I-95 Bridges Merit Criterion 3 Economic Competitiveness and Opportunity - Supplemental Information

NCDOT thanks FHWA for making staff available to provide comments on the I-95 Bridges Bridge Investment Program Grant Application. Based on their input, NCDOT is providing the following supplemental information with regards to Merit Criterion 3. NCDOT has developed a website that includes references and other supplemental information: I-95 Bridges

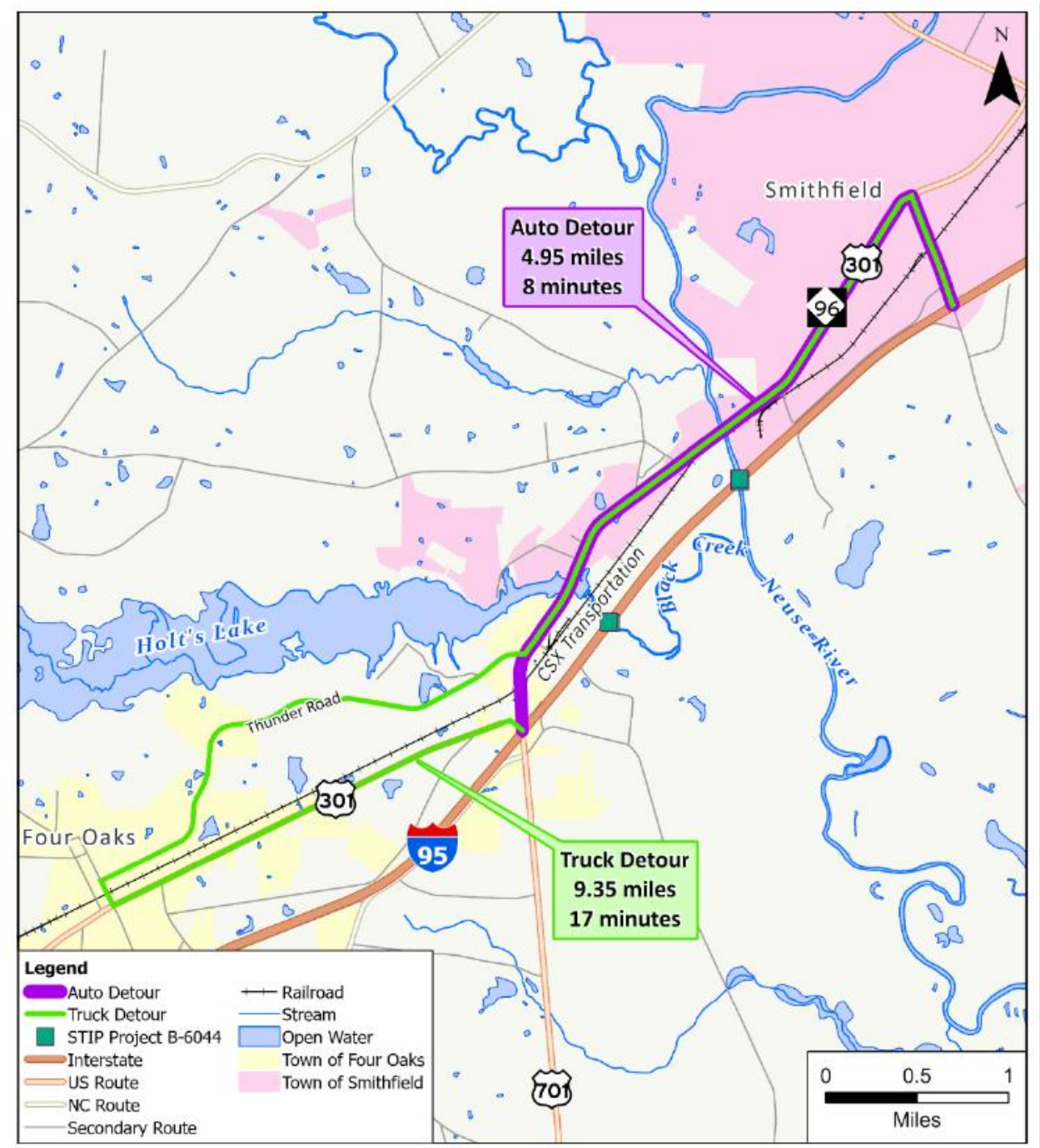
The I-95 corridor is designated as part of the National Highway Freight Network and the North Carolina Strategic Transportation Corridors network (Corridor T), recognized as a critical link connecting the state's Coastal Plains region to major employment centers between the South Carolina and Virginia state lines. As noted in Criterion 2 of the application, I-95 at the project location carries approximately 50,000 vehicles per day, with a truck composition of 12% truck tractor-semitrailers and 4 percent dual-axle vehicles. According to the NC Statewide Multimodal Freight Plan (2023), traffic volumes are expected to grow with the opening of the CSX rail intermodal terminal at Rocky Mount, which increases both truck activity and the strategic importance of I-95 to the state's multimodal freight network. This section of I-95 is also crucial for the deployment of Fort Bragg military assets to the Virginia ports at Norfolk.

