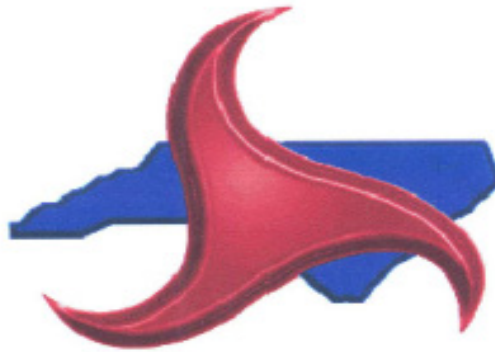


Bridge Design Speed Investigation

Bridge #541 on SR 2788 (Crooked Creek Road) over Crooked Creek
Buncombe County



Document Prepared By:

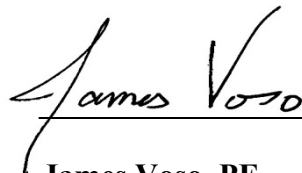
Mattern & Craig, Inc.
Consulting Engineers - Surveyors
12 Broad Street
Asheville, NC 28801
(828) 254-2201
FAX: (828) 254-4562

Commission No: 3241

May 15, 2012



Investigating Engineer


James Voso, PE

Bridge and Approach Investigation Checklist

Project 17BP.13.R.33
Description Replace Bridge #541 on SR 2788 (Crooked Creek Rd) over Crooked Creek
Route SR 2788 (Crooked Creek Road)
Division 13
County Buncombe

Existing Speed Limit 55 mph ☐ Posted ☒ Statutory

Reasonable & Comfortable
Passenger Car Speed 35 mph southbound and 20 mph northbound

Speed Data None

Ball Bank Speed Study Curve just north of Bridge #541 had a ball bank indication of 9 at 30 mph. Other curves south of the bridge would have an advisory speed under 25 mph due to road conditions.

Warning Signs at Bridge 4 Bridge End Delineators, Weight Limit (22 tons - single vehicle, 32 tons - truck tractor semitrailer), Narrow Bridge warning sign

Roadside Development Residences in southwest quadrant of bridge. Farm land in the northwest quadrant. Wooded in the northeast and southeast quadrants of bridge.

ADT History No ADT history available

Pedestrian/Bicycle Traffic Low

Bridge and Approach
Digital Photos (attached)

Approach Lane Width 8.5'

Approach Shoulder Width: 3'
Shoulder Type grass

Lane Width (existing bridge) 15.5' one lane

Shoulder width (existing bridge) 1'

Strategic Corridor / Thoroughfare
Designation and Recommended
Cross Section Not a Strategic Corridor/Thoroughfare. Two lane cross section at 35 mph based on 3R guidelines.

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

Comments Gravel road with potholes approaching bridge from the south. Paved road north of bridge. Comfortable travel speed approaching bridge from south is 20 mph due to road conditions. Southbound bridge approach has dip in pavement that prevents travel faster than 20 mph across bridge.

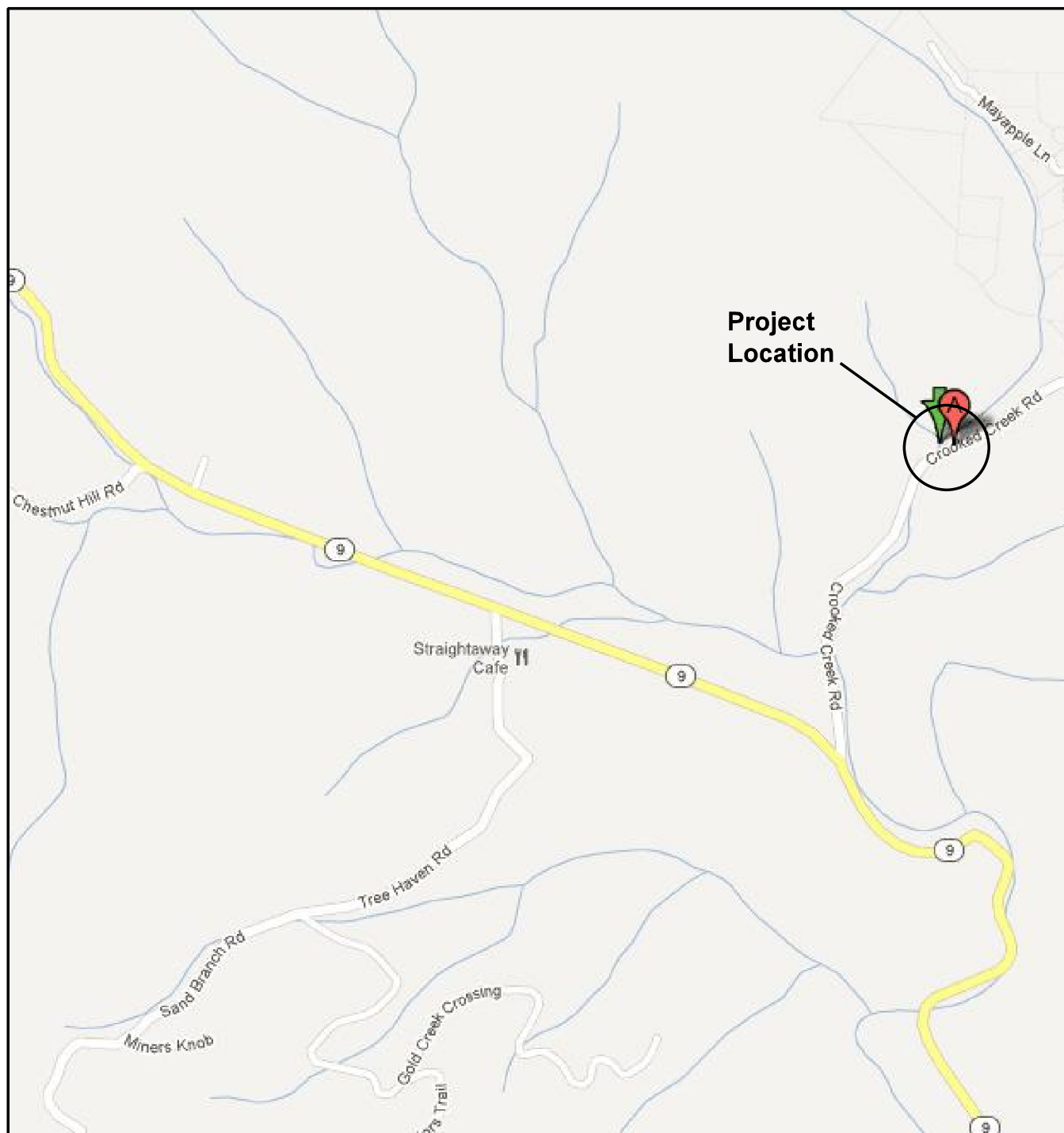
Reasonable Bridge Speed 35 mph

Investigated by: Lori Boyer Reviewed by: James Voso

Bridge #541

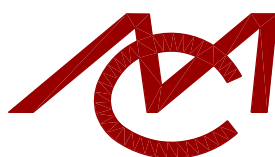
Buncombe County

Division 13



VICINITY MAP

Bridge #541 on SR 2788
(Crooked Creek Road)
over Crooked Creek



Mattern & Craig

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Comm. No. 3241

Bridge Approach Speed Crash Analysis Request

Order # 41000017888

500 feet on Both Sides of Bridge Number 541 on Secondary Route 2788 (Crooked Creek Road) over Crooked Creek in Buncombe 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: BUNCOMBE **City:** All and Rural
Date: 01/01/2002 to 12/31/2011 **Study:** 41000017888
Location: 500 feet on Both Sides of Bridge Number 541 on Secondary Route 2788 (Crooked Creek Road) over Crooked Creek

Report Details

Study Criteria

Study Name	Log No.	PH No.	TIP No.	K/A Cf.	B/C Cf.	ADT	ADT Route
41000017888	41000017888			76.8	8.4	310	40002788

Request Date	Courier Service	Phone No.	Ext.	Fax No.
02/14/2012		(828)650-2700		

County			Municipality					
Name	Code	Div.	Name	Code	Y-Line Ft.	Begin Date	End Date	Years
BUNCOMBE	10	13	All and Rural		0	01/01/2002	12/31/2011	10.00

Location Text	Requestor
500 feet on Both Sides of Bridge Number 541 on Secondary Route 2788 (Crooked Creek Road) over Crooked Creek	D.D. (Bucky) Galloway, PE Blue Ridge Mountains Region Fletcher NC

Fiche Roads

Name	Code
SR 2788	40002788
CROOKED CREEK	50007467

Strip Road

Name	Code	Begin MP	End MP	Miles	Kilometers
SR 2788	40002788	0.446	0.640	0.194	0.312

Bridge #541
Buncombe County
Division 13

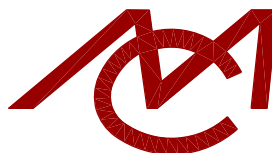


Northbound Approach



Northbound Approach at bridge

Bridge #541 on SR 2788
(Crooked Creek Road)
over Crooked Creek



Comm. No. 3241

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Bridge #541

Buncombe County

Division 13

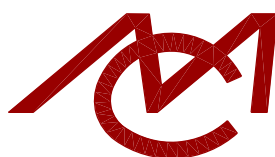


Southbound Approach



Southbound Approach at bridge

Bridge #541 on SR 2788
(Crooked Creek Road)
over Crooked Creek



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