Kimley»Horn

March 23rd, 2023

Memorandum To: George Boules
Project Management Unit
NCDOT

From: Tim Padgett, PE
Kimley-Horn and Associates, Inc.

Subject: Traffic Forecast for B-5683 (Bridge No. 302 Replacement on Lake Wheeler Road (SR 1371) over Yates Mill Pond Spillway) in Wake County, NC

This forecast was reviewed and approved by the NCDOT Transportation Planning Division on March 20, 2023.

Please find attached the 2023 traffic estimate and 2050 traffic forecast for B-5683 in Wake County. This project studies the replacement of bridge No. 302 on Lake Wheeler Road (SR 1371) over Yates Mill Pond Spillway. The following scenarios are provided:

- Base Year 2023 No-Build/Build
- Future Year 2050 No-Build/Build

The bridge replacement is not considered to substantially impact traffic volumes, therefore the No-Build and Build conditions are assumed to be the same.

Certain assumptions were made in the development of the forecast:

Fiscal Constraint. Within the Metropolitan Planning Organization (MPO) area, future forecasts are based on projects included in the Financial Plan for the 2050 Capital Area Metropolitan Transportation Plan (MTP). This information is included in the official version of the Triangle Regional Model (TRMv6.2/TRMG2v1.1).

Future Conditions and Development Activity. The forecast was developed using output from the Triangle Regional Model (TRMv6.2/TRMG2v1.1). Assumptions about future development activity and changes in the distribution of population and employment in the forecast study area are implicit in the model. Information from local officials was also used in the development of the forecast.

Forecast Methodology. The Base year 2023 estimate and Horizon Year 2050 forecast provided in the attached forecast were developed using a method under which observed traffic data as well as 2017 and 2045 model output were considered.

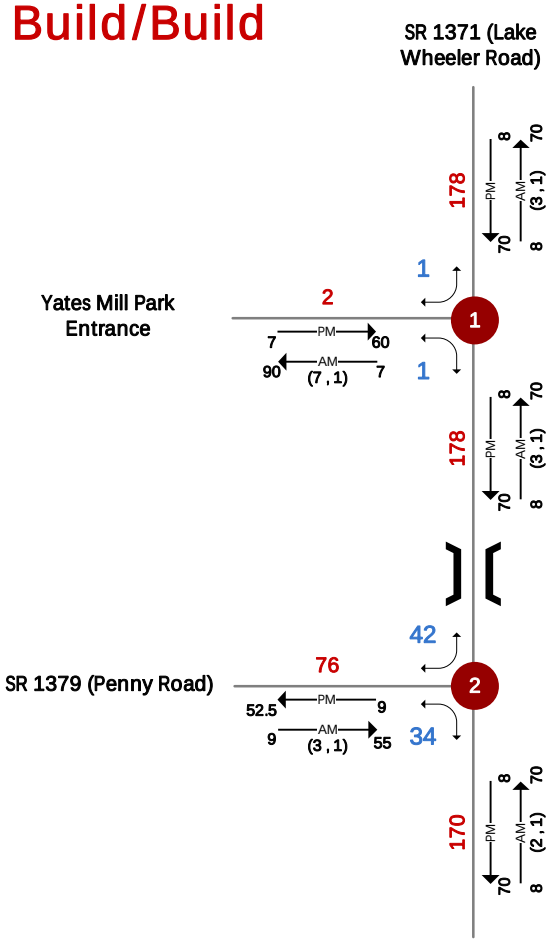
To determine any intermediate years, straight-line interpolation may be used. AADT volumes may be extrapolated for up to two years immediately following 2050. If it is determined that any of these

assumptions have become inconsistent with the project and surrounding area activity, please request updated projections at this location.

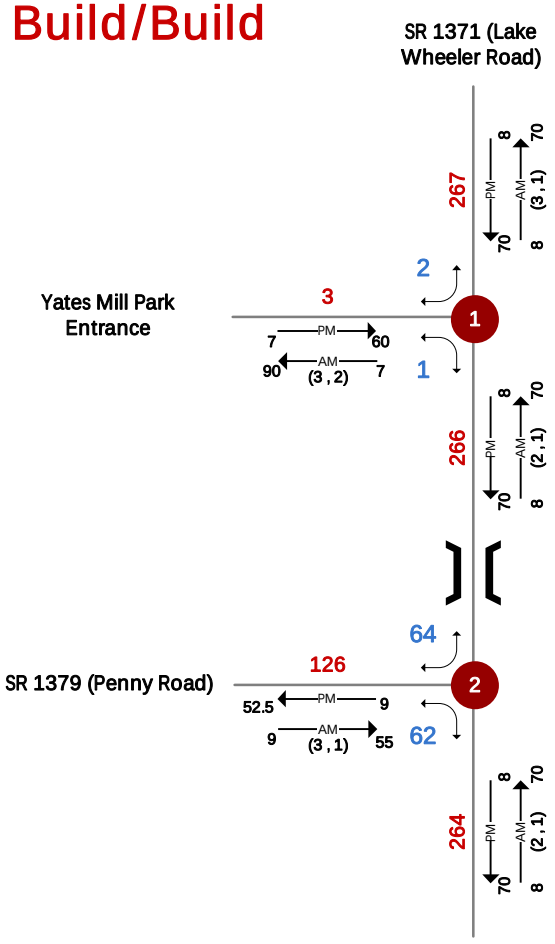
If we can be of any further assistance, please do not hesitate to contact me at 919-653-2991, or tim.padgett@kimley-horn.com

