

BRIDGE MAINTENANCE RECOMMENDATIONS

COUNTY: BLOUNT
 CITY: N/A
 LOCATION: 5-05551-00.25-
 CO. SEQ.: 1 SPEC. CASE: 0



Tennessee Department of Transportation

BIG SPRINGS

CROSSING: GALLAGHER CREEK
 FED BRIDGE NO.: 05S24230003

REVISED: 11/08/2021

FACILITY CARRIED:	NFA 5551	NUMBER OF MAIN SPANS:	1
HIGHWAY SYSTEM:	11-OTHER COUNTY ROADS	NUMBER OF APPROACH SPANS:	0
BRIDGE WIDTH (CURB TO CURB):	24 FT 3 IN	BRIDGE LENGTH (FT):	22
BRIDGE WIDTH (OUT TO OUT):	25 FT 11 IN	MAXIMUM SPAN LENGTH (FT):	20
APPROACH ROADWAY (W/SHOULDERS):	19 FT 0 IN	SKEW ANGLE (DEGREES):	90
MAINTAINED BY:	COUNTY HIGHWAY AGENCY		
MAIN SPAN MATERIAL:	CONCRETE		
MAIN SPAN DESIGN TYPE:	CULVERT (INCLUDES FRAME CULVERTS)		
APPROACH SPAN MATERIAL:	OTHER OR NOT APPLICABLE		
APPROACH SPAN DESIGN TYPE:	OTHER OR NOT APPLICABLE		
INSPECTION DATE:	11/08/2021	GENERAL CONDITION:	POOR
PPRM PIN NUMBER:		STRUCTURALLY DEFICIENT:	YES
H TRUCK RATING @ INV.:	15 TONS	SUFFICIENCY RATING:	48.0

