

OFFICE ESTIMATE

1@ 50' Bridge

Project# 17BP.11.R.104✓

TIP# _____

Let Date _____

WBS# _____

PREDESIGN-PRESURVEY REPORT

County WILKES (DIV. 11)Bridge# 960317Road# SR 1745✓ (SHUMATE MOUNTAIN RD)Stream W. PRONG ROARING RIVER

Type Of Request: POC Force Account TIP NCMA

Date 4/15/14 Name MJYAssigned To RCHChecked By 4/21/14 WSKPrior Survey Date NO (attach copy of prior survey) BRN BK: NO✓ CD. FILE NO✓Study By Scour Section NONE✓Flood Zone AE Detail Study LIMITED✓ Date 1/22/04 Panel# 3962B.M. Info N/AQuad Map MCGRADY Drainage Area 14.2 SQ. MI.✓ From DASS✓ STA: 211211315Q25 2700 cfs✓ Q50 3200 cfs✓ Q100 3800 cfs✓ Method REG. EQNS.✓REGION 2/RURAL✓

EXISTING BRIDGE INFORMATION

Location 0.4 MI. E. JCT. SR1730✓ (LONG. 81.1275 36.30167)Average Daily Traffic 380 (2010) 6% TRK.✓Length 31'✓ Bed- To Crown 8' Water Depth 2'Type Structure TIM. FLOOR ON I-BEAMS (LOW WATER TYPE), TIM. CAPS/POST & SILLSType Spans 1@ 31'Upstream Structure 960277 (TIM. FLOOR ON SALVAGED I-BEAMS, REIN. CONC. ABUTS.; 1@ 47')Location 1.5 MI. N. JCT. SR1715Bed- To Crown 11' (D=1') Prior Survey _____Downstream Structure 960166 (STEEL PLANK FLOOR ON I-BEAMS, TIM. CAPS/POST & CONC. SILLS; 1@ 45'-4";Location 50' E. JCT SR1746Bed- To Crown 21' (D=2') Prior Survey _____SCS Watershed N/A1@ 45';
1@ 45'-4";
TOTAL LENGTH
IS 136')

(DENR: NO)

