

PREDESIGN-PRESURVEY REPORT

Project#
TIP# B-5873
Let Date
WBS#

County Buncombe (D.V.)
(13)

Bridge# 100088
Road# SR 3137 (SHARON RD.)
Stream CANE CRK ✓

Type Of Request: POC Force Account TIP NCMA

Date 1/20/16 Name Wsh

Assigned To PFF/MTS

Checked By REL 1-21-16

BRN. BK. NONE CO. FILE NONE

Prior Survey Date NONE (attach copy of prior survey)

Study By Scour Section NONE

Flood Zone AE Detail Study LIMITED Date _____ Panel# 9685 •

B.M. Info N/A ESM = 30.0 SQ MILES

Quad Map OTEEN/BLK. MT. Drainage Area 26.6 SQ MI. From STREAM STATS
Q25 4300 cfs Q50 5100 cfs Q100 6000 cfs Method RURAL REGION 2
REG. EQU.

LAT: 35.507103
LONG: 82.414051

EXISTING BRIDGE INFORMATION BUILT: 1959

Location 0.01 MI S. JCT SR 3136

Average Daily Traffic 200 2000 6% TRK.

Length 45' Bed- To Crown 13 Water Depth 2' 4"

Type Structure TIMBER FLR ON I BEAMS

Type Spans 1 @ 45' 5.5"

Upstream Structure (2) PRIVATE BRGS THEN: 100125 2 @ 41' 9"

Location 0.03 MI E. JCT SR 3136 REINFOR. DECK CONC. ON GIRDER

Bed- To Crown 22' (3' DEEP) Prior Survey N/A BUILT: 1922

Downstream Structure 100084 / TIMBER FLR ON I BEAMS

Location BRUSH CREEK RD. (SR 3142) 0.01 MI S. JCT SR 3145

Bed- To Crown 15' (2' DEEP) Prior Survey N/A BUILT: 1960

SCS Watershed N/A 1 @ 41' 8"