No.	RECOMMENDATIONS	REPAIR DATE	REPAIRED BY
1.	REPAIR UNDERMINING AT ABUTMENT 1 RIGHT		

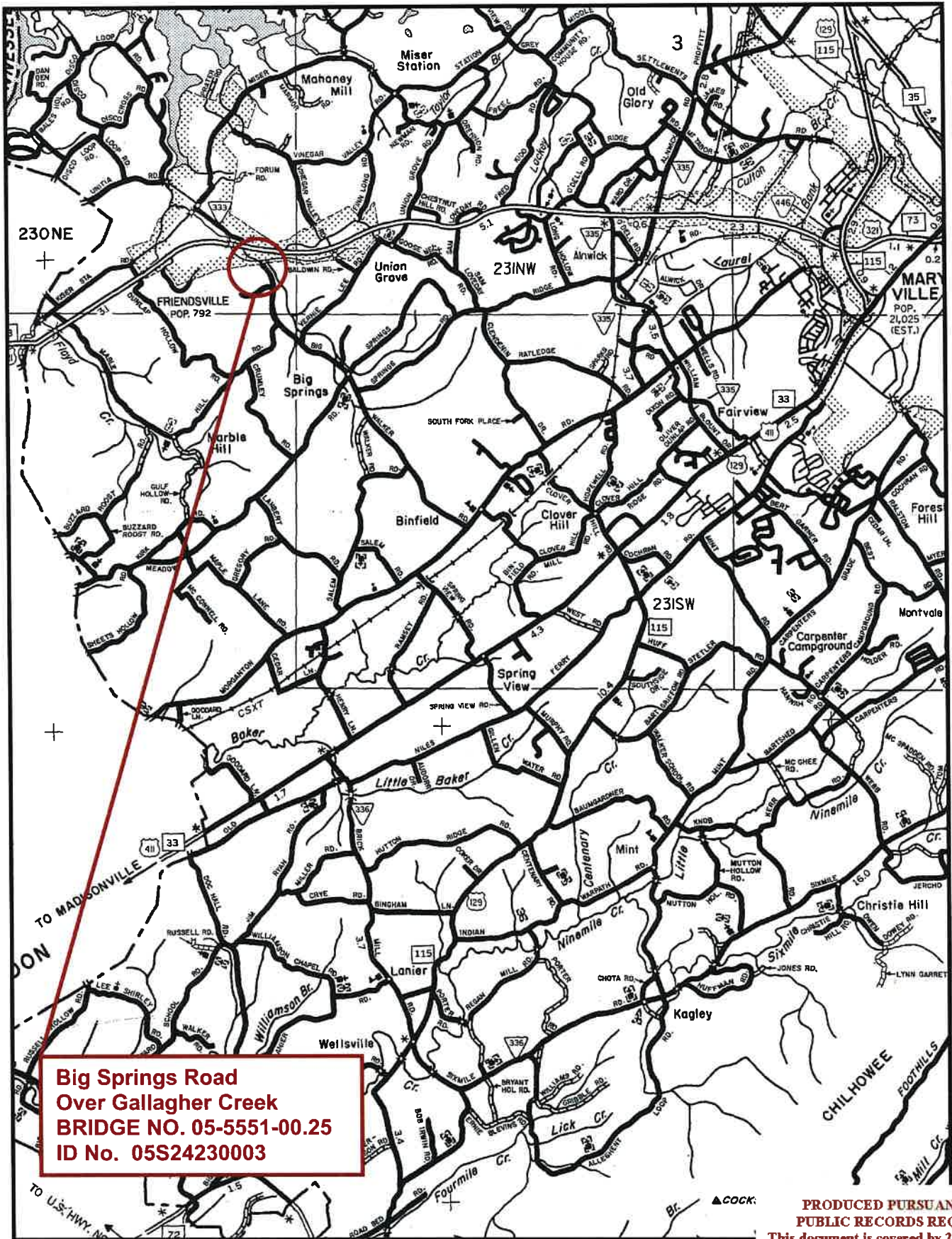
SUGGESTED ROUTINE MAINTENANCE AND COMMENTS

APPROACH GUARDRAILS ARE NON EXISTENT

BRIDGERAILS ARE NON EXISTENT

GENERAL COMMENTS:

BLOUNT COUNTY



**Big Springs Road
Over Gallagher Creek
BRIDGE NO. 05-5551-00.25
ID No. 05S24230003**

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BRIDGE MAINTENANCE RECOMMENDATIONS

COUNTY: BLOUNT
 CITY: N/A
 LOCATION: 5-05551-00.25-
 CO. SEQ.: 1 SPEC. CASE: 0



CROSSING: GALLAGHER CREEK
 FED BRIDGE NO.: 05S24230003

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GENERAL COMMENTS:



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

Bridge Condition Coding Form

Revised 11/09/2021

Bridge Number: 05S242300031
(Includes Item 5A)
Feature Intersected: GALLAGHER CREEK
Evaluation Status: NO CHANGE BUT STILL EVALUATE

County: 5
Route: 05551
Special Case: 0
County Sequence: 1
Log Mile: 0.25

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	11/08/2021	N NOT APPLICABLE
	EARLIEST DATE OF NEXT REGULAR INSPECTION	09/09/2023	
10	MINIMUM V.C. OVER DECK (ROADWAY + SHOULDERS)	99 FT. 99 IN.	9 EXCELLENT CONDITION
520	MINIMUM V.C. OVER DECK (EXCLUDES SHOULDERS)	99 FT. 99 IN.	8 VERY GOOD CONDITION - NO PROBLEMS NOTED.
36	TRAFFIC SAFETY FEATURES		7 GOOD CONDITION - SOME MINOR PROBLEMS.
	Br. Rail Trans. Appr. Rail Terminal SPEED LIMIT	N N N N 45	6 SATISFACTORY CONDITION - MINOR DETERIORATION OF STRUCTURAL ELEMENTS.
41	STRC OPEN/CLOSED/POSTED	P	5 FAIR CONDITION - ALL PRIMARY STRUCTURAL ELEMENTS ARE SOUND BUT MAY HAVE MINOR SECTION LOSS, CRACKING, SPALLING OR SCOUR.
	A K P		4 POOR CONDITION - ADVANCED SECTION LOSS, DETERIORATION, SPALLING OR SCOUR.
58	DECK	N	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	N	
60	SUBSTRUCTURE	N	
61	CHANL/CHANL PROTECTION	7	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	4	
71	WATERWAY ADEQUACY	7	
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
	N 35° 44.9820'	W 84° 7.2720'	

TEAM LEADER SIGNATURE

REVIEW DATE

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Photographs

Bridge ID#: 05S24230003

Date: 11/08/2021



APPROACH BACK ON LOG



VIEW ACROSS DECK

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APPROACH FORWARD ON LOG



ELEVATION LEFT INLET

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VIEW UPSTREAM LEFT



UNDERMINING UP TO 4' DEEP ABUTMENT 2 MIDDLE

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UNDERMINING UP TO 4' DEEP ABUTMENT 2 MIDDLE



