

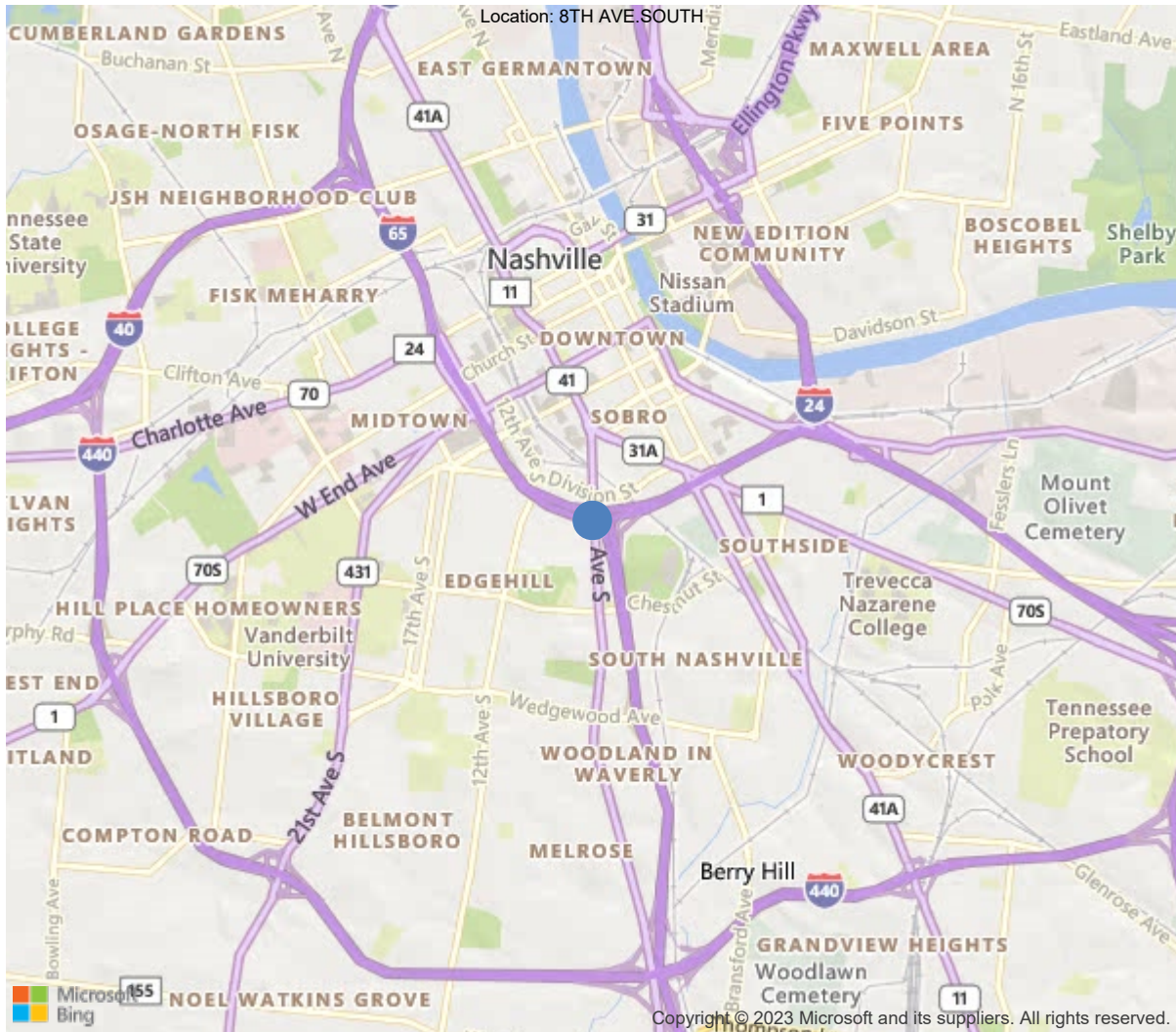


Latitude:36.14810, Longitude:-86.77920

Region 03, 19 - Davidson County

Team Leader: Jeremy Billingsley

Inspectors: Jimmy Haynes, Ricky Knight, Barney Love, Harley Anderson, Joseph Brown



36.14810, -86.77920



90 - LAST INSPECTION DATE 12/07/2021

10 - MIN. V.C. OVER DECK  
(ROADWAY + SHOULDERS) 99.99 FT.