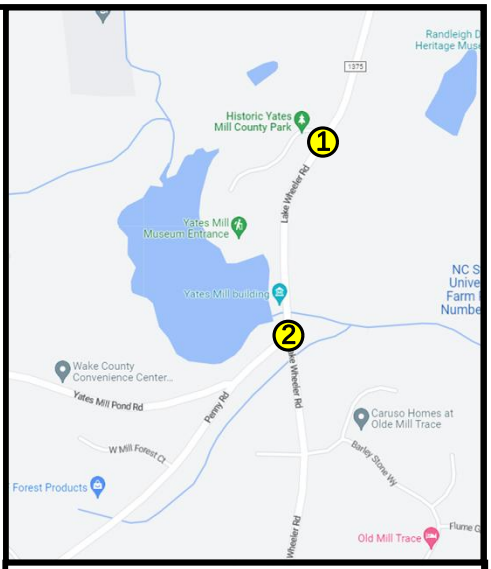
Cc: TrafficForecast@ncdot.gov

2023 No Build/Build



2050 No Build/Build





B-5683
Replace Bridge No. 302

2023/2050 No Build/Build

Vehicles Per Day in 100s

1- Less than 50 VPD

PM
D **DHV**
AM
DHV (d,t) D

DHV	Design Hourly Volume (%) = K30
AM/PM	Peak Period
D	Peak Hour Directional Split (%)
→	Indicates Direction of D
(d,t)	Dual, TT-STs (%)

Existing Roadway
Road Widening
Proposed Roadway

EXTENTS

SR 1371 (Lake Wheeler Road) from Yates Mils Park Entrance to SR 1379 (Penny Road)

Wake County **Division 5**

PROJECT

Replace Bridge No. 302 on Lake Wheeler Rd (SR 1371) over Yates Mill Pond Spillway

March 23, 2023

Sheet 1 of 1

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Traffic Forecast Report

B-5683
(TIP PROJECT)

Replace Bridge 302 on Lake Wheeler Road (SR 1371) over Yate Mill Pond Spillway, Forsyth County

WBS # 45638.1.1
March 2023

Prepared By: Kimley-Horn and Associates, Inc.

Kimley»Horn

Table of Contents

Traffic Forecast Report

1. Project Background

Project Request Information

This forecast was requested by George Boules with the Project Management Unit. The proposed project is located in Wake County. The project entails the replacement of Bridge 302 on Lake Wheeler Road (SR 1371) over the Yates Mill Pond Spillway.

The traffic forecast was performed for each of the following scenarios:

- Base Year 2023 No-Build/Build
- Future Year 2050 No-Build/Build

Turning movements are provided for the following locations:

1. Lake Wheeler Rd (SR 1371) & Yates Mill Park Entrance
2. Lake Wheeler Rd (SR 1371) & Penny Rd (SR 1379)

Route Information

Lake Wheeler Road (SR 1371) is classified as a Major Collector. It is a north-south route that runs from South Saunders Street near downtown Raleigh to US 401 near Fuquay-Varina. It roughly parallels US 401. It serves as a major north-south connection in Winston-Salem.

Penny Road (SR 1379) is a Major Collector and east-west route connecting Lake Wheeler Road with Ten-Ten Road in Apex.

Both routes primarily serve single family residential development southeast of Raleigh.

Land Use Information

Land use in the area primarily consists of rural land north of the project site, and rural single family residential south of the project site. North Carolina State University operates agriculture facilities to the north of the project site.

2. Sources of Information and Data

Previous Forecasts

There are no previous forecasts for this project.

Historic AADT

Historic Average Annual Daily Traffic (AADT) volumes from 2002 through 2021 were used as part of the forecast process.

A historic AADT table is provided in **Appendix A**.

Field Data Collection

Traffic count information was collected by Quality Counts, LLC on Wednesday, January 25, 2023 at the following locations shown in the table below.

