

Draft Report

# NCDOT State TIP Project No. U-6046

NC 81 (Swannanoa River Road) Widening from  
US 70 (Tunnel Road) to US 74 Alt (S Tunnel Road)

Asheville, Buncombe County  
WBS # 47355.1.3

JANUARY 2018



PREPARED FOR



PREPARED BY





February 16, 2018

MEMORANDUM TO: Kristina Solberg, PE  
Project Engineer  
Highway Division 13  
NC Department of Transportation

FROM: Taruna Tayal, PMP  
VHB Engineering NC, P.C.

SUBJECT: Traffic Forecast for U-6046 Upgrade of NC 81 (Swannanoah River Road) between US 70 (Tunnel Road) and US 74 Alt (S Tunnel Road), Buncombe County.

Please find attached the **2017/2040 Traffic Forecast** for the above-mentioned project. NCDOT Division 14 is proposing STIP No. U-6046, which includes the upgrade of NC 81 (Swannanoah River Road) from US 70 (Tunnel Road) and US 74 Alt (S Tunnel Road), The 2.35-mile project is located in Buncombe County (NCDOT Division 13) in the City of Asheville and within the French Broad River Metropolitan Planning Organization (FBRMPO).

This forecast has been reviewed and approved by the Transportation Planning Division on February 2, 2018.

Lyuba Zuyeva, FBRMPO Director, Shannon Tuch, City of Asheville, Principal Planner, Jessica Bernstein, City of Asheville, Planner II and Daniel Cooper Sellers, PE, French Broad River MPO and Land of Sky RPO Coordinator, Transportation Planning Branch, NCDOT were contacted for information on the specific planned and approved developments in the area. The following scenarios are provided in this forecast:

1. Scenario 1 – 2017 Base Year No-Build Scenario
2. Scenario 2 – 2040 Design Year No-Build Scenario

**Fiscal Constraint:** Within an MPO, the future year forecasts assume construction of projects as listed within the MPO's Metropolitan Transportation Plan (MTP, previously called LRTP). This forecast is consistent with the French Broad River Metropolitan Planning Organization (FBRMPO) 2040 Metropolitan Transportation Plan (MTP) (adopted 9/23/2015). There are no projects in the MTP in the area of this facility.

**Future Conditions and Development Activity:** There are no confirmed development projects within the study area which would significantly impact the forecast.



