

TRAFFIC FORECAST COVER LETTER

MEMORANDUM TO: Tierre Peterson, PE (NCDOT Structures Management Unit)

FROM: Shashank Shekhar, PE (Arcadis)

DATE: November 16, 2022

SUBJECT: **Traffic Forecast for STIP Project B-5681**
Wake County
Replace Bridge No. 258 on SR 2713 over US 70 in Garner

This forecast has been reviewed and approved by NCDOT Transportation Planning Division on November 16, 2022.

Please find attached the 2022 (Base Year) and 2050 (Future Year) Traffic Forecast for project B-5681 located in Wake County. Project B-5681 includes replacement of bridge # 258 on SR 2713 (Vandora Springs Road) over US 70 in Garner. The proposed new bridge will have same number of vehicle travel lanes as existing two-lane bridge.

The project lies within Capital Area Metropolitan Planning Organization (CAMPO). The project is not in the current State Transportation Improvement Program STIP (2020-2029) or draft STIP (2024-2033).

Triangle Regional Model version 6.2 based on 2050 MTP (TRM v6.2 2050 MTP), adopted February 16, 2022, was utilized for this forecast.

Staff from NCDOT and local officials were consulted during the development of this forecast.

This is an updated forecast for this project which replaces the previous forecast dated June 8, 2016. The following two (2) scenarios are provided in the forecast:

- 2022 Base Year No Build | Build (BY NB | B)
- 2050 Future Year No Build | Build (FY NB | B)

The B-5681 project will replace bridge # 258 with same number of travel lanes and is not expected to affect travel demand. Hence, the forecast represents project No-Build and Build conditions.

Certain assumptions were made in the development of the forecast

Fiscal Constraint: For projects falling within an MPO, forecasts are fiscally constrained to match the assumptions of MPO's Metropolitan Transportation Plan (MTP). This forecast assumes that all projects within CAMPO's 2050 MTP (adopted February 16, 2022) are constructed and open to traffic in 2050.



The following highway project from 2050 MTP is anticipated to affect travel pattern for this project:

US 70 widening (Horizon Year 2040): Widen US 70 from US 401 to I-40 from existing 4-lane boulevard to proposed 6-lane boulevard. CAMPO project ID A300.

Development Activity: There is no substantial land development currently under construction, nor is any substantial future development or site-specific development anticipated within the immediate area of the project assumed within the traffic forecast.

Methodology: The 2022 Base Year estimate is based on recent traffic count data collected for the project and historic AADT data.

The 2050 Future Year forecast is based on growth rates determined from projected population growth, historical traffic growth rates, and model growth rates.

The AM and PM peak factors are provided separately.

Interpolation: To determine any intermediate years, straight-line interpolation may be used. AADT volumes may be extrapolated for up to two years immediately following 2050. If it is determined that any of these assumptions have become inconsistent with the project and surrounding area activity, please request updated information.

If you have any questions, please do not hesitate to contact Shashank Shekhar (919-328-5563, shashank.shekhar@arcadis.com). Thank you.

cc: *TrafficForecast@ncdot.gov (via email as pdf attachments)*



NOT TO
SCALE

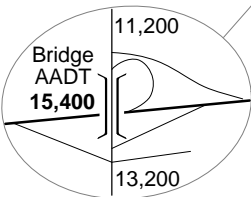
SR 1004
W Garner
Road

Bobbitt
Drive

Vandora Hills
Place

Methodist /
Oak Drive

SR 1004
W Garner
Road



Beichler
Drive

Foxwood
Drive

SR 2713
Vandora
Springs Road

Forest Hills
Shopping
Center

Aversboro
Road

SR 2794
7th Avenue



2022 BASE YEAR No Build | Build

AVERAGE ANNUAL DAILY TRAFFIC
SHEET 1 OF 2

- ## LEGEND
- ### Vehicles Per Day (VPD) in 100s
 - 1- Less than 50 VPD
 - X Movement Prohibited
 - Roadway
 - $K \xrightarrow{PM} D$
(d, t)
 - K Design Hour Factor (%)
 - PM PM Peak Period
 - D Peak Hour Directional Split (%)
 - Indicates Direction of D
 - (d,t) Duals, TT-STs (%)

TIP: B-5681	WBS: 45636.1.1
COUNTY: Wake	DIVISION: 5
DATE: November 16, 2022	
PREPARED BY: ARCADIS	
LOCATION: SR 2713 (Vandora Springs Rd) between SR 2794 (7 th Ave) and SR 1004 (W Garner Rd)	
PROJECT: Replace Bridge #258 on SR 2713 over US 70	



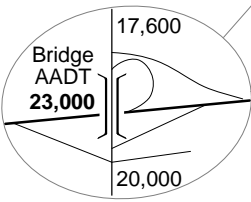
NOT TO
SCALE

SR 1004
W Garner
Road

SR 1004
W Garner
Road

Bobbitt
Drive

Methodist /
Oak Drive



Beichler
Drive

Aversboro
Road

Forest Hills
Shopping
Center

Foxwood
Drive

SR 2794
7th Avenue

SR 2713
Vandora
Springs Road



2050

FUTURE YEAR

No Build | Build

AVERAGE ANNUAL DAILY TRAFFIC

SHEET 2 OF 2

- ### LEGEND
- ### Vehicles Per Day (VPD) in 100s
 - 1- Less than 50 VPD
 - X Movement Prohibited
 - Roadway
 - $\overrightarrow{K \xrightarrow{PM} D}$
(d, t)
 - K Design Hour Factor (%)
 - PM PM Peak Period
 - D Peak Hour Directional Split (%)
 - Indicates Direction of D
 - (d,t) Duals, TT-STs (%)

TIP: B-5681	WBS: 45636.1.1
COUNTY: Wake	DIVISION: 5
DATE: November 16, 2022	
PREPARED BY: ARCADIS	
LOCATION: SR 2713 (Vandora Springs Rd) between SR 2794 (7 th Ave) and SR 1004 (W Garner Rd)	
PROJECT: Replace Bridge #258 on SR 2713 over US 70	