

PREDESIGN-PRESURVEY REPORT

Office Estimated Bridge Length: _____
County: Rowan
Bridge No.: 63 TIP No.: _____
Road No.: NC 150 Let Date: _____
Stream: Kerr Creek WBS No.: _____

Type of Request: _____
Date: _____ Name: wgc Assigned To: _____
Checked By: _____
Prior Survey Date: (Attach Copy of Prior Survey) _____
Study by Scour: _____ Code: _____
Flood Zone: Yes Study Type: Limited Date: 6/16/2009 Panel No.: 5609
BM Info: _____
Quad Map: Cleveland Drainage Area: 9.9 sq. mi. From: StreamStats
Q25: - Q50: 2600 Q100: 3123 FEMA Method: 2009-5158 Rural

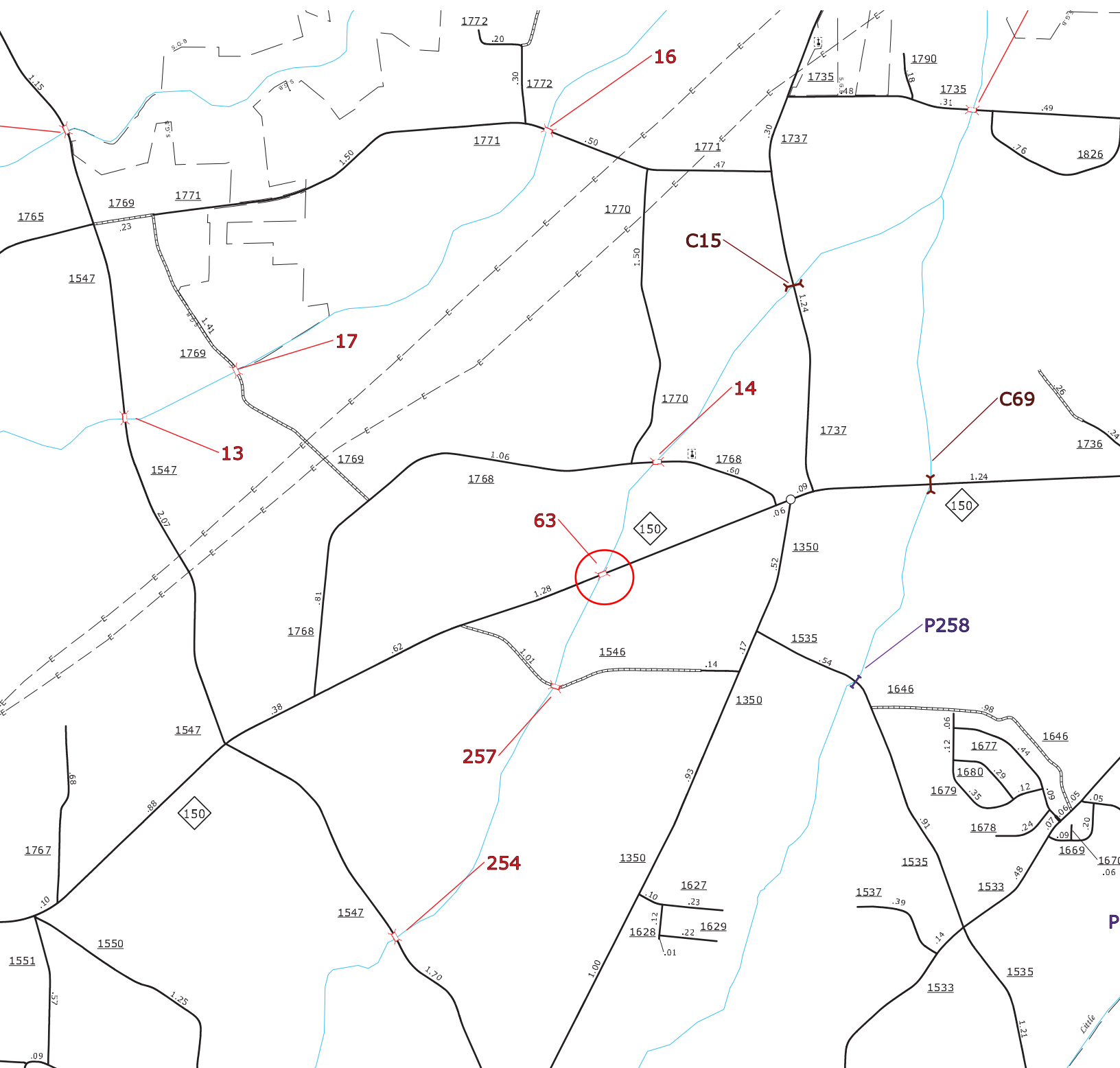
EXISTING BRIDGE INFORMATION

Location: NC 150 over Kerr Creek
High Water Information: _____

Average Daily Traffic: 3800 in 2012 Does 100 Yr. WSEL Overtop Roadway: No
Length: 122' Bed-To-Crown: 15 ft. Water Depth: 1 ft.
Type Structure: Precast prestressed concrete channels, PPC caps on timber piles
Type Spans: 1@41', 1@40', 1@41'
Upstream Structure: Brg#257 - 1 @ 26'; 1 @ 40'; 1 @ 26' Steel Girder
Location: SR 1546
Bed-To-Crown: 15' Prior Survey: _____
Downstream Structure: Brg#14- 1 @ 102' BB (New)
Location: SR 1768
Bed-To-Crown: 13' Prior Survey: _____

ENVIRONMENTAL

