March 31, 2025

MEMORANDUM TO: John Button, PE
Regional Traffic Safety Engineer
NCDOT Triad Region

FROM: John Burris, PTP
HNTB North Carolina, PC

SUBJECT: Final Traffic Forecast for the US 29 Corridor Study
Davidson, Randolph, and Guilford Counties

This traffic forecast was reviewed by the North Carolina Department of Transportation (NCDOT) Transportation Planning Division (TPD) and approved on March 26, 2025.

Please find attached the Final Traffic Forecast for the US 29 Corridor Study. The traffic forecast for this project was requested by North Carolina Department of Transportation (NCDOT) Traffic Safety Unit / Transportation Mobility and Safety Division in October 2024 as part of the 2023 Transportation Mobility and Safety Division (TMSD) On Call to be performed by HNTB North Carolina, P.C.

The US 29 Corridor Study (US 29 CS) will provide recommendations for mobility and safety improvements to I-85 Bus / US 29-70 at the selected full movement at-grade intersections between US 64 in Davidson County and SR 4070 (Durand Ave) in Guilford County with the viewpoint of protecting the mobility along the corridor while providing safe intersections for future development along the corridor.

This traffic forecast includes two scenarios listed below:

- 2025 Base Year (BY)
- 2045 Future Year (FY)

**Fiscal Constraint**

Within a Metropolitan Planning Organization (MPO), future year traffic forecasts assume construction of projects listed within an MPO's Metropolitan Transportation Plan (MTP). This traffic forecast is consistent with the High Point Urban Area MPO 2045 MTP, which was adopted by their Transportation Advisory Committee on August 25, 2020, and the Greensboro Urban Area MPO 2045 MTP, which was adopted by their Transportation Advisory Committee on December 9, 2020.

**Travel Demand Model**

Output from the 2017 / 2045 PTRM was used as a tool in the development of this traffic forecast. The model has a Base Year of 2017 and a Future Year of 2045. The model includes all fiscally-constrained projects contained in the MTP at the time of the model's effective date, as well as socioeconomic data (population, households, employment, etc.) projections. For the purposes of the US 29 CS traffic forecast, model runs were completed after ensuring all relevant transportation projects proposed in the MTP were included and by modifying the highway network to include projects if they were not originally in the model.

The North Carolina Statewide Model (NCSTM) (Generation 4.5, TransCAD 7 Build 12375) was also used in the development of this traffic forecast. The NCSTM has a Base Year of 2017 and a Future Year of 2045.

**Interpolation**

To determine any intermediate years, straight-line interpolation may be used. AADT volumes may be extrapolated for up to two years immediately following 2045.

**Development Activity**

All recent and planned developments, except for the Lexington Avenue Subdivision, were reviewed with local planners and were determined to fall within the scope of the planned growth shown in the official future year PTRM socioeconomic data set, which includes all fiscally-constrained projects contained in the MTP. It was determined that the Lexington Avenue Subdivision consisting of 282 townhomes was not included in the network. The AADT from the development was taken from the TIA and distributed throughout the network.

**Forecast Methodology**

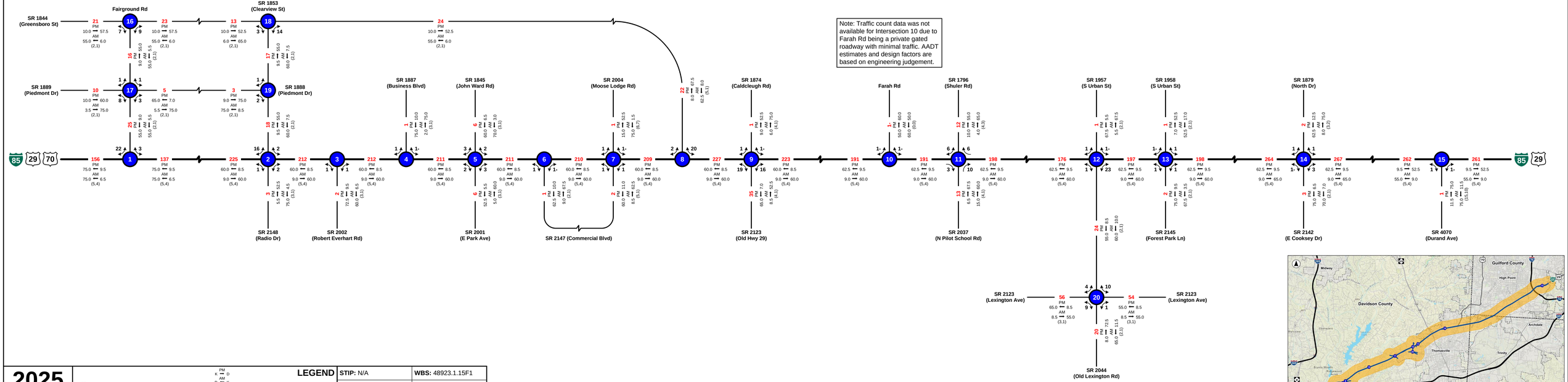
The 2025 BY traffic forecast scenario is a traffic estimate for existing study area conditions. Actual field collected traffic counts from August 2023 / January 2025, comparing project specific count data with recent historical AADT, historical trend line estimates, extrapolating historical AADT volumes to 2025 using 10-year historic growth rates (2014 – 2023) and 20-year historic growth rates (2004 – 2023), previous traffic forecasts completed, and engineering judgment were all used in the development of the 2025 BY traffic forecast scenario.