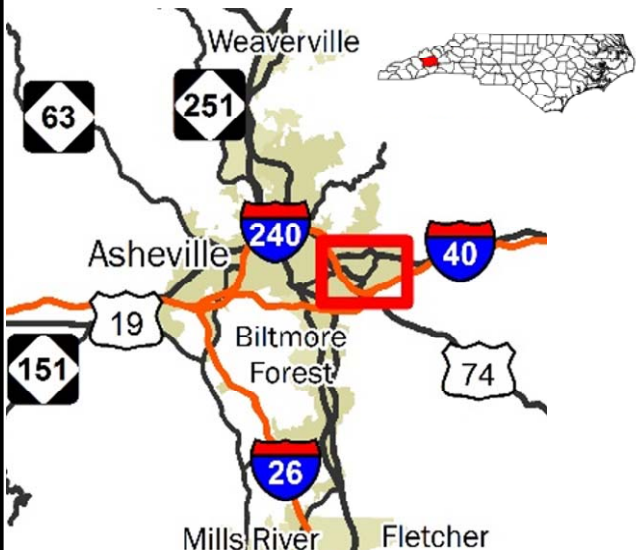
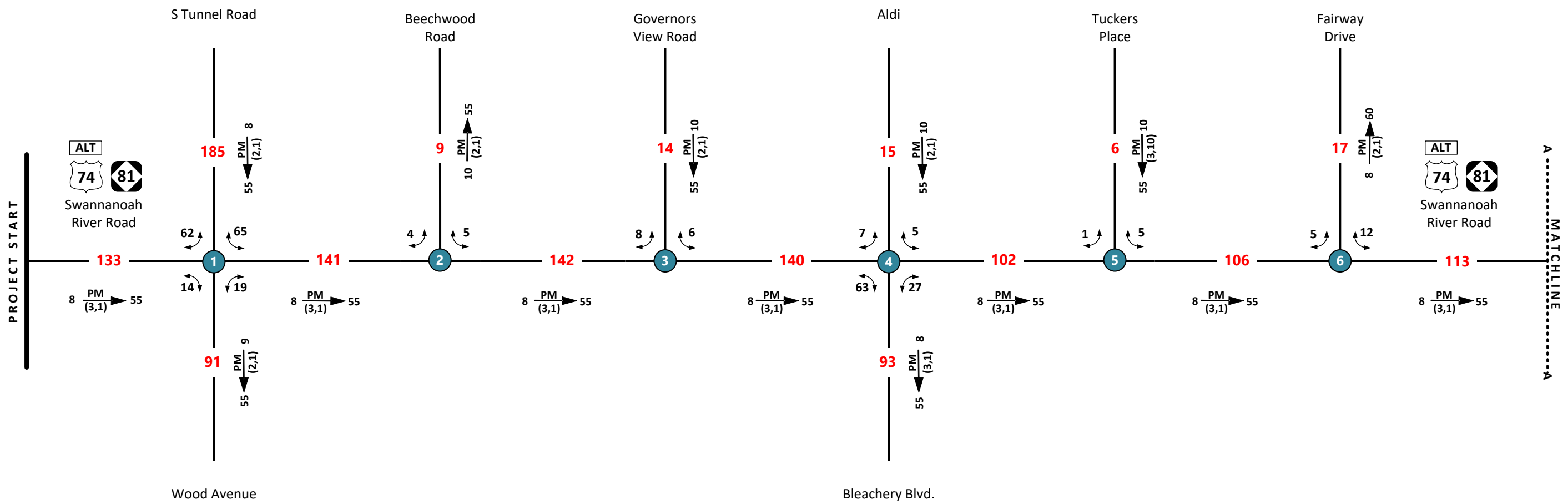
**Forecast Methodology:** The Base Year No-Build traffic forecast was developed primarily based upon traffic counts taken for this forecast, as well as historic traffic counts and trends. The design year 2040 No-Build traffic forecast was developed based upon modeling results and existing traffic data since the specific project improvement is not currently known and is not expected to affect the demand. The 2015 FBRMPO TDM V2 (adopted in January 2016) was used as a tool in the development of the traffic forecasts.

**Interpolation:** To determine volumes during any intermediate years straight-line interpolation may be used. AADT volumes may be extrapolated for up to two years immediately following 2017 or 2040. If it is determined that any of these assumptions have become inconsistent with the project and surrounding area activity, request should be made for updated projections at this location.

If you have any questions or I can be of further assistance, please do not hesitate to call me at 919.741.5525, or e-mail me at [ttayal@vhb.com](mailto:ttayal@vhb.com).

cc: (via e-mail as PDF attachment)  
Lyuba Zuyeva, French Broad River MPO  
Michael Reese, PE, CPM, Congestion Management  
Brenda Moore, PE, CPM Highway Design Branch  
Clark Morrison, PhD, PE, Pavement Management  
Steve Williams, Division 14 Planning Engineer  
Brendan Merithew, PE, Division 13 Planning Engineer  
Daniel Sellers, PE, Transportation Planning Division  
Keith G. Dixon, Transportation Planning Division

File Copy: U-6046, Buncombe



## 2017 Average Annual Daily Traffic

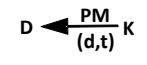
## No-Build Alternative (Scenario 1) SHEET 1 OF 2