HATCHERY SUPPORTED

ENVIRONMENTAL

TVA: YES

Trout Stream YES

Anadromous Fish NO

Primary Nursery Area YES

High Quality Waters NO

Nutrient Sensitive Waters NO

Near Water Supply Intake N/A

CAMA County NO

Stream Classification C #

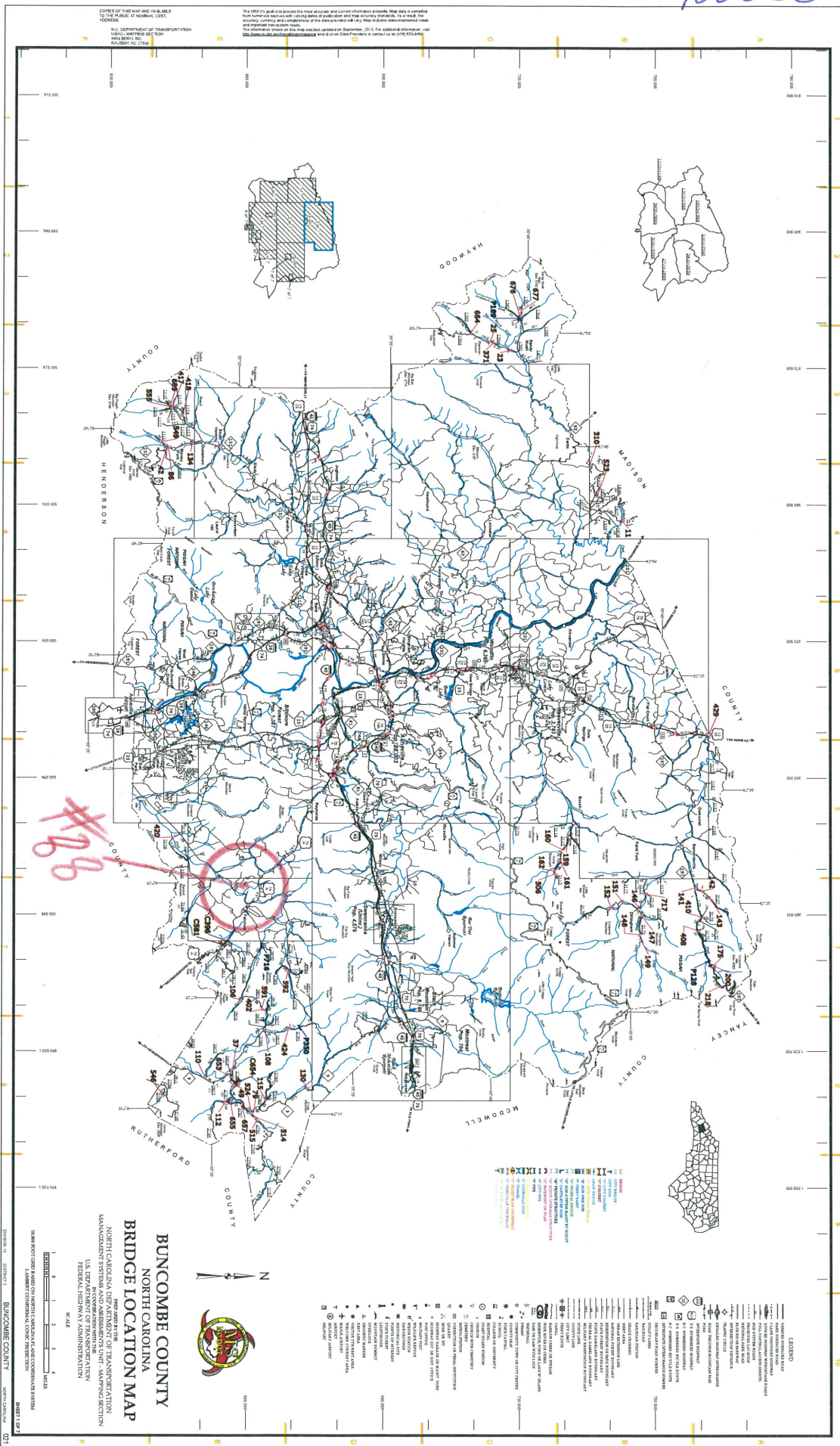
DENR River Basin Info. FRENCH BROAD

C-49

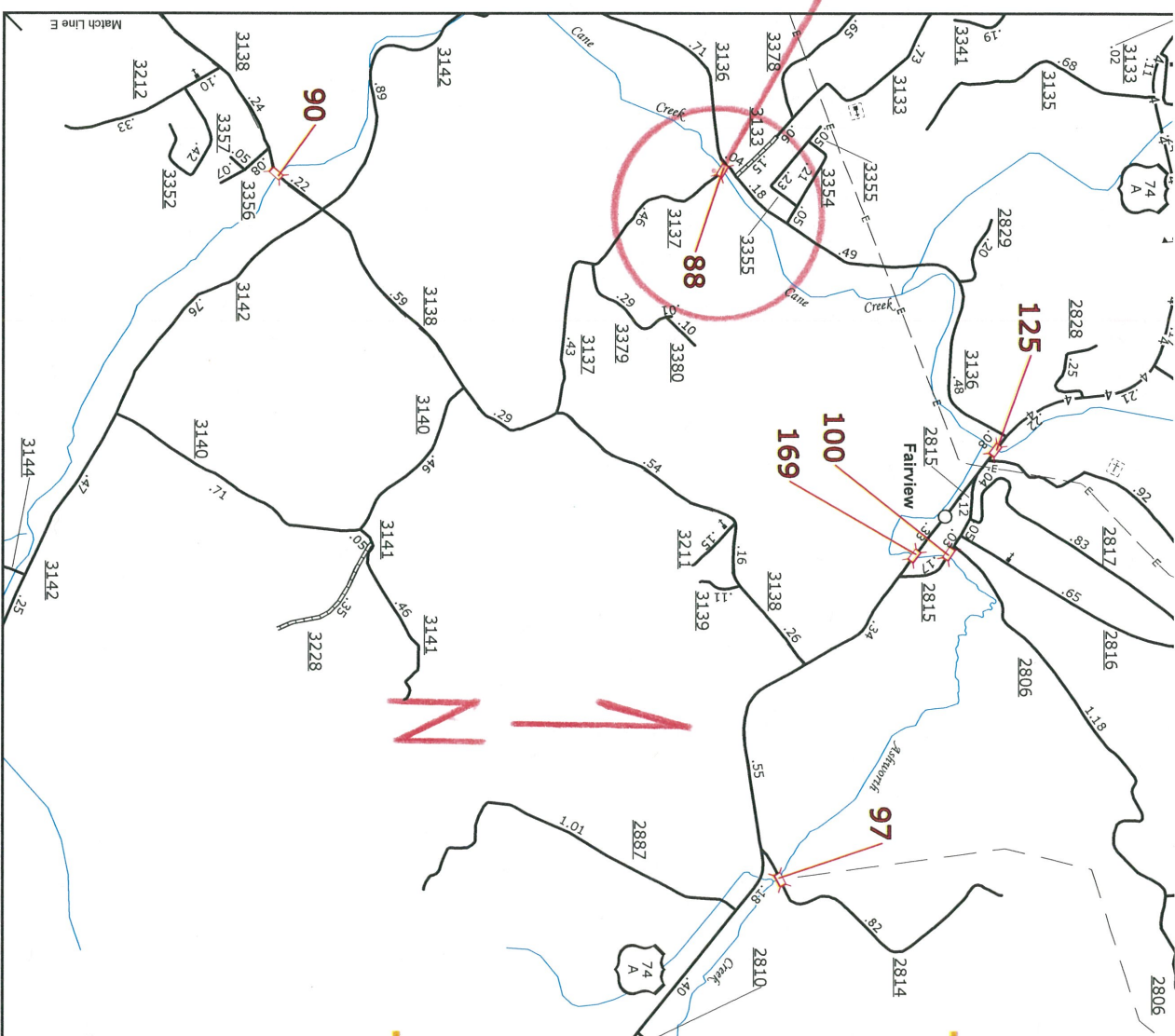
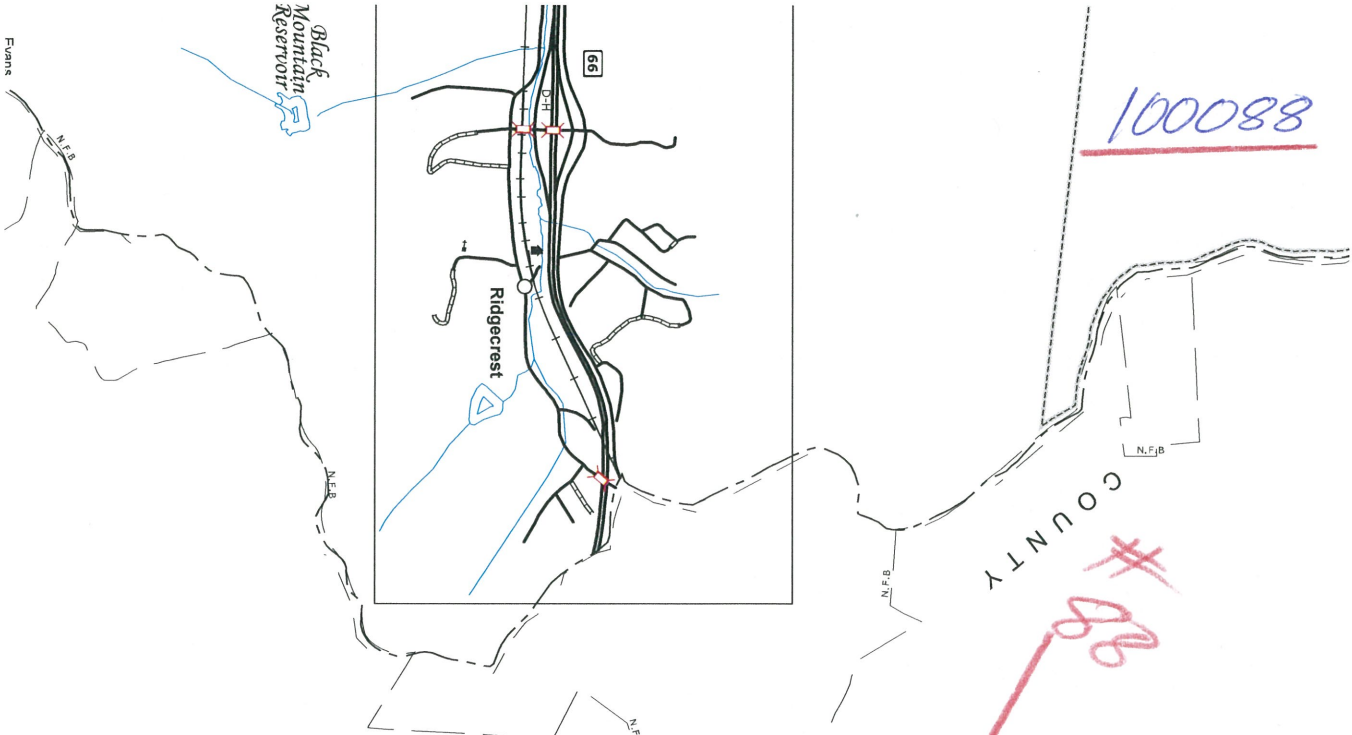
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1-21-16

