



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

ROY COOPER
GOVERNOR

J. ERIC BOYETTE
SECRETARY

August 17, 2021

MEMORANDUM TO: Tierre Peterson
Structures Management Unit

FROM: Chris McKoy
Traffic Forecasting Group

SUBJECT: Traffic Forecast for Project B-5847
Catawba County
Replace Bridge No. 173, SR 1709 over I-40

Please find attached the 2021/2045 Traffic Forecast for project B-5847 in Catawba County.

The forecast includes the following scenarios:

- Base Year (2021) Project No-Build Estimate
- Future Year (2045) Project No-Build Forecast
- Future Year (2045) Project Build Forecast

Fiscal Constraint: Within an MPO area travel demand forecasts assume the construction of projects listed within an MPO's Metropolitan Transportation Plan (MTP). This forecast is consistent with the Greater Hickory Metropolitan Planning Organization 2045 MTP adopted May 23, 2018. This forecast also assumes that all projects listed within the NCDOT 2020-2029 STIP will be constructed and open to traffic by 2045.

Development Activity:

There is no substantial development under construction and limited approved development within the vicinity of the project.

Forecast Methodology:

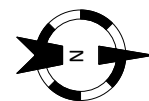
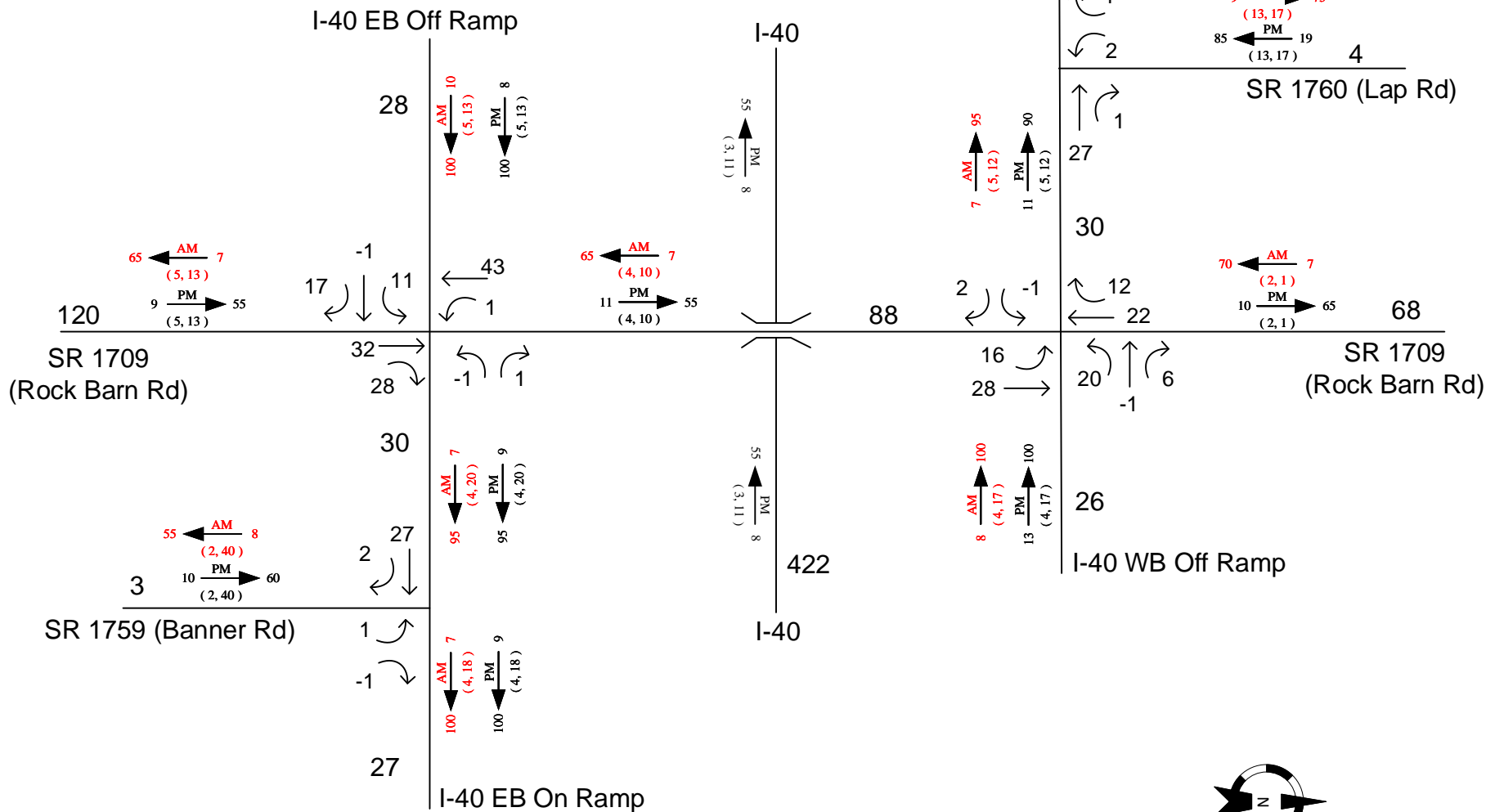
The 2021 Estimate is based upon current traffic counts validated by historical AADT trends.

