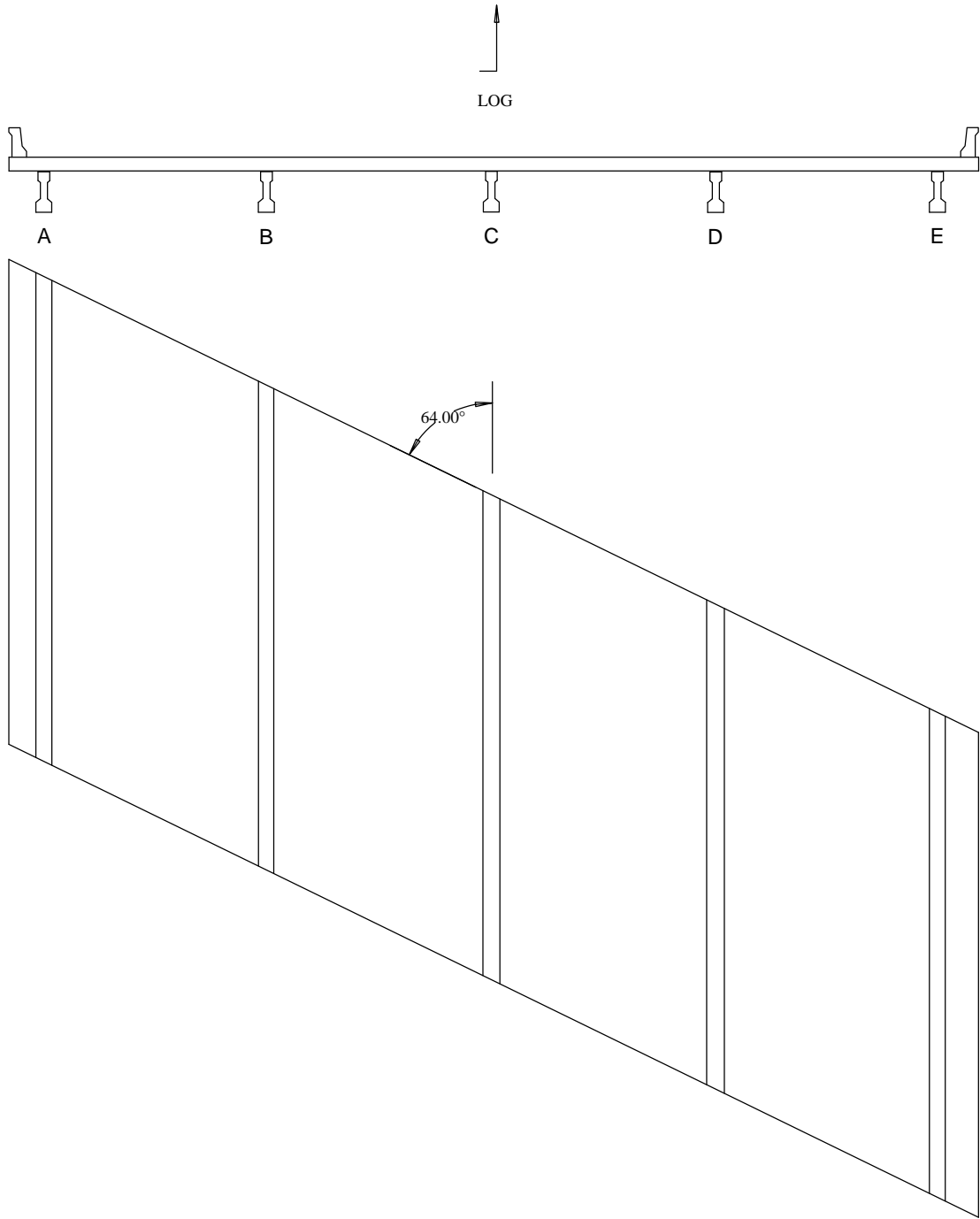
BRIDGE NO. 47-5643-00.44L

03-27-18 RC

TOP DECK SPAN 1-3

WEARING SURFACE	G	CRACKS IN OVERLAY
		RAVELING AT APPROACH 1
BRIDGE RAIL	G	

**PRODUCED PURSUANT TO
PUBLIC RECORDS REQUEST
This document is covered by 23 USC §409
And its production pursuant to a public
document records request does not
waive the provisions of §409**



