
Bridge Design Speed Investigation

850034

Structure #34 on NC 104 (Riverside Drive) over Johnson Creek

Surry County



Document Prepared By:

Ramey Kemp & Associates, Inc.
8307 University Executive Park Drive, Suite 260
Charlotte, NC 28262

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Project Manager

A handwritten signature in black ink, reading "Jacob D. Carpenter".

Jacob D. Carpenter, PE
Regional Manager

Principal Investigator

A handwritten signature in black ink, reading "Andrew Eagle".

Andrew Eagle, PE, PTOE
Traffic Engineer



Bridge and Approach Investigation Checklist

Project 13191
Description Bridge # 34 over Johnson Creek
Route NC 104 (Riverside Drive)
Division 11
County Surry

Existing Speed Limit 55 ☐ Posted ☒ Statutory
Reasonable & Comfortable Passenger Car Speed 50
Speed Data 50-55 mph
Ball Bank Speed Study 45 mph: NB Approach - 7, NB Departure - 9, SB App - 10, SB Dep - 7
50 mph: NB App - 10, NB Dep - 11, SB App - 13, SB Dep - 9
55 mph: NB App - 12, NB Dep - 17, SB App - 15, SB Dep - 10
Warning Signs at Bridge 3x Guardrail Ends, 1x Bridge End Delineators, 2x Bridge Ices Before Road,
2x Curve Ahead (40 mph)
Roadside Development Residential, Farm
ADT History 3100 vpd (From NCDOT TEAAS); 3100 vpd (2012)
Pedestrian/Bicycle Traffic Minimal Expected
Bridge and Approach Digital Photos Attached
Approach Lane Width 10.5 ft
Approach Shoulder Width: 1 ft paved
Shoulder Type 6 ft grass
Lane Width (existing bridge) 10 ft
Shoulder width (existing bridge) 2.5-3.5 ft (~26 ft total width)
Strategic Corridor / Thoroughfare Designation and Recommended Cross Section NC 104 is classified as a major collector in the Statewide Functional Classification System. 2-lane cross-section recommended.
Crash History and Safety Considerations Crash analysis completed for 7/1/2008 to 6/30/2013. No collisions reported.
Comments Reasonable bridge speed 50 mph due to curve north of bridge.

Reasonable Bridge Speed 50

Investigated by: J. Andrew Eagle, PE, PTOE

Reviewed by: 

County: Surry

Bridge and Route: 850034 – NC 104 Riverside Dr.

Date: 9/17/13

Northbound



Northbound



Southbound



Southbound





Bridge Location Map - Bridge #850034