520 - MIN. V.C. OVER DECK  
(EXCLUDES SHOULDERS) 99.99 FT.

### 36 - TRAFFIC SAFETY FEATURES

Br. Rail	Trans.	Appr. Rail	Terminal	SPEED LIM.
0	1	1	N	55

41 - STRC OPEN/CLOSED/POSTED A

58 - DECK 5

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 2 - Fair

16 - LATITUDE	17 - LONGITUDE
36.148097	-86.779197

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 CORREC

*Jeremy R. Billingsley*  
TEAM LEADER SIGNATURE

IDENTIFICATION	
(1) State Names	47 - Tennessee
(8) Structure Number	19I00400317
(5) Inventory Route	1
(2) Highway Agency District	Region 3
(3) County Code	19 - Davidson
(4) Place Code	52006
(6) Features Intersected	I40 RMP / 8TH AVE SR 6
(7) Facility Carried	I40
(9) Location	8TH AVE.SOUTH
(11) Mile Point	18.340 mi
(12) Base Highway Network	Yes
(13) LRS Inventory Rte & Subrte	19I0040001
(16) Latitude	36.148097
(17) Longitude	-86.779197
(98) Border Bridge State Code	
(99) Border Bridge Structure No.	
STRUCTURE TYPE AND MATERIAL	
(43) Main Structure Type	42
Material	4 - Steel continuous
Type	2 - Stringer/Multi-beam or girder
(44) Approach Structure Type	00
Material	0 - Other / None
Type	0 - Other / None
(45) No. of Spans in Main Unit	3
(46) No. of Approach Spans	0
(107) Deck Structure Type	1 - Concrete Cast-in-Place
(108) Wearing Surface/Protective System	
Type of Wearing Surface	6 - Bituminous
Type of Membrane	0 - None
Type of Deck Protection	0 - None
AGE AND SERVICE	
(27) Year Built	1970
(106) Year Reconstructed	0
(42) Type of Service	11
On	1 - Highway
Under	1 - Highway, with or without pedestrian
(28) Lane	
On	2
Under	4
(29) Average Daily Traffic	133586
(30) Year of ADT	2021
(109) Truck ADT	7 %
(19) Bypass, Detour Length	10 mi
GEOMETRIC DATA	
(48) Length of Maximum Span	82.0 ft
(49) Structure Length	157.2 ft
(50) Curb or Sidewalk Width	
Left	0.0 ft
Right	0.0 ft
(51) Bridge Roadway Width Curb to Curb	39.7 ft
(52) Deck Width Out to Out	41.7 ft
(32) Approach Roadway Width (W/Shoulders)	38.1 ft
(33) Bridge Median	0 - No median
(34) Skew	60 Deg
(35) Structure Flared	0 - No flare
(10) Inventory Route Min Vert Clear	99.99 ft
(47) Inventory Route Total Horiz Clear	39.7 ft
(53) Min Vert Clear Over Bridge Rdwy	99.99 ft
(54) Min Vert Underclear	14.50 ft
Ref:	
(55) Min Lat Underclear RT	9.8 ft
Ref:	
(56) Min Lat Underclear LT	99.9 ft
NAVIGATION DATA	
(38) Navigation Control	N - Not applicable, no waterwa
(111) Pier Protection	
(39) Navigation Vertical Clearance	0.0 ft
(116) Vert-Lift Bridge Nav Min Vert Clear	ft
(40) Navigation Horizontal Clearance	0.0 ft

CLASSIFICATION	
(112) NBIS Bridge Length	Y
(104) Highway System	1
(26) Functional Class	11 - Urban Principal Arterial
(100) Defense Highway	1 - The inventory route is on
(101) Parallel Structure	N - No parallel structure exis
(102) Direction of Traffic	1 - way traffic
(103) Temporary Structure	
(105) Federal Lands Highways	0 - N/A
(110) Designated National Network	1 - The inventory route is par
(20) Toll	3 - On free road. The structu
(21) Maintain	1 - State Highway Agency
(22) Owner	1 - State Highway Agency
(37) Historical Significance	4 - Historical significance is
CONDITION	
(58) Deck	6
(59) Superstructure	5
(60) Substructure	5
(61) Channel & Channel Protection	N
(62) Culverts	N
LOAD RATING AND POSTING	
(31) Design Load	5 - MS 18 / HS 20
(63) Operating Rating Method	1
(64) Operating Rating	
Type	1 - Load Factor(LF)
Rating	
(65) Inventory Rating Method	1 - Load Factor(LF)
(66) Inventory Rating	
Type	
Rating	
(70) Bridge Posting	5 - Equal to or above legal loads
(41) Structure Open/Posted/Closed	A - Open, no restriction
APPRAISAL	
(67) Structural Evaluation	5
(68) Deck Geometry	9
(69) Clearances, Vertical/Horizontal	5
(71) Waterway Adequacy	N
(72) Approach Roadway Alignment	8
(36A) Bridge Railings	0 - Inspected feature does not meet
(36B) Transitions	1 - Inspected feature meets current
(36C) Approach Guardrail	1 - Inspected feature meets current
(36D) Approach Guardrail Ends	N - Not applicable or a safety feat
(113) Scour Critical Bridges	N - Bridge not over waterway.
PROPOSED IMPROVEMENTS	
(75) Type of Work	35 - Bridge rehabilitation bec
(76) Length of Structure Improvement	157.2 ft
(94) Bridge Improvement Cost	\$ 982
(95) Roadway Improvement Cost	\$ 99
(96) Total Project Cost	\$ 1474
(97) Year of Improvement Cost Estimate	2022
(114) Future ADT	213738
(115) Year of Future ADT	2042

INSPECTIONS *			
(90) Inspection Date	12/07/2021		
(91) Frequency	24		
(92) Critical Feature Inspection	Done	Freq. (Mon)	Date
A: Fracture Critical Detail	No		
B: Underwater Inspection	No		
C: Other Special Inspection			
<p>* The inspection date and frequency information in this box contains the current NBI date and frequency information. Please refer to the report header for the date this inspection was conducted.</p>			



### Inspection Team's Summary

Partial and full depth repairs were made on the deck in all spans. Left lane was repaved.

ELEMENTS	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
12	Re Concrete Deck	SF	6544	6334	200	10	0
1080	Delamination/Spall/Patched Area	SF	10	0	0	10	0
1130	Cracking (RC and Other)	SF	200	0	200	0	0
510	Wearing Surfaces	SF	6221	6201	20	0	0
3230	Effectiveness (Wearing Surface)	SF	20	0	20	0	0
(12) Element record added 2015-11-16.							
(1080-12) Element record added 12/4/2019							
(1130-12) Element record added 12/4/2019							
(510-12) Element record added 2015-11-16.							
(3230-510-12) Element record added 12/4/2019							
107	Steel Opn Girder/Beam	LF	784	634	110	40	0
1000	Corrosion	LF	150	0	110	40	0
515	Steel Protective Coating	SF	7056	0	2672	4009	375
3410	Chalking (Steel Protective Coatings)	LF	6681	0	2672	4009	0
3420	Peeling/Bubbling/Cracking (Steel Protective Coatings)	LF	375	0	0	0	375
(107) Element record added 2015-11-16.							
(1000-107) Element record added 12/4/2019							
(515-107) Element record added 2015-11-16.							
(3410-515-107) Element record added 12/4/2019							
(3420-515-107) Element record added 12/4/2019							
205	Re Conc Column	EA	6	1	5	0	0
1080	Delamination/Spall/Patched Area	EA	2	0	2	0	0
1130	Cracking (RC and Other)	EA	3	0	3	0	0
(205) Element record added 2015-11-16.							
(1080-205) Element record added 12/4/2019							
(1130-205) Element record added 12/4/2019							
215	Re Conc Abutment	LF	98	82	12	4	0
1080	Delamination/Spall/Patched Area	LF	4	0	0	4	0
1130	Cracking (RC and Other)	LF	12	0	12	0	0
(215) Element record added 2015-11-16.							
(1080-215) Element record added 12/4/2019							
(1130-215) Element record added 12/4/2019							



