

# SCDOT BRIDGE INSPECTION FORM

35 of 71

(008) BRIDGE ID: 1420030101200  
(420) ASSET NO: 644  
(419) RAMP NO:  
(026) FUNCTIONAL CLASS: 04

(005) ROUTE: CLARENDON US 301  
(006) CROSSING: BLACK RIVER (NO. 2)  
(009) LOCATION: 8MI N OF MANNING  
(016) LAT: 33 d 48 m 32.00 s (017) LON: 80 d 6 m 50.00 s

## GENERAL BRIDGE DATA

	EXISTING	REVISED
(027) Year Built	1934	
(106) Year Recon	1964	
(031) Design Load	2	
(36A) Railings	0	
(36B) Transitions	0	
(36C) Appr Guard	1	
(36D) Appr Guard End	0	
(037) History	4	
(319) Last Paint Date		

	EXISTING			REVISED	
(042) Type Serv; On(A) Und(B)	1	5			
(028) Lanes; On(A) Und(B)	2	0			
(107) Deck Struct	1				
(108) Wear Surf/Membrane/Prot	6	8	8		
	MAT-SUP-SUB			MAT-SUP-SUB	
(043) Main Original (A)	3	02	7		
Main Reconst (B)	3	02	5		
(044) Appr Original (A)	0	00	0		
Appr Reconst (B)	0	00	0		

## GEOMETRIC DATA

	EXISTING	REVISED
(032) Appr Rdway	40	
(033) Bridge Median	0	
(034) Skew	0	
(035) Flared	0	
(045) # Main Spans	16	
(046) # Appr Spans	0	
(048) Max Span Lgth	25	
(308) Appr Span Lgth	0	
(049) Struct Length	400	
(47A) Horz Clear Right	44	
(47B) Horz Clear Left	0	
(47UA) Horz Clear Right	0	
(47UB) Horz Clear Left	0	
(50B) Sidewalk Right	0	
(50A) Sidewalk Left	0	
(051) Curb to Curb	44	
(052) Deck Out-Out	48	

	EXISTING		REVISED	
	FT	IN	FT	IN
(053) Vert Clr Above Deck	99	99		
(54A) Vert Clear Ref		N		
(54B) Vert Clear Right	0	0		
(54C) Vert Clear Left	0	0		
(10A) Great Min Clr Over/Und	99	99		
(10B) Great Min Right	99	99		
(10C) Great Min Left	99	99		
(55A) Lat Clear Ref		N		
(55B) Lat Clear Right		99.9		
(55C) Lat Clear Left		0		
(038) Navigation Cont		0		
(039) Nav Vert Clear		0		
(040) Nav Horz Clear		0		
(111) Nav Pier Port				

## RATINGS DATA

	EXISTING	REVISED
(58) Deck	5	
(59) Super Str	4	
(60) Sub Str	4	
(061) Channel	7	6
(062) Culv Ret	N	
(071) Water Adeq	5	
(072) Appr Rdway	7	8
(113) Scour Critical	5	
(067) Structure	4	GEN
(068) Deck Geom	9	GEN
(069) Underclear	N	GEN
(070) Bridge Post	5	GEN

	EXISTING			REVISED	
(041) Traffic Status	A			K	
(063) Rating Method	2				
(064) Operating Rating	42				
(065) Rating Method	2				
(066) Inventory Rating	20				
(411) Date Rated	8/29/1989				
(418) Conditions During Rating	5	4	4		
	Freq Mth/Year			Freq Mth/Year	
(091, 090) Routine Insp	24	09/2013		9/2015	
(92A, 93A) Fracture Critical	N				
(92B, 93B) Underwater Insp	N				
(92C, 93C) Special Insp	N				

Inspection Leader: *Donald W. Barnett*  
Date: 9-29-2015

Reviewed By: *an*  
Date: 11/16/15  
10-30-15

*\* Bridge & Roadway closed \**

08/26/2015

## Bridge Element Group Textual Data

Bridge ID: 14-2-00301-0-12-00

14 Sep-2015



### **Abutments and/or Headwalls:**

--CONT'D FROM BENTS---- MINOR DETER. ON PILES, TYPICALLY NEAR BEARING AREAS;

