



Hamilton County

Regular Inspection Report

Location: 33-03610-01.58

Federal ID: 33100240061

Closeout Agency:

TDOT

Description:

4 Span Bridge

FAU 3610 – McBrien Road

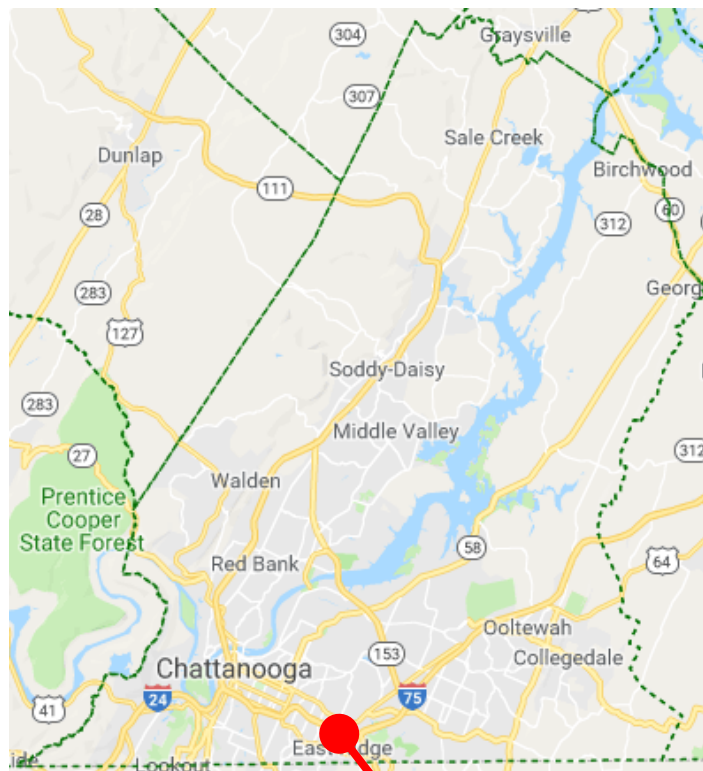
OVER

I-24 Log Mile 13.63

Inspection Date: October 12, 2020

Overall Condition Rating:

FAIR



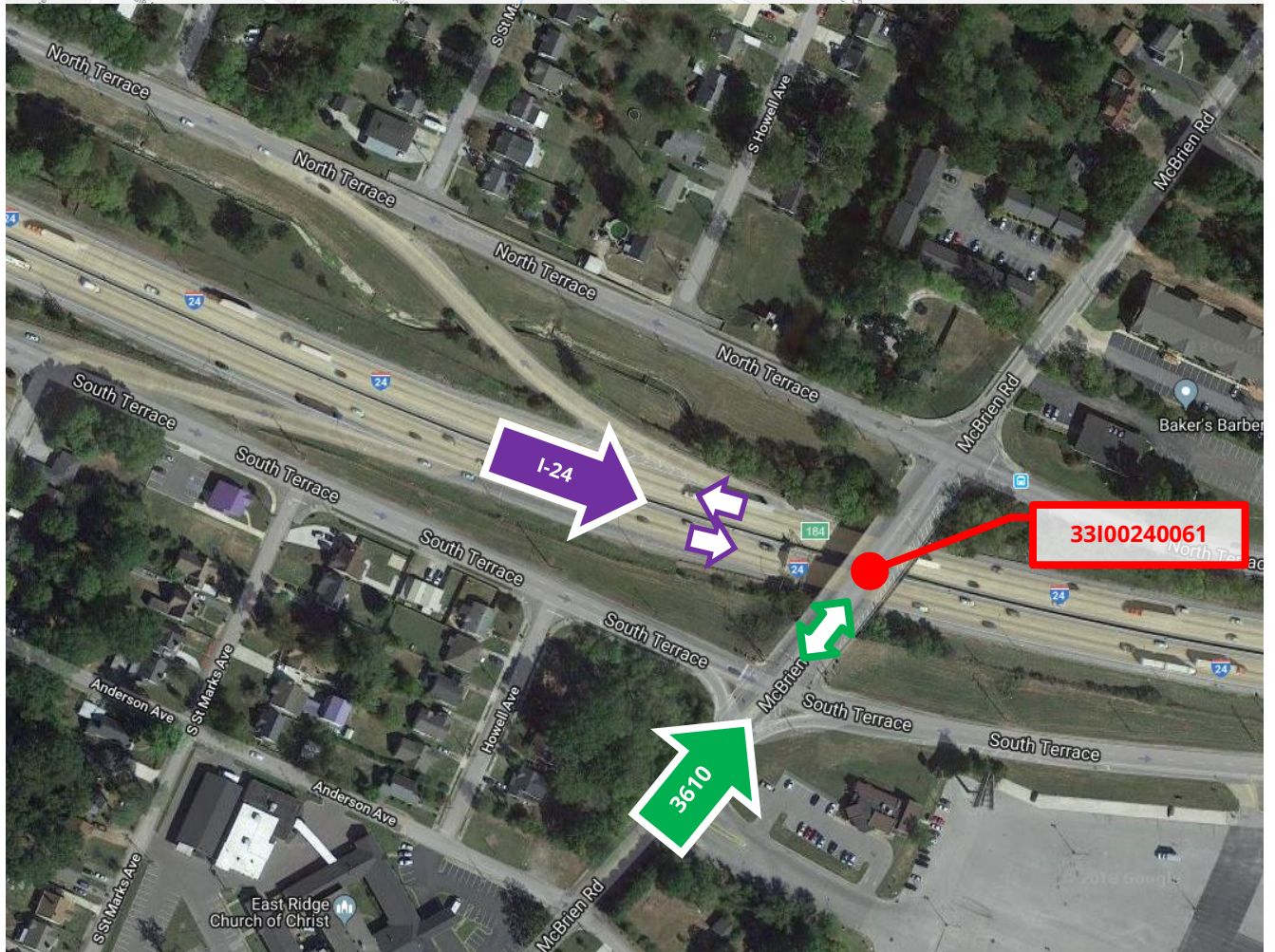
33100240061

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LOCATION MAP



I-24 Exit 184
Moore Rd



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BRIDGE MAINTENANCE RECOMMENDATIONS



Tennessee Department of Transportation

COUNTY: HAMILTON
 LOCATION: 33-03610-01.58-
 CO. SEQ.: 1 SPEC. CASE: 0

CROSSING: MCBRIEN RD / I-24
 FED. BRIDGE NO.: 33I00240061
 MAINT. DIST.: 33

REPAIR LIST NO.: 2
 DATE ADDED: 12/10/2018
 REVISED: 10/12/2020

FACILITY CARRIED:	FAU 3610	NUMBER OF MAIN SPANS:	4
HIGHWAY SYSTEM:	18-STP URBAN, NON-STATE SYS.	NUMBER OF APPROACH SPANS:	0
BRIDGE WIDTH (CURB TO CURB):	67 FT 10 IN	BRIDGE LENGTH (FT):	192
BRIDGE WIDTH (OUT TO OUT):	79 FT 4 IN	MAXIMUM SPAN LENGTH (FT):	60
APPROACH ROADWAY (W/SHOULDERS):	47 FT 10 IN	SKEW ANGLE (DEGREES):	68
MAINTAINED BY:	STATE HIGHWAY AGENCY		
MAIN SPAN MATERIAL:	PRESTRESSED CONCRETE		
MAIN SPAN DESIGN TYPE:	BOX BEAM OR GIRDERS - MULTIPLE		
APPROACH SPAN MATERIAL:	OTHER OR NOT APPLICABLE		
APPROACH SPAN DESIGN TYPE:	OTHER OR NOT APPLICABLE		
INSPECTION DATE:	10/12/2020	GENERAL CONDITION:	FAIR
EVALUATION DATE:	11/20/2018	STRUCTURALLY DEFICIENT:	NO
PPRM PIN NUMBER:		SUFFICIENCY RATING:	81.4
H TRUCK RATING @ INV.:	19 TONS		

SUGGESTED ROUTINE MAINTENANCE AND COMMENTS
REPAIR CRACKS SPALLS AND DELAMINATIONS IN DECK SUPERSTRUCTURE AND SUBSTRUCTURE
REPAIR UNDERMINING AT ABUTMENT NO. 2 LEFT SIDE
REMOVE HANGING ELECTRICAL LINE ON LOOKING AHEAD SIDE OF BENT NO. 3
INSTALL PADDLEBOARD SIGNS AT APPROPRIATE LOCATIONS (APPROACH NO. 2)
LEVEL THE WEARING SURFACE AT BOTH APPROACHES
REPAIR APPROACH SIDEWALKS
BRIDGERAILS ARE SUBSTANDARD

GENERAL COMMENTS:

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

Bridge Condition Coding Form

Revised 10/20/2020

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 (Values for Coding Items 58, 59, 60 and 62)			
90	LAST INSPECTION DATE	<input type="text" value="10/12/2020"/>	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.			
	EARLIEST DATE OF NEXT REGULAR INSPECTION	<input type="text" value="08/13/2022"/>				
		<input type="text" value="/ /"/>				
10	MINIMUM V.C. OVER DECK (ROADWAY + SHOULDERS)	99 FT. 99 IN. <input type="text"/> FT. <input type="text"/> IN.				
520	MINIMUM V.C. OVER DECK (EXCLUDES SHOULDERS)	99 FT. 99 IN. <input type="text"/> FT. <input type="text"/> IN.				
36	TRAFFIC SAFETY FEATURES					
	Br. Rail	Trans.	Appr. Rail	Terminal	SPEED LIMIT	
	0	N	N	N	30	
	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	
41	STRC OPEN/CLOSED/POSTED	A				
	A K P	<input type="text"/>				
58	DECK	6				
59	SUPERSTRUCTURE	5				
60	SUBSTRUCTURE	5				
61	CHANL/CHANL PROTECTION	N				
62	CULVERT AND RETAIN WALL	N				
71	WATERWAY ADEQUACY	N				
72	APPROACH RDWY ALIGNMENT	8				
521	OVERALL CONDITION	FAIR				
16	LATITUDE	17 LONGITUDE				
	N 35° .2890'	W 85° 13.6240'				
	<input type="text"/>	<input type="text"/>				
	<input type="text" value="/ /"/>					
	TEAM LEADER SIGNATURE	REVIEW DATE				

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Photographs

Bridge ID#: 33I00240061

Date: 10/12/2020



BRIDGE NO. - BRIDGE RAIL - #1 RIGHT SIDE



VIEW ACROSS TOP OF DECK

Photographs

Bridge ID#: 33I00240061

Date: 10/12/2020



LOOKING AHEAD ON ROUTE



LOOKING BACK ON ROUTE

Photographs

Bridge ID#: 33I00240061

Date: 10/12/2020



LEFT SIDE VIEW OF BRIDGE



RIGHT SIDE VIEW OF BRIDGE

Photographs

Bridge ID#: 33I00240061

Date: 10/12/2020



UNDERPASS NO. - BENT #1 - COLUMN "B"



SUPER/SUBSTRUCTURE - ABUTMENT #1

Photographs

Bridge ID#: 33I00240061

Date: 10/12/2020



SUPER/SUBSTRUCTURE - BENT #2



BEARING "L" - ABUTMENT #1

Photographs

Bridge ID#: 33I00240061

Date: 10/12/2020



BEARING "C" - BENT #2



APPROACH #1

Photographs

Bridge ID#: 33I00240061

Date: 10/12/2020



WEARING SURFACE



TRAFFIC SAFETY FEATURES

Photographs

Bridge ID#: 33I00240061

Date: 10/12/2020



APPROACH #2



LOOKING AHEAD ON ROUTE FROM UNDERPASS - EASTBOUND

Photographs

Bridge ID#: 33I00240061

Date: 10/12/2020



LOOKING BACK ON ROUTE FROM UNDERPASS - WESTBOUND



TRAFFIC SAFETY FEATURES

Photographs

Bridge ID#: 33I00240061

Date: 10/12/2020



CRACKS IN WEARING SURFACE



BENT #2 - COLUMN "B" - REBAR/SPALL/DELAMINATION

Photographs

Bridge ID#: 33I00240061

Date: 10/12/2020



BOTTOM OF CAP - BENT #1 - BETWEEN COLUMNS "D" AND "E"

