

Project# _____
TIP# _____
Let Date _____
WBS# _____

PREDESIGN-PRESURVEY REPORT

County RUTHERFORD

Bridge# 800038
Road# NC 108 (TRYON ROAD)
Stream MOUNTAIN CREEK ✓

Type Of Request: POC Force Account TIP NCMA

Date 4/4/12 Name Wsh

Assigned To RCH

Checked By _____

Prior Survey Date MARCH '51 (attach copy of prior survey) BRN BK NO CO. FILE YES

Study By Scour Section _____

Flood Zone AE Detail Study LIMITED DS Date 7/2/08 Panel# 1509

B.M. Info N/A

Quad Map Pea RIDGE Drainage Area 43.2 From DASS (0214924000)
Q25 5300 Q50 6300 Q100 7300 Method RURAL / REG. EQU.
REGION 1

EXISTING BRIDGE INFORMATION

Location 0.1 MI. E. JCT SR 1193

Average Daily Traffic 1400, (108) TRK - 7%

Length 83' Bed- To Crown 21' Water Depth 3'

Type Structure ABUTS: RC, PIER, RC SOLID POST & WEB, RC DECK GIRDERS

Type Spans 2 @ 41' 3"

Upstream Structure 800058 ON SR 1178

Location 0.1 MI. E. JCT. SR 1157 (TIMBER FLR), 1950, 35'

Bed- To Crown 20' 1' DEEP Prior Survey _____

Downstream Structure 800266 ON SR 1149

Location 0.4 MI. W. JCT. SR 1145

Bed- To Crown 29' 1' DEEP Prior Survey _____

SCS Watershed YES

ESM No - UNDERSIGNED ENVIRONMENTAL

Trout Stream NO Anadromous Fish NO Primary Nursery Area NO

No 303D

High Quality Waters NO Nutrient Sensitive Waters NO

Near Water Supply Intake NO CAMA County NO

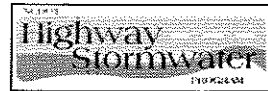
Stream Classification WS-IV Stream # 9-25-(0.5)

DENR River Basin Info. BROAD RIVER BASIN

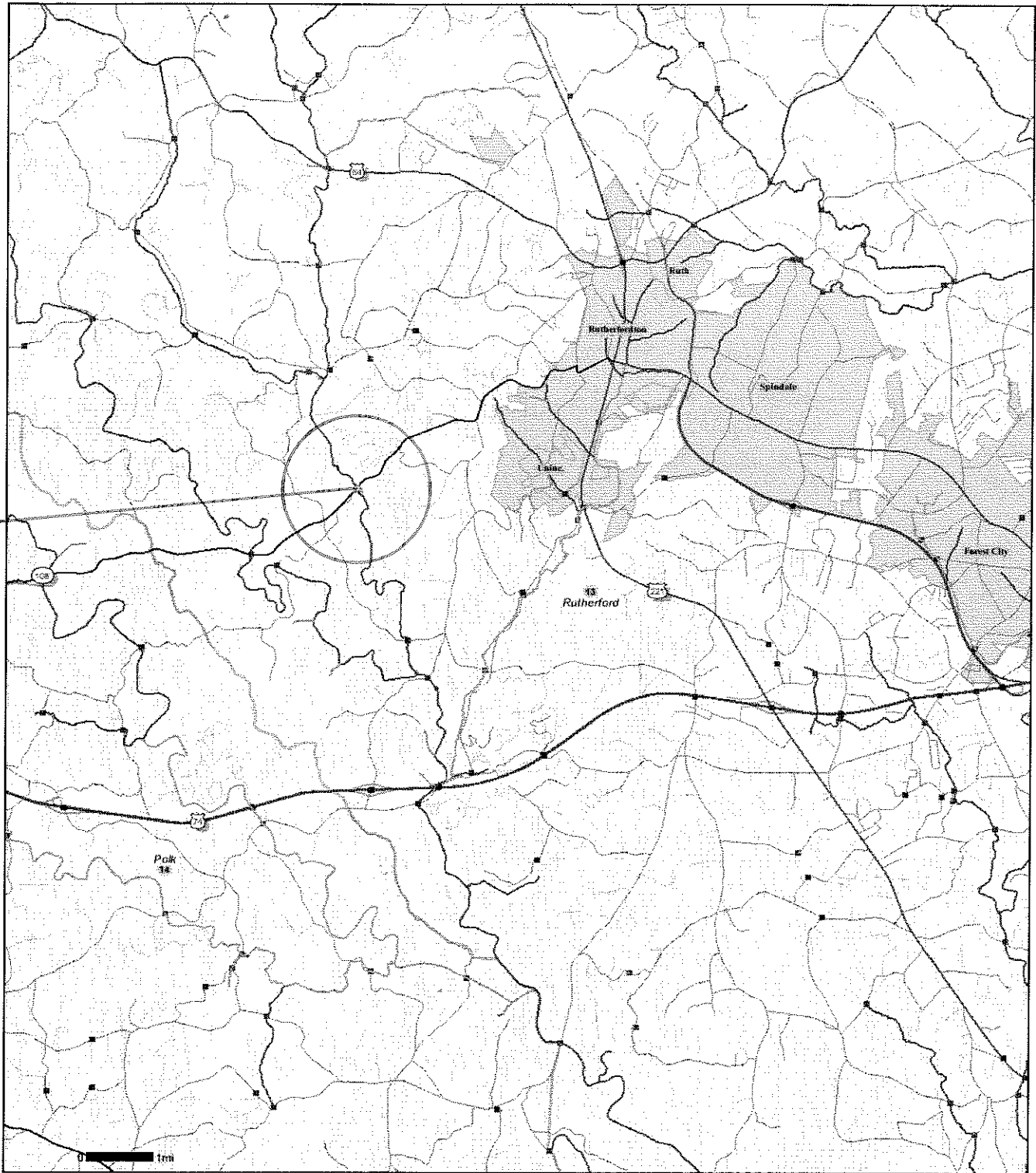
Mountain Creek from a point 0.5 mile downstream of US Hwys. 64 & 74 to a point
0.4 mile upstream of mouth 9-25-(3.5)