The 2045 forecast was developed based upon consideration of output from the 2015/2045 Greater Hickory Travel Demand Model (v1.2), review of population projections for Catawba County prepared by the State Demographers Office and review of the previous Traffic Forecast for B-5847 completed in 2016.

The use of straight-line interpolation to estimate AADT for years between 2021 and 2045 is acceptable.

If it is determined that any of these assumptions have become inconsistent with the project and surrounding area activity, please request an updated forecast.

If we can be of further assistance, please do not hesitate to contact me at 707-0939, email: cdmckoy@ncdot.gov.



2021 No Build

AVERAGE ANNUAL DAILY TRAFFIC

TIP: B-5847

WBS: 45800.1.2

COUNTY: Catawba

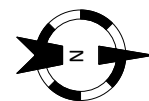
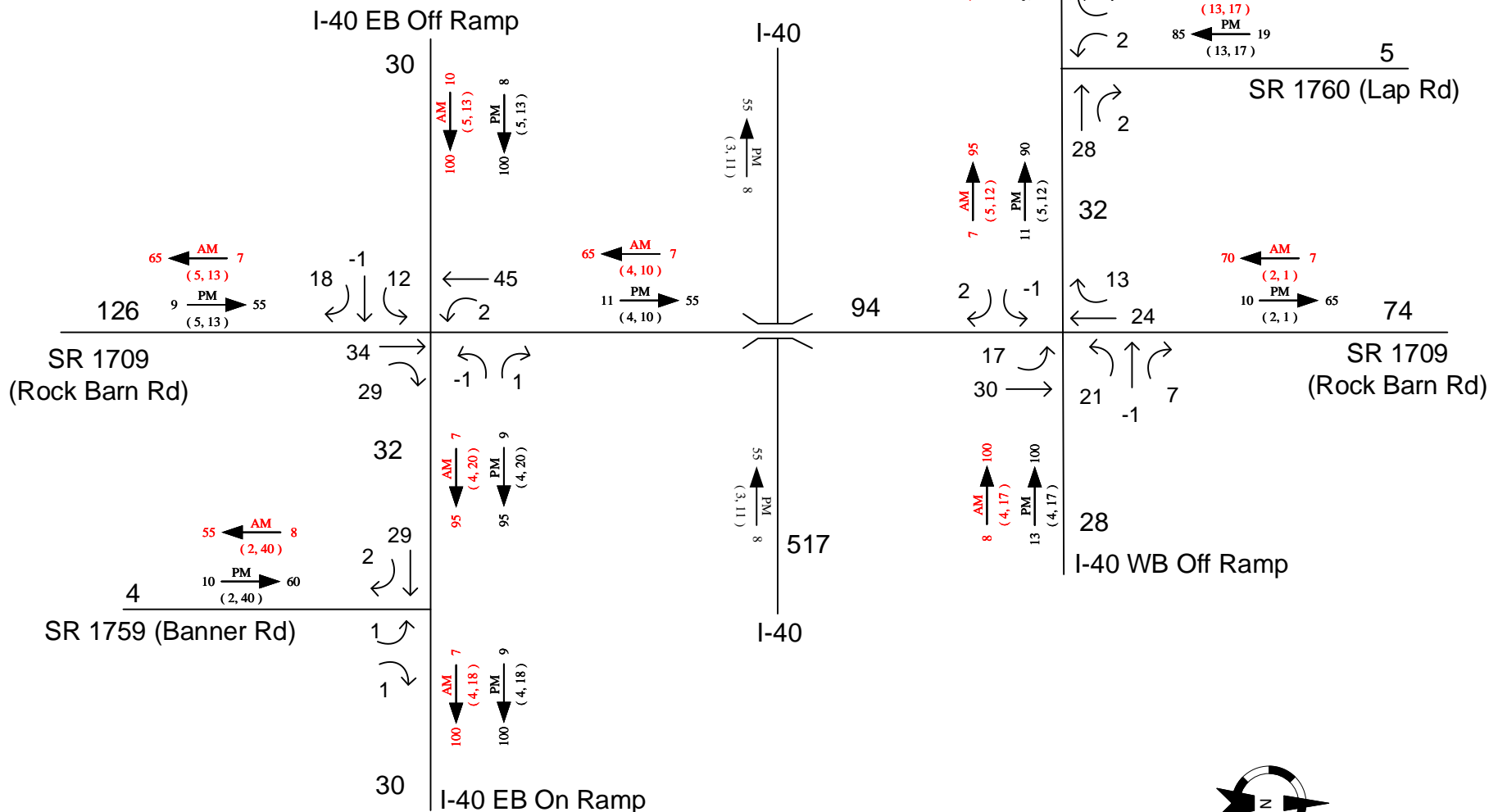
DIVISION: 12

