

# MEMORANDUM

July 2017

TO: John Conforti  
Project Development and Environmental Analysis

FROM: Ivo Dernev, PE  
AECOM, Technical Services of North Carolina, Inc.

SUBJECT: TIP Project No. U-4434  
Extend existing Independence Boulevard near the Covil/Montgomery Ave corridor from the intersection with Randall Parkway to U.S. 74 (Martin Luther King Jr. Parkway) in New Hanover County  
NCDOT Divisions 3

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Please find attached the 2017/2040 Traffic Forecast for the above mentioned project. This forecast was requested by John Conforti of NCDOT's Project Development and Environmental Analysis (PDEA) Branch on 2/7/2017. The final forecast report was approved by the Transportation Planning Branch on July 21, 2017.

Projects U-4434 includes extending of existing Independence Boulevard near the Covil/Montgomery Ave corridor from the intersection with Randall Parkway to U.S. 74 (Martin Luther King Jr. Parkway) in New Hanover County. The project is located within the Wilmington Metropolitan Planning Organization (WMPO) area and is part of the Wilmington area model roadway network.

Four other previous forecasts for TIP projects U-4737, FS-1503A, U-3338C, and U-5702 have overlapping segments with the current traffic forecast have been developed recently:

- U-4737 was completed in October 2014 by a private engineering firm
- FS-1503A was completed in December 2015 by NCDOT TPB
- U-3338C was completed in December 2015 by NCDOT TPB
- U-5702 was completed in December 2015 by NCDOT TPB

Included in the traffic forecast are the analyses for four scenarios, two 2017 Base Year and two 2040 Future Year scenarios:

- **2017 Base Year No-Build Scenario**
- **2017 Base Year Build**
- **2040 Future Year No-Build Scenario**
- **2040 Future Year Build Scenario** - Extend existing Independence Boulevard near the Covil/Montgomery Ave corridor from the intersection with Randall Parkway to U.S. 74 (Martin Luther King Jr. Parkway)

**Certain assumptions were made in the development of the forecast:**

Fiscal Constraint: The project is located within the boundaries of a MPO; therefore the travel demand model and traffic forecasts are fiscally-constrained to match the assumptions of the Wilmington MPO 2040 Metropolitan Transportation Plans (MTP).

The following projects included in the 2040 MTP were considered as projects anticipated having possible impact on traffic volumes and patterns in the traffic forecast vicinity:

- U-3338 - Kerr Ave widening from Randall Pkwy to US 74 (Martin Luther King Jr Pkwy)
- U-3831 - Gordon Rd widening from NC 132 Interchange to US 17 BUS (Market St)
- U-5702 - US 117/NC 132 (College Rd) widening from US117 (Shipyard Blvd) to Wilshire Blvd
- U-5792 - US 17 BUS (Market St) Rd Diet from 17th St to Covil Ave
- U-5792 - Convert at-grade US 117/NC 132 (College Rd) & US 74 (MLK Pkwy) Intersection into Interchange
- R-22 - Hurst Drive extension from Kerr Ave to Riegel Rd
- R-29 - Love Grove Additional Access from Nixon St to King St
- R-33 - Kerr Ave widening from Patrick Ave to Wrightsville Ave
- R-35 - N 23rd St widening from NC133/Castle Hayne Rd to US74/Martin Luther King Jr Pkwy
- R-37 - Wilshire Blvd extension from US117/132/ College Rd to MacMillan Ave
- R-40 - Kerr Ave extension from Wrightsville Ave to US76/Oleander Drive

If it is determined that any of these assumptions have become inconsistent with the project and surrounding area, please request updated traffic projections at this location.

**Travel Demand Model:** The Wilmington Area Model was used as a tool in the development of this forecast.

**Development Activity:** Based upon information provided by interviewees, multiple developments are proposed for construction in the the study area. The developments were described in further detail in the report and were considered while developing this forecast.

**Forecast Methodology:** The 2017 traffic volumes and design factors were developed based upon current counts, historic AADT trend projections and previous forecasts.