### **Bents and/or Piers:**

4: 5-TT PILES PER INTERIOR BENT SPACED AT 5'11" WITH SWAY BRACING 10"X12" TIMBER CAPS ON OC ; WIDENED EACH SIDE WITH 2-14"X14" PRESTR. CONCRETE PILES PER BENT SPACED AT 8', 24"X30" CONCRETE CAPS / ENCASED: P3&6 ON BT1;P5 ON BT2;P7 ON BT3;P3 ON BT4;P7 ON BT7;P4&5 ON BT11;P3 ON BT16; DETERIORATION ON TIMBER CAP ENDS;--SEE ABUTMENTS--

### **Bearings:**

STEEL PLATES / FAIR, DUE TO RUST WITH SECTION LOSS

### **Girders/Floor Beams/Stringers and/or Beams:**

4: 5-7.5"X18" STEEL "I" BEAMS 4 THRU 8 PER SPAN SPACED AT 5'11" WITH 6"X18" CONCRETE DIAPHRAGMS ON OC; WIDENED EACH SIDE WITH 3-7.5"X18" STEEL "I" BEAMS PER SPAN WITH 1'X3' STEEL DIAPHRAGMS ON RC / DUE TO RUSTING OF STEEL BEAMS THROUGHOUT STRUCTURE WITH SECTION LOSS; THE WORST BEING OUT SIDE BEAMS ON BOTH O.C. & R.C.;--SEE TRUSS SECTION--

### **Truss Members:**

--CONT'D FROM BEAMS-- R.C. FASCIA BEAMS USALLY HAVE MOD TO SEVERE RUST W/ SOME BEAM ENDS HAVING COMPLETE SECTION LOSS; R.C. END DIAPH/CROSS BRACING HAVE MAJOR RUST WITH SECTION LOSS AT ENDS; BEAM 1 ON SP1 HAS ANGLED PLATES BOLTED TO BEAM FOR SUPPORT;

**Expansion Joints:**

N/A

**Decks and/or Slabs:**

5: 7" CONCRETE DECK WITH 4" OF ASPHALT SURFACING, 16 SPANS AT 25' /  
DUE TO SHRINKAGE CRACKS WITH EFFLORESCENCE THROUGHOUT  
STRUCTURE

**Curbs:**

7: CONCRETE SAFETY CURB /

**Bridge Railing/Parapets and/or Median Barriers:**

CONCRETE RAILING AND POSTS ACROSS BRIDGE WITH STANDARD "W"  
BEAM GUARDRAIL WITH TIMBER POSTS ON APPROACHES /

**Paint System(s):**

4: FAIR / DUE TO MODERATE TO MAJOR AND SEVERE RUST ON BEAMS  
WITH SECTION LOSS ON O.C AND R.C FASCIA BEAMS ENDS;

**Waterway and Scour:**

6-SAT.: RIPRAP UNDER O.C AND END OF BRIDGE; WASHING UNDER END BT  
AT END OF BRIDGE; DEBRIS AND OLD PILES IN CHANNEL AND AT FLOOD  
PLAIN LEVEL; MINOR SCOUR AT SEVERAL PILES DUE TO FLOOD;

**Fender System:**

N/A

**Roadway Alignment:**

8-VERY GOOD: STRAIGHT ALIGNMENT;

**Traffic Signs:**

BRIDGE END PANELS ON ALL CORNERS /

**Encroachments:**

2 UTILITIES RT. C/L AND 1 UTILITY LT. C/L

# BRIDGE DEFICIENCY

Defect	Work County	Asset Group	Type	Route	Structure
7	CLARENDON	BRIDGES	US	301	644 - 20030101200-BLACK RIVER (RD)
Inspection Date	Type	Route	Aux	Milepoint	Direction
THURSDAY - OCT 22, 2015	US	301	12	201	N
Off System Description					

Deficiency	Activity	Priority	Accomplishment Unit	Est. Work Quantity
307 - BRIDGE MAINTENANCE		C	PERSON HOURS	
Deficiency comments				
REPAIR WASHOUT AT BOTH ENDS OF BRIDGE PLACE SLOPE PROTECTION UNDER BOTH ENDS OF BRIDGE. STRUCTURE # 14-2-00301-0-12-00				