Photographs

Bridge ID#: 33I00240061

Date: 10/12/2020



END OF BEAM "F" SPAN #2 - SPALL/REBAR



BENT #1 - COLUMN "F" - REBAR/SPALLS

Photographs

Bridge ID#: 33I00240061

Date: 10/12/2020



BOTTOM OF CAP - BENT #3 - BETWEEN COLUMNS "A" AND "B" - DELAM



BOTTOM OF CAP - BENT #3 - BETWEEN COLUMNS - "B" AND "C" - DELAM

Photographs

Bridge ID#: 33I00240061

Date: 10/12/2020



BENT #3 - COLUMN "A" - REBAR SPALL



BENT #3 - COLUMN "B" - DELAM/SPALLS

Photographs

Bridge ID#: 33I00240061

Date: 10/12/2020



BENT #2 - COLUMN "E" - DELAMINATION



BENT #3 - COLUMN "E" - LOOSE ELECTRIC WIRING

Photographs

Bridge ID#: 33I00240061

Date: 10/12/2020



BOTTOM OF DECK - SPAN #3 - LEAKAGE

Photographs

Bridge ID#: 33I00240061

Date: 10/12/2020



UNDERPASS EASTBOUND - #1 RIGHT - DAMAGED GUARDRAIL

BRIDGE INSPECTION REPORT

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

Field Report No. 25 Date 10/12/2020
Previous Report No. 24 Date 10/10/2018

Bridge No. 33100240061
Eleven Digit No.

Plans: DESIGN
Bridge Location No. 33 - 03610 - 0158
Co. Route Log Mile

03610 - McBRIEN ROAD(3610-1.58) over I - 24
Facility Carried on Structure Crossing
Year Constructed 1958 County Hamilton Maintenance District: 29
Year Widened _____

FEATURES

Wearing Surface ASPHALT Depth 3.0 in
 Flared Width Median Width NONE ft
 Navigation Control Bridge Skew 68° - RT

Structure Type (Main) Prestressed / Post-tensioned | Box Beam / Girders - Multiple

Structure Type (Appr.) _____

No. Main Spans 4 No. Approach Spans _____

Maximum Span Length 60.0 ft

Total Length 192.0 ft

WIDTHS (*.* ft.)

Deck Out-to-Out 79.5 ft

Roadway Curb/Curb 68.0 ft

Sidewalk Lt. 4.5 ft Rt. 4.5 ft

*Approach Roadway 48 ft

*(Does Not Include Shoulders)

Approach Shoulder Lt. 0 ft
Rt. 0 ft

TEAM LEADER

S. Davis

INSPECTORS

J. Edwards

W. Spencer

Min. Vertical Clearance over Carried Route - 03610 99 ft - 99 in

See Underpass Inspection for underpass clearances

Fracture Critical Bridge (See BIR 3.9 if Fracture Critical)

NBIS Bridge (Length > 20ft)

Underwater Inspection Performed By: _____

Underwater Inspection Date _____

See bottom of "Bents" page for applicable notes from underwater reports

COORDINATES

Latitude: N 35° 0.289'

Longitude: W 85° 13.624'

Date Collected: 10/12/2020

EQUIPMENT + RESOURCES

Tape / Laser

GPS

Traffic Control - TDOT

Ladder

Big Boat

Traffic Control - Bridge

Flashlight

Little Boat

Other: 8' ROD.

Reach All

Bucket Truck

General Inspection Comments:

Overall Rating Comments:

BRIDGE is: OPEN Closeout Agency TDOT

OVERALL RATING: FAIR

PERFORMANCE EVALUATION

Time of Day Inspected AM Weather Conditions 70° - CLOUDY

Vehicles Observed ALL TYPES.

LIVE LOAD BEHAVIOR

Substructure	Yes/No	Comments
Horiz./ Vert. Defl.	NO	
Vibration	NO	
Superstructure		
Horiz./ Vert. Defl.	NO	
Vibration	NO	

APPROACH

	Rating	Comments
Alignment	GOOD	
Slab	NA	
Joints	FAIR	OVERLAYED. NO VISIBLE SIGNS OF SIGNIFICANT ISSUES
Pavement	FAIR	ROUGH, UNEVEN.
Slope	GOOD	
Drains	NONE	

TRAFFIC SAFETY FEATURES

	Rating	Standard/ NonStandard	Comments
Bridgerailing	FAIR	Nonstandard	
Transitions	NONE	N/A	CURB >6"
Approach Rail	NONE	N/A	
Guardrail Terminal	NONE	N/A	
Median	NONE		

SIGNS POSTED ON ROUTE

Weight Limit Posted

Paddleboards NO Gross..... Tons
 Vertical Clearance (<14'-6") NO 2 Axle..... Tons
 Narrow Bridge Signs NO 3 or more Axles. Tons
 One Lane Bridge Signs NO

Other Signs or Plaques:

ATTACHED SIGNS

Sign Number:

Location:

Directions:

Problems with Signs: PADDLEBOARDS MISSING AT APPROACH #2.

DECK

	Rating	Comments
Wearing Surface	FAIR	ASPHALT, CRACKS OVER JOINTS, WIDE CRACKS.
Deck - Structural Condition	FAIR	PRESTRESS CONCRETE BOX BEAMS HAVE LEAKAGE.
Curbs	GOOD	>=6"
Median	NONE	CLOSED - NO BARRIER.
Sidewalks	POOR	SETTLED AND UNEVEN AT APPROACHES.
Paint	NA	
Drains	NA	
Lighting Standards	GOOD	SPAN 2 - LEFT HAS EXPOSED WIRES AND SPAN 3 - RIGHT.
Utilities	NONE	
Joint Leakage	POOR	HEAVY.
Expansion Joints	NV	OVERLAYED.

SUPERSTRUCTURE

Bearing Devices	NV	NO VISIBLE SIGNS OF SIGNIFICANT ISSUES.
Girders or Beams	FAIR	DELAMINATION, SPALLS, EXPOSED STRANDS WITH 90% SECTION LOSS, HAIRLINE CRACKS WITH EFFLORESCENCE.
Floor Beams	NA	
Stringers	NA	
Diaphragms	NA	
Bracing	NA	
Paint	NA	
Alignment of Members	GOOD	GAPS UP TO 1.5" IN SPAN #1.
Trusses - General	NA	
Portals	NA	
Bracing	NA	

TEXTURE COAT

Condition Rating _____ Needs Spot Painting _____
 Overall Appearance _____ Needs Repainting _____
 Staining Rating _____
 Fading Rating _____
 Scaling Rating _____

Comments _____

SUBSTRUCTURE

ABUTMENTS

	Rating	Comments
Caps	GOOD	<i>HAIRLINE CRACKS, REBAR SPALL, STAINS.</i>
Stem:	NA	
Wings / Walls	GOOD	<i>NO VISIBLE DEFECTS FOUND.</i>
Backwall	NV	<i>PRESTRESSED CONCRETE BOX BEAMS.</i>
Plumb	GOOD	<i>NO VISIBLE DEFECTS FOUND.</i>
Footing	NA	
Piles	NV	
Embankment	GOOD	<i>UNDERMINING AT ABUTMENT #2, LEFT.</i>
Bridge Seat:	NV	<i>NO VISIBLE SIGNS OF STRUCTURAL ISSUES</i>
Rip Rap	NA	

BENTS

Bridge Seat:	GOOD	<i>NO VISIBLE DEFECTS FOUND.</i>
Caps	FAIR	<i>SIGNIFICANT REBAR SPALLS, DELAMINATION.</i>
Columns / Shaft	FAIR	<i>BENTS 2 AND 3 - SIGNIFICANT REBAR SPALLS.</i>
Pier / Crash Walls:	NA	
Plumb	GOOD	<i>NO VISIBLE DEFECTS FOUND.</i>
Footings	NV	
Piles	NV	
Piles Need Replacement:	NO	

Underwater
Substructure
Comments

Inspection Team's Summary
Bridge Location No. 33-03610-01.58
Inspection Date 10/12/2020
Bridge Rating FAIR

This is a 4-span prestressed side by side box beam bridge. It was inspected by a Chattanooga bridge inspection team from Region 2. The bridge rails do meet current safety standards. The paddleboards are nonexistent at approach #1. Settlement exists at both approaches. The bridge was under construction at the time of inspection. This bridge is scheduled for replacement. Deck elevations were not taken this cycle.

The deck is rated "FAIR". The box beams have heavy leakage coming through the joints.

The superstructure is rated "FAIR". The beams have spalls and hairline cracks, one spall in span #3 has section loss on exposed strands.

The substructure is rated "FAIR". The abutments have hairline cracks and undermining is present at #2 left. The bents have significant amount of delamination and spalls. Section loss and corrosion is present in exposed rebar.

The underpass is rated "GOOD". The underpass transitions and approach rails are substandard. The Eastbound Approach #1 Guardrail is damaged.

ELEVATIONS OF DECK

PAGE NO. _____

BRIDGE LOCATION NO. 33 3610 1.58 (2.06)
COUNTY ROUTE LOG MILE (LOG km)

DATE: 09-03-98

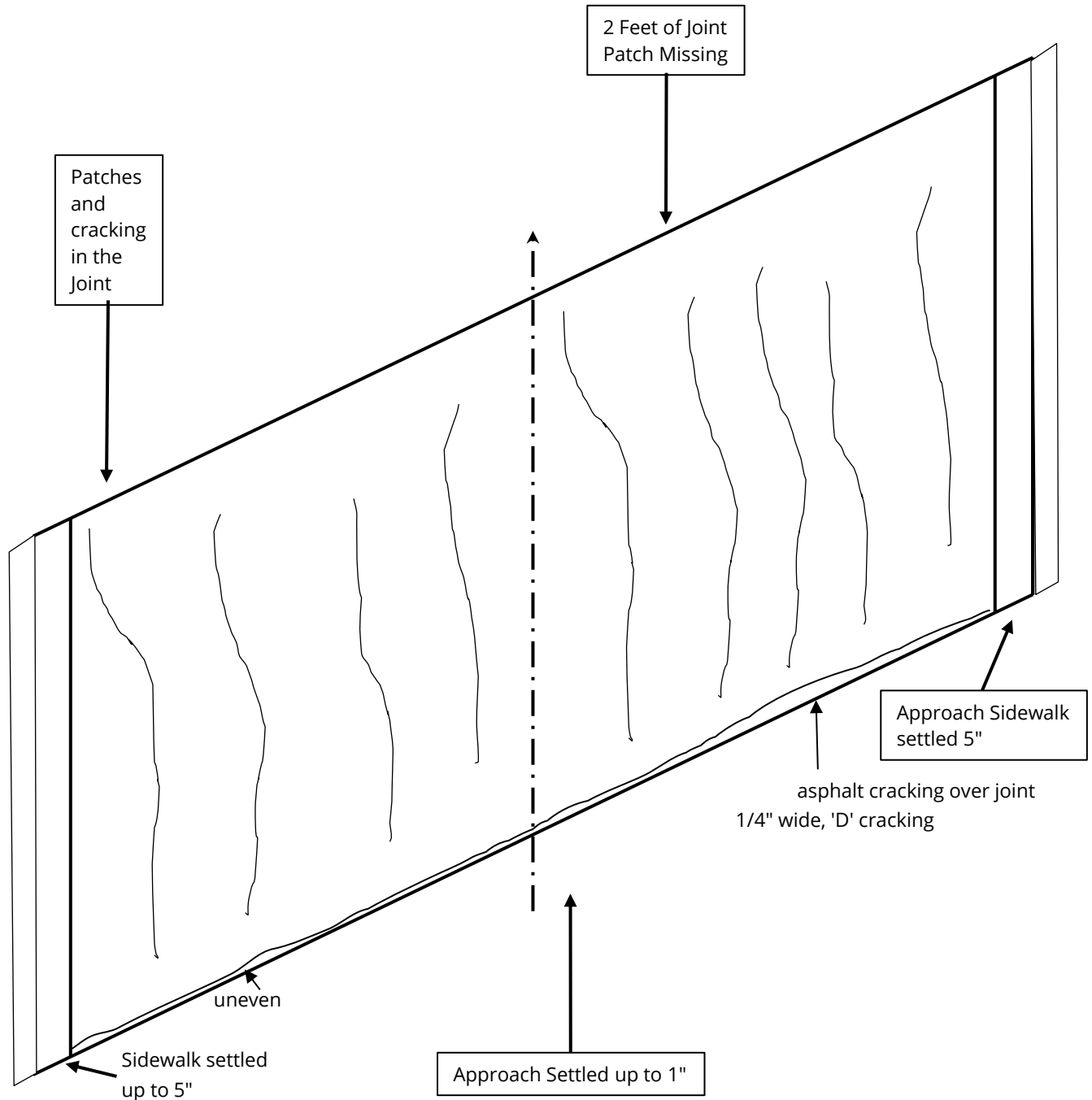
STATION/ LOCATION	TOP OF LT. CURB/RAIL	GUTTER/ EDGE DECK	CENTERLINE	GUTTER/ EDGE DECK	TOP OF RT. CURB/RAIL
ABUT # 1	697.51	696.83	697.66	697.43	698.18
BENT # 1	698.31	697.55	698.29	697.95	698.75
BENT # 2	699.12	698.33	698.90	698.39	699.25
BENT # 3	699.22	698.42	698.81	698.20	698.72
ABUT # 2	699.04	698.10	699.38	698.72	699.40