Environmental Sensitivity Map - 2008

4/4/2012 10:49 AM



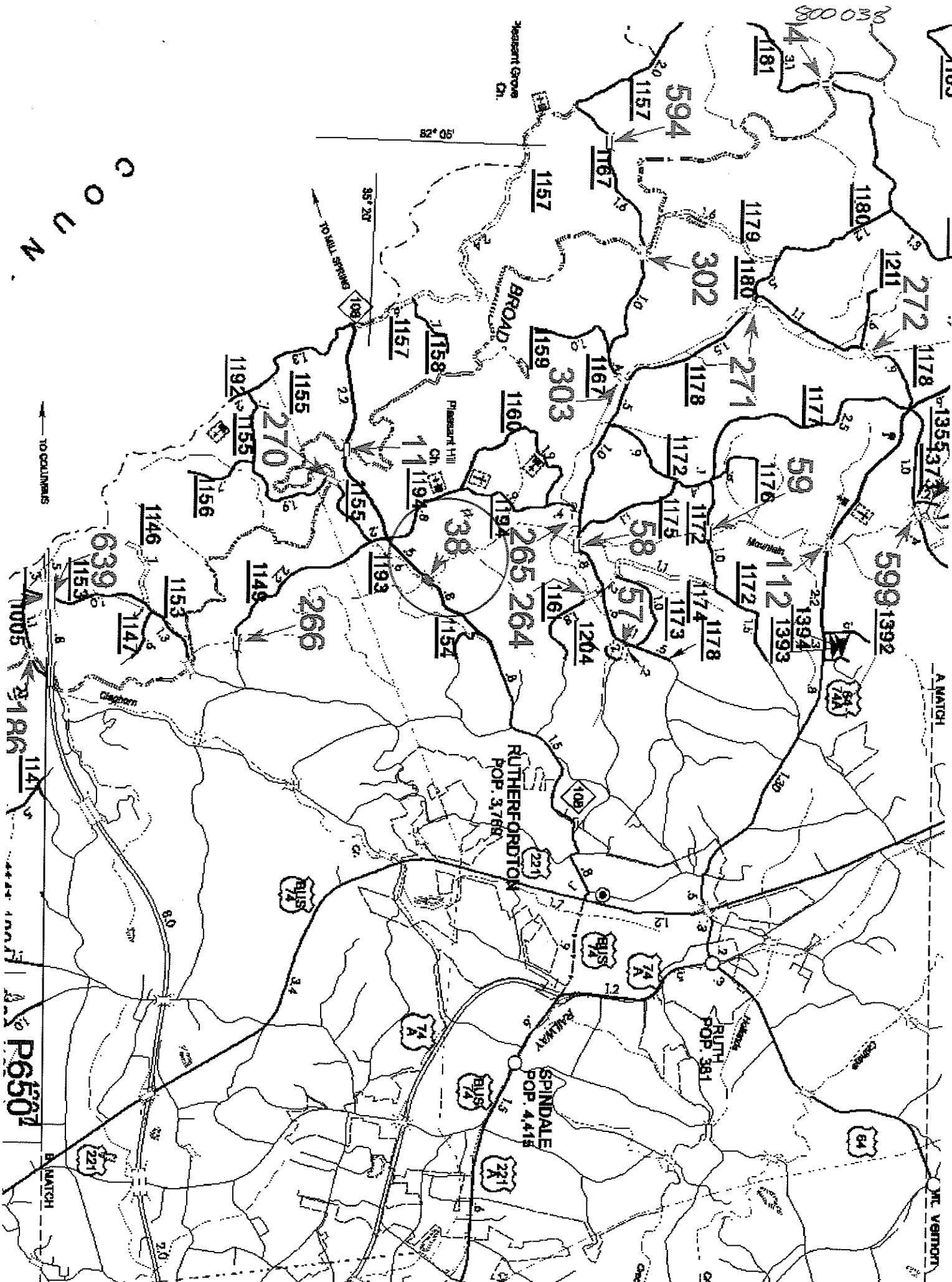
800038 LOCATION



Legend

- | | | | | | |
|---|---|--|---|---|---|
| <ul style="list-style-type: none"> City/Town DOQQ Grid 24K Grid 100K Grid Drainage Areas of Selected Sites USGS Continuous Gage Station 2003 USGS Gage Stations CGIA Copy Ambient Water Monitoring Stations Industrial Outfalls 2006 Implicit Outfalls 2007 DRAFT Stormwater Controls IDDEP | <ul style="list-style-type: none"> NPDES Sites TIP Intersections 2004 To 2010 TIP Bridge 2004 To 2010 NCDOT Bridges TIP Road Section 2004 To 2010 TIP Intersections 2007 To 2013 TIP Bridge 2007 To 2013 TIP Road Section 2007 To 2013 Airports Ferry Routes Power/Transmission Line Rest Areas | <ul style="list-style-type: none"> Railroad Local Roads Secondary Road Interstate Highway US Route Highway NC Route Surface Water Intake Anadromous Spawning Streams Water Supply Watersheds Primary Nursery Secondary Nursery Special Secondary Nursery | <ul style="list-style-type: none"> SA Water ORW HQW_ORW_DWQ_2006 High Quality Water Zone Hazardous Spill Basin Line 303D Streams 24K Hydrography Line Federal Lands National Wetlands Inventory Hazardous Spill Basin Polygon HSB Boundary 24K Hydrography Polygon 100K Hydrography Line | <ul style="list-style-type: none"> 100K Hydrography Polygon Streambed Mapping (19 Counties) Trout Water WRC Trout Water DWQ Soil State Boundary EEP TLW Local Planning EEP TLW Basinwide Planning Sub River Basin 14 Digit Hydrologic Catalog Unit 8 Digit Hydrologic Catalog Unit River Basin Major Urban | <ul style="list-style-type: none"> Minor Urban Jordan Boundary Falls Lake Boundary High Rock Boundary Catawba Main Stem RND Boundary Goose Creek Boundary Piedmont Hydrogeology County Physiographic Frame Data 500K Physiographic Region DOT Division Background County |
|---|---|--|---|---|---|





C O U N

TO COUNTRIES

TO COUNTRIES

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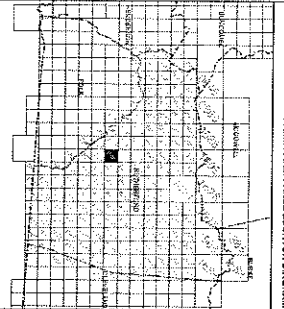
TO COUNTRIES

TO COUNTRIES

800038



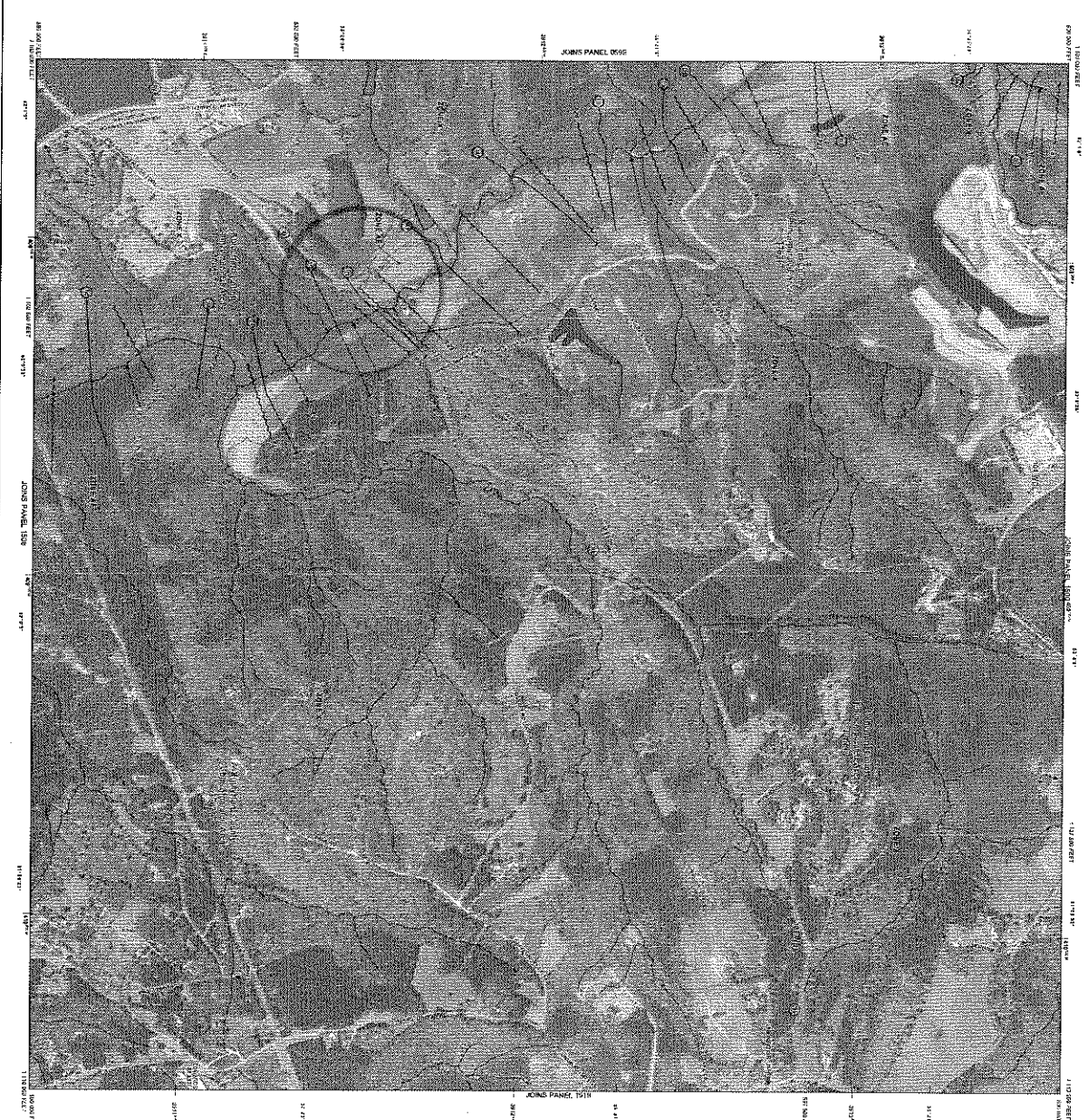
BRG# 800038 BUTHERFORD CO
MOUNTIAN CREEK NC 108 / TRYON RD.
DA= 43:2 30 MILES
QUAD SHF: PEA RIDGE