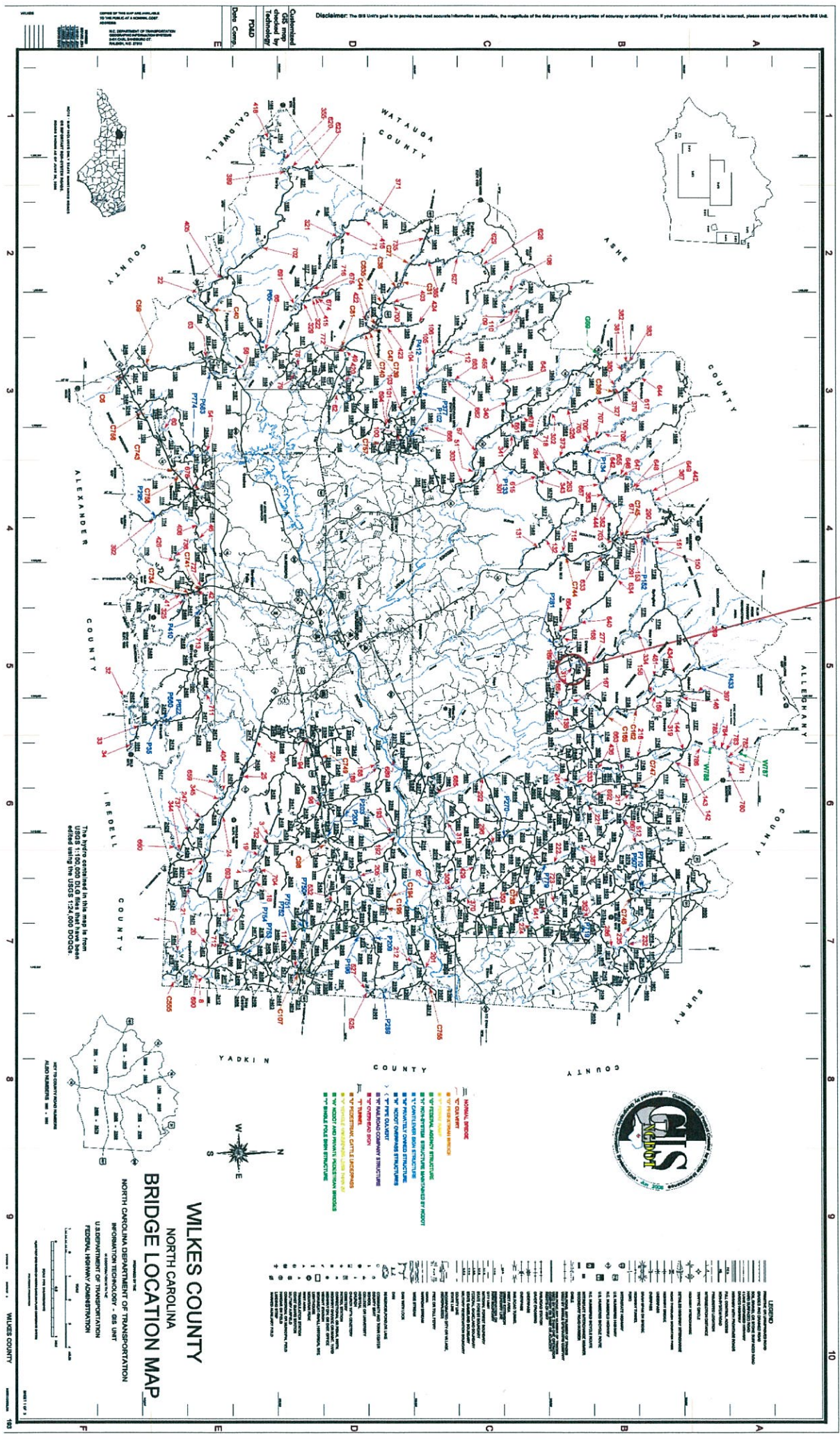
(ESM-YES-WILD)

