



NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
BRIDGE MANAGEMENT UNIT

ATTENTION

CORRECTED LATITUDE

BRIDGE INSPECTION REPORT

INSPECTION TYPE: Clearance Only - Contract

COUNTY WAKE BRIDGE NUMBER 910252 INSPECTION CYCLE 0 YRS
ROUTE RIDGE ROAD ACROSS I440 M.P. 6

LOCATION 0.1 MI.S.US70

SUPERSTRUCTURE REINFORCED CONCRETE FLOOR ON I-BEAMS

SUBSTRUCTURE EBTS: RC CAPS/SPREAD FTGS IBTS:RCP&B/ SPREAD FTGS.

SPANS 1@60'6;2@82'6;2@56'6

LONGITUDE 78° 40' 22.83"

LATITUDE 35° 50' 22.32"

35° 50' 2.70"

INSPECTION DATE 06/21/2013

PRESENT CONDITION CLEARANCE ONLY

PRESENT POSTING N

PROPOSED POSTING

OTHER SIGNS PRESENT



COVER - LOOKING WESTBOUND

Fracture Critical	<u>No</u>
Temporary Shoring	<u>No</u>
Scour Critical	<u>No</u>
Scour POA	<u>No</u>

SIGN NOTICE
ISSUED FOR

NUMBERED
REQUIRED

<u>No</u>	WEIGHT LIMIT	
<u>No</u>	DELINEATORS	
<u>No</u>	NARROW BRIDGE	
<u>No</u>	ONE LANE BRIDGE	
<u>No</u>	LOW CLEARANCE	