100088



100088



BRIDGE
CITY BRIDGE
CITY SIGN

Fairview

Evans

100088

DA=26.6 SQ MI

35.50710, -82.41405

100088



100088

StreamStats Version 3.0
Flow Statistics Ungaged Site Report

Date: Wed Jan 20, 2016 4:43:21 PM GMT-5

Study Area: North Carolina

NAD 1983 Latitude: 35.5071 (35 30 26)

NAD 1983 Longitude: -82.4139 (-82 24 50)

Drainage Area: 26.6 mi²

Peak Flows Region Grid Basin Characteristics			
100% Peak Southeast US over 1 sqmi 2009 5158 (26.6 mi ²)			
Parameter	Value	Regression Equation Valid Range	
		Min	Max
Drainage Area (square miles)	26.6	1	9000
Percent Area in Region 1 (percent)	0.000	0	100
Percent Area in Region 2 (percent)	100.000	0	100
Percent Area in Region 3 (percent)	0.000	0	100
Percent Area in Region 4 (percent)	0.000	0	100
Percent Area in Region 5 (percent)	0.000	0	100

Urban Flows Region Grid Basin Characteristics			
Area in square miles=26.6			
Percent imperviousness of basin area 2006 NLCD=0.69			
Percentage of impervious area determined from NLCD 2011 impervious dataset=0.71			
100% Region 2 Urban Blue Ridge FS007-00 (26.6 mi ²)			
Parameter	Value	Regression Equation Valid Range	
		Min	Max
Drainage Area (square miles)	26.6	0.04	41
Percent Impervious NLCD2011 (percent)	0.71 (below min value 2)	2	54.6

Warning: Some parameters are outside the suggested range. Estimates will be extrapolations with unknown errors.

Peak Flows Region Grid Statistics						
Statistic	Value	Unit	Prediction Error (percent)	Equivalent years of record	90-Percent Prediction Interval	
					Min	Max
PK2	1410	ft ³ /s	35		812	2460
PK5	2440	ft ³ /s	34		1410	4210
PK10	3230	ft ³ /s	35		1840	5670
PK25	4280	ft ³ /s	38		2350	7800
PK50	5050	ft ³ /s	40		2680	9500
PK100	5970	ft ³ /s	42		3070	11600
PK200	6760	ft ³ /s	44		3350	13700
PK500	8000	ft ³ /s	48		3770	17000

<http://pubs.usgs.gov/sir/2009/5158/> (<http://pubs.usgs.gov/sir/2009/5158/>)

Weaver, J.C., Feaster, T.D., and Gotvald, A.J., 2009. Magnitude and frequency of rural floods in the Southeastern United States through 2006—Volume 2. North Carolina: U.S. Geological Survey Scientific Investigations Report 2009-5158. 111 p.

100088



NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
STRUCTURE MANAGEMENT UNIT

ATTENTION: **PRIORITY MAINTENANCE X 2 (WINGWALLS AT
DOWNSTREAM END OF BOTH END BENTS)**

Structure Safety Report

Routine Element Inspection

COUNTY: BUNCOMBE STRUCTURE NUMBER: 100088 FREQUENCY: 24 MONTHS

FACILITY CARRIED: SR3137 MILE POST:

LOCATION: .01 MI.S.JCT.SR3136

FEATURE INTERSECTED: CANE CREEK

LATITUDE: 35° 30' 25.66" LONGITUDE: 82° 24' 50.65"

TIMBER FLOOR ON SALVAGE I-BEAMS

SUPERSTRUCTURE: **TIMBER FLOOR ON I-BEAMS**

SUBSTRUCTURE: ABUTS:EXISTING REINFORCED CONCRETE

SPANS: 1 @ 45"-5.5

☐ FRACTURE CRITICAL ☐ TEMPORARY SHORING ☐ SCOUR CRITICAL ☐ SCOUR PLAN OF ACTION

PRESENT CONDITION: Fair INSPECTION DATE: 11/04/2014

POSTED SV: **Not Posted** **Not Posted** POSTED TTST: **Not Posted** **Not Posted**

OTHER SIGNS PRESENT: DELINEATORS (4) ONE LANE BRIDGE (2)



Sign noticed issued for		Number Required
<u>NO</u>	WEIGHT LIMIT	<u>0</u>
<u>NO</u>	DELINEATORS	<u>0</u>
<u>NO</u>	NARROW BRIDGE	<u>0</u>
<u>NO</u>	ONE LANE BRIDGE	<u>0</u>
<u>NO</u>	LOW CLEARANCE	<u>0</u>

NORTH

INSPECTED BY ME, RENFRO	SIGNATURE <i>Mike Renfro</i>	ASSISTED BY BG. HEATH
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100088

BRIDGE MANAGEMENT UNIT

DATA ON EXISTING STRUCTURE

Run Date: 01/22/2015

COUNTY : BUNCOMBE	DIVISION : 13	DISTRICT : 2	STRUCTURE NUMBER : 100088	LENGTH : 45	FEET
ROUTE CARRIED : SR3137		FEATURE INTERSECTED : CANE CREEK			
LOCATED : .01 MI.S.JCT.SR3136		BRIDGE NAME :		CITY :	
FUNC. CLASS : 09	SYST.ON : NFA	SYST.UNDER : NFA	ADT & YR : 200 2000	RAIL TYPE : LT 227 RT 227	
BUILT : 1959	BY : BMU	PROJ :	FED.AID PROJ :	DESIGN LOAD : Unknown	
REHAB :	BY : BMU	PROJ : 5.8451	ALIGNMENT : TAN	SKEW : 90	LANES : ON 1 UNDER 0
NAVIGATION : VC 0 FT	HC 0 FT	HT. CRN. TO BED : 13 FT	WATER DEPTH : 2 FT		
SUPERSTRUCTURE : TIMBER FLOOR ON I-BEAMS					
SUBSTRUCTURE : ABUTS:EXISTING REINFORCED CONCRETE					
SPANS : 1 @ 45'-5.5					
BEAMS OR GIRDERS : 6 LINES 24 I-BEAMS @ 2'-5 CENTERS					
FLOOR : 3X4 TIM/1 AWS	ENCROACHMENT :		DECK (OUT TO OUT) : 15.083 FT		
CLEAR ROADWAY : 14.083 FT	BETWEEN RAILS : 14.75 FT		SIDEWALK OR CURB : LT .3 FT RT .3 FT		
VERT.CL.OVER : 999.9 FT					
INV.RTG. : HS-1	OPE.RTG. : HS-1	CONTR.MEMBER : intbm#3	POSTED : SV	TTST	DATE 02/23/1995
SYSTEM : Secondary S.R. Route			GREEN LINE ROUTE : N		
UNDER ROUTES AND CLEARANCES					

REMARKS :