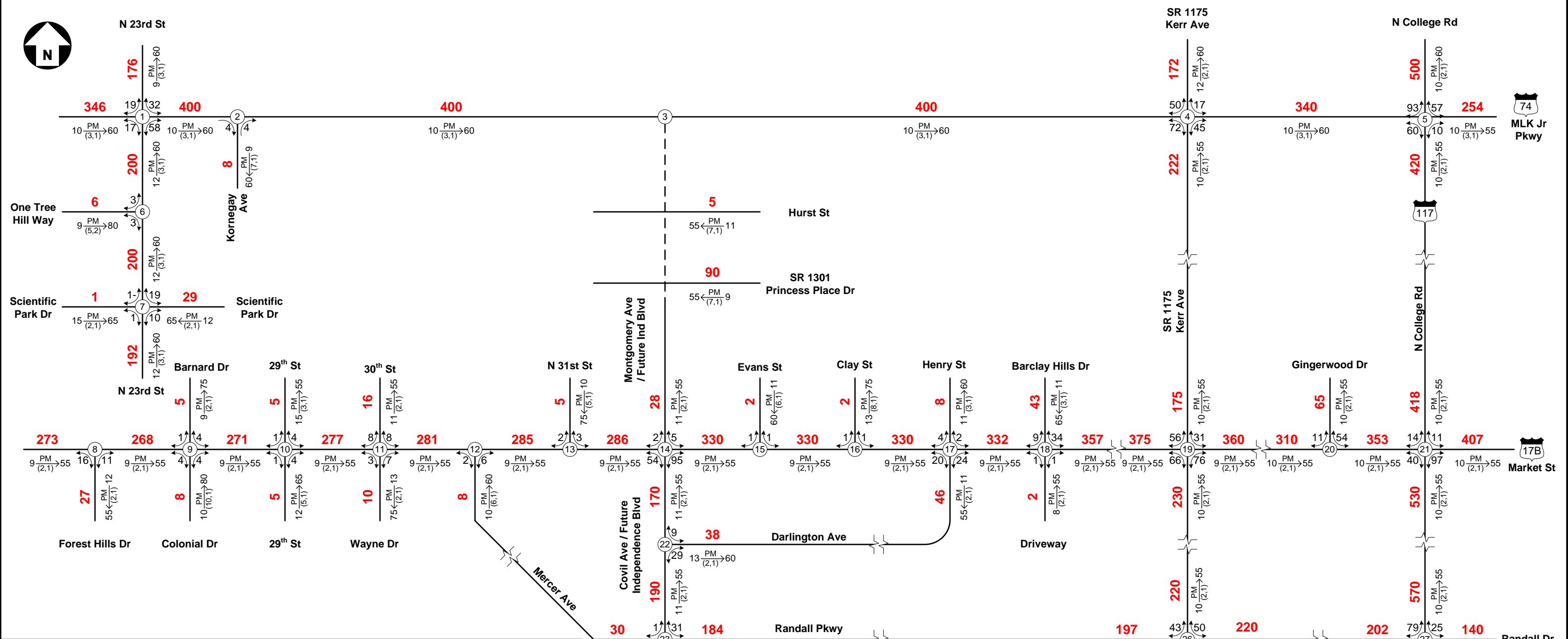
The Wilmington Area Model was relied upon in the calculation of the 2017 Base Year Build and 2040 Future Year traffic volumes. Historic growth rates were analyzed and compared to modeled growth rates. Engineering judgment adjustments were applied as needed in finalizing the volumes in order to develop a balanced forecast.

**Interpolation:** To determine any intermediate years, straight-line interpolation may be used. AADT volumes may be extrapolated for up to two years immediately following 2040. 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 you have any questions or if I can be of further assistance, please do not hesitate to call me at (919) 239-7203, or e-mail me at [ivo.dernev@aecom.com](mailto:ivo.dernev@aecom.com)

cc: FILE (New Hanover County TIP Project U-4434)

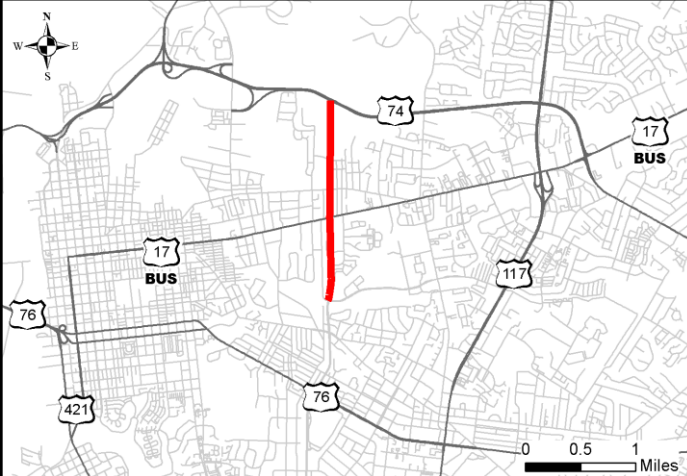
cc: (via e-mail as PDF attachments)  
Keith G. Dixon, State Traffic Forecast Engineer  
Jim Dunlop, PE, Congestion Management Unit  
Glenn Mumford, PE, Roadway Design Unit  
Clark Morrison, PE, Pavement Management Unit  
Alan Pytcher, Highway Division 3 Planning Engineer  
Mike Kozlosky, Wilmington MPO Executive Director  
Behshad Norowzi, TPB Coastal Group Supervisor