ELEMENTS	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
234	Re Conc Pier Cap	LF	79	61	18	0	0
1130	Cracking (RC and Other)	LF	18	0	18	0	0
(234) Element record added 2015-11-16.							
(1130-234) Element record added 12/4/2019							
311	Moveable Bearing	EA	15	10	0	0	5
1000	Corrosion	EA	3	0	0	0	3
1020	Connection	EA	2	0	0	0	2
(311) Element record added 2015-11-16.							
(1000-311) Element record added 12/4/2019							
(1020-311) Element record added 12/4/2019							
313	Fixed Bearing	EA	5	5	0	0	0
(313) Element record added 2015-11-16.							
330	Metal Bridge Railing	LF	312	297	10	0	5
1000	Corrosion	LF	15	0	10	0	5
(330) Element record added 2015-11-16.							
(1000-330) Element record added 12/4/2019							
331	Re Conc Bridge Railing	LF	312	0	294	12	6
1080	Delamination/Spall/Patched Area	LF	18	0	0	12	6
1130	Cracking (RC and Other)	LF	294	0	294	0	0
(331) Element record added 2015-11-16.							
(1080-331) Element record added 12/4/2019							
(1130-331) Element record added 12/4/2019							



Bridge #

























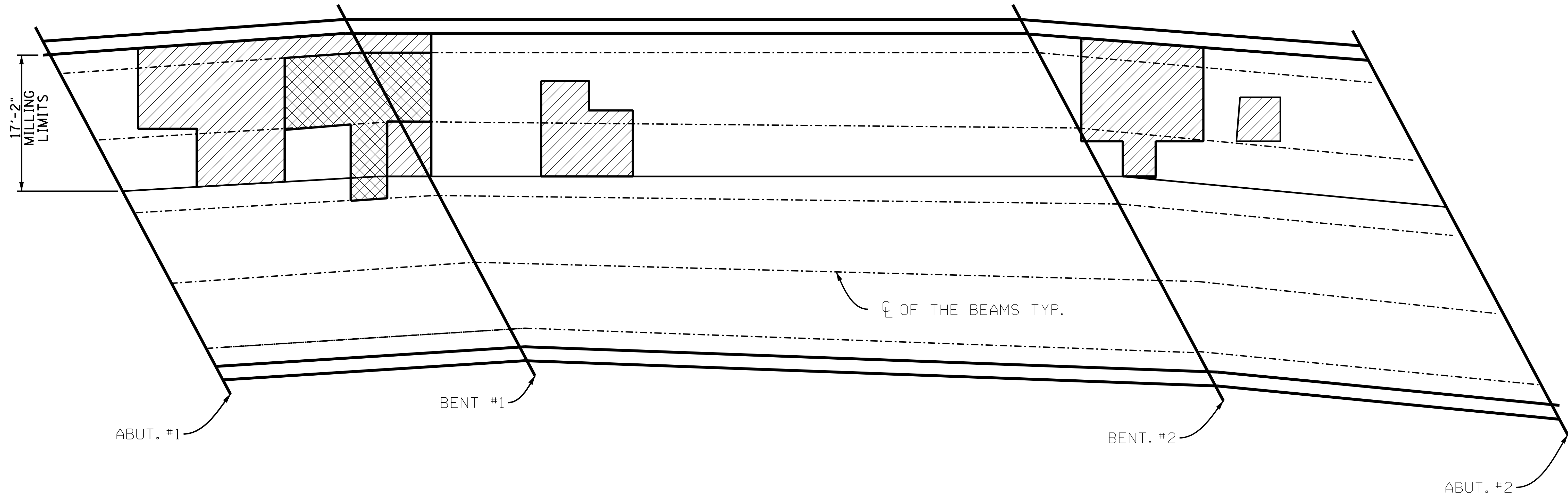




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CONST. NO.:

PROJECT NO.	YEAR	SHEET NO.
	2023	1



-  FULL DEPTH REPAIRS LOCATIONS
-  PARTIAL DEPTH REPAIRS LOCATIONS



PIN NO.: \_\_\_\_\_ DATE: \_\_\_\_\_  
DESIGN BY: \_\_\_\_\_ DATE: 2/21/23  
DRAWN BY: S.E. DATE: 2/21/23  
SUPERVISED BY: K.M. DATE: 2/21/23  
CHECKED BY: \_\_\_\_\_ DATE: / /

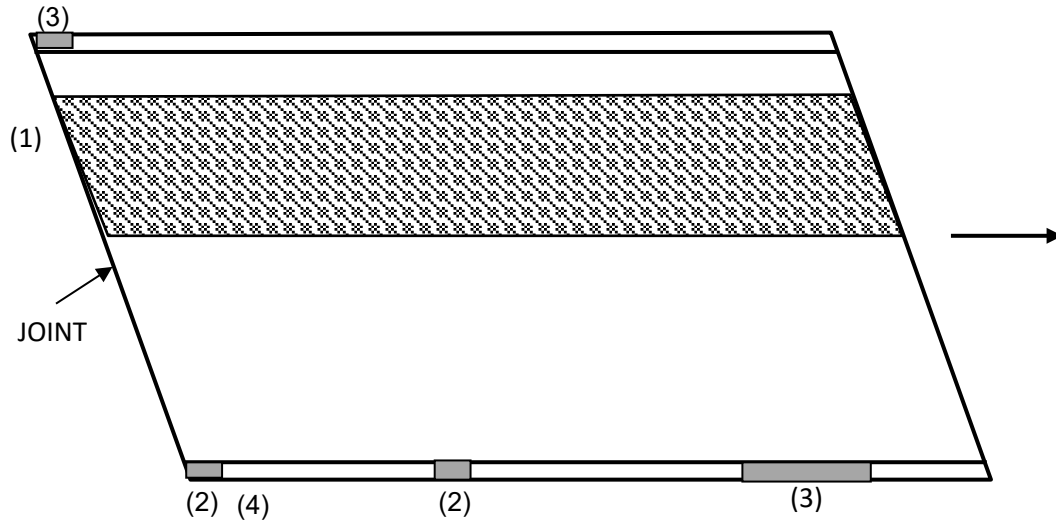
STATE OF TENNESSEE  
DEPARTMENT OF TRANSPORTATION  
REPAIRS LOCATIONS  
BRIDGE NO. 19-140-18.34  
FED. I.D. NO. 19I00400317  
OVER  
8TH AVENUE  
DAVIDSON CO.  
2/18/2023

PRODUCED PURSUANT TO  
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Document records request does not  
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# Top of Deck Span No. 1