Trout Stream: No Anadromous Fish: No Primary Nursery Area: No
High Quality Waters: No Nutrient Sensitive Waters: No
Near Water Supply Intake: No CAMA County: No
Stream Classification: C Secondary: _____
DENR River Basin Info: Yadkin/Pee-Dee
Notes: 100 yr. hitting low steel





NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
BRIDGE MANAGEMENT UNIT

ATTENTION

TEMPORARY REPAIRS ON BEAMS AND CAPS

BRIDGE INSPECTION REPORT

INSPECTION TYPE: Routine Inspection - Contract

COUNTY ROWAN BRIDGE NUMBER 790063 INSPECTION CYCLE 0 YRS
ROUTE NC150 ACROSS KERR CREEK M.P. 0

LOCATION 0.5 MI. W. JCT. SR1350

SUPERSTRUCTURE REINFORCED CONCRETE DECK ON I-BEAMS

SUBSTRUCTURE E.BENTS:RC CAPS ON STEEL PILES,INT.BENTS:RCP&W ON SPREAD FTG

SPANS 1@41'0", 1@40'0", 1@41'0"

LONGITUDE 80° 38' 59.11"

LATITUDE 35° 38' 34.07"

INSPECTION DATE 07/09/2013

PRESENT CONDITION FAIR

PRESENT POSTING Not Posted

PROPOSED POSTING

OTHER SIGNS PRESENT 4 DELINEATORS



LOOKING EAST

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

SIGN NOTICE ISSUED FOR		NUMBERED REQUIRED
<u>No</u>	WEIGHT LIMIT	<u></u>
<u>No</u>	DELINEATORS	<u></u>
<u>No</u>	NARROW BRIDGE	<u></u>
<u>No</u>	ONE LANE BRIDGE	<u></u>
<u>No</u>	LOW CLEARANCE	<u></u>