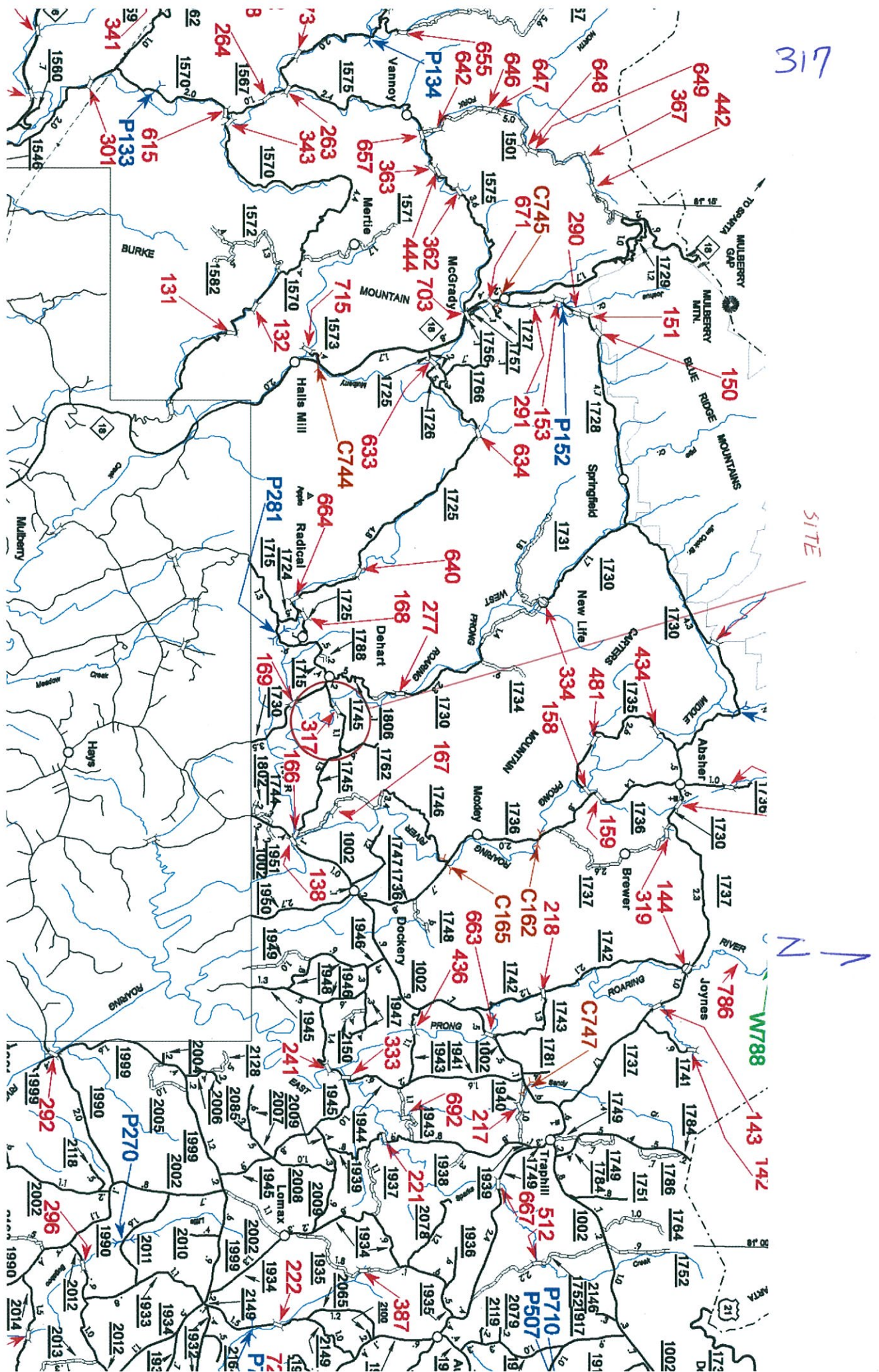
ENVIRONMENTAL

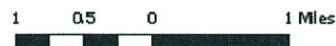
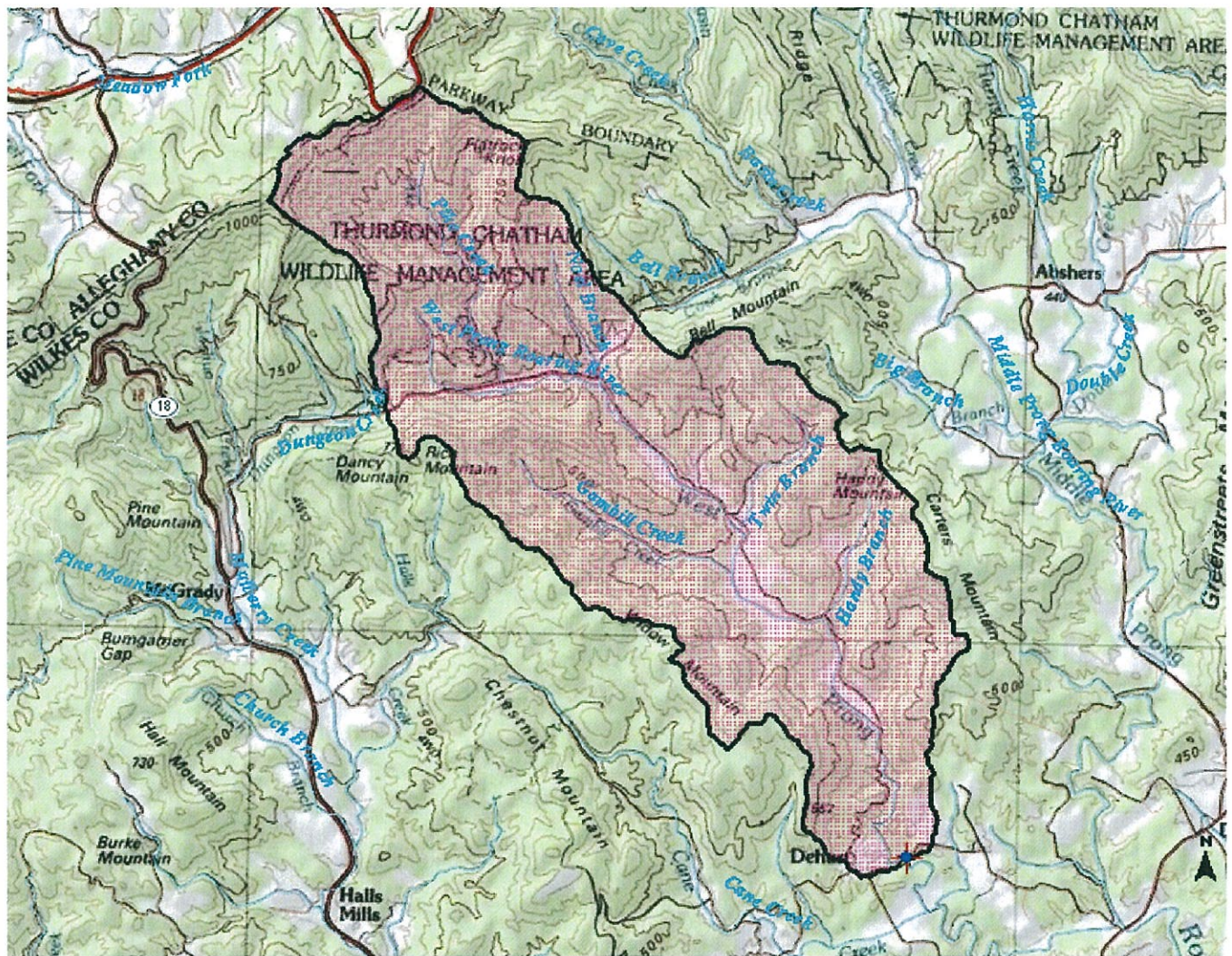
TVA NO✓Trout Stream NOAnadromous Fish NONE Primary Nursery Area NO✓High Quality Waters NO✓Nutrient Sensitive Waters NO✓Near Water Supply Intake NO✓CAMA County NOStream Classification C✓ # 12-46-1-(5)✓DENR River Basin Info. YADKIN✓

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SITE







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North Carolina StreamStats

Streamstats Ungaged Site Report

Date: Tue Apr 15 2014 12:34:51 Mountain Daylight Time

Site Location: North_Carolina

NAD27 Latitude: 36.3016 (36 18 06)

NAD27 Longitude: -81.1271 (-81 07 38)

NAD83 Latitude: 36.3017 (36 18 06)

NAD83 Longitude: -81.1270 (-81 07 37)

Drainage Area: 14.2 mi²

Percent Urban: 2.3 %

Percent Impervious: 0.1 %

Peak Flows Region Grid Basin Characteristics			
100% Peak Southeast US 2009 5158 (14.2 mi ²)			
Parameter	Value	Regression Equation Valid Range	
		Min	Max
Drainage Area (square miles)	14.2	1	9000
Percent Area in Region 1 (percent)	3.813	0	100
Percent Area in Region 2 (percent)	96.187	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

DASS = 14.2 Sq Mi.

Urban Flows Region Grid Basin Characteristics			
100% Peak urban Blue Ridge-Piedmont FS007-00 (14.2 mi ²)			
Parameter	Value	Regression Equation Valid Range	
		Min	Max
Drainage Area (square miles)	14.2	0.04	41
Area of Impervious Surfaces (percent)	0.12 (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 Streamflow Statistics					
Statistic	Flow (ft ³ /s)	Prediction Error (percent)	Equivalent years of record	90-Percent Prediction Interval	
				Minimum	Maximum
PK2	867	35		498	1510
PK5	1530	34		882	2640
PK10	2030	35		1150	3580
PK25	2720	38		1490	4960
PK50	3220	40		1710	6070
PK100	3810	42		1950	7440
PK200	4330	44		2140	8760
PK500	5140	48		2420	10900