Date 2/24/2023  
JH/JB

Bridge Location No. 19 I40 18.34  
County Route Log Mile

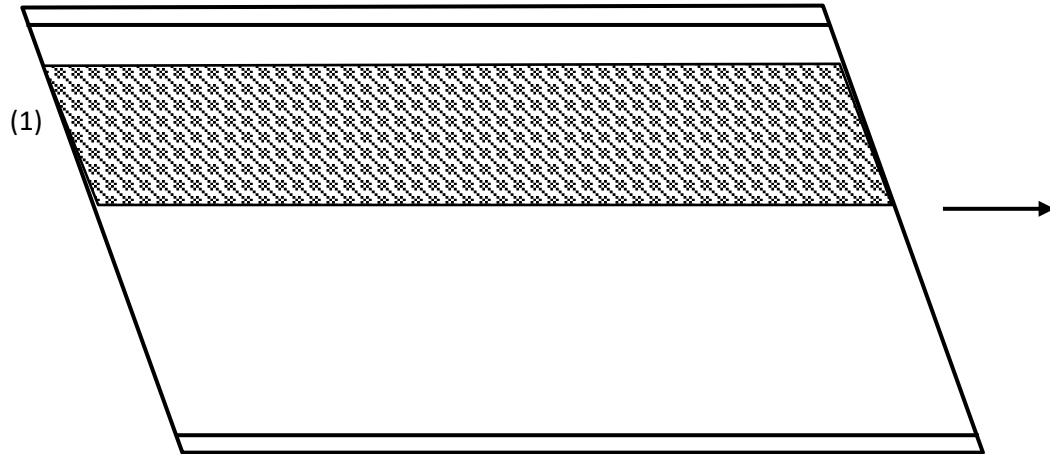


DECK	NV	AC OVERLAY -GOOD- (1) NEW A/C
PARAPETS	POOR	(3) HVY SCALE UP TO 10' X FULL WIDTH X 2"DP;
		SPALLS W/EXP. STL. & MAP CRACKS UP TO 1/16" OPEN
JOINT	NV	PAVED OVER W/ POTHOLES
TUBE RAILS	POOR	(2) HVY IMPACT DMG. RT. SD. @ 1ST POST & 4TH POST AND 6TH
		POST LT SIDE; (4) TUBULAR RAIL BROKEN

# Top of Deck Span No. 2

Date 2/24/2023  
JH/JB

Bridge Location No. 19 I40 18.34  
County Route Log Mile



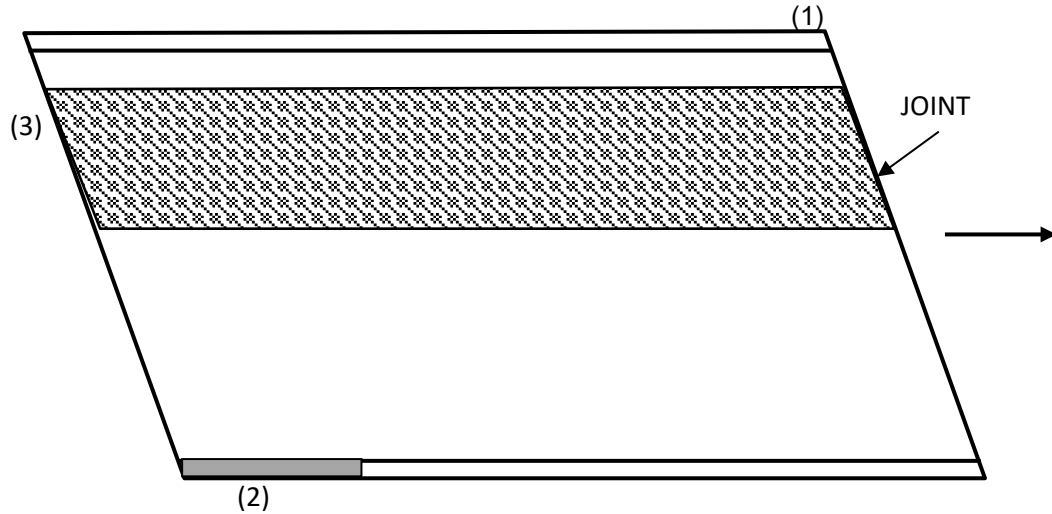
DECK	NV	AC OVERLAY - GOOD - (1) NEW A/C
PARAPETS	FAIR	LIGHT SCALE & POP OUTS, RANDOM CRACKS UPTO 1/16" OPEN
TUBE RAILS	FAIR	LGT. IMPACT SCRAPES