Work Completion		
Date	Defect	Organization Unit
Comments		

Work Inspection		
Work Inspection Date	Cleared	Name of Inspector
	N	

Save	Selection	Print Deficiency	RECEIVED	New Record	Status	Return
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<b>BRIDGE INSPECTION</b> <b>STREAM / GROUND</b> <b>PROFILE</b>					BRIDGE NUMBER: 14-2-00301-0-12-00																											
					ROAD NUMBER: US - 301																											
					CROSSING: BLACK RIVER																											
COMMENTS:					TOP OF WATER TO TOP OF RAIL																											
* = HEAVY VEGETATION UP TO TOP OF BRIDGE RAILING					HORIZONTAL BLOCKAGE (%) TO																											
TOP OF WATER = 21.1' AT BENT # 8					VERTICAL BLOCKAGE (%)																											
TOP OF WATER (POND)= 20.0' AT BENT # 3																																
	10/22/15	9/14/15	9/17/13	11/29/05	<b>NORTH / SOUTH</b> <b>EAST / WEST</b> <b>LEFT ABUTMENT</b>	11/29/05	9/17/13	9/14/15	10/22/15																							
	13.0'	6.0'	6.0'	5.2'	17	6.6'	6.6'	6.8'	7.2'																							
	24.5'	13.3'	13.2'	13.0'	16	12.5'	12.5'	11.1'	12.4'																							
	25.5'	16.7'	16.9'	16.8'	15	13.8'	13.7'	13.8'	18.5'																							
	20.6'	15.9'	16.0'	15.4'	14	15.6'	15.4'	15.3'	17.3'																							
	13.5'	14.0'	14.3'	14.0'	13	15.4'	15.4'	15.0'	14.2'																							
	15.4'	14.5'	14.5'	14.5'	12	15.4'	15.2'	14.1'	13.8'																							
	14.7'	14.4'	14.4'	14.3'	11	15.6'	15.5'	15.6'	16.3'																							
	15.8'	14.5'	15.4'	15.2'	10	15.0'	14.9'	15.0'	14.5'	195'																						
	23.5'	23.6'	23.2'	22.9'	9	21.9'	21.1'	20.2'	21.9'																							
	21.6'	19.4'	20.8'	22.0'	8	22.8'	23.4'	24.0'	23.4'	240'																						
	16.0'	16.0'	16.4'	15.7'	7	14.8'	14.4'	*	14.4'																							
	14.5'	14.6'	14.6'	14.5'	6	14.8'	14.8'	14.7'	14.9'																							
	16.0'	16.6'	16.1'	16.1'	5	16.1'	16.9'	*	18.0'	330'																						
	18.5'	20.4'	20.0'	20.0'	4	20.1'	20.1'	20.2'	19.4'																							
	22.9'	21.2'	21.3'	21.3'	3	18.3'	18.5'	18.9'	14.8'	365'																						
	13.9'	19.6'	19.1'	19.5'	2	12.0'	12.3'	12.3'	12.4'																							
	5.4'	5.3'	5.1'	6.9'	1	5.8'	6.2'	6.4'	6.6'																							
FLOOD UPSTREAM					BASE	RIGHT ABUTMENT NORTH / SOUTH EAST / WEST					BASE	FLOOD DOWNSTREAM																				
G.B. & D.V. & R.J. MEASUREMENT BY											10/22/2015 DATE MEASURED											11:30 TIME										
MEASUREMENTS ARE FROM TOP OF RAIL TO GROUND LINE																																



14-2-00301-0-12-00 2015 Beam 1 Bent 17 Common Rust & Section Loss Throughout all Facsia Beam Ends