### LEGEND

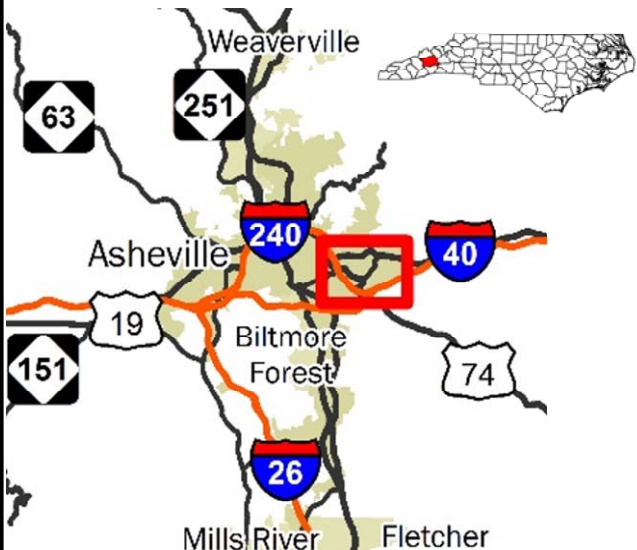
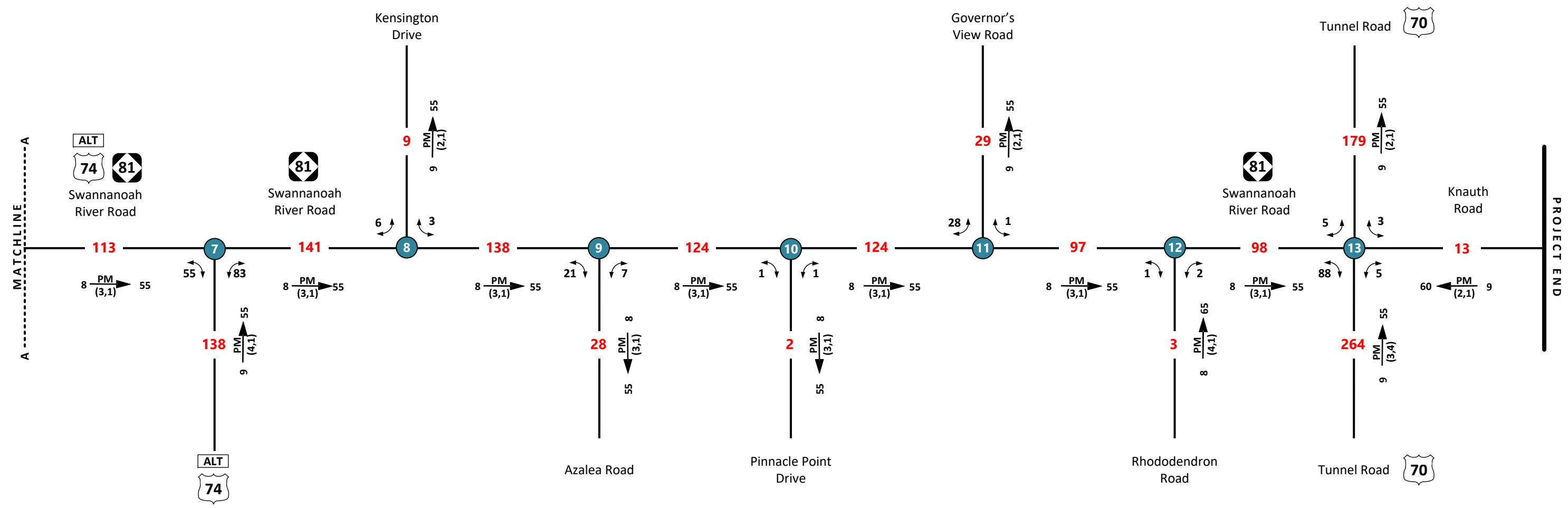
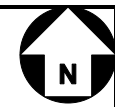
### No. of Vehicles per Day (VPD) in 100s

— Existing Roadway

PM PM Peak Hour  
 D Peak Hour Directional Split (%)  
 Indicates Direction of D  
 (d,t) Duals, TTSTs (%)  
 K Design Hour Factor (%)  
 X Movement Prohibited  
 1- Less than 50 VPD