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

Run Date: 07/22/2013

IDENTIFICATION							
(1) STATE NAME -NORTH CAROLINA	BRIDGE	790063		SUFFICIENCY RATING =	19.97		
(8) STRUCTURE NUMBER(FEDERAL)		000000001590063		STATUS =	Structurally Deficient		
(5) INVENTORY ROUTE (ON/UNDER) - ON		31001500					
(2) STATE HIGHWAY DEPARTMENT DISTRICT		1					
(3) COUNTY CODE 159	(4) PLACE CODE	0					
(6) FEATURE INTERSECTED - KERR CREEK							
(7) FACILITY CARRIED NC150							
(9) LOCATION 0.5 MI. W. JCT. SR1350							
(11) MILEPOINT		0					
(16) LAT 35° 38' 34.07"	(17) LONG 80° 38' 59.11"						
(98) BORDER BRIDGE STATE CODE	PCT SHARE						
(99) BORDER BRIDGE STRUCTURE NO							
STRUCTURE TYPE AND MATERIAL				CLASSIFICATION			
(43) STRUCTURE TYPE MAIN: Steel				(112) NBIS BRIDGE SYSTEM -	YES		
TYPE - Stringer Multibeam or Girder	CODE	302		(104) HIGHWAY SYSTEM Is not on NHS	0		
(44) STRUCTURE TYPE APPR :				(26) FUNCTIONAL CLASS - Major Collector	07		
TYPE -	CODE	0		(100) STRAHNET HIGHWAY - Not a STRAHNET Route	0		
(45) NUMBER OF SPANS IN MAIN UNIT		3		(101) PARALLEL STRUCTURE - No Parallel Structure	N		
(46) NUMBER OF APPROACH SPANS		0		(102) DIRECTION OF TRAFFIC - 2-way Traffic	2		
(107) DECK STRUCTURE TYPE - 1	CODE			(103) TEMPORARY STRUCTURE - Temporary Structure/Conditions	T		
(108) WEARING SURFACE / PROTECTIVE SYSTEM :				(110) DESIGNATED NATIONAL NETWORK - Not on the National Network	0		
(A) TYPE OF WEARING SURFACE -	CODE			(20) TOLL On Free Road	3		
(B) TYPE OF MEMBRANE -	CODE			(31) MAINTAIN - State Highway Agency	01		
(C) TYPE OF DECK PROTECTION -	CODE			(22) OWNER - State Highway Agency	01		
				(37) HISTORICAL SIGNIFICANCE - Not Eligible	5		
				CONDITION			
	CODE	0		(58) DECK	5		
(45) NUMBER OF SPANS IN MAIN UNIT		3		(59) SUPERSTRUCTURE	4		
(46) NUMBER OF APPROACH SPANS		0		(60) SUBSTRUCTURE	5		
(107) DECK STRUCTURE TYPE - 1	CODE			(61) CHANNEL & CHANNEL PROTECTION	5		
(108) WEARING SURFACE / PROTECTIVE SYSTEM :				(62) CULVERTS	N		
(A) TYPE OF WEARING SURFACE -	CODE						
(B) TYPE OF MEMBRANE -	CODE						
(C) TYPE OF DECK PROTECTION -	CODE						
				LOAD RATING AND POSTING			
				(31) DESIGN LOAD Unknown	0		
(27) YEAR BUILT		1963		(63) OPERATING RATING METHOD - Load Factor	1		
(106) YEAR RECONSTRUCTED				(64) OPERATING RATING - HS-1	1		
(42) TYPE OF SERVICE : ON - Highway				(65) INVENTORY RATING METHOD - Load Factor	1		
UNDER - Waterway	CODE	15		(66) INVENTORY RATING - HS-1	1		
(28) LANES: ON STRUCTURE 2 UNDER STRUCTURE		0		(70) BRIDGE POSTING - No Posting Required	5		
(29) AVERAGE DAILY TRAFFIC		3800		(41) STRUCTURE OPEN, POSTED ,OR CLOSED	D		
(30) YEAR OF ADT 2012	(109) TRUCK ADT PCT	7%		DESCRIPTION - Open Temporary Shoring			
(19) BYPASS OR DETOUR LENGTH		1 MI					
GEOMETRIC DATA				APPRAISAL			
(48) LENGTH OF MAXIMUM SPAN		39 FT		(67) STRUCTURAL EVALUATION	3		
(49) STRUCTURE LENGTH		122 FT		(68) DECK GEOMETRY	4		
(50) CURB OR SIDEWALK: LEFT 1.58 FT RIGHT 1.58 FT				(69) UNDERCLEARANCES, VERTI & HORIZ	N		
(51) BRIDGE ROADWAY WIDTH CURB TO CURB		28.17 FT		(71) WATERWAY ADEQUACY	7		
(52) DECK WIDTH OUT TO OUT		33.5 FT		(72) APPROACH ROADWAY ALIGNMENT	8		
(32) APPROACH ROADWAY WIDTH (W/SHOULDERS)		23 FT		(36) TRAFFIC SAFETY FEATURES	0000		
(33) BRIDGE MEDIAN - No Median	CODE	0		(113) SCOUR CRITICAL BRIDGES	4		
(34) SKEW 45°	(35) STRUCTURE FLARED	0					
(10) INVENTORY ROUTE MIN VERT CLEAR		999.9 FT		PROPOSED IMPROVEMENTS			
(47) INVENTORY ROUTE TOTAL HORIZ CLEAR		28.17 FT		(75) TYPE OF WORK -	CODE		
(53) MIN VERT CLEAR OVER BRIDGE RDWY		999.9 FT		(76) LENGTH OF STRUCTURE IMPROVEMENT			
(54) MIN VERT UNDERCLEAR REF Not a Highway or Railroad		0 FT		(94) BRIDGE IMPROVEMENT COST			
(55) MIN LAT UNDERCLEAR RT REF Not a Highway or Railroad		000 FT		(95) ROADWAY IMPROVEMENT COST			
(56) MIN LAT UNDERCLEAR LT REF -		000 FT		(96) TOTAL PROJECT COST			
				(97) YEAR OF IMPROVEMENT COST ESTIMATE			
				(114) FUTURE ADT 7600	(115) YEAR FUTURE ADT	2025	
				INSPECTIONS			
				(90) INSPECTION DATE	07/09/2013		
NAVIGATION DATA				(92) CRITICAL FEATURE INSPECTION :	(93) CFI DATE		
(38) NAVIGATION CONTROL - No Navigational Control	CODE	0		A) FRACTURE CRIT DETAIL - NO	A)		
(111) PIER PROTECTION -	CODE			B) UNDERWATER INSP - NO	B)		
(39) NAVIGATION VERTICAL CLEARANCE		0		C) OTHER SPECIAL INSP NO	C)		
(116) VERT - LIFT BRIDGE NAV MIN VERT CLEAR	FT			SCOUR			
(40) NAVIGATION HORIZONTAL CLEARANCE		0 FT					