DATE OF NORTH CAROLINA FIRM PANEL LOCATION DIAGRAM

DATUM INFORMATION

The hydrologic data for this map are based on the North Carolina State Plane (NAD 83) datum. The elevation data were obtained from the National Hydrographic Survey (NHS) and the National Oceanic and Atmospheric Administration (NOAA). The datum is based on the mean sea level (MSL) at the location of the map. The datum is based on the mean sea level (MSL) at the location of the map. The datum is based on the mean sea level (MSL) at the location of the map.



NOTES TO USERS

This map is a representation of the information provided by the National Flood Insurance Program (NFIP). It is not a guarantee of the accuracy of the information. The information is provided for informational purposes only. The information is provided for informational purposes only. The information is provided for informational purposes only.

FIRM
FLOOD INSURANCE RATE MAP
NORTH CAROLINA
PANEL 1509
EFFECTIVE DATE
JULY 2, 2008
WAP NUMBER
371039000
www.nfloodmaps.com

NATIONAL FLOOD INSURANCE PROGRAM
FIRM
FLOOD INSURANCE RATE MAP
NORTH CAROLINA
PANEL 1509
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WAP NUMBER
371039000
www.nfloodmaps.com

LEGEND

GENERAL FLOOD HAZARD ZONES

- Zone A** Special Flood Hazard Area (SFHA) - 1% Annual Chance Flood
- Zone B** Special Flood Hazard Area (SFHA) - 1% Annual Chance Flood
- Zone C** Special Flood Hazard Area (SFHA) - 1% Annual Chance Flood
- Zone D** Special Flood Hazard Area (SFHA) - 1% Annual Chance Flood
- Zone E** Special Flood Hazard Area (SFHA) - 1% Annual Chance Flood
- Zone F** Special Flood Hazard Area (SFHA) - 1% Annual Chance Flood
- Zone G** Special Flood Hazard Area (SFHA) - 1% Annual Chance Flood
- Zone H** Special Flood Hazard Area (SFHA) - 1% Annual Chance Flood
- Zone I** Special Flood Hazard Area (SFHA) - 1% Annual Chance Flood
- Zone J** Special Flood Hazard Area (SFHA) - 1% Annual Chance Flood
- Zone K** Special Flood Hazard Area (SFHA) - 1% Annual Chance Flood
- Zone L** Special Flood Hazard Area (SFHA) - 1% Annual Chance Flood
- Zone M** Special Flood Hazard Area (SFHA) - 1% Annual Chance Flood
- Zone N** Special Flood Hazard Area (SFHA) - 1% Annual Chance Flood
- Zone O** Special Flood Hazard Area (SFHA) - 1% Annual Chance Flood
- Zone P** Special Flood Hazard Area (SFHA) - 1% Annual Chance Flood
- Zone Q** Special Flood Hazard Area (SFHA) - 1% Annual Chance Flood
- Zone R** Special Flood Hazard Area (SFHA) - 1% Annual Chance Flood
- Zone S** Special Flood Hazard Area (SFHA) - 1% Annual Chance Flood
- Zone T** Special Flood Hazard Area (SFHA) - 1% Annual Chance Flood
- Zone U** Special Flood Hazard Area (SFHA) - 1% Annual Chance Flood
- Zone V** Special Flood Hazard Area (SFHA) - 1% Annual Chance Flood
- Zone W** Special Flood Hazard Area (SFHA) - 1% Annual Chance Flood
- Zone X** Special Flood Hazard Area (SFHA) - 1% Annual Chance Flood
- Zone Y** Special Flood Hazard Area (SFHA) - 1% Annual Chance Flood
- Zone Z** Special Flood Hazard Area (SFHA) - 1% Annual Chance Flood

#0328

JOINS PANEL 0599

592 500 FEET

36°20'30"

3912 000 M.

3911 000 M.





NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
BRIDGE MANAGEMENT UNIT

ATTENTION PRIORITY MAINTENANCE (SPALLING IN GIRDER)

BRIDGE INSPECTION REPORT

INSPECTION TYPE: Routine Inspection

COUNTY RUTHERFORD BRIDGE NUMBER 800038 INSPECTION CYCLE 2 YRS

ROUTE NC108 ACROSS MOUNTAIN CREEK M.P. 0

LOCATION .1 M.I.E.JCT.SR1193

SUPERSTRUCTURE REINFORCED CONCRETE DECK GIRDERS

SUBSTRUCTURE ABUTS:REINFORCED CONCRETE;PIER:RC SOLID POST & WEB

SPANS 2 @ 41'-3

LONGITUDE 82° 1' 54.2"

LATITUDE 35° 19' 49.6"

PRESENT CONDITION FAIR

INVENTORY RATING

INSPECTION DATE 05/11/2011

OPERATING RATING

PRESENT POSTING Not Posted

PROPOSED POSTING

COMPUTER UPDATE

ANALYSIS DATE

POSTING LETTER DATE

SUFFICIENCY RATING

OTHER SIGNS PRESENT DELINEATORS (4), NARROW BRIDGE (2)



