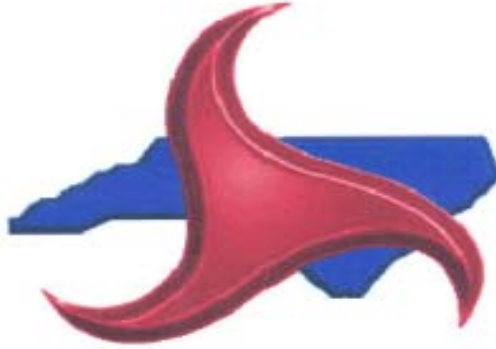


Bridge Design Speed Investigation

Bridge #174 on SR 1706 (Mount Lebanon Church Road) over Hunting
Creek
Rutherford County



Document Prepared By:

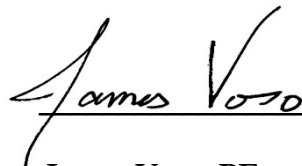
Mattern & Craig, Inc.
Consulting Engineers - Surveyors
12 Broad Street
Asheville, NC 28801
(828) 254-2201
FAX: (828) 254-4562

Commission No: 3350

July 18, 2013



Investigating Engineer


James Voso, PE

Bridge and Approach Investigation Checklist

Project 17BP.13.PE.1
Description Replace Bridge #174 on SR 1706 (Mount Lebanon Church Road) over Hunting Creek
Route SR 1706 (Mount Lebanon Church Road)
Division 13
County Rutherford

Existing Speed Limit 55 mph ☐ Posted ☒ Statutory

Reasonable & Comfortable
Passenger Car Speed 30 mph

Speed Data N/A

Ball Bank Speed Study Curve east of Bridge #174 had a ball bank indication of 14 at 25 mph.

Warning Signs at Bridge 4 Bridge End Delineators, Weight Limit (24 tons - single vehicle, 32 tons - truck tractor semitrailer)

Roadside Development Residence in northwest quadrant of bridge. Farm land in northeast quadrant of bridge. Wooded in south of bridge.

ADT History 90 (2000)

Pedestrian/Bicycle Traffic Low

Bridge and Approach
Digital Photos (attached)

Approach Lane Width 9'

Approach Shoulder Width: 9'
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 30 mph based on 3R guidelines.

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

Comments Bridge number posted on bridge.

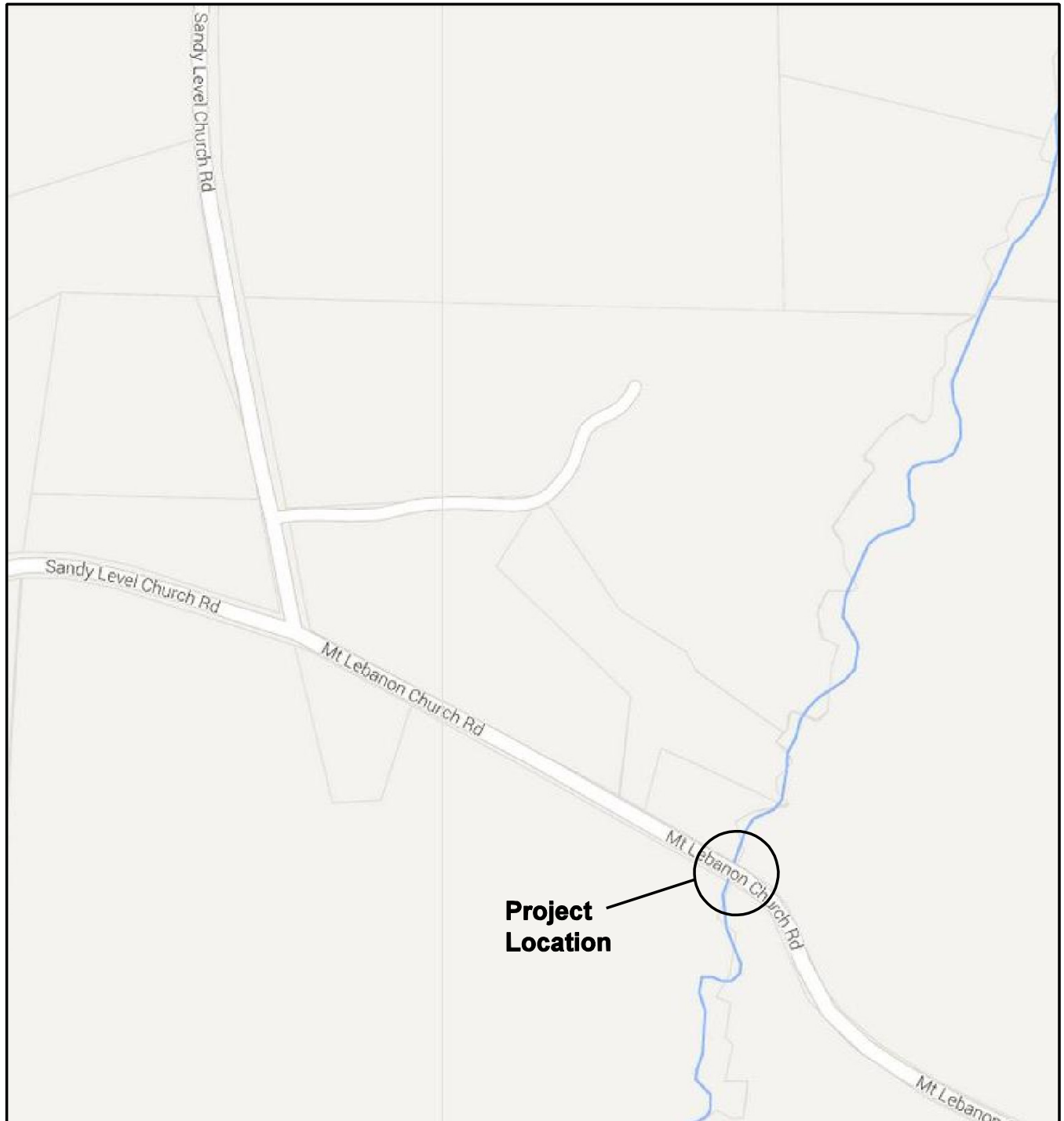
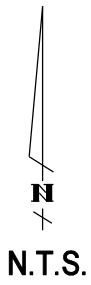
Reasonable Bridge Speed 30 mph

Investigated by: Mathew Bolden Reviewed by: James Voso

Bridge #174

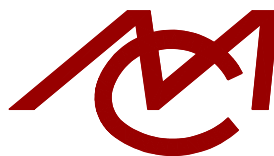
Rutherford County

Division 13



VICINITY MAP

Bridge #174 on SR 1706
(Mount Lebanon Church Road)
over Hunting Creek



Mattern & Craig

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Bridge #174
Rutherford County
Division 13

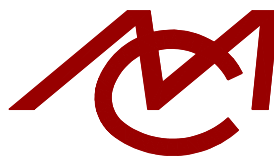


Eastbound Approach



Eastbound Approach at bridge

Bridge #174 on SR 1706
(Mount Lebanon Church Road)
over Hunting Creek



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Bridge #174
Rutherford County
Division 13

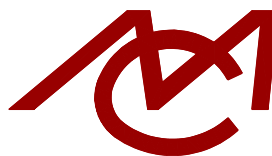


Westbound Approach



Westbound Approach at bridge

Bridge #174 on SR 1706
(Mount Lebanon Church Road)
over Hunting Creek



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

Study Criteria Summary

County: RUTHERFORD **City:** All and Rural
Date: 5/1/2003 **to** 4/30/2013 **Study:** RUTHERFORDBRIDGE174
Location: SR 1706 (Mt Lebanon Church Rd) from 500 feet west of Bridge 174 to 500 feet east of the bridge

Report Details

Study Criteria

Study Name	Log No.	PH No.	TIP No.	K/A Cf.	B/C Cf.	ADT	ADT Route
RUTHERFORDBRIDGE174				76.8	8.4	90	40001706

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

County			Municipality					
Name	Code	Div.	Name	Code	Y-Line Ft.	Begin Date	End Date	Years
RUTHERFORD	80	13	All and Rural		0	5/1/2003	4/30/2013	10.00

Location Text	Requestor
SR 1706 (Mt Lebanon Church Rd) from 500 feet west of Bridge 174 to 500 feet east of the bridge	

Fiche Roads	
Name	Code
SR 1706	40001706
MT LEBANON	50020803

Strip Road					
Name	Code	Begin MP	End MP	Miles	Kilometers
SR 1706	40001706	0.127	0.331	0.204	0.328