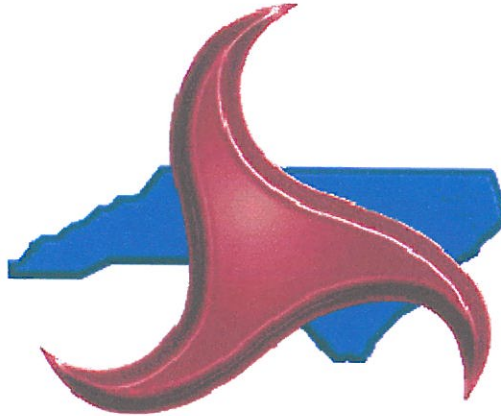


17BP.7.R.86 Bridge Design Speed Study

Bridge #400258 on SR 3351 (Smithwood Road)

Guilford County

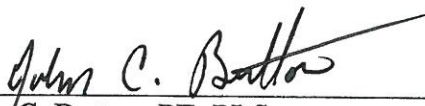


Document Prepared By:

Regional Traffic Office – Triad Region
Traffic Safety Unit
Transportation Mobility and Safety Division
North Carolina Department of Transportation

September 30, 2014

Principal Investigator:



John C. Button, PE, PLS
Triad Regional Traffic Safety Engineer



9-30-2014

Bridge and Approach Investigation Checklist

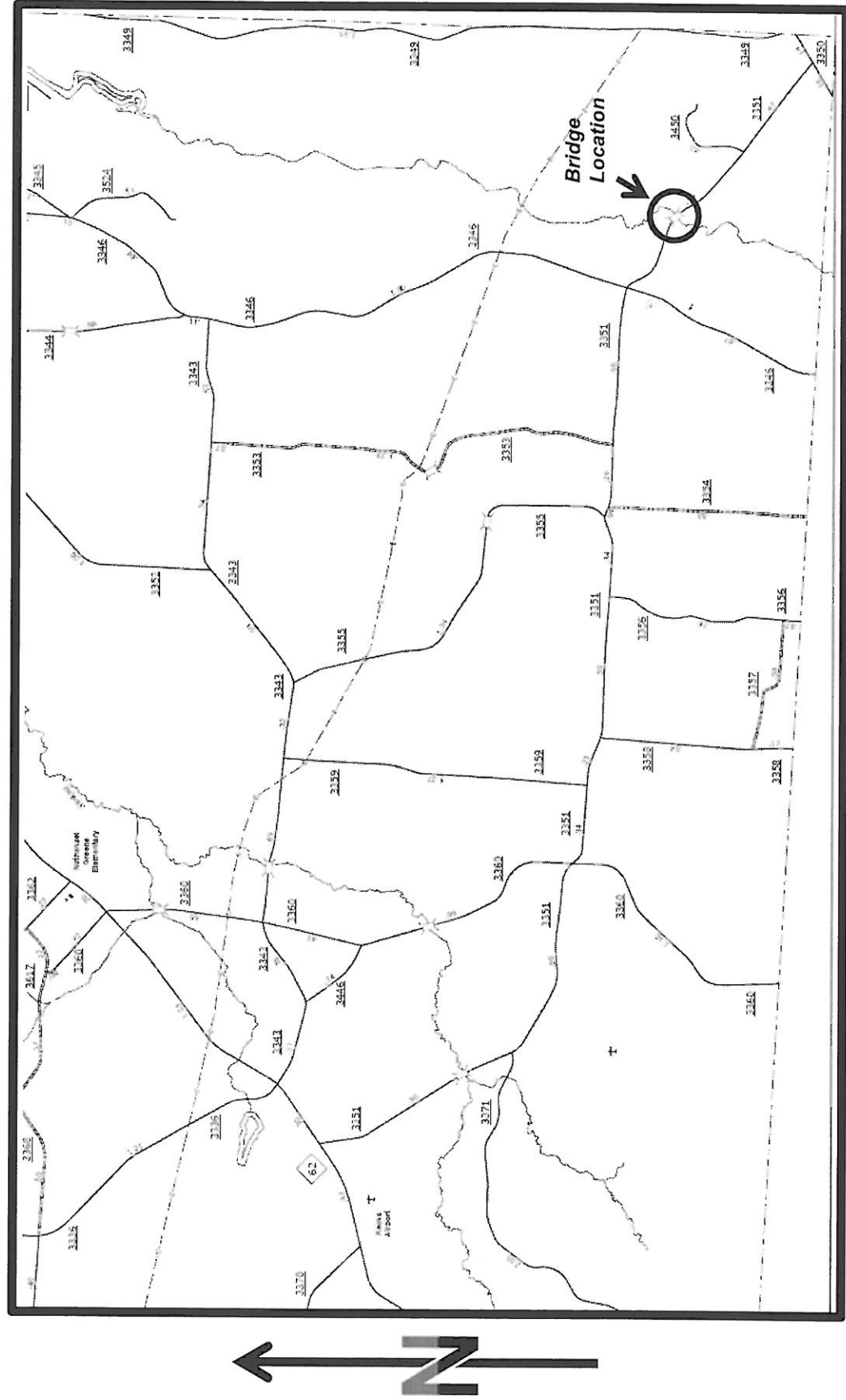
Project 17BP.7.R.86
Description Bridge # 400258 over South Prong Stinking Quarter Creek
Route SR 3351 (Smithwood Road)
Division 7
County Guilford

Existing Speed Limit 55 mph ☐ Posted ☒ Statutory
Reasonable & Comfortable Passenger Car Speed 45 mph
Speed Data No speed data collected because of sparseness of traffic.
Ball Bank Speed Study 12 degrees at 40 mph for curves approaching bridge.
Warning Signs at Bridge Three W23-10 object markers, one missing on northeast corner of bridge.
Regulatory 24/39 ton weight limit sign on each approach.
Reverse Curve Warning Signs located on each approach to the bridge.
Roadside Development Rural
ADT History 1999 AADT = 200 vpd per NCDOT Traffic Map.
2013 AADT = 210 vpd per NCDOT Traffic Map.
Pedestrian/Bicycle Traffic No bike or pedestrian traffic observed during site visit.
Little bike or ped traffic expected.
Bridge and Approach Digital Photos See attached photos.
Approach Lane Width 20'-0" overall pavement width with 8'-9"/8'-6" lane widths.
Approach Shoulder Width: Varies from 5' to 9'.
Shoulder Type Grass
Lane Width (existing bridge) 24'-10" overall pavement width with 8'-4"/8'-6" lane widths.
Shoulder width (existing bridge) 40"/33"
Strategic Corridor / Thoroughfare Designation and Recommended Cross Section This section of SR 3351 is designated as a local route
on the NCDOT Functional Classification Route Map.
The NCDOT "R-R-R Guide" recommends a minimum of 10 foot lane
widths and 3 foot shoulder widths (6 foot shoulder widths where
guardrail is to be installed) on local routes.
Crash History and Safety Considerations No crashes recorded in vicinity of bridge from 07/01/2004 to 06/30/2014.
Comments _____

Reasonable Bridge Speed 50 mph

Investigated by: John Button, P.E. 9/11/2014

Bridge # 4000258 on SR 3351 (Smithwood Road) in Guilford County



Guilford County



SR 3351 (Smithwood Road) westbound $\pm$ 0 feet east of Bridge# 400258

Guilford County



SR 3351 (Smithwood Road) westbound $\pm$ 50 feet east of Bridge# 400258

Guilford County



SR 3351 (Smithwood Road) westbound $\pm$ 100 feet east of Bridge# 400258

Guilford County



SR 3351 (Smithwood Road) westbound $\pm$ 150 feet east of Bridge# 400258

Guilford County



SR 3351 (Smithwood Road) westbound $\pm$ 200 feet east of Bridge# 400258

Guilford County



SR 3351 (Smithwood Road) westwestbound $\pm$ 250 feet east of Bridge# 400258

Guilford County



SR 3351 (Smithwood Road) eastbound $\pm$ 0 feet west of Bridge# 400258

Guilford County



SR 3351 (Smithwood Road) eastbound ± 50 feet west of Bridge# 400258

Guilford County



SR 3351 (Smithwood Road) eastbound $\pm$ 100 feet west of Bridge# 400258

Guilford County



SR 3351 (Smithwood Road) eastbound $\pm$ 150 feet west of Bridge# 400258

Guilford County



SR 3351 (Smithwood Road) eastbound $\pm$ 200 feet west of Bridge# 400258

Guilford County



SR 3351 (Smithwood Road) eastbound ± 250 feet west of Bridge# 400258

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

Study Criteria Summary

County: GUILFORD **City:** All and Rural
Date: 7/1/2004 to 6/30/2014 **Study:** GUILFORDBRIDGE400258
Location: 500 feet on either side of bridge 400258 on SR 3351 (Smithwood Road)

Report Details

Study Criteria

Study Name	Log No.	PH No.	TIP No.	K/A Cf.	B/C Cf.	ADT	ADT Route
GUILFORDBRIDGE400258				76.8	8.4	200	40003351

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

County			Municipality						
Name	Code	Div.	Name	Code	Y-Line Ft.	Begin Date	End Date	Years	
GUILFORD	40	7	All and Rural		0	7/1/2004	6/30/2014	10.00	

Location Text	Requestor
500 feet on either side of bridge 400258 on SR 3351 (Smithwood Road)	

Fiche Roads	
Name	Code
SR 3351	40003351
SMITHWOOD	50028467

Strip Road					
Name	Code	Begin MP	End MP	Miles	Kilometers
SR 3351	40003351	0.757	0.953	0.196	0.315