



Traffic Forecast Cover Letter

To: Tierre Peterson, Structures Management Unit, North Carolina Department of Transportation

From: Joseph Schirripa, CDM Smith

Date: June 19, 2019

*Subject: Traffic Forecast for BR-0099
Bridge Replacement on NC 120 over US 74 Bypass*

The NCDOT Transportation Planning Division approves this forecast for BR-0099 for delivery as of June 11, 2019.

Please find here-in the traffic forecast for STIP Project BR-0099 in Rutherford County. The project calls for replacing the existing NC 120 bridge over US 74 Bypass; however, the build alternative is anticipated to be consistent with the existing structure. Contained with this letter are the forecasting report detailing the backgrounds, methods, and findings of the traffic forecast along with the traffic forecast diagrams. This forecast was made in response to a December 14, 2018 Scope of Services for BR-0099 managed by Tierre Peterson of the Structures Management Division of the North Carolina Department of Transportation.

The traffic forecast request for this project includes US 74, one diamond interchange (US 74 at NC 120) and two intersections (NC 120 at SR 1924/Daves Road; and NC 120 at Faye Toney Rd). The traffic forecast was developed for the following scenarios as identified below:

1. Base Year No-Build
2. 2040 No-Build

As the proposed design is not anticipated to result in traffic diversion, no separate build alternative forecast is provided.

This forecast considered the following assumptions:

Development Activity

A review of demographic data projections from the Office of Statewide Budget and Management (OSBM) shows a trend of relatively flat growth of 0.05 percent in Rutherford County. A review of the Complete Economic and Demographic Data Source (CEDDS) likewise indicates that growth is also flat (around 0.45 percent). CEDDS, a dataset compiled by Woods and Poole Economics, is a collection of commonly used socioeconomic indicators (e.g., population, employment) for the United States and all regions, states, special statistical areas and counties.

It is a valuable resource containing historical, current and projected data and provides information that is often used to check for reasonableness of other socioeconomic projections. Significant growth in the area, either localized to a specific area within the study area or generally throughout the county, is not expected to occur. Future year traffic patterns and levels are expected to be similar to current conditions.