BRIDGE MANAGEMENT UNIT

DATA ON EXISTING STRUCTURE

Run Date: 07/22/2013

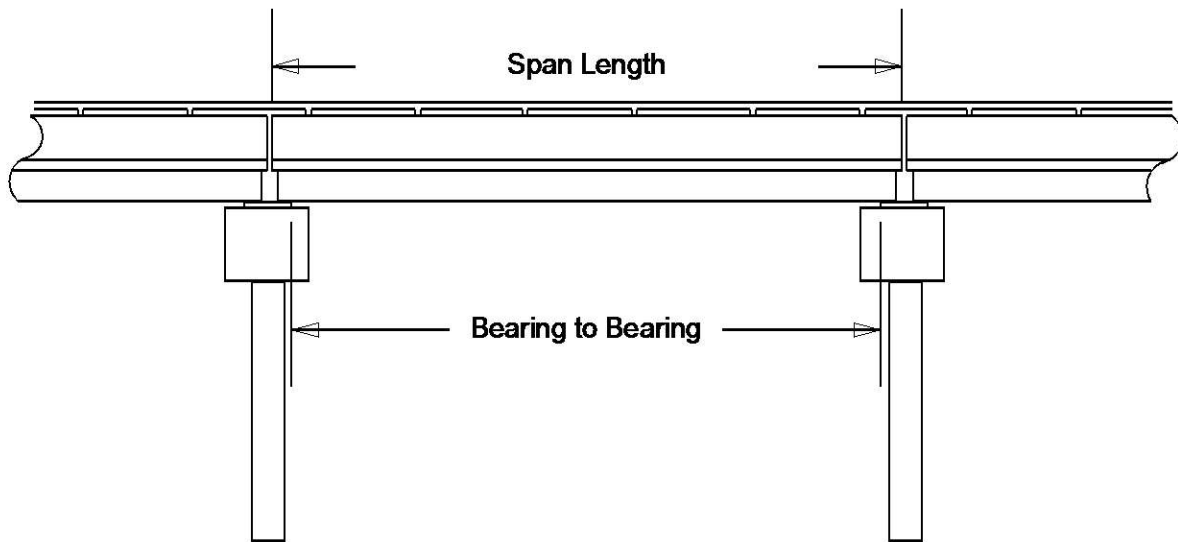
COUNTY :	DIVISION :	DISTRICT :	STRUCTURE NUMBER :	LENGTH :	
ROWAN	9	1	790063	122	FEET
ROUTE CARRIED :		FEATURE INTERSECTED :			
NC150		KERR CREEK			
LOCATED :		BRIDGE NAME :		CITY :	
0.5 MI. W. JCT. SR1350					
FUNC. CLASS :	SYST.ON :	SYST.UNDER :	ADT & YR :	RAIL TYPE :	
07	FA	NFA	3800 2012	LT 71	RT 71
BUILT :	BY :	PROJ :	FED.AID PROJ :	DESIGN LOAD :	
1963	BMU			Unknown	
REHAB :	BY :	PROJ :	ALIGNMENT :	SKEW :	LANES :
			TAN	135	ON 2 UNDER 0
NAVIGATION :			HT. CRN. TO BED :		WATER DEPTH :
VC 0 FT	HC 0 FT		15 FT		1 FT
SUPERSTRUCTURE : REINFORCED CONCRETE DECK ON I-BEAMS					
SUBSTRUCTURE : E.BENTS:RC CAPS ON STEEL PILES,INT.BENTS:RCP&W ON SPREAD FTG					
SPANS : 1@41'0", 1@40'0", 1@41'0"					
BEAMS OR GIRDERS : 4 LINES OF W27X84 I-BEAMS @ 8'0" CENTERS					
FLOOR :	ENCROACHMENT :		DECK (OUT TO OUT) :		
7.75"RC,3.5"AWS			33.5 FT		
CLEAR ROADWAY :	BETWEEN RAILS :		SIDEWALK OR CURB :		
28.17 FT	31.33 FT		LT	1.58 FT	RT 1.58 FT
VERT.CL.OVER : 999.9 FT					
INV.RTG. :	OPE.RTG. :	CONTR.MEMBER :	POSTED :	DATE	
HS-1	HS-1	Int.bmsSpB	SV TTST	10/31/1980	
SYSTEM : Primary N.C. Route			GREEN LINE ROUTE : Y		
UNDER ROUTES AND CLEARANCES					