100 088

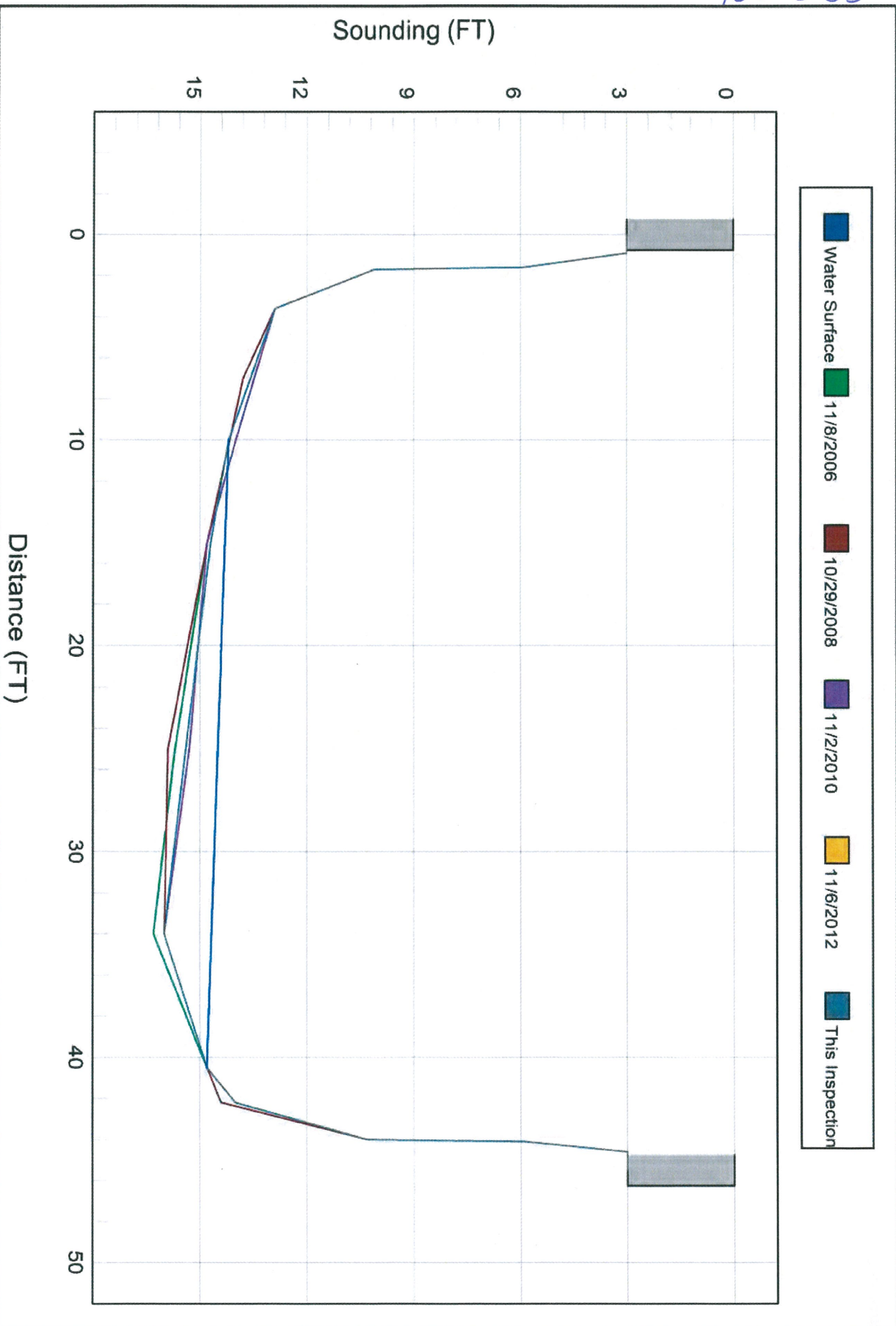
Bridge: 100088

County BUNCOMBE

Date:

Top of Rail = 0 FT (Sounding)

STREAMBED PROFILE (Downstream)



100088

Structure: 100088

County: BUNCOMBE

Date: 11/04/2014

Structure Photos



LOOKING UPSTREAM



LOOKING DOWNSTREAM

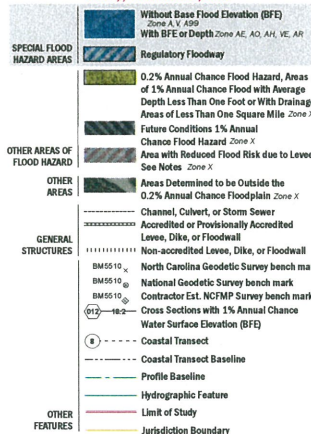
100088



This digital Flood Insurance Rate Map (FIRM) was produced through a unique cooperative partnership between the State of North Carolina and the Federal Emergency Management Agency (FEMA). The State of North Carolina has implemented a long term approach to floodplain management to decrease the risk associated with flooding. This is accomplished by the State's commitment to the National Flood Insurance Program (NFIP). As a part of this effort, the State of North Carolina has joined in a Cooperative Technical State agreement with FEMA to produce and maintain this digital FIRM.