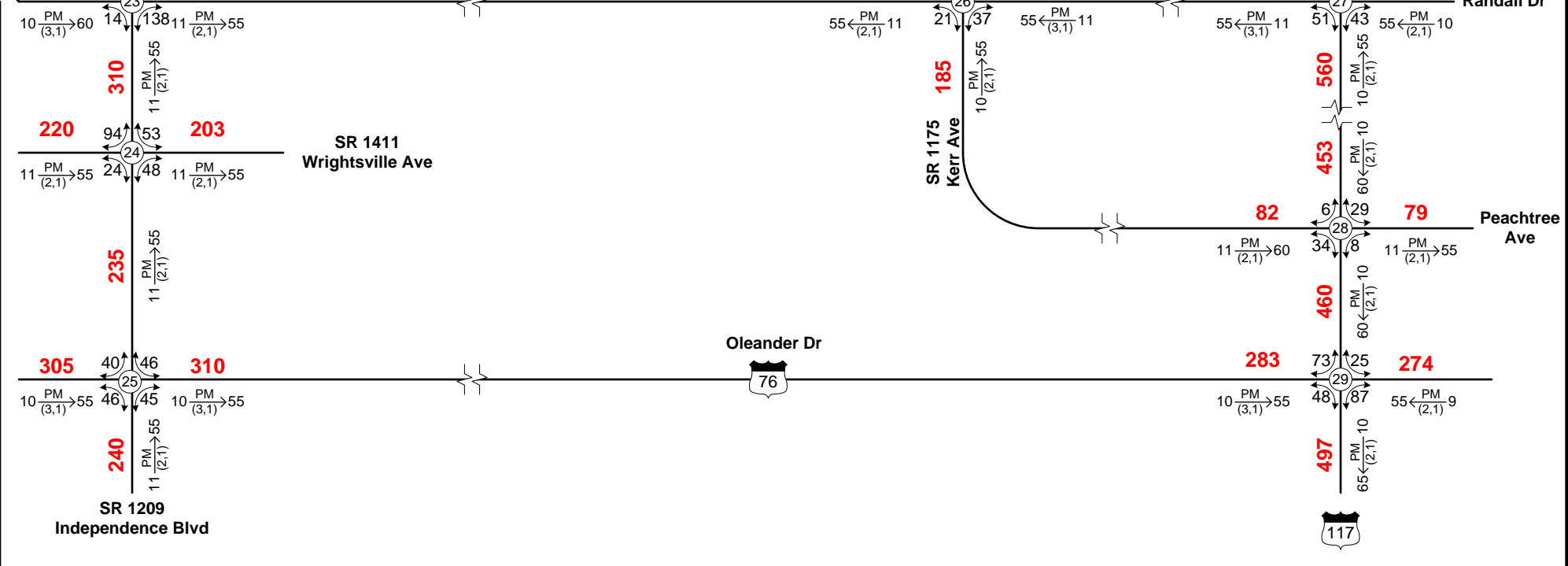
# 2017 No - Build Traffic Forecast

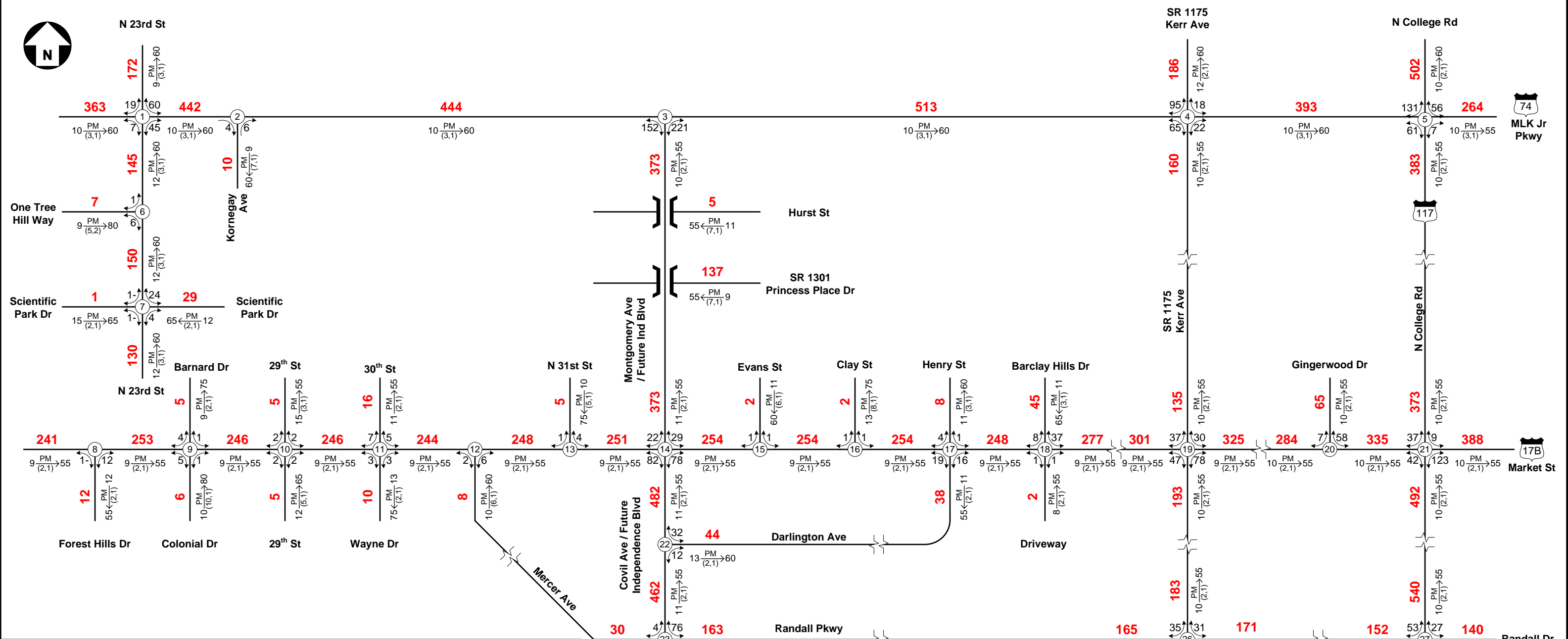
**SHEET 1 OF 4** AVERAGE ANNUAL DAILY TRAFFIC

TIP: U-4434	WBS: 37764.1.1	DATE: July 2017	DIVISION: 3
PREPARED BY: AECOM	PROJECT: Independence Blvd Extension		
COUNTY: New Hanover	LOCATION: Randall Pkwy to Martin Luther King Jr Pkwy		