14-2-00301-0-12-00 2015 Beam 8 Bent 17 Major Section Loss & Rusting





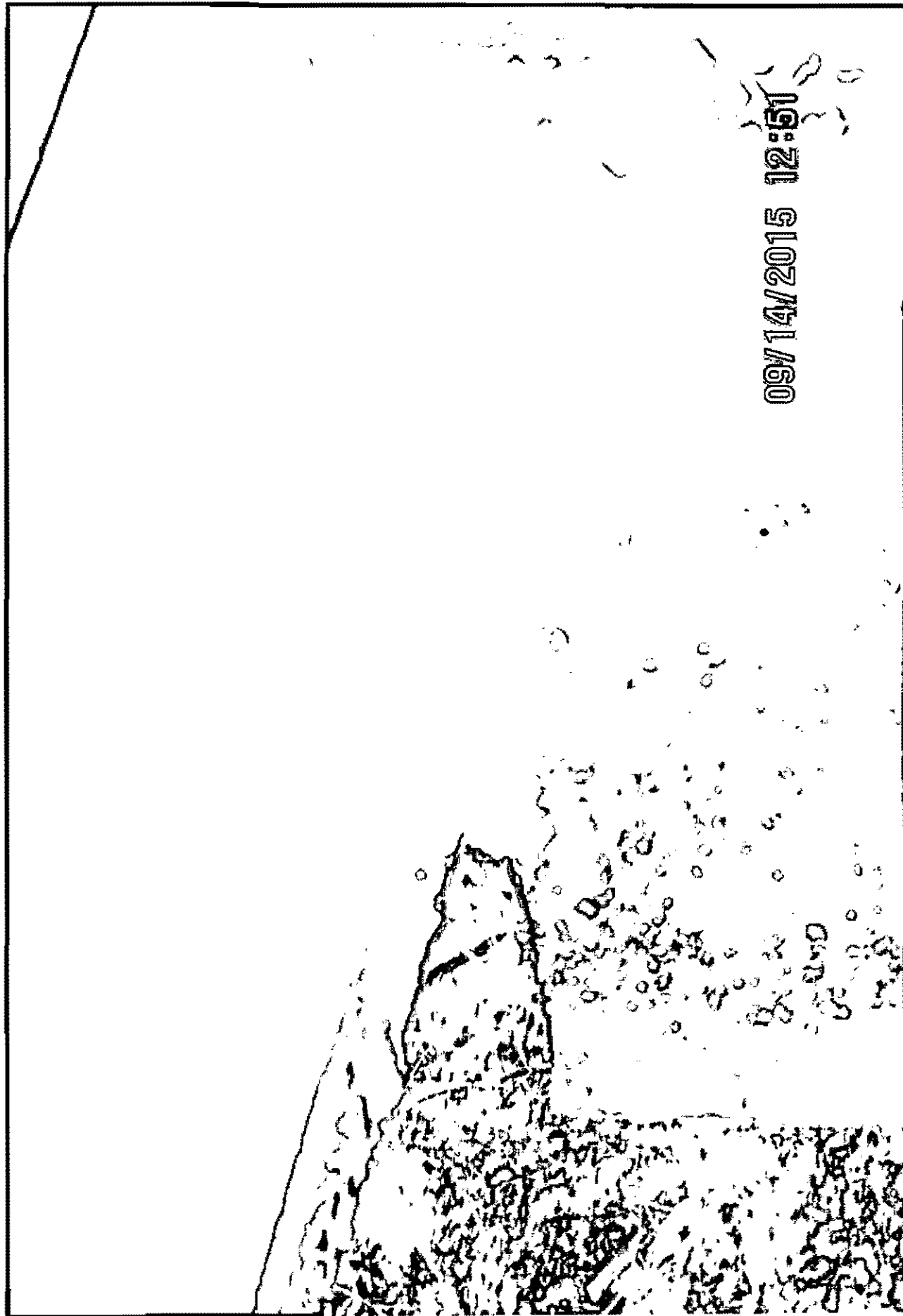
14-2-00301-0-12-00 2015 Beam 8 on Bent 15 Complete Section Loss on Diaphragms & Major Section Loss on Beam Ends