NATIONAL BRIDGE INVENTORY----- STRUCTURE INVENTORY AND APPRAISAL

Run Date: 07/16/2013

IDENTIFICATION					
(1) STATE NAME -NORTH CAROLINA	BRIDGE	910252	SUFFICIENCY RATING =		76.5
(8) STRUCTURE NUMBER(FEDERAL)	000000001830252	STATUS =		Functionally Obsolete	
(5) INVENTORY ROUTE (ON/UNDER) - ON	50000000				
(2) STATE HIGHWAY DEPARTMENT DISTRICT	1				
(3) COUNTY CODE 183	(4) PLACE CODE 55000				
(6) FEATURE INTERSECTED - I440			CLASSIFICATION		CODE
(7) FACILITY CARRIED RIDGE ROAD			(112)NBIS BRIDGE SYSTEM -	YES	
(9) LOCATION 0.1 MI.S.US70			(104)HIGHWAY SYSTEM Is not on NHS	0	
(11)MILEPOINT	6	(26) FUNCTIONAL CLASS - Local		19	
(16)LAT 35° 50' 22.32"	(17)LONG 78° 40' 22.83"	(100)STRAHNET HIGHWAY - Not a STRAHNET Route		0	
(98)BORDER BRIDGE STATE CODE	PCT SHARE	(101)PARALLEL STRUCTURE - No Parallel Structure		N	
(99)BORDER BRIDGE STRUCTURE NO		(102)DIRECTION OF TRAFFIC - 2-way Traffic		2	
		(103)TEMPORARY STRUCTURE -			
		(110)DESIGNATED NATIONAL NETWORK - Not on the National Network		0	
		(20) TOLL On Free Road		3	
		(31) MAINTAIN - State Highway Agency		01	
		(22) OWNER - State Highway Agency		01	
		(37) HISTORICAL SIGNIFICANCE - Not Eligible		5	
STRUCTURE TYPE AND MATERIAL					
(43) STRUCTURE TYPE MAIN: Steel					
TYPE - Stringer Mutlibeam or Girder	CODE	302			
(44) STRUCTURE TYPE APPR :					
TYPE -	CODE	000	CONDITION		
(45) NUMBER OF SPANS IN MAIN UNIT	5	(58) DECK		7	
(46) NUMBER OF APPROACH SPANS		(59) SUPERSTRUCTURE		7	
(107)DECK STRUCTURE TYPE - 1	CODE		(60) SUBSTRUCTURE	5	
(108)WEARING SURFACE / PROTECTIVE SYSTEM :		(61) CHANNEL & CHANNEL PROTECTION		N	
(A) TYPE OF WEARING SURFACE -	CODE		(62) CULVERTS	N	
(B) TYPE OF MEMBRANE -	CODE				
(C) TYPE OF DECK PROTECTION -	CODE		LOAD RATING AND POSTING		
		(31) DESIGN LOAD HS 20 + MOD		6	
		(63) OPERATING RATING METHOD - Load Factor		1	
		(64) OPERATING RATING - HS-48		86	
		(65) INVENTORY RATING METHOD - Load Factor		1	
		(66) INVENTORY RATING - HS-28		51	
		(70) BRIDGE POSTING - No Posting Required		5	
		(41) STRUCTURE OPEN, POSTED ,OR CLOSED		A	
		DESCRIPTION - Open, No Restriction			
AGE AND SERVICE					
(27) YEAR BUILT	1960				
(106)YEAR RECONSTRUCTED					
(42) TYPE OF SERVICE : ON - Overpass - Interchange					
UNDER - Highway	CODE	61			
(28) LANES: ON STRUCTURE 2 UNDER STRUCTURE	7				
(29) AVERAGE DAILY TRAFFIC	2000				
(30) YEAR OF ADT 1986	(109) TRUCK ADT PCT 7%				
(19) BYPASS OR DETOUR LENGTH	0 MI				
GEOMETRIC DATA					
(48) LENGTH OF MAXIMUM SPAN	82 FT				
(49) STRUCTURE LENGTH	339 FT				
(50)CURB OR SIDEWALK: LEFT 1.625 FT RIGHT 1.625 FT					
(51) BRIDGE ROADWAY WIDTH CURB TO CURB	28 FT				
(52) DECK WIDTH OUT TO OUT	33.417 FT				
(32) APPROACH ROADWAY WIDTH (W/SHOULDERS)	27 FT				
(33) BRIDGE MEDIAN - No Median	CODE	0			
(34) SKEW 46°	(35) STRUCTURE FLARED	0			
(10) INVENTORY ROUTE MIN VERT CLEAR	20.33 FT				
(47) INVENTORY ROUTE TOTAL HORIZ CLEAR	28 FT				
(53) MIN VERT CLEAR OVER BRIDGE RDWY	999.9 FT				
(54) MIN VERT UNDERCLEAR REF Highway	18.3 FT				
(55) MIN LAT UNDERCLEAR RT REF Highway	15 FT				
(56) MIN LAT UNDERCLEAR LT REF -	2.8 FT				
NAVIGATION DATA					
(38) NAVIGATION CONTROL - Not Applicable	CODE	N			
(111)PIER PROTECTION -	CODE				
(39) NAVIGATION VERTICAL CLEARANCE	0				
(116)VERT - LIFT BRIDGE NAV MIN VERT CLEAR	FT				
(40) NAVIGATION HORIZONTAL CLEARANCE	0 FT				
PROPOSED IMPROVEMENTS					
(75) TYPE OF WORK -			CODE		
(76) LENGTH OF STRUCTURE IMPROVEMENT					
(94) BRIDGE IMPROVEMENT COST					
(95) ROADWAY IMPROVEMENT COST					
(96) TOTAL PROJECT COST					
(97) YEAR OF IMPROVEMENT COST ESTIMATE					
(114)FUTURE ADT 4000	(115) YEAR FUTURE ADT	2025			
INSPECTIONS					
(90) INSPECTION DATE			09/27/2012		
(92) CRITICAL FEATURE INSPECTION :			(93) CFI DATE		
A) FRACTURE CRIT DETAIL - NO			A)		
B) UNDERWATER INSP - NO			B)		
C) OTHER SPECIAL INSP NO			C)		
SCOUR					

Structure No: 910252

County: WAKE

Run Date:

Span Number	Feature Intersected	Inventory Route	Minimum Maximum Vertical Clearance	Milepoint	Base Highway Network	LRS Inventory Route	Toll	Functional Classification	Nuner of Lanes	Average Daily Traffic	Year of Average Daily Traffic	Total Horizontal Clearance	See Note 1					STRAHNET Highway Designator	Direction of Traffic	Highway System of Route
													Reference Feature	Minimum Vertical Underclearance	Right Lateral Underclearance	Left Lateral Underclearance	Underclearance Appraisal Grade			
	6	5	10	11	12	13	20	26	28	29	30	47	54A	54	55	56	69	100	102	104
2	I 440 WBL	11004400	17.5	6	1	10440		11	3	56000	2011	50.6	H	15.5	11.2	3.9	9	1	1	1
3	I 440 EBL	11004400	20.9	6	1	10440		11	4	56000	2011	51	H	18.3	15	2.8	9	1	1	1

Note 1: Items 54, 55, and 56 are not reported FHWA under route data points but are collected for each under route to determine the minimum value for Underclearance Appraisal Item 69. The under route that generates the lowest Underclearance Appraisal value will be reported on the Facility Carried record.

BRIDGE MANAGEMENT UNIT

DATA ON EXISTING STRUCTURE

Run Date: 07/16/2013

COUNTY : WAKE DIVISION : 5 DISTRICT : 1 STRUCTURE NUMBER : 910252 LENGTH : 339 FEET

ROUTE CARRIED : RIDGE ROAD FEATURE INTERSECTED : I440

LOCATED : 0.1 MI.S.US70 BRIDGE NAME : CITY : RALEIGH

FUNC. CLASS : 19 SYST.ON : NFA SYST.UNDER : NFA ADT & YR : 2000 1986 RAIL TYPE : LT 99 RT 99

BUILT : 1960 BY : SHC PROJ : 8.14905 FED.AID PROJ : F637(7) DESIGN LOAD : HS 20 + MOD

REHAB : BY : PROJ : ALIGNMENT : TAN. SKEW : 44 LANES : ON 2 UNDER 7

NAVIGATION : VC 0 FT HC 0 FT HT. CRN. TO BED : 0 FT WATER DEPTH : 0 FT

SUPERSTRUCTURE : REINFORCED CONCRETE FLOOR ON I-BEAMS

SUBSTRUCTURE : EBTS: RC CAPS/SPREAD FTGS IBTS:RCP&B/ SPREAD FTGS.

SPANS : 1@60'6;2@82'6;2@56'6

BEAMS OR GIRDERS : 4 LNS.36 IN. I-BEAMS @8.0' CTS.

FLOOR : 7.75 RC/NO AWS ENCROACHMENT : DECK (OUT TO OUT) : 33.417 FT

CLEAR ROADWAY : 28 FT BETWEEN RAILS : 31.25 FT SIDEWALK OR CURB : LT 1.625 FT RT 1.625 FT

VERT.CL.OVER : 999.9 FT

INV.RTG. : HS-28 OPE.RTG. : HS-48 CONTR.MEMBER : I BM SpD POSTED : SV TTST DATE

SYSTEM : Primary Municipal roads over State System GREEN LINE ROUTE : Y

UNDER ROUTES AND CLEARANCES

Span	Route Description	Vertical Clearances		Horizontal Clearances		
		MMVC	MVC	Total	Left	Right
2	I 440 WBL	17.50	15.50	50.60	3.90	11.20
3	I 440 EBL	20.90	18.30	51.20	2.80	15.00

Note: All measurements are in feet.

REMARKS :

Bridge Inspection Field Sketch



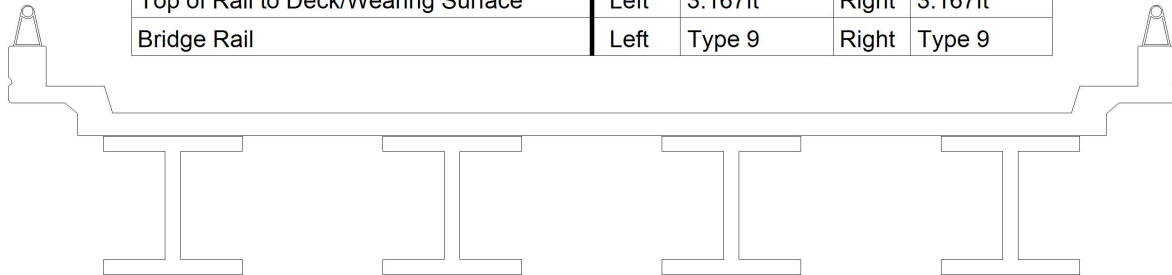
Roadway	24ft Wide	2 Paved Lanes	Looking East
Left Shoulder	3ft Wide	3ft Paved	
Right Shoulder	3ft Wide		3ft Unpaved
Left Guardrail	3ft from road		
Right Guardrail	3ft from road		