TIP: U-6046
WBS: 47355.1.3
DIVISION: 13
COUNTY: Buncombe
DATE: February 16, 2018
PREPARED BY: VHB Engineering NC, P.C.
LOCATION: NC 81 in Buncombe County from US 70 (Tunnel Road) to US 74 Alt (S Tunnel Road)
PROJECT: NC 81 Widening

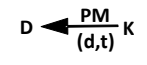


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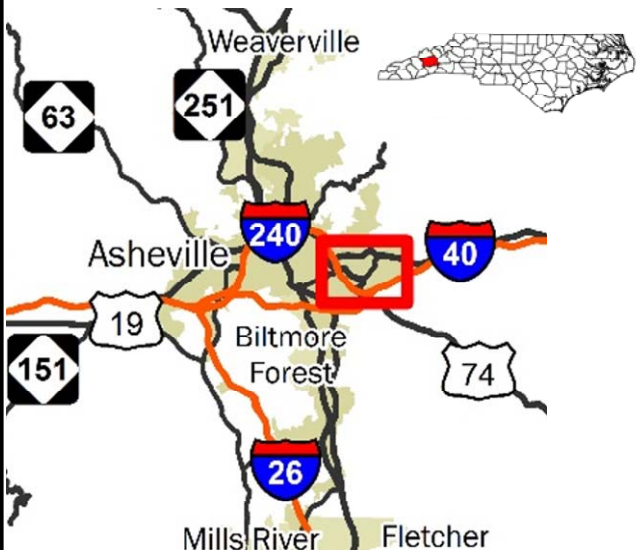
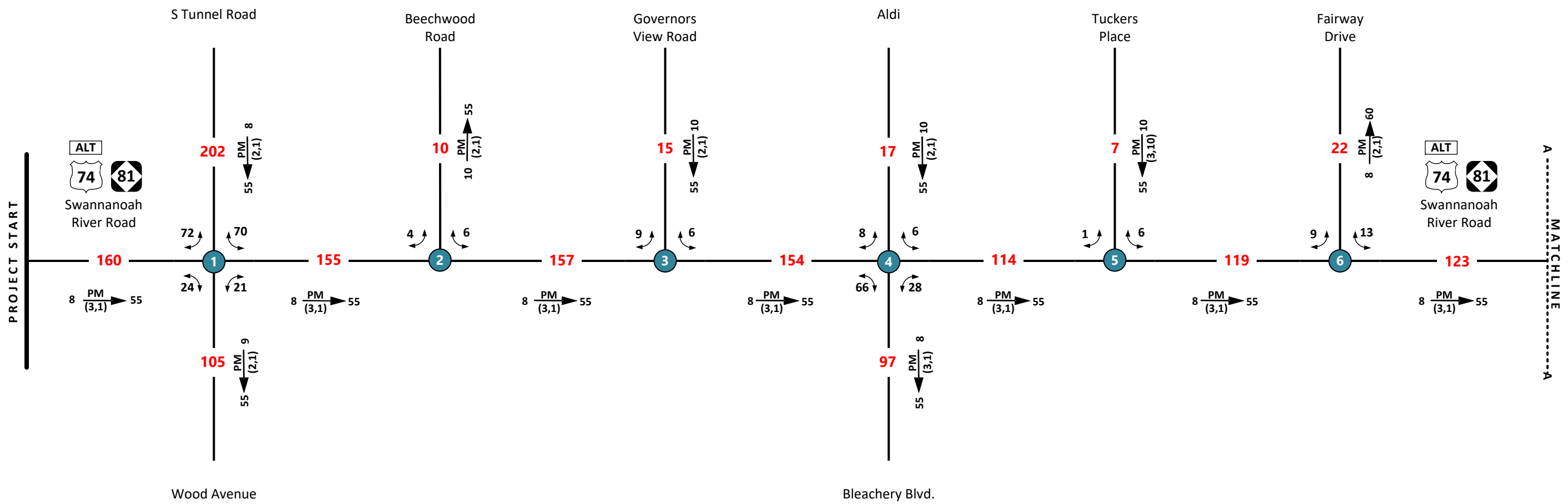
## No-Build Alternative (Scenario 1) SHEET 2 OF 2

