



February 24<sup>th</sup>, 2025

Memorandum To: Colin Mellor  
Project Management Team – Div 7, 9 & 10  
NCDOT Project Management Unit

From: Tim Padgett, PE  
Kimley-Horn and Associates, Inc.

Subject: Traffic Forecast for I-3306AC (NC 86 Interchange Improvements), Orange County, NC

This forecast was reviewed and approved by the NCDOT Transportation Planning Division on February 24, 2025.

Please find attached the 2024 traffic estimates and 2050 traffic forecasts for I-3306AC in Orange County. This project studies intersection improvements at NC 86. The following scenarios are provided:

- Base Year 2024 No-Build
- Future Year 2050 No-Build
- Future Year 2050 Build (I-40 widened to 6-lanes from I-85 to US 15-501)

Certain assumptions were made in the development of the forecast:

**Fiscal Constraint.** Within the Metropolitan Planning Organization (MPO) area, future forecasts are based on projects included in the Financial Plan for the 2050 Durham – Chapel Hill – Carrboro Metropolitan Planning Organization (DCHC MPO) Metropolitan Transportation Plan (MTP). This information is included in the official version of the Triangle Regional Model (TRMG2v1.3.2).

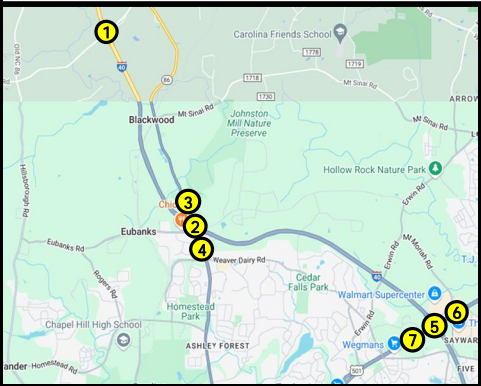
**Future Conditions and Development Activity.** The forecast was developed using output from the Triangle Regional Model (TRMG2v1.3.2). Assumptions about future development activity and changes in the distribution of population and employment in the forecast study area are implicit in the model. Information from local officials was also used in the development of the forecast.

**Forecast Methodology.** Base year 2024 estimates and Horizon Year 2050 forecasts provided in the attached forecast were developed using a method under which observed traffic data as well as 2020 and 2050 model output were considered.

To determine any intermediate years, straight-line interpolation may be used. AADT volumes may be extrapolated for up to two years immediately following 2050. If it is determined that any of these assumptions have become inconsistent with the project and surrounding area activity, please request updated projections at this location.

If we can be of any further assistance, please do not hesitate to contact me at 919-653-2991, or [tim.padgett@kimley-horn.com](mailto:tim.padgett@kimley-horn.com)

Cc: [TrafficForecast@ncdot.gov](mailto:TrafficForecast@ncdot.gov)



I-3306AC

2024  
No Build

## Vehicles Per Day in 100s 1- Less than 50 VPD

← PM DHV  
D AM →  
DHV (d,t) D

DHV Design Hourly Volume (%) = K30  
AM/PM Peak Period  
D Peak Hour Directional Split (%)  
→ Indicates Direction of D  
(d,t) Dual, TT-STs (%)