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>

WEST APPROACH

NATIONAL BRIDGE INVENTORY----- STRUCTURE INVENTORY AND APPRAISAL Run Date: 06/24/2011

IDENTIFICATION				CLASSIFICATION		CODE
(1) STATE NAME -NORTH CAROLINA	BRIDGE	800038	SUFFICIENCY RATING =		51.2	
(8) STRUCTURE NUMBER(FEDERAL)	000000001610038		STATUS =	Functionally Obsolete		
INVENTORY ROUTE (ON/UNDER) - ON	131001080					
(2) STATE HIGHWAY DEPARTMENT DISTRICT	13					
(3) COUNTY CODE 161	(4) PLACE CODE 00000		(112)NBIS BRIDGE SYSTEM -		YES	
(6) FEATURE INTERSECTED - MOUNTAIN CREEK			(104)HIGHWAY SYSTEM NON NHS Route		0	
(7) FACILITY CARRIED NC108			(26) FUNCTIONAL CLASS - Major Collector		07	
(9) LOCATION .1 MILE JCT. SR1193			(100)STRAHNET HIGHWAY - Not a STRAHNET Route		0	
(11)MILEPOINT	0		(101)PARALLEL STRUCTURE - No Parallel Structure		N	
(16)LAT 35° 19' 49.6"	(17)LONG 82° 1' 54.2"		(102)DIRECTION OF TRAFFIC - 2-way Traffic		2	
(98)BORDER BRIDGE STATE CODE	PCT SHARE		(103)TEMPORARY STRUCTURE - Not Temporary			
(99)BORDER BRIDGE STRUCTURE NO			(110)DESIGNATED NATIONAL NETWORK - Not Part of		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				CONDITION		CODE
(43) STRUCTURE TYPE MAIN: Concrete			(58) DECK		5	
TYPE - Tee Beam	CODE 104		(59) SUPERSTRUCTURE		5	
(44) STRUCTURE TYPE APPR :			(60) SUBSTRUCTURE		5	
TYPE -	CODE		(61) CHANNEL & CHANNEL PROTECTION		5	
(45) NUMBER OF SPANS IN MAIN UNIT	2		(62) CULVERTS		N	
(46) NUMBER OF APPROACH SPANS						
(107)DECK STRUCTURE TYPE - Concrete cast-in-place	CODE 1		LOAD RATING AND POSTING		CODE	
(108)WEARING SURFACE / PROTECTIVE SYSTEM :			(31) DESIGN LOAD H 15		2	
(A) TYPE OF WEARING SURFACE - Bituminous	CODE 6		(64) OPERATING RATING - HS-19		135	
(B) TYPE OF MEMBRANE - None	CODE 0		(66) INVENTORY RATING - HS-12		121	
(C) TYPE OF DECK PROTECTION - None	CODE 0		(70) BRIDGE POSTING - No Posting Required		5	
			(41) STRUCTURE OPEN, POSTED, OR CLOSED		A	
			DESCRIPTION - Open, No Restriction			
AGE AND SERVICE				APPRAISAL		CODE
(27) YEAR BUILT	1926		(67) STRUCTURAL EVALUATION		5	
(106)YEAR RECONSTRUCTED			(68) DECK GEOMETRY		2	
(42) TYPE OF SERVICE : ON - Highway			(69) UNDERCLEARANCES, VERTI & HORIZ		N	
UNDER - Waterway	CODE 15		(71) WATERWAY ADEQUACY		7	
(28) LANES: ON STRUCTURE 2 UNDER STRUCTURE			(72) APPROACH ROADWAY ALIGNMENT		7	
(29) AVERAGE DAILY TRAFFIC	1400		(36) TRAFFIC SAFETY FEATURES		0111	
(30) YEAR OF ADT 2008	(109) TRUCK ADT PCT 7 %		(113)SCOUR CRITICAL BRIDGES		U	
(19) BYPASS OR DETOUR LENGTH	7 MI		SCOUR PLAN OF ACTION Z			
GEOMETRIC DATA				PROPOSED IMPROVEMENTS		CODE
(48) LENGTH OF MAXIMUM SPAN	40 FT		(75) TYPE OF WORK -	CODE 311		
(49) STRUCTURE LENGTH	83 FT		(76) LENGTH OF STRUCTURE IMPROVEMENT	108 FT		
(50)CURB OR SIDEWALK: LEFT 0.7 FT RIGHT	0.7 FT		(94) BRIDGE IMPROVEMENT COST	\$231,000		
(51) BRIDGE ROADWAY WIDTH CURB TO CURB	20.0 FT		(95) ROADWAY IMPROVEMENT COST	\$58,000		
(52) DECK WIDTH OUT TO OUT	23.0 FT		(96) TOTAL PROJECT COST	\$347,000		
(32) APPROACH ROADWAY WIDTH (W/SHOULDERS)	21.0 FT		(97) YEAR OF IMPROVEMENT COST ESTIMATE	2007		
(33) BRIDGE MEDIAN - No Median	CODE 0		(114)FUTURE ADT 2800	(115) YEAR FUTURE ADT 2025		
(34) SKEW 30° (35) STRUCTURE FLARED	NO		INSPECTIONS			
(10) INVENTORY ROUTE MIN VERT CLEAR	99 FT 99 IN		(90) INSPECTION DATE	05/11/2011		
(47) INVENTORY ROUTE TOTAL HORIZ CLEAR	20.0 FT		(92) CRITICAL FEATURE INSPECTION :	(93) CFI DATE		
(53) MIN VERT CLEAR OVER BRIDGE RDWY	99 FT 99 IN		A) FRACTURE CRIT DETAIL - NO	A)		
(54) MIN VERT UNDERCLEAR REF Not a Highway or Railroad			B) UNDERWATER INSP - NO	B)		
(55) MIN LAT UNDERCLEAR RT REF Not a Highway or Railroad	99.9 FT		C) OTHER SPECIAL INSP NO	C)		
(56) MIN LAT UNDERCLEAR LT REF -	0.0 FT		SCOUR			
NAVIGATION DATA						
(38) NAVIGATION CONTROL - No Navigational Control	CODE 0					
(111)PIER PROTECTION - Not Applicable	CODE					
(39) NAVIGATION VERTICAL CLEARANCE	0					
(116)VERT - LIFT BRIDGE NAV MIN VERT CLEAR						
(40) NAVIGATION HORIZONTAL CLEARANCE	0					