CHECKED BY: KEITH E MAYNARD 9/27/12

Title APPROACH ROADWAY		Description LOOKING EAST	
Bridge No: 910252	Drawn By: MJM	Date: 09/29/2008	File Name: S0242001208

Bridge Inspection Field Sketch

Deck Width/Out to Out	33.417ft	Between Rails	31.25ft
Clear Roadway	28.0ft	Wearing Surface	
Median Width		Median Height	
Curb Height		Left	0.917ft
Sidewalk Width		Right	0.917ft
Clear Roadway (Rail to Median)		Left	
Guardrail Width		Right	
Top of Rail to Deck/Wearing Surface		Left	1.083ft
Bridge Rail		Right	1.083ft
		Left	3.167ft
		Right	3.167ft
		Left	Type 9
		Right	Type 9



Measurements for Span #	1		
Deck Thickness	0.646	Left Overhang	4.708
Top of Rail to Bottom of Beam	8.083	Right Overhang	4.708

Beam Number	Beam Type	Spacing	Comments
1	Steel I Beam	8.0ft	36" I - BEAM
2	Steel I Beam	8.0ft	36" I - BEAM
3	Steel I Beam	8.0ft	36" I - BEAM
4	Steel I Beam	ft	36" I - BEAM

CHECKED BY: KEITH E MAYNARD 9/27/11

Title

TYPICAL SECTION

Description

4 LINES OF I-BEAMS

Bridge No: 910252

Drawn By: KMM

Date: 09/29/2008

File Name: S0242001209

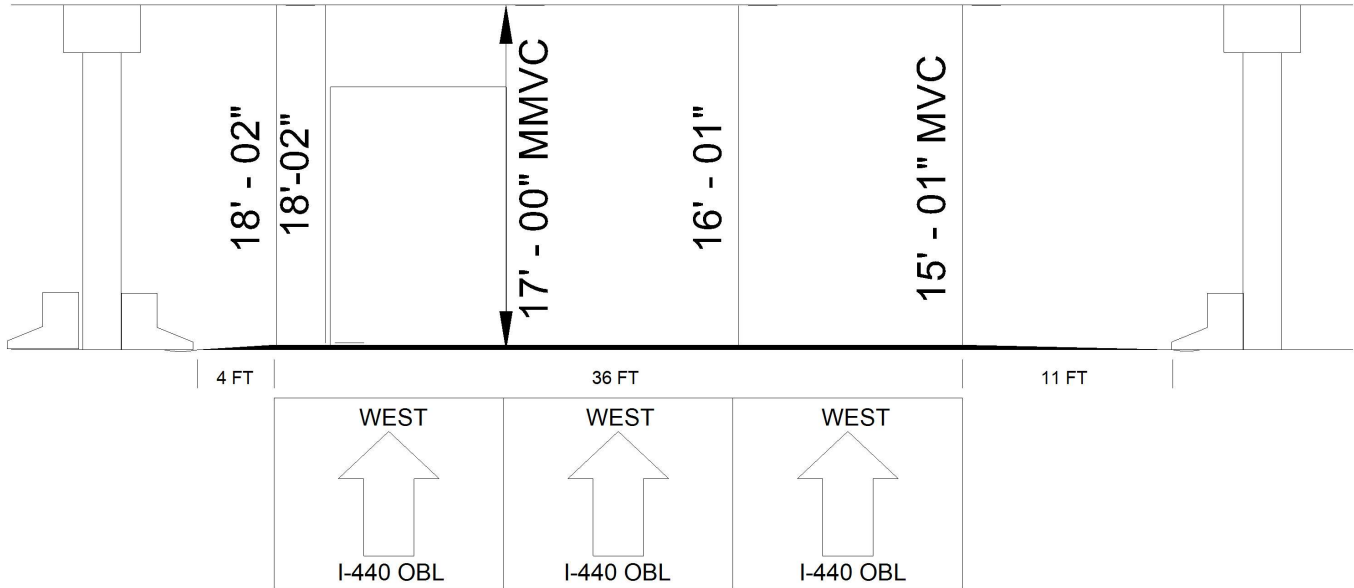
Bridge Inspection Field Sketch

EAST

SR4106 - RIDGE ROAD

WEST