### LEGEND

- ### No. of Vehicles per Day (VPD) in 100s
- Existing Roadway
- PM PM Peak Hour
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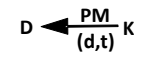
# 2040 Average Annual Daily Traffic

## No-Build Alternative (Scenario 2) SHEET 1 OF 2

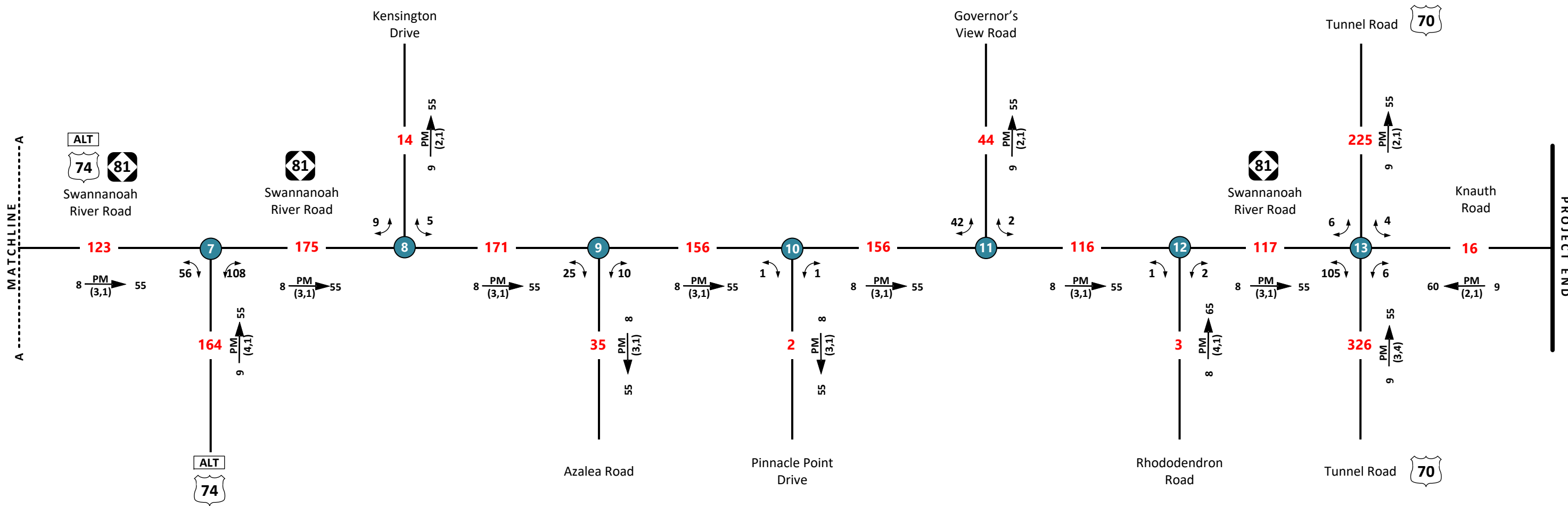
### LEGEND

- ### No. of Vehicles per Day (VPD) in 100s
- Existing Roadway

- PM PM Peak Hour
- D Peak Hour Directional Split (%)
- Indicates Direction of D
- (d,t) Duals, TTSTs (%)