BENCH MARK LOCATION BRIDGE SEAT, ABUT. # 2, RT. SIDE. (NORTH ABUTMENT)

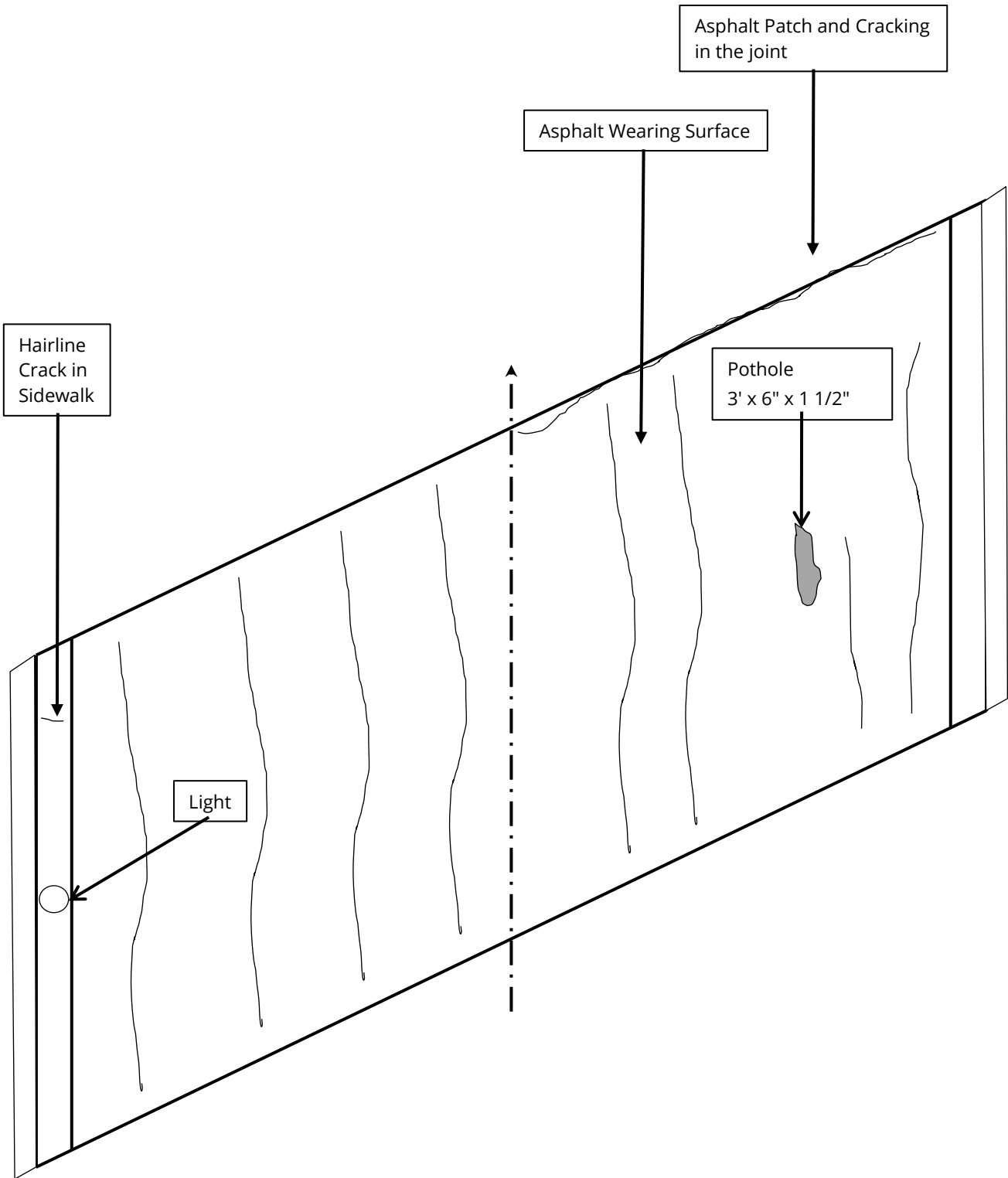
CH MARK ELEVATION 696.11

E: ELEVATIONS TAKEN FROM PREVIOUS REPORT DATED 10-16-96

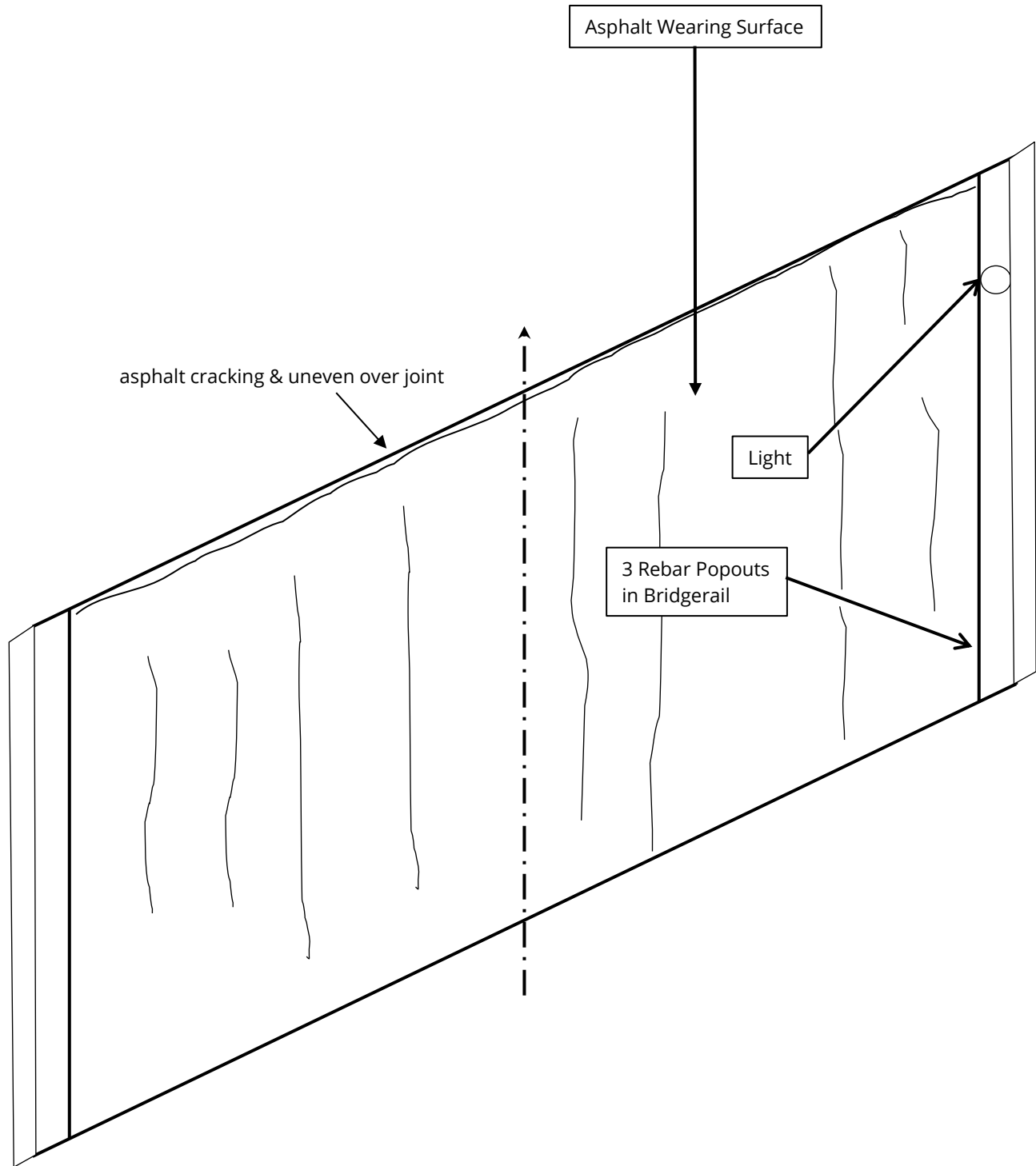
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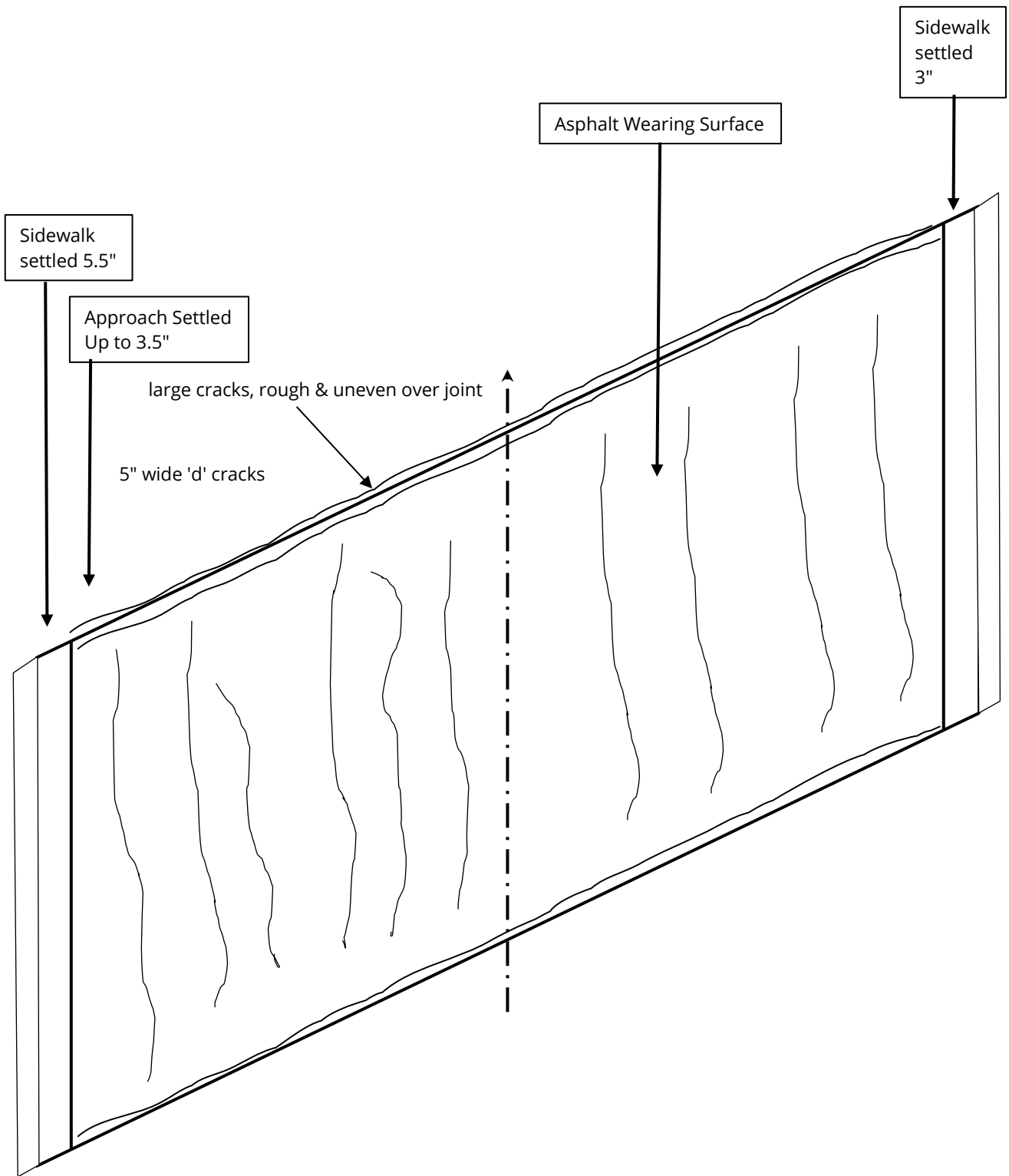