TABLE 1 – Field Data Collection

Location	Type Count	Date(s)	County
Lake Wheeler Rd (SR 1371) at Yates Mill Pond Entrance	13-hr tmc	01-25-2023	Wake
Lake Wheeler Rd (SR 1371) at Penny Rd (SR 1379)	13-hr tmc	01-25-2023	Wake

All counts were converted from raw counts to AADT using a two-step method. For the 13-hr turning movement counts, the raw information was first factored to 24-hr and was then multiplied by the appropriate seasonal factor to get to AADT. Seasonal factors, and 24-hr factors were all obtained from the Transportation Planning Division Traffic Survey Group. All adjustment factors, along with raw count information can be found in the appendix.

Local Contacts

The following individuals were contacted during the development of this forecast:

City of Raleigh:
- Planner – Christopher Golden
- MPO Coordinator – Alex Rickard

NCDOT MPO Contact:
- Phil Geary

NCDOT Division Staff:
- Division Planning Engineer – David Keilson

The contacts provided information concerning Lake Wheeler Rd at Tryon Rd, including a 225+/- apartment complex (Allora Pines) proposed on Tryon Rd.

3. Base Year 2023 No-Build/Build Estimate

Methodology

Historic AADT information along with turning movement counts were used to determine the 2023 AADTs and turning movements on all facilities and at their intersections.

All turning movements were balanced using the Traffic Forecast Utility Intersection Analysis tool. All AADT information can be found in the tables in **Appendix A**.

Determination of Design Factors

Design factors for 2023 were calculated where applicable using information from available turning movement counts. Factors include TTSTs, duals, D, and Design K Factor. Truck factors were also compared to the 2021 Traffic Data Event Segment Shapefile.

Design factors can be found in the tables in **Appendix A**.

4. General Model Data

Model Information

The Triangle Regional Model was used for this forecast. TRMv6.2 and TRMG2v1.1 were both examined as part of this forecast.

Model Adjustments

No model adjustments were necessary since No-Build and Build conditions were assumed to be the same. Lake Wheeler Rd (SR 1371) maintains its coded model cross-section for the existing Base Year Model and the Future Year Model.

Model Scenarios

Regional Model analysis was performed for each of the two B-5683 scenarios listed in Table 2.

TABLE 2 – TRIANGLE REGIONAL MODEL SCENARIOS

Alternative	Model
2016 NB/BLD	TRMv6.2
2050 NB/BLD	TRMv6.2
2020 NB/BLD	TRMG2v1.1
2050 NB/BLD	TRMG2v1.1

Note:

- "No Build" is defined as without the subject project, but with all other applicable projects. (In the base year this is current conditions, in the future year it is the MTP).
- All future year (2050) Scenarios are to be fiscally constrained per the most recent CAMPO MTP.

Nearby TIP projects include:

- HL-0008S – Intersection improvements at Penny Rd (SR 1379) and Olde South Rd (SR 1382)
- HL-0008H – Intersection improvements at Lake Wheeler Rd (SR 1371) and Simpkins Rd (SR 1375)

The Triangle Regional Model provides volumes as an average weekday in spring/fall when school is in session. Therefore, these volumes were converted to AADT using appropriate seasonal factors from the Transportation Planning Division Traffic Surveys Group. An average weekday factor for the month of October (0.94 non interstate) was used for this conversion.

Both Lake Wheeler Road and Penny Road load high in TRMv6.2 while Lake Wheeler Road loads a little high in TRMG2v1.1 and Penny Road loads a little low. Overall, TRMG2v1.1 loads closer to actual AADT counts. A Model Validation table can be found in **Appendix A**.

5. Future Year 2050 No-Build/Build Forecast

Assumptions

Within the Metropolitan Planning Organization (MPO) area, future forecasts are based on projects included in the Financial Plan for the 2050 Capital Area Metropolitan Planning Organization Metropolitan Transportation Plan (MTP). This information is included in the official version of the Triangle Regional Model (TRMv6.2). All development projected in the model is included as input to this forecast.

Methodology

For the Future Year (2050) No-Build Forecast, the following were considered when developing volumes:

- Historic growth along the corridor calculated from AADT data (5-year, 10-year, and long-term per year growth rates)
- Model growth for the corridor calculated from 2016 and 2050 No-Build model run results (TRMv6.2)
- Wake County historic growth and projected growth (North Carolina Office of State Budget and Management)

Growth rates were calculated based on all available data and applied to the 2023 No-Build Forecast using engineering judgement and turning movements and mainline volumes were balanced and adjusted as necessary.

