

**Date**  
7/29/16

**To**  
Brian Wert, P.E.  
NCDOT Transportation Planning Branch



**PROJECT  
CORRESPONDENCE**

**From**  
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**Subject**  
Traffic Forecast Comparison for  
STIP Projects I-4400/I-4700 and I-2513

State Transportation Improvement Program (STIP) project I-4400/I-4700 is under development by the North Carolina Department of Transportation (NCDOT) as the proposed widening of I-26 from US 25 south of Hendersonville to I-40/I-240 south of Asheville. This project is needed to:

- Improve existing and projected roadway capacity deficiencies, and
- Improve insufficient pavement structure and deteriorating existing road surface conditions.

The purpose of the project is to reduce congestion, with a goal of achieving an overall Level of Service (LOS) D in the design year (2040), and to improve the pavement structure.

The purpose of this memorandum is to review the subject project's traffic forecast in order to show that it has independent utility. A STIP project immediately adjacent to I-4400/I-4700 is STIP project I-2513, also known as the I-26 Connector project. STIP project I-2513 proposes to upgrade part of the I-240 corridor to improve interstate freeway conditions that will better accommodate future traffic. I-2513 connects I-26 in southwest Asheville to US 19/23/74A in northwest Asheville. Refer to **Figure 1** for a vicinity map of the I-4400/I-4700 and I-2513 projects.

**Table 1** below shows the traffic forecast reports reviewed for this memorandum. Each forecast is fiscally constrained to match the assumptions of the French Broad River Metropolitan Planning Organization (FBRMPO) Metropolitan Transportation Plan (MTP).

**Table 1 – Asheville Area Project Traffic Forecast Reports**

Project	Agency / Firm	Date
I-2513	AECOM	June 2016
I-4400/I-4700	NCDOT	December 2013

The STIP project traffic forecast scenarios that are analyzed in this memo are listed below. **Table 2** summarizes the projects that are assumed complete in each traffic forecast scenario.

- **I-2513 2015 No-Build Scenario:** This scenario is representative of existing traffic counts and travel patterns in the year 2015 with no MTP projects assumed complete.
- **I-2513 2040 No-Build Scenario:** All MTP projects are considered complete with the exception of the I-2513 STIP project. STIP project I-4400/I-4700 is one of the MTP projects assumed to be complete in this scenario.
- **I-2513 2040 Build 4 / Eight Lane (B4 8-L) Scenario:** All MTP projects are considered complete, including the I-2513 and I-4400/I4700 STIP projects. This scenario assumes that I-26/I-240 has been widened to 8 lanes from just north of I-40 to just north of Haywood Road. For a full description of the scenario, refer to pages 27 - 28 of I-2513 Traffic Forecast Report. The B4 8-L scenario is representative of the Least Environmentally Damaging Preferred Alternative (LEDPA).
- **I-4400/I-4700 Build Hybrid 6/8-Lane Widening (B 6-8) Scenario:** All MTP projects are considered complete, including the I-4400/I-4700 and I-2513 STIP projects. This scenario assumes that I-26 has been widened to 8 lanes from I-40 to US 25 (Exit 44) and 6 lanes from US 25 (Exit 44) to US 25 (Exit 54).

**Table 2 – STIP Project Traffic Forecast Scenarios**

STIP Project	Traffic Forecast Scenario	I-4400/I-4700 Constructed?	I-2513 Constructed?	All other MTP Projects Constructed?
I-2513	2015 No-Build	No	No	No
	<b>2040 No-Build</b>	<b>Yes</b>	<b>No</b>	<b>Yes</b>
	2040 Build (B4 8-L)	Yes	Yes	Yes
I-4400/I-4700	2040 Build (B 6-8)	Yes	Yes	Yes

The four traffic forecast scenarios listed above are selected so that the travel demand impacts of STIP project I-4400/I-4700 can be assessed in multiple scenarios both with and without I-2513. The I-2513 traffic forecast provides a critical direct comparison with the I-4400/I-4700 traffic demand and independent utility because it is a major project adjacent to the I-4400/I-4700 project. The I-2513 2040 No-Build scenario especially enables that direct comparison with I-4400/I-4700 traffic demand because that scenario projects what 2040 traffic volumes would be like in a scenario where I-4400/I-4700 is completed, but I-2513 is not.

The I-2513 traffic forecast provides a directional breakdown of where drivers are headed at the I-26 and I-40 interchange. **Table 3** summarizes that more drivers are headed from I-26 (South) to I-40 than from I-26 (South) to I-240 Northbound. This comparison shows that drivers will have need to use the I-4400/I-4700 portion of I-26 to access I-40 regardless of whether I-2513 is built or not.

**Table 3 – I-26 to I-40 Connection (Directional vpd)**

Segment	I-2513		
	2015 No-Build	2040 No-Build	2040 Build (B4 8-L)
I-26 (South) to I-240 Northbound (I-26)	20,100	24,600	28,800
I-26 (South) to I-40 Westbound	17,400	24,800	28,500
I-26 (South) to I-40 Eastbound	6,600	8,800	7,000
I-26 (South) to I-40 (Total)	24,000	33,600	35,500

**Table 4** focuses on the 2040 I-26 traffic volumes both north and south of I-40. Additional segment information is provided in **Appendix A**. I-26 traffic volumes south of I-40 are 27 percent to 50 percent larger than I-26 traffic volumes north of I-40. Higher traffic volumes south of I-40 show that drivers are using the I-26 (south of I-40) to I-40 connection regardless of potential traffic demand induction by I-2513.

**Table 4 – I-26 2040 Traffic Volume Comparison (vpd)**

Facility	Segment	I-2513			I-4400 / I-4700
		2015 No-Build	2040 No-Build	2040 Build (B4 8-L)	2040 Build (B 6-8)
I-26	North of I-40 to NC 191 (N)	62,400	77,600	101,400	89,700
	South of I-40 to NC 191 (S)	88,200	116,400	128,600	114,900
<b>% Difference*</b>		<b>41%</b>	<b>50%</b>	<b>27%</b>	<b>28%</b>

\*Percentage of I-26 Traffic Volumes South Of I-40 Relative to Traffic Volumes North of I-40

As shown in the I-2513 traffic forecast, No-Build and Build daily volumes verify the need for widening the existing I-26 four-lane facility south of I-40. Drivers have need to use I-26 south of I-40 to connect to I-40, regardless of whether or not I-2513 is constructed or not. Therefore, I-4400/I-4700 appears to demonstrate independent utility with or without I-2513.

If you have any questions, please do not hesitate to contact me at 919-424-0481 or [breyolds@hntb.com](mailto:breyolds@hntb.com).

cc: John Williams, P.E., NCDOT PDEA  
 Clarence Coleman, P.E., FHWA

## Appendix A – Supplemental Information

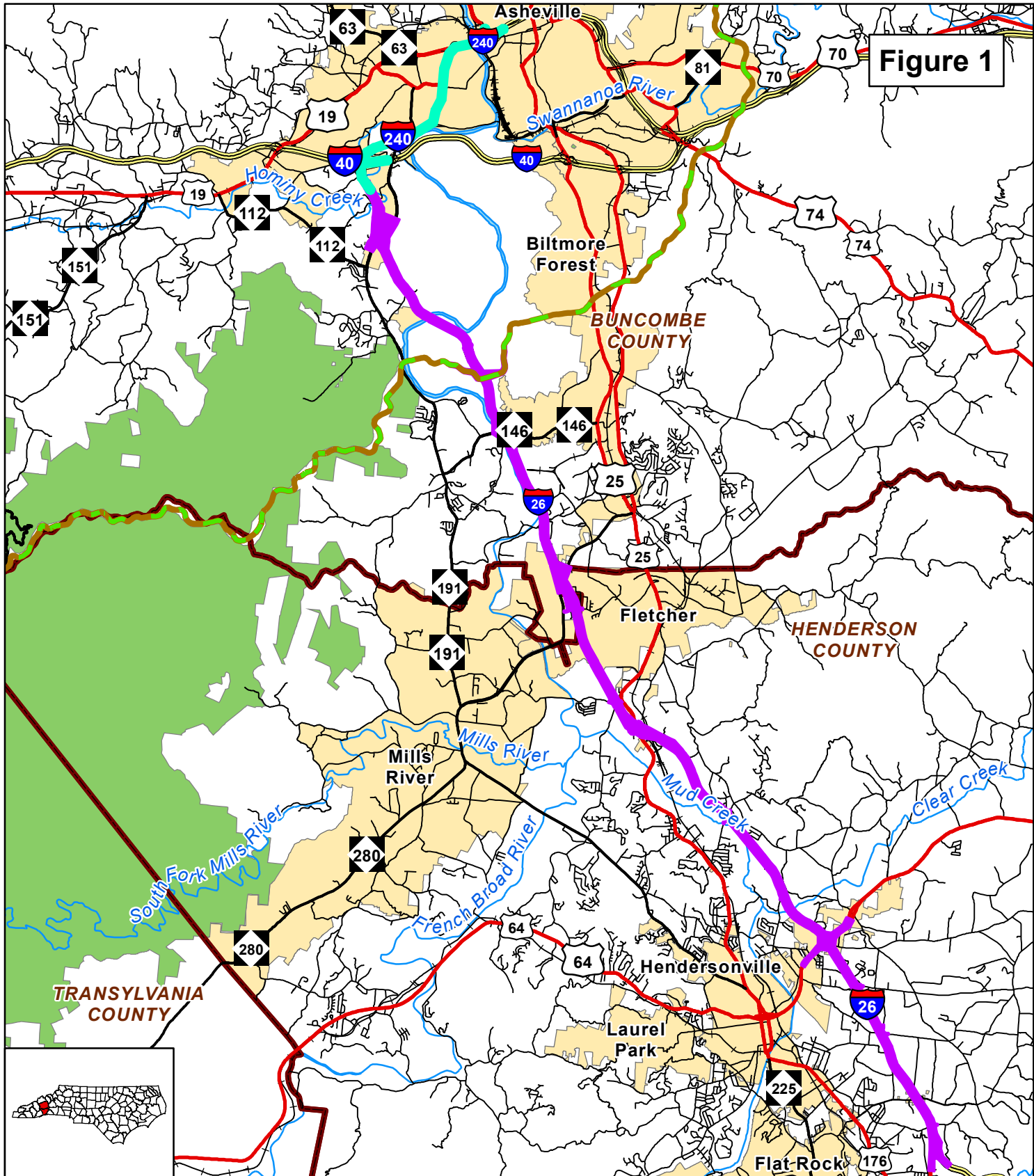
**Table A1** provides a comparison of the 2040 traffic volume values projected in traffic forecasts for I-2513 and I-4400/I-4700. As shown in **Table A1**, the I-2513 2040 No-Build volumes on I-26 south of I-40 (project location of I-4400/I-4700) range from 116,400 – 120,000 vehicles per day (vpd), which are higher than the I-4400/I-4700 Build condition volumes (114,900 – 117,900 vpd) for the same location. This comparison shows that there will be similar traffic demand on I-26 at the I-4400/I-4700 project location regardless of whether I-2513 is built or not.

**Table A1 – STIP Project I-4400/I-4700 to I-2513 Traffic Forecast Comparison (vpd)**

Facility	Segment	I-2513		I-4400 / I-4700
		2040 No-Build	2040 Build (B4 8-L)	2040 Build (B 6-8)
I-40	Liberty Rd to US 19-23	86,200	87,600	68,300
	US 19-23 to I-26/I-240	113,800	118,800	107,000
	I-26/I-240 to NC 191	53,400	46,000	37,200
	NC 191 to US 25	67,800	66,400	53,900
	US 25 to US 25ALT	71,400	71,200	47,400
US 19-23	North of I-40	42,800	37,600	28,100
	South of I-40	34,000	35,200	37,200
I-26	North of I-40 to NC 191 (N)	77,600	101,400	89,700
	South of I-40 to NC 191 (S)	116,400	128,600	114,900
	South of NC191 (S)	120,000	123,800	117,900
NC 191	North of I-40	24,000	20,400	19,500
	South of I-40	29,200	21,600	30,000
	East of I-26	32,000	18,200	26,500
	Rocky Ridge Road to I-26	38,800	43,000	34,100
	West of Rocky Ridge Rd	38,200	42,400	33,300
US 25	North of I-40	47,400	44,400	36,500
	South of I-40	49,400	48,400	32,800

**Highlight** = Overlaps STIP project I-4400/I-4700 location

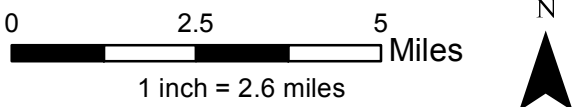
**Figure 1**



**Legend**

- I-4400/I-4700 Location
- I-2513 Location
- Interstate
- US Route
- State Route
- Blue Ridge Parkway
- Railroad
- Stream
- Water Body
- Pisgah National Forest
- County Boundary
- Municipal Boundary

**Traffic Forecast Vicinity Map  
STIP Project Numbers  
I-4400/I-4700 & I-2513  
Buncombe and Henderson Counties**



Sources: NCDOT, NCOneMap, NPS, and HNTB Date: July 2016