REMARKS :

Structure Data Worksheet

Spans

County: ROWAN Structure No: 790063 Date: 07/09/2013 Inspected By: RDW



Span No	Span Length	Bearing to Bearing	Comments
1	41	37.917	NBIS BRIDGE LENGTH = 116 FT.
2	40.25	39.333	
3	41	37.917	

Stream Bed Soundings

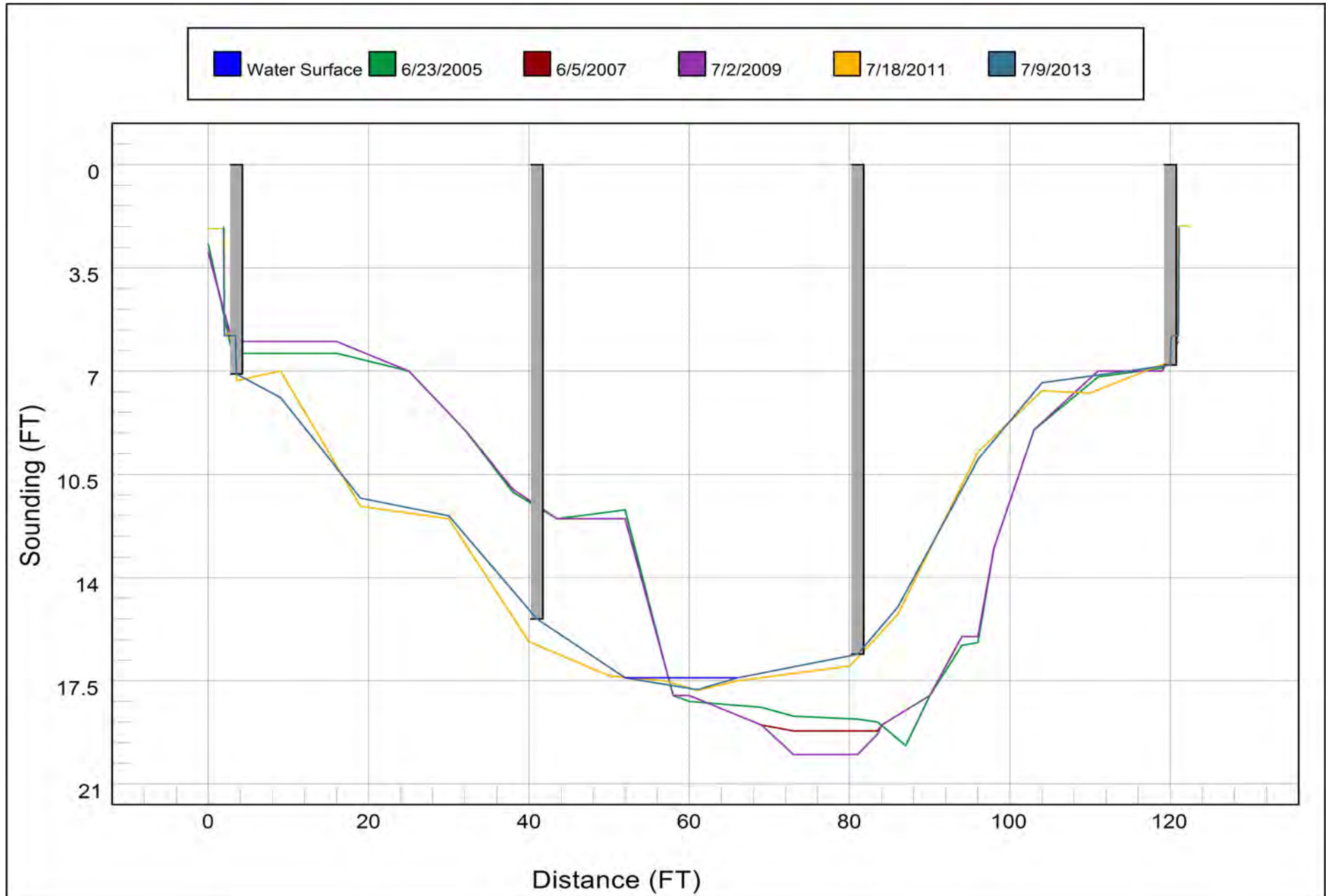
(See next sheet for profile sketch)

Bridge No: 790063 County: ROWAN Date: 07/09/2013 By: RDW

Record sounding from top of rail. Other location if needed: TOP OF RAIL

Distance from Highwater Mark to top of rail: 12 Location of Highwater Mark: ON BANKS