- ### No. of Vehicles Per Day in 100s
- 1- Less than 50 vpd
- X Movement Prohibited
- K  $\frac{PM}{(d, t)}$  Design Hour Factor (%)
- PM PM Peak Period
- D Peak Hour Directional Split (%)
- Indicates Direction of D
- (d, t) Duals, TT-STs (%)



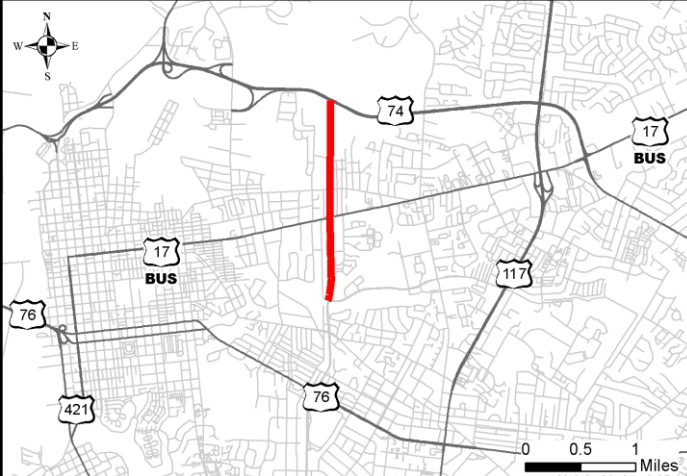


# 2017 Build Traffic Forecast

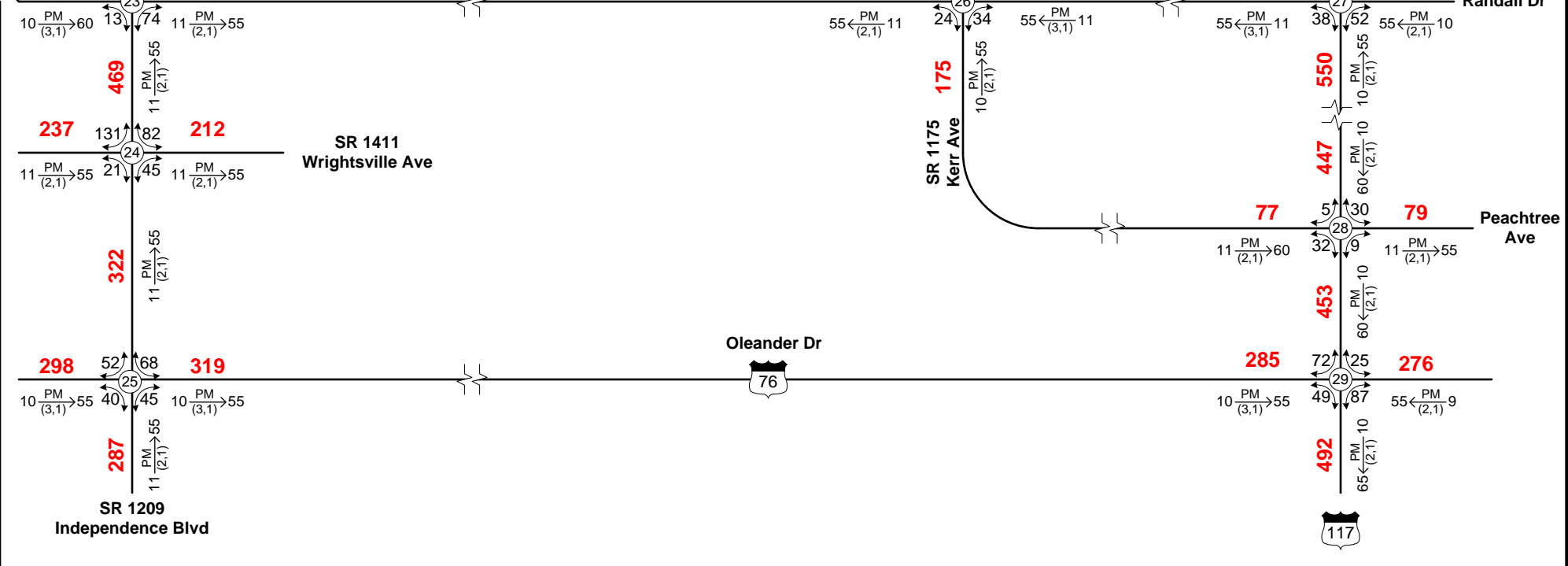
## SHEET 2 OF 4

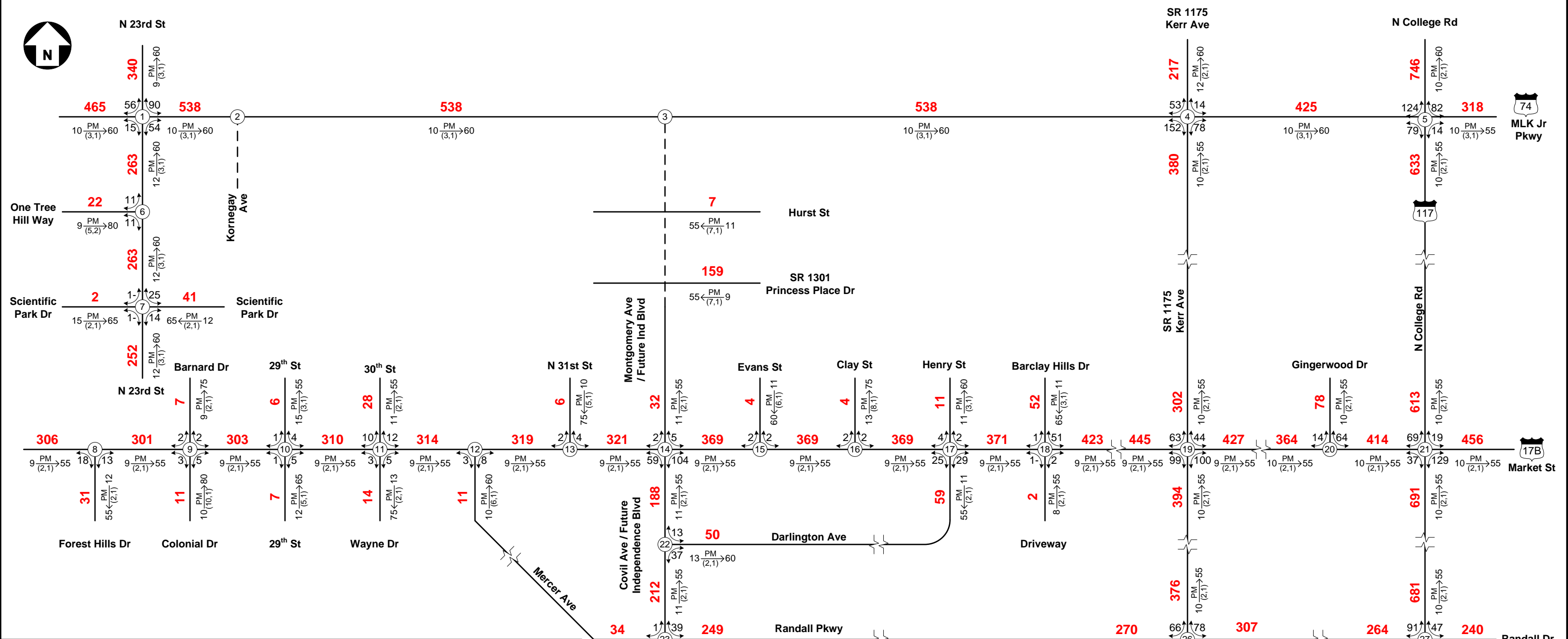
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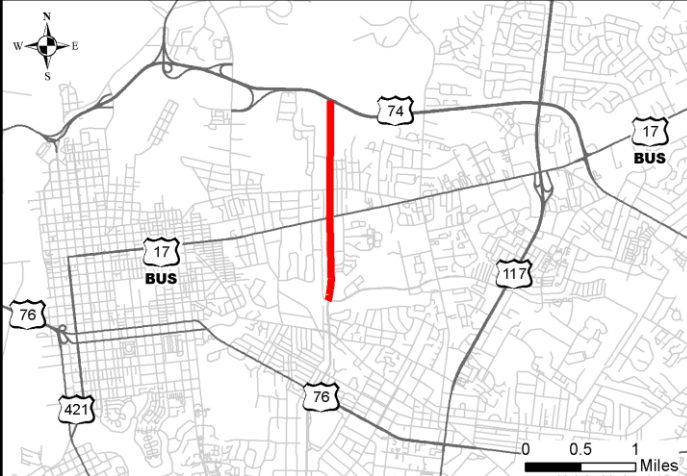