UNDERMINING UP TO 1' DEEP ABUTMENT 2 LEFT

Photographs

Bridge ID#: 05S24230003

Date: 11/08/2021



UNDERMINING UP TO 4' DEEP ABUTMENT 1 RIGHT



UNDERMINING UP TO 3' DEEP ABUTMENT 1 LEFT

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Bridge ID#: 05S24230003

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CRACK UP TO 3/8" OPEN BREASTWALL ABUTMENT 1



CRACK UP TO 3/8" OPEN BREASTWALL ABUTMENT 1

Photographs

Bridge ID#: 05S24230003

Date: 11/08/2021



CRACK UP TO 1/4" OPEN HEADWALL OUTLET



HEAVY SCALE HEADWALL OUTLET

Photographs

Bridge ID#: 05S24230003

Date: 11/08/2021



SPALL 1' DIAMETER 4" DEEP TOP WING 1 RIGHT



VIEW DOWNSTREAM RIGHT

Photographs

Bridge ID#: 05S24230003

Date: 11/08/2021



ELEVATION RIGHT OUTLET



BRIDGE NUMBER

FORM BIR 3.5
03/20/78
REV. 9-22-98
DT-1540

FIELD REPORT NO. 15 DATE 11-08-21
PREVIOUS REPORT NO. 14 DATE 11-19-19
PLANS--DESIGN [] AS BUILT [X] NONE []

BRIDGE INSPECTION REPORT (CULVERTS)

BRIDGE NO. 05S24230003 BRIDGE LOCATION NO. 05 - 5551 - 00.25
ELEVEN DIGIT NO. CO. ROUTE LOG MILE

BIG SPRINGS RD. OVER GALLAGHER CREEK
ROAD NAME STREAM NAME STRUCTURE NAME (IF NAMED)

YEAR CONSTRUCTED 1930 COUNTY BLOUNT MAINTENANCE DISTRICT NO. 19
(Estimated [X] or Actual [])

FEATURES

WEARING SURFACE--CONCRETE [] ASPHALT [X] (DEPTH= 3 in.)
TIMBER [] GRAVEL [] (DEPTH= _____ in.)
FLARED WIDTH ----- YES [] NO [X]
MEDIAN WIDTH ----- OPEN [] NONE [X] CLOSED [] (< 25 FT.)
BRIDGE SKEW 90° LT [] RT [] UNDER 0.00' FILL NBIS LENGTH 19 10
DEPTH (ft.) (in.)

STRUCTURE TYPE CS BARRELS 1 @ 20' X 6.0' (ft.)
NO. SPAN DEPTH

WIDTHS (*. *ft.)

INSPECTORS

DECK OUT-TO-OUT: * *SEE NEXT PAGE 1. BROOKS-TL
BRIDGE LENGTH: * 2. RADER
ROADWAY: RAIL-TO-RAIL * CURB-TO-CURB 3. MUSTAIN
APPROACH ROADWAY (NOT INCLUDING SHOULDERS): 19.0' 4. SAUTNER
APPROACH SHOULDER: 0.0' RT 0.0' LT 5. CARICO
SIDEWALK: N/A RT N/A LT 6. _____
OTHER (EX: MEDIAN): _____ 7. _____
8. _____

SIGNING

YES NO NEEDED WEIGHT LIMIT POSTED
PADDLEBOARD - - - [X] [] [] YES [] NO [X]
BRIDGE NUMBER - - - [] [X] [] GROSS . . . _____ TONS
NARROW BRIDGE - - - [] [X] [] 2 AXLE . . . _____ TONS
ONE LANE BRIDGE - - [] [X] [] 3 OR MORE AXLE _____ TONS

OTHER SIGNS & COMMENTS _____

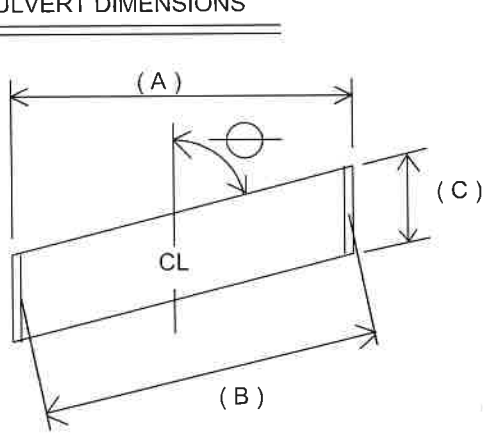
COMMENTS:

Ronald L Brooks Digitally signed by Ronald L Brooks
Date: 2021.12.03 07:26:37 -05'00'

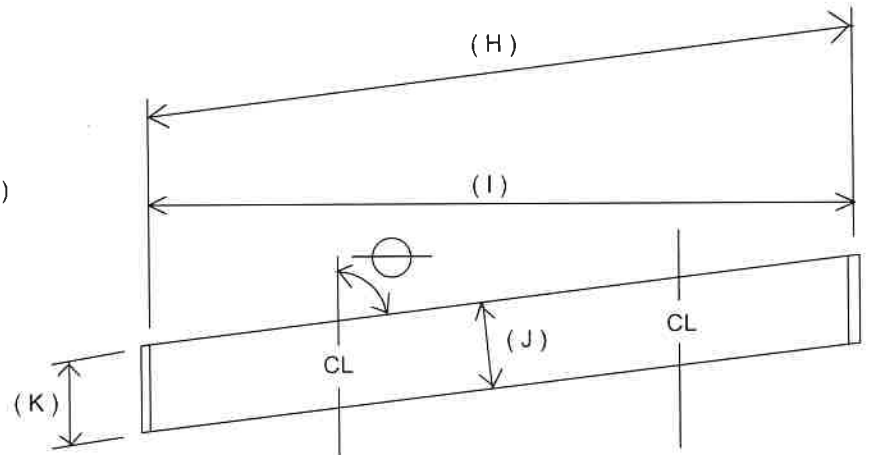
SUPERVISING BRIDGE INSPECTOR

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

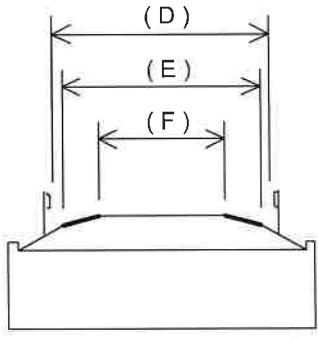
CULVERT DIMENSIONS



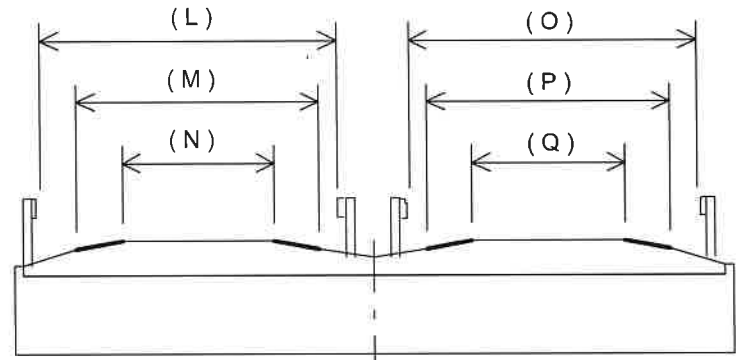
PLAN VIEW



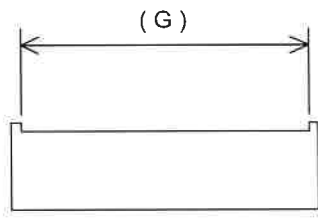
PLAN VIEW



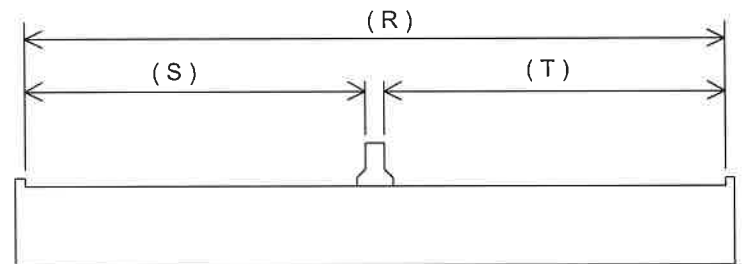
CROSS SECTION VIEW (WITH FILL)



CROSS SECTION VIEW (WITH FILL)



CROSS SECTION VIEW (WITHOUT FILL)



CROSS SECTION (WITHOUT FILL)

