

Bridge Approach Speed Investigation

Bridge # 380142 over Grassy Creek on SR 1431 (Grassy Creek Rd)
Granville County
WBS Element # 17BP.5.R.16



Document Prepared By:

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May 4, 2012

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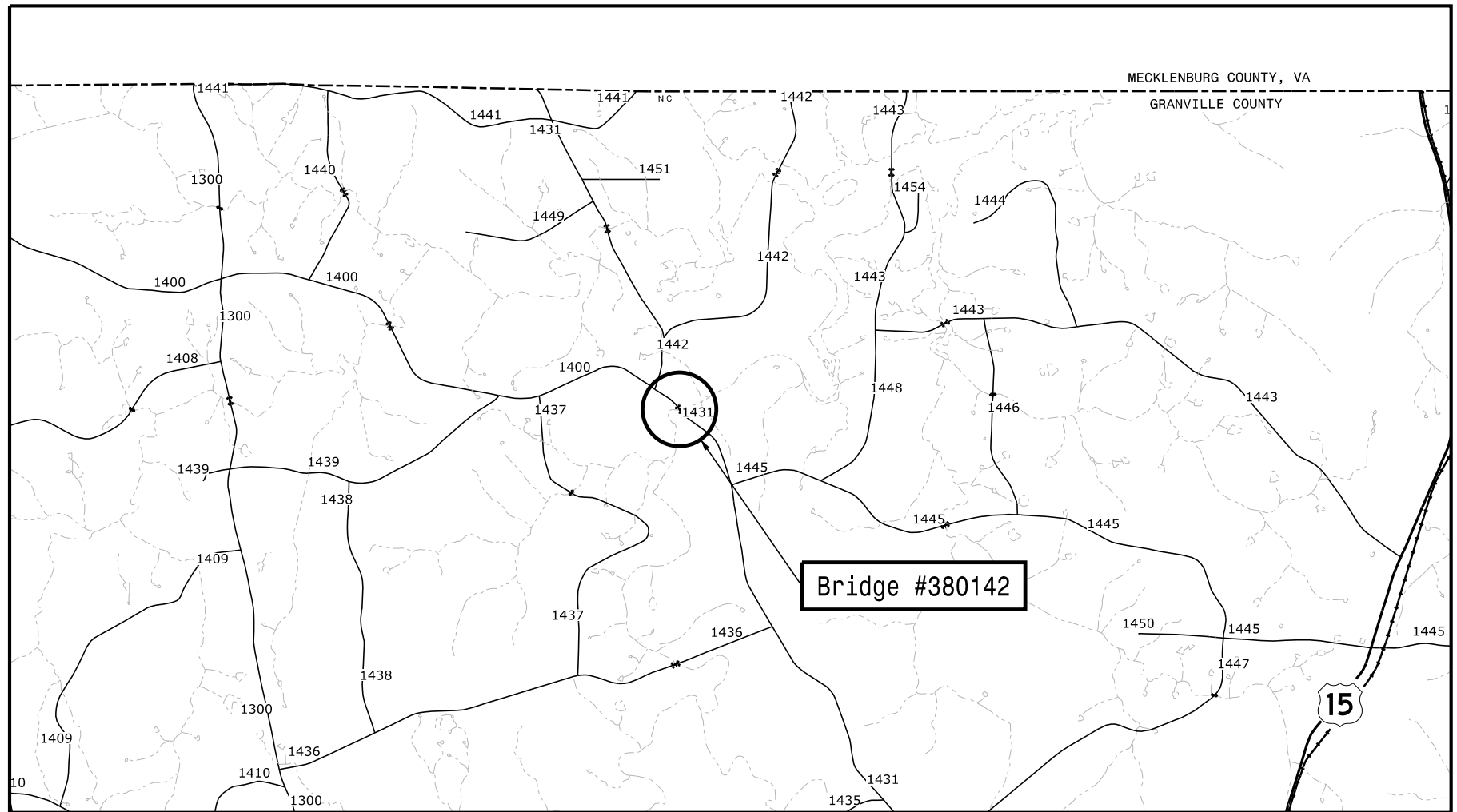
Bradley Reynolds

Bradley A. Reynolds, PE
Project Manager



Division 5 - Granville County Design Build Year 2 Bridge Program

Bridge locations plotted based on coordinates provided by Bridge Management



Division	County	Structure Number	Structure Description	Latitude	Longitude
5	Granville	380142	Bridge #142 over Grassy Creek on SR 1431	36.51286275	-78.62134347



1"=5000'
SCALE

Bridge and Approach Investigation Checklist

Project 17BP.5.R.16

Description Bridge #142 over Grassy Creek on SR 1431

Route SR 1431 (Grassy Creek Rd)

Division 5

County Granville

Existing Speed Limit 55 ☐ Posted ☒ Statutory

Reasonable & Comfortable Passenger Car Speed 55 mph

Speed Data N/A

Ball Bank Speed Study 45 mph: EB - 7, WB - 7
50 mph: EB - 10, WB - 7
55 mph: EB - 13, WB - 10

Warning Signs at Bridge Object Markers (OM-3L & OM-3R) - one located at each bridge corner
Weight Limit Signs (Single Vehicle 18 tons, TTST 23 tons) - 1x each Appr.
Reverse Curve (W1-4R) with 45 mph advisory speed - 1x each Appr.
Side Road (W2-2R) - WB 400' past bridge

Roadside Development Wooded/Rural/Residential. Community Center in SE quadrant. Church in NW quadrant. Land surrounding creek owned by US Army Corps of Engineers.

ADT History 490 vpd from 2010 NCDOT Traffic Survey Map
500 vpd from 2008 NCDOT Traffic Survey Map

Pedestrian/Bicycle Traffic Minimal expected. Worn dirt path to creek in NE quadrant.

Bridge and Approach Digital Photos Attached

Approach Lane Width 20' overall pavement width with 10' lanes

Approach Shoulder Width: Varies from 7' to 9'±
Shoulder Type Grass

Lane Width (existing bridge) 22' overall pavement width with 9' lanes

Shoulder width (existing bridge) 2'

Strategic Corridor / Thoroughfare Designation and Recommended Cross Section N/A, NCDOT-designated Minor Collector

Crash History and Safety Considerations Zero reported collisions in a ten-year history (2/1/02 to 1/31/2012).

Comments N/A

Reasonable Bridge Speed 55 mph

County: Granville

Description: Bridge #142 over Grassy Creek

Route: SR 1431

SR 1431 (Grassy Creek Rd) Eastbound $\pm$ 300' from Bridge #142

SR 1431 (Grassy Creek Rd) Eastbound $\pm$ 50' from Bridge #142



SR 1431 (Grassy Creek Rd) Westbound $\pm$ 300' from Bridge #142



SR 1431 (Grassy Creek Rd) Westbound $\pm$ 50' from Bridge #142



County: Granville

Description: Bridge #142 over Grassy Creek

Route: SR 1431

Westbound approach to Bridge #142 from Farm Rd intersection



Westbound view of Bridge #142 structure



Bridge Approach Speed Crash Analysis Request

Order # 41000018450

500 feet on Both Sides of Bridge Number 142 on Secondary Route 1431 (Grassy Creek Road) over Grassy Creek in Granville County

Document Prepared By:

Safety Planning Group
Traffic Safety Systems Management Unit
Transportation Mobility and Safety Division
North Carolina Department of Transportation

Note: The crash statistics have been generated and are available through North Carolina's Crash Database. This database provides an inventory of **reported** crashes on record that have occurred at this location. Please note that many traffic crashes go unreported for a variety of reasons, and this report simply provides a listing of all crashes on record that occurred within 0 feet of the section described above.

North Carolina Department of Transportation
Traffic Engineering Accident Analysis System
Strip Analysis Report

Study Criteria Summary

County: GRANVILLE **City:** All and Rural
Date: 02/01/2002 **to** 01/31/2012 **Study:** 41000018450
Location: 500 feet on Both Sides of Bridge Number 142 on Secondary Route 1431 (Grassy Creek Road) over Grassy Creek

Report Details

Study Criteria

Study Name	Log No.	PH No.	TIP No.	K/A Cf.	B/C Cf.	ADT	ADT Route
41000018450	41000018450			76.8	8.4	530	40001431

Request Date	Courier Service	Phone No.	Ext.	Fax No.
03/12/2012		(919)773-2778		

County			Municipality					
Name	Code	Div.	Name	Code	Y-Line Ft.	Begin Date	End Date	Years
GRANVILLE	38	5	All and Rural		0	02/01/2002	01/31/2012	10.00

Location Text	Requestor
500 feet on Both Sides of Bridge Number 142 on Secondary Route 1431 (Grassy Creek Road) over Grassy Creek	Kelly L. Becker, PE Capital Safety Region Raleigh NC

Fiche Roads	
Name	Code
SR 1431	40001431
GRASSY CREEK	50012322

Strip Road					
Name	Code	Begin MP	End MP	Miles	Kilometers
SR 1431	40001431	5.116	5.338	0.222	0.357