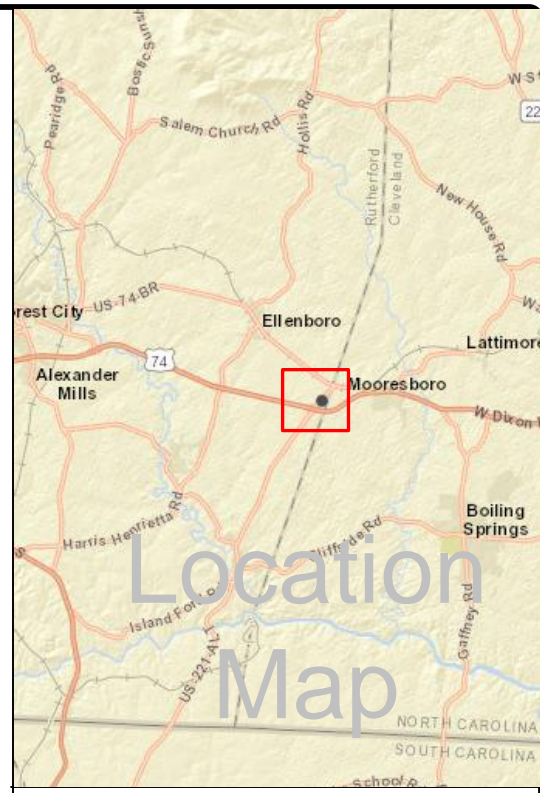
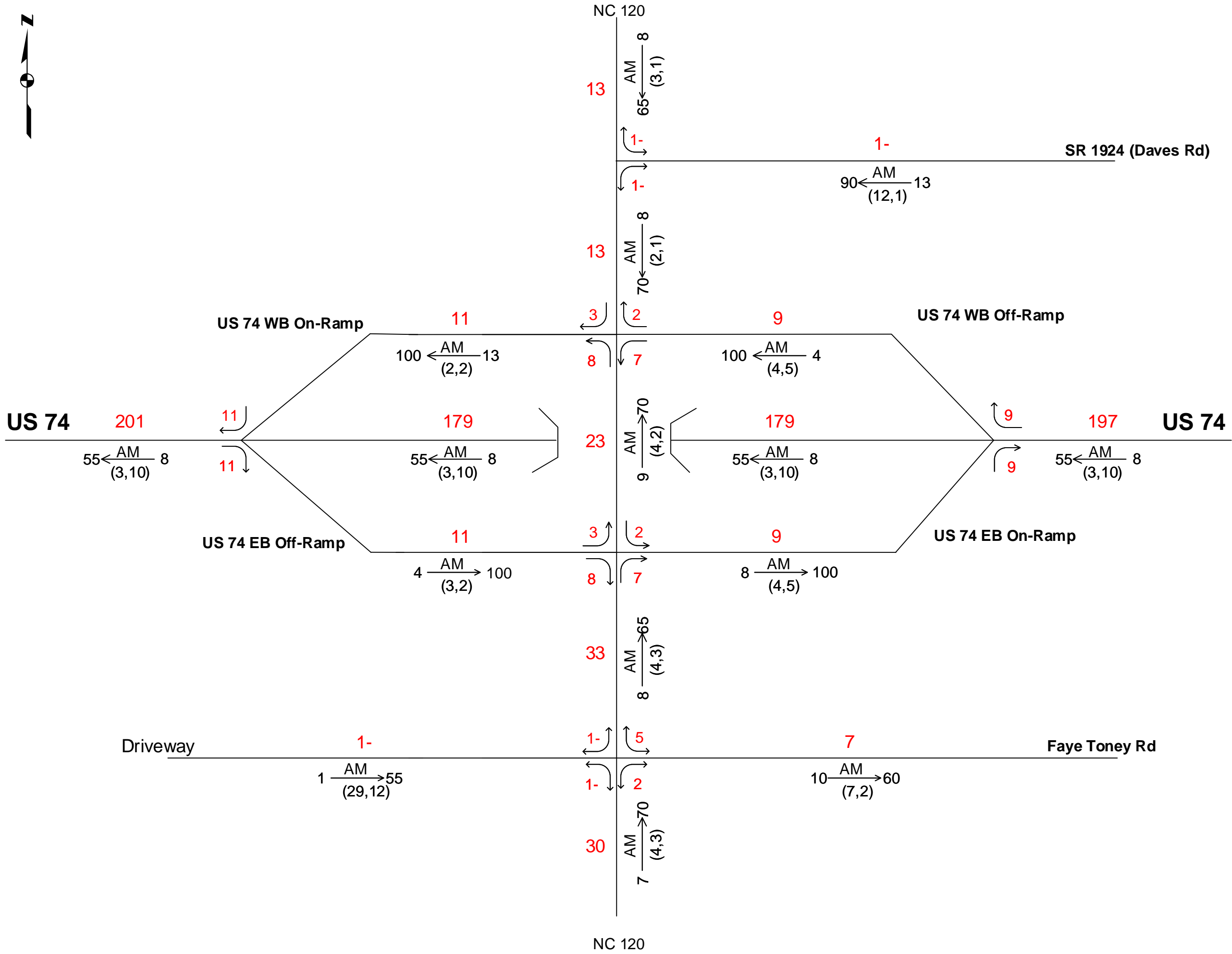
Additionally, Ms. Karyl Fuller with the Isothermal Regional Planning Organization, was contacted on May 1, 2019 to determine if there are any developments planned for the study area that may impact the traffic forecast. Ms. Fuller noted three currently existing developments; Hydratight and CMI Enterprises, Facebook Forest City Data Center, and Tryon International Equestrian Center, that may have the potential for further development. Our forecast for BR-0099 accounts for reasonable growth that accounts for any potential additional traffic from these activities. Ms. Fuller also indicated that there are no developments currently planned in the study area and that there are no developments planned in the near future.