**.* ft.

**.* ft.

(A) 26.0' (B) _____ (C) 22.0' (H) _____ (I) _____ (J) _____ (K) _____
 (D) _____ (E) _____ (F) _____ (L) _____ (M) _____ (N) _____ (O) _____
 (G) 24.2' (P) _____ (Q) _____ (R) _____ (S) _____
 (T) _____

FORM BIR 3.7
 Rev. 9-22-98
 DT-1424

BRIDGE LOCATION NO. 05- 5551 - 00.25
 CO. ROUTE LOG MILE

DATE: 11-08-21

TRAFFIC SAFETY FEATURES

		<u>STANDARD</u>	<u>SUB-STANDARD</u>	<u>COMMENTS</u>
BRIDGE RAILING	G F P C	[]	[]	N/A
TRANSITION	G F P C	[]	[]	N/A
GUARDRAIL	G F P C	[]	[]	N/A
GUARDRAIL TERMINAL	G F P C	[]	[]	N/A

CULVERT & RETAINING WALLS

BARREL: CONCRETE	G <u>F</u> P C	HONEYCOMB, CRACKING UP TO 3/8" ABUTMENT 1 SCALE UP TO 3 1/2"; UNDERMINING ABUTMENT 1 UP TO 4' AND UNDERMINING ABUTMENT 2 UP TO 4' DEEP N/A		
HEADWALL/CURBS	G <u>F</u> P C	HONEYCOMB, SCALE		
CUTOFF WALL	G F P C	N/A		
WINGWALL	G <u>F</u> P C	SCALE		
ADEQUACY	<u>G</u> F P C			
DEBRIS/DRIFT	<u>G</u> F P C			
SEDIMENT	<u>G</u> F P C			
VEGETATION	<u>G</u> F P C			
CHANNEL SCOUR	G F <u>P</u> C	HEAVY SCOUR AT RT SIDE ABUT.1 (OUTLET)		
DRAINS	G F P C	N/A		