DOWNSTREAM			UPSTREAM		
Distance (Station) (ft)	Sounding (ft)	Description	Distance (Station) (ft)	Sounding (ft)	Description
1.9	2.1				
2	5.8	Top of Cap			
3.4	5.8				
3.5	7.1	END BENT 1	3.5	6.6	END BENT 1
9	7.9				
19	11.3				
30	11.9				
41	15.4	BENT 1	41	12	BENT 1
52	17.4	Water Surface/Water Edge (WSWE)			
61	17.8				
66	17.4	Water Surface/Water Edge (WSWE)			
81	16.6	BENT 2	81	18.8	BENT 2
86	15				
96	10				
104	7.4				
120	6.8	END BENT 2	120	7	END BENT 2
120.1	5.8				
121	5.8	Top of Cap			
121.1	2.1				



Bridge Inspection Field Sketch



Roadway	23ft Wide	2 Paved Lanes	Looking East
Left Shoulder	2ft Wide		2ft Unpaved
Right Shoulder	2ft Wide		2ft Unpaved
Left Guardrail			
Right Guardrail			

MEASUREMENTS VERIFIED BY RL BOWERS 7/9/2013

Title

APPROACH ROADWAY SKETCH

Description

LOOKING EAST

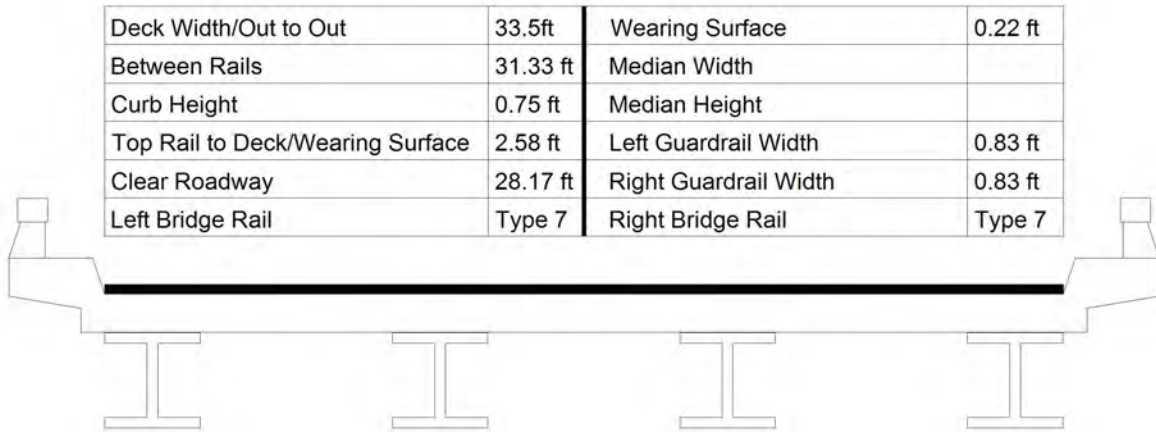
Bridge No: 790063

Drawn By: RCL

Date:07/21/11

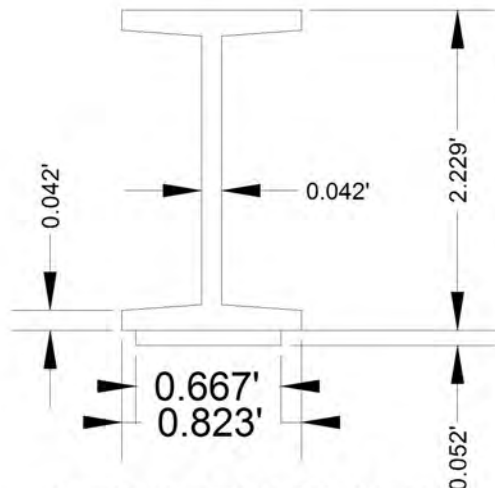
File Name:S0066000253

Bridge Inspection Field Sketch



Measurements for Span #	1		
Deck Thickness	0.67	Left Overhang	4.75
Top of Rail to Bottom of Beam	5.75	Right Overhang	4.75

Beam No	Beam Type	Spacing	Comments
1	Steel I Beam	8ft	OTHER SPANS SIMILAR
2	Steel I Beam	8ft	
3	Steel I Beam	8ft	
4	Steel I Beam		