Forecast Methodology

Compound annual growth rates (CAGR) were determined using the historic AADT between 2009 and 2017. Another set of growth rate was determined using the 2017 and 2040 population data as well as a review of the Rutherford travel demand model. Based on an analysis of the various growth rates, a growth rate of 2.93% (compounded annually) was identified to be reasonable in the study area. The estimated growth rate was submitted to NCDOT on March 29, 2019 and was approved on April 8, 2019. No trip diversion is anticipated due to the replacement of the existing bridge on NC 120.

If you have any questions concerning this forecast, please feel free to contact me. I can be reached by phone at (919) 325-3597 or by e-mail at schirripaj@cdmsmith.com. I will be glad to answer any questions that may arise.

cc: Keith Dixon, State Traffic Forecast Engineer, NCDOT
Clark Morrison, PE, PhD, Pavement Management Unit, NCDOT
Brenda Moore, PE, Roadway Design, NCDOT
Steve Cannon, PE, Division 13 Planning Development Engineer, NCDOT
James Upchurch, Mountains Group Supervisor, TPD, NCDOT
James Dunlop, PE, Congestion Management, NCDOT



2019

AVERAGE ANNUAL DAILY TRAFFIC

NO BUILD

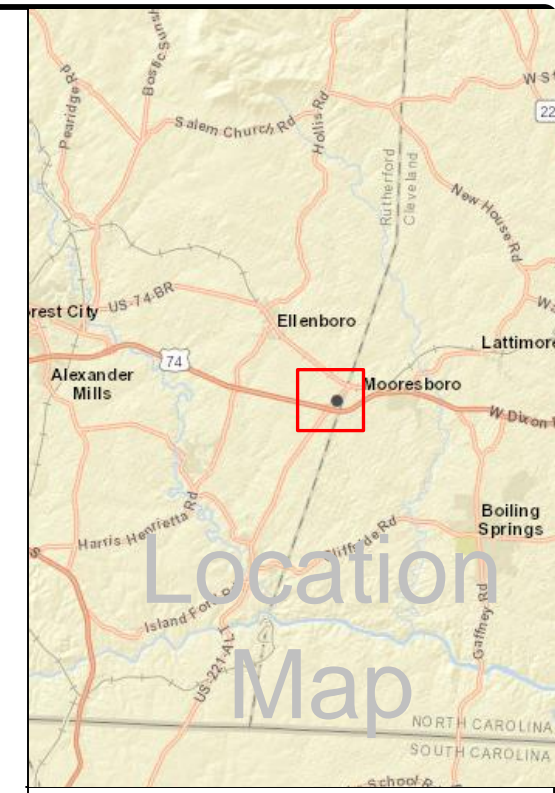
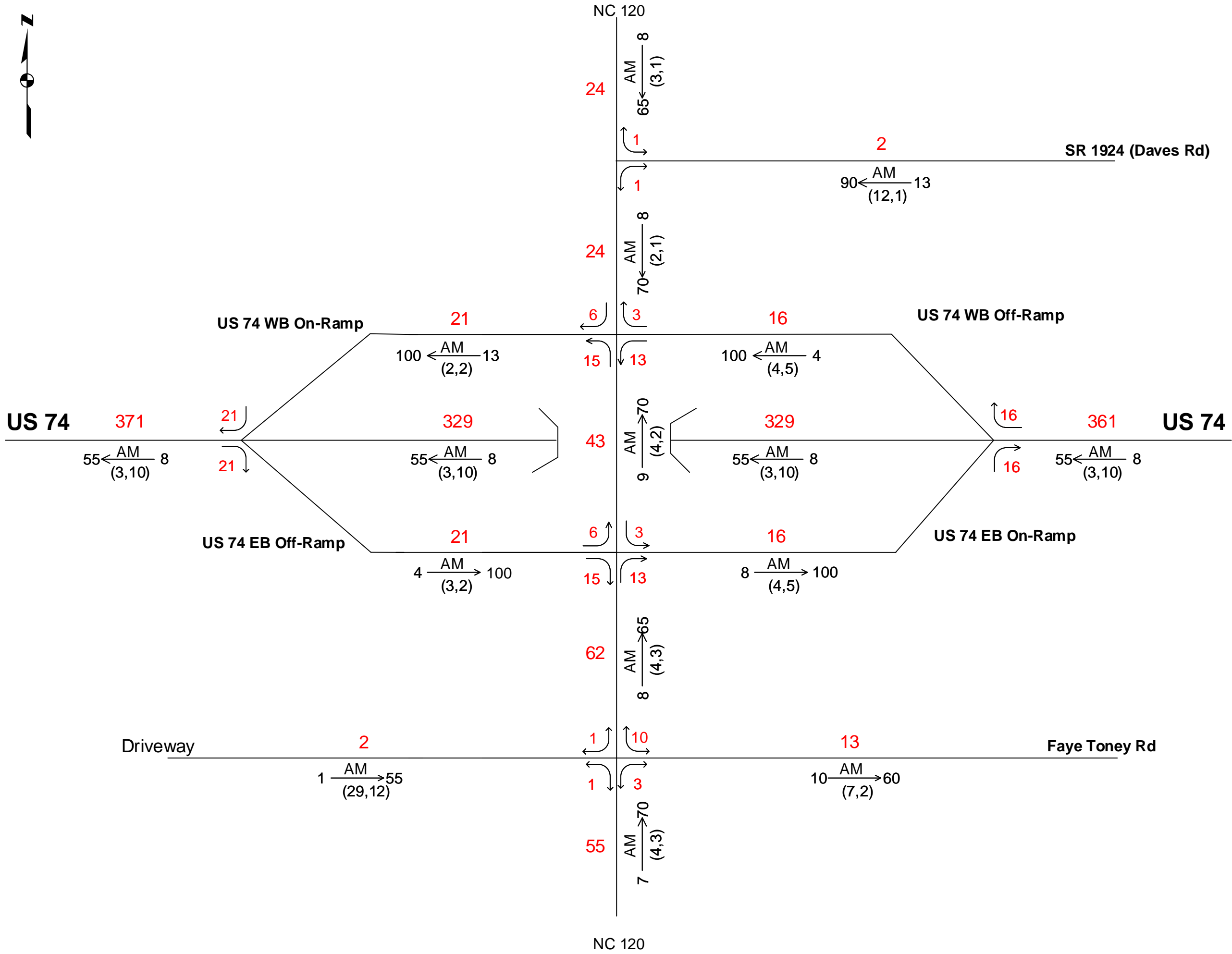
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SHEET 1 OF 1