SPAN 2 BEAM 1



Roadway 1		Direction of Traffic	East
Distance to Left Rail	4FT	Distance to Right Rail	11FT
Distance to Left Toe of Slope		Distance to Left Bent	7.583 FT
Distance to Right Toe of Slope		Distance to Right Bent	12.417FT
MMVC	17'-0" at Beam 1, 10 FT from LEFT EDGE OF LEFT THROUGH LANE		
MVC	15'-1" at Beam 1, 0 FT from RIGHT EDGE OF RIGHT THROUGH LANE		

CHECKED BY: KEITH E MAYNARD 9/27/12

Title

VERTICAL CLEARANCE SPAN 2

Description

I-440 WESTBOUND, OUTER BELT LLN.

Bridge No: 910252

Drawn By: KMM; TFM

Date: 9/29/2008

File Name: S0242001210

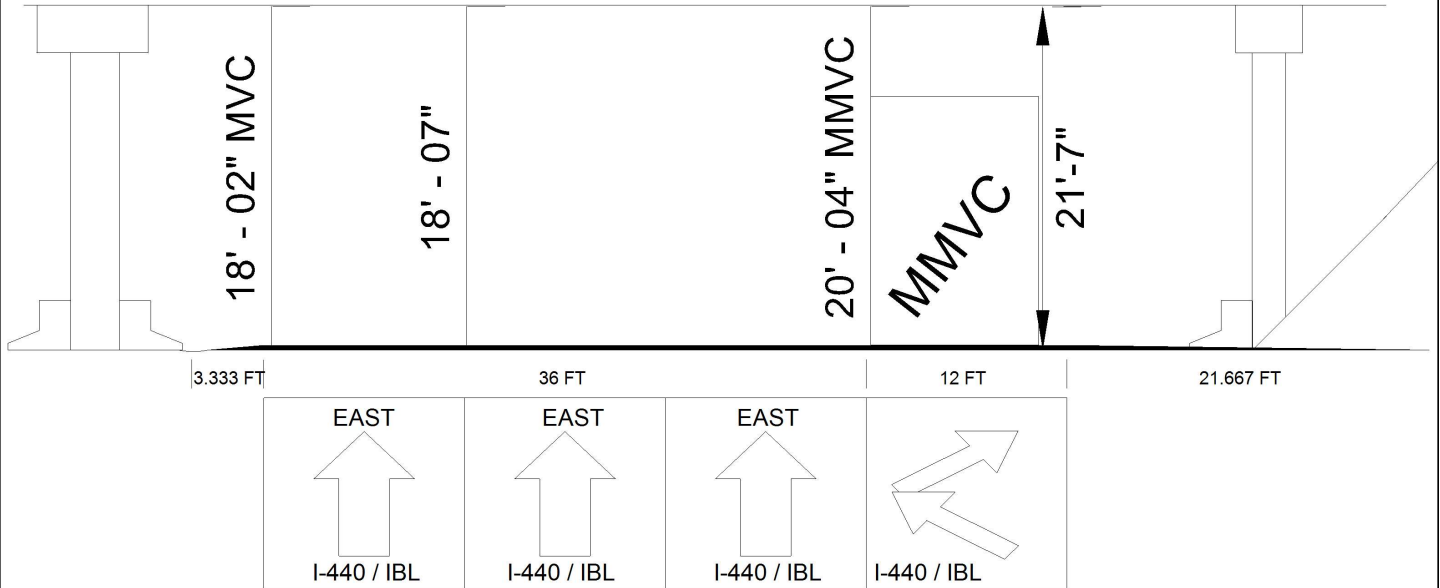
Bridge Inspection Field Sketch

WEST

SR4106 RIDGE ROAD

EAST

SPAN 3 BEAM 1



Roadway 1		Direction of Traffic	West
Distance to Left Rail	3.333FT	Distance to Right Rail	21.667FT
Distance to Left Toe of Slope		Distance to Left Bent	5.083FT
Distance to Right Toe of Slope	23.083FT	Distance to Right Bent	23.083FT
MMVC	20'-4" at Beam 1, 10 FT from RIGHT EDGE OF RIGHT THRU LANE		
MVC	18'-2" at Beam 1, 0 FT from LEFT EDGE OF LEFT THRU LANE		

CHECKED BY: KEITH E MAYNARD 9/27/12

Title

VERTICAL CLEARANCE SPAN 3

Description

I-440 EAST INNER BELT LN.