# 2040

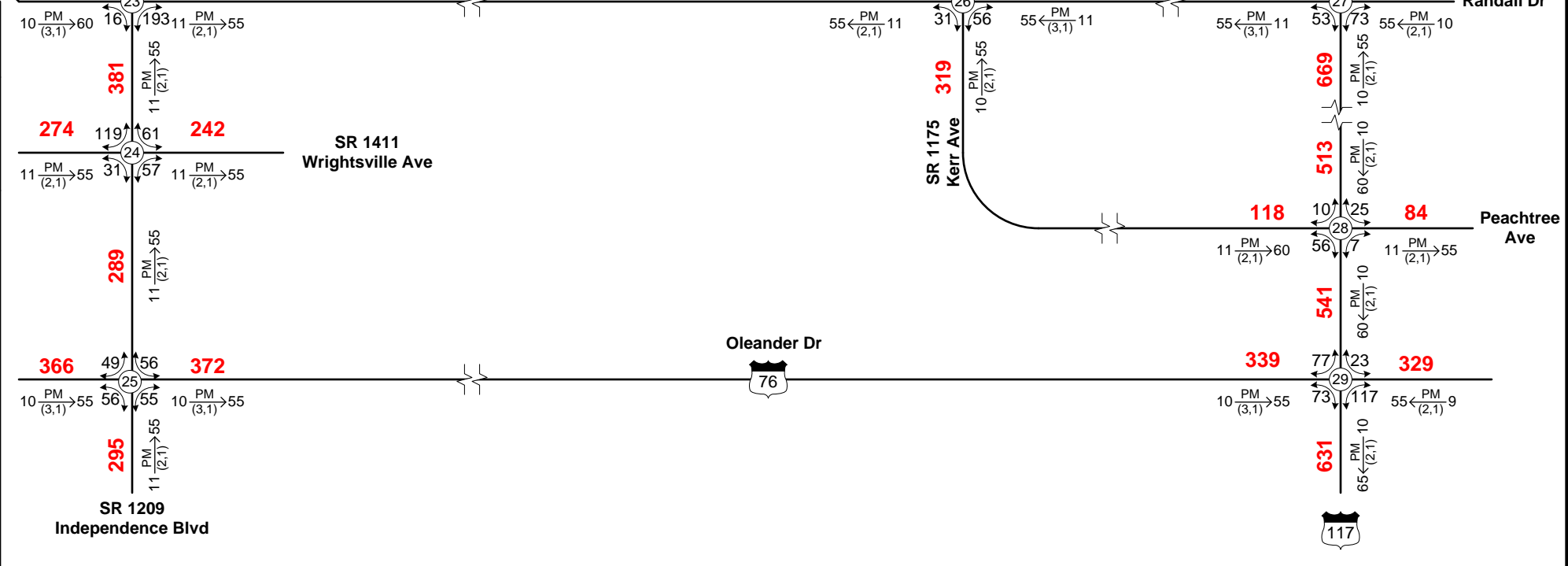
## No - Build Traffic Forecast SHEET 3 OF 4