FLOOD HAZARD INFORMATION

SEE FIS REPORT FOR ZONE DESCRIPTIONS AND INDEX MAP
THE INFORMATION DEPICTED ON THIS MAP AND SUPPORTING
DOCUMENTATION ARE ALSO AVAILABLE IN DIGITAL FORMAT AT
[HTTP://FRIS.NC.GOV/FRIS](http://FRIS.NC.GOV/FRIS)



NOTES TO USERS

For information and questions about this map, available products, associated with the FIRM including historic versions of the FIRM, how to order products or the National Flood Insurance Program in general, please call the FEMA Map Information Kiosk at 1-877-FEMA-MAP (1-877-336-2627) or visit the FEMA Map Service Center website at fema.gov. An accompanying Flood Insurance Study report, Letter of Map Revision (LOMR), or Letter of Map Amendment (LOMA) revising portions of the panel, and digital versions of this FIRM may be available. Visit the North Carolina Floodplain Mapping Program website at <http://www.ncfloodplainmapping.com> or contact the FEMA Map Service Center.

Considerations regarding land use and adjacent FIRM panels must obtain a current copy of the adjacent panel as well as the current FIRM index. These may be ordered directly from the Map Service Center at the number listed above.

For community and countywide map data refer to the Flood Insurance Study report for this jurisdiction.

To determine if flood insurance is available in the community, contact your insurance agent or call the National Flood Insurance Program at 1-800-638-6622.

Base map information shown on this FIRM was provided in digital format by the North Carolina Floodplain Mapping Program (NCFPMP). The source of this information can be determined from the metadata available in the digital FIRM database and in the Technical Support Data Worksheet (TSDW).

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ACCREDITED LEVEE NOTES TO USERS: If an accredited levee rate appears on this panel check with your local community to obtain more information, such as the estimated level of protection provided (which may exceed the 1 percent annual-chance level) and Emergency Action Plan, or the levee system's ability to provide protection. To mitigate flood risk in residual risk areas, property owners and residents are encouraged to consider flood insurance and floodproofing or other protective measures. For more information on flood insurance, interested parties should visit the FEMA Website at <http://www.fema.gov/newsroom/floodinsur>.

PROVISIONALLY ACCREDITED LEVEE NOTES TO USERS: If a Provisionally Accredited Levee (PAL) note appears on this panel, check with your local community to obtain more information, such as the estimated level of protection provided (which may exceed the 1 percent annual-chance level) and Emergency Action Plan, or the levee system's ability to provide protection. To mitigate flood risk in residual risk areas, property owners and residents are encouraged to consider flood insurance and floodproofing or other protective measures. For more information on flood insurance, interested parties should visit the FEMA Website at <http://www.fema.gov/newsroom/floodinsur>.

LIMIT OF MODERATE WAVE ACTION (LIMWA) NOTES TO USERS: For some coastal flooding areas the AE Zone category has been divided by a Limit of Moderate Wave Action (LIMWA). The LIMWA represents the approximate limit of moderate wave action. The effect of wave heights between the 1% and 0.2% annual chance flood (or between the dike and the LIMWA for areas where VE Zones are not identified) will be similar to, but less severe than those in the 1%.

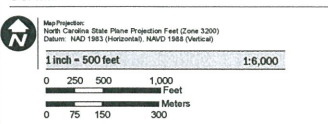
COASTAL BARRIER RESOURCES SYSTEM (CBRS) NOTE: This map may include approximate boundaries of the CBRS for informational purposes only. Flood insurance is not available within CBRS areas for structures that are newly built or substantially improved on or after the date(s) indicated on the map. For more information see <http://www.fema.gov/floodinsurance/understanding>, January 2007, the FIS report, or call the U.S. Fish and Wildlife Service Customer Service Center at 1-800-344-6862.

Limit of Moderate Wave Action (LIMWA)