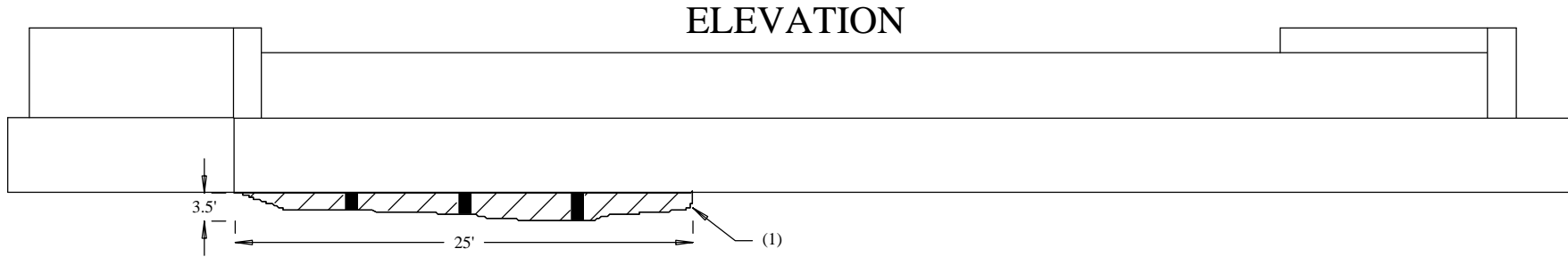
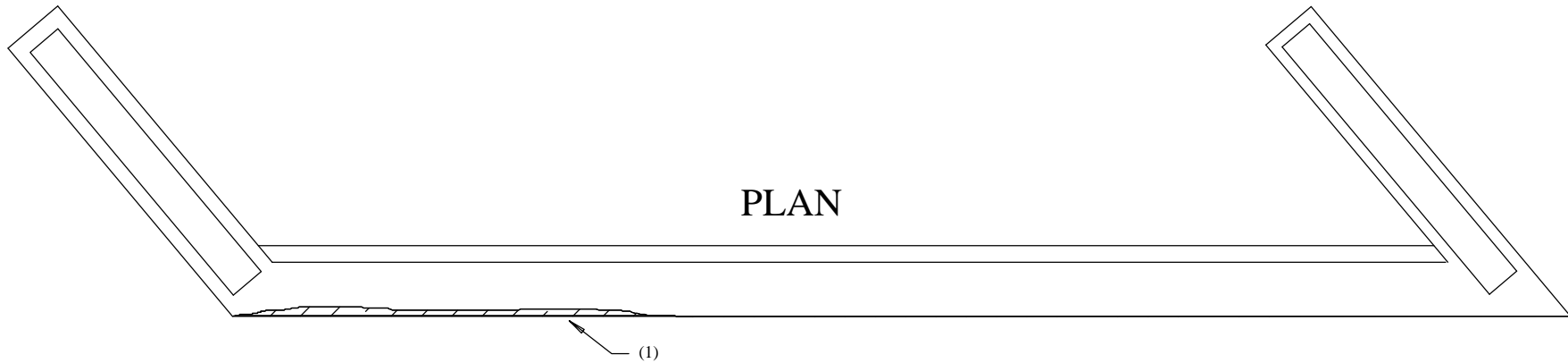
BRIDGE NO. 47-5643-00.44L

03-27-18 ACSIII

BOTTOM DECK SPAN 1-3

BOTTOM DECK	G	
BEAMS	G	
DIAPHRAGMS	G	

**PRODUCED PURSUANT TO
PUBLIC RECORDS REQUEST
This document is covered by 23 USC §409
And its production pursuant to a public
document records request does not
waive the provisions of §409**