LEGEND

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

TIP: BR-0099	WBS: 67099.1.1
COUNTY: Rutherford	DIVISION: 13
DATE: 6-4-2019	
PREPARED BY: CDM Smith	
LOCATION: Mooresboro, NC, US 74 at NC 120; NC 120 at Daves Rd; NC 120 at Faye Toney Rd	
PROJECT: Replace the NC 120 bridge over US 74 Byp.	

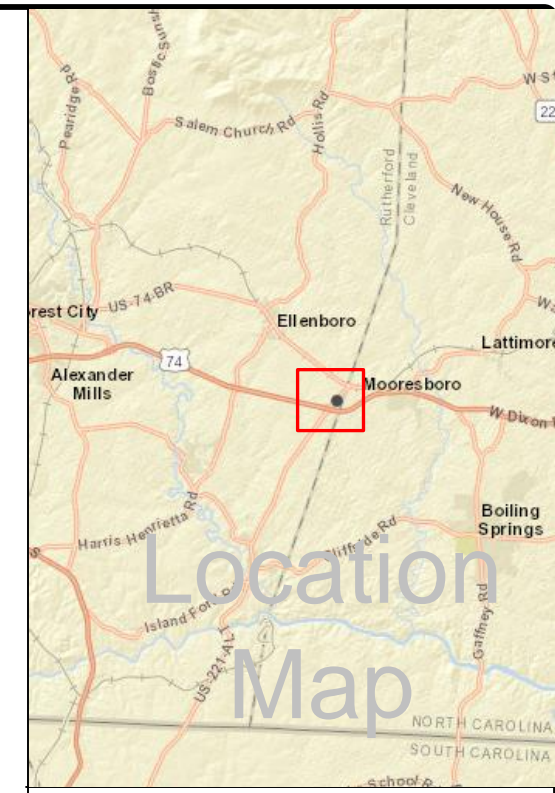
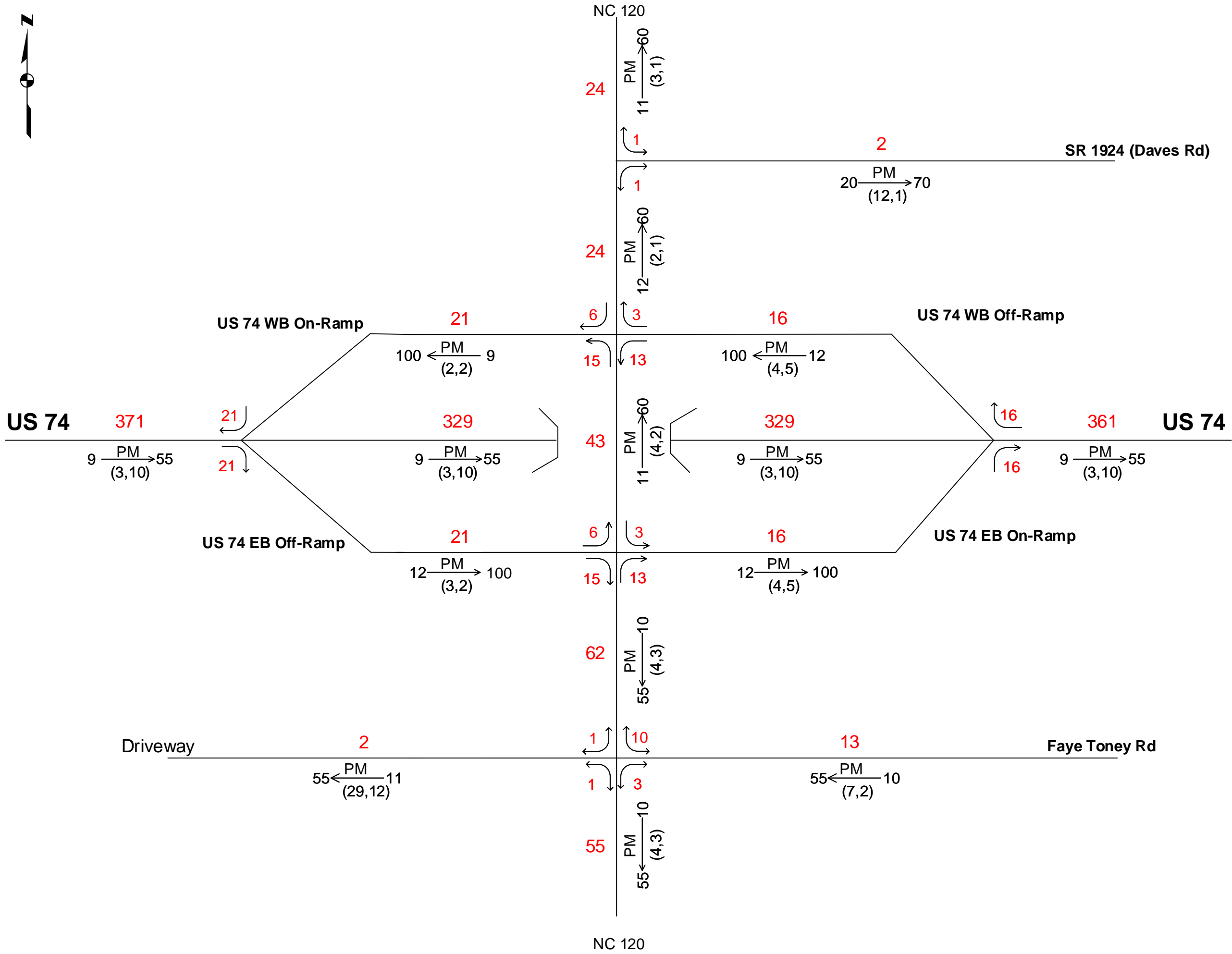


2040
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AM
SHEET 1 OF 1

LEGEND

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2040

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