



NC DEPARTMENT OF TRANSPORTATION ATTENTION
 DIVISION OF HIGHWAYS
 BRIDGE MANAGEMENT UNIT

BRIDGE INSPECTION REPORT

INSPECTION TYPE: Routine Inspection

COUNTY GASTON BRIDGE NUMBER 350067 INSPECTION CYCLE 2 YRS

ROUTE US29/US74 ACROSS DUHART'S CREEK M.P. 0

LOCATION 0.3 MI. S. JCT. SR2200

TRIPLE 6' X 8' RCBC 88.917 ALONG THE CENTERLINE OF CULVERT

SUPERSTRUCTURE 8'x6' D65 9-30-14

SUBSTRUCTURE _____

SPANS _____

LONGITUDE 81° 7' 44.30"

LATITUDE 35° 15' 35.26"

INSPECTION DATE 08/18/2014

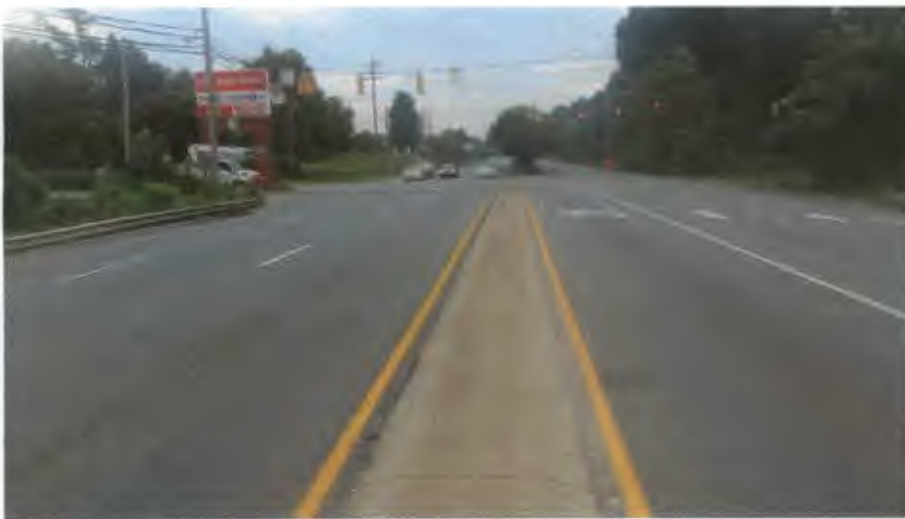
PRESENT CONDITION FAIR

PRESENT POSTING N NOT POSTED

PROPOSED POSTING _____

OTHER SIGNS PRESENT NONE

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



WEST APPROACH

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	_____

IDENTIFICATION

(1) STATE NAME -NORTH CAROLINA BRIDGE 350067
 (8) STRUCTURE NUMBER(FEDERAL) 00000000710067
 (5) INVENTORY ROUTE (ON/UNDER) - ON 21000290
 (2) STATE HIGHWAY DEPARTMENT DISTRICT 1
 (3) COUNTY CODE 71 (4) PLACE CODE 25580
 (6) FEATURE INTERSECTED - DUHARTS CREEK
 (7) FACILITY CARRIED US29/US74
 (9) LOCATION 0.3 MI. S. JCT. SR2200
 (11) MILEPOINT 0
 (16) LAT 35° 15' 35.26" (17) LONG 81° 7' 44.30"
 (98) BORDER BRIDGE STATE CODE PCT SHARE
 (99) BORDER BRIDGE STRUCTURE NO

SUFFICIENCY RATING = 91.71
 STATUS = Not Deficient

STRUCTURE TYPE AND MATERIAL

(43) STRUCTURE TYPE MAIN: Concrete continuous
 TYPE - Culverts (includes frame culverts) CODE 219
 (44) STRUCTURE TYPE APPR :
 TYPE - CODE 000
 (45) NUMBER OF SPANS IN MAIN UNIT 3
 (46) NUMBER OF APPROACH SPANS
 (107) DECK STRUCTURE TYPE - N CODE
 (108) WEARING SURFACE / PROTECTIVE SYSTEM :
 (A) TYPE OF WEARING SURFACE - CODE
 (B) TYPE OF MEMBRANE - CODE
 (C) TYPE OF DECK PROTECTION - CODE

CLASSIFICATION CODE
 (112) NBIS BRIDGE SYSTEM - YES
 (104) HIGHWAY SYSTEM Is on the NHS 1
 (26) FUNCTIONAL CLASS - Other Principal Arterial 14
 (100) STRAHNET HIGHWAY - Not a STRAHNET Route 0
 (101) PARALLEL STRUCTURE - No Parallel Structure N
 (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

AGE AND SERVICE

(27) YEAR BUILT 1960
 (106) YEAR RECONSTRUCTED
 (42) TYPE OF SERVICE : ON - Highway
 UNDER - Waterway CODE 15
 (28) LANES: ON STRUCTURE 6 UNDER STRUCTURE 0
 (29) AVERAGE DAILY TRAFFIC 32000
 (30) YEAR OF ADT 2012 (109) TRUCK ADT PCT 12%
 (19) BYPASS OR DETOUR LENGTH 3 MI

CONDITION CODE
 (58) DECK N
 (59) SUPERSTRUCTURE N
 (60) SUBSTRUCTURE N
 (61) CHANNEL & CHANNEL PROTECTION 7
 (62) CULVERTS 6

LOAD RATING AND POSTING

CODE
 (31) DESIGN LOAD HS 20 + MOD 6
 (63) OPERATING RATING METHOD - Load Factor 1
 (64) OPERATING RATING - HS-26 46
 (65) INVENTORY RATING METHOD - Load Factor 1
 (66) INVENTORY RATING - HS-20 36
 (70) BRIDGE POSTING - No Posting Required 5
 (41) STRUCTURE OPEN, POSTED ,OR CLOSED A
 DESCRIPTION - Open, No Restriction

GEOMETRIC DATA

(48) LENGTH OF MAXIMUM SPAN 8 FT
 (49) STRUCTURE LENGTH 25 FT
 (50) CURB OR SIDEWALK: LEFT 0 FT RIGHT 0 FT
 (51) BRIDGE ROADWAY WIDTH CURB TO CURB 86 FT
 (52) DECK WIDTH OUT TO OUT 88.917 FT
 (32) APPROACH ROADWAY WIDTH (W/SHOULDERS) 82 FT
 (33) BRIDGE MEDIAN - No Median CODE 2
 (34) SKEW 0° (35) STRUCTURE FLARED 0
 (10) INVENTORY ROUTE MIN VERT CLEAR 999.9 FT
 (47) INVENTORY ROUTE TOTAL HORIZ CLEAR 82 FT
 (53) MIN VERT CLEAR OVER BRIDGE RDWY 999.9 FT
 (54) MIN VERT UNDERCLEAR REF Not a Highway or Railroad 0 FT
 (55) MIN LAT UNDERCLEAR RT REF Not a Highway or Railroad 000 FT
 (56) MIN LAT UNDERCLEAR LT REF - 000 FT

APPRAISAL CODE
 (67) STRUCTURAL EVALUATION 6
 (68) DECK GEOMETRY 5
 (69) UNDERCLEARANCES, VERTI & HORIZ N
 (71) WATERWAY ADEQUACY 6
 (72) APPROACH ROADWAY ALIGNMENT 8
 (36) TRAFFIC SAFETY FEATURES 0111
 (113) SCOUR CRITICAL BRIDGES 8

PROPOSED IMPROVEMENTS

CODE
 (75) TYPE OF WORK -
 (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 64000 (115) YEAR FUTURE ADT 2025

INSPECTIONS

(90) INSPECTION DATE 08/18/2014
 (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

NAVIGATION DATA

(38) NAVIGATION CONTROL - No Navigational Control CODE 0
 (111) PIER PROTECTION - CODE
 (39) NAVIGATION VERTICAL CLEARANCE 0
 (116) VERT - LIFT BRIDGE NAV MIN VERT CLEAR FT
 (40) NAVIGATION HORIZONTAL CLEARANCE 0 FT

BRIDGE MANAGEMENT UNIT

DATA ON EXISTING STRUCTURE

Run Date: 10/01/2014

COUNTY : GASTON DIVISION : 12 DISTRICT : 1 STRUCTURE NUMBER : 350067 LENGTH : 25 FEET

ROUTE CARRIED : US29/US74 FEATURE INTERSECTED : DUHARTS CREEK

LOCATED : 0.3 MI. S. JCT. SR2200 BRIDGE NAME : CITY : GASTONIA

FUNC. CLASS : 14 SYST.ON : FA SYST.UNDER : NFA ADT & YR : 32000 2012 RAIL TYPE : LT 233 RT 233

BUILT : 1960 BY : SHC PROJ : FED.AID PROJ : DESIGN LOAD : HS 20 + MOD

REHAB : BY : PROJ : ALIGNMENT : TAN SKEW : 90 LANES : ON 6 UNDER 0

NAVIGATION : VC 0 FT HC 0 FT HT. CRN. TO BED : 9 FT WATER DEPTH : 1 FT

SUPERSTRUCTURE : TRIPLE 8'X6'RC BOX CULVERT; 88'-11 ALONG CENTERLINE CULVERT

SUBSTRUCTURE :

SPANS :

BEAMS OR GIRDERS :

FLOOR : ENCROACHMENT : DECK (OUT TO OUT) : 88.917 FT

CLEAR ROADWAY : 86 FT BETWEEN RAILS : 86 FT SIDEWALK OR CURB : LT 0 FT RT 0 FT

VERT.CL.OVER : 999.9 FT

INV.RTG. : HS-20 OPE.RTG. : HS-26 CONTR.MEMBER : POSTED : SV TTST DATE

SYSTEM : Primary U.S. Route GREEN LINE ROUTE : N

UNDER ROUTES AND CLEARANCES

REMARKS :

BRIDGE INSPECTION RECORD AND SUMMARY (R. C. BOX CULVERTS)

INSPECTION TYPE Routine Inspection
BRIDGE NO. 350067

ROUTE US29/US74

INSPECTION DATE 08/18/2014

ROUTE ORIENTATION S - N
OVER DUHART'S CREEK

EVALUATION CODES: CRITICAL (C, 0 - 3); POOR (P, 4); FAIR (F, 5, 6); GOOD (G, 7 - 9)

1. Top Slab		F
2. Bottom Slab		G
3. Ext. & Int. Walls		F
4. Wingwalls - Retaining Walls		G
5. Headwalls, Toewalls, Flumes		G
6. Structure Alignment - Settlement		G
7. Drainage Systems (On Structure)		G
8. Channel & Channel Protection	a. Waterway	G
	b. Alignment	F
	c. Scour	F
	d. Slope Prot. (Rip-Rap, Dikes, etc.)	
9. Approach Roadway Condition		F
10. Estimated Remaining Life		22
11. Channel & Channel Protection	Item 61	7
12. Culvert & Retaining Walls	Item 62	6
13. Waterway Adequacy	Item 71	6
14. Approach Roadway	Item 72	8
15. Field Scour Evaluation		B
16. Presently Posted		NO
17. Regulatory Sign Notice Issued		NO
18. Prompt Action Notice Issued		NO
19. Total Field Inspection Time		5
20. Inspected By		<i>all Rk</i>

Bridge I&A Form 1(82)H State of North Carolina Dept. of Transportation Division of Highways		FIELD INSPECTION REPORT <u>Bridge Inspeccion & Analysis</u>	
Team Leader derek rickus			
Assisted By eap			
Item No.	Grade		
8c	F	TOEWALL EXPOSED AT THE INLET. 1'X2'L AT BARREL 1 AND 3 AND 2'H X 3' L AT INLET OF BARREL 2.	
9	F	THERE IS A 3' LONG X 2' BACK AREA OF EROSION ON THE EASTAPPROACH UNDER THE GUTTER AREA. ERODED AREA AT THE SOUTHWEST CORNER BEHIND THE SOUTHWEST WING. EROSION IS 5'LONG X 4'W X 2'H.	
1	F	THERE IS MODERATE EFFLORESCENCE ALONG THE CONSTRUCTION JOINTS IN THE TOP SLAB AND WALLS AT 12 FT FROM THE OUTLET OF ALL THREE BARRELS. CONSTRUCTION JOINT AT 22 FT FROM THE OUTLET OF THE BARRELS OPEN 1/2 TO 5/8 WIDE AT TOP. THERE IS MINOR SPALLING WITH REBAR EXPOSED WITHIN 1 FT OF JOINT IN BARREL 1.	
3	F	H/L VERTICAL CRACKING IN ALL THREE BARRELS FOR FULL HEIGHT.	
36a	N	lt. and rt. shoulders 2' speed limit 45 mph	

BRIDGE INSPECTOR'S RECOMMENDATION FOR MAINTENANCE REPAIRS

Bridge: 350067

County GASTON

Date: 08/18/2014


These Repairs Should Be Made Within Twelve Months From Date Of This Inspection

MMS Code	Description of Function	Unit	Quantity	Remarks	Est. Cost
3352	Maint Slope Protection	SF	6	THERE IS A 3' LONG X 2' BACK AREA OF EROSION ON THE EAST APPROACH UNDER THE GUTTER AREA.	
3352	Maint Slope Protection	SF	20	ERODED AREA AT THE SOUTHWEST CORNER BEHIND THE SOUTHWEST WING. EROSION IS 5' LONG X 4' W X 2' H.	
3352	Maint Slope Protection	SF	10	TOEWALL EXPOSED AT THE INLET. 1' X 2' L AT BARREL 1 AND 3 AND 2' H X 3' L AT INLET OF BARREL 2.	

Key

 Priority Maintenance Item

 Critical Finding Item

 Priority Maintenance Level Not Determined



THERE IS A 3' LONG X 2' BACK AREA OF EROSION ON THE EAST APPROACH UNDER THE GUTTER AREA.