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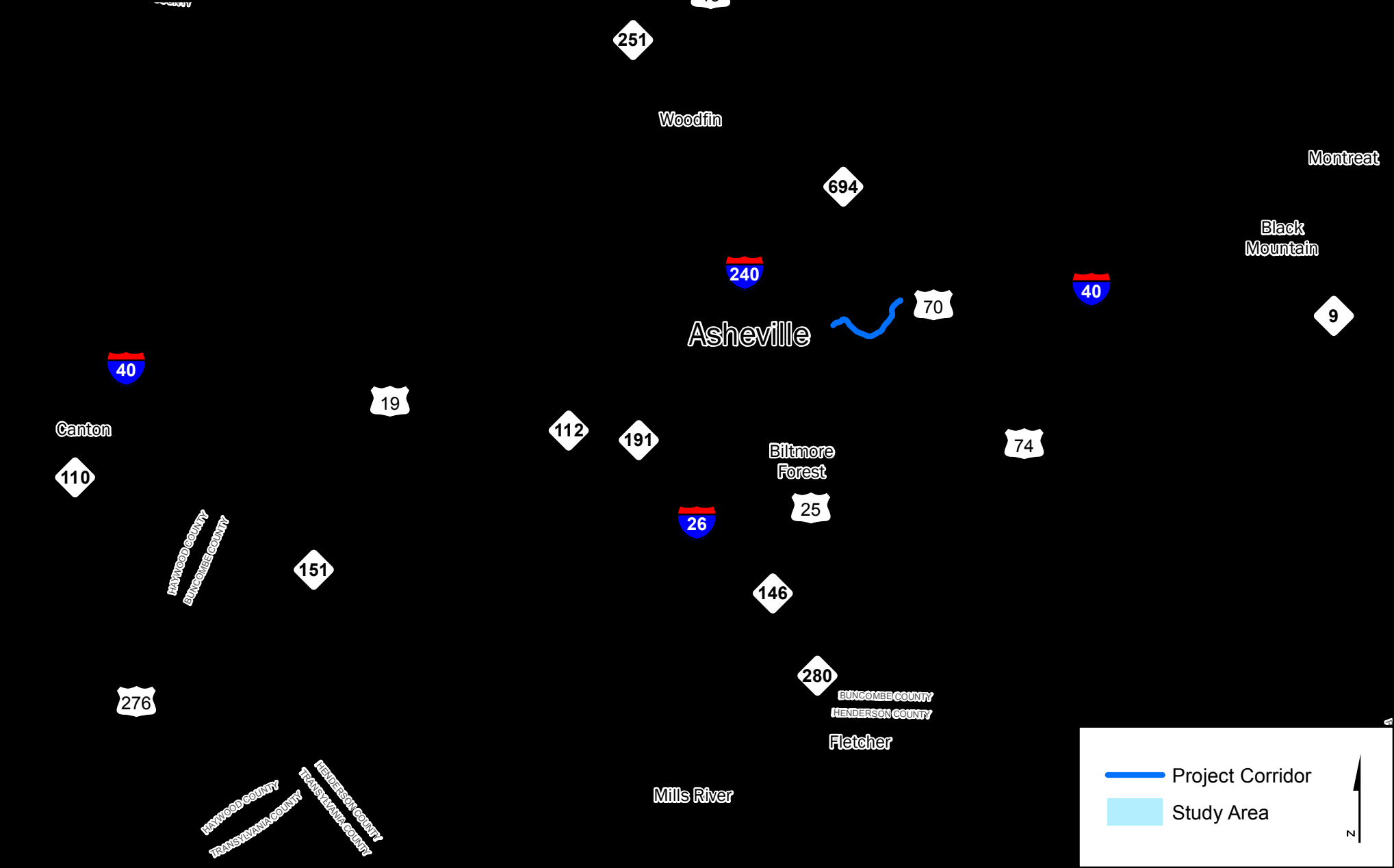
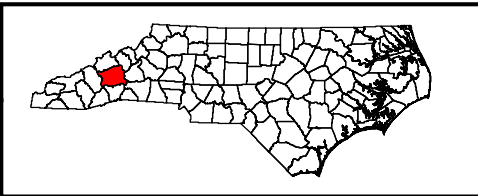
# 2040 Average Annual Daily Traffic

## No-Build Alternative (Scenario 2) SHEET 2 OF 2

### LEGEND

- ### No. of Vehicles per Day (VPD) in 100s
- Existing Roadway
- PM PM Peak Hour
- D Peak Hour Directional Split (%)
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U-6046: NC 81 Widening from US 70 (Tunnel Rd) to US 74 (S Tunnel Rd)  
PROJECT VICINITY



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