Urban Flows Region Grid Streamflow Statistics					
Statistic	Flow (ft ³ /s)	Standard Error (percent)	Equivalent years of record	90-Percent Prediction Interval	
				Minimum	Maximum
PK2U	55.2				
PK5U	143				
PK10U	233				
PK25U	458				
PK50U	631				
PK100U	844				

SITE



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 demonstrated by the State's commitment to map flood hazard areas at the local level. As a part of this effort, the State of North Carolina has entered into 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)

- SPECIAL FLOOD HAZARD AREAS**
 - Without Base Flood Elevation (BFE) Zone A, V, AR9
 - With BFE or Depth Zone AE, AO, AH, VE, AR
 - Regulatory Floodway
- OTHER AREAS OF FLOOD HAZARD**
 - 0.2% Annual Chance Flood Hazard, Areas of Less Than One Square Mile Zone X
 - Future Conditions 1% Annual Chance Flood Hazard Zone X
 - Area with Reduced Flood Risk due to Levee See Notes Zone X
 - Areas Determined to be Outside the 0.2% Annual Chance Floodplain Zone X
- GENERAL STRUCTURES**
 - Channel, Culvert, or Storm Sewer
 - Accredited or Provisionally Accredited Levee, Dike, or Floodwall
 - Non-accredited Levee, Dike, or Floodwall
 - North Carolina Geodetic Survey bench mark
 - National Geodetic Survey bench mark
 - Contractor Est. NCFMP Survey bench mark
 - Cross Sections with 1% Annual Chance Water Surface Elevation (BFE)
 - Coastal Transect
 - Coastal Transect Baseline
 - Profile Baseline
 - Hydrographic Feature
 - Limit of Study
 - Jurisdiction Boundary
- OTHER FEATURES**

NOTES TO USERS

For information and questions about this map, available products, associated with this FIRM including historic versions of this FIRM, how to order products or the National Flood Insurance Program in general, please visit the FEMA Map Information eXchange 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 (LOR), or Letter of Map Amendment (LOMA) regarding portions of this panel, and digital versions of this FIRM may be available. Visit the North Carolina Floodplain Mapping Program website at <http://www.ncfloodplain.org> or contact the FEMA Map Service Center.

Community mapping and/or 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 1-800-368-6622.

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

ACCREDITED LEVEE NOTES TO USERS: An accredited levee note appears on this panel which shows 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, on the levee system(s) shown as providing protection. To mitigate flood risk in residential 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/floodinsurance>.

PROVISIONALLY ACCREDITED LEVEE NOTES TO USERS: A Provisionally Accredited Levee (PAL) note appears on this panel, which shows 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, on the levee system(s) shown as providing protection. To mitigate flood risk in residential 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/floodinsurance>.

LIMIT OF MODERATE WAVE ACTION NOTES TO USERS: For some coastal flooding zones the AE Zone category has been divided by a Limit of Moderate Wave Action (LMWA). The LMWA represents the approximate limit of the 1.5-foot cresting wave. The effects of wave heights between the VE Zone and the LMWA (or between the LMWA and the LMWA) for areas where VE Zones are not identified will be similar to, but less than those for the VE Zone.

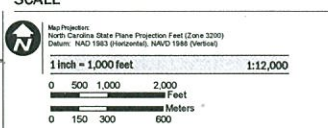
Limit of Moderate Wave Action (LMWA)

COASTAL BARRIER RESOURCES SYSTEM (CBRS) NOTE

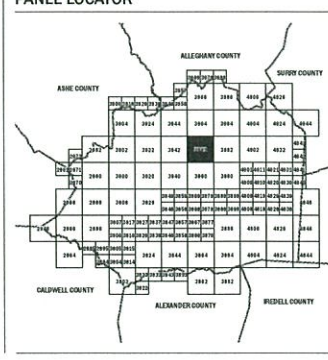
This map includes approximate boundaries of the CBRS for information purposes only. Flood insurance is not available within CBRS areas for structures that are newly built or substantially improved or after the date(s) indicated on the map. For more information visit <http://www.fema.gov/floodinsurance>. Further, the FIS Report, or call the U.S. Fish and Wildlife Service Customer Service Center at 1-800-344-6467.

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 3962

Panel Contains:

COMMUNITY
WILKES COUNTY

CID PANEL SUFFIX
370256 3962 J

MAP NUMBER
3710396200J
MAP REVISED
3/2/2009



81°8'30"W 81°8'0"W 81°7'30"W 81°7'0"W 81°6'30"W

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SITE

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NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
BRIDGE MANAGEMENT UNIT

ATTENTION

PRIORITY MAINTENANCES, TEMPORARY REPAIR

BRIDGE INSPECTION REPORT

INSPECTION TYPE: Routine Inspection - Contract

COUNTY WILKES BRIDGE NUMBER 960317 INSPECTION CYCLE 0 YRS
ROUTE SR1745 ACROSS W.PRONG ROARING RIVER M.P. 0

LOCATION .4 MI.E.JCT.SR1730

SUPERSTRUCTURE TIMBER FLOOR ON I-BEAMS (LOW-WATER TYPE)

SUBSTRUCTURE E.BTS:TIM.CAPS/TIM.POST&SILLS @ VAR.CTS.

SPANS 1 @ 31'

LONGITUDE 81° 7' 37.04" LATITUDE 36° 18' 60.88" 36° 18' 5.94"

INSPECTION DATE 01/09/2013 PRESENT CONDITION FAIR

PRESENT POSTING SV 25 TTST 37 SV 27 TTST 32 PROPOSED POSTING

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



WEST APPROACH LOOKING EAST

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

SIGN NOTICE ISSUED FOR		NUMBERED REQUIRED
<u>Yes</u>	WEIGHT LIMIT	<u>1</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>

BRIDGE MANAGEMENT UNIT

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DATA ON EXISTING STRUCTURE

Run Date: 02/26/2013

COUNTY : WILKES DIVISION : 11 DISTRICT: 3 STRUCTURE NUMBER : 960317 LENGTH : 31 FEET

ROUTE CARRIED : SR1745 FEATURE INTERSECTED : W.PRONG ROARING RIVER

LOCATED : .4 MI.E.JCT.SR1730 BRIDGE NAME : CITY :

FUNC. CLASS : 09 SYST.ON : NFA SYST.UNDER : NFA ADT & YR : 380 2010 RAIL TYPE : LT 0 RT 0

BUILT : 1950 BY : BMU PROJ : FED.AID PROJ : DESIGN LOAD : Unknown

REHAB : 1977 BY : PROJ : ALIGNMENT : TAN SKEW : 100 LANES : ON 2 UNDER 0

NAVIGATION : VC 0 FT HC 0 FT HT. CRN. TO BED : 8 FT WATER DEPTH : 2 FT

SUPERSTRUCTURE : TIMBER FLOOR ON I-BEAMS (LOW-WATER TYPE)

SUBSTRUCTURE : E.BTS:TIM.CAPS/TIM.POST&SILLS @ VAR.CTS.

SPANS : 1 @ 31'

BEAMS OR GIRDERS : 9 LINES 16 I-BEAMS @ VAR. CENTERS

FLOOR : 4X8 TIM/ 2 AWS ENCROACHMENT : DECK (OUT TO OUT) : 20 FT

CLEAR ROADWAY : 18.917 FT BETWEEN RAILS : 0 FT SIDEWALK OR CURB : LT .5 FT RT .5 FT

VERT.CL.OVER : 999.9 FT

INV.RTG. : HS-1 OPE.RTG. : HS-1 CONTR.MEMBER : int bm POSTED : SV 25 TTST 37 DATE 09/29/2008

SYSTEM : Secondary S.R. Route GREEN LINE ROUTE : N

UNDER ROUTES AND CLEARANCES

REMARKS :