14-2-00301-0-12-00 2015 General View from End Looking to the Beginning



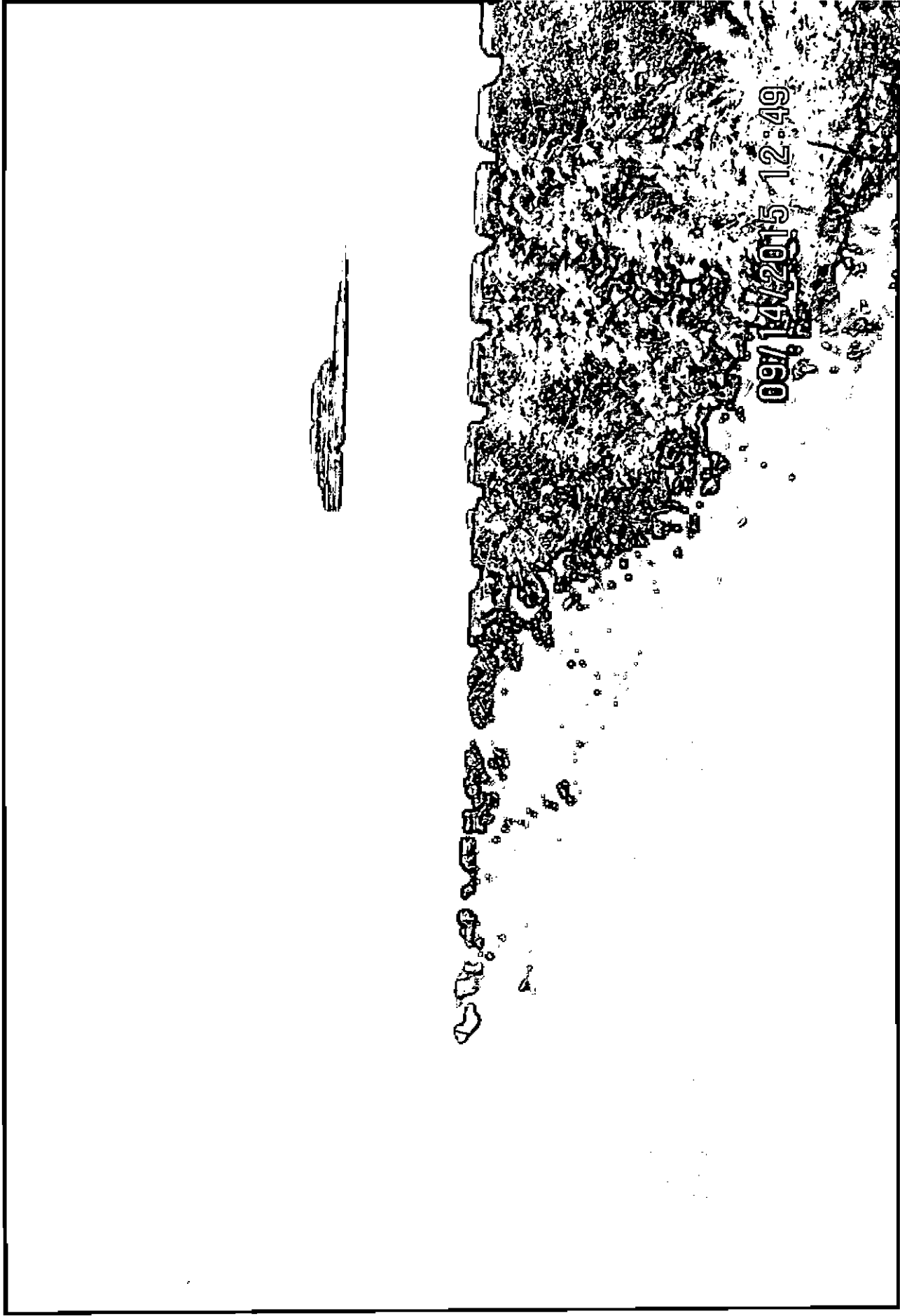
14-2-00301-0-12-00 2015 General View of Cracking & Delaminations in Concrete Diaphragms



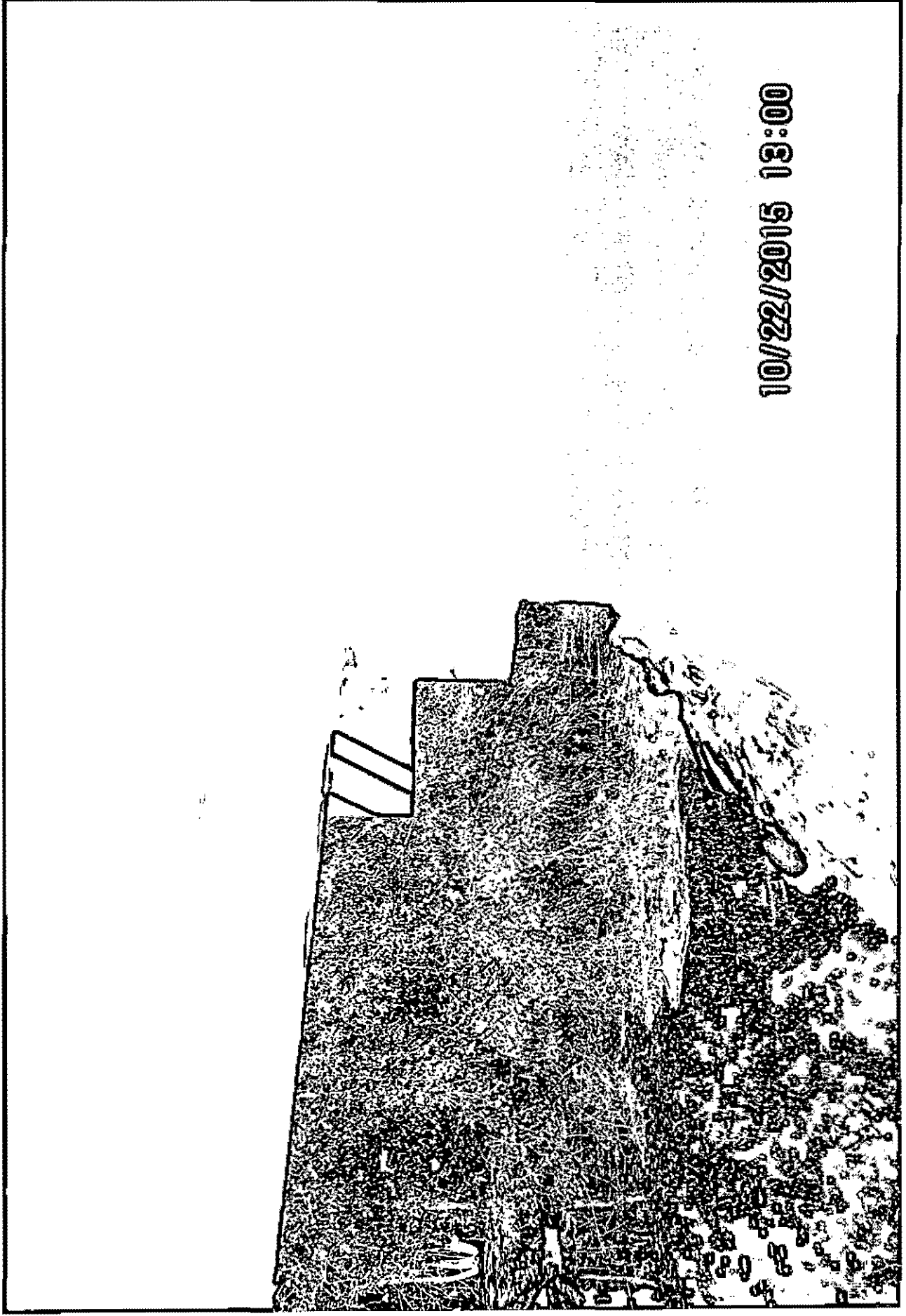
14-2-00301-0-12-00 2015 Major Rusting & Section Loss of End of Beam 1 at Bent 3



14-2-00301-0-12-00 2015 Misalignment of Piles 4 & 5 of Bent 1 With Signs of Cap Rotation



14-2-00301-0-12-00 2015 Stringer Repair of Beam 1 of Span 1



14-2-00301-0-12-00 2015 Washing & Loss of Slope Protection at End of Bridge



14-2-00301-0-12-00 2015 Debris Buildup under Span #2





14-2-00301-0-12-00 2015 Debris Buildup Upstream Side of Span #1