The 2045 FY traffic forecast scenario is based on a review and comparison of model daily volumes and growth rates, followed by historical trend line estimates, model TAZ data, regional population and employment projections, knowledge of future land use, and engineering judgment. Model runs were completed for the FY traffic forecast scenario without any changes to the model network.

If it is determined that any of these assumptions have become inconsistent with the project and surrounding area activity, please request updated projections. If you have any questions or I can be of further assistance, please do not hesitate to call me at (919) 424-0483 or e-mail me at jburris@hntb.com.

**cc:** Keith Dixon (trafficforecast@ncdot.gov), NCDOT Transportation Planning Division

FINAL




Note: Traffic count data was not available for Intersection 10 due to Farah Rd being a private gated roadway with minimal traffic. AADT estimates and design factors are based on engineering judgement.




# 2025

**ANNUAL AVERAGE DAILY TRAFFIC**

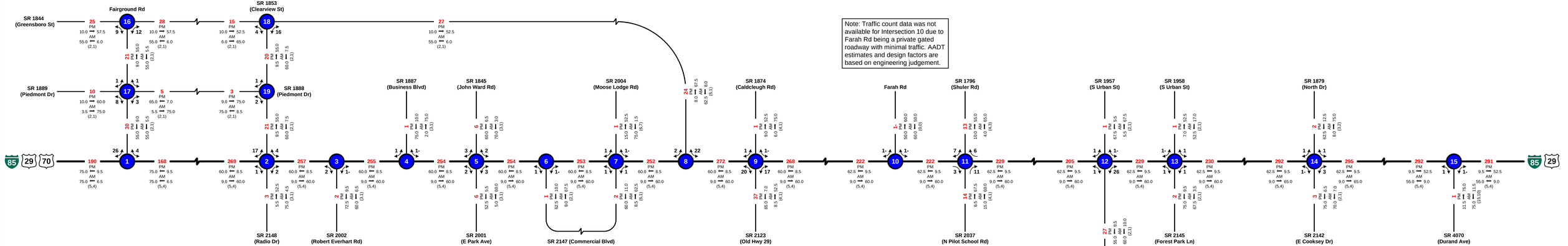
**Base Year (BY)**

## LEGEND

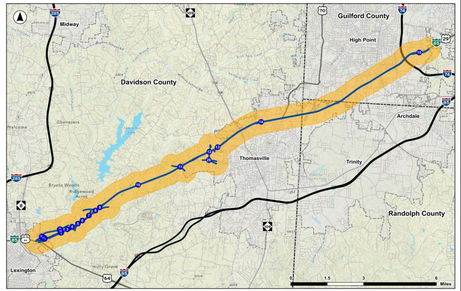
- (#) Study Area Intersection ID
- ### No. of Vehicles Per Day (VPD) in 100s
- 1- Less than 50 VPD
- X Movement Prohibited
- K Design Hour Factor (%)
- PM PM Peak Hour
- AM AM Peak Hour
- D Peak Hour Directional Split (%)
- Indicates Direction of D
- (d,t) Duals, TT-STs (%)

| | |
|---|---|
| **STIP:** N/A | **WBS:** 48923.1.15F1 |
| **COUNTY:** Guilford, Randolph, and Davidson | **DIVISION:** 7, 8, and 9 |
| **PREPARED BY:** HNTB North Carolina, PC | |
| **PROJECT:** US 29 Corridor Study | |
| **DATE:** March 2025 | **Sheet 1 of 1** |

FINAL




Note: Traffic count data was not available for Intersection 10 due to Farah Rd being a private gated roadway with minimal traffic. AADT estimates and design factors are based on engineering judgement.




# 2045

**ANNUAL AVERAGE DAILY TRAFFIC**

**Future Year (FY)**

## LEGEND

- (#) Study Area Intersection ID
- ### No. of Vehicles Per Day (VPD) in 100s
- 1- Less than 50 VPD
- X Movement Prohibited
- K PM D / D AM K (d,t) Peak Hour Directional Split (%)
- K Design Hour Factor (%)
- PM PM Peak Hour
- AM AM Peak Hour
- D Peak Hour Directional Split (%)
- ➡ Indicates Direction of D
- (d,t) Duals, TT-STs (%)

| | |
|---|---|
| **STIP:** N/A | **WBS:** 48923.1.15F1 |
| **COUNTY:** Guilford, Randolph, and Davidson | **DIVISION:** 7, 8, and 9 |
| **PREPARED BY:** HNTB North Carolina, PC | |
| **PROJECT:** US 29 Corridor Study | |
| **DATE:** March 2025 | **Sheet 1 of 1** |