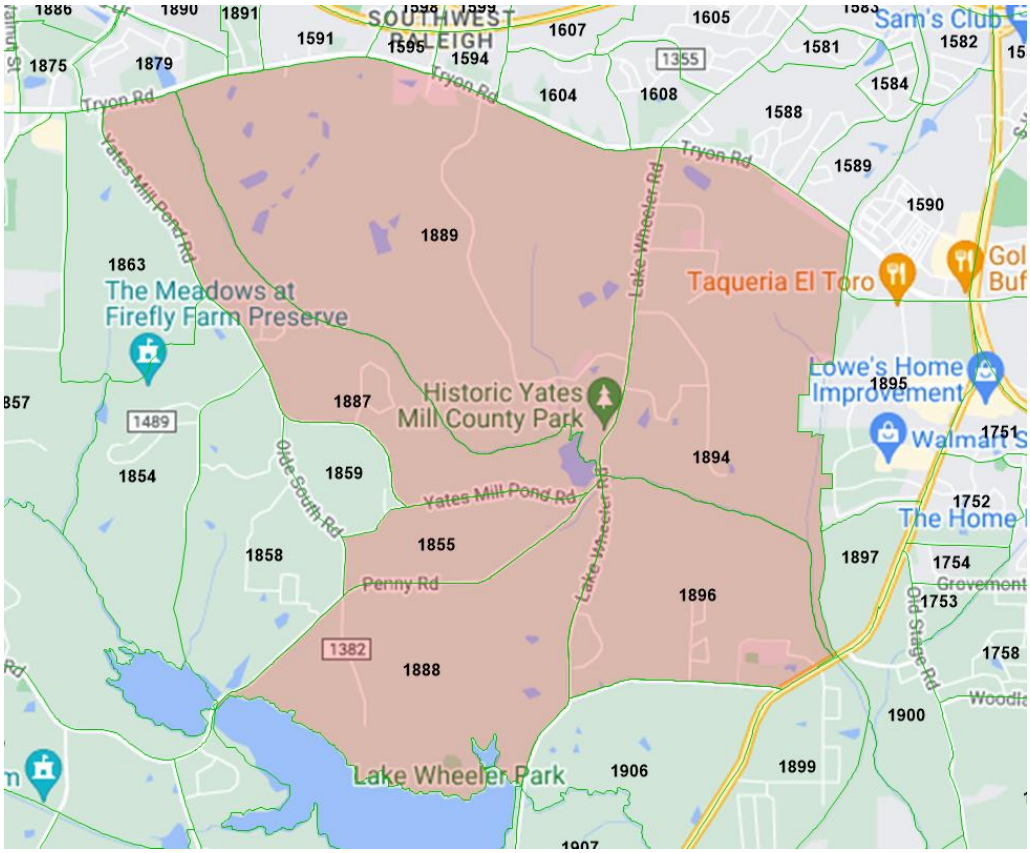
Growth Information

The model appears to adequately account for growth information in the project area. The TAZs in the project area were examined in both TRMv6.2 and TRMG2v1.1. See the figure and table below for specific information.

TABLE 3 – Model Growth Information

Model	BY HH / EMP	FY HH / EMP	Growth per year
TRMv6.2	1671 / 744	3509 / 1225	2.2% / 1.5%
TRMG2v1.1	1765 / 1024	3560 / 1261	2.1% / 0.6%

TRMv6.2 BY 2016 and FY 2050, TRMG2v1.1 BY 2020 and FY 2050



Determination of Design Factors

Based on the model data, the project, and engineering judgement, the future year No-Build condition is expected to remain the same as the 2023 Base Year No-Build. Design factors can be seen in the tables in **Appendix A**.

Appendix A
Data Tables

Table A.1 Historic AADT Table

Int ID	Node	Intersection Name	NCDOT Historic Traffic Count Data												2021 NCDOT DMS	Project-Specific TMC	2023 Estimate
			2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021			
1	1	Lake Wheeler Rd north of Yates Mill Park Entrance	-	-	-	-	-	-	-	-	-	-	-	-	-	18,500	17,800
	3	Lake Wheeler Rd south of Yates Mill Park Entrance	-	13000	-	14000	-	15000	-	15000	-	16000	-	16000	16,000	18,500	17,800
	4	Yates Mill Park Entrance west of Lake Wheeler Rd	-	-	-	-	-	-	-	-	-	-	-	-	-	200	200
2	1	Lake Wheeler Rd north of Penny Rd	-	13000	-	14000	-	15000	-	15000	-	16000	-	16000	16,000	18,500	17,800
	3	Lake Wheeler Rd south of Penny Rd	-	13000	-	13000	-	14000	-	14000	-	15500	-	-	-	17,700	17,000
	4	Penny Rd west of Lake Wheeler Rd	-	6100	-	-	-	6800	-	7100	-	7200	-	6600	6,600	7,500	7,600