BRIDGE NO. 47-5643-00.44L

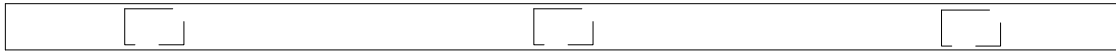
03-27-18 RC

ABUTMENT 1 & 2

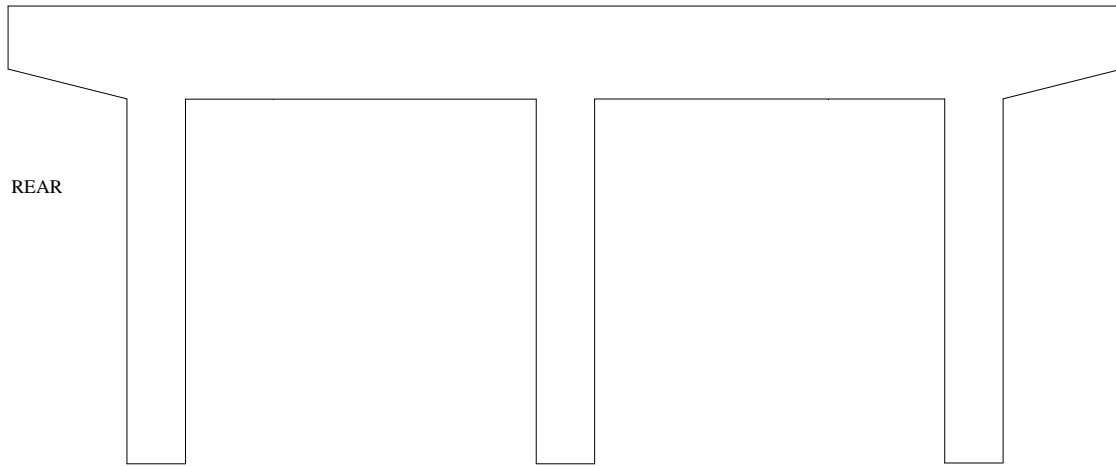
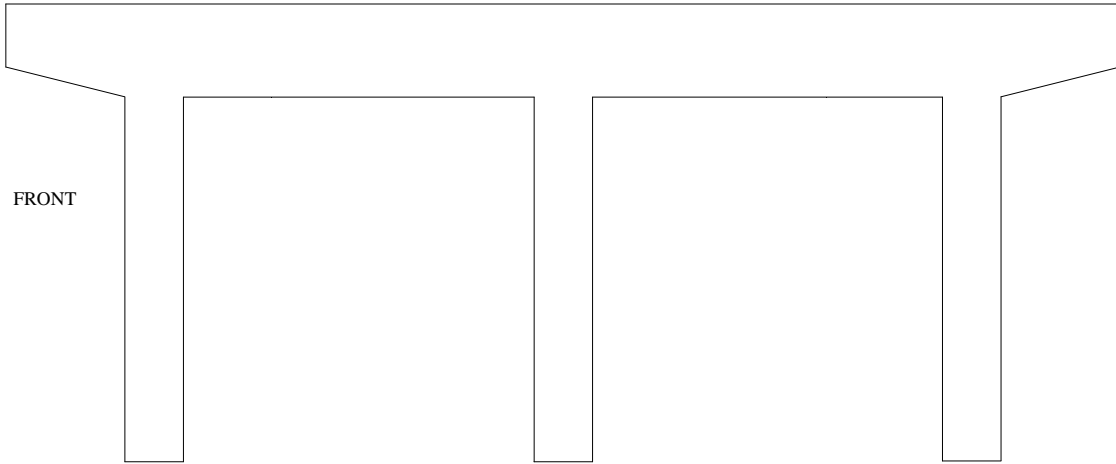
CAP	G	
BACKWALL	G	
WINGS	G	
SLOPE/EMBANKMENT	F	(1) SETTLEMENT W/EXPOSED PILINGS ALL ACROSS ABUTMENT 1 & ABUTMENT 2 LI UP TO 6' BACK UNDER

**PRODUCED PURSUANT TO
PUBLIC RECORDS REQUEST
This document is covered by 23 USC §409
And its production pursuant to a public
document records request does not
waive the provisions of §409**

PLAN



ELEVATION



BRIDGE NO. 47-5643-00.44L

03-27-18 ACSIII

BENT 1&2

CAP	G	
RISERS	G	
COLUMNS	G	

LOG