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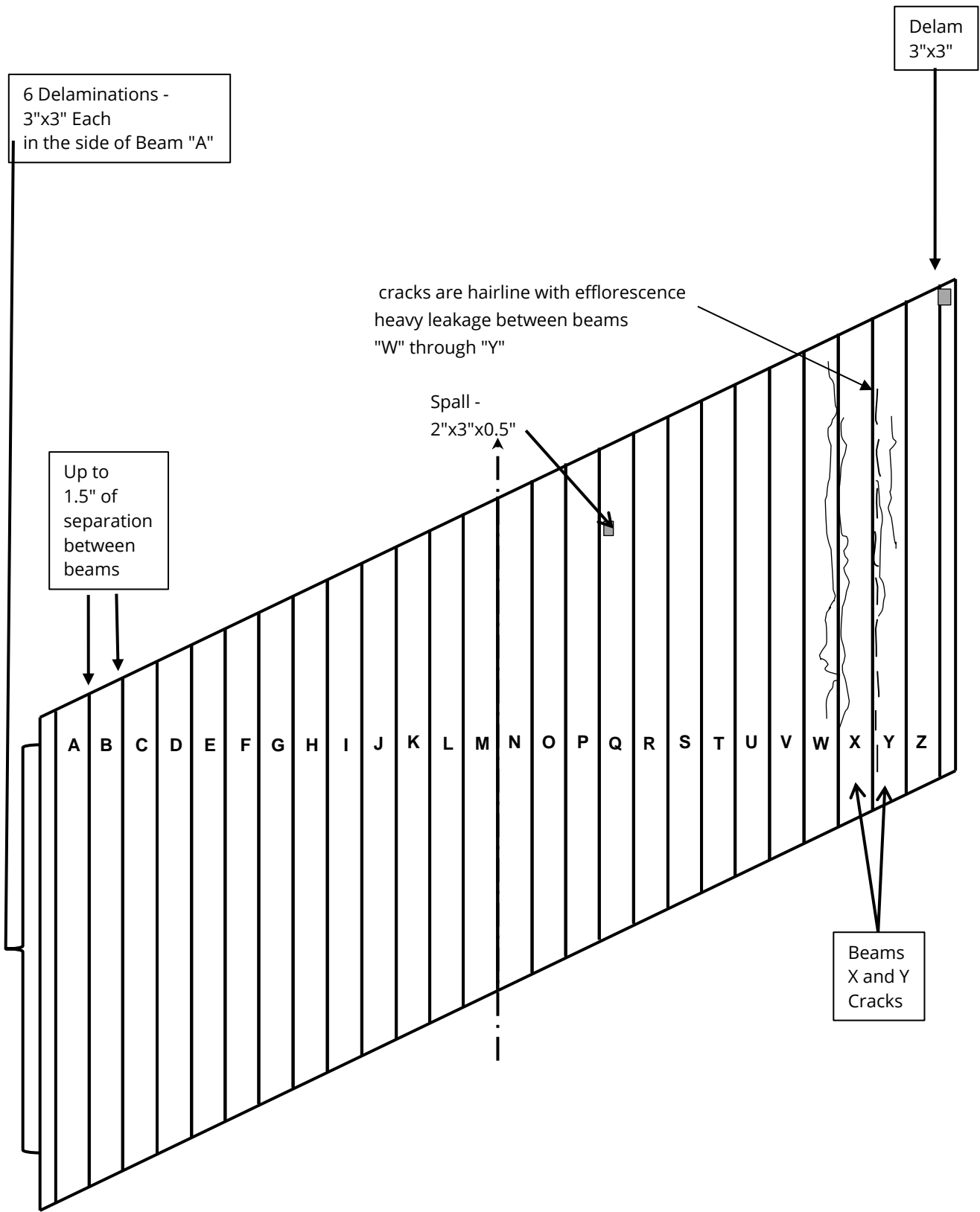
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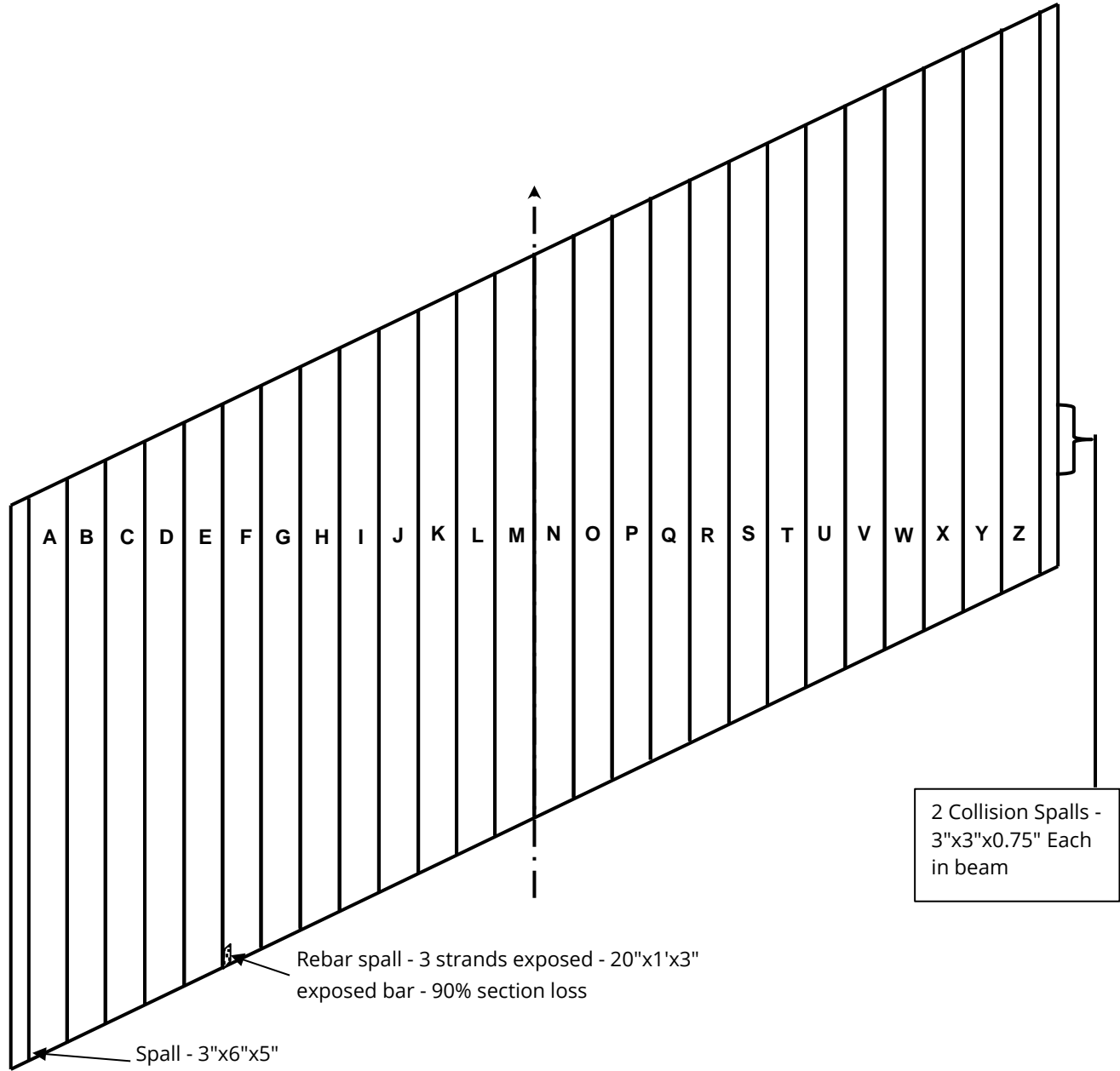


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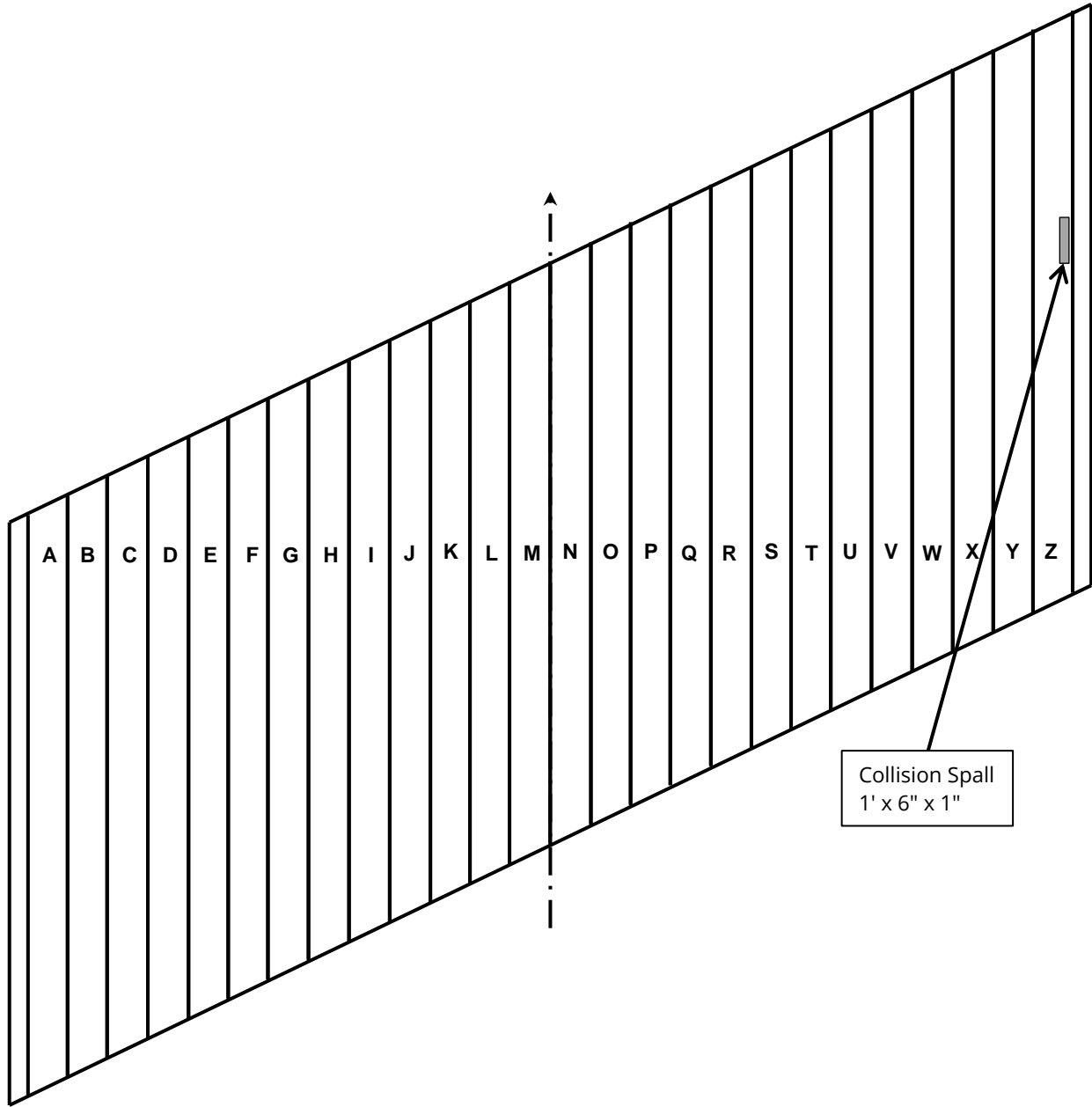
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There is leakage between the beams.