Table A.2 AM Design Data Table

Int ID	Node	Intersection Name	D - Directional Distribution %			K - Peak Hour Factor %			% Trucks (Daily)		
			2022 TMC Data	Chosen 2022 No-Build Value	Chosen 2045 No-Build Value	2022 TMC Data	Chosen 2022 No-Build Value	Chosen 2045 No-Build Value	2022 TMC Data	Chosen 2022 No-Build Value	Chosen 2045 No-Build Value
1	1	Lake Wheeler Rd north of Yates Mill Park Entrance	69.2%	70.0%	70.0%	8.3%	8.0%	8.0%	(3,0)	(3 , 1)	(3 , 1)
	3	Lake Wheeler Rd south of Yates Mill Park Entrance	69.6%	70.0%	70.0%	8.4%	8.0%	8.0%	(3,0)	(3 , 1)	(3 , 1)
	4	Yates Mill Park Entrance west of Lake Wheeler Rd	91.7%	90.0%	90.0%	6.6%	7.0%	7.0%	(7,0)	(7 , 1)	(7 , 1)
2	1	Lake Wheeler Rd north of Penny Rd	68.7%	70.0%	70.0%	8.3%	8.0%	8.0%	(3,0)	(3 , 1)	(3 , 1)
	3	Lake Wheeler Rd south of Penny Rd	67.8%	70.0%	70.0%	8.4%	8.0%	8.0%	(2,0)	(2 , 1)	(2 , 1)
	4	Penny Rd west of Lake Wheeler Rd	53.6%	55.0%	55.0%	8.9%	9.0%	9.0%	(3,0)	(3 , 1)	(3 , 1)

Table A.3 PM Design Data Table

Int ID	Node	Intersection Name	D - Directional Distribution %			K - Peak Hour Factor %			% Trucks (Daily)		
			2022 TMC Data	Chosen 2022 No-Build Value	Chosen 2045 No-Build Value	2022 TMC Data	Chosen 2022 No-Build Value	Chosen 2045 No-Build Value	2022 TMC Data	Chosen 2022 No-Build Value	Chosen 2022 Build 1 Value
1	1	Lake Wheeler Rd north of Yates Mill Park Entrance	70.1%	70.0%	70.0%	8.3%	8.0%	8.0%	(3,0)	(3 , 1)	(3 , 1)
	3	Lake Wheeler Rd south of Yates Mill Park Entrance	70.2%	70.0%	70.0%	8.3%	8.0%	8.0%	(3,0)	(3 , 1)	(3 , 1)
	4	Yates Mill Park Entrance west of Lake Wheeler Rd	61.5%	60.0%	60.0%	7.2%	7.0%	7.0%	(7,0)	(7 , 1)	(7 , 1)
2	1	Lake Wheeler Rd north of Penny Rd	69.3%	70.0%	70.0%	8.4%	8.0%	8.0%	(3,0)	(3 , 1)	(3 , 1)
	3	Lake Wheeler Rd south of Penny Rd	70.3%	70.0%	70.0%	8.6%	8.0%	8.0%	(2,0)	(2 , 1)	(2 , 1)
	4	Penny Rd west of Lake Wheeler Rd	51.4%	52.5%	52.5%	8.6%	9.0%	9.0%	(3,0)	(3 , 1)	(3 , 1)

Table A.4 Growth Rate Table

Int ID	Node	Intersection Name	2023 AADT Estimate	Historic Growth Rates		TRMv6.2	TRMG2v1.1	Applied Growth Rate	2050 No-Build Volumes		
				5-Year Growth	10-Year Growth	Per Year Growth (2016-2050)	Per Year Growth (2020-2050)		TRMv6.2 Estimate	TRMG2v1.1 Estimate	FYNB Forecast
1	1	Lake Wheeler Rd north of Yates Mill Park Entrance	17,800	-	-	0.6%	1.8%	1.5%	27,900	32,700	26,700
	3	Lake Wheeler Rd south of Yates Mill Park Entrance	17,800	1.6%	2.1%	0.6%	1.8%	1.5%	27,900	32,700	26,600
	4	Yates Mill Park Entrance west of Lake Wheeler Rd	200	-	-	-	-	1.5%	-	-	300
2	1	Lake Wheeler Rd north of Penny Rd	17,800	1.6%	2.1%	0.6%	1.8%	1.5%	27,900	32,700	26,600
	3	Lake Wheeler Rd south of Penny Rd	17,000	2.6%	2.6%	1.5%	2.0%	1.6%	30,800	32,200	26,400
	4	Penny Rd west of Lake Wheeler Rd	7,600	1.4%	2.1%	1.3%	2.4%	1.9%	13,000	12,600	12,600