Bridge: 960317

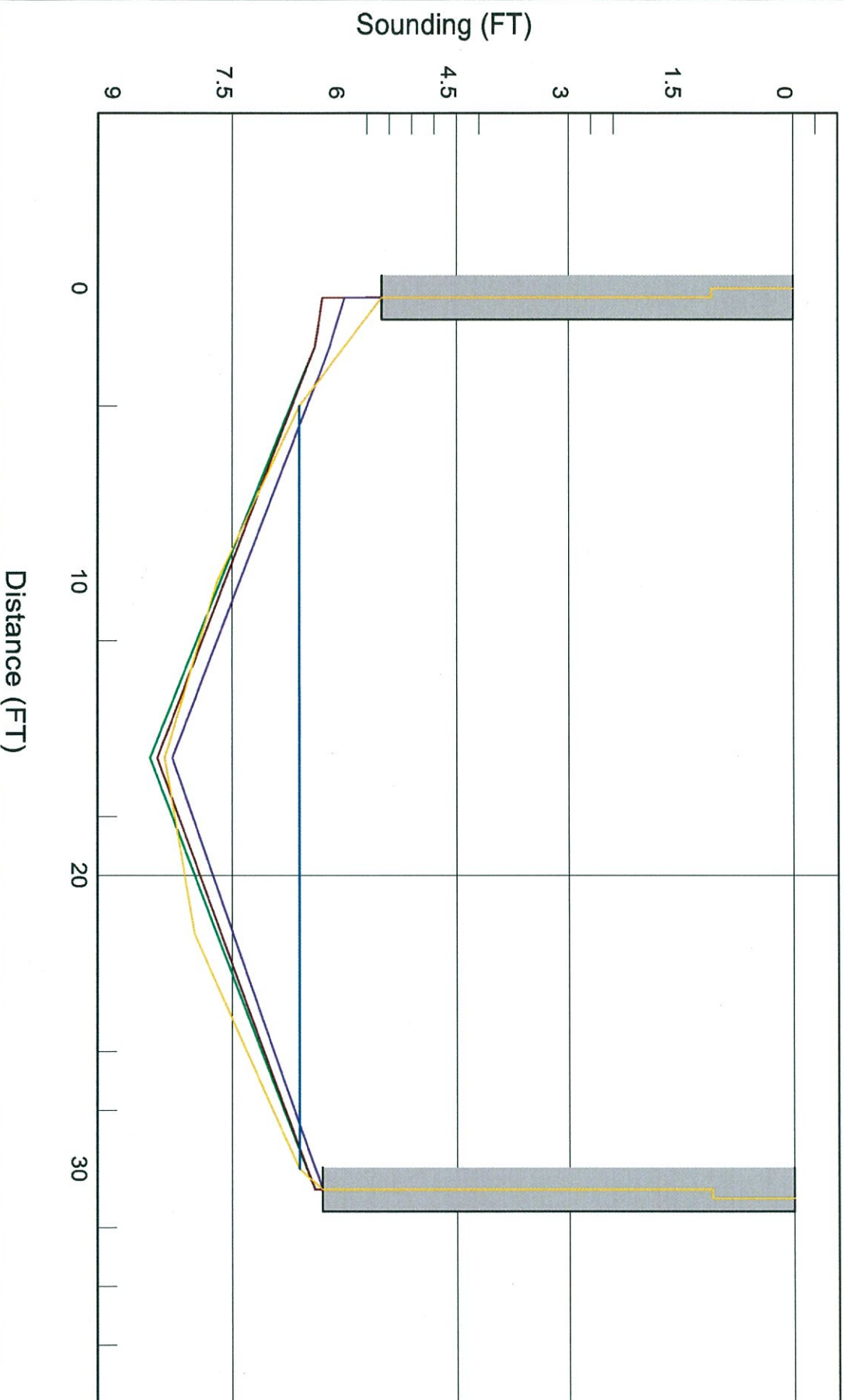
County WILKES

Date: 01/09/2013

Top of Rail = 0 FT (Sounding)

STREAMBED PROFILE (Downstream)

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LOOKING UPSTREAM (NORTH) FROM BELOW



NORTH ELEVATION