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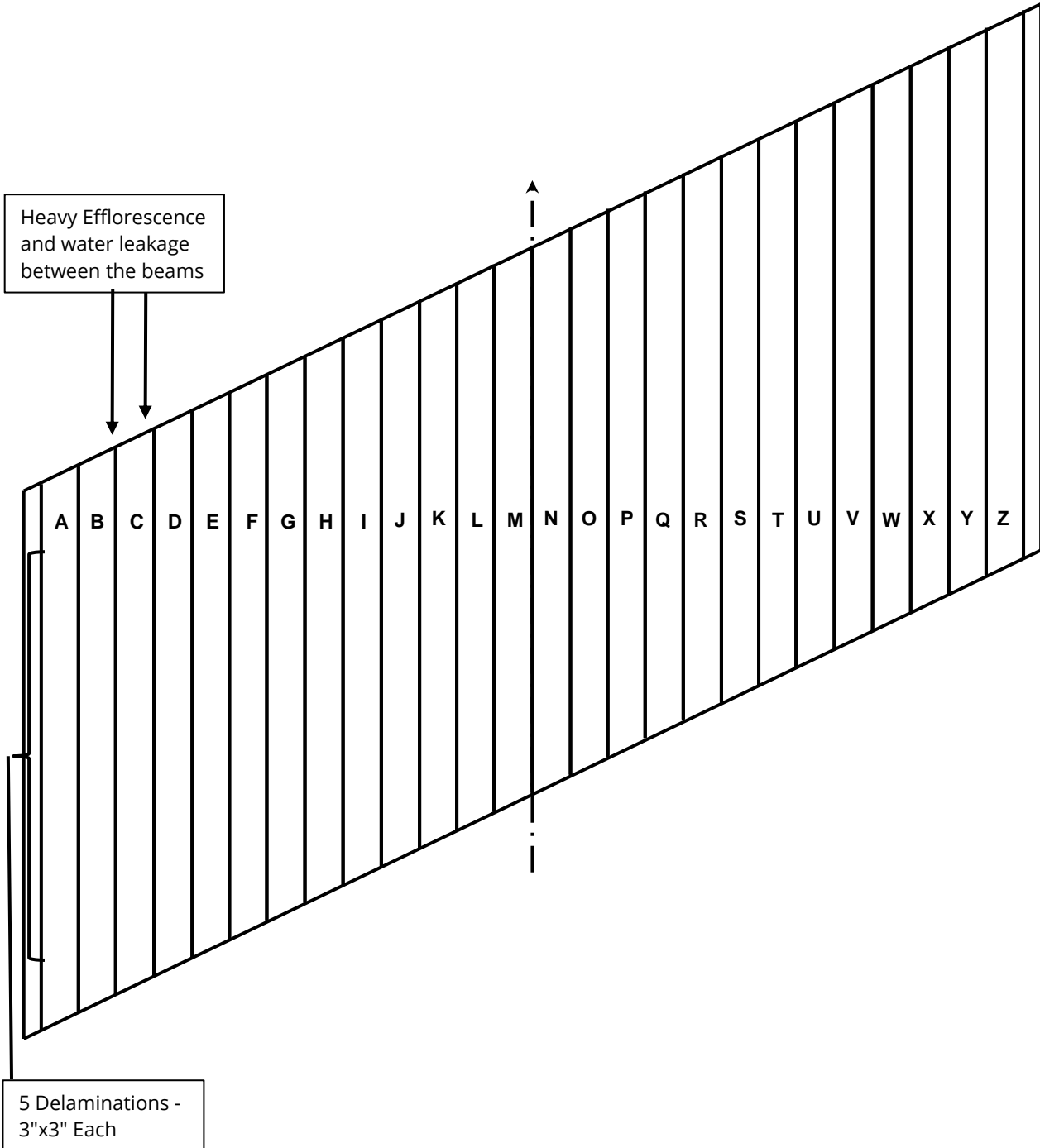
There is leakage between the beams.



Collision Spall
1' x 6" x 1"

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There is leakage between the beams.



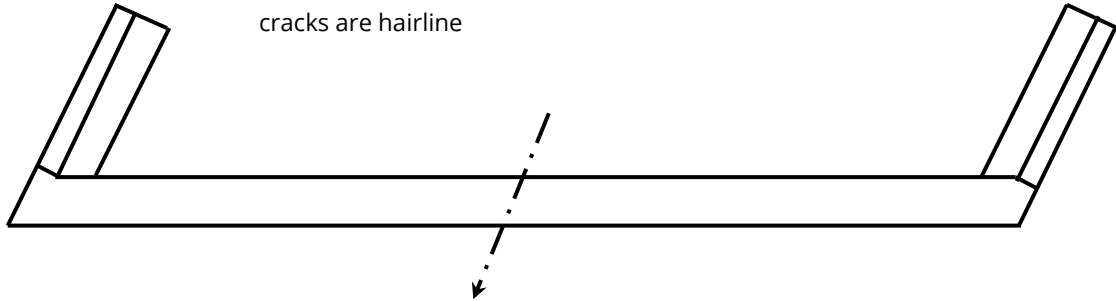
Heavy Efflorescence
and water leakage
between the beams

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

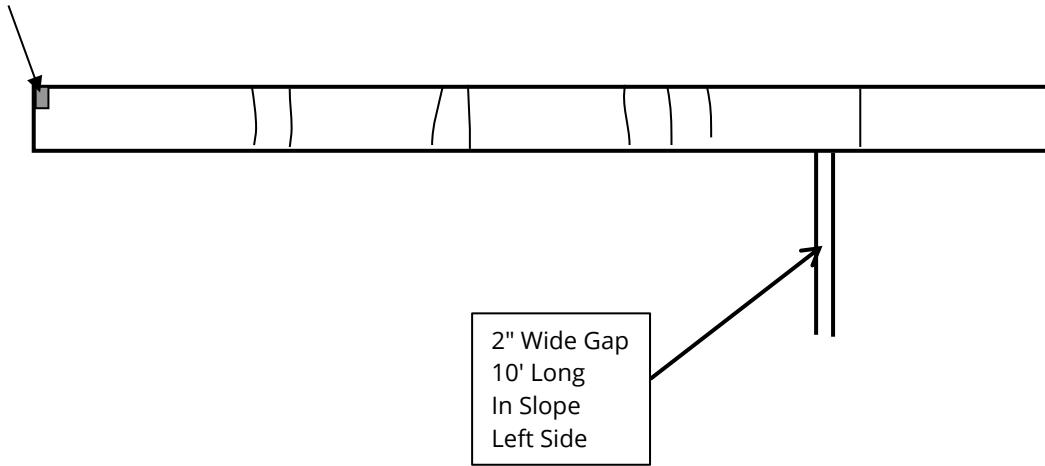
5 Delaminations -
3"x3" Each

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Bearings - Elastomeric Pads - Not Visible