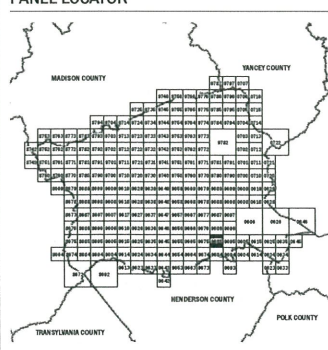
CBRS Area

Otherwise Protected Area

SCALE



PANEL LOCATOR



National Flood Insurance Program

NORTH CAROLINA FLOODPLAIN MAPPING PROGRAM

NATIONAL FLOOD INSURANCE PROGRAM

FLOOD INSURANCE RATE MAP

NORTH CAROLINA

Panel 9685

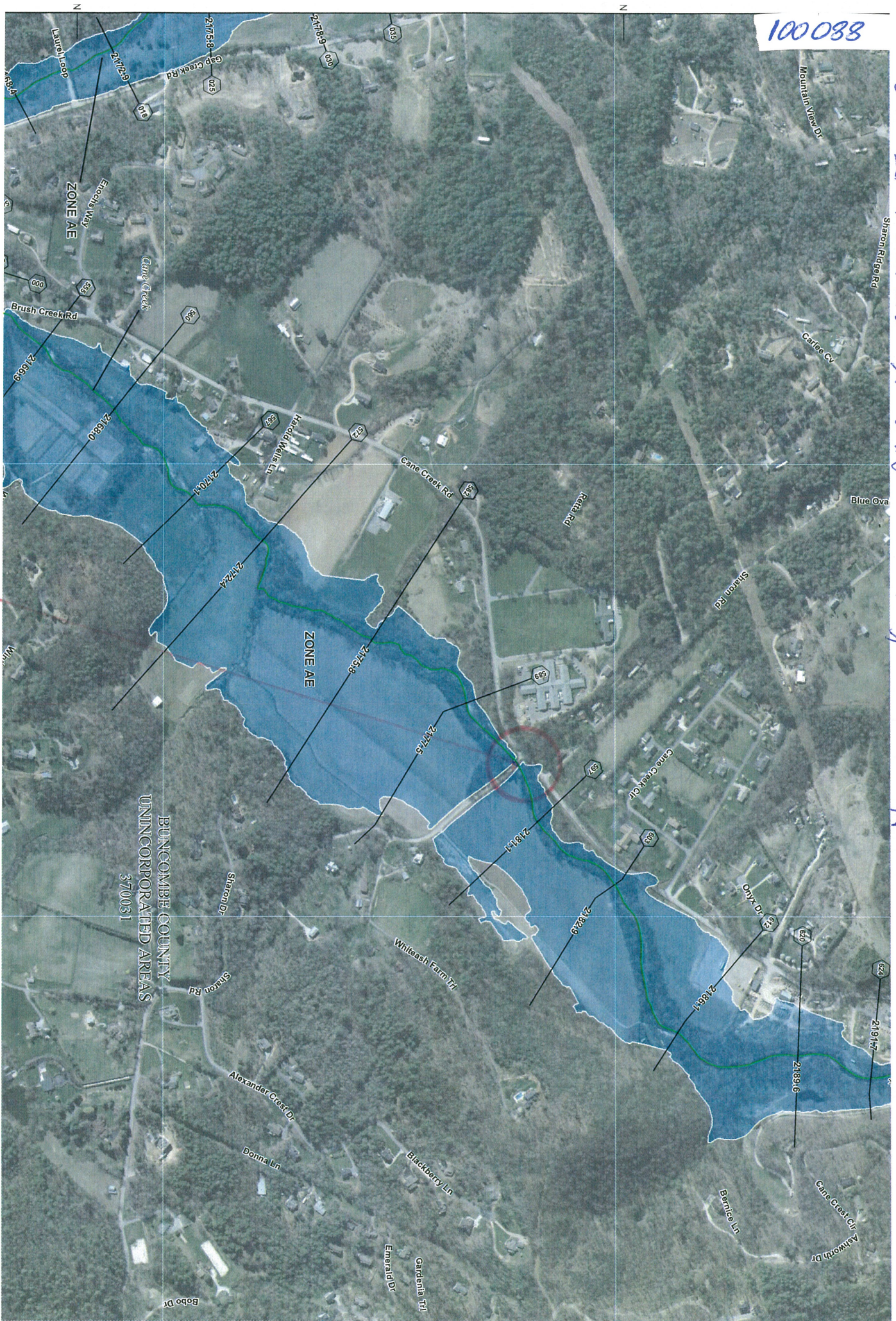
Panel Contains:
COMMUNITY
BUNCOMBE COUNTY

CID PANEL SUFFIX
370051 968 J

MAP NUMBER
3700968500J
MAP REVISED
01/06/10

100038

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* NO HEC RAS X SECTION FOUND
ONLY 1 STR. ON CANE CRK IN HEC RAS

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