By replacing the aging structures with bridges designed to accommodate projected 2062 traffic volumes and current and future load requirements, the project will protect the reliability of freight movement on I-95 and reduce the risk of extended closures, load restrictions, and diversions onto a secondary-road network that lacks sufficient capacity.

Since 2013, traffic on this segment of I-95 has grown from 37,000 average annual vehicles per day (AADT) to 51,000 in 2025 based on NCDOT's interactive AADT map. This is an increase of 38 percent overall, or about 3 percent per year. At the project location, 2025 traffic counts indicate approximately 5,960 combination trucks per day, representing approximately 12 percent of total traffic. Dual-axle vehicles account for an additional 4 percent of traffic but are not included in the combination-truck total used to calculate freight value.

Were this segment of I-95 to be detoured due to a bridge failure, both cars and trucks would be detoured onto US 301 as shown in Figure 1. It should be noted that bridge 000000001010037, which carries US 301 and NC 96 over CSX railroad, is load rated to 18 tons for single vehicles (SV) and 21 tons for tractor-trailer trucks (TTS). The detour for automobiles would be 4.95 miles and add about 8 minutes to travel times along the corridor. For heavy trucks, the detour would be 9.35 miles and take approximately 17 minutes due to the load rating on the US 301 bridge.

Figure 1. Proposed Detour Route



Based on data from the Bureau of Transportation Statistics, freight moving through the corridor has an estimated average value of approximately $1,001 per ton. Assuming an average payload of 42,000 to 48,000 pounds per semi-truck, approximately $125 million to $143 million in truck freight is carried through the corridor each day and would be exposed to delay or disruption during an extended closure.

Recent experience in Pennsylvania and Georgia illustrates the severe consequences when interstate bridges fail: traffic diverted onto secondary roads not designed for such volumes increases crash risk and imposes significant economic costs. Closing the 5-mile stretch that would be affected by a failure of the I-95 Neuse River bridges would cost an estimated $84.8 million per day in 2022 dollars.

The bridges on I-95 are at the end of their design lives and cannot be expected to last through the anticipated design year of the facility even if extensive maintenance activities are expended. All of the structures are currently in poor condition or are in danger of falling into poor condition. As noted in the State of Good Repair discussion, over $336,000 has been spent on maintenance and repair of these bridges since 2020. Continued deterioration could result in increasingly frequent maintenance activities, load restrictions, emergency repairs, or extended closures. Therefore, the economic and supply-chain consequences of disrupting this nationally significant freight route are directly relevant to evaluating the project's benefits.

Projected traffic in the design year on I-95 is 84,000 AADT by 2062. This would translate to approximately 9,800 trucks per day. At that volume, a 17-minute detour would result in approximately 2,777 truck-hours of delay per day before accounting for congestion on the detour route. This is likely an underestimation as without substantial expansion, U.S. 301 would not be able to accommodate this volume. Diverting I-95 traffic to US 301 would place substantial additional demand on a rural route that currently carries approximately 10,000 vehicles per day. The resulting traffic volume would be expected to exceed the practical capacity of portions of the detour route and produce substantial congestion and travel-time delay. Replacing the aging I-95 structures will protect the reliability of freight movement, accommodate projected traffic and load requirements, and reduce the risk of extended disruptions to this nationally significant freight corridor. The replacement of these critical, but aging bridges, addresses several of the goals in the USDOT 2026 National Freight Strategic Plan (NFSP) that was recently announced.

NCDOT thanks FHWA for this opportunity to provide additional information and requests your strong consideration of this application.