

STATE STORMWATER PERMIT - NOT REQUIRED

FEMA APPROVAL - NO

- FEMA 100-yr WS ---

OFFICE ESTIMATE ~~60 ft BRIDGE~~ 12x5 Bottomless

REMARK: ---

Project# _____

TIP# _____

Let Date _____

WBS# 17BP.14.R.81

PREDESIGN-PRESURVEY REPORT

County HAYWOOD

Bridge# 430310

Road# SR 1348

Name LAUREL BRANCH

Stream LAUREL BRANCH

Type Of Request: POC Force Account TIP NCMA

Date 8/19/2011 Name SAB

Assigned To JLL

Checked By WHT

Prior Survey Date NO (attach copy of prior survey)

Study By Scour Section 4/15/2010 Code Z

Flood Zone N Detail Study No Date Pre2/19/08 Panel# 8711

B.M. Info

Quad Map Fines Creek Drainage Area 1.46 Sq Mi From Delineation

Q25 524 cfs Q50 628 cfs Q100 754 cfs Method USGS Rural

Region 2 (Blue Ridge)

EXISTING BRIDGE INFORMATION

Location 0.3 MI. N. JCT. SR 1338

Average Daily Traffic 50 Yr - 1995

Length 21' Bed- To Crown 6' Water Depth 1'

Type Structure TIMBER FLOOR ON TIMBER JOISTS. E.BTS: TIM. CAPS/TIM. POST & CONC. SILLS @ 7' CTS.

Type Spans 1@20'6

Upstream Structure N/A

Location SR 1348 NOT NUMBERED

Bed- To Crown --- Prior Survey ---

Downstream Structure N/A

Location I-40 NOT NUMBERED

Bed- To Crown --- Prior Survey ---

SCS Watershed _____

ENVIRONMENTAL

Trout Stream NO Anadromous Fish NO Primary Nursery Area NO

High Quality Waters NO Nutrient Sensitive Waters NO

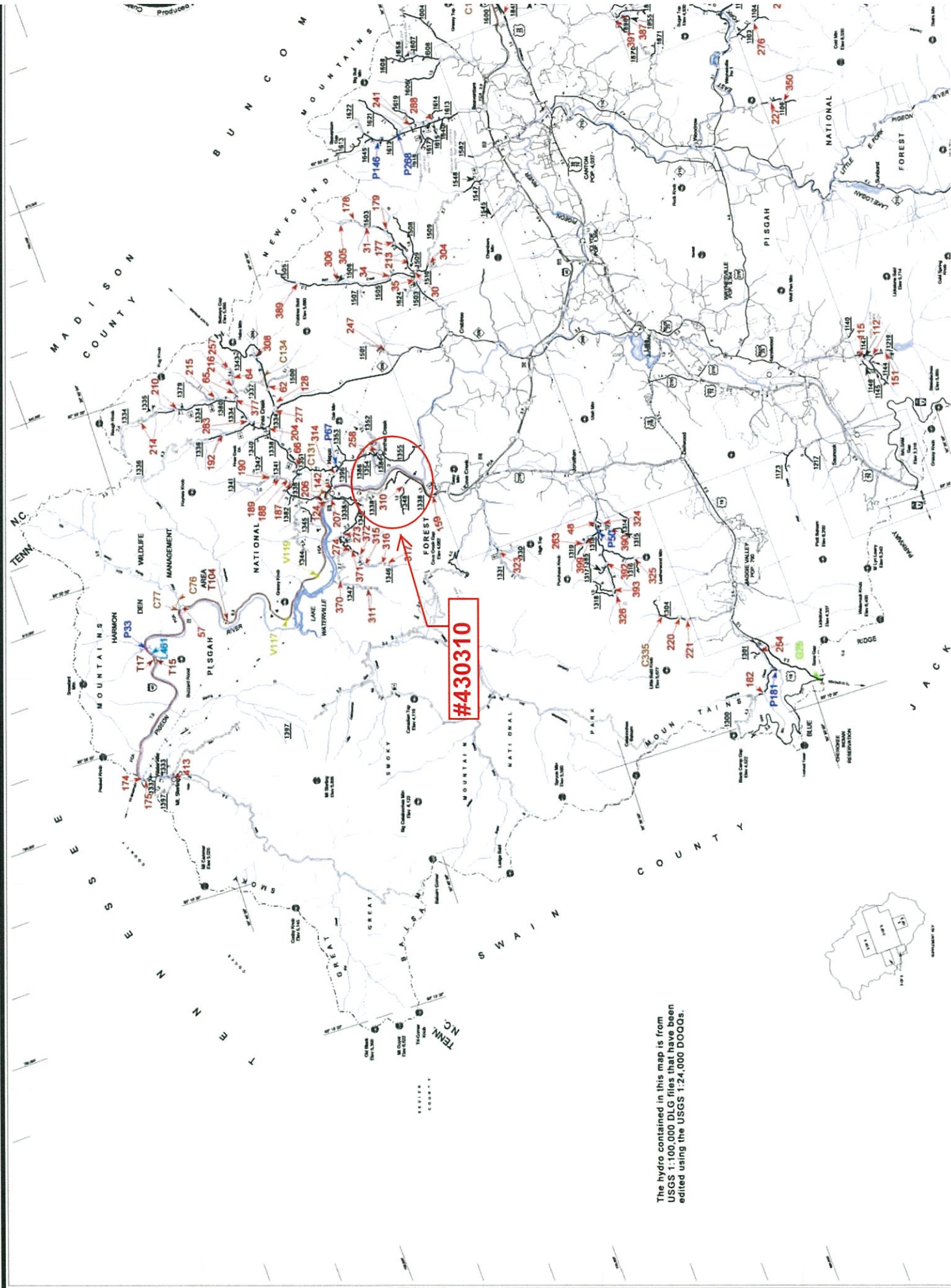
Near Water Supply Intake NO CAMA County NO

Stream Classification C

DENR River Basin Info. French Broad

Min bridge length = $3 \times (6') + (20') + (21') =$ 59'

1 2 3 4 5 6



#430310

The hydro contained in this map is from
USGS 1:100,000 DLG files that have been
edited using the USGS 1:24,000 DOQs.

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map
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NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
BRIDGE MANAGEMENT UNIT

ATTENTION

BRIDGE INSPECTION REPORT

INSPECTION TYPE: Routine Inspection

COUNTY HAYWOOD

BRIDGE NUMBER 430310

INSPECTION CYCLE 2 YRS

ROUTE SR1348

ACROSS LAUREL BRANCH

M.P. 0

LOCATION .3 MI.N.JCT.SR1338

SUPERSTRUCTURE TIMBER FLOOR ON TIMBER JOISTS

SUBSTRUCTURE E.BTS:TIM.CAPS/TIM.POST&CONC.SILLS @ 7'CTS.

SPANS 1 @ 20'-6

LONGITUDE 82° 59' 57.1"

LATITUDE 35° 38' 6.5"

PRESENT CONDITION FAIR

INVENTORY RATING

INSPECTION DATE 03/16/2011

OPERATING RATING

PRESENT POSTING SV 15 TTST 21

PROPOSED POSTING

COMPUTER UPDATE

ANALYSIS DATE

POSTING LETTER DATE

SUFFICIENCY RATING

OTHER SIGNS PRESENT DELINEATORS [4] AND NARROW BRIDGE [2]



LOOKING NORTH.

SIGN NOTICE
ISSUED FOR

NUMBERED
REQUIRED

No WEIGHT LIMIT

No DELINEATORS

No NARROW BRIDGE

No ONE LANE BRIDGE

No LOW CLEARANCE

BRIDGE MANAGEMENT UNIT
DATA ON EXISTING STRUCTURE

Run Date: 05/02/2011

COUNTY : HAYWOOD		DIV : 14		DIST : 2		STRUCTURE NUMBER : 430310		LENGTH : 21 FEET	
ROUTE CARRIED : SR1348				FEATURE INTERSECTED : LAUREL BRANCH					
LOCATED : .3 MI.N.JCT.SR1338				BRIDGE NAME :				CITY :	
FUNC. CLASS : 09		SYST.ON : NFA		SYST.UNDER : NFA		ADT & YR : 50 1995		RAIL TYPE : LT 227 RT 227	
BUILT : 1963		BY : BMU		PROJ :		FED.AID PROJ :		DESIGN LOAD : Other or Unknown	
REHAB :		BY : BMU		PROJ : 5.9451		ALIGNMENT : TAN		SKEW : 140	
								LANES : ON 2 UNDER	
NAVIGATION : VC 0.0 FT HC 0.0 FT				HT. CRN. TO BED : 6 FT				WATER DEPTH : 1 FT	
SUPERSTRUCTURE : TIMBER FLOOR ON TIMBER JOISTS									
SUBSTRUCTURE : E.BTS:TIM.CAPS/TIM.POST&CONC.SILLS @ 7'CTS.									
SPANS : 1 @ 20'-6									
BEAMS OR GIRDERS : 10 LNS. 6X14 TIM.JOISTS @ 2'CTS.									
FLOOR : 4X8 TIM/1.5 AWS		ENCROACHMENT :				DECK (OUT TO OUT) : 20.0 FT			
CLEAR ROADWAY : 19.2 FT		BETWEEN RAILS : 19.8 FT				SIDEWALK OR CURB : LT 0.3 FT RT 0.3 FT			
VERT.CL.OVER : 99 FT 99 IN		VERT.CL.UNDER : 00 FT 00 IN				HOR.CL.UNDER : 0.0 FT			
INV.RTG. : HS-10		OPE.RTG. : HS-14		CONTR.MEMBER : int Joist		POSTED : SV 15 TTST 21		DATE 10/07/2008	
SYSTEM : Secondary S.R. Route						GREEN LINE ROUTE : N			
2ND OPENING :		3RD OPENING :		4TH OPENING :		5TH OPENING :			
REMARKS :									

Stream Bed Soundings

(See next sheet for profile sketch)

Bridge No: 430310 County: HAYWOOD Date: 03/16/2011 By: WBF

Record sounding from top of rail. Other location if needed: _____

Distance from Highwater Mark to top of rail: _____ Location of Highwater Mark: NOT DETECTED

DOWNSTREAM			UPSTREAM		
Distance (Station) (ft)	Sounding (ft)	Description	Distance (Station) (ft)	Sounding (ft)	Description
0	3	FILL FACE ABUTMENT 1	0	2.9	FILL FACE ABUTMENT 1
1.3	4.5	Top of Cap			
1.4	7.9	STREAM FACE ABUTMENT 1 AND WE AND WS	1.4	7.8	STREAM FACE ABUTMENT 1
9	8.3	STREAM BED			
12	7.5	Water Surface/Water Edge (WSWE)			
24.2	6.2	STREAM FACE ABUTMENT 2	24.2	6.3	STREAM FACE ABUTMENT 2
24.3	4.5	Top of Cap			
25.5	3	FILL FACE ABUTMENT 2	25.5	2.9	FILL FACE ABUTMENT 2

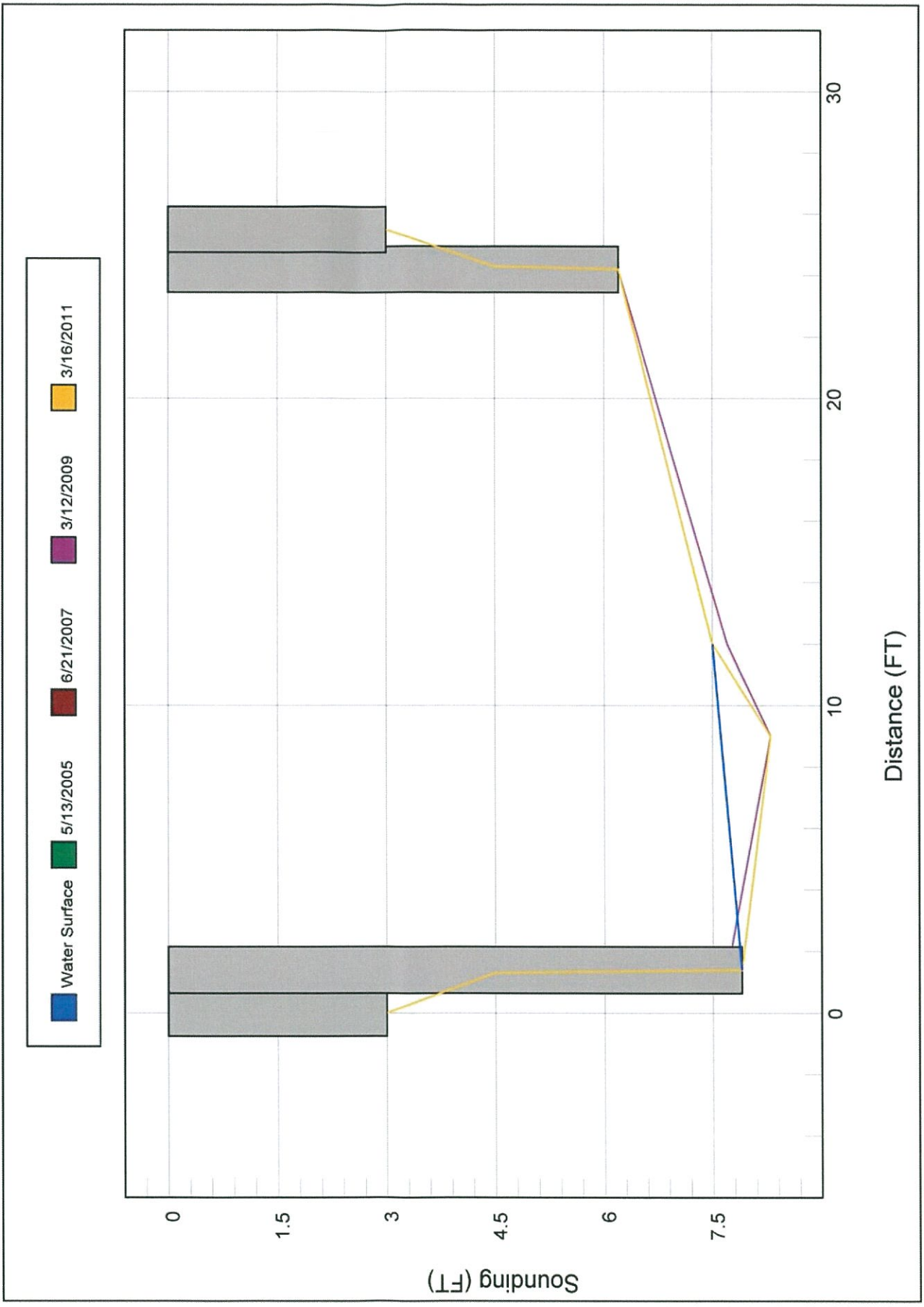
Bridge: 430310

County HAYWOOD

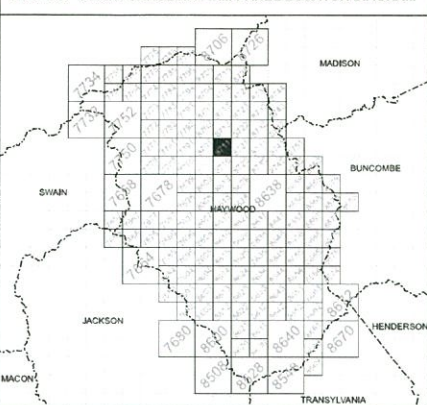
Date: 03/16/2011

STREAMBED PROFILE (Downstream)

Top of Rail = 0 FT (Sounding)



STATE OF NORTH CAROLINA FIRM PANEL LOCATOR DIAGRAM



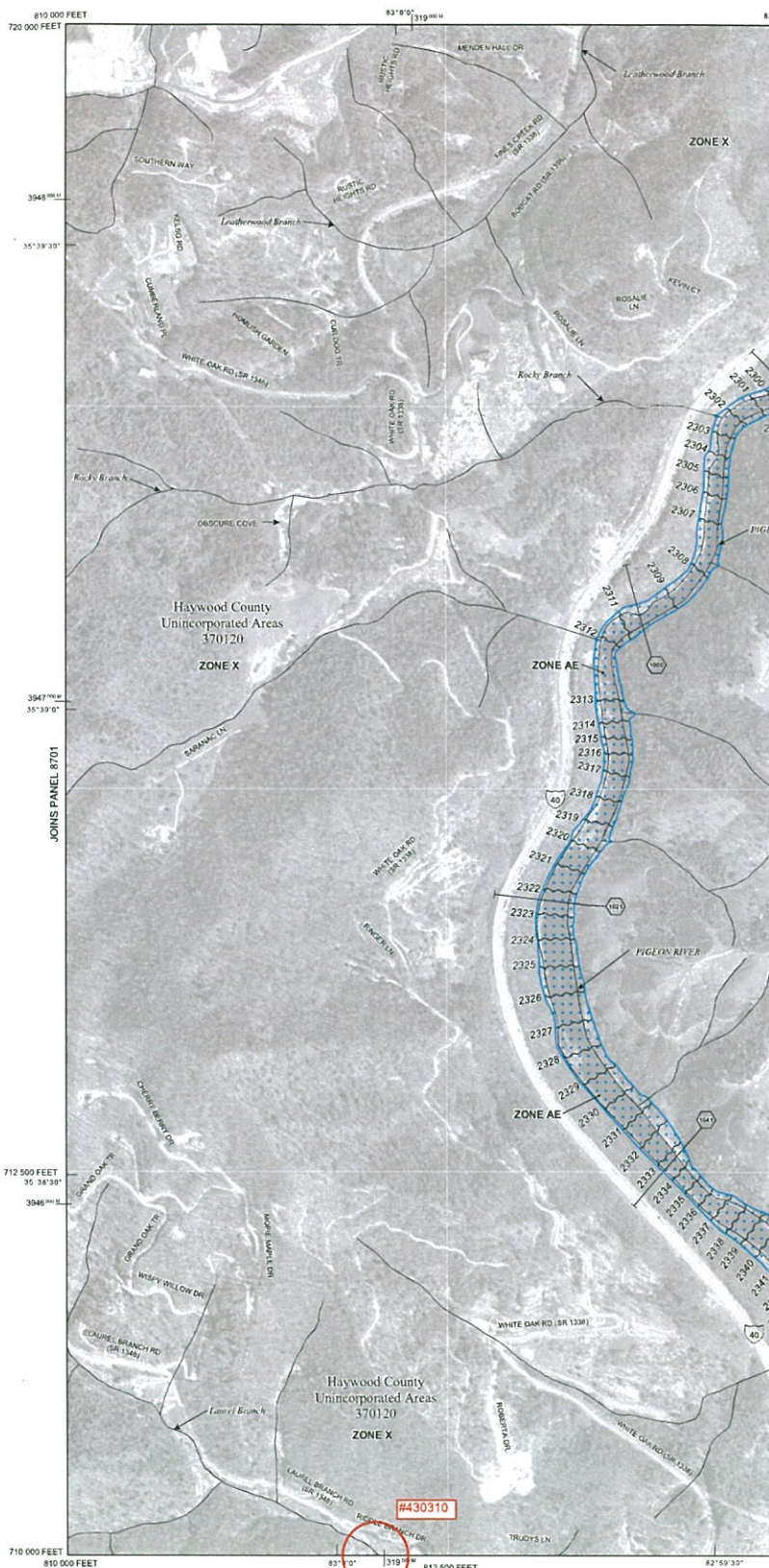
DATUM INFORMATION

The projection used in the preparation of this map was the North Carolina State Plane (FIPSZONE 3200). The horizontal datum was the North American Datum of 1983, GRS80 ellipsoid. Differences in datum, ellipsoid, projection, or Universal Transverse Mercator zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdictional boundaries. These differences do not affect the accuracy of this FIRM. All coordinates on this map are in U.S. Survey Feet, where 1 U.S. Survey Foot = 1200/3937 Meters.

Flood elevations on this map are referenced to the North American Vertical Datum of 1988 (NAVD 88). These flood elevations must be compared to structure and ground elevations referenced to the same vertical datum. An average offset between NAVD 88 and the National Geodetic Vertical Datum of 1929 (NGVD 29) has been computed for each North Carolina county. This offset was then applied to the NGVD 29 flood elevations that were not revised during the creation of this statewide format FIRM. The offsets for each county shown on this FIRM panel are shown in the vertical datum offset table below. Where a county boundary and a flooding source with unrevised NGVD 29 flood elevations are coincident, an individual offset has been calculated and applied during the creation of this statewide format FIRM. See Section 5.1 of the accompanying Flood Insurance Study report to obtain further information on the conversion of elevations between NAVD 88 and NGVD 29. To obtain current elevation, description, and/or location information for bench marks shown on this map, please contact the North Carolina Geodetic Survey at the address shown below. You may also contact the Information Services Branch of the National Geodetic Survey at (301) 713-3242, or visit its website at <http://www.ngs.noaa.gov>.

North Carolina Geodetic Survey
121 West Jones Street
Raleigh, NC 27601
(919) 733-3836
<http://www.ngs.state.nc.us>

County	Vertical Datum Offset ft
Haywood	See Vertical Datum Offset Table in FIS Report
Example:	$NAVD\ 88 = NGVD\ 29 + (-0.50)$



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 of floodplain management to decrease the costs associated with flooding. This is demonstrated by the State's commitment to map floodplain areas at the local level. As a part of this effort, the State of North Carolina has joined in a Cooperating Technical State agreement with FEMA to produce and maintain this digital FIRM.

www.ncfloodmaps.com

This map is for use in administering the National Flood Insurance Program. It does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size. The community map repository should be consulted for possible updated or additional flood hazard information.

To obtain more detailed information in areas where Base Flood Elevations (BFEs) and/or floodways have been determined, users are encouraged to consult the Flood Profiles, Floodway Data, Limited Detailed Flood Hazard Data, and/or Summary of Stillwater Elevations tables contained within the Flood Insurance Study (FIS) report that accompanies this FIRM. Users should be aware that BFEs shown on the FIRM represent rounded whole-foot elevations. These BFEs are intended for flood insurance rating purposes only and should not be used as the sole source of flood elevation information. Accordingly, flood elevation data presented in the FIS report should be utilized in conjunction with the FIRM for purposes of construction and/or floodplain management.

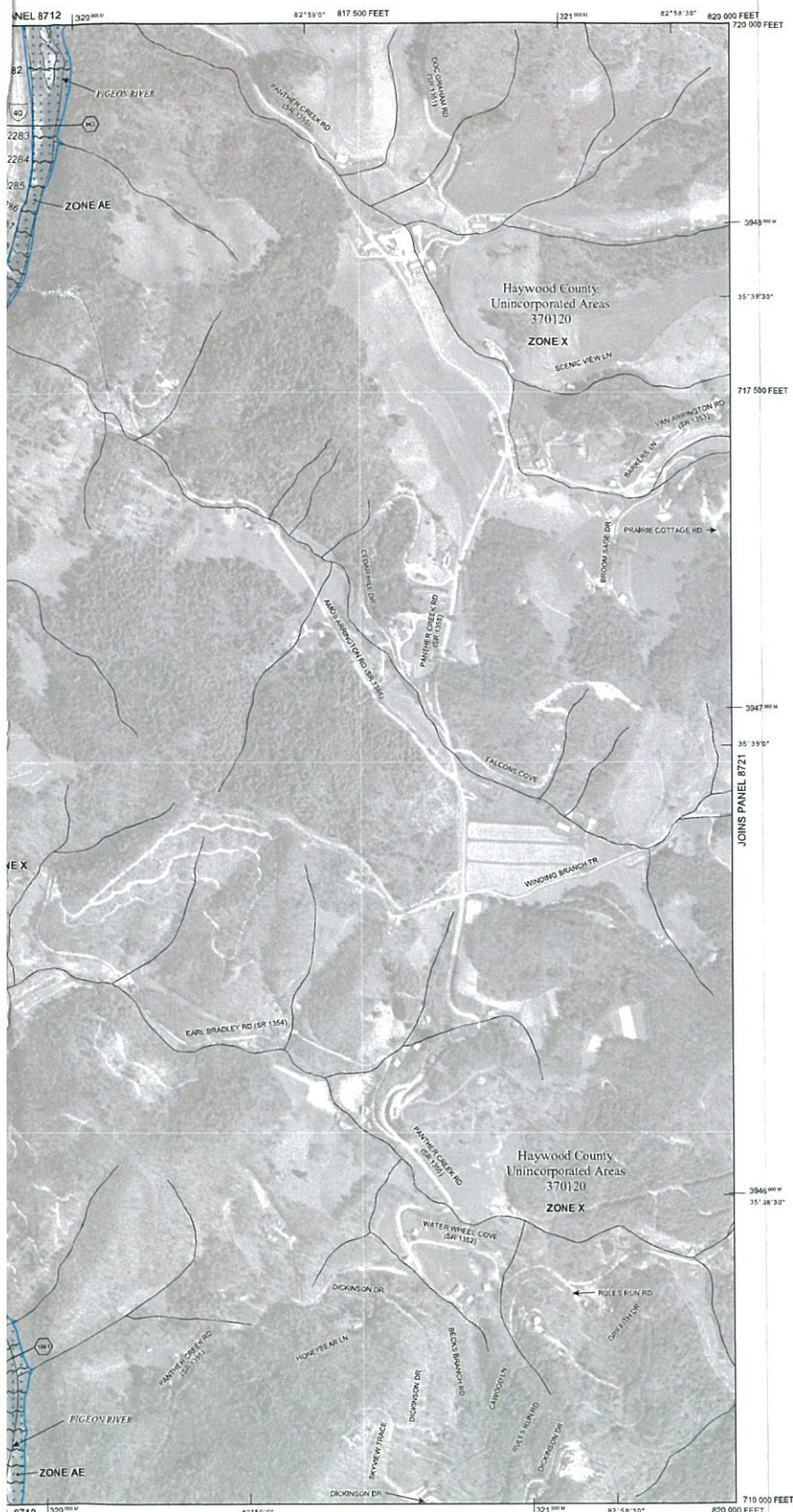
Boundaries of regulatory floodways shown on the FIRM for flooding sources studied by detailed methods were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data for flooding sources studied by detailed methods as well as non-encroachment widths for flooding sources studied by limited detailed methods are provided in the FIS report for this jurisdiction. The FIS report also provides instructions for determining a floodway using non-encroachment widths for flooding sources studied by limited detailed methods.

Certain areas not in Special Flood Hazard Areas may be protected by flood control structures. Refer to Section 4.4 "Flood Protection Measures" of the Flood Insurance Study report for information on the flood control structures in this jurisdiction.

Base map information and geospatial data used to develop this FIRM were obtained from organizations, including the participating local community(ies), state and federal agencies, other sources. The primary base for this FIRM is aerial imagery acquired by Haywood County during the period of collection for the Haywood imagery is 2004. Information and geospatial data supplied by the local community(ies) that met FEMA base map specifications were considered preferred source for development of the base map. See geospatial metadata for the base map for additional information about base map preparation.

Base map features shown on this map, such as corporate limits, are based on the most current data available at the time of publication. Changes in the corporate limits may occur since this map was published. Map users should consult the appropriate local, state, or federal official or website to verify current conditions of jurisdictional boundaries and base map features. This map may contain roads that were not considered in the hydraulic analysis of streams. No new hydraulic model was created during the production of this statewide format FIRM.

NOT



LEGEND

SPECIAL FLOOD HAZARD AREAS (SFHA) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V, and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.

- ZONE A** No Base Flood Elevations determined.
- ZONE AE** Base Flood Elevations determined.
- ZONE AH** Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.
- ZONE AO** Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
- ZONE AR** Special Flood Hazard Area formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.
- ZONE A99** Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.
- ZONE VE** Coastal flood zone with velocity hazard (wave action). Base Flood Elevations determined.

FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

OTHER FLOOD AREAS

- ZONE X** Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile, and areas protected by levees from 1% annual chance flood.

OTHER AREAS

- ZONE X** Areas determined to be outside the 0.2% annual chance floodplain.
- ZONE D** Areas in which flood hazards are undetermined, but possible.

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

OTHERWISE PROTECTED AREAS (OPAs)

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

- 1% annual chance floodplain boundary
- 0.2% annual chance floodplain boundary
- Floodway boundary
- Zone boundary
- Zone D boundary
- CBRS and OPA boundary
- Boundary dividing Special Flood Hazard Zones and boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths or flood velocities.
- Base Flood Elevation line and value, elevation in feet
- Base Flood Elevation value where uniform within zone elevation in feet

(EL 987)

*Referenced to the North American Vertical Datum of 1988

Transsect line

Geographic coordinates referenced to the North American Datum of 1983 (NAD 83)

4276 96W

1477 500 FEET

BM5510

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USERS

This map reflects more detailed and up-to-date stream channel configurations than those shown on the previous FIRM for this jurisdiction. The floodplains and floodways that were transferred from the previous FIRM may have been adjusted to conform to these new stream channel configurations. As a result, the Flood Profiles and Floodway Data tables in the Flood Insurance Study report (which contains authoritative hydraulic data) may reflect stream channel distances that differ from what is shown on this map.

Please refer to the separately printed Map Index for an overview map of the county showing the layout of map panels, community map repository addresses, and a Listing of Communities table containing National Flood Insurance Program dates for each community as well as a listing of the panels on which each community is located.

If you have questions about this map, or questions concerning the National Flood Insurance Program in general, please call 1-877-FEMA MAP (1-877-336-2627) or visit the FEMA website at <http://www.fema.gov>.

An accompanying Flood Insurance Study report, Letter of Map Revision (LOMR) or Letter of Map Amendment (LOMA) revising portions of this panel, and digital versions of this FIRM may be available. Visit the North Carolina Floodplain Mapping Program website at <http://www.ncfloodmaps.com>, or contact the FEMA Map Service Center at 1-800-358-9616 for information on all related products associated with this FIRM. The FEMA Map Service Center may also be reached by Fax at 1-800-358-9620 and its website at <http://www.msc.fema.gov>.

MAP REPOSITORY

Refer to listing of Map Repositories on Map Index or visit <http://www.ncfloodmaps.com>.

EFFECTIVE DATE OF FLOOD INSURANCE RATE MAP PANEL

EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL

For community map revision history prior to statewide mapping, refer to the Community Map History table located in the Flood Insurance Study report for this jurisdiction.

To determine if flood insurance is available in this community, contact your insurance agent, the North Carolina Division of Emergency Management or the National Flood Insurance Program at the following phone numbers or websites:

NC Division of Emergency Management (919) 715-8000 <http://www.ncdcm.state.nc.us/> National Flood Insurance Program (800) 638-6620 <http://www.fema.gov/business/nfip>

NATIONAL FLOOD INSURANCE PROGRAM

PANEL 8711J

FIRM

FLOOD INSURANCE RATE MAP

NORTH CAROLINA

PANEL 8711
(SEE LOCATOR DIAGRAM OR MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	CID No.	PANEL	SUFFIX
HAYWOOD COUNTY	370120	8711	J

PRELIMINARY
FEB 19 2008

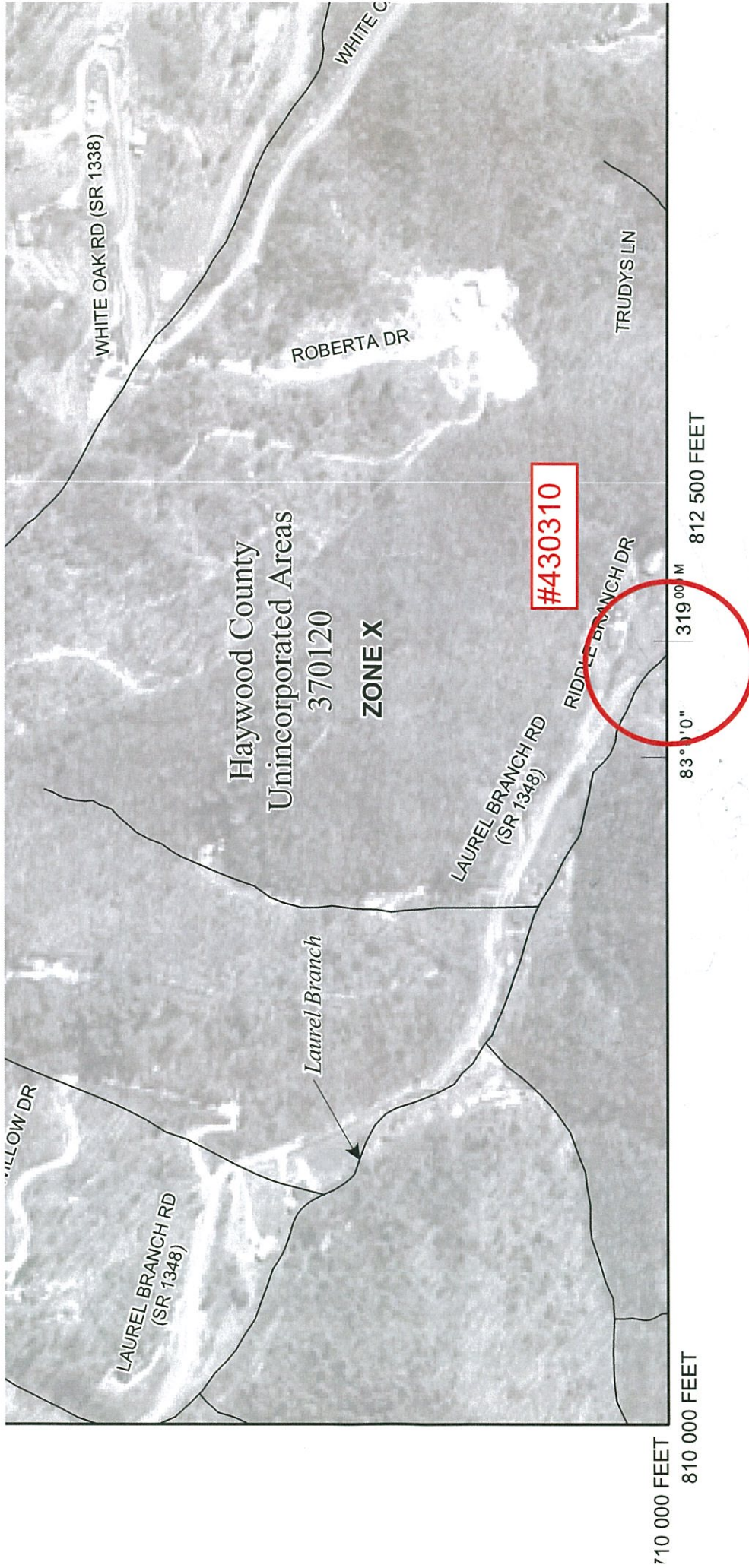
Notice to User: The Map Number shown below should be used when placing map orders; the Community Number shown above should be used on insurance applications for the subject community.

EFFECTIVE DATE

MAP NUMBER

3700871100J

State of North Carolina
Federal Emergency Management Agency



810 000 FEET

812 500 FEET

83° 3' 0"

319° 00' M