800038

BRIDGE MANAGEMENT UNIT
DATA ON EXISTING STRUCTURE

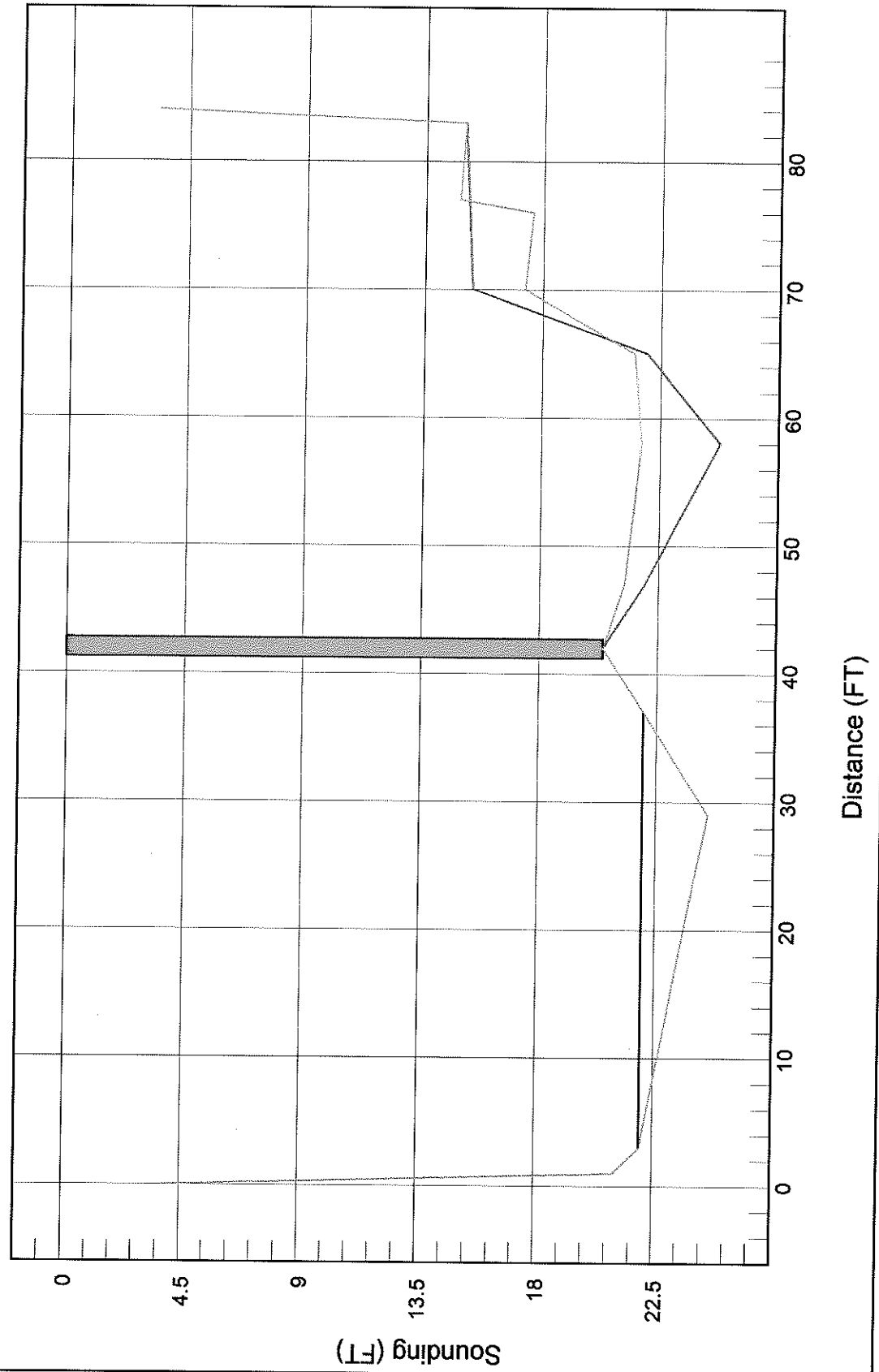
Run Date: 06/24/2011

COUNTY : RUTHERFORD		DIV : 13		DIST : 1		STRUCTURE NUMBER : 800038		LENGTH : 83 FEET	
ROUTE CARRIED : NC108				FEATURE INTERSECTED : MOUNTAIN CREEK					
LOCATED : .1 MI.E.JCT.SR1193				BRIDGE NAME :			CITY :		
FUNC. CLASS : 07		SYST.ON : FA		SYST.UNDER : NFA		ADT & YR : 1400 2008		RAIL TYPE : LT 301 RT 301	
BUILT : 1926		BY : SHPWC		PROJ : 874		FED.AID PROJ :		DESIGN LOAD : H 15	
REHAB :		BY :		PROJ :		ALIGNMENT : TAN		SKREW : 120	
								LANES : ON 2 UNDER	
NAVIGATION : VC 0.0 FT HC 0.0 FT				HT. CRN. TO BED : 21 FT				WATER DEPTH : 3 FT	
SUPERSTRUCTURE : REINFORCED CONCRETE DECK GIRDERS									
SUBSTRUCTURE : ABUTS:REINFORCED CONCRETE;PIER:RC SOLID POST & WEB									
SPANS : 2 @ 41'-3									
BEAMS OR GIRDERS : 3 LINES REINFORCED CONCRETE DECK GIRDERS @ 8' CENTERS									
FLOOR : 9 RC/5 AWS		ENCROACHMENT :				DECK (OUT TO OUT) : 23.0 FT			
CLEAR ROADWAY : 20.0 FT		BETWEEN RAILS : 21.3 FT				SIDEWALK OR CURB : LT 0.7 FT RT 0.7 FT			
VERT.CL.OVER : 99 FT 99 IN		VERT.CL.UNDER : 00 FT 00 IN				HOR.CL.UNDER : 0.0 FT			
INV.RTG. : HS-12		OPE.RTG. : HS-19		CONTR.MEMBER : RCDG		POSTED : SV		TTST DATE	
SYSTEM : Primary N.C. Route						GREEN LINE ROUTE : Y			
2ND OPENING :		3RD OPENING :		4TH OPENING :		5TH OPENING :			
REMARKS :									

Bridge: 800038 County RUTHERFORD Date: 05/11/2011

STREAMBED PROFILE

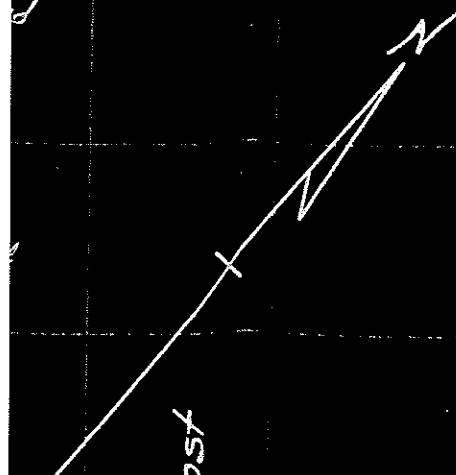
Vertical Scale: 0 to 22.5 FT



Remove & Fill in

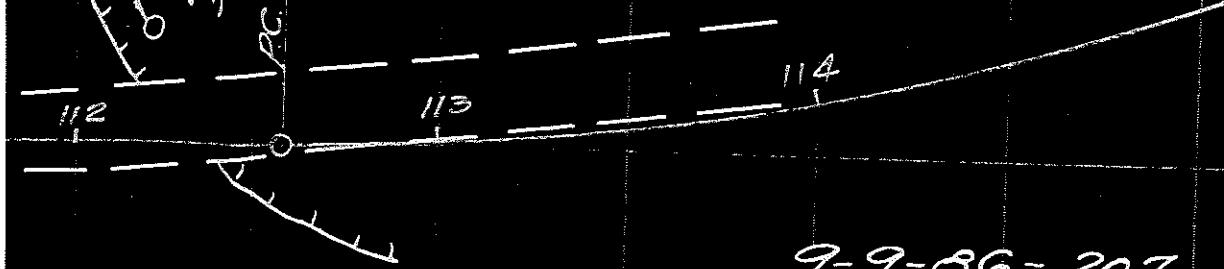
800038

11023



P.I. 114+87.6
 Δ 35°27' Lt
D 8°
T 229.1'
L 443.1'

Toe of hill
 5 B.M. Elev. 842.54
 Nail 17 8" Fence Post
 30 Lt 112420
 PC 112458.5



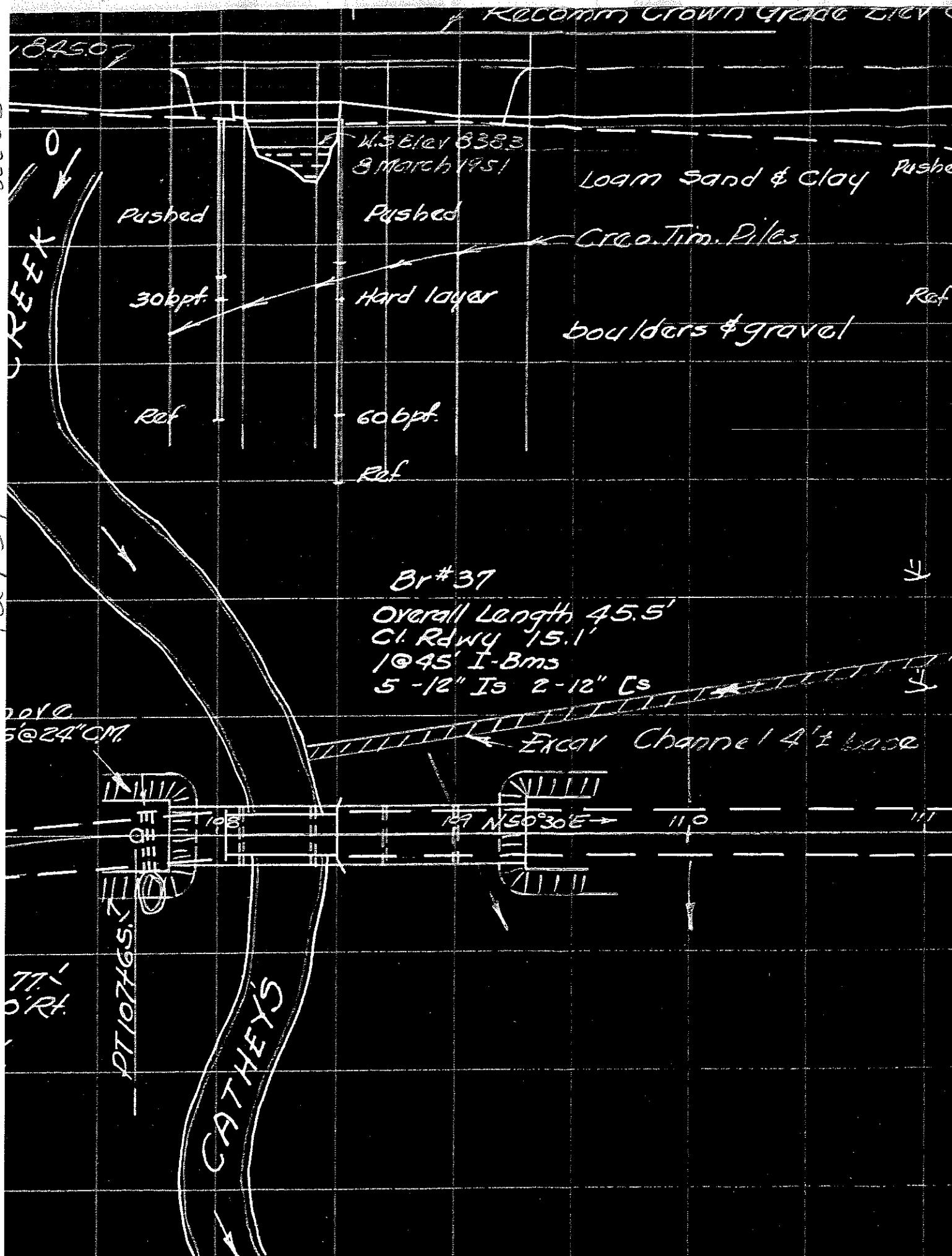
Br # 38
 Overall Length 220'
 Cl. Rdwy 15.2'
 1 @ 22' I-Bms.
 5-9" Is 2-9' Is