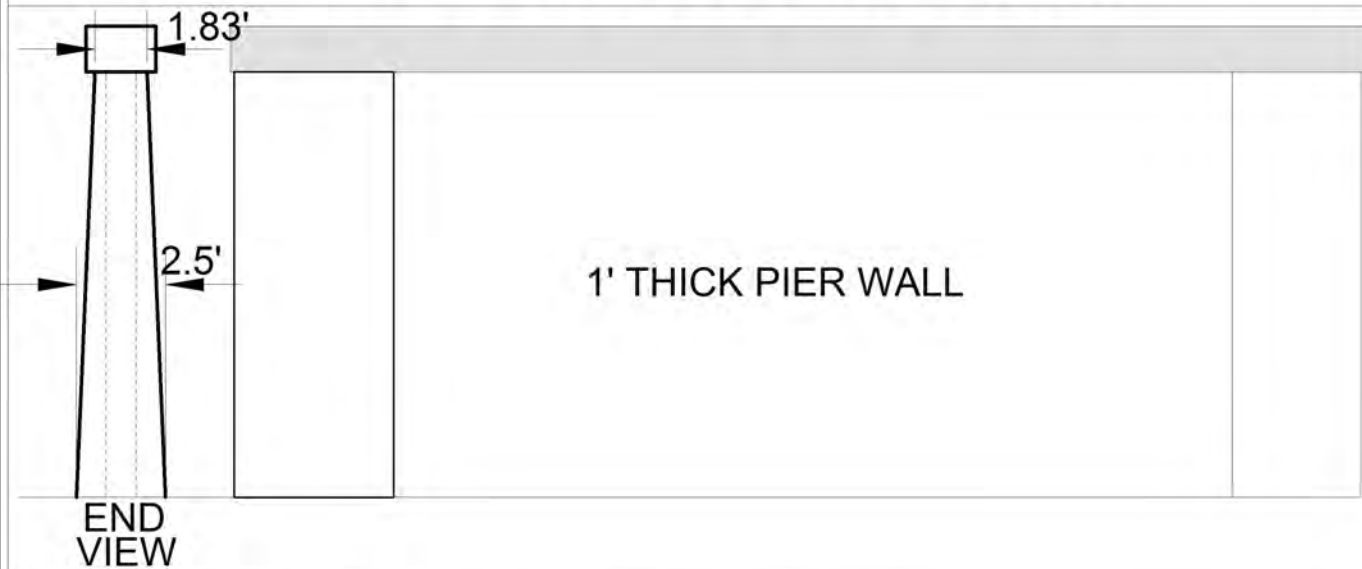


TYPICAL BEAM SECTION

MEASUREMENTS VERIFIED BY RL BOWERS 7/9/2013

Title STRUCTURE DATA SKETCH		Description STRUCTURE DATA SKETCH	
Bridge No: 790063	Drawn By: RCL	Date: 07/21/11	File Name: S0066000258

Bridge Inspection Field Sketch

[illegible]