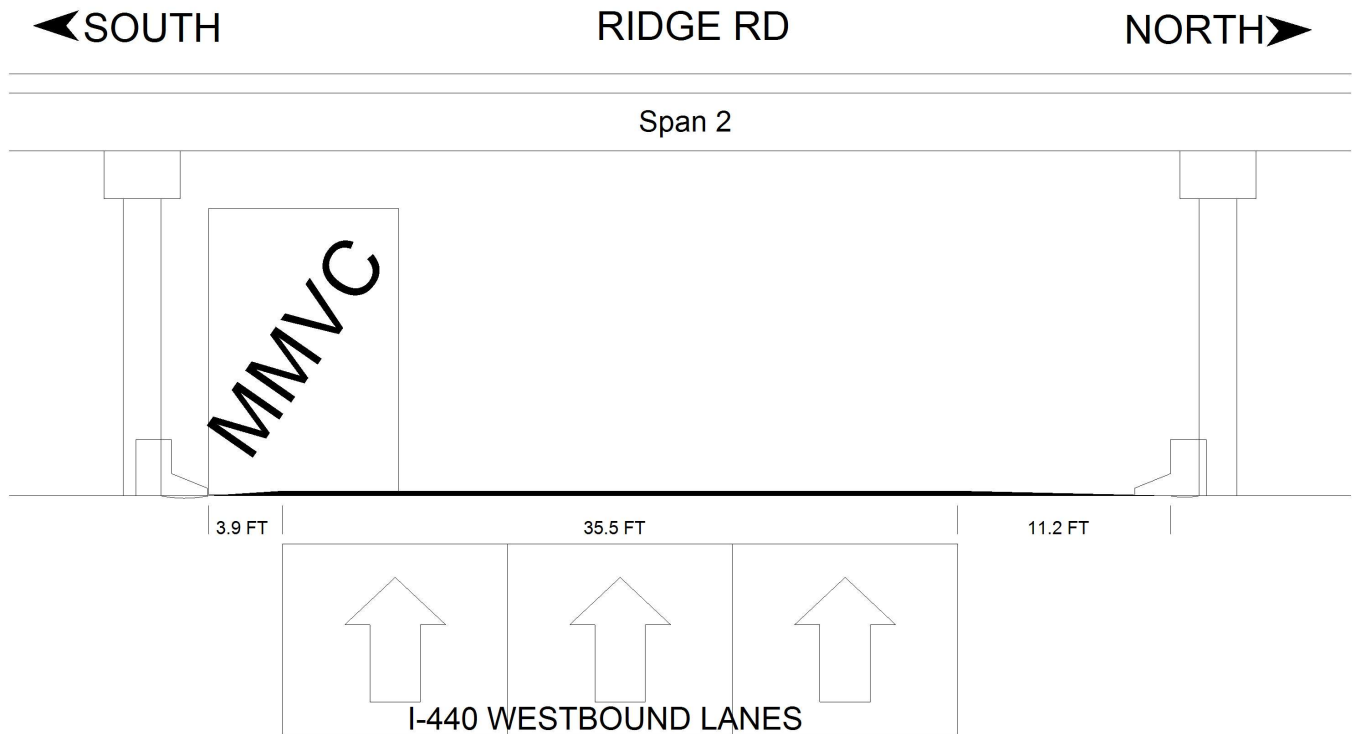
Bridge No: 910252

Drawn By: KMM; TFM

Date: 9/29/2008

File Name: S0242001211

Bridge Inspection Field Sketch



Roadway 1		Direction of Traffic	West
Distance to Left Rail	3.9FT	Distance to Right Rail	11.2FT
Distance to Left Toe of Slope		Distance to Left Bent	6.4FT
Distance to Right Toe of Slope		Distance to Right Bent	12.7FT
MMVC	17.5 Ft at Beam 1, 6 FT from YELLOW LINE		
MVC	15.5 Ft at Beam 1, 0 FT from WHITE LINE OF SHOULDER		

LIDAR VERIFIED

Title		Description	
H252 SPAN 2 LIDAR		CLEARANCE	
Bridge No:	910252	Drawn By:	TA
Date:	6/21/2013	File Name:	S0550000189

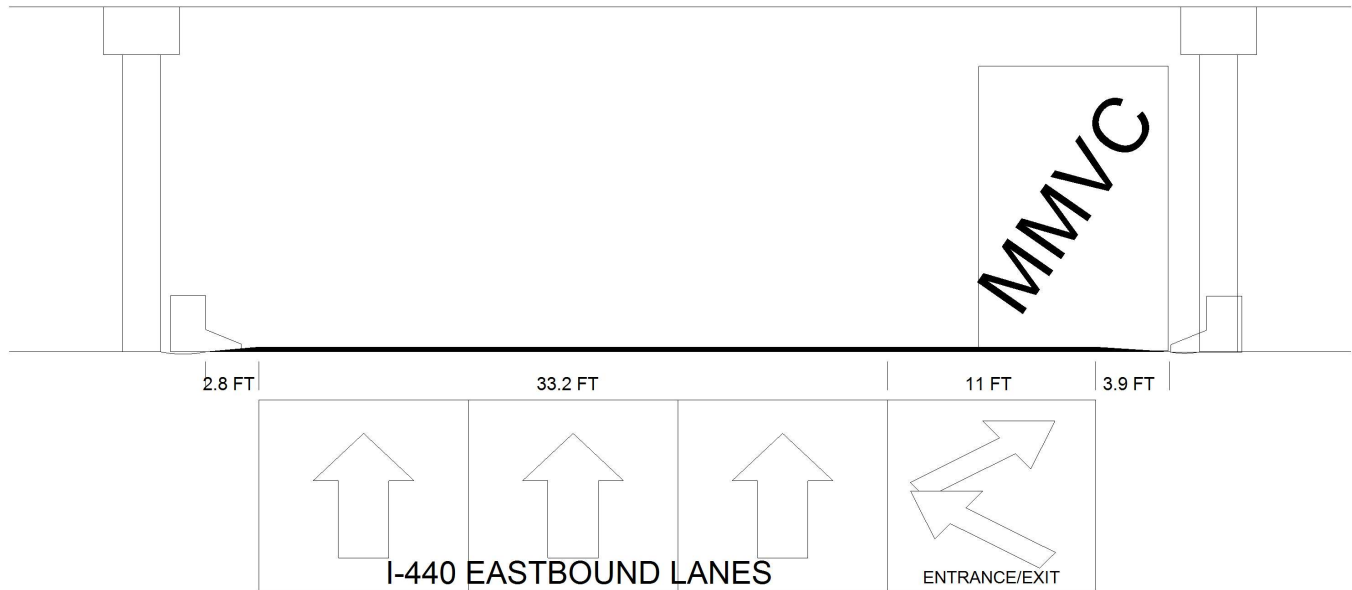
Bridge Inspection Field Sketch

◀ NORTH

RIDGE RD

SOUTH ▶

Span 3



Roadway 1		Direction of Traffic	East
Distance to Left Rail	2.8FT	Distance to Right Rail	15FT
Distance to Left Toe of Slope		Distance to Left Bent	5.2FT
Distance to Right Toe of Slope		Distance to Right Bent	16.5FT
MMVC	20.9 Ft at Beam 1, 6 FT from WHITE LINE OF SHOULDER		
MVC	18.3 Ft at Beam 1, 0 FT from YELLOW LINE		

LIDAR VERIFIED

Title

H252 SPAN 3 LIDAR

Description

CLEARANCE

Bridge No: 910252

Drawn By: TA

Date: 6/21/2013

File Name: S0550000190



COVER - LOOKING WESTBOUND



LOOKING EASTBOUND