9-9-86-207
 RUTHERFORD CO
 CATHEY'S CREEK
 Brs # 37 & # 38
 March 1951 W.B.J.

184507

800038

1 of 3



800038

(3 of 3)

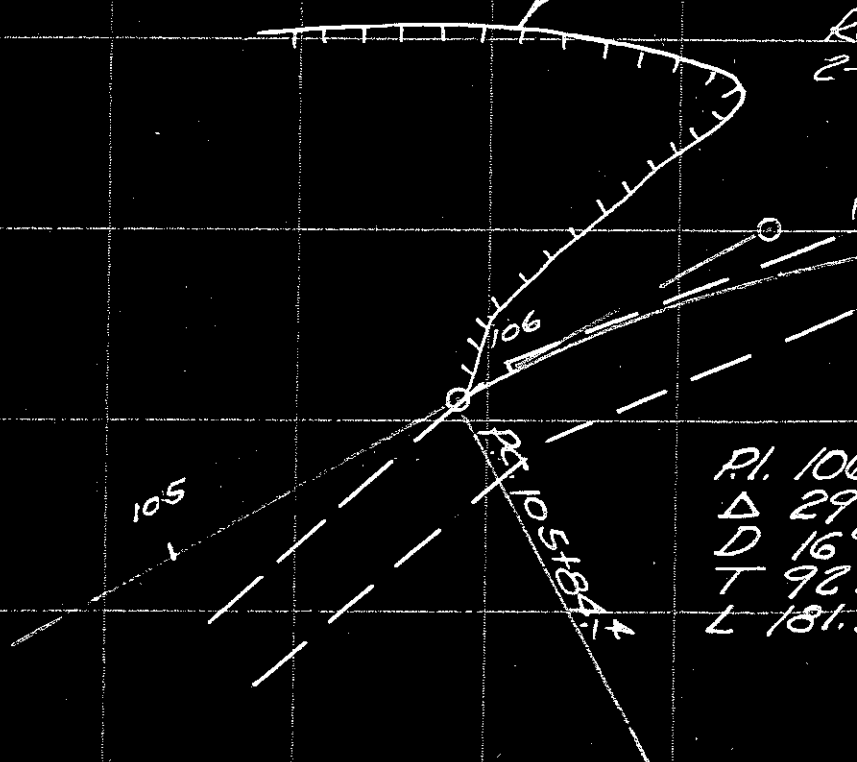
1940 H.W.

840

830

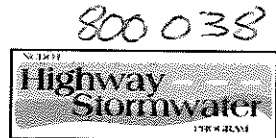
DA 25.59 Mi.
 C=0.7 (Tail)
 Waterway Reg'd 1000' ±
 (6 @ 25' @ EBS on US 64A
 Downstr.)

Toe of hill



Environmental Sensitivity Map - 2008

4/9/2012 6:47 AM



038 w/LimtDS&WatrShd



Legend

- | | | | | | |
|--|--|--|---|---|---|
| <ul style="list-style-type: none"> City/Town DOQQ Grid 24K Grid 100K Grid Drainage Areas of Selected Sites USGS Continuous Gage Station 2003 USGS Gage Stations CGIA Copy Ambient Water Monitoring Stations Industrial Outfalls 2006 Implicit Outfalls 2007 DRAFT Stormwater Controls IDEP | <ul style="list-style-type: none"> NPDES Sites TIP Intersections 2004 To 2010 TIP Bridge 2004 To 2010 NCDOT Bridges TIP Intersections 2007 To 2013 TIP Bridge 2007 To 2013 TIP Road Section 2007 To 2013 Airports Ferry Routes Power/Transmission Line Rest Areas | <ul style="list-style-type: none"> Railroad Local Roads Secondary Road Interstate Highway US Route Highway NC Route Surface Water Intake Anadromous Spawning Streams Water Supply Watersheds Primary Nursery Secondary Nursery Special Secondary Nursery | <ul style="list-style-type: none"> SA Water ORW HQW_ORW_DWQ_2006 High Quality Water Zone Hazardous Spill Basin Line 303D Streams 24K Hydrography Line Federal Lands National Wetlands Inventory Hazardous Spill Basin Polygon HSB Boundary 24K Hydrography Polygon 100K Hydrography Line | <ul style="list-style-type: none"> 100K Hydrography Polygon Streambed Mapping (19 Counties) Trout Water WRC Trout Water DWQ Soil State Boundary EEP TLW Local Planning EEP TLW Basinwide Planning Sub River Basin 14 Digit Hydrologic Catalog Unit 8 Digit Hydrologic Catalog Unit River Basin Major Urban | <ul style="list-style-type: none"> Minor Urban Jordan Boundary Falls Lake Boundary High Rock Boundary Catawba Main Stem RND Boundary Goose Creek Boundary Piedmont Hydrogeology County Physiographic Frame Data 500K Physiographic Region DOT Division Background County |
|--|--|--|---|---|---|

