



April 25, 2025

Scott A. Jones, PE
District 2 Engineer
North Carolina Department of Transportation
Phone: (336) 747-7900
Email: sajones8@ncdot.gov

Reference: Triple A Mart Property Redevelopment – Winston-Salem, North Carolina

Subject: Traffic Impact Assessment

Dear Mr. Jones:

This letter summarizes the findings of the traffic impact assessment performed by RFK Engineers PLLC for the above referenced project in Winston-Salem. The purpose of this study is to determine the potential impact created by the additional traffic generated by the proposed mixed-use development. For the purposes of this study, a five (5) year build out was assumed.

The site is located at the intersection of Clemmonsville Road and Thomasville Road (northeast quadrant). Per discussions with Site Engineer, the following land uses were assumed to provide a conservative estimate for the site's anticipated trip generation while providing the developer some flexibility with the development plan:

- General Office – 2,800 square feet
- Strip Retail – 15,500 square feet
- High-Turnover (Sit-Down) Restaurant – 8,750 square feet
- Gas Station/Convenience Store – 8 fueling positions

Access to the property is proposed via two (2) new access locations with a full movement access located on Thomasville Road [opposite Glencoe Street] and a right-in/right-out access located on Clemmonsville Road. Refer to the attached appendix for a copy of the vicinity map (Figure A-1) and site plan.

The study area was determined through coordination with the North Carolina Department of Transportation (NCDOT) and the City of Winston-Salem (City), and consists of the following existing intersections:

- Clemmonsville Road and Thomasville Road
- Thomasville Road and Glencoe Street – Unsignalized (*analyzed under build conditions only*)

With the existing signalized intersection of Clemmons Road and Thomasville Road proposed to be converted to a roundabout under the NCDOT State Transportation Improvement Program (STIP) project I-5880, it was determined that the study would analyze traffic conditions during the weekday AM and PM peak hours for the following scenarios.

- Future (2030) No Build Traffic Conditions
- Future (2030) Build Traffic Conditions

Existing Traffic Conditions

Clemmons Road (locally maintained) and Thomasville Road (SR 4235) are two-lane facilities in the vicinity of the site with posted speed limits of 35 miles per hour (mph).

Based on 2023 NCDOT Annual Average Daily Traffic (AADT) data, which is the most recent available, Clemmons Road carries approximately 12,000 vehicles per day (vpd) east of Thomasville Road and 11,000 vpd to the west. Thomasville Road carries approximately 6,400 vpd south of Clemmons Road.

Exclusive left turn lanes are provided on both the eastbound and westbound approaches of Clemmons Road at the intersection with Thomasville Road. Refer to the attached appendix for an illustration of the existing lane configurations (number of traffic lanes on the intersection approach), storage capacities, traffic control, and other roadway information within the study area (Figure A-3).

Existing traffic volumes at the study intersections were obtained from turning movement counts that were conducted in February of 2025 during typical weekday AM (7:00 to 9:00) and PM (4:00 to 6:00) peak periods while school was in session. Refer to the attached appendix for a copy of the raw traffic count data, as well as an illustration of the existing (2025) peak hour traffic volumes (Figure A-4).

Future No Build Traffic Conditions

In order to estimate future year 2030 traffic volumes at the Clemmons Road/Thomasville Road intersection, a growth factor should be applied to the existing base year 2025 traffic data. Based on historical NCDOT AADT data for Clemmons and Thomasville Road, daily traffic volumes have minimally increased, and even decreased, over the past 10 years. For the purpose of this analysis, a conservative approach was taken, and a compounded annual growth rate of 0.5% was applied to the 2025 traffic counts to project background traffic growth for a five-year period.

Based on coordination with NCDOT, there is one future State Transportation Improvement Program (STIP) project that will impact traffic patterns within the study area. Under STIP I-5880, the existing signalized intersection of Clemmons Road and Thomasville Road is proposed to be converted to a single-lane roundabout. Based on the latest schedules (per NCDOT), construction of I-5880 is anticipated to begin in the fiscal year of 2025. A horizon year of 2030 was assumed for the purpose of this study;

therefore, the improvements associated with I-5880 are accounted for in all future scenarios of this analysis.

In order to estimate future year 2030 traffic volumes at the Clemmons Road/Thomasville Road intersection with all improvements complete, the traffic forecast completed for I-5880 by VHB in May 2018, was utilized. The '*Intersection Analysis Utility*' worksheet provided by NCDOT Congestion Management was utilized to break out AM and PM peak hour volumes for the 2030 No Build and Build scenarios. A 'per movement' adjustment factor (between Build and No Build) was then calculated by dividing the Build volume by the corresponding No Build volume (i.e., if the southbound right Build volume was 15 and the No Build volume for the same movement was 10, then the adjustment factor was calculated to be 1.5). Refer to the attached appendix for an illustration of the future (2030) no build peak hour traffic volumes (Figure A-5), relative information from the traffic forecast for I-5880, the IAU break outs for 2030 No Build and Build, as well as the adjustment factor calculations for each movement.

Trip Generation

In order to determine the future traffic conditions upon build out of the proposed development, an estimate of traffic projected to travel to/from the site is required. The average weekday daily trips as well as the AM and PM peak hour site trips were calculated utilizing the 11th Edition of the Institute of Transportation Engineers (ITE) *Trip Generation Manual*.

The proposed development is expected to generate 3,956 total daily trips (1,978 entering and 1,978 exiting), with 293 trips (161 entering and 132 exiting) occurring during the AM peak hour and 401 trips (200 entering and 201 exiting) during the PM peak hour.

It should be noted that not all trips are expected to be new trips. Internal capture and pass-by trips were accounted for as part of this analysis. Internal capture are those trips that are captured internally within the development. For example, a convenience store patron who also visits the retail plaza or an office worker who visits a restaurant. Internal captures rates were estimated utilizing North Carolina Highway Research Program (NCHRP) report 684. Based on NCHRP report 684, internal capture is expected to account for 36 trips (18 entering and 18 exiting) during the AM peak hour and 102 trips (51 entering and 51 exiting) during the PM peak hour.

Pass-by trips are trips that are drawn from traffic already utilizing the adjacent roadway network. For example, someone that is on their way home from work stops by the convenience store/gas station before continuing to their final destination. Pass-by trips do not add traffic to the adjacent roadways but do add to the turning movements at the development driveways. Based on information provided within the ITE *Trip Generation Manual*, pass-by trips are expected to account for 68 trips (34 entering and 34 exiting) during the AM peak hour and 106 trips (53 entering and 53 exiting) during the PM peak hour.

Finally, primary trips (or 'new' trips) are destination trips or trips generated by the development after accounting for internal capture and pass-by trips. It is anticipated that the development could add up to 189 new trips (109 entering and 80 exiting) during the AM peak hour and 193 new trips (96 entering and 97 exiting) during the PM peak hour).

Refer to Table 1 for a detailed breakdown of the site trip generation.

Table 1: Site Trip Generation

ITE Land Use (Code)	Independent Variable	Average Daily Traffic (vpd)	AM Peak Hour (vph)		PM Peak Hour (vph)	
			Enter	Exit	Enter	Exit
General Office (710)	2,800 square feet	52	7	1	2	7
Strip Retail, <40 ksf (822)	15,500 square feet	844	22	15	51	51
High-Turnover, Sit- Down, Restaurant (932)	8,750 square feet	938	68	52	73	70
Convenience Store/Gas Station (945)	8 fueling positions	2,122	64	64	74	73
Total Traffic		3,956	161	132	200	201
<i>Internal Capture</i>			-18	-18	-51	-51
External Trips			143	114	149	150
<i>Pass-By Trips^{1,2}</i>			-34	-34	-53	-53
Primary (New) Trips			109	80	96	97

1. High-Turnover Restaurant: 43% PM peak hour

2. Convenience Store/Gas Station: 60% AM peak hour, 56% PM peak hour

Trip Distribution and Assignment

For this study, primary site trip distribution percentages were developed based on existing traffic patterns, population densities, and engineering judgment. The primary trips for the proposed

development were then assigned to the study intersections and site access(es) based on the following distribution percentages.

- 30% to/from the west via Clemmons Road
- 10% to/from the east via Clemmons Road
- 30% to/from the north via Thomasville Road
- 30% to/from the south via Thomasville Road

The pass-by site trips were distributed based on future traffic patterns at the intersection of Clemmons Road and Thomasville Road, with a focus on the location of the proposed development driveways and their impact on those travel patterns.

Refer to the attached appendix for illustrations of the primary site trip distribution (Figure A-6), primary site trips assignment (Figure A-7), pass-by site trip distribution (Figure A-8), and pass-by site trip assignment (Figure A-9).

Future Build Traffic Conditions

In order to estimate traffic conditions with the proposed site developed, the site-generated trips were added to the future (2030) no build traffic volumes to determine the future build traffic volumes. Refer to the attached appendix for an illustration of the future (2030) build peak hour traffic volumes (Figure A-10).

Capacity Analysis

All study intersections were analyzed using the methodology outlined in the Highway Capacity Manual (HCM) published by the Transportation Research Board. The computer software packages, Synchro (Version 11.1) and SIDRA INTERSECTION 9.1, was used to complete all analysis. Synchro allows the user to input data into the software and calculate the output (for signalized and unsignalized intersections) based on methodologies in the HCM, while SIDRA allows the user the same capabilities for roundabout intersections.

Analysis results for signalized intersections and roundabouts provide level of service calculations for all approaches and an overall resulting level of service. The capacity analysis for an unsignalized intersection does not provide an overall level of service for the intersection, but rather a level of service for movements and/or approaches that have a conflicting movement.

The HCM defines capacity as “the maximum hourly rate at which persons or vehicles can reasonably be expected to traverse a point or uniform section of a lane or roadway during a given time period under prevailing roadway, traffic, and control conditions”. Level of service (LOS) is a term used to represent

different driving conditions, and is defined as a “qualitative measure describing operational conditions within a traffic stream, and their perception by motorists and/or passengers”. Level of service varies from Level “A” representing free flow, to Level “F” where greater vehicle delays are evident.

Refer to Table 2 for HCM levels of service and related average control delay per vehicle for both signalized and unsignalized intersections. Control delay as defined by the HCM includes “initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay”. As shown in Table 2, an average control delay of 40 seconds at a signalized intersection results in level of service D.

Table 2: Highway Capacity Manual Levels of Service and Delay

SIGNALIZED INTERSECTION		UNSIGNALIZED INTERSECTION / ROUNDABOUT	
Level Of Service	Average Control Delay Per Vehicle (Seconds)	Level Of Service	Average Control Delay Per Vehicle (Seconds)
A	0-10	A	0-10
B	10-20	B	10-15
C	20-35	C	15-25
D	35-55	D	25-35
E	55-80	E	35-50
F	>80	F	>50

Capacity analysis was completed in accordance with the NCDOT Capacity Analysis Guidelines. Under all future traffic conditions, the study intersections were analyzed using proposed lane configurations and traffic control associated with STIP I-5880. In addition, a peak hour factor (PHF) of 0.90 and heavy vehicle percentage of 2% was utilized for all study intersection movements, under all traffic conditions.

Clemmons Road and Thomasville Road

With the construction of NCDOT STIP I-5880, the intersection is proposed to become a single-lane roundabout. A summary of the capacity analysis results is presented in Table 3. Refer to the attached appendix for the design (provided by NCDOT) of the proposed roundabout as well as the SIDRA capacity analysis reports.

Table 3: Capacity Analysis Results for Clemmons Road and Thomasville Road

Scenario	Approach	Lane Configurations	AM Peak Hour Level Of Service (Delay)		PM Peak Hour Level Of Service (Delay)	
			Approach	Overall	Approach	Overall
No Build (2030) Roundabout	NB	1 LT-TH-RT	B (11.3)	B (10.6)	A (8.2)	A (9.1)
	SB	1 LT-TH-RT	A (8.6)		B (10.3)	
	EB	1 LT-TH-RT	A (6.5)		A (9.9)	
	WB	1 LT-TH-RT	B (13.3)		A (8.2)	
Build (2030) Roundabout	NB	1 LT-TH-RT	B (13.6)	B (13.2)	A (9.6)	B (11.1)
	SB	1 LT-TH-RT	A (9.9)		B (12.5)	
	EB	1 LT-TH-RT	A (7.5)		B (11.9)	
	WB	1 LT-TH-RT	C (17.6)		B (10.3)	

Bold denotes a lane reconfiguration or geometric improvement associated with NCDOT STIP I-5880

Capacity analysis indicates that the roundabout intersection of Clemmons Road and Thomasville Road is expected to operate at an overall LOS B during the AM and PM peak hours under future no build and build traffic conditions except for the AM peak hour under no build conditions (LOS A). Additionally, all intersection approaches are expected to operate at LOS B or better except for the westbound approach during the AM peak hour under build conditions (LOS C).

When compared to the future no build traffic conditions, the increase in overall intersection and approach delays are expected to be less than 4.5 seconds per vehicle with the addition of site trips. Due to the acceptable levels of operation and minimal impact of the proposed site, no mitigation is recommended at this intersection.

Site Access Locations

A summary of the capacity analysis results is presented in Table 4. Refer to the attached appendix for the Synchro capacity analysis reports.

Table 4: Capacity Analysis Results for Site Access Locations

Intersection	A p p r o a c h	Lane Configurations	AM Peak Hour Level Of Service (Delay)		PM Peak Hour Level Of Service (Delay)	
			Approach	Overall	Approach	Overall
Thomasville Road & Glencoe Street/Site Access A	NB ² SB ² EB ¹ WB ¹	1 LT-TH, 1 RT 1 LT, 1 TH-RT 1 LT-TH-RT 1 LT-TH-RT	A (7.5) A (8.0) B (12.3) B (12.1)	N/A	A (8.0) A (7.9) B (13.4) B (14.2)	N/A
Clemmons Road & Site Access B	EB WB SB ¹	1 TH 1 TH-RT 1 RT	-- -- B (12.1)	N/A	-- -- B (11.9)	N/A

1. Stop-controlled approach for unsignalized intersection.

2. Major street left turn movement for unsignalized intersection.

Bold denotes a geometric improvement and/or modification recommended by developer

Capacity analysis indicates that the stop-controlled approach of each site access location is expected to experience minor to moderate delays [of less than 14.5 seconds per vehicle] and operate at an overall LOS B during the AM and PM peak hours. The major street left turn movements are expected to experience minor delays [of 8.0 seconds per vehicle or less] and operate at LOS A.

Based on a comparison of the build volumes to the turn warrants located within the NCDOT *Policy on Street and Driveway Access to North Carolina Highways*, no exclusive turn lanes are warranted at the proposed site access locations on Thomasville Road or Clemmons Road.

Queuing Analysis

In addition to the capacity analysis, a queