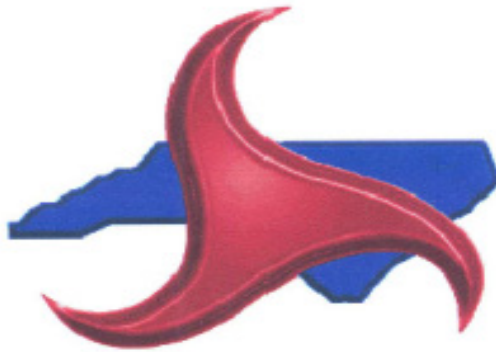


Bridge Design Speed Investigation

Bridge #232 on SR 1101 (Hebron Hill Road) over Crooked Creek
McDowell County



Document Prepared By:

Mattern & Craig, Inc.
Consulting Engineers - Surveyors
12 Broad Street
Asheville, NC 28801
(828) 254-2201
FAX: (828) 254-4562

Commission No: 3241

May 15, 2012



Investigating Engineer


James Voso, PE

Bridge and Approach Investigation Checklist

Project 17BP.13.R.56
Description Replace Bridge #232 on SR 1101 (Hebron Hill Road) over Crooked Creek
Route SR 1101 (Hebron Hill Road)
Division 13
County McDowell

Existing Speed Limit 55 mph ☐ Posted ☒ Statutory

Reasonable & Comfortable
Passenger Car Speed 20 mph

Speed Data N/A

Ball Bank Speed Study Curve south of Bridge #232 had a ball bank indication of 13 at 20 mph.

Warning Signs at Bridge One Lane Bridge warning sign, Bridge end delineators both ends,
Weight Limit (23 tons - single vehicle, 33 tons - truck tractor semitrailer)

Roadside Development Vacant land north of bridge and wooded south of bridge.

ADT History No ADT data available.

Pedestrian/Bicycle Traffic Low

Bridge and Approach
Digital Photos (attached)

Approach Lane Width 12' one lane

Approach Shoulder Width: 3'
Shoulder Type Grass

Lane Width (existing bridge) 9' one lane

Shoulder width (existing bridge) 1.5'

Strategic Corridor / Thoroughfare
Designation and Recommended
Cross Section Not a Strategic Corridor/Thoroughfare. Two lane cross section at 25
mph based on 3R guidelines.

Crash History and
Safety Considerations No crashes reported (1/1/2002 - 12/31/2011, 10 years).

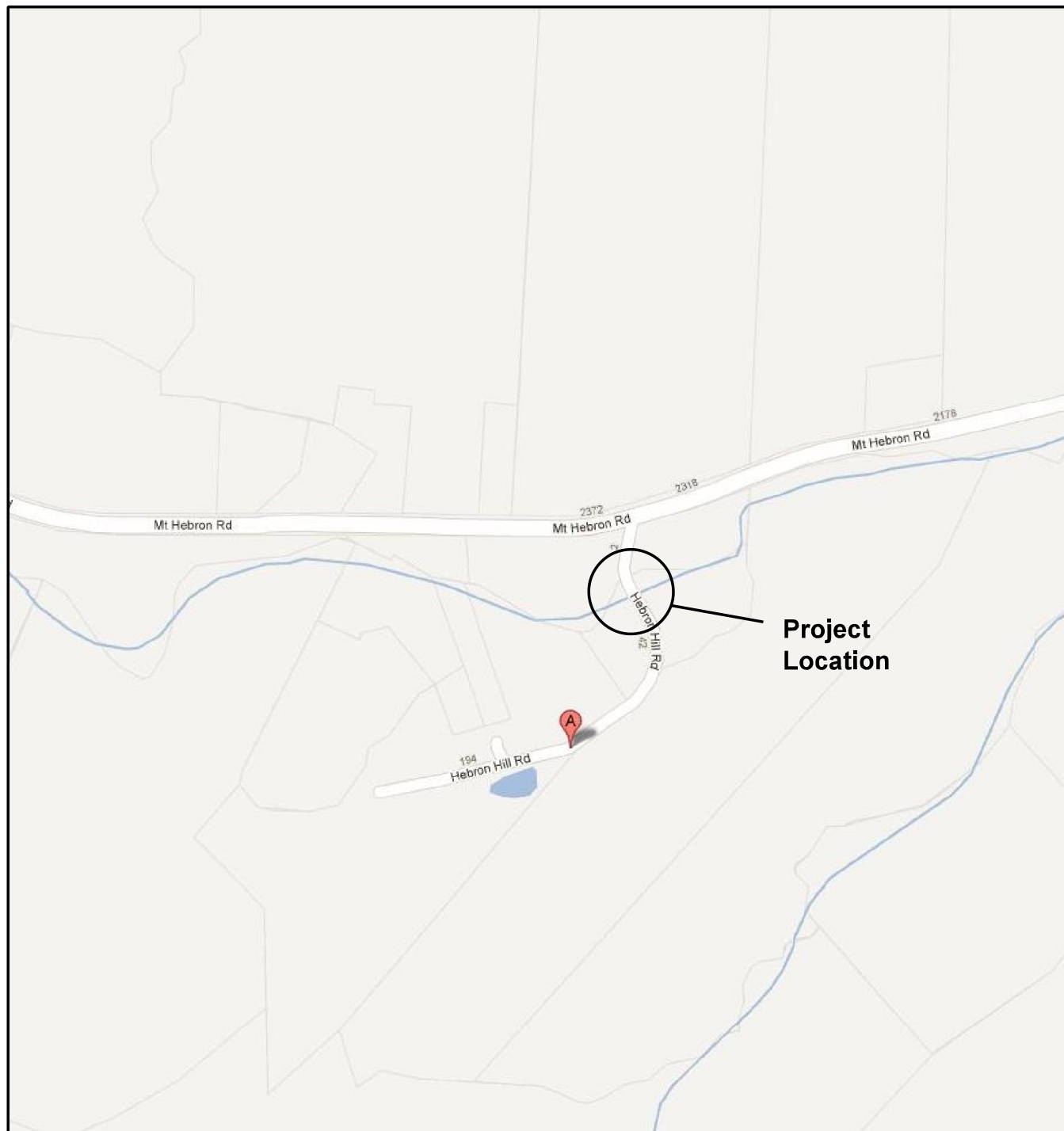
Comments Gravel road in good condition. Curves affect bridge speed.

Reasonable Bridge Speed 25 mph

Investigated by: Lori Boyer Reviewed by: James Voso

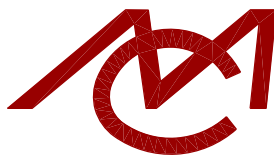


Bridge #232
McDowell County
Division 13



VICINITY MAP

Bridge #232 on SR 1101
(Hebron Hill Road)
over Crooked Creek



Mattern & Craig
CONSULTING ENGINEERS • SURVEYORS

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Comm. No. 3241

Bridge Approach Speed Crash Analysis Request

Order # 41000018005

**Bridge Number 232 on Secondary Route 1101 (Hebron Hill Road) over Creek from
Secondary Road 1100 (Mount Hebron Road) to 500 feet South of the Bridge Structure in
McDowell 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: MCDOWELL **City:** All and Rural
Date: 01/01/2002 to 12/31/2011 **Study:** 41000018005
Location: Bridge Number 232 on Secondary Route 1101 (Hebron Hill Road) over Creek from Secondary Road 1100 (Mount Hebron Road) to 500 feet South of the Bridge Structure

Report Details

Study Criteria

Study Name	Log No.	PH No.	TIP No.	K/A Cf.	B/C Cf.	ADT	ADT Route
41000018005	41000018005			76.8	8.4	100	40001101

Request Date	Courier Service	Phone No.	Ext.	Fax No.
02/17/2012		(828)650-2700		

County			Municipality					
Name	Code	Div.	Name	Code	Y-Line Ft.	Begin Date	End Date	Years
MCDOWELL	58	13	All and Rural		0	01/01/2002	12/31/2011	10.00

Location Text	Requestor
Bridge Number 232 on Secondary Route 1101 (Hebron Hill Road) over Creek from Secondary Road 1100 (Mount Hebron Road) to 500 feet South of the Bridge Structure	D.D. (Bucky) Galloway, PE Blue Ridge Mountains Region Fletcher NC

Excluded Accidents
101803629

Fiche Roads	
Name	Code
SR 1101	40001101
HEBRON HILL	50013581

Strip Road					
Name	Code	Begin MP	End MP	Miles	Kilometers
SR 1101	40001101	0.000	0.111	0.111	0.179

Bridge #232

McDowell County

Division 13

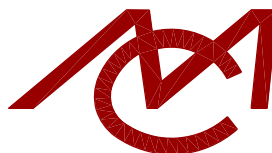


Northbound Approach



Northbound Approach at bridge

Bridge #232 on SR 1101
(Hebron Hill Road)
over Crooked Creek



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Bridge #232

McDowell County

Division 13

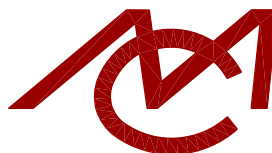


Southbound Approach



Southbound Approach at bridge

Bridge #232 on SR 1101
(Hebron Hill Road)
over Crooked Creek



Comm. No. 3241

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