

Bridge Design Speed Investigation

Bridge #163 on SR 1339 (Rockdale Road) over Little Rock Creek
Mitchell County



Document Prepared By:

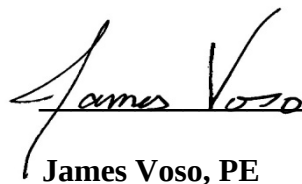
Mattern & Craig, Inc.
Consulting Engineers - Surveyors
12 Broad Street
Asheville, NC 28801
(828) 254-2201
FAX: (828) 254-4562

Commission No: 3350

July 22, 2013



Investigating Engineer


James Voso, PE

Bridge and Approach Investigation Checklist

Project 17BP.13.PE.1
Description Replace Bridge #163 on SR 1339 (Rockdale Rd) over Little Rock Creek
Route SR 1339 (Rockdale Rd)
Division 13
County Mitchell

Existing Speed Limit 55 mph ☐ Posted ☒ Statutory

Reasonable & Comfortable
Passenger Car Speed 20 mph

Speed Data N/A

Ball Bank Speed Study Curve west of Bridge #163 had a ball bank indication of 16 at 20 mph.

Warning Signs at Bridge 4 Bridge End Delineators, Weight Limit (20 tons - single vehicle,
29 tons - truck tractor semitrailer)

Roadside Development Wooded east of bridge. Farm land in the northwest quadrant of bridge.
Residence in the southwest quadrant of bridge.

ADT History 150 (2000)

Pedestrian/Bicycle Traffic Low

Bridge and Approach
Digital Photos (attached)

Approach Lane Width 9'

Approach Shoulder Width: 3'
Shoulder Type grass

Lane Width (existing bridge) 8'

Shoulder width (existing bridge) 1.5'

Strategic Corridor / Thoroughfare
Designation and Recommended
Cross Section Not a Strategic Corridor/Thoroughfare. Two lane cross section at 20
mph based on 3R guidelines.

Crash History and
Safety Considerations No crashes reported near bridge (5/1/2003 - 4/30/2013, 10 years).

Comments SR 1339 intersects SR 1338 (Fork Mountain Rd) with stop control on the
SR 1339 approach at the eastern terminus of the bridge. Bridge number
posted on bridge.

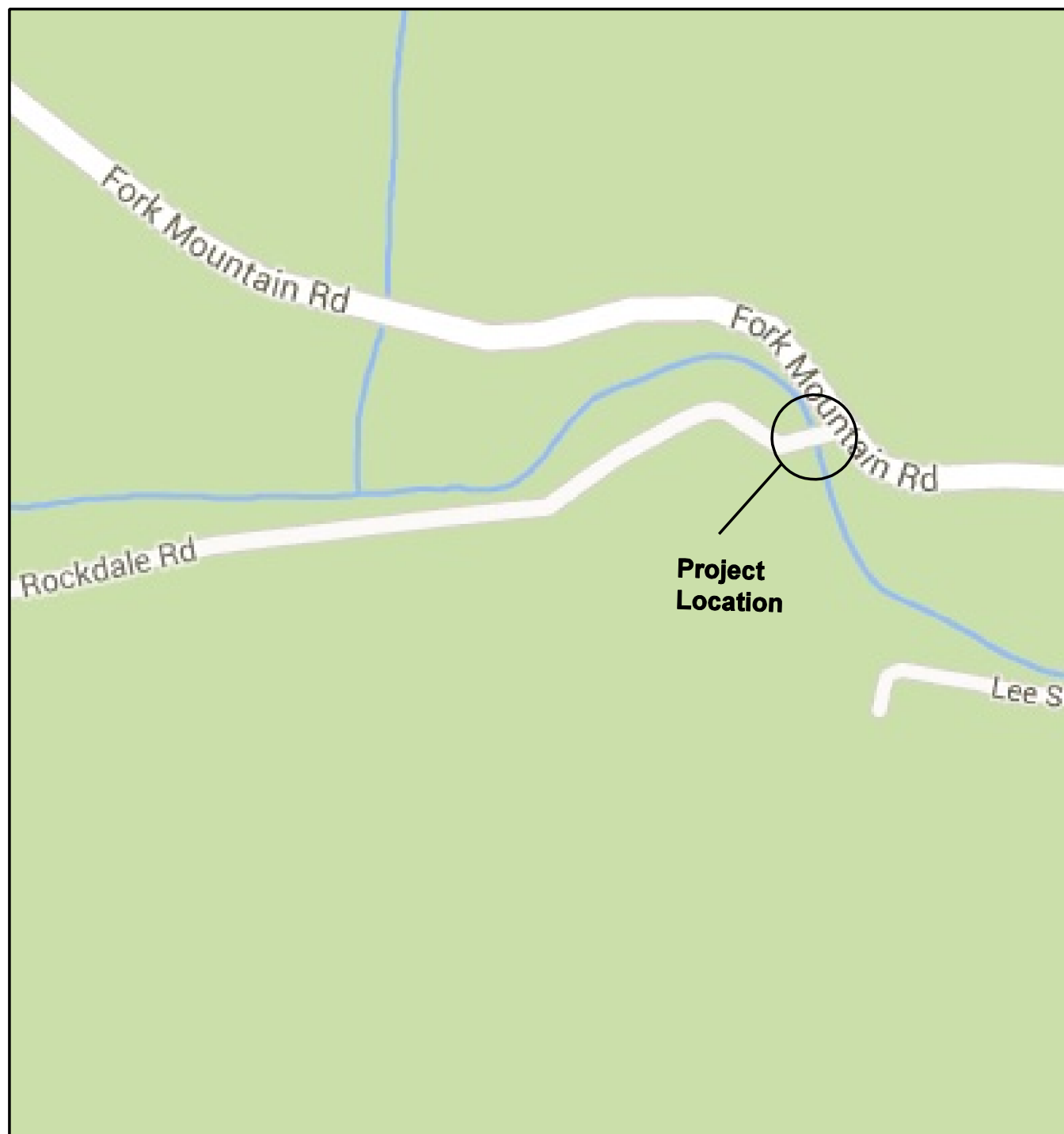
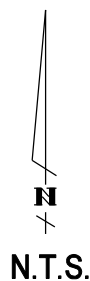
Reasonable Bridge Speed 20 mph

Investigated by: Mathew Bolden Reviewed by: James Voso

Bridge #163

Mitchell County

Division 13



VICINITY MAP

Bridge #163 on SR 1339
(Rockdale Road)
over Little Rock Creek



Mattern & Craig

CONSULTING ENGINEERS • SURVEYORS

12 BROAD STREET
ASHEVILLE, NORTH CAROLINA 28801
(828) 254-2201
FAX (828) 254-4562

Comm. No. 3350

Bridge #163

Mitchell County

Division 13

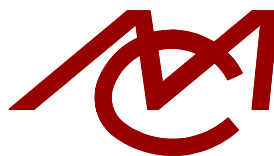


Eastbound Approach



Eastbound Approach at bridge

**Bridge #163 on SR 1339
(Rockdale Road)
over Little Rock Creek**



Mattern & Craig

CONSULTING ENGINEERS • SURVEYORS

12 BROAD STREET
ASHEVILLE, NORTH CAROLINA 28801

(828) 254-2201

FAX (828) 254-4562

Comm. No. 3350

Bridge #163

Mitchell County

Division 13

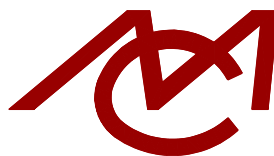


Westbound Approach



Westbound Approach at bridge

Bridge #163 on SR 1339
(Rockdale Road)
over Little Rock Creek



Mattern & Craig

CONSULTING ENGINEERS • SURVEYORS

12 BROAD STREET
ASHEVILLE, NORTH CAROLINA 28801

(828) 254-2201

FAX (828) 254-4562

Comm. No. 3350

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

Study Criteria Summary

County: MITCHELL **City:** All and Rural
Date: 5/1/2003 to 4/30/2013 **Study:** MITCHELLBRIDGE163
Location: SR 1339 (Rockdale Rd) from SR 1338 (Fork Mountain Rd) to 500 feet west of Bridge 163

Report Details

Study Criteria

Study Name	Log No.	PH No.	TIP No.	K/A Cf.	B/C Cf.	ADT	ADT Route
MITCHELLBRIDGE163				76.8	8.4	150	40001339

Request Date	Courier Service	Phone No.	Ext.	Fax No.
--------------	-----------------	-----------	------	---------

County			Municipality					
Name	Code	Div.	Name	Code	Y-Line Ft.	Begin Date	End Date	Years
MITCHELL	60	13	All and Rural		0	5/1/2003	4/30/2013	10.00

Location Text	Requestor
SR 1339 (Rockdale Rd) from SR 1338 (Fork Mountain Rd) to 500 feet west of Bridge 163	

Fiche Roads	
Name	Code
SR 1339	40001339
FROG LEVEL	50011255
ROCKDALE	50026246

Strip Road					
Name	Code	Begin MP	End MP	Miles	Kilometers
SR 1339	40001339	0.000	0.113	0.113	0.182