### AVERAGE ANNUAL DAILY TRAFFIC

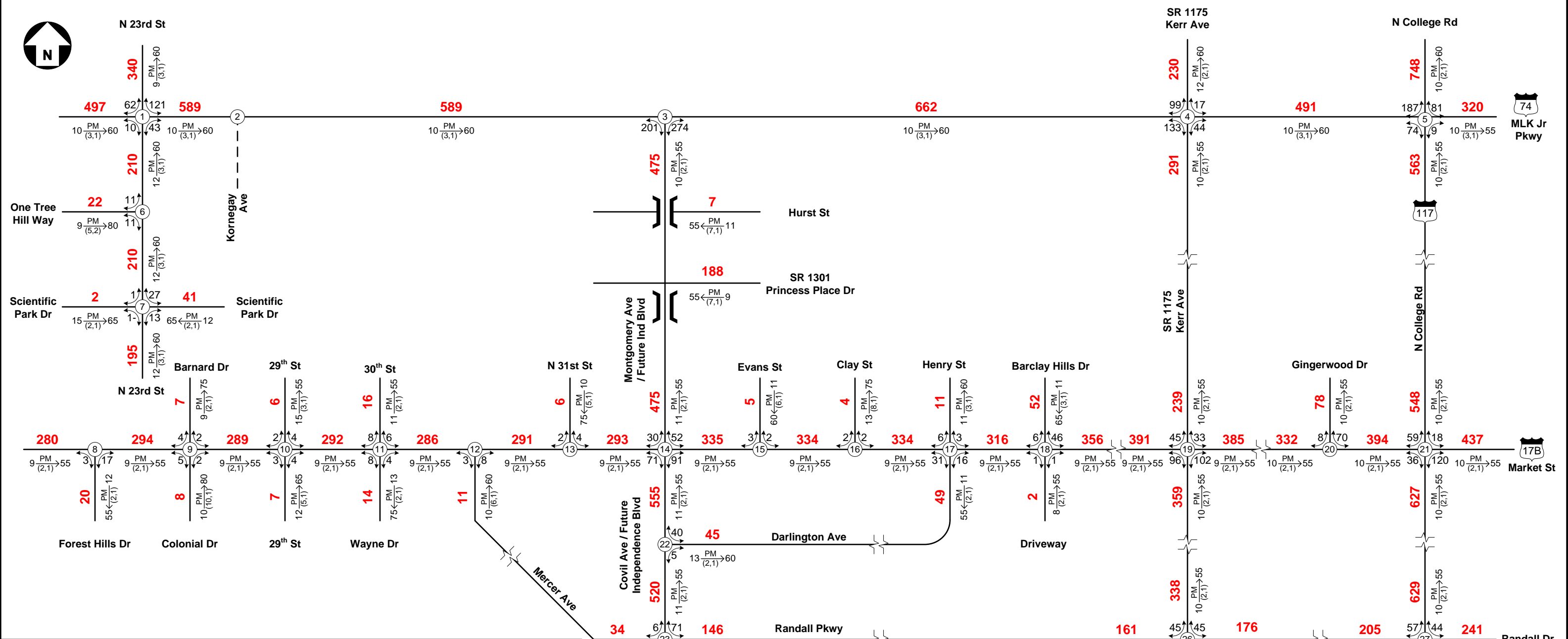
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PREPARED BY: AECOM	PROJECT: Independence Blvd Extension		
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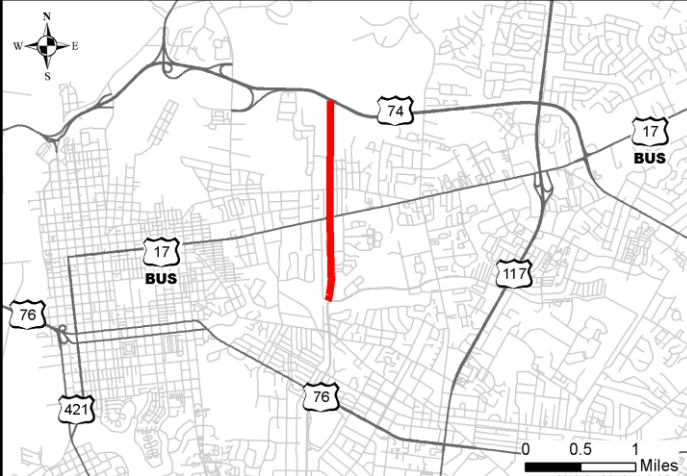


# 2040

## Build Traffic Forecast SHEET 4 OF 4

### AVERAGE ANNUAL DAILY TRAFFIC

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