# Top of Deck Span No. 3

Date 12/7/2021  
JB

Bridge Location No. 19 I40 18.34  
County Route Log Mile

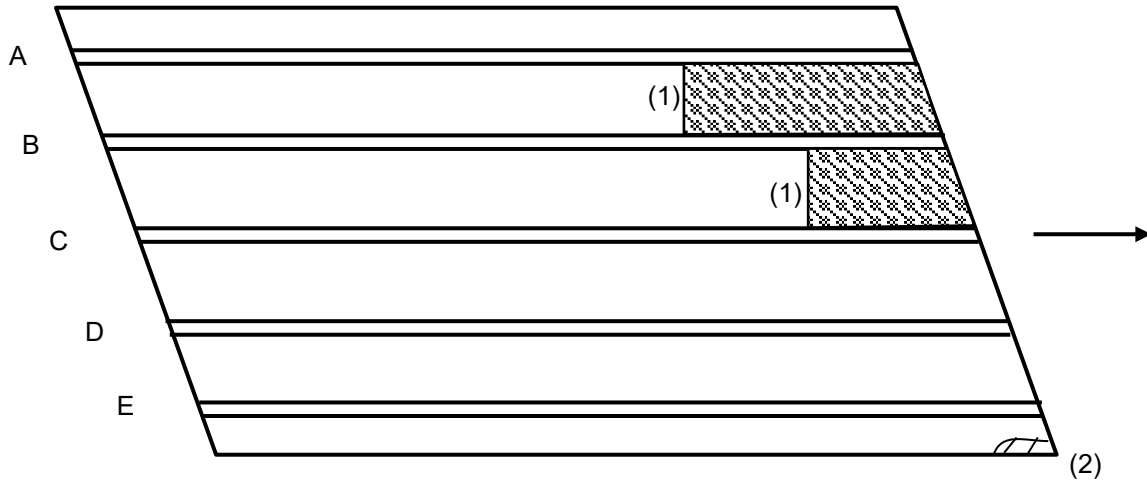


DECK	NV	AC OVERLAY - GOOD - (3) NEW A/C
PARAPETS	POOR	(2) MOD SCALE, SPALLS W/ EXP. STL., MAP CRACKS UP TO
		1/16" OPEN 10'L X FULL WIDTH
JOINT	NV	PAVED OVER
TUBE RAILS	FAIR	(1) MOD. IMPACT DMG. LAST POST LT. SD.

# Bottom of Slab Span No. 1

Date 2/24/2023  
JH/JB

Bridge Location No. 19 I40 18.34  
County Route Log Mile



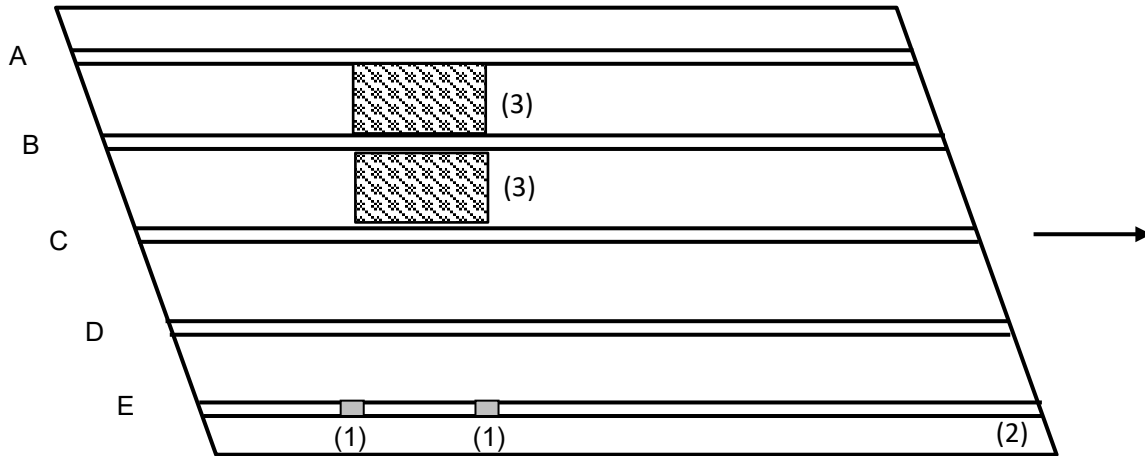
DECK	FAIR	(1) PARTIAL & FULL DEPTH REPAIRS
		DIA X 8" DP BAY 'B'
DIAPHRAGMS	GOOD	LIGHT CORR. ALL BAYS
BEAMS	GOOD	
"A"	FAIR	MOD RUST TOP FLANGE FULL LENGTH W/EFF; HVY PEELING
"E"	FAIR	MOD RUST TOP FLANGE 8'L @ ABUT. #1
'B, D, C'	FAIR	VERT. MOVEMENT UPTO 1/4" UNDER LOADS @ BEARING
OVERHANGS	FAIR	(2) SCALE OVER BENT #1 W/EFF. 10'L X 2'H X 4" DP
PAINT	FAIR	PEELING ON BM'S