APPROACHES

ALIGNMENT	<u>G</u> F P C	
PAVEMENT	<u>G</u> F P C	
EMBANKMENT	<u>G</u> F P C	

COMMENTS: _____

INSPECTION TEAM'S SUMMARY

Federal ID # 05S24230003

Bridge # 05-05551-00.25

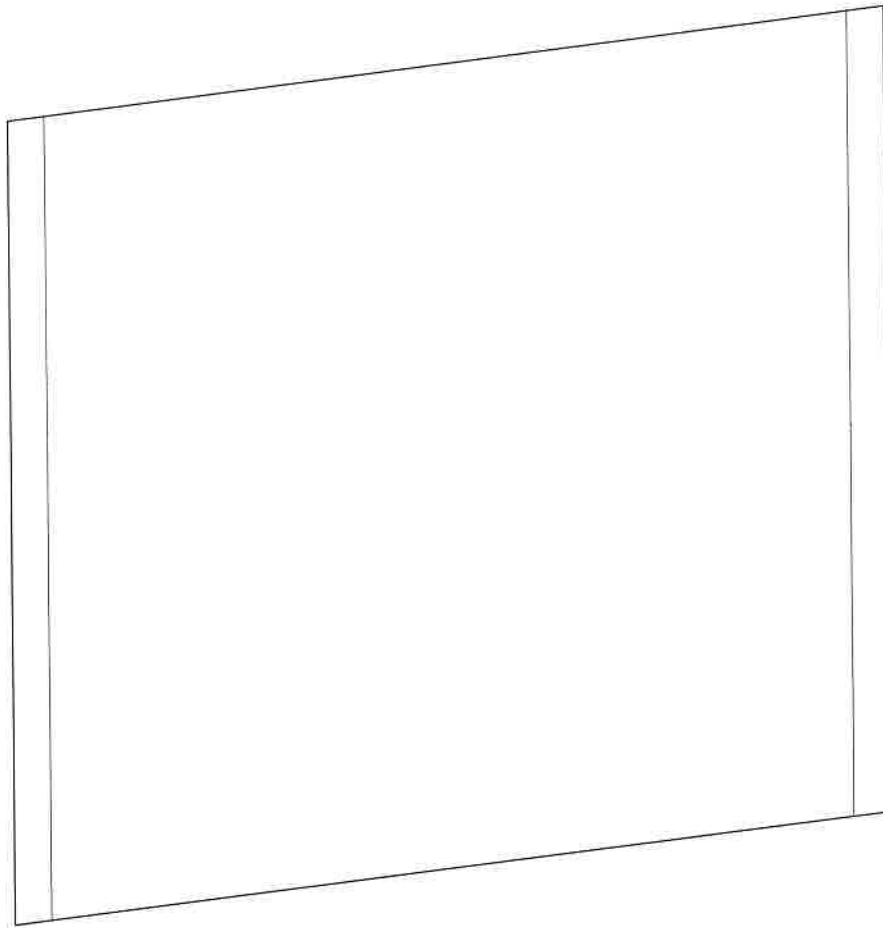
November 8, 2021

The subject bridge was inspected on the above date and found to be in generally fair condition. Roadway alignment is good. Continuous asphalt overlay across the approaches and the top of the bridge is in good condition. There are no existing traffic safety features. The paddleboard signs are in place.

Barrel concrete is in fair condition with cracking up to (3/8)", honeycomb and leaching. Headwalls and wings are in fair condition with scale. Barrel wall #1 right has undermining up to 2' high x 2' deep x 4' long. The sill on #1 side is undermined completely starting from 2' on right to 3" on left.

Channel is rated good with some heavy scour at the outlet side of abutment 1 up to 4' back under.

