

PRELIMINARY HYDRAULICS STUDY
FOR
ENVIRONMENTAL IMPACT

STATE PROJECT NO. 33831.1.1
TIP NO. B-4676 WILKES COUNTY
BRIDGE NO. 29
SR 1001 OVER CUB CREEK



11/18/05

SUNGATE DESIGN GROUP, P.A.
915 Jones Franklin Road
Raleigh, NC 27606

1/1

HYDRAULIC ASPECTS OF ENVIRONMENTAL IMPACT OF THE PROPOSED
REPLACEMENT OF BRIDGE NO. 29 OVER CUB CREEK ON SR 1001 IN WILKES
COUNTY (B-4676)

August 12, 2005

This project involves the replacement of Bridge No. 29 on SR 1001 over Cub Creek in Wilkes County. Cub Creek is in the Yadkin River Basin. The area of the drainage basin for the creek at the subject location is 14.41 square miles. The existing bridge consists of 1 @ 25.0, 1 @ 29.6, and 1 @ 24.8 (total length is 79.4 feet, bed to crown height is 12.2 feet, and normal depth of flow is 2.0 feet) concrete thru channels on timber piles and timber abutments. The clear roadway is 29.6 feet. The existing bridge is in a horizontal tangent with a curve striped on bridge. The north approach is in tangent with a sharp curve beginning approximately 500 feet from end of the bridge. There is a sag approximately 100 feet from the north end of the bridge. The south approach is in a curve from the end of the bridge with grade falling toward the bridge. Sight distances for both approaches are good.

There are two utilities, a 4" and a 2" PVC pipe, attached to the upstream side of the bridge. There are no other utilities attached to the existing bridge. Overhead power and telephone lines cross the stream approximately 70 feet upstream of the bridge. Also, there is a pedestrian bridge, two 15" CMP's, and sewer manholes that are on the upstream side of the bridge.

According to NCDOT Bridge Maintenance Supervisor, Mr. R.F. Minton, water has never been on or over the bridge. He did state that he had observed it out of the banks on several occasions. Mr. Herbert Boehm, a local business owner for 7 years, verified this information. There was some minor debris accumulation on the upstream face of the bridge. Debris potential appears to be high due to the large amount observed at the site. There was no scour observed. The channel banks are steep but appear to be stable with large trees located on the downstream banks. On the upstream banks close to the bridge, the trees have been cleared to the top of banks. There were no wetlands observed in any of the four quadrants of the bridge. There are no structures or utilities observed in the floodplain except those mentioned above. Bridge scour information for the existing bridge is not available, as it has not been assessed due to insufficient substructure data. The existing bridge, built in 1969, is in poor condition.

Based on a preliminary hydraulic analysis in conjunction with a field reconnaissance of the site, the proposed replacement structure is a bridge approximately 110 feet long. It is recommended that the bridge be replaced in the same location as the existing structure. The grade of the roadway should approximately match the elevation of the existing road. The minimum deck grade should be 0.3%. An upstream realignment

will impact utility lines and an existing pedestrian bridge but would improve the horizontal alignment. Replacement downstream would worsen the horizontal alignment and is not recommended. The length of the bridge for all three alternatives would be approximately the same, but the existing location provides for the least impact to utilities and the surrounding area. The length of the proposed bridge and the recommended roadway elevation may be adjusted (increased or decreased) to accommodate design floods as determined in the final hydrologic study and hydraulic design.

According to the Bridge Maintenance Unit, the upstream structure consists of 1 @ 40.5' bridge and the downstream structure consists of 1 @ 45.4', 1 @ 45', 1 @ 45.4' bridge.

Since the proposed bridge is to be located at the existing structure, a detour bridge is necessary. If it is determined that an off-site detour is not feasible, it is recommended that a detour bridge be located immediately downstream of the existing bridge. The detour bridge should be approximately 80 feet long. An upstream location will impact overhead utility lines and an existing pedestrian bridge but provides a better horizontal alignment. Although the downstream detour would worsen the horizontal alignment, it provides the least impact to utilities and the surrounding area. If it is determined that the final bridge be relocated upstream of the existing bridge, it is recommended to use the existing bridge as the detour structure. The elevation of the detour road should approximately match the existing road as long as horizontal and/or vertical alignments do not dictate otherwise.

Wilkes County is a participant in the Federal Flood Insurance Program. The bridge is within an Approximate Study Area. The new structures should be designed to match or lower the existing 100-year storm elevation upstream of the roadway. Since the proposed replacement for Bridge # 29 would be a structure similar in waterway opening size, it is not anticipated that it will have any significant adverse impact on the existing floodplain and floodway.

Siltation of adjacent areas and streams due to project construction should be kept to a minimum with use and maintenance of the standard erosion control measures and devices. Existing drainage patterns will be maintained to the extent practicable and groundwater resources will not be affected. The bridge is located below headwaters. The existing bridge site is not located in a Water Supply Watershed Area. The Division of Water Quality, NCDENR, has classified the waters of Cub Creek as "C" (Aquatic Life, Secondary Recreation, Fresh Water). Cub Creek is not included on NCDENR-DWQ's 303d list of impaired streams.

It is anticipated that the construction of the project can be authorized under a United States Army Corps of Engineers (USCOE) individual permit. The Hydraulic Design group will assist the Project Development and Environmental Analysis Branch, in coordinating with the USACOE and other governmental regulatory agencies to ensure that all environmental concerns are appropriately addressed.

CHECKLIST FOR PRELIMINARY HYDRAULIC INVESTIGATION

TIP No.: B-4676

County: WILKES

Prepared By: SDG

ITEM No.	OFFICE DATA:	
1	X	PROJECT INITIATION – research existing files
2	X	PRELIMINARY DESIGN FORM – appendix D of design guidelines
3	X	LOCATION MAP – identify project limits and nearby drainage structures
4	X	BMU DATABASE DATA – highly important information (old project #, structures, etc.)
5	N/A	OLD BRIDGE/CULVERT SURVEY REPORTS
6	X	USGS QUAD MAP -Label: quad map name, begin/end project, streams, major drainage structures
7	X	FLOOD MAP -Label: panel no. & date, community name, stream, scale, legend, FIS data (discharges, profiles, etc.) -Request HEC-2 data from COE or FEMA (date ordered: _____)
8	X	PRELIMINARY HYDROLOGIC DESIGN -Determine drainage area from gauge records, old structure reports, FEMA studies, or planimeter -Compute and compare discharges with other studies
9	X	PRELIMINARY HYDRAULIC DESIGN -Check with bridge scour group for previous scour studies -Determine replacement and detour structures
10	X	PERMIT -Attach a copy of the environmental sensitivity map -Determine if above (<5cfs average daily flow) or (>5cfs adf) headwaters -Check CAMA jurisdiction
11	X	FIELD DATA: PLAN AND PROFILE VIEWS OF THE SITE -Plan; Label: north arrow, utilities, road name/#, stream name and direction, structures in flood plain -Profile; Label: road direction, high water marks, road and flood plain profiles normal and ordinary high water marks -Conduct site interviews -Investigate alignments of replacement and detour structures
12	X	PHOTOS -Upstream structure face, up and downstream waterways, both roadway approaches, and other significant features

PRELIMINARY DESIGN AND ASSESSMENT STREAM CROSSING AND ENCROACHMENTS

COUNTY WILKES

PROJECT # B-4676

ROUTE SR 1001

DATE AUGUST 12, 2005

ASSESSMENT PREPARED BY SDG

STREAM CUB CREEK

HYDROLOGIC EVALUATIONS

NEAREST GAUGING STATION ON THIS STREAM: _____ (NONE)

ARE FLOOD STUDIES AVAILABLE ON THIS STREAM: NO

FLOOD DATA:

Q10	Q50	Q500	METHOD USED TO COMPUTE Q			DRAINAGE AREA
2290	3670	Q500	EST. BKWTR.	OR OVERTOPPING	USGS URBAN REGRESSION EQS.	14.4 SQ MI
FT.	FT.	cfs	EST. BKWTR.	cfs		
3180	4150		EST. BKWTR.			
Q25	Q100		EST. BKWTR.			
FT.	FT.	cfs	EST. BKWTR.			

PROPERTY RELATED EVALUATIONS

DAMAGE POTENTIAL: LOW _____ MODERATE _____ HIGH X

COULD THIS BE SIGNIFICANTLY INCREASED BY PROPOSED ENCROACHMENT: YES _____ NO X

EXPLANATION: _____

LIST BUILDINGS IN FLOOD PLAIN NONE _____ LOCATION _____

FLOOR ELEVATION: _____

UPSTREAM LAND USE: RURAL _____

ANTICIPATE ANY CHANGE? NO _____

ANY FLOOD ZONE? (FIA STUDIES, ETC.) YES X NO _____

TYPE OF STUDY APPROXIMATE _____

BASE FLOOD ELEVATION NA _____ (100 YEAR)

ROADWAY OVERFLOW SECTION (NONE X) LENGTH ELEVATION

EMBANKMENT: SOIL TYPE

COMMENTS:

LEVELS AGGRADATION/DEGRADATION RESERVOIRS

DIVERSIONS DRAINAGE DISTRICT NAVIGATION

BACKWATER FROM ANOTHER SOURCE

EXPLANATION:

NOTE ANY OUTSIDE FEATURES WHICH MIGHT AFFECT STAGE, DISCHARGE OR FREQUENCY.

HIGHWAY AND BRIDGE (CULVERT) RELATED EVALUATIONS

COMMENTS:

IS THE TRAFFIC VOLUME, TYPE, USAGE SUCH TO WARRANT CONSIDERATION FOR VARIANCE FROM STANDARDS OR EXISTING LEVEL OR INTERRUPTION?

LEVELS?

DOES THE LEVEL OF TRAFFIC SERVICE OF AN EXISTING CROSSING VARY GREATLY FROM STANDARD DESIGN

EMERGENCY ROUTE	SCHOOL BUS ROUTE	MAIL ROUTE	DETOUR AVAILABLE?	LENGTH OF DETOUR	MILES
PRESENT YEAR TRAFFIC COUNT	PRESENT YEAR TRAFFIC COUNT	PRESENT YEAR TRAFFIC COUNT			
DESIGN YEAR TRAFFIC COUNT	DESIGN YEAR TRAFFIC COUNT	DESIGN YEAR TRAFFIC COUNT			
VPD	VPD	VPD			
% TRUCKS	% TRUCKS	% TRUCKS			

TRAFFIC RELATED EVALUATIONS

REGULATORY FLOODWAY WIDTH NA (AS NOTED IN FIA STUDIES)

COMMENTS:

ADDRESSING: _____

(3) _____ SPECIFIC DESIGN PROCESS WITH APPROPRIATE RISK/ECONOMIC EVALUATION

(2) _____ NORMAL PROCESS WITH SPECIAL SPECIFIC CONSIDERATION FOR

(1) _____ X _____ NORMAL PROCESS

THIS SITE ASSESSMENT INDICATES THE DESIGN SHOULD FOLLOW:

DISCUSSION: _____

WERE OTHER HYDRAULIC ALTERNATES CONSIDERED? _____ YES _____ NO _____ X _____

BRIDGE WATERWAY OPENING 358 SQ FT _____ CULVERT OPENING _____

LOW ROADWAY GRADE Match existing grade. _____ DETOUR GRADE Match existing grade. _____

DETOUR STRUCTURE 80' Bridge _____

RECOMMENDED DESIGN 110' Bridge _____

ALTERNATIVES

COMMENTS: _____

DOES STREAM CARRY APPRECIABLE AMOUNT OF LARGE DEBRIS? _____ YES _____

ARE BANKS STABLE? YES _____ PROTECTION NEEDED _____ NO _____

IS THERE UNUSUAL SCOUR POTENTIAL? YES _____ NO _____ X _____ PROTECTION NEEDED _____ NO _____

MISCELLANEOUS COMMENTS

LIST SPECIAL CONDITIONS OR CONSIDERATIONS WHICH AFFECT HYDRAULIC DESIGN (NONE) _____ X _____

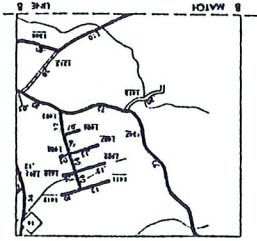
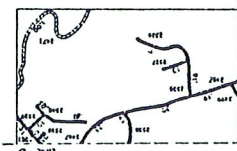
ENVIRONMENTAL CONSIDERATIONS

WILKES COUNTY NORTH CAROLINA

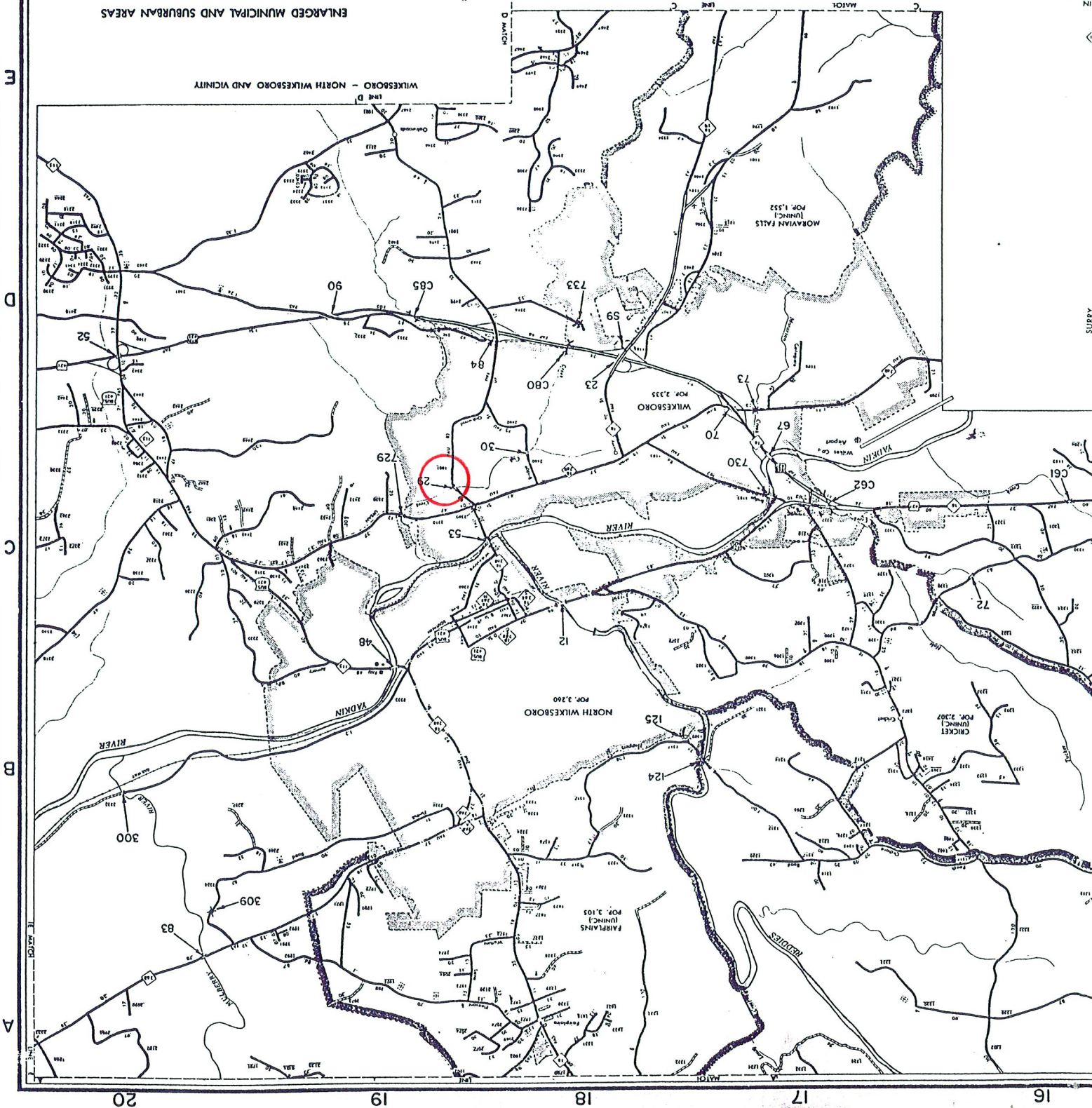
ENLARGED MUNICIPAL AND SUBURBAN AREAS

BRIDGE LOCATION MAP

PREPARED BY BRIDGE MAINTENANCE UNIT, RALEIGH, NORTH CAROLINA
IN COOPERATION WITH THE
U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION



WILKESBORO - NORTH WILKESBORO AND VICINITY

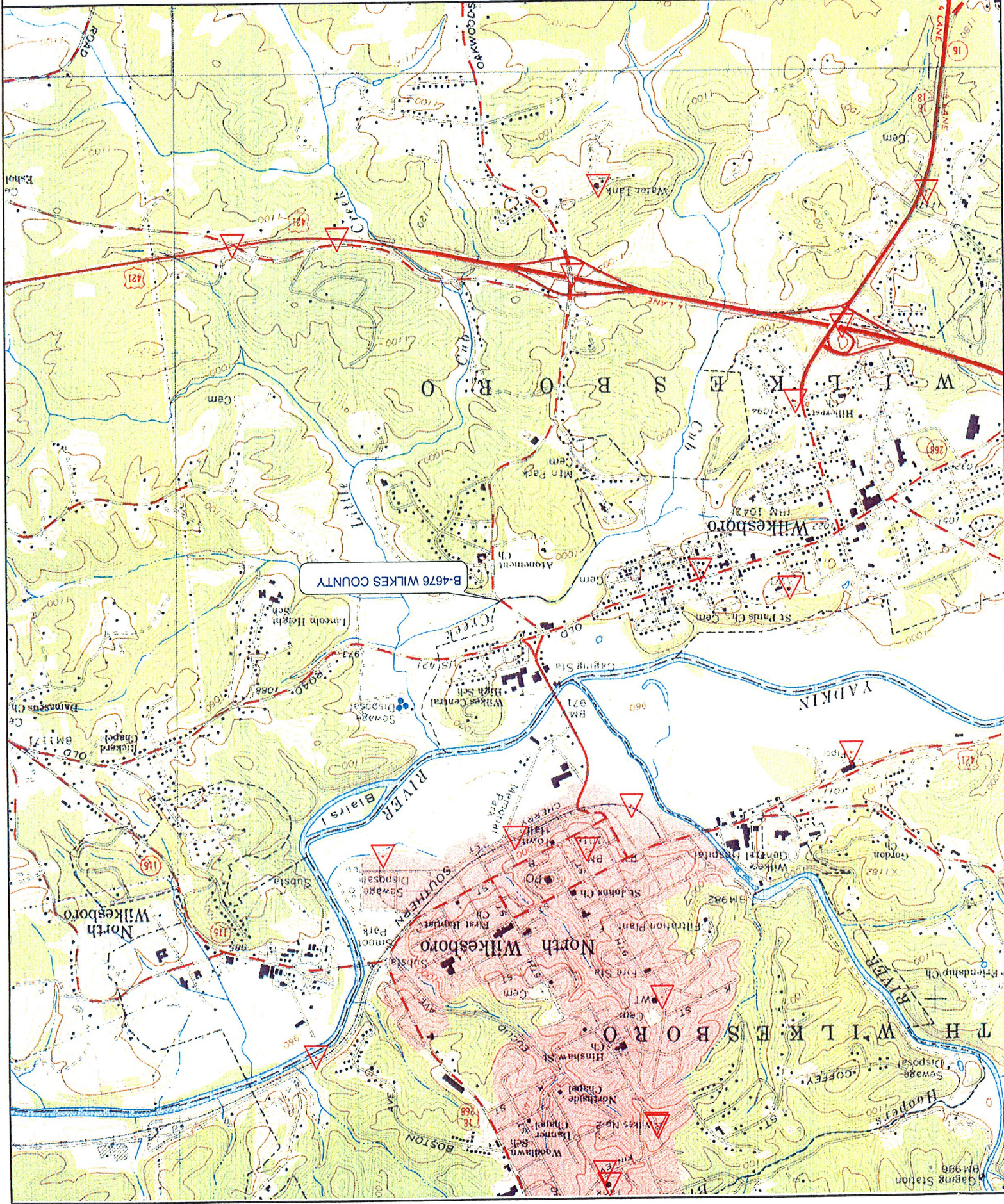


FEDL STATE CODE... 374
 CUSTODIAN..... 01
 OWNER..... 01
 OLD-CNTY... 076 FEDL AID PROJECT NO.
 STRUCTURE TYPE..... 0
 OVER UNDER..... 1
 ROUTE NUMBER..... 31010010
 DIVISION..... 11
 FIPS COUNTY CODE... 193
 FIPS PLACE CODE... 74020
 YEAR ADT..... 2003
 DESIGN LOAD..... 0
 CRITICAL DEFENSE.....
 FACILITY CARRIED... SR1001
 LOCATION..... 15 MI.S.JCT.NC18,NC268 FEDERAL SKW..... 00
 FLARED..... 0
 SAFETY FEATURES..... 0000
 HISTORICAL SIGNIF... 5
 NAV CONTROL..... 0
 NAV VERT CLEAR..... 000
 NAV HORIZ CLEAR..... 0000
 DETOUR LENGTH..... 02
 TOLL..... 3

POSTED, OPEN/CLOSED... P
 STRUCTURE TYPE MAIN... 522
 STRUCT TYPE APPR SPANS... 000
 NUMBER MAIN SPANS..... 003
 NUMBER APPROACH SPANS... 0000
 TOTAL HORIZ CLEARANCE... 29.7
 SAFE LOAD APPRAISAL... 2
 WATERWAY ADEQUACY APPR... 7
 APPR ROADWAY ALIGN APPR... 6
 SIDEWALK WIDTH LEFT... 00.4
 SIDEWALK WIDTH RIGHT... 00.4
 BRIDGE ROADWAY WIDTH... 029.7
 DECK WIDTH..... 031.1
 INSPECTION FREQUENCY... 24
 MIN VERT CLR OVER BRG... 99.99
 FRACTURE CRITICAL INSP... N
 UNDERWATER INSPECTION... N
 MIN LAT UNDERCLR RIGHT... N 99.9
 MIN LAT UNDERCLR LEFT... 00.0
 BORDER BRIDGE.....
 BORDER BRG STRUCTURE NO.

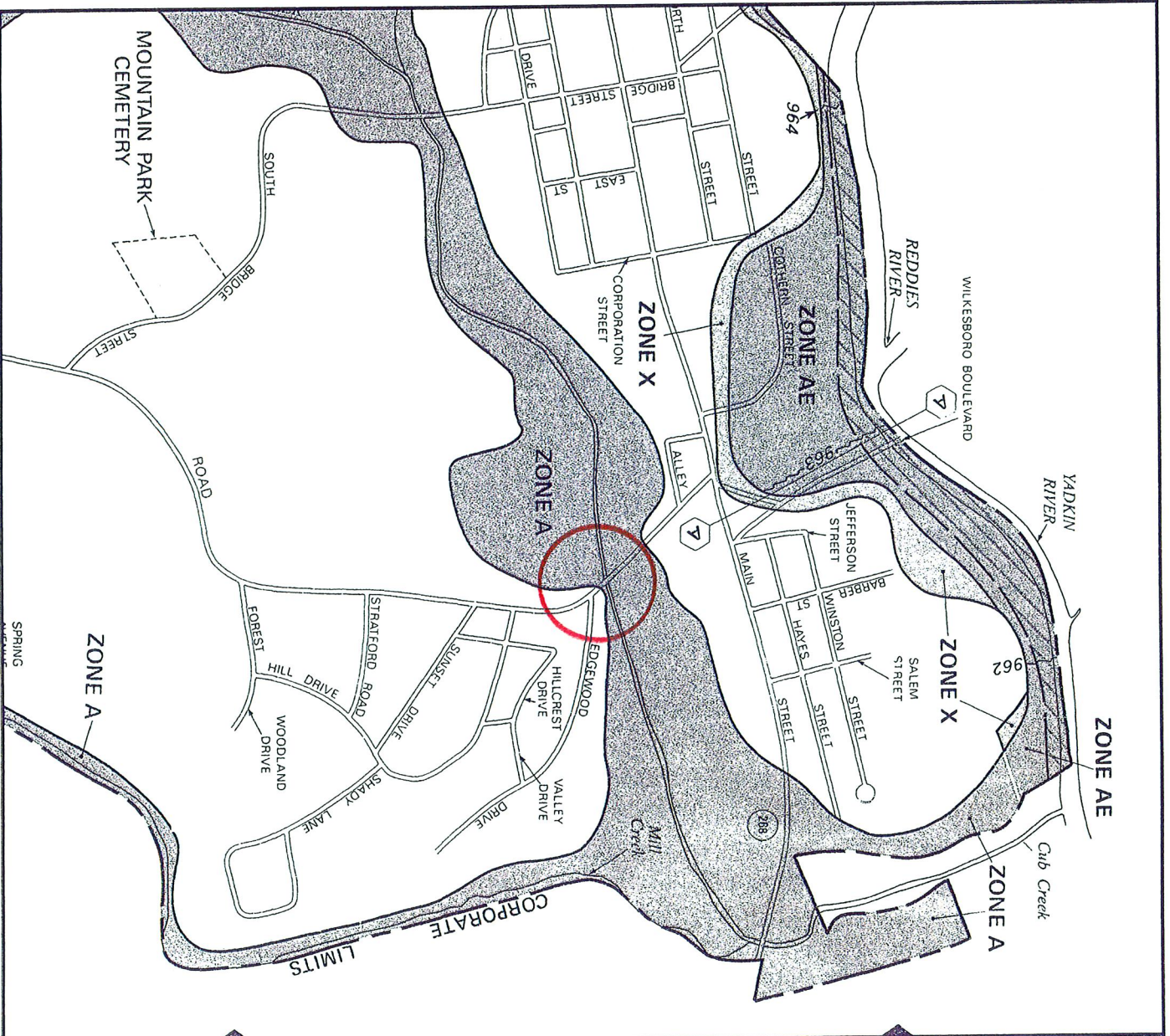
BRIDGE IMPROVEMENT COST... 000312
 PARALLEL STRUCTURE FLAG... N
 ROADWAY IMPROVE COST... 000078
 TRAFFIC DIRECTION..... 2
 TEMPORARY STRUCTURE FLAG
 YEAR IMPROVE COST EST... 2005
 NATIONAL HWY SYSTEM... 0
 YEAR RECONSTRUCTED... 0000
 AVG TRUCK ADT..... 06
 DESIGNATED TRUCK HWY... 0
 WEAR/PROTECTIVE SURFACE... 600
 PIER/ABUTMENT PROJECT...
 NBIS BRIDGE..... Y
 SCOUR CRITICAL BRIDGE... U
 FUTURE ADT... 015200
 MIN NAV VC VERT LIFT BRG
 BETWEEN RAILS..... 030.5
 YEAR FUTURE ADT... 2025
 DISTRICT..... 3
 ROAD SYSTEM CODE..... L
 FUND SOURCE ORIGINAL...
 FUND SOURCE REBUILD...
 BUILT BY - ORIGINAL... BMU
 BUILT BY - RECONST...
 PROJECT - ORIGINAL...
 PROJECT - RECONST...
 COUNTY..... WILKES
 CITY..... WILKESBO
 PAINT CONDITION.....
 YEAR PAINTED.....
 SPECIAL CODE..... B-4676
 APPR TRAVELWAY WIDTH... 019
 WATER DEPTH..... 003
 HEIGHT CROWN TO BED... 013

POSTING UPDATE..... 08 14 2001 STRUCTURAL STEEL LBS.. 0000
POSTED SV..... 26 YEAR DECK EVALUATION.
POSTED TTST..... 29 ABUTMENT FOOTING..... 000
REPLACEMENT STATUS... K ABUTMENT SUBSTRUCTURE. 711
SPECIAL PERMIT..... ABUTMENT CAP..... 531
CONTROLLING MEMBER... PILE, TIM. PIER FOOTING MAIN..... 000
NC SKEW..... 090 PIER SUBSTRUCT MAIN.. 711
ALIGNMENT..... TAN PIER CAP MAIN..... 531
GUARDRAIL TYPE RIGHT.. 23 3 PIER FOOTING APPROACH. 000
GUARDRAIL TYPE LEFT.. 23 3 PIER SUBSTR APPROACH. 000
PAINT SYSTEM CODE..... PIER CAP APPROACH..... 000
TYPE SERVICE..... 15 DEFENSE HIGHWAY..... 0
FLOOR & WEAR SURFACE.. PPC/CH/3.5 AWS ENCROACHMENTS..... 1 LN. UTILITY
BRIDGE NAME..... NC HWY SYSTEM ON. 14
TYPE SUPERSTRUCT.. PRESTRESSED CONC.CHANNEL (STD.BMD-13)
TYPE SUBSTRUCTURE. E.BTS.&INT.BTS.PPC CAPS/TIMBER PILES @ 5'-8 CENTERS
TYPE SPANS..... 1 @ 25'-4; 1 @ 30'; 1 @ 25'
BEAMS & GIRDERS... 12 PPC CHANNEL SECTIONS



Location: 036° 08' 55.21" N 081° 08' 35.53" W
 Caption: BRIDGE # 29 SR 1001
 CUB CREEK

Name: WILKESBORO
 Date: 7/26/2005
 Scale: 1 inch equals 2000 feet



once agent or call the National Flood Insurance Program at (800) 538-6620.



APPROXIMATE SCALE



NATIONAL FLOOD INSURANCE PROGRAM

FIRM
FLOOD INSURANCE RATE MAP

TOWN OF
WILKESBORO,
NORTH CAROLINA
WILKES COUNTY

(ONLY PANEL PRINTED)

COMMUNITY-PANEL NUMBER
370259 0005 E

MAP REVISED:
AUGUST 9, 1999



Federal Emergency Management Agency

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov

USGS Urban - Blue Ridge Piedmont

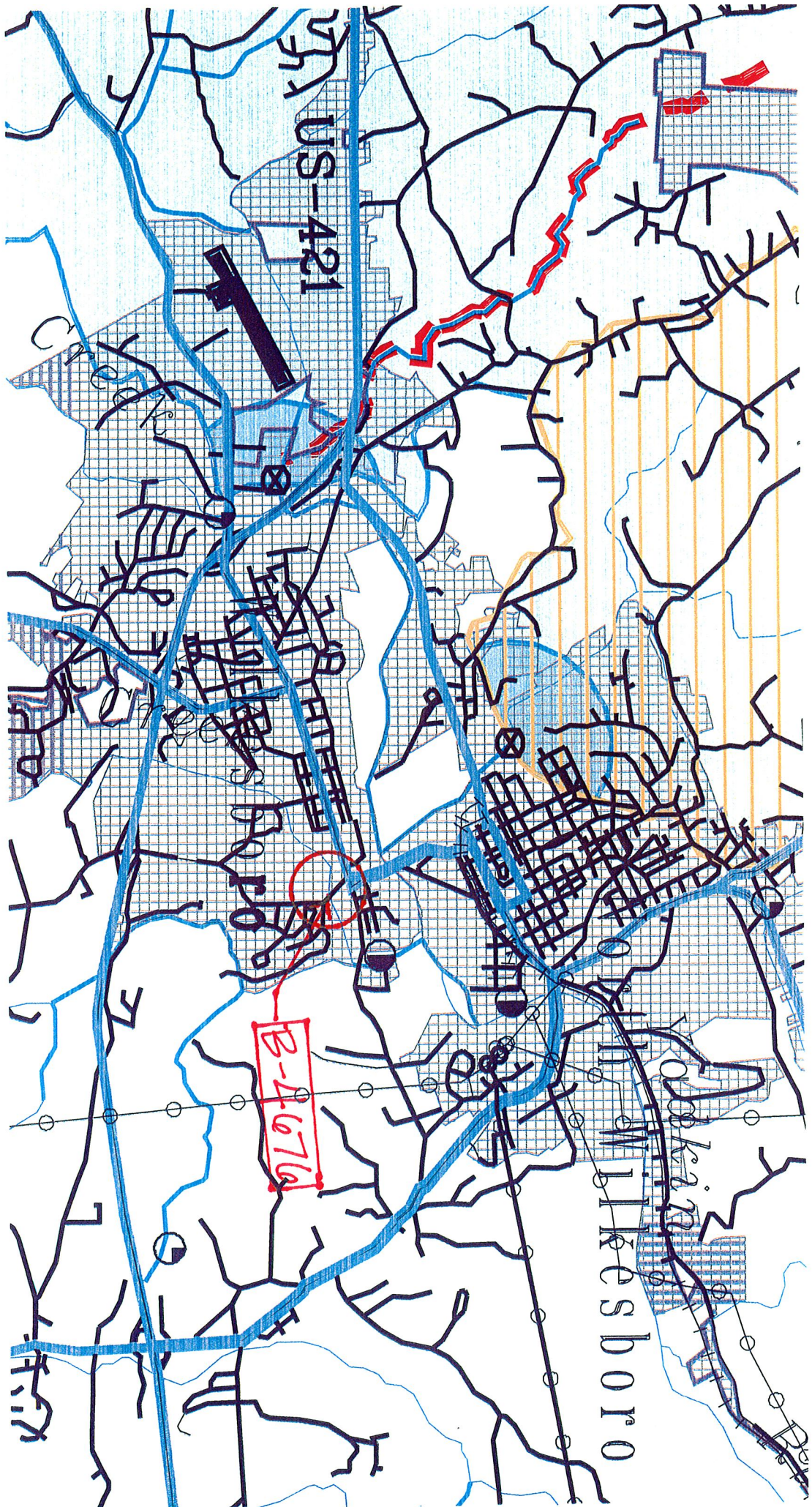
Project: B-4676 Bridge #29
 County: Wilkes

D.A. (Sq. Mi.) = 14.4
 ImperVIOUS Area (%IA) = 10

Q ₂ = 33.3DA ^{0.739} IA ^{0.686}	=	1160	=	1160	cfs
Q ₅ = 78.9DA ^{0.681} IA ^{0.572}	=	1811	=	1810	cfs
Q ₁₀ = 122DA ^{0.655} IA ^{0.515}	=	2291	=	2290	cfs
Q ₂₅ = 228DA ^{0.611} IA ^{0.436}	=	3175	=	3180	cfs
Q ₅₀ = 296DA ^{0.602} IA ^{0.396}	=	3670	=	3670	cfs
Q ₁₀₀ = 374DA ^{0.593} IA ^{0.358}	=	4147	=	4150	cfs

Say

ENVIRONMENTAL SENSITIVITY MAP



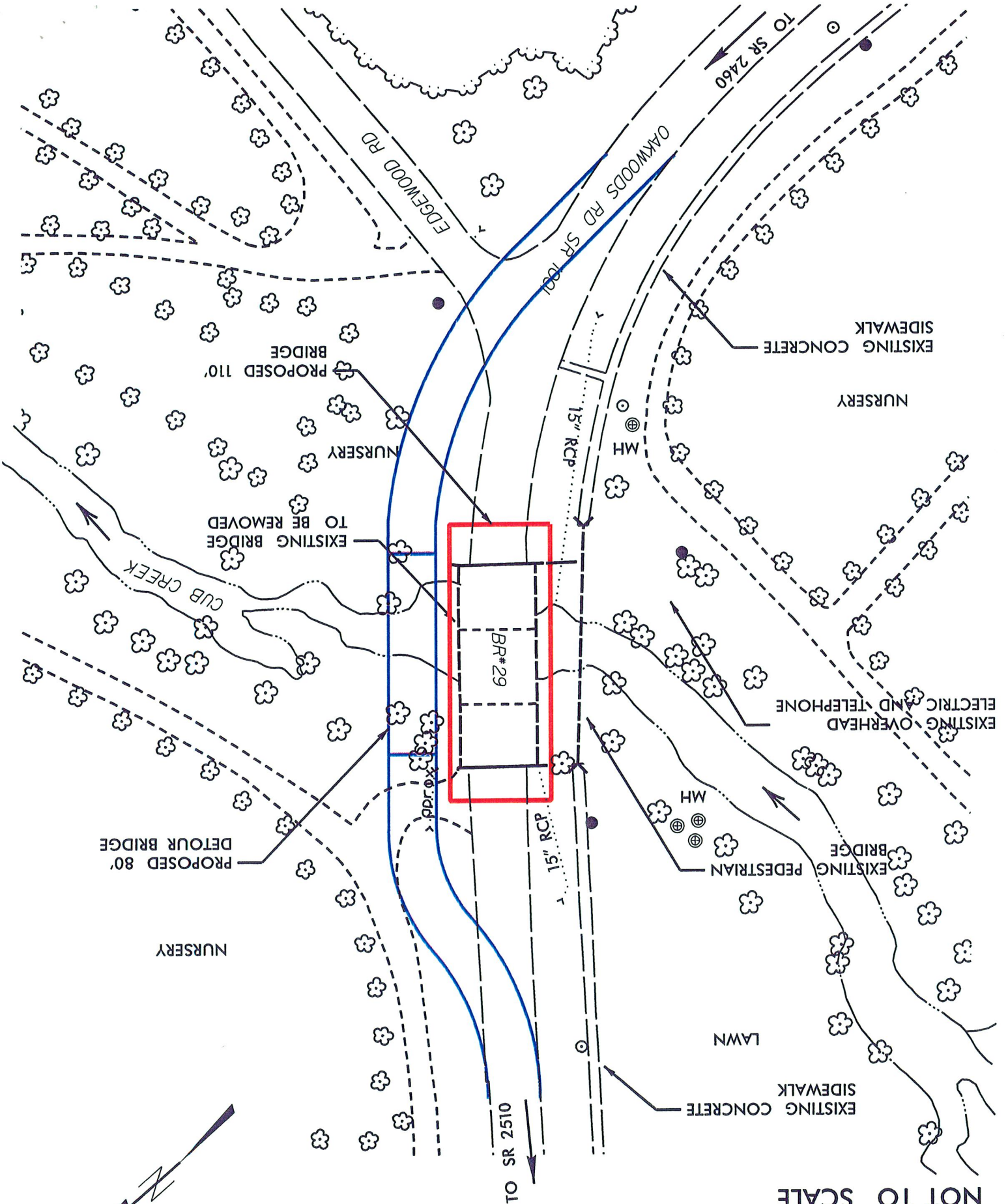
Name of Stream	Description	Curr. Class	Date	Prop. Class	Basin	Stream Index #
Reddies River	From a point 0.4 mile downstream of Hoopers Branch to North Wilkesboro Water Supply Dam	MS-II;HQW, CA	08/03/92	Yadkin	12-40-(9.5)	
Reddies River	From North Wilkesboro Water Supply Dam to Yadkin River	C	04/06/55	Yadkin	12-40-(10)	
Cub Creek	From source to Yadkin River	C	03/01/77	Yadkin	12-41	
Little Cub Creek	From source to Wilkesboro's Old Water Supply Dam	MS-I;HQW	08/03/92	Yadkin	12-41-1-(1)	
Little Cub Creek	From Wilkesboro's Old Water Supply Dam to Cub Creek	C	03/01/77	Yadkin	12-41-1-(2)	
Mulberry Creek	From source to Yadkin River	C	04/06/55	Yadkin	12-42	
Joshua Creek	From source to Mulberry Creek	C,Tr	07/01/73	Yadkin	12-42-1	
Dungeon Creek	From source to Joshua Creek	C	04/06/55	Yadkin	12-42-1-1	
Pine Mountain Branch	From source to Mulberry Creek	C	04/06/55	Yadkin	12-42-2	
Halls Creek (Harris)	From source to Mulberry Creek	C,Tr	07/01/73	Yadkin	12-42-3	
Church Barnch Creek	From source to Mulberry Creek	C	04/06/55	Yadkin	12-42-4	
Wooten Creek	From source to Mulberry Creek	C	04/06/55	Yadkin	12-42-5	
Bee Tree Branch	From source to Mulberry Creek	C	04/06/55	Yadkin	12-42-6	
Hay Meadow Creek	From source to Mulberry Creek	C	04/06/55	Yadkin	12-42-7	
Wilkes Lake	Entire lake and connecting stream to Mulberry Creek	C	04/06/55	Yadkin	12-42-8	
Long Creek	From source to Mulberry Creek	C	04/06/55	Yadkin	12-42-9	
Rock Creek	From source to Yadkin River	C	04/06/55	Yadkin	12-43	
Fishing Creek	From source to Yadkin River	C	04/06/55	Yadkin	12-44	
YADKIN RIVER	From a point 1.0 mile upstream of Roaring River to a point 0.2 mile upstream of the mouth of Big Bugaboo Creek	MS-V	08/01/98	Yadkin	12-(45)	

NC DENR - DIVISION OF WATER QUALITY
 STREAM CLASSIFICATION DESCRIPTIONS

Class Description

B	Primary Recreation, Fresh Water
C	Aquatic Life, Secondary Recreation, Fres
CA	Critical Area
FWS	Future Water Supply Waters
H0W	High Quality Waters
N/A	Not Applicable/out of State
NSW	Nutrient Sensitive Waters
ORW	Outstanding Resource Waters
SA	Market Shellfishing, Salt Water
SB	Primary Recreation, Salt Water
SC	Aquatic Life, Secondary Recreation, Salt
SW	Swamp Waters
Tr	Trout Waters
MS-I	Water Supply I -- Natural
MS-II	Water Supply II -- Undeveloped
MS-III	Water Supply III -- Moderately Developed
MS-IV	Water Supply IV -- Highly Developed
MS-V	Water Supply V -- Upstream

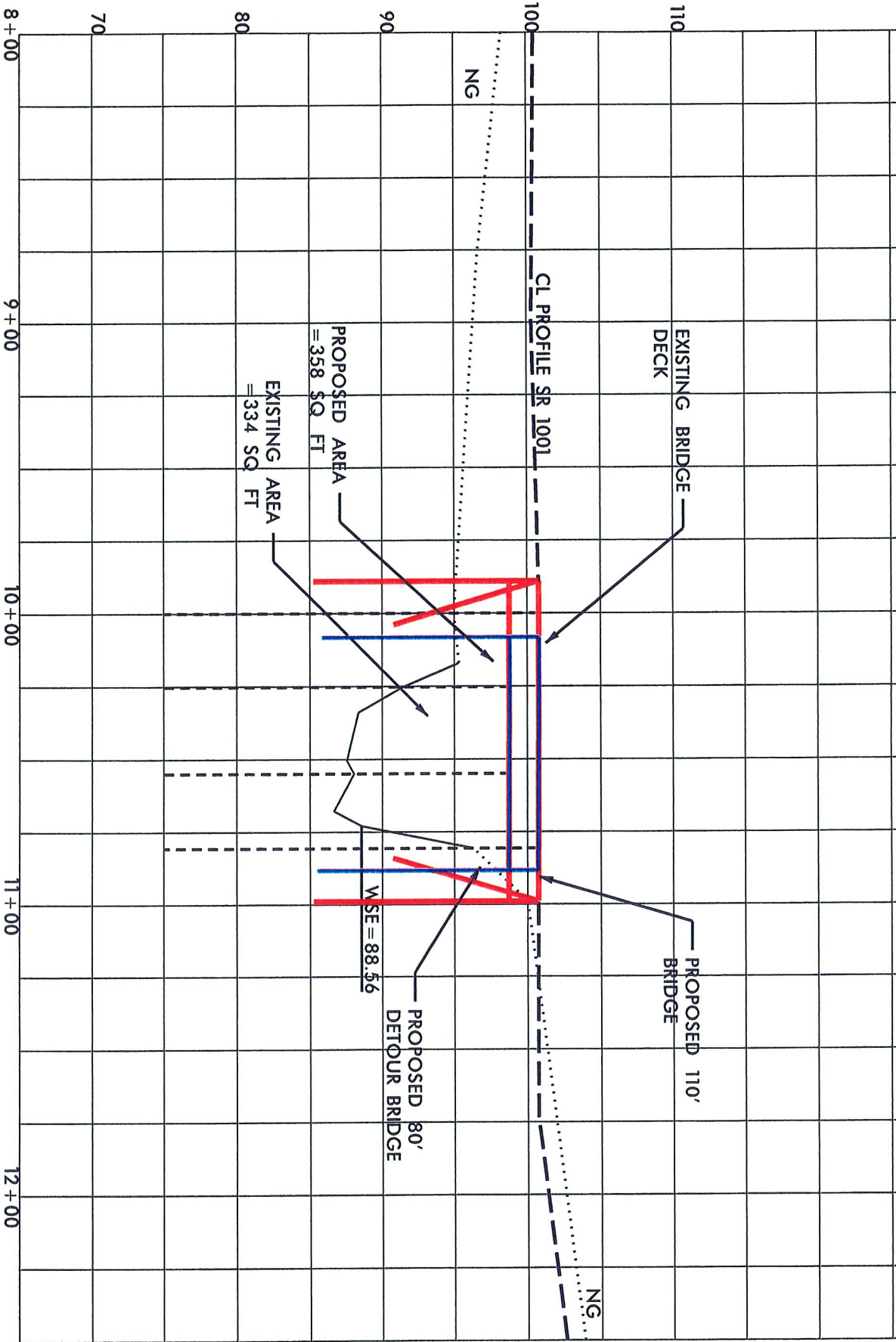
B-4676
CUB CREEK
WILKES COUNTY
NOT TO SCALE



BED PROFILE @ DOWNSTREAM

FACE

CUB CREEK



NORTH

B-4676 SR 1001

SOUTH

BRIDGE #29 WILKES COUNTY

VERTICAL SCALE: 1" = 10'
HORIZONTAL SCALE: 1" = 50'

NATIONAL PRINTFAST

NO. 446

3/25/05

B-467C
WILKES Co

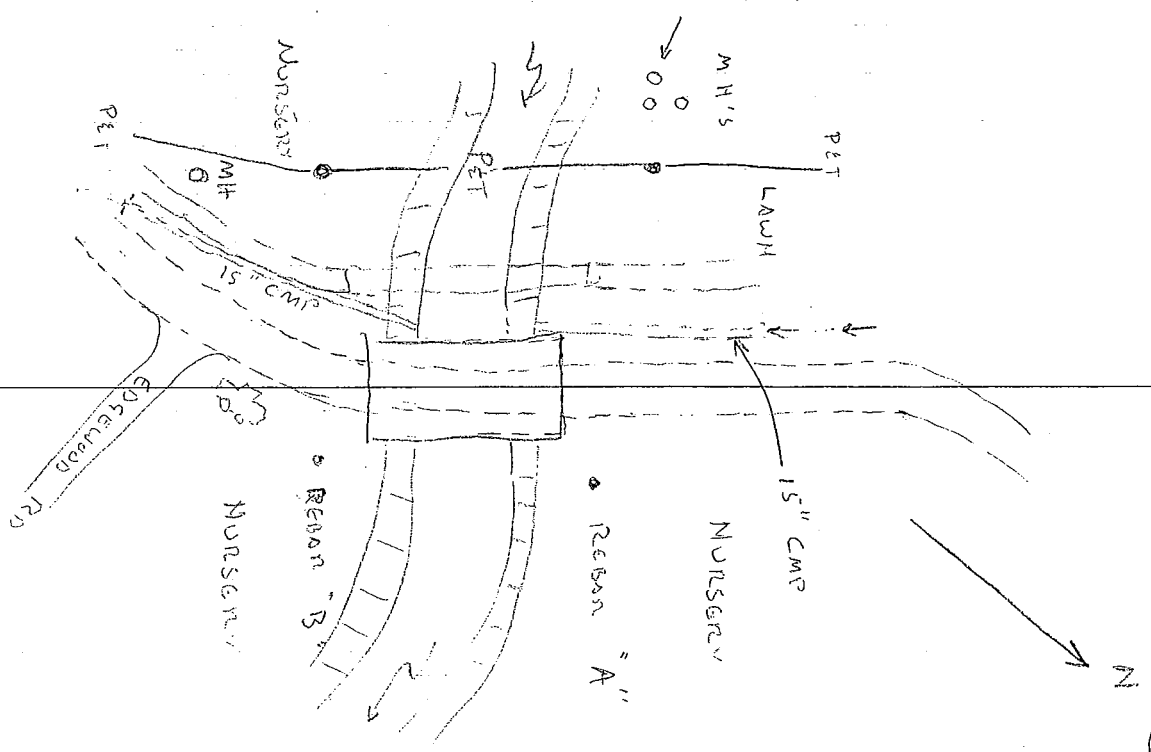
WILKES
PRINTING

①

(2)

- CONCRETE THRU CHANNEL ON TIMBER PILES & TIMBER ABUTS
- NORTH APPROACH IN TANGENT W/ SHARP CURVE ≈ 500 FEET FROM BRIDGE. GRADE FALLING TOWARD BRIDGE. GOOD SIGN DISTANCE
- SOUTH APPROACH IN CURVE W/ GRADE FALLING TOWARD BRIDGE. GOOD SIGN DISTANCE.
- BRIDGE IN TANGENT W/ CURVE STRIPED ON BRIDGE
- OVERHEAD POWER & TELEPHONE ≈ 70' UPSTREAM
- 4" PVC & 2" PVC PIPES ATTACHED TO UPSTREAM SIDE OF BRIDGES

NATIONAL PRINTFAST NO. 446



(3)

(2)

- POSTSTRAM BRIDGES UPSTREAM OF BRIDGES
- MINOR DEBRIS ON UPSTREAM FACE, DEBRIS POTENTIAL APPEARS HIGH
- No SCOUR
- No WETLANDS
- BANKS STEEP BUT FAIRLY STABLE TREES HAVE BEEN CUT ON BANKS CLOSE TO BR. US. LARGE TREES ON BANKS DS
- Bed MAT'L: SAND, COBBLES
- POSSIBLE Sewer Line Downstream (under) UPSTREAM
- REPLACE EXISTING ALIGNMENT, UTILITIES, ETC
- Detour D.S.

NATIONAL PRINTFAST

NO. 446

(5)

④

No
IN

Dwellings ,
Food PLANT
STRUCTURES

NATIONAL PRINTFAST

NO. 447

⑤

8

STA	PT	DATE	D	Z	S
PT "B"	(2)	0-00-00	96.91	+3.69	100.00
Q	3	6-31-30	174.60	+4.39	100.70
Q	4	11-33-18	285.37	+10.18 (1)	103.49
MC	5	5-32-54	299.73	+8.54	104.85
"	6	2-10-41	311.38	+14.27	110.58
GUT	7	23-47-52	91.51	+4.00	100.71
Q BOB	8	15-07-08	83.81	+4.41	100.72
GUT	9	6-00-01	77.51	+4.07	100.38
MC	10	5-44-38	77.29	+4.81	101.12
RAIL	11	5-27-25	76.74	+6.86	103.17
TOP ABU	12	4-54-56	77.62	+3.42	99.73
Bot "	13	5-09-12	77.31	+3.44 (2)	96.33
TB	14	330-44-25	57.90	-3.76	72.55
MC	15	350-52-40	57.27	-6.07 (1)	86.82
SEAT	16	5-12-13	77.23	+2.51	98.82
NEWS	17	7-34-44	70.82	-7.75	88.56
BE0	18	9-00-57	66.03	-6.26 (1)	86.63
BE0 @	19	13-23-41	53.52	-1.11 (2)	88.16
BE0 @	20	21-28-05	42.47	-1.13 (2)	87.54
MC	21	28-22-49	36.54	-0.91 (1)	88.36

HAUL (TB)

(96.31)

9

10

STA	22	Share	D	2	6
N.C. Bgmt #2	34-28-04	30,63	+2,18	91,45	
TR	53-10-36	26,05	+2,44	95,33	
Bot ABUT	90-40-20	24,73	+2,09	94,98	
Sgmt	91-50-20	24,76	+2,52	98,83	
TOP ABUT	93-27-16	24,63	+4,09	100,40	
GUF	90-32-24	26,02	+4,13	100,74	
EOB	86-57-32	39,20	+4,52	100,83	
GVI	83-21-33	54,92	+4,15	100,46	
Q	145-24-31	115,86	+4,01	100,32	
Q	157-34-09	322,92	+4,36	100,67	
MG	165-05-29	297,84	+3,90	100,21	
"	166-12-05	325,36	+8,65	104,96	
"	167-28-27	131,22	+0,31	96,62	

NATIONAL PRINTFAST

NO. 446

PICTURES

FILE

LOOK MONTHLY

" D S YR

" U S YR

LOOK SOUTH

" U P S YR

" DISTRICT

OUT OF TOP BANKS

TWO YEARS AGO

NO SPECIFIC DATES

NEVER OVER BOARD

DR OVER BRIDGE

THEY HAVE BEEN HERE SINCE 1999

OWNERS OF BUSINESS HEARST BOEHR

SCREEN PRINTERS UNLIMITED

11

(2)

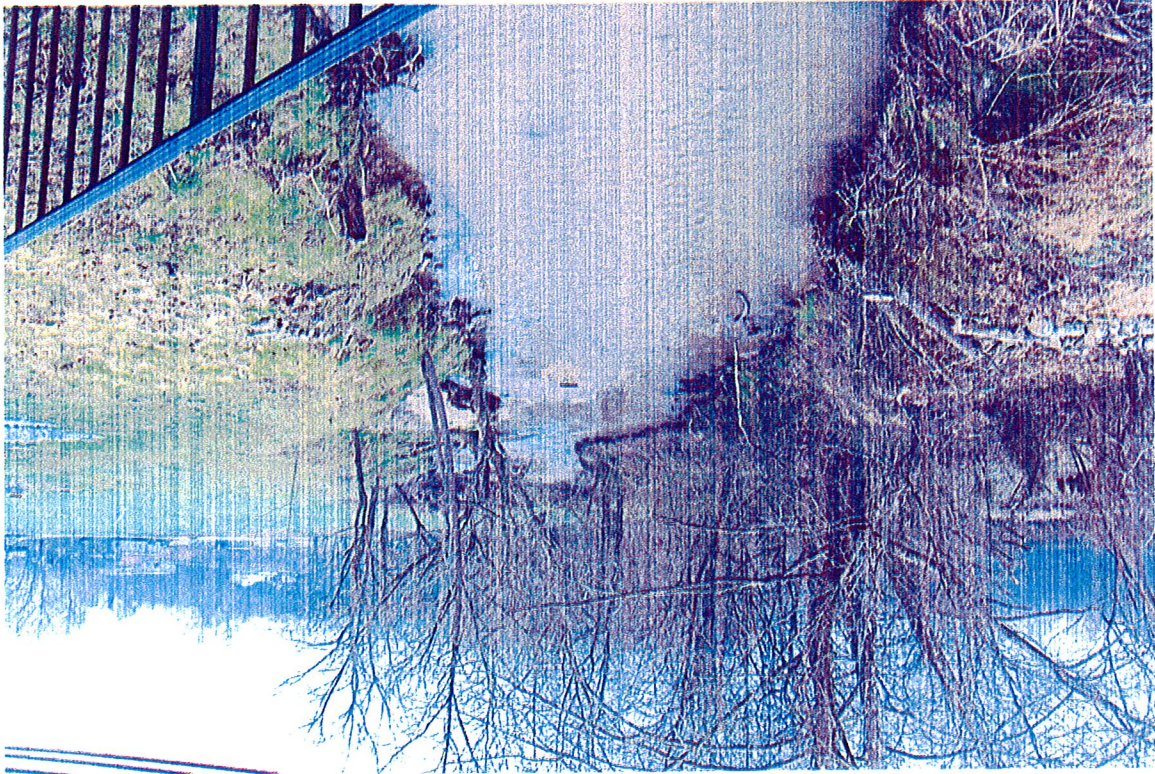
NATIONAL PRINTFAST

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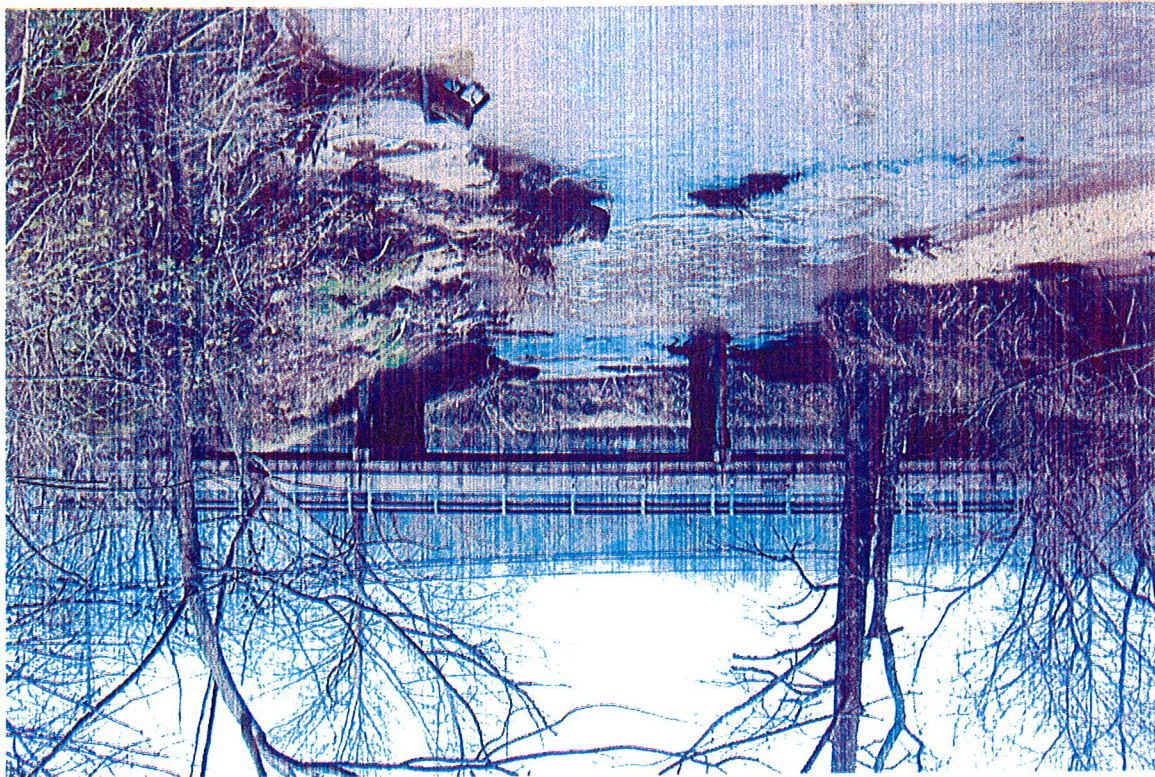
MATTHEW MILLER
7 YEARS
NO FLOOD INC OF
ROND OR BRIDGE
NEVER OUT OF TB

(13)

LOOKING UPSTREAM



DOWNSTREAM FACE OF BRIDGE



SUBJECT B-4474

PROJECT _____ COUNTY _____

PREPARED BY TAO DATE 5/24/00 STATION _____

CHECKED BY _____ DATE _____ STR NO _____ SHEET _____ OF _____

Have Appraiser to be instrument a Road to drive @ North end of Island.

Survey cable ground sensors - need to tie the survey unit.

Bridge posted water

James Henry west side of bridge

Redesign bridge on west side of bridge

Sanitary sewer on west side of bridge

3' span timber pole concrete cap end bent (about) 2' bolts local masons

UNITES attached to bridge

stream pipe is to be west of bridge

landscaping (masonry) business 3' across

park No @ms.

* Buy Road

one boat in the water

lined fiber optic west side of bridge

shallow water

adding road 6" into park

land agreed for

possibly a barrier to protect pedestrian

greenway will connect w/ bridge sidewalk

possibly Access under the bridge for greenway

* possibly offset bridge to allow for greenway

last two years

have done trout releases

will be trout stocked.

Stream Restoration Grant (DNR)

Melvin Leichter Pedestrian Plan

Cliff
Mike
ME

Ken
Kathy

Clear water Management Trust Fund.
 County land - possibly will trade - borders park area
 No net loss of Recreation land -
~~and~~ land that is ~~not~~ no longer considered parkland.

10 ft - reduce

office complex = 6-700 south of bridge (park hour traffic)

Will send Request for Greenway underneath

Recommended 10' height clearance

~~Recommended~~ *Recommended Access - will guidelines assist for trails under bridges

Paddletrails.org

Wendin to see trail program

Send Kathy A(S) info.

Check on A(F)
 Call County about land
 Meeting w/ FHM, Wang, Dec, Division

Subject: B-4676 LWCF Property (Wilkesboro Conversion)

Date: Mon, 10 Apr 2006 12:41:04 -0400

From: Kathy White <Kathy.White@ncmail.net>

Organization: Recreation Resources Service

To: Tracy Walter <twalter@dot.state.nc.us>

CC: Greg Purvis <gpurvis@wang-engineering.com>,
Wilkesboro Ken Noland Mgr <townmanager@wilkesboronorthcarolina.com>,
KW File Copy <kathy.white@ncmail.net>

Tracy, Confirming our mtg the 24th at 11:00. If available, mail me any maps, drawings, etc that would be helpful prior to the meeting...or maybe direct me to any of the project plans on the web. Since there are federal funds in the project, a 4(f) conversion will be required in addition to the LWCF 6(f) conversion.

Kathy

Ken, Is there any land adjacent to Cub Creek Park that may be available to replace the small amount of LWCF land that will be converted? We can start talking about potential replacement property.

Kathy

Ref -- DOT TIP:

<http://www.ncdot.org/planning/development/tip/tip/>

Wilkes Co.	8.2761801, BRZ-1001(29)	Replace Bridge #29 over Cub Creek on SR 1001.	\$200,000.00 Cost
B-4676		Funds are needed for preliminary engineering.	\$160,000.00 Fed.
			\$40,000.00 State

Please note new phone number:

Kathy White

Recreation Resources Service

585 Waughtown Street

Winston-Salem, NC 27107

Voice: (336) 771-5065

FAX: (336) 771-4631

kathy.white@ncmail.net

<http://natural-resources.ncsu.edu/rrs>

On 4/10/2006 8:26 AM, Tracy Walter wrote:

Good Morning Kathy,

As I mentioned in my message, both Ken Nowland and Greg Purvis (Wang Engineering) are able to meet on Wednesday May 24. We will plan on meeting you onsite at 11:00am that morning.

Tracy