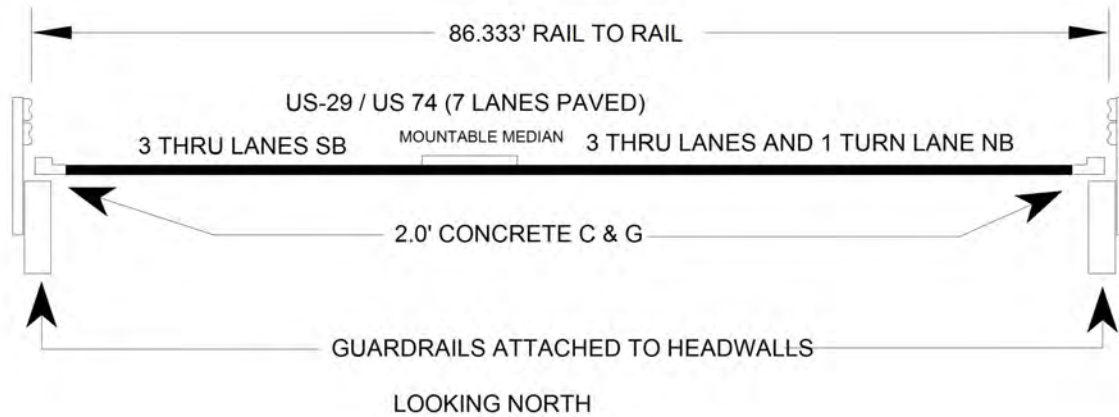


TOEWALL EXPOSED AT THE INLET. 1'X2'L AT BARREL 1 AND 3 AND 2'H X 3' L AT INLET OF BARREL 2.



ERODED AREA AT THE SOUTHWEST CORNER BEHIND THE SOUTHWEST WING. EROSION IS 5'LONG X 4'W X 2'H.

Bridge Inspection Field Sketch



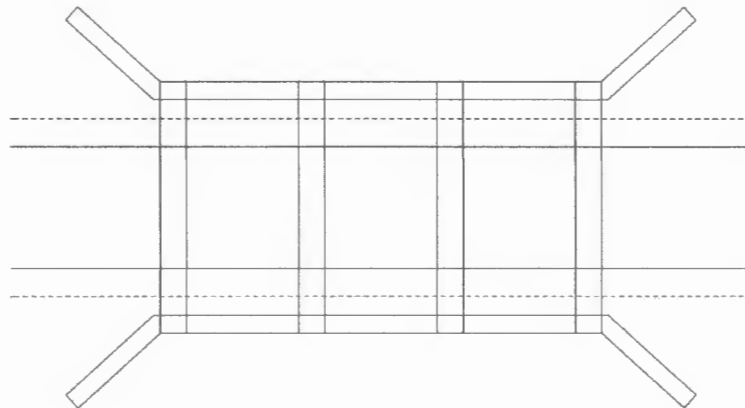
Left Lanes			
Roadway	33ft Wide	3 Paved Lanes	South Bound
Right Shoulder	2ft Wide	2ft Paved	
Left Guardrail			
Right Guardrail	2ft from road		
Median	4ft Wide	0.25ft High	
Right Lanes			
Roadway	45.333ft Wide	4 Paved Lanes	North Bound
Right Shoulder	2ft Wide	2ft Paved	
Left Guardrail			
Right Guardrail	2ft from road		

SPEED LIMIT 45 MPH

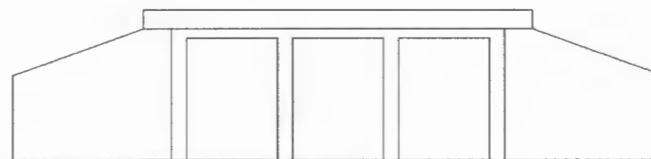
VERIFIED BY ERIC PATTERSON ON 8-18-2014

Title APPROACH ROADWAY	Description LOOKING NORTH
Bridge No: 350067	Drawn By: DJA
Date: 7/17/2008	File Name: S0146030583

Bridge Inspection Field Sketch



Crown of Roadway



Bed

Number of Barrels	Skew	Distance From Crown to Bed
3	90°	9ft
Length Along Center Line of Culvert		Length Along Center Line of Roadway
88.917ft		25.167ft

Barrel #	Width	Height	Wall Thickness	Scour at Inlet	Scour at Outlet	Distance From Previous Pipe
1	8.0'	8.0'	0.667'	Yes - 1'H X 2'L	No	
2	8.0'	8.0'	0.667'	Yes - 2'H X 3'L	No	
3	8.0'	8.0'	0.667'	Yes - 1'H X 2'L	No	

DGS
9-30-14

VERIFIED BY ERIC PATTERSON ON 8-18-2014

Title CULVERT DIMENSIONS	Description PLAN AND ELEVATION
Bridge No: 350067	Drawn By: DJA
Date: 7/17/2008	File Name: S0146030584



WEST APPROACH



EAST APPROACH



UPSTREAM



LOOKING UPSTREAM



LOOKING DOWNSTREAM



DOWNSTREAM