Title
PIER DIAGRAM

Description
LOOKING EAST

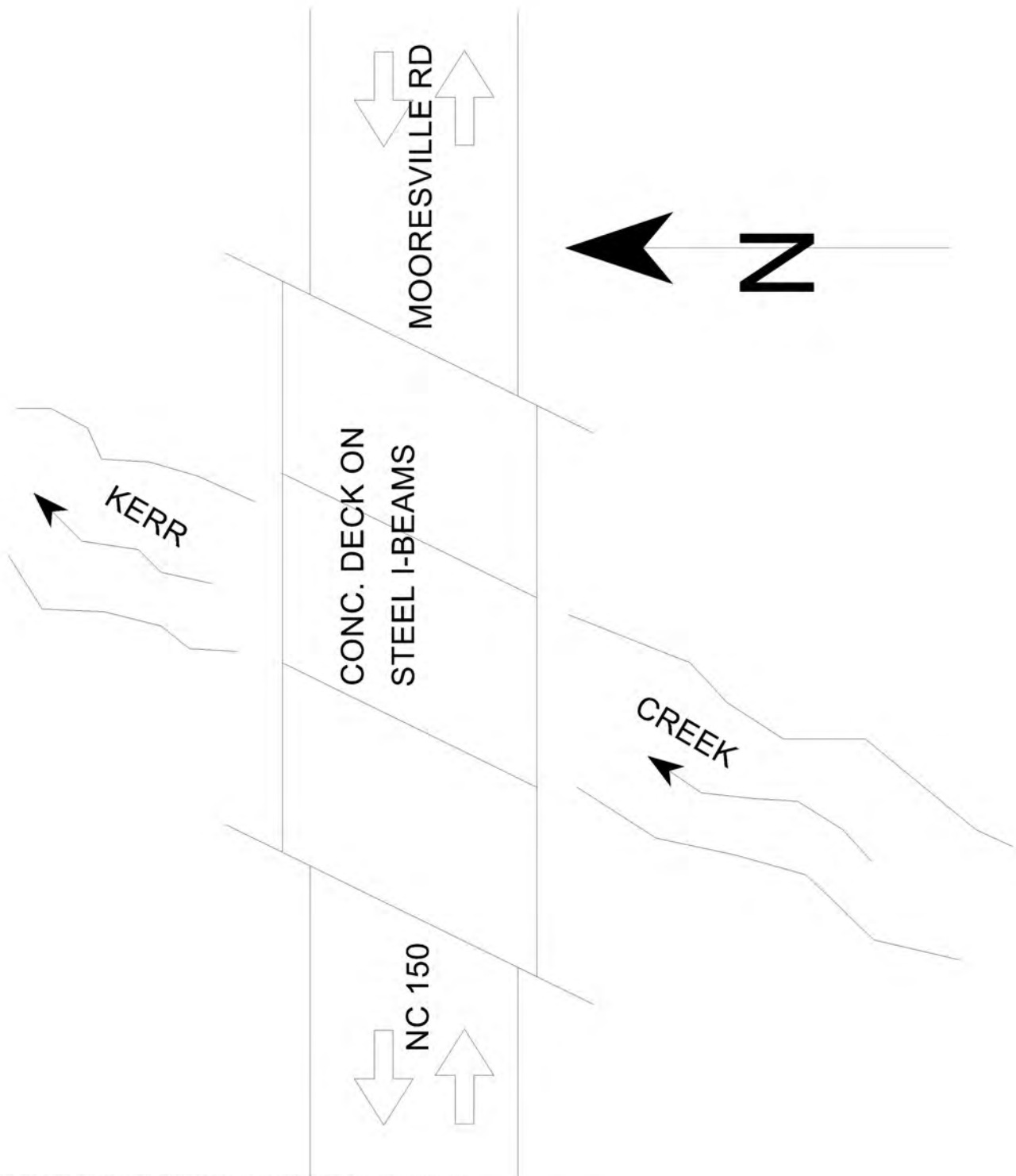
Bridge No: 790063

Drawn By: RCL

Date: 7/20/11

File Name: S0062000354

Bridge Inspection Field Sketch



MEASUREMENTS VERIFIED BY RL BOWERS 7/9/2013

Title
LOCATION SKETCH

Description
PLAN VIEW

Bridge No: 790063

Drawn By: RCL

Date: 7/21/2011

File Name: S0342000140



LOOKING WEST



SOUTH PROFILE



NORTH PROFILE



FROM THE BRIDGE LOOKING WEST



FROM THE BRIDGE LOOKING NORTH DOWNSTREAM



FROM THE BRIDGE LOOKING SOUTH UPSTREAM



FROM THE BRIDGE LOOKING EAST



THERE IS A GEODETIC SURVEY MARKER TOP OF CURB AT NW CORNER.



LOOKING EAST



END BENT 1



BENT 1



END OF THE BT CAP



SUPERSTRUCTURE

Section 5.0 – Engineering Methods

Table 8—Summary of Discharges

Flooding Source	Location	Drainage Area (square miles)	Discharges (cfs)			
			10% Annual Chance	2% Annual Chance	1% Annual Chance	0.2% Annual Chance
Jump and Run Branch	Approximately 570 feet downstream of Woodleaf Road	0.9	*	*	972	*
	Approximately 170 feet upstream of Woodleaf Road	0.9	*	*	958	*
	Approximately 980 feet upstream of Woodleaf Road	0.7	*	*	862	*
	Approximately 0.4 mile upstream of Woodleaf Road	0.6	*	*	816	*
	Approximately 0.3 mile downstream of Ashbrook Road	0.5	*	*	771	*
	Approximately 890 feet downstream of Ashbrook Road	0.5	*	*	755	*
	Just upstream of Ashbrook Road	0.4	*	*	643	*
	Approximately 920 feet downstream of White Oaks Drive	0.3	*	*	565	*
	Just upstream of White Oaks Drive	0.2	*	*	448	*
Kerr Creek	At the confluence with Sloans Creek	11.9	*	*	3,509	*
	Approximately 0.6 mile downstream of Mooresville Road / NC Highway 150	10.9	*	*	3,314	*
	At Mooresville Road / NC Highway 150	9.9	*	*	3,123	*
	Approximately 0.8 mile upstream of Mooresville Road / NC Highway 150	8.9	*	*	2,919	*
	Approximately 1.6 miles upstream of Mooresville Road / NC Highway 150	7.9	*	*	2,713	*
	Approximately 2.1 miles upstream of Mooresville Road / NC Highway 150	6.9	*	*	2,486	*
	Approximately 2.6 miles upstream of Mooresville Road / NC Highway 150	5.8	*	*	2,230	*

.Kerr Creek Limited Detail Study Plan: Floodway Run 12/18/2006

Mooreville Road TOR (Kerr) Structure ID: LDS_KC_03 Approximate