DATE: 8-17-2021

PREPARED BY: Chris McKoy

LOCATION:
SR 1709 over I-40

PROJECT: Replace Bridge No.173



Sheet 2 of 3



2045 No Build

AVERAGE ANNUAL DAILY TRAFFIC

TIP: B-5847

WBS: 45800.1.2

COUNTY: Catawba

DIVISION: 12

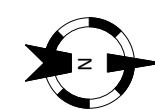
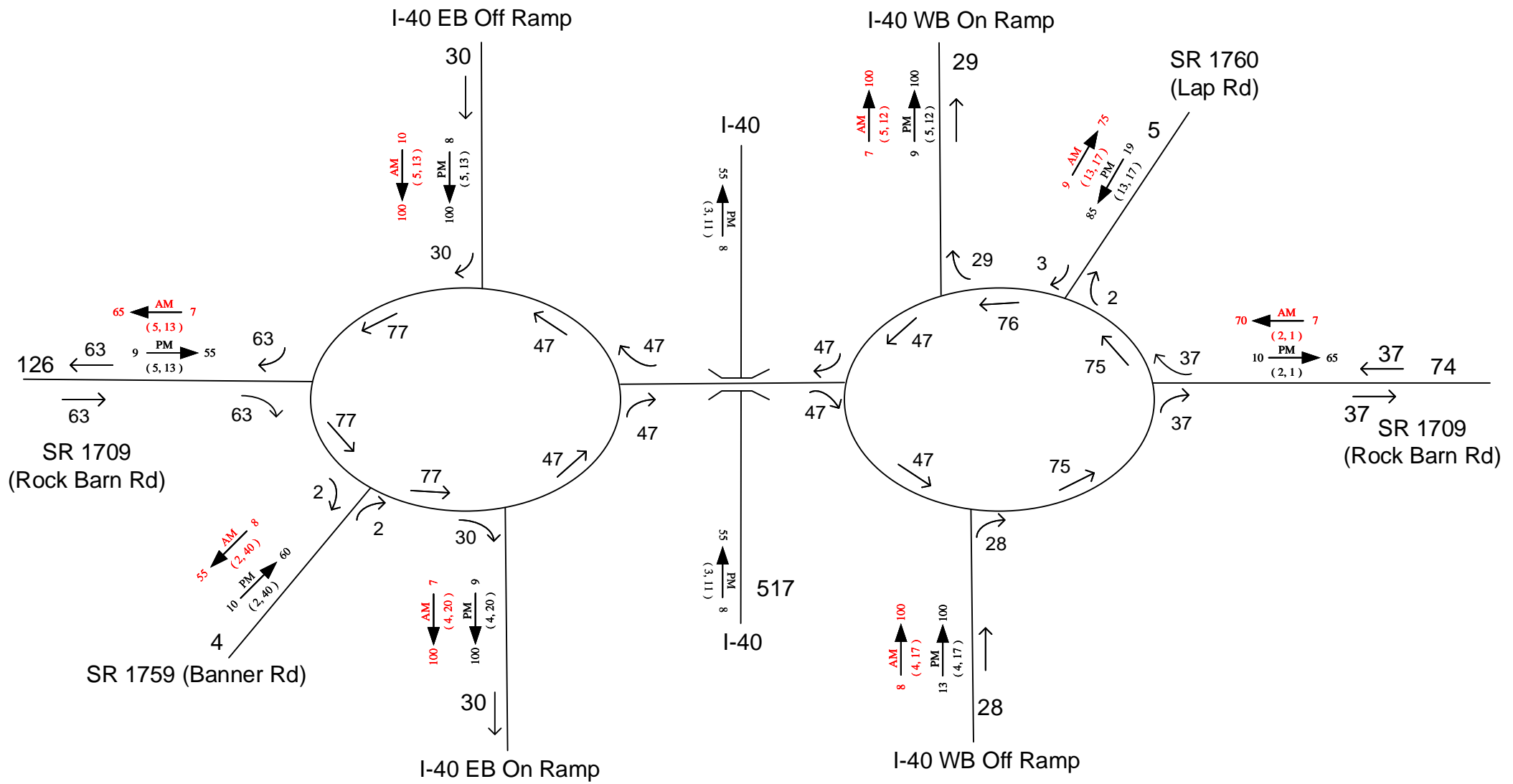
DATE: 8-17-2021

PREPARED BY: Chris McKoy

LOCATION:

SR 1709 over I-40

PROJECT: Replace Bridge No.173



2045 Build

AVERAGE ANNUAL DAILY TRAFFIC

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

TIP: B-5847	WBS: 45800.1.2
COUNTY: Catawba	DIVISION: 12
DATE: 8--2021	
PREPARED BY: Chris McKoy	
LOCATION: SR 1709 over I-40	
PROJECT: Replace Bridge No.173	