Section 4.0 – Area Studied

Table 4—Flooding Sources Studied by Detailed Methods: Limited Detailed

Source	Riverine Sources		Affected Communities
	From	To	
Knob Creek (into Broad River) Tributary 9	The confluence with Knob Creek (into Broad River)	Approximately 0.6 mile upstream of McEntire Road (SR 1341)	Rutherford County (Unincorporated Areas)
Knob Creek (into Broad River) Tributary 11	The confluence with Knob Creek (into Broad River)	Approximately 0.5 mile upstream of Pleasant Grove Road (SR 1345)	Rutherford County (Unincorporated Areas)
Lake Lure	Entire shoreline within Rutherford County		Town of Lake Lure
Little Camp Creek	The confluence with Big Camp Creek	Approximately 0.4 mile upstream of Old Morganton Road (SR 1513)	Rutherford County (Unincorporated Areas)
Maple Creek	The confluence with Mountain Creek	Approximately 140 feet upstream of US Highway 64 (US 74 A Alternate)	Rutherford County (Unincorporated Areas)
McKinney Creek	The confluence with Broad River	Approximately 1,450 feet upstream of Ted Smith Road (SR 1104)	Rutherford County (Unincorporated Areas)
Mill Creek (into Catheys Creek)	The confluence with Catheys Creek	Approximately 0.8 mile upstream of the confluence with Catheys Creek	Rutherford County (Unincorporated Areas)
Morrow Creek	The confluence with Second Broad River	Approximately 0.8 mile upstream of Pine Street (SR 1903)	Rutherford County (Unincorporated Areas), Town of Forest City
Mountain Creek	The confluence with Broad River	The confluence of East Branch Mountain and West Branch Mountain Creek	Rutherford County (Unincorporated Areas)
North Fork First Broad River	The confluence with First Broad River	Approximately 1.5 miles upstream of the confluence of Sally Queen Creek	Rutherford County (Unincorporated Areas)
Piney Creek	The confluence with Cedar Creek	Approximately 300 feet upstream of Piney Creek Tributary 1	Rutherford County (Unincorporated Areas)
Piney Creek Tributary 1	The confluence with Piney Creek	Approximately 0.7 mile upstream of Bills Creek Road (SR 1008)	Rutherford County (Unincorporated Areas)
Piney Knob Creek	The confluence with West Branch Mountain Creek	Approximately 300 feet upstream of Elliott Road (SR 1348)	Rutherford County (Unincorporated Areas)
Pot Branch	The confluence with Brier Creek	Approximately 2.3 miles upstream of the confluence with Brier Creek	Rutherford County (Unincorporated Areas)
Puzzle Creek	The confluence with Second Broad River	Approximately 200 feet upstream of Piney Mountain Church Road (SR 1007)	Town of Bostic, Rutherford County (Unincorporated Areas)
Reynolds Creek	The confluence with Hollands Creek	Approximately 0.6 mile upstream of West Street	Rutherford County (Unincorporated Areas), Town of Spindale

Section 5.0 – Engineering Methods

Table 6—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
McKinney Creek	Approximately 200 feet downstream of Ted Smith Road (SR 1104)	2.1	*	*	1,390	*
Mill Creek (into Catheys Creek)	Confluence with Catheys Creek	4.0	*	*	2,050	*
Morrow Creek	Confluence with Second Broad River	2.6	*	*	1,570	*
	Approximately 30 feet downstream of US Highway 74 A Bypass	1.1	*	*	940	*
Mountain Creek	Confluence with Broad River	46.5	*	*	9,510	*
	Approximately 0.4 mile downstream of Tryon Road (NC Highway 108)	44.3	*	*	9,250	*
	Approximately 430 feet downstream of Tryon Road (NC Highway 108)	42.7	*	*	9,040	*
	Approximately 1,480 feet upstream of Maple Creek Road (SR 1178)	28.6	*	*	7,030	*
	Approximately 230 feet downstream of US Highway 64 / 74 A Alternate	25.0	*	*	6,880	*
	Approximately 750 feet downstream of Mountain Creek Road (SR 1355)	19.9	*	*	6,790	*
Mountain Creek Tributary 16	Confluence with Mountain Creek	4.6	1,090	1,840	2,250	3,340
	Approximately 80 feet upstream of Aberdeen Farm Drive	2.7	770	1,320	1,620	2,440
	Approximately 290 feet upstream of Clearwater Parkway	1.2	440	780	960	1,460
Mountain Creek Tributary of Tributary 16	Confluence with Mountain Creek Tributary 16	0.7	320	570	700	1,080
North Fork First Broad River	Confluence with First Broad River	14.5	*	*	4,590	*

Section 5.0 – Engineering Methods

Table 10—Limited Detailed Flood Hazard Data

Cross Section ¹	Stream Station ²	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width ³ (feet)
MILL CREEK (INTO CATHEYS CREEK)				
036	3,649	2,050	966.9	209 / 12
040	4,012	2,050	967.4	76 / 30
MORROW CREEK				
003	332	1,570	803.2 ⁴	50 / 40
007	656	1,570	803.2 ⁴	107 / 16
011	1,086	1,570	803.2 ⁴	91 / 28
012	1,218	1,570	803.2 ⁴	32 / 32
014	1,388	1,570	803.2 ⁴	31 / 29
017	1,668	1,570	803.2 ⁴	46 / 153
020	2,046	1,570	803.2 ⁴	52 / 53
025	2,534	1,570	803.2 ⁴	39 / 38
032	3,190	1,570	803.2 ⁴	23 / 56
038	3,784	1,570	803.4	35 / 118
042	4,242	1,170	804.8	22 / 20
049	4,908	1,170	807.7	35 / 27
053	5,314	940	809.7	26 / 24
057	5,733	940	812.0	25 / 25
061	6,054	940	813.5	55 / 55
066	6,649	940	818.3	21 / 21
072	7,243	940	822.6	14 / 16
079	7,881	940	827.4	22 / 21
080	7,976	940	827.8	32 / 20
081	8,056	940	834.3	25 / 26
083	8,266	940	834.4	22 / 46
088	8,822	940	834.7	16 / 22
096	9,556	940	842.2	18 / 18
103	10,308	940	851.2	22 / 25
108	10,830	940	858.4	15 / 15
112	11,248	940	864.6	15 / 15
118	11,802	940	870.9	13 / 12
120	12,001	940	872.9	16 / 16
MOUNTAIN CREEK				
007	686	9,510	757.6 ⁴	146 / 425
011	1,132	9,510	757.6 ⁴	86 / 134
015	1,533	9,510	757.6 ⁴	57 / 50
020	2,005	9,510	757.6 ⁴	47 / 43
023	2,297	9,490	757.6 ⁴	55 / 55
024	2,354	9,490	757.6 ⁴	52 / 52
026	2,573	9,490	757.6 ⁴	112 / 114
031	3,149	9,490	757.6 ⁴	149 / 302
037	3,654	9,490	757.6 ⁴	44 / 551
041	4,110	9,490	757.6 ⁴	53 / 695
046	4,620	9,490	757.6 ⁴	45 / 843
051	5,079	9,490	757.6 ⁴	45 / 706
055	5,483	9,490	757.6 ⁴	180 / 381
062	6,173	9,490	757.6 ⁴	56 / 57
064	6,358	9,490	757.6 ⁴	239 / 46
068	6,847	9,490	757.6 ⁴	224 / 214

Section 5.0 – Engineering Methods

Table 10—Limited Detailed Flood Hazard Data

Cross Section ¹	Stream Station ²	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width ³ (feet)
MOUNTAIN CREEK				
074	7,447	9,490	757.6 ⁴	38 / 42
079	7,932	9,490	758.6	44 / 66
084	8,355	9,490	759.3	44 / 43
088	8,825	9,490	760.9	74 / 34
092	9,164	9,490	761.7	48 / 48
097	9,687	9,490	762.8	42 / 93
100	9,959	9,490	763.1	43 / 77
103	10,334	9,490	763.7	57 / 44
108	10,762	9,370	764.5	174 / 198
112	11,170	9,370	764.7	41 / 198
117	11,671	9,370	765.1	92 / 174
123	12,325	9,370	765.5	45 / 207
129	12,918	9,370	765.9	429 / 49
133	13,316	9,370	766.1	555 / 101
137	13,722	9,370	766.2	545 / 43
143	14,292	9,370	766.5	332 / 268
150	14,986	9,370	767.0	51 / 235
155	15,510	9,370	767.7	43 / 42
164	16,395	9,250	769.4	425 / 150
168	16,843	9,250	769.5	370 / 302
173	17,322	9,040	769.7	463 / 217
176	17,631	9,040	769.9	94 / 100
177	17,740	9,040	772.2	82 / 90
183	18,267	9,040	773.4	425 / 277
187	18,673	9,040	773.4	616 / 88
194	19,383	9,040	773.5	675 / 42
201	20,082	9,040	773.6	475 / 78
208	20,794	9,040	774.0	407 / 57
211	21,103	9,040	774.2	340 / 147
219	21,896	8,910	775.5	243 / 77
225	22,484	8,910	776.9	195 / 273
231	23,050	8,910	777.5	526 / 246
237	23,687	8,910	777.8	746 / 335
245	24,503	8,820	778.7	116 / 605
254	25,410	8,820	780.9	175 / 42
260	26,005	8,240	783.0	324 / 44
267	26,697	7,130	784.3	129 / 45
271	27,054	7,130	785.3	31 / 45
271	27,127	7,130	786.7	59 / 80
273	27,349	7,130	787.8	71 / 208
280	27,958	7,130	787.9	52 / 667
285	28,452	7,130	788.0	61 / 252
294	29,425	7,030	788.7	141 / 454
300	29,963	7,030	789.4	224 / 312
303	30,317	7,030	790.2	178 / 195
307	30,724	7,030	791.4	60 / 173
315	31,484	7,030	793.1	36 / 323
318	31,834	7,030	793.5	33 / 161