RB
TPS-SPV1



BRIDGE NO. 05-1220-00.98

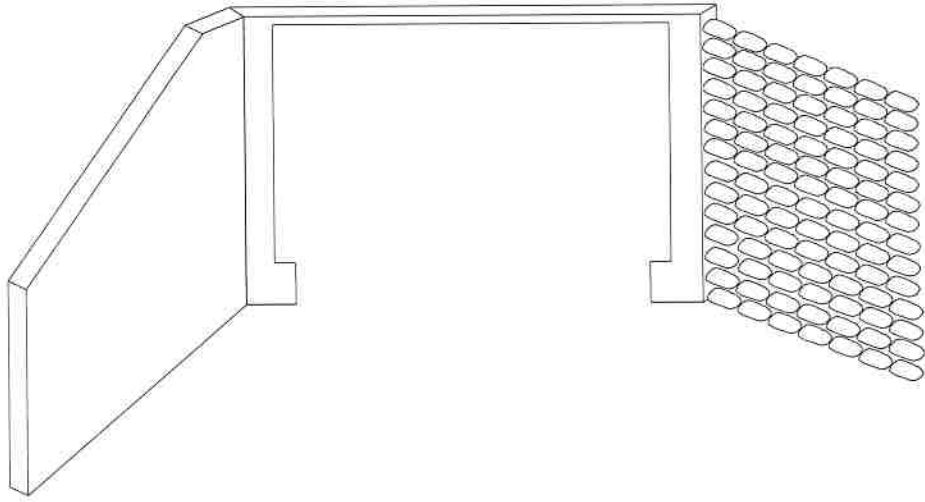
11-08-21 GM

TOP DECK

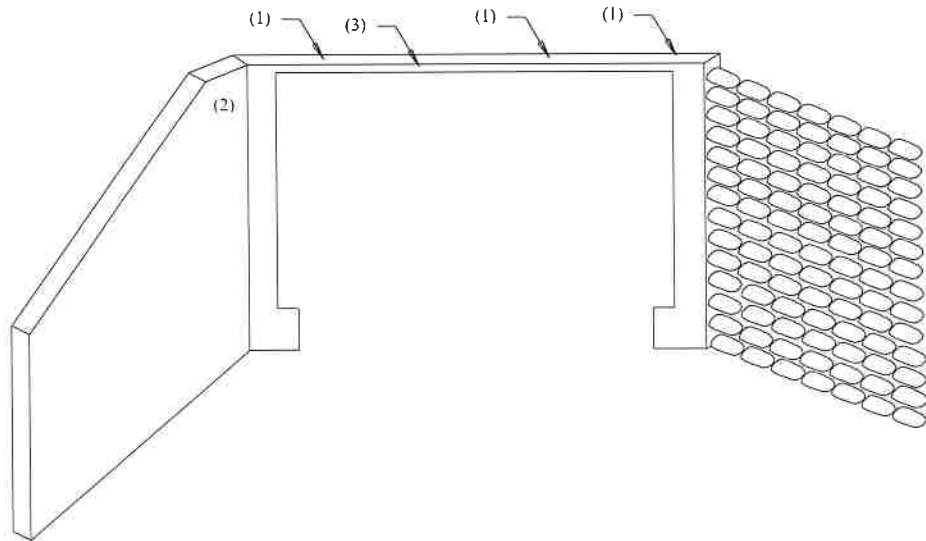
BRIDGE RAIL	G	
WEARING SURFACE	G	

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INLET



OUTLET

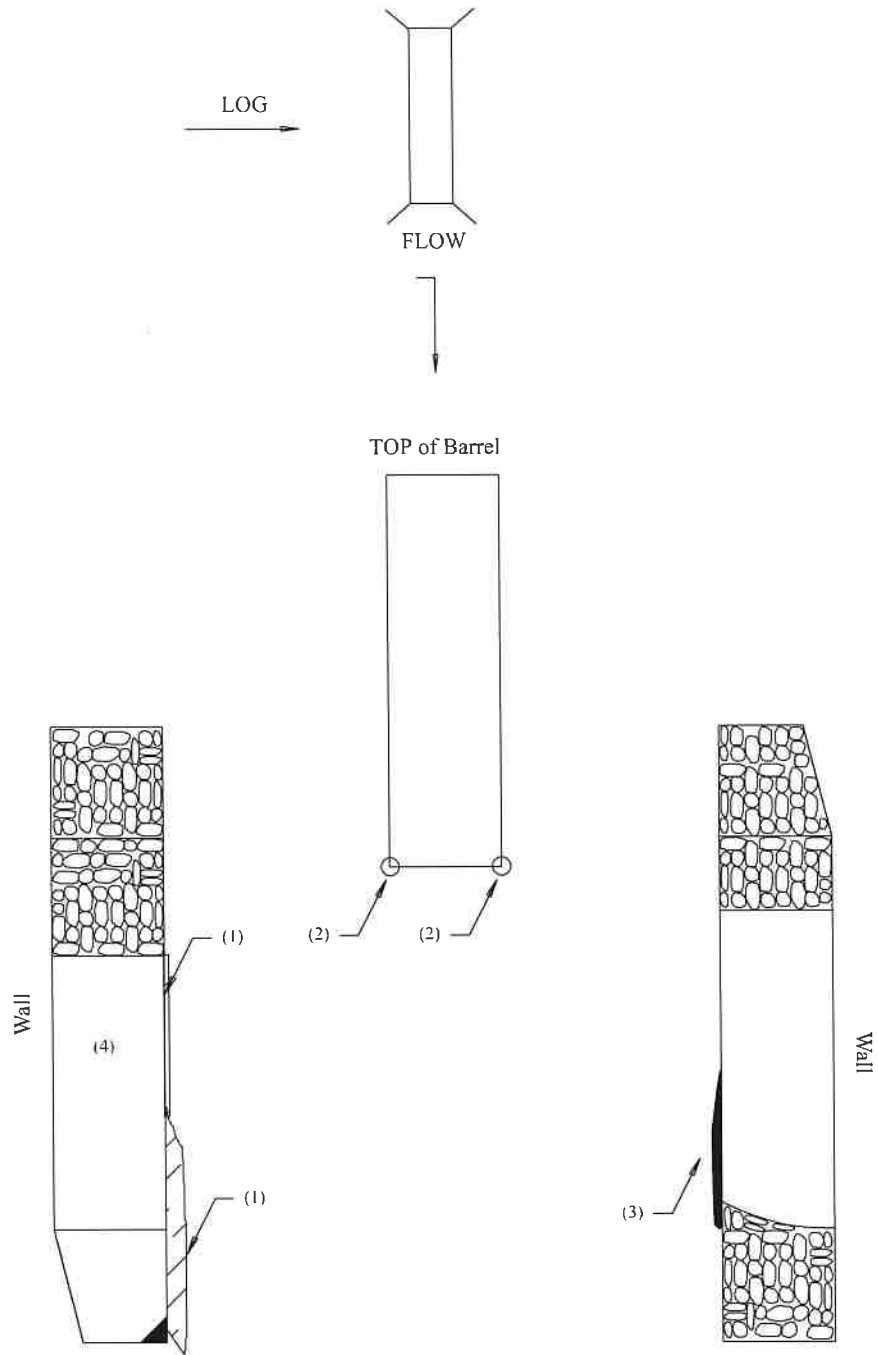


LOC. 05-5551-0.25

11-08-21 RC

INLET HDWALL	F	LIGHT SCALE
WINGS	F	SOME MORTAR MISSING
OUTLET HDWALL	F	(1) 3" DP. SCALE (3) CRACK ACROSS HEADWALL UP TO 1/8"
WINGS	F	(2) SPALL 1' DIA. X 3" DEEP
		SOME MORTAR MISSING