Existing Roadway

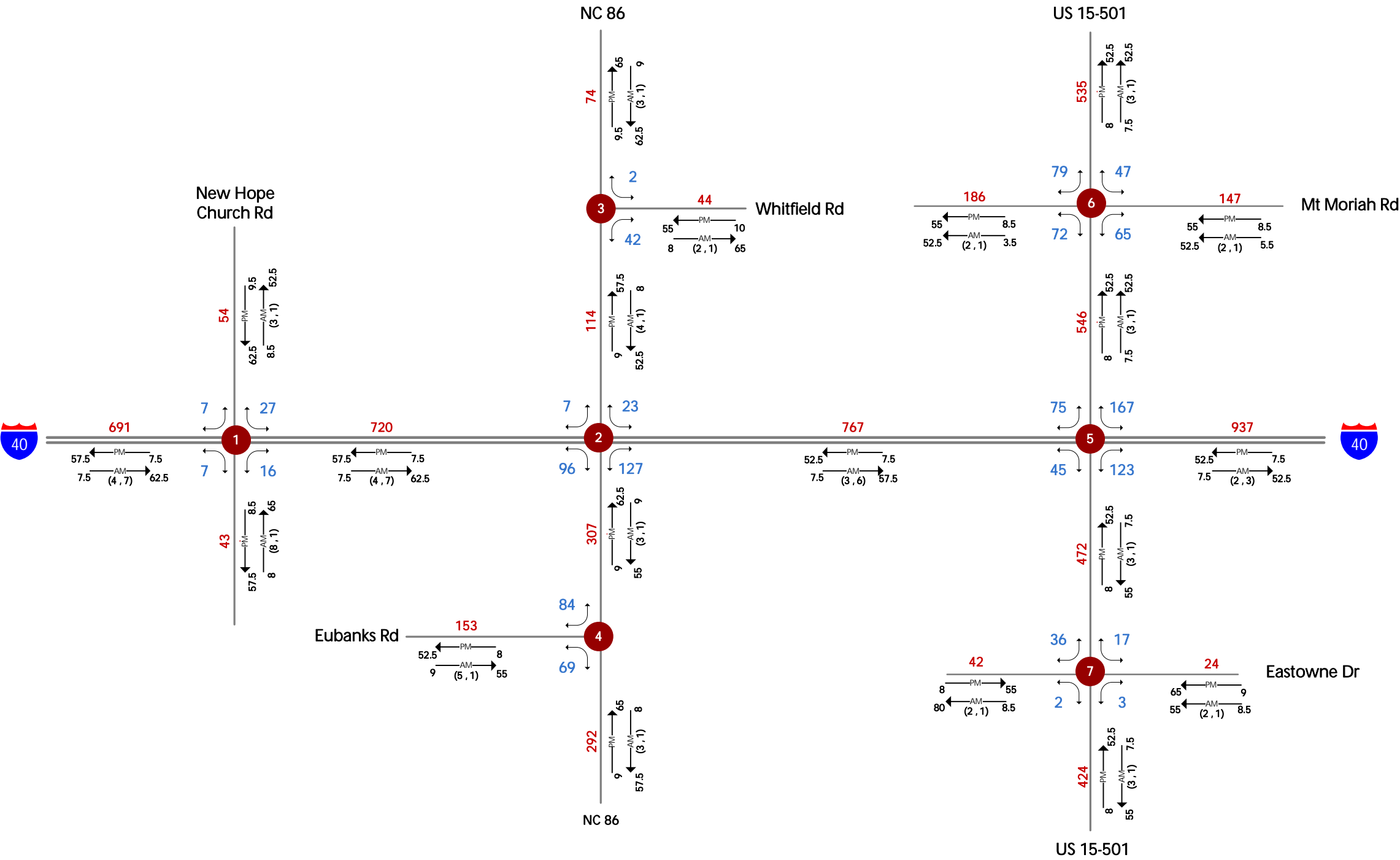
EXTENTS  
I-40/NC 86

Orange County Division 7

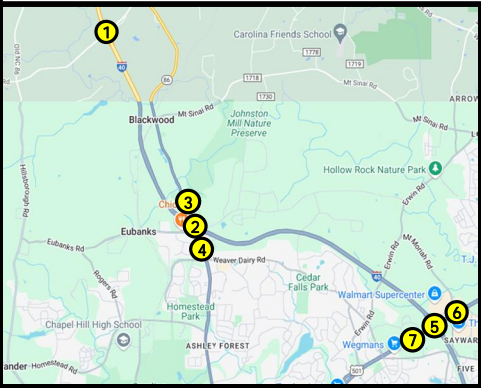
PROJECT

Interchange  
Improvements

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I-3306AC

2050  
Build

## Vehicles Per Day in 100s 1- Less than 50 VPD

←PM DHV  
D AM→  
DHV (d,t) D

DHV Design Hourly Volume (%) = K30  
AM/PM Peak Period  
D Peak Hour Directional Split (%)  
→ Indicates Direction of D  
(d,t) Dual, TT-STs (%)

Existing Roadway

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