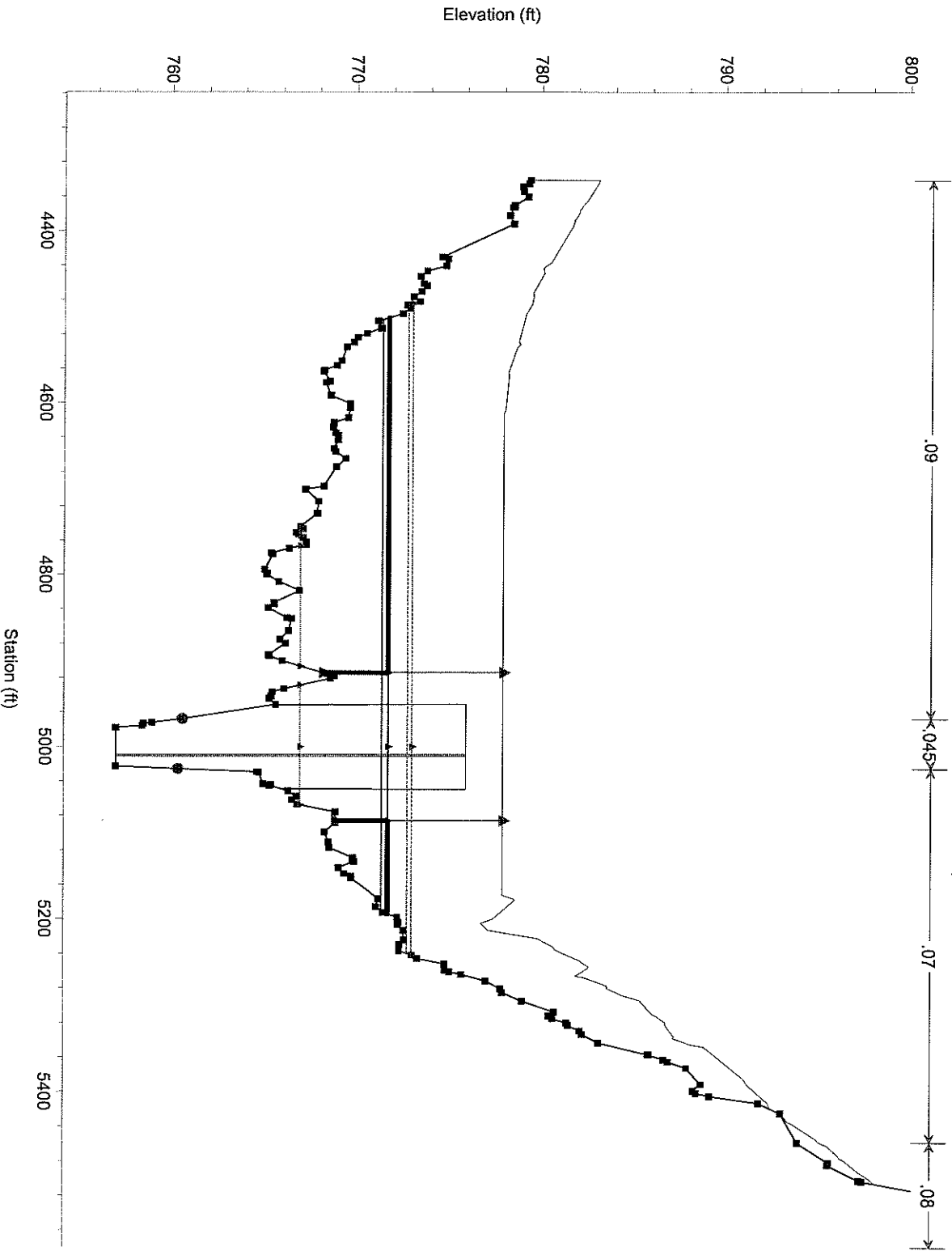
Section 5.0 – Engineering Methods

Table 10—Limited Detailed Flood Hazard Data

Cross Section¹	Stream Station²	Flood Discharge (cfs)	1% Annual Chance Water- Surface Elevation (feet NAVD 88)	Non- Encroachment Width³ (feet)
MOUNTAIN CREEK				
323	32,271	7,030	795.1	106 / 33
327	32,731	7,030	796.5	43 / 41
332	33,182	7,030	797.7	47 / 37
337	33,678	7,030	799.2	37 / 124
340	33,984	7,030	799.6	40 / 67
343	34,255	6,930	800.0	53 / 38
343	34,302	6,930	800.5	54 / 30
344	34,378	6,930	801.0	68 / 33
347	34,668	6,930	801.6	40 / 76
352	35,187	6,930	802.3	84 / 39
356	35,638	6,930	803.1	41 / 42
361	36,079	6,930	804.1	40 / 224
367	36,732	6,930	804.5	51 / 77
373	37,306	6,913	805.2	98 / 425
379	37,930	6,913	805.4	556 / 82
385	38,511	6,907	805.7	346 / 49
390	39,020	6,907	806.4	37 / 62
395	39,514	6,907	808.3	60 / 32
400	39,960	6,907	809.8	119 / 40
404	40,442	6,907	810.6	36 / 56
410	40,952	6,891	811.7	34 / 69
415	41,526	6,891	813.2	52 / 84
418	41,843	6,891	813.7	142 / 101
421	42,143	6,879	813.7	103 / 103
423	42,257	6,879	814.5	101 / 101
429	42,866	6,879	815.3	37 / 373
435	43,542	6,797	815.5	204 / 379
440	43,976	6,797	815.6	151 / 242
443	44,347	6,797	815.9	57 / 35
447	44,704	6,797	817.6	33 / 80
451	45,116	6,797	818.8	58 / 58
457	45,733	6,797	820.2	65 / 61
462	46,227	6,797	821.3	80 / 32
469	46,880	6,790	822.1	107 / 225
473	47,268	6,790	822.3	101 / 102
474	47,393	6,790	823.0	90 / 133
482	48,224	3,680	823.3	177 / 171
487	48,701	3,680	823.4	332 / 147
NORTH FORK FIRST BROAD RIVER				
000	36	4,590	1,081.9 ⁵	18 / 126
010	1,018	4,590	1,087.4	27 / 131
017	1,700	4,590	1,091.2	95 / 14
031	3,085	4,590	1,097.0	69 / 121
032	3,218	4,590	1,101.8	117 / 118
040	4,029	4,530	1,104.1	48 / 29
047	4,716	4,530	1,110.5	73 / 51
057	5,694	4,300	1,116.6	40 / 200
064	6,359	4,300	1,122.4	149 / 31

Mountain Creek Limited Detail Study Plan: Floodway Run 9/19/2007

Tryon Rd. Structure ID: Tryon Rd. Approximate Survey Structure



Legend	
EG 100-FW	
EG 100-year	
WS 100-FW	
WS 100-year	
Crit 100-year	
Crit 100-FW	
Ground	
Ineff	
Bank Sta	
Encroachment	