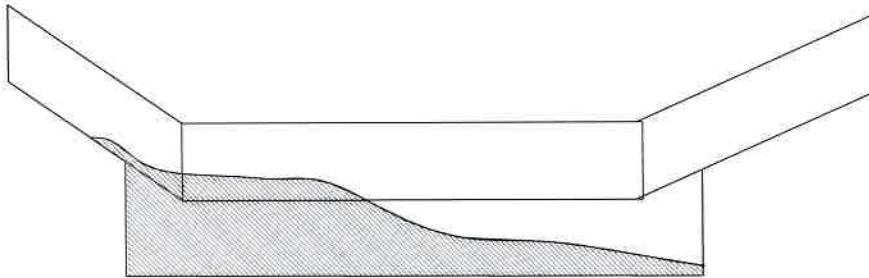
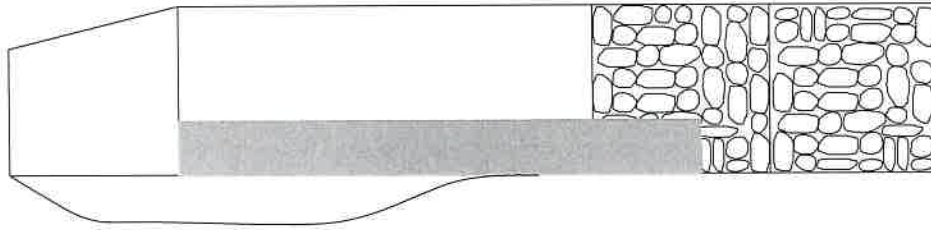
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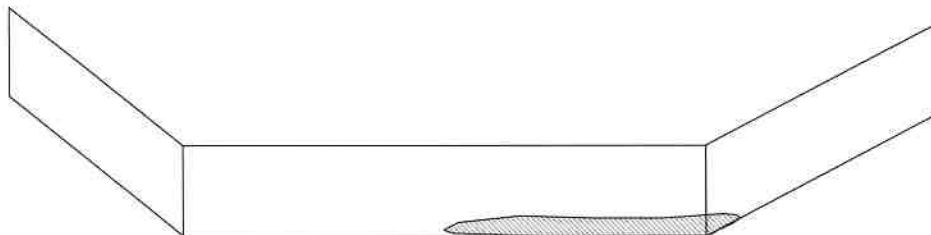
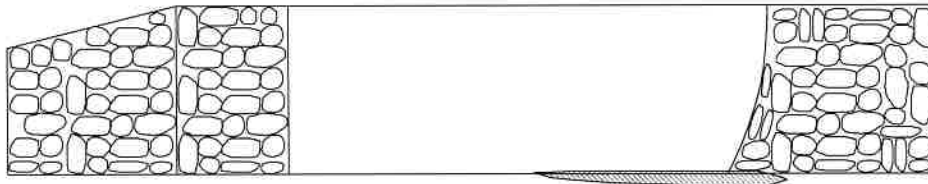
LOC. 05-5551-0.25		11-08-21 RC	BARREL 1
BARREL	F	(1) UNDERMINING WING #1 RIGHT & UNDER ABUTMENT 1 - 2' H x 15' L x UP TO 4' DEEP	
		(2) DEEP SCALE 2' x 1' x 3" AT CORNERS OF TOP OF BARREL DOWNSTREAM	
		(3) UNDERMINING OF ABUTMENT 2 - 4' D x 1' H x 1/2 OF ABUTMENT 2	
		(4) CRACK UP TO 1/4"	
SCOUR	P		

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Wall



Wall



LOC. 05-5551-0.25

- (1) UNDERMINING WING #1 RIGHT & UNDER ABUTMENT 1 - UP TO 2' H x 15' L x UP TO 4' DEPTH
- (2) DEEP SCALE 2' x 1' x 3" AT CORNERS OF TOP OF BARREL DOWNSTREAM
- UNDERMINING OF ABUTMENT 2 - 4' D x 1' H x 1/2 OF ABUTMENT 2

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