# Bottom of Slab Span No. 2

Date 2/24/2023  
JH/JB

Bridge Location No. 19 I40 18.34  
County Route Log Mile

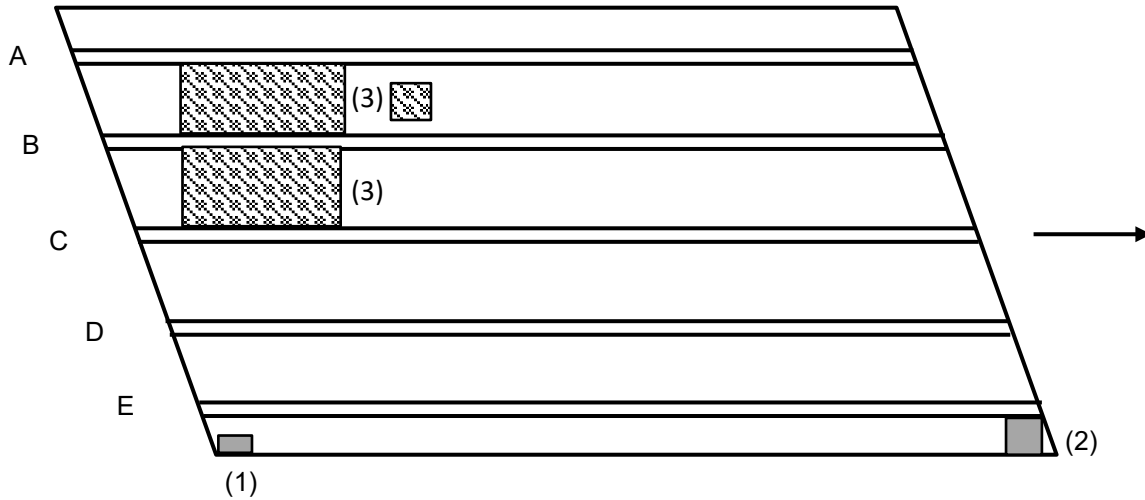


DECK	FAIR	MAP CRACKING W/EFF UP TO 3'L--BAY 'A'; (3) PARTIAL & FULL
		DEPTH REPAIRS
DIAPHRAGMS	GOOD	LIGHT CORROSION
BEAMS	GOOD	
"E"	GOOD	(1) LIGHT SCRAPE BEAM 'E' W/RUST; (2) LGH CORR. TOP FLANGE
		8' L FROM BENT #2, MISSING BOLT ON GUSSET PLATE
PAINT	FAIR	FADING, MOD PEELING
OVERHANGS	GOOD	

# Bottom of Slab Span No. 3

Date 12/7/2021  
AA

Bridge Location No. 19 I40 18.34  
County Route Log Mile



DECK	FAIR	EFF. W/ LEACHING @ BENT #2 TOP FLANGE BM 'E'; (3) PARTIAL DEPTH REPAIRS
DIAPHRAGMS	GOOD	
BEAMS	GOOD	LIGHT CORR. @ BEAM ENDS @ ABUT.
"E"	POOR	M/H CORR & LEACH @ BENT 2 BM 'E' TOP FLANGE 12' L W/SEC LOSS
OVERHANGS	FAIR	(1) DELAM OVER BENT #2 - 8' X 2' W/HVY EFF, (2) SPALL W/EXP STL 4' X 3' X 4" DP
PAINT	FAIR	MOD PEELING BM'S C,D, & E