Table A.5 Model Validation Table

Int ID	Node	Link Name	Base Year (2023)								2050 No-Build Volumes				
			Historic Estimate (2016)	Historic Estimate (2021)	TRMv6.2 Raw (2016)	TRMv6.2 AADT (2016)	TRMG2v1.1 Raw (2020)	TRMG2v1.1 AADT (2020)	Extrapolated Model AADT (2023)	2023 Forecast Estimate	TRMv6.2 Raw (2050)	TRMv6.2 AADT (2050)	TRMG2v1.1 Raw (2050)	TRMG2v1.1 AADT (2050)	2050 Forecast Estimate
1	1	Lake Wheeler Rd north of Yates Mill Park Entrance	-	-	21,614	23,000	18,072	19,200	23,900	17,800	26,187	27,900	30,737	32,700	26,700
	3	Lake Wheeler Rd south of Yates Mill Park Entrance	15000	16,000	21,614	23,000	18,072	19,200	23,900	17,800	26,187	27,900	30,737	32,700	26,600
	4	Yates Mill Park Entrance west of Lake Wheeler Rd	-	-	-	-	-	-	-	200	-	-	-	-	300
2	1	Lake Wheeler Rd north of Penny Rd	15000	16,000	21,614	23,000	18,072	19,200	23,900	17,800	26,187	27,900	30,737	32,700	26,600
	3	Lake Wheeler Rd south of Penny Rd	14000	-	17,492	18,600	16,579	17,600	20,600	17,000	28,992	30,800	30,280	32,200	26,400
	4	Penny Rd west of Lake Wheeler Rd	7100	6,600	7,771	8,300	5,775	6,100	9,100	7,600	12,219	13,000	11,817	12,600	12,600

Intersection 1: Lake Wheeler Rd at Yates Mill Park

Start Date/Time	1/18/2023				6:00 AM												
	Lake Wheeler Rd				0				Lake Wheeler Rd				Yates Mill Park Entrance				
	from North				from East				from South				from West				
Time	LT	TH	RT	U-turn	LT	TH	RT	U-turn	LT	TH	RT	U-turn	LT	TH	RT	U-turn	Int. Total
6:00 AM	0	31	0	0	0	0	0	0	0	128	0	0	0	0	0	0	159
6:15 AM	0	38	0	0	0	0	0	0	0	132	0	0	0	0	0	0	170
6:30 AM	0	57	1	0	0	0	0	0	0	185	0	0	0	0	0	0	243
6:45 AM	0	54	2	0	0	0	0	0	0	213	0	0	0	0	0	0	269
7:00 AM	0	67	3	0	0	0	0	0	1	255	0	0	0	0	1	0	327
7:15 AM	0	119	1	0	0	0	0	0	1	227	0	0	0	0	0	0	348
7:30 AM	0	112	0	0	0	0	0	0	1	247	0	1	0	0	0	0	361
7:45 AM	0	126	2	0	0	0	0	0	2	239	0	0	0	0	0	0	369
8:00 AM	0	75	0	0	0	0	0	0	2	234	0	0	1	0	0	0	312
8:15 AM	0	85	1	0	0	0	0	0	2	244	0	0	0	0	0	0	332
8:30 AM	0	113	1	0	0	0	0	0	1	206	0	0	1	0	0	0	322
8:45 AM	0	115	3	0	0	0	0	0	0	183	0	0	0	0	0	0	301
9:00 AM	0	97	1	0	0	0	0	0	0	174	0	0	2	0	0	0	274
9:15 AM	0	94	2	0	0	0	0	0	2	146	0	0	2	0	1	0	247
9:30 AM	0	97	0	1	0	0	0	0	1	127	0	2	0	0	0	0	228
9:45 AM	0	84	0	0	0	0	0	0	2	101	0	0	0	0	1	0	188
10:00 AM	0	88	0	0	0	0	0	0	0	123	0	0	2	0	0	0	213
10:15 AM	0	84	1	0	0	0	0	0	1	121	0	0	0	0	0	0	207
10:30 AM	0	100	1	0	0	0	0	0	1	141	0	2	0	0	2	0	247
10:45 AM	0	96	1	0	0	0	0	0	1	124	0	0	1	0	2	0	225
11:00 AM	0	79	1	0	0	0	0	0	0	121	0	0	3	0	1	0	205
11:15 AM	0	83	2	0	0	0	0	0	1	119	0	0	1	0	1	0	207
11:30 AM	0	82	0	0	0	0	0	0	0	123	0	0	1	0	0	0	206
11:45 AM	0	124	2	0	0	0	0	0	3	113	0	0	4	0	1	0	247
12:00 PM	0	125	2	0	0	0	0	0	0	118	0	0	4	0	0	0	249
12:15 PM	0	114	1	0	0	0	0	0	0	132	0	0	1	0	0	0	248
12:30 PM	0	130	1	0	0	0	0	0	0	123	0	0	2	0	0	0	256
12:45 PM	0	120	1	0	0	0	0	0	0	102	0	0	1	0	1	0	225
1:00 PM	0	116	1	0	0	0	0	0	2	127	0	0	4	0	1	0	251
1:15 PM	0	128	2	0	0	0	0	0	0	92	0	0	2	0	0	0	224
1:30 PM	0	139	3	0	0	0	0	0	0	94	0	0	0	0	0	0	236
1:45 PM	0	113	1	0	0	0	0	0	1	89	0	0	1	0	0	0	205
2:00 PM	0	120	0	0	0	0	0	0	1	144	0	0	0	0	1	0	266
2:15 PM	0	121	2	0	0	0	0	0	0	101	0	0	1	0	1	0	226
2:30 PM	0	152	0	0	0	0	0	0	0	99	0	0	0	0	1	0	252
2:45 PM	0	179	1	0	0	0	0	0	0	109	0	0	1	0	1	0	291
3:00 PM	0	156	0	0	0	0	0	0	0	94	0	0	0	0	0	0	250
3:15 PM	0	177	0	0	0	0	0	0	0	77	0	0	0	0	1	0	255
3:30 PM	0	204	0	0	0	0	0	0	0	94	0	0	2	0	0	0	300
3:45 PM	0	192	0	0	0	0	0	0	0	104	0	0	1	0	0	0	297
4:00 PM	0	217	0	0	0	0	0	0	1	89	0	0	3	0	3	0	313
4:15 PM	0	247	1	0	0	0	0	0	0	95	0	0	1	0	2	0	346
4:30 PM	0	235	1	0	0	0	0	0	1	90	0	0	0	0	3	0	330
4:45 PM	0	245	0	0	0	0	0	0	0	121	0	0	1	0	1	0	368
5:00 PM	0	243	2	0	0	0	0	0	0	108	0	0	0	0	0	0	353
5:15 PM	0	234	0	0	0	0	0	0	2	102	0	0	0	0	0	0	338
5:30 PM	0	238	1	0	0	0	0	0	0	99	0	0	0	0	0	0	338
5:45 PM	0	190	4	0	0	0	0	0	0	82	0	0	0	0	0	0	276
6:00 PM	0	141	0	0	0	0	0	0	0	71	0	0	0	0	0	0	212
6:15 PM	0	147	0	0	0	0	0	0	0	73	0	0	0	0	0	0	220
6:30 PM	0	123	0	0	0	0	0	0	0	86	0	0	0	0	0	0	209
6:45 PM	0	116	0	0	0	0	0	0	0	73	0	0	0	0	0	0	189
Total	0	6762	49	1	0	0	0	0	30	6814	0	5	43	0	26	0	13730
Percent Duals	3.0%								3.0%				7.0%				
Percent TTST	0.0%								0.0%				0.0%				
Approach total	13668				0				13632				148				
TSG ATR Group	1				1				1				1				
Seasonal Factor	1.10				1.10				1.10				1.10				
13to24hr Factor	1.23				1.23				1.23				1.23				
BY AADT Vol	18500				0				18500				200				
AM Peak (Traditional - 6:00AM - 12:00 PM)																	
Peak Direction	OUTBOUND				OUTBOUND				INBOUND				OUTBOUND				
DHV (K)	0.083				0.000				0.084				0.066				
Dir. Dist. (D)	0.308				0.000				0.696				0.083				
PM Peak (Overall - 12:00PM - 7:00 PM)																	
Peak Direction	INBOUND				OUTBOUND				OUTBOUND				INBOUND				
DHV	0.083				0.000				0.083				0.072				
Directional Dist.	0.701				0.000				0.298				0.615				

Intersection 2: Lake Wheeler Rd at Penny Rd

Start Date/Time	1/18/2023				6:00 AM												
	Lake Wheeler Rd				0				Lake Wheeler Rd				Penny Rd				
	from North				from East				from South				from West				
Time	LT	TH	RT	U-turn	LT	TH	RT	U-turn	LT	TH	RT	U-turn	LT	TH	RT	U-turn	Int. Total
6:00 AM	0	24	7	0	0	0	0	0	9	111	0	0	23	0	3	0	177
6:15 AM	0	31	7	0	0	0	0	0	14	109	0	0	18	0	7	0	186
6:30 AM	0	41	10	0	0	0	0	0	15	149	0	0	33	0	3	0	251
6:45 AM	0	40	17	0	0	0	0	0	34	181	0	0	35	0	5	0	312
7:00 AM	0	49	16	0	0	0	0	0	45	206	0	0	51	0	4	0	371
7:15 AM	0	90	28	0	0	0	0	0	42	173	0	0	55	0	12	0	400
7:30 AM	0	96	17	0	0	0	0	0	45	191	0	0	62	0	34	0	445
7:45 AM	0	92	28	0	0	0	0	0	46	181	0	0	57	0	26	0	430
8:00 AM	0	66	19	0	0	0	0	0	58	172	0	0	66	0	15	0	396
8:15 AM	0	60	17	0	0	0	0	0	42	199	0	0	45	0	10	0	373
8:30 AM	0	85	30	0	0	0	0	0	36	158	0	0	49	0	11	0	369
8:45 AM	0	83	32	0	0	0	0	0	50	137	0	0	45	0	23	0	370
9:00 AM	0	76	23	0	0	0	0	0	45	129	0	0	42	0	29	0	344
9:15 AM	0	65	30	0	0	0	0	0	25	105	0	0	44	0	25	0	294
9:30 AM	0	79	16	0	0	0	0	0	23	103	0	0	28	0	22	0	271
9:45 AM	0	65	19	0	0	0	0	0	19	78	0	0	23	0	21	0	225
10:00 AM	0	70	21	0	0	0	0	0	29	102	0	0	23	0	11	0	256
10:15 AM	0	69	19	0	0	0	0	0	19	86	0	0	36	0	15	0	244
10:30 AM	0	72	26	0	0	0	0	0	20	109	0	0	36	0	21	0	284
10:45 AM	0	81	20	0	0	0	0	0	19	92	0	0	31	0	11	0	254
11:00 AM	0	65	15	0	0	0	0	0	12	99	0	0	22	0	12	0	225
11:15 AM	0	67	18	0	0	0	0	0	26	99	0	0	22	0	14	0	246
11:30 AM	0	64	19	0	0	0	0	0	13	101	0	0	27	0	19	0	243
11:45 AM	0	90	29	0	0	0	0	0	23	83	0	0	30	0	24	0	279
12:00 PM	0	86	39	0	0	0	0	0	21	100	0	0	20	0	23	0	289
12:15 PM	0	98	21	0	0	0	0	0	22	96	0	0	31	0	23	0	291
12:30 PM	0	107	17	0	0	0	0	0	23	89	0	0	32	0	28	0	296
12:45 PM	0	102	25	0	0	0	0	0	10	78	0	0	24	0	27	0	266
1:00 PM	0	100	19	0	0	0	0	0	21	106	0	0	25	0	14	0	285
1:15 PM	0	94	28	0	0	0	0	0	11	79	0	0	12	0	12	0	236
1:30 PM	0	109	29	0	0	0	0	0	17	78	0	0	16	0	13	0	262
1:45 PM	0	90	28	0	0	0	0	0	13	69	0	0	23	0	17	0	240
2:00 PM	0	95	18	0	0	0	0	0	21	121	0	0	28	0	19	0	302
2:15 PM	0	90	40	0	0	0	0	0	18	77	0	0	23	0	27	0	275
2:30 PM	0	126	26	0	0	0	0	0	21	65	0	0	33	0	31	0	302
2:45 PM	0	140	35	0	0	0	0	0	23	78	0	0	27	0	29	0	332
3:00 PM	0	120	37	0	0	0	0	0	32	78	0	0	15	0	25	0	307
3:15 PM	0	133	40	0	0	0	0	0	33	61	0	0	23	0	29	0	319
3:30 PM	0	151	52	0	0	0	0	0	22	64	0	0	24	0	20	0	333
3:45 PM	0	169	28	0	0	0	0	0	20	80	0	0	31	0	35	0	363
4:00 PM	0	153	56	0	0	0	0	0	28	63	0	0	24	0	48	0	372
4:15 PM	0	200	50	0	0	0	0	0	20	75	0	0	20	0	44	0	409
4:30 PM	0	189	55	0	0	0	0	0	22	71	0	0	24	0	50	0	411
4:45 PM	0	193	55	0	0	0	0	0	28	95	0	0	28	0	44	0	443
5:00 PM	0	200	44	0	0	0	0	0	14	76	0	0	32	0	54	0	420
5:15 PM	0	194	44	0	0	0	0	0	24	80	0	0	25	0	46	0	413
5:30 PM	0	181	67	0	0	0	0	0	17	72	0	0	26	0	42	0	405
5:45 PM	0	153	45	0	0	0	0	0	17	55	0	0	26	0	42	0	338
6:00 PM	0	121	30	0	0	0	0	0	14	55	0	0	16	0	28	0	264
6:15 PM	0	113	30	0	0	0	0	0	12	48	0	0	27	0	30	0	260
6:30 PM	0	97	30	0	0	0	0	0	11	60	0	0	27	0	24	0	249
6:45 PM	0	92	24	0	0	0	0	0	7	45	0	0	25	0	15	0	208
Total	0	5316	1495	0	0	0	0	0	1251	5267	0	0	1590	0	1216	0	16135
Percent Duals	3.0%								2.0%				3.0%				
Percent TTST	0.0%								0.0%				0.0%				
Approach total	13668				0				13050				5552				
TSG ATR Group	1				1				1				1				
Seasonal Factor	1.10				1.10				1.10				1.10				
13to24hr Factor	1.23				1.23				1.23				1.23				
BY AADT Vol	18500				0				17700				7500				
AM Peak (Traditional - 6:00AM - 12:00 PM)																	
Peak Direction	OUTBOUND				OUTBOUND				INBOUND				INBOUND				
DHV (K)	0.083				0.000				0.084				0.089				
Dir. Dist. (D)	0.313				0.000				0.678				0.536				
PM Peak (Overall - 12:00PM - 7:00 PM)																	
Peak Direction	INBOUND				OUTBOUND				OUTBOUND				INBOUND				
DHV	0.084				0.000				0.086				0.086				
Directional Dist.	0.693				0.000				0.297				0.514				