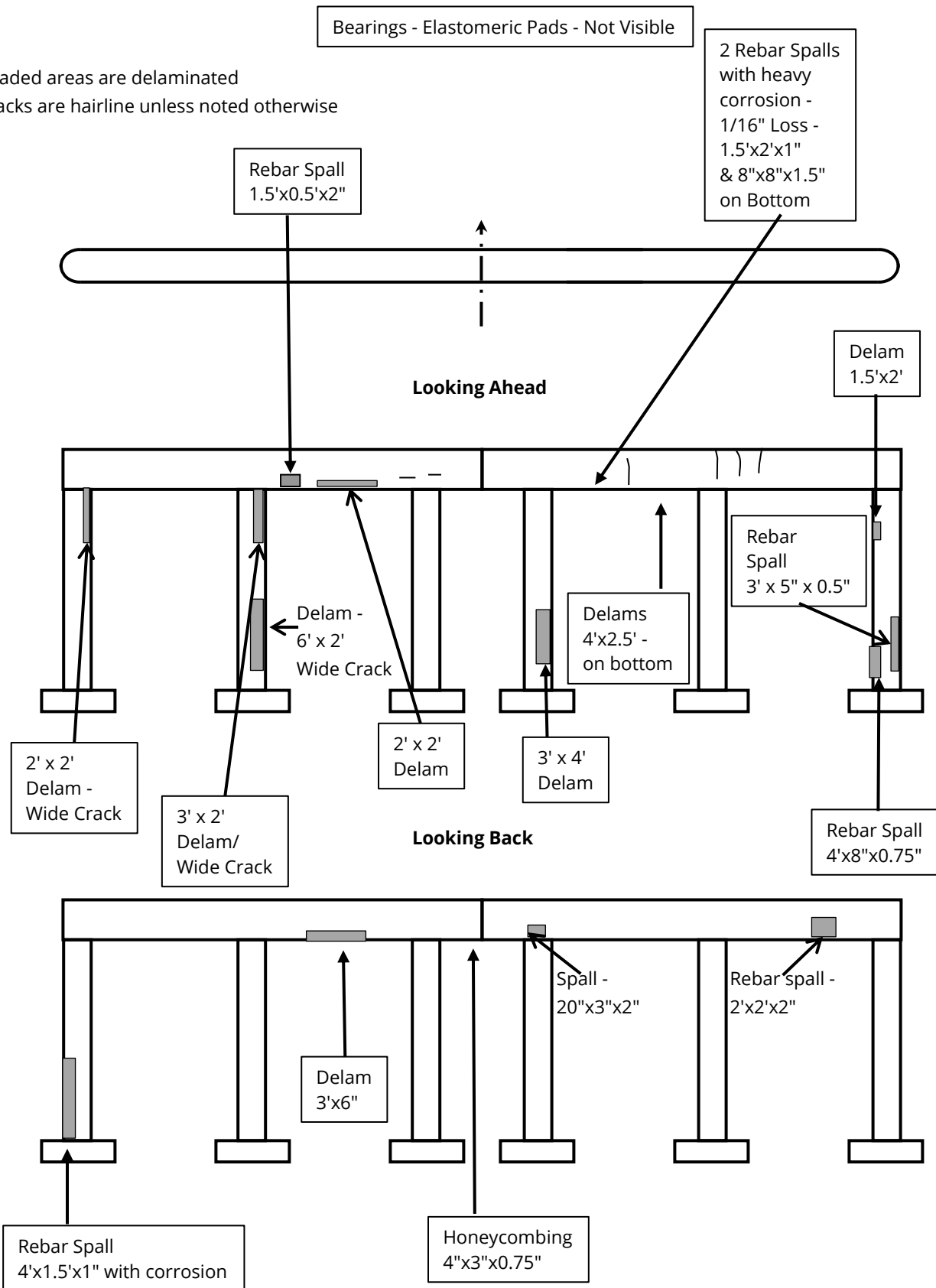


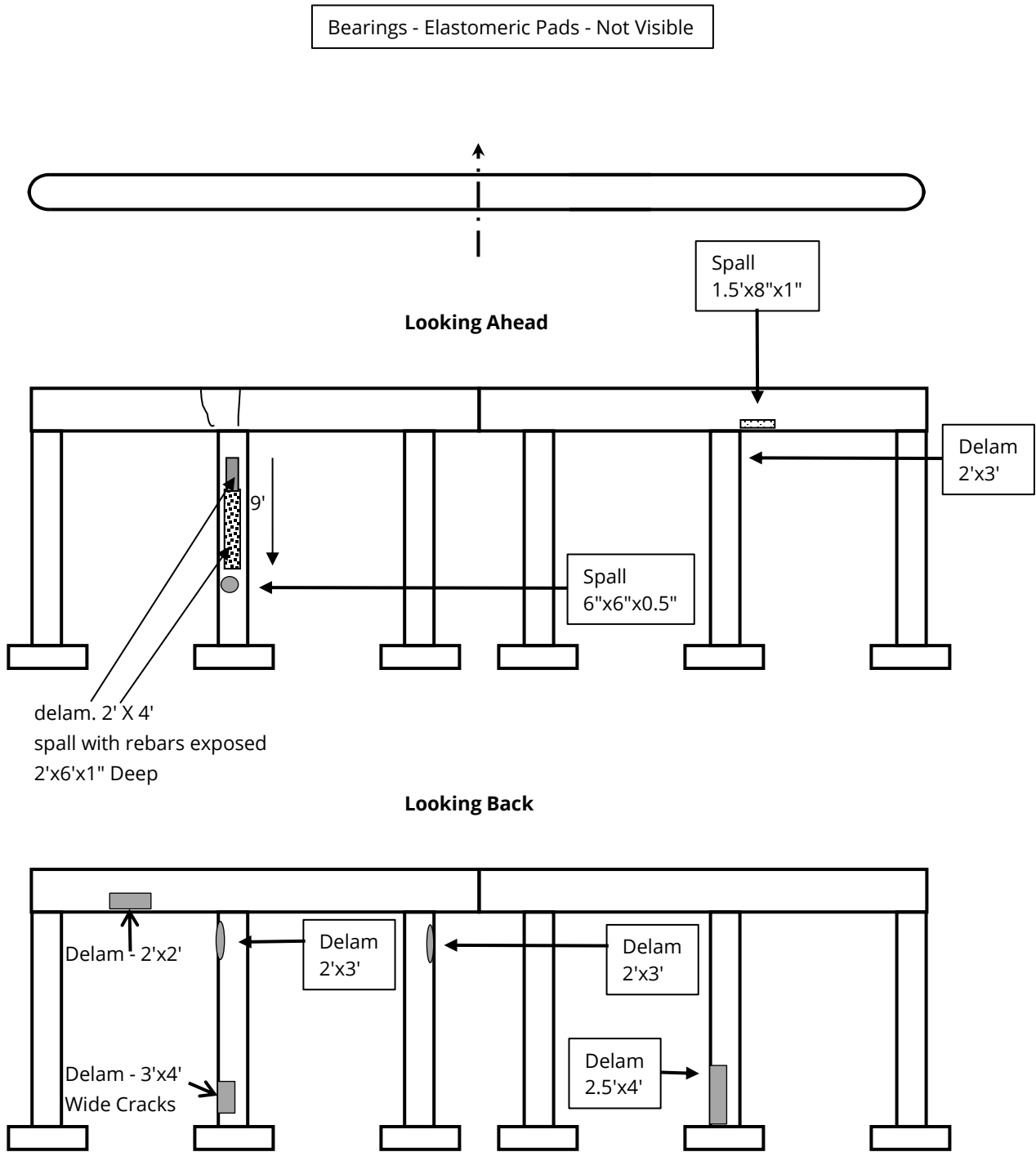
Rebar spall - 10" X 7" x 1"



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shaded areas are delaminated
cracks are hairline unless noted otherwise





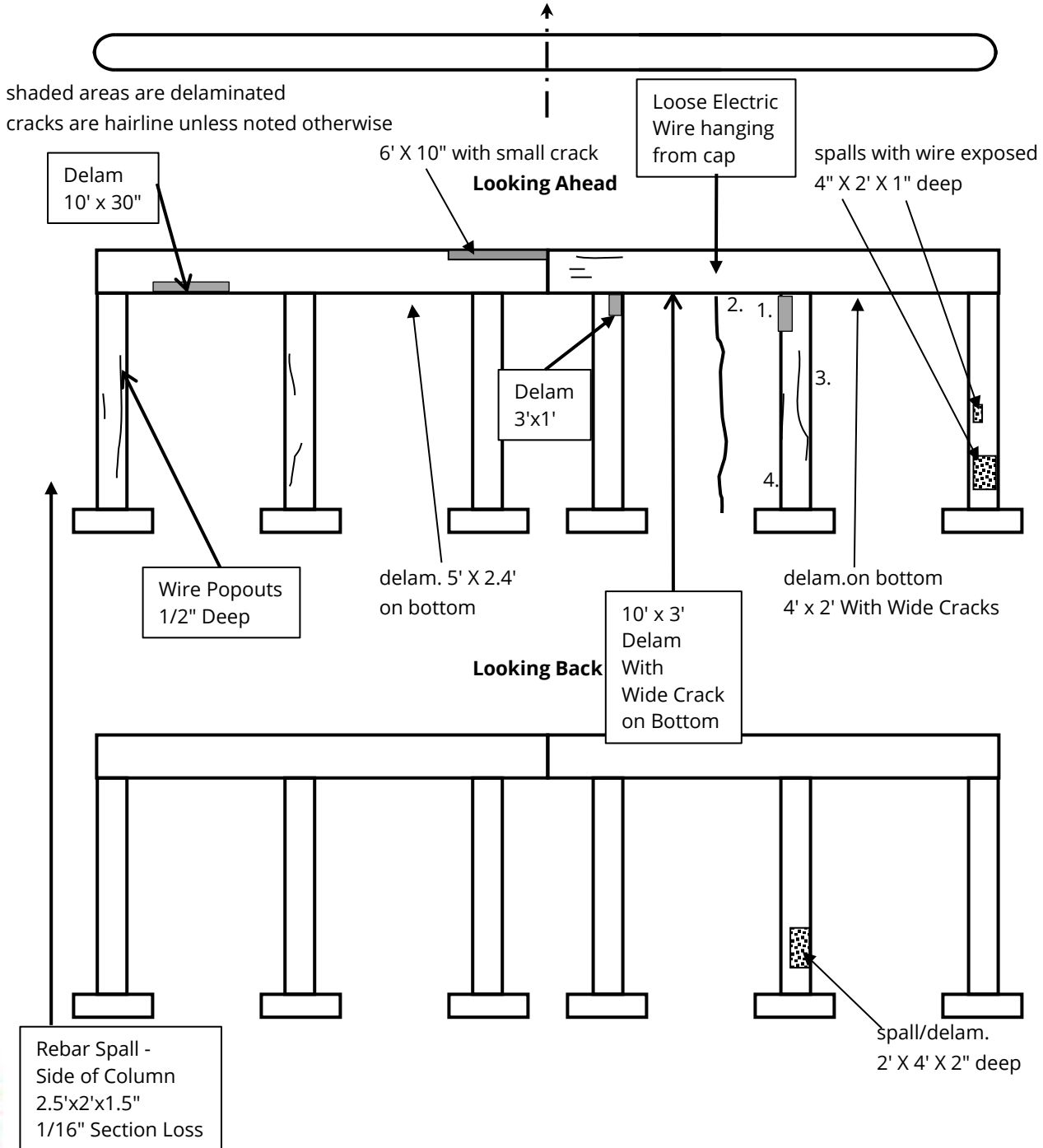
Inspector's Notes:
Median wall has collision damage.

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Bearings - Elastomeric Pads - Not Visible

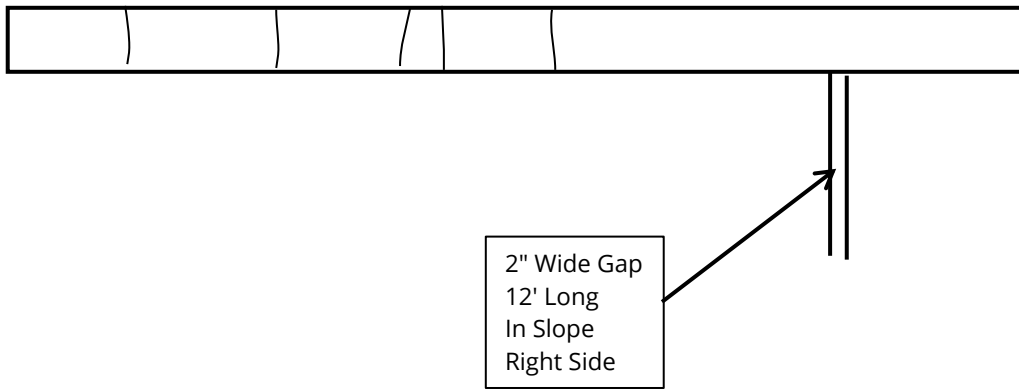
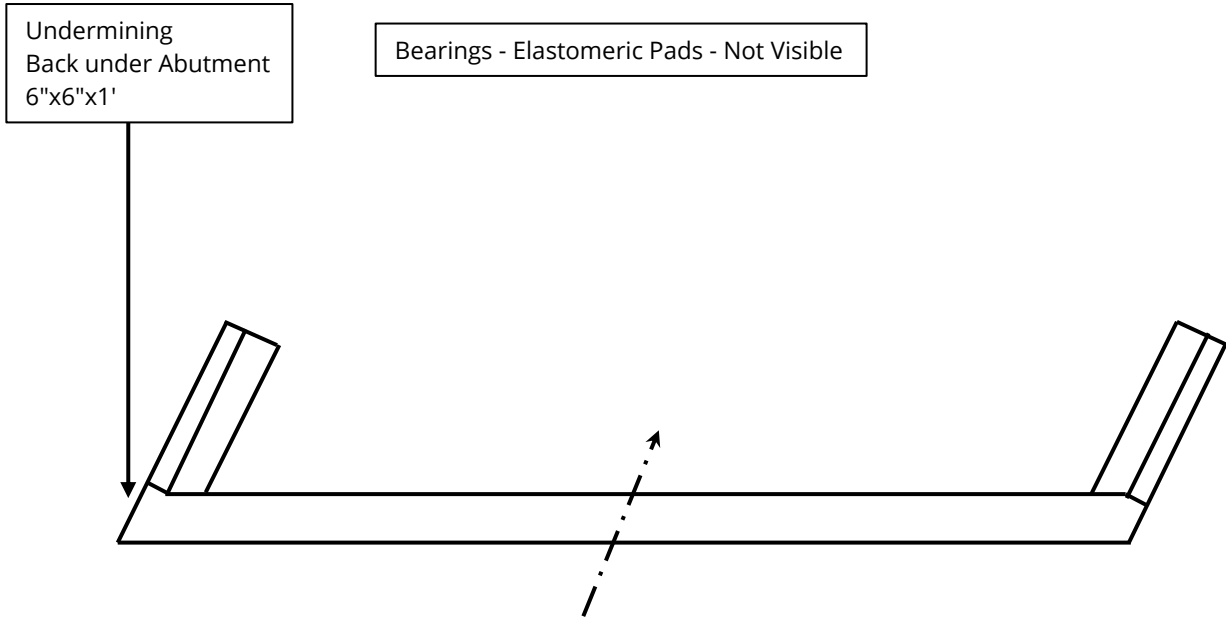
Defects

1. Delam: 3'x2.5'
2. Delam: 3'x2.5' (on bottom)
3. Exposed Wire: 2'x4"x1"
4. Wire Exposed: 3'x4"x1" (side of column)



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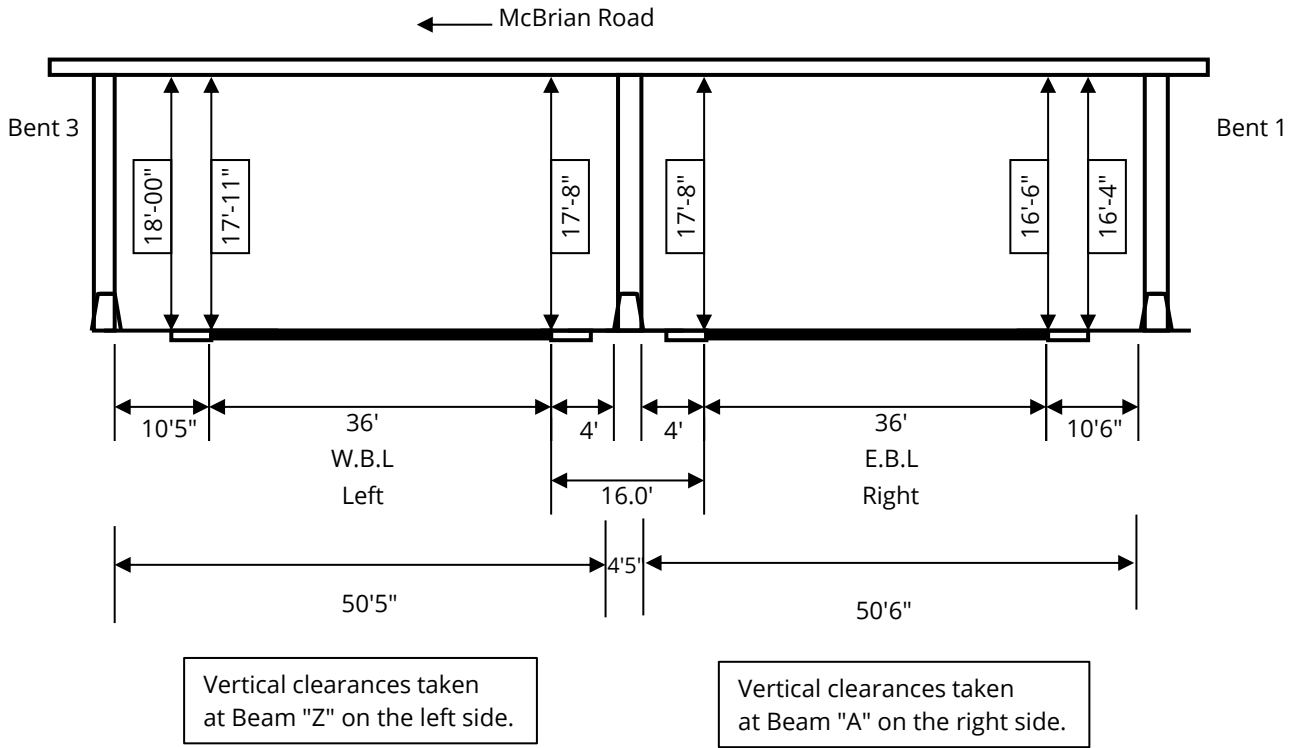
Abutment 2



All cracks are hairline.

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Abutment 2



Looking ahead on the underpass route (I-24)

*Note: Because of the high traffic volume and the high traffic speeds, on the Eastbound side, only the shoulder clearance measurement (16'4") could be taken safely.

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BRIDGE MAINTENANCE RECOMMENDATIONS



Tennessee Department of Transportation

COUNTY: HAMILTON

LOCATION: 33-I0024-13.63-

CO. SEQ.: 2 SPEC. CASE: 0

MILEPOST: 184.57

CROSSING: FAU 3610 (MCBRIEN RD)

FED. BRIDGE NO.: 33I00240061

MAINT. DIST.: 33

REPAIR LIST NO.: N

DATE ADDED:

REVISED: 10/12/2020

FACILITY CARRIED:	FAU 3610	NUMBER OF MAIN SPANS:	
HIGHWAY SYSTEM:	02-INTERSTATE URBAN	NUMBER OF APPROACH SPANS:	
BRIDGE WIDTH (CURB TO CURB):	N/A FT IN	BRIDGE LENGTH (FT):	192
BRIDGE WIDTH (OUT TO OUT):	N/A FT IN	MAXIMUM SPAN LENGTH (FT):	60
APPROACH ROADWAY (W/SHOULDERS):	96 FT 1 IN	SKEW ANGLE (DEGREES):	N/A
MAINTAINED BY:			
MAIN SPAN MATERIAL:	PRESTRESSED CONCRETE		
MAIN SPAN DESIGN TYPE:	BOX BEAM OR GIRDERS - MULTIPLE		
APPROACH SPAN MATERIAL:			
APPROACH SPAN DESIGN TYPE:			
INSPECTION DATE:	10/12/2020	GENERAL CONDITION:	GOOD
EVALUATION DATE:	11/20/2018	STRUCTURALLY DEFICIENT:	
PPRM PIN NUMBER:		SUFFICIENCY RATING:	
H TRUCK RATING @ INV.:	TONS		

SUGGESTED ROUTINE MAINTENANCE AND COMMENTS

UNDERPASS SUBSTRUCTURE PROTECTION BARRIER RAIL IS SUBSTANDARD

UNDERPASS SUBSTRUCTURE TRANSITIONS ARE SUBSTANDARD

REPAIR APPROACH RAIL AT APPROACH #1, RIGHT

GENERAL COMMENTS:

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.



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

Underpass Condition Coding Form

Revised 10/20/2020

County:

Route:

Special Case:

County Sequence:

Bridge Number:
(Includes Item 5A)

Feature Intersected:

Log Mile:

CODE ONLY THOSE VALUES WHICH HAVE CHANGED

ITEM #	DESCRIPTION	VALUE	UNDERPASS SAFETY FEATURES
90	LAST INSPECTION DATE	<input type="text" value="10/12/2020"/>	
	EARLIEST DATE OF NEXT REGULAR INSPECTION	<input type="text" value="08/13/2022"/>	
		<u> </u> / <u> </u> / <u> </u>	
10	MINIMUM V.C. OVER DECK (ROADWAY + SHOULDERS)	<u>16</u> FT. <u>4</u> IN. <u> </u> FT. <u> </u> IN.	515 (A) TYPE UNDERPASS BARRIER COMBINATION OF METAL & CONCRETE BARRIER OR RAIL <hr/> Revised Barrier Type
520	MINIMUM V.C. OVER DECK (EXCLUDES SHOULDERS)	<u>16</u> FT. <u>6</u> IN. <u> </u> FT. <u> </u> IN.	(B) ADEQUACY OF BARRIER OR RAIL <u>0</u>
47	TOTAL HORIZONTAL UNDERCLEARANCE	<u>50</u> FT. <u>6</u> IN. <u> </u> FT. <u> </u> IN.	(C) ADEQUACY OF TRANSITIONS <u>0</u>
54	MINIMUM VERTICAL UNDERCLEARANCE (EXCLUDES SHOULDERS)		(D) ADEQUACY OF TERMINALS <u>1</u>
	Circle One: <input checked="" type="radio"/> H R	<u>16</u> FT. <u>6</u> IN.	
55	MINIMUM LATERAL UNDERCLEARANCE ON RIGHT SIDE	Circle One: <input checked="" type="radio"/> H R <u>10</u> FT. <u>5</u> IN.	554 VERTICAL CLEARANCE LISTED ON HEIGHT POSTING <u> </u> FT. <u> </u> IN. <u> </u> FT. <u> </u> IN.
56	MINIMUM LATERAL UNDERCLEARANCE ON LEFT SIDE	<u>4</u> FT. <u>0</u> IN.	16 LATITUDE N 35° .2890' 17 LONGITUDE W 85° 13.6240'
521	OVERALL CONDITION	<u>GOOD</u>	HEIGHT POSTED AT BOTH APPROACHES? YES [] NO [] N/A [X]
555	COMMENTS	<hr/> <hr/> <hr/> <hr/> <hr/>	

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.

Underpass Inspection Report

Form BIR 3.0A
(Rev. 9-22-98)
DT-1443

Field Report No. 25 Date 10/12/2020
Previous Report No. 24 Date 10/10/2018

Bridge No. 33I00240061
 Eleven Digit No. Underpass Route I - 24
Highway or 33 - 03610 - 0158 over 33 - I0024 - 1363
 Overhead Structure Bridge Location Underpass Location No.
 County Hamilton Type of Underpass: Highway
 Year Constructed 1958
 Year Widened _____ Year Rehabilitated _____

GEOMETRIC FEATURES UNDER BRIDGE

(*. * ft. unless otherwise noted)

Divided Highway LEFT - WEST BOUND LANE Type of Wearing Surface CONCRETE
 Width of Approach Traveled Roadway 36.0 ft. (Does Not Include Shoulders)
 Width of Median if Divided Highway 4.4 ft.
 Approach Shoulder Width 10.4 ft. Right 4.0 ft. Left
 *Horizontal Clearance Under Bridge 50.4 ft.
 *Distance Between Pier Protection Guardrail and Substructure NA ft. Right NA ft. Left
 *Width of Sidewalk Under Bridge NA ft. Right NA ft. Left
 *Minimum Vertical Clearance: 17 ft 8 in Location: SPAN 2 - BEAM "Z" - YELLOW LINE (LEFT)

TRAFFIC SAFETY FEATURES

Barrier Type: TRIMS Item 515A Combination Metal and Concrete

	Adequacy	Rating	Standard / Nonstandard
Pier Protection	Item 515B - 0	GOOD	Nonstandard
Transitions	Item 515C - 0	GOOD	Nonstandard
Approach Rail		GOOD	Nonstandard
Terminal	Item 515D - 1	GOOD	Standard

TEAM LEADER

S. Davis

INSPECTORS

J. Edwards

W. Spencer

SIGNING

Yes/ No/ Needed

Paddleboards	NO
Vertical Clearance (<14'-6")	NO
Narrow Passage	NO
One Lane Passage	NO

Other Signs or Plaques:

Other Underpass Signs Needed

Problems with Signs:

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BRIDGE FEATURES (*.* ft.)

Bridge Skew	<u>68° - RT</u>	Number of Lanes/Tracks on Bridge	<u>5</u>
Structure Type (Main Span)	<u>Prestressed / Post-tensioned Box Beam / Girders -</u>		No. Main Spans <u>4</u>
Structure Type (Appr.Spans)	<u></u>		No. Appr. Spans <u></u>
Maximum Span Length	<u>60.0</u> (ft.)	Total Length	<u>192.0</u> (ft.)
Width of Bridge Out-to-Out	<u>79.5</u> (ft.)	Right Angle to Centerline of Bridge (If Unable to Measure at Right Angle to Centerline of Bridge)	

UNDERPASS RATING: GOOD TRIMS Item 521

- Potential for bridge elements falling on to roadway below
- Potential is due to failure of major members

Underpass Inspection Comments

Note: If Underpass Route is Divided Highway, Use Two of These Forms, One for Each Roadway.

MINIMUM PICTURES REQUIRED

1. Elevation View of Bridge on Both Sides Showing Underpass
2. View Showing Both Approaches to Bridge
3. View Showing Safety Features
4. View Showing Any Problems

Underpass Inspection Report

Form BIR 3.0A
(Rev. 9-22-98)
DT-1443

Field Report No. 25 Date 10/12/2020
Previous Report No. 24 Date 10/10/2018

Bridge No. 33I00240061
Eleven Digit No. _____

or

33 - 03610 - 0158 over 33 - I0024 - 1363 - R

Railroad/Walkway Bridge Location Underpass Location No.

County Hamilton Type of Underpass: _____

Year Constructed 1958

Year Widened _____ Year Rehabilitated _____

GEOMETRIC FEATURES UNDER BRIDGE

(*.* ft. unless otherwise noted)

Divided Highway RIGHT - EAST BOUND LANE Type of Wearing Surface CONCRETE

Width of Approach Traveled Roadway 36.0 ft. (Does Not Include Shoulders)

Width of Median if Divided Highway 4.4 ft.

Approach Shoulder Width 10.5 ft. Right 4 ft. Left

*Horizontal Clearance Under Bridge 50.5 ft.

*Distance Between Pier Protection Guardrail and Substructure NA ft. Right NA ft. Left

*Width of Sidewalk Under Bridge NA ft. Right NA ft. Left

*Minimum Vertical Clearance: 16 ft 04 in Location: BEAM "B" - SPAN 1 - RIGHT SHOULDER

TRAFFIC SAFETY FEATURES

Barrier Type: TRIMS Item 515A

	Adequacy	Rating	Standard / Nonstandard
Pier Protection	Item 515B - 0	GOOD	Nonstandard
Transitions	Item 515C - 0	GOOD	Nonstandard
Approach Rail		GOOD	NonStandard
Terminal	Item 515D - 1	GOOD	Standard

TEAM LEADER
S. Davis

INSPECTORS
J. Edwards
W. Spencer

SIGNING

Yes/ No/ Needed

Paddleboards	NO
Vertical Clearance (<14'-6")	NO
Narrow Passage	NO
One Lane Passage	NO

Other Signs or Plaques:

Other Underpass Signs Needed

Problems with Signs:

BRIDGE FEATURES (*. * ft.)

Bridge Skew	<u>68° - RT</u>	Number of Lanes/Tracks on Bridge	<u>5</u>
Structure Type (Main Span)	<u>Prestressed / Post-tensioned Box Beam / Girders -</u>		No. Main Spans <u>4</u>
Structure Type (Appr.Spans)			No. Appr. Spans _____
Maximum Span Length	<u>60.0</u> (ft.)	Total Length	<u>192.0</u> (ft.)
Width of Bridge Out-to-Out	<u>79.5</u> (ft.)	Right Angle to Centerline of Bridge	
(If Unable to Measure at Right Angle to Centerline of Bridge)			

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Underpass Inspection Comments

Note: If Underpass Route is Divided Highway, Use Two of These Forms, One for Each Roadway.

MINIMUM PICTURES REQUIRED

1. Elevation View of Bridge on Both Sides Showing Underpass
2. View Showing Both Approaches to Bridge
3. View Showing Safety Features
4. View Showing Any Problems

Your Agency Name

Your Office Name

Your Department Name

Structure Inventory and Appraisal Sheet (English Units)

Bridge Key: 33100240061 Agency ID: 33100240061 SR: 96.6 SD/FO: ND

IDENTIFICATION

State 1: 47 Tennessee Struc Num 8: 33100240061
 Facility Carried 7: FAU 3610 Location 9: IN EAST RIDGE
 Rte.(On/Under) 5A: Route On Structure Rte. Signing Prefix 5B: 5 City Street
 Level of Service 5C: 1 Mainline Route Number 5D: 03610
 Directional Suffix 5E: 0 N/A (NBI) % Responsibility: Unknown
 SHD District 2: Region 2 County Code 3: Hamilton
 Place Code 4: East Ridge Mile Post 11: 1.580 mi
 Feature Intersected 6: MCBRIEN RD / I-24
 Latitude 16: 35° 00' 17" Longitude 17: 085° 13' 37"
 Border Bridge Code 98: Unknown (P)
 Border Bridge Number 99: Unknown

INSPECTION

Frequency 91: 24 months Inspection Date 90: 10/12/2020 Next Inspection: 10/12/2022
 FC Frequency 92A: FC Inspection Date 93A: NA Next FC Inspection: NA
 UW Frequency 92B: UW Inspection Date 93B: NA Next UW Inspection: NA
 SI Frequency 92C: SI Date 93C: NA Next SI: NA
 Element Frequency: 24 months Element Insp. Date: 10/12/2020 Next Elem. Insp.: 10/12/2022

CLASSIFICATION

Defense Highway 100: 0 Not a STRAHNET hwy Parallel Structure 101: No || bridge exists
 Direction of Traffic 102: 2 2-way traffic Temporary Structure 103: Unknown (NBI)
 Highway System 104: 0 Not on NHS NBIS Length 112: Long Enough
 Toll Facility 20: 3 On free road Functional Class 26: 16 Urban Minor Arterial
 Defense Hwy 110: 0 Not a STRAHNET hwy Historical Significance 37: 4 Hist sign not determin
 Owner 22: 01 State Highway Agency
 Custodian 21: 01 State Highway Agency

STRUCTURE TYPE AND MATERIALS

Number of Approach Spans 46: 0 Number of Spans Main Unit 45: 4
 5 Prestressed Concrete
 Deck Type 107: 9 Other
 Wearing Surface 108A: 6 Bituminous
 Membrane 108B: 8 Unknown
 Deck protection 108C: None

CONDITION

Deck 58: 6 Satisfactory Super 59: 5 Fair Sub 60: 5 Fair
 Culvert 62: N N/A (NBI) Channel/Channel Protection 61: N N/A (NBI)

AGE AND SERVICE

Year Built 27: 1959 Year Reconstructed 106: -1
 Type of Service on 42A: 5 Highway-pedestrian
 Type of Service under 42B: 1 Highway
 Lanes on 28A: 5 Lanes under 28B: 6 Detour Length 19: 0.6 mi
 ADT 29: 8,790 Truck ADT 109: 2% Year of ADT 30: 2014

LOAD RATING AND POSTING

Inventory Rating Method 65: B ASD (metric tons) Operating Rating Method 63: B ASD (metric tons)
 Inventory Rating 66: HS21.8 Operating Rating 64: HS29.7
 Design Load 31: 6 MS18(HS20)+mod Posting 70: 5 At/Above Legal Loads
 Posting Status 41: A Open, no restriction

APPRAISAL

Bridge Rail 36A: 0 Substandard Approach Rail 36C: N N/A or not required
 Transition 36B: N N/A or not required Approach Rail Ends 36D: N N/A or not required
 Str Evaluation 67: 6 Equal Min Criteria Deck Geometry 68: 5 Above Tolerable
 Underclearance, Vertical and Horizontal 69: 4 Tolerable
 Waterway Adequacy 71: N Not applicable Approach Alignment 72: 8 Equal Desirable Crit
 Scour Critical 113: N Not Over Waterway

GEOMETRIC DATA

Length Max Span 48: 60.04 ft Structure Length 49: 191.93 ft
 Curb/Sdwik Width L 50A: 5.91 ft Curb/Sidewalk Width R 50B: 5.58 ft
 Width Curb to Curb 51: 67.91 ft Width Out to Out 52: 79.40 ft
 Approach Roadway width 32: 47.90 ft Median 33: 0 No median (w/ shoulders)
 Deck Area: 15,238.50 sq. ft
 Skew 34: 22.00° Structure Flared 35: 0 No flare
 Vertical Clearance 10: 99.99 ft Horizontal Clearance 47: 67.91 ft
 Minimum Vertical Clearance Over Bridge 53: 99.99 ft
 Minimum Vertical Underclearance Reference 54A: H Hwy beneath struct
 Minimum Vertical Underclearance 54B: 16.50 ft
 Minimum Lateral Underclearance Reference R 55A: H Hwy beneath struct
 Minimum Lateral Underclearance R 55: 10.17 ft
 Minimum Lateral Underclearance L 56: 5.91 ft

PROPOSED IMPROVEMENTS

Bridge Cost 94: \$-2 Type of Work 75: Unknown (P)
 Roadway Cost 95: \$-1 Length of Improvement 76: -1.0 ft
 Total Cost 96: \$-1 Future ADT 114: 14,064
 Year of Cost Estimate 97: Unknown Year of Future ADT 115: 2034

NAVIGATION DATA

Navigation Control 38: NA-no waterway
 Vertical Clearance 39: 0.0 ft Horizontal Clearance 40: 0.0 ft
 Pier Protection 111: Unknown (NBI) Lift Bridge Vertical Clearance 116:

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	104/3	Pre Cld Box Girder	ft	4,992.00	91%	4,523.00	9%	466.00	0%	3.00	0%	0.00
0	1080/3	Delamination/Spall/Patched Area	ft	17.00	0%	0.00	94%	16.00	6%	1.00	0%	0.00
0	1090/3	Exposed Rebar	ft	2.00	0%	0.00	0%	0.00	100%	2.00	0%	0.00
0	1110/3	Cracking (PSC)	ft	100.00	0%	0.00	100%	100.00	0%	0.00	0%	0.00
0	1120/3	Efflorescence/Rust Staining	ft	350.00	0%	0.00	100%	350.00	0%	0.00	0%	0.00
0	205/3	Re Conc Column	each	18.00	39%	7.00	33%	6.00	28%	5.00	0%	0.00
0	1080/3	Delamination/Spall/Patched Area	each	5.00	0%	0.00	40%	2.00	60%	3.00	0%	0.00
0	1090/3	Exposed Rebar	each	3.00	0%	0.00	67%	2.00	33%	1.00	0%	0.00
0	1130/3	Cracking (RC and Other)	each	3.00	0%	0.00	67%	2.00	33%	1.00	0%	0.00
0	215/3	Re Conc Abutment	ft	171.00	99%	169.00	1%	1.00	1%	1.00	0%	0.00
0	1080/3	Delamination/Spall/Patched Area	ft	1.00	0%	0.00	0%	0.00	100%	1.00	0%	0.00
0	1130/3	Cracking (RC and Other)	ft	13.00	100%	13.00	0%	0.00	0%	0.00	0%	0.00
0	4000/3	Settlement	ft	1.00	0%	0.00	100%	1.00	0%	0.00	0%	0.00
0	234/3	Re Conc Pier Cap	ft	133.00	73%	97.00	21%	28.00	6%	8.00	0%	0.00
0	1080/3	Delamination/Spall/Patched Area	ft	32.00	0%	0.00	81%	26.00	19%	6.00	0%	0.00
0	1090/3	Exposed Rebar	ft	2.00	0%	0.00	0%	0.00	100%	2.00	0%	0.00
0	1130/3	Cracking (RC and Other)	ft	4.00	50%	2.00	50%	2.00	0%	0.00	0%	0.00
0	313/3	Fixed Bearing	each	104.00	100%	104.00	0%	0.00	0%	0.00	0%	0.00
0	316/3	Other Bearing	each	104.00	100%	104.00	0%	0.00	0%	0.00	0%	0.00
0	331/3	Re Conc Bridge Railing	ft	384.00	100%	382.00	1%	2.00	0%	0.00	0%	0.00
0	1130/3	Cracking (RC and Other)	ft	1.00	100%	1.00	0%	0.00	0%	0.00	0%	0.00
0	7000/3	Damage	ft	2.00	0%	0.00	100%	2.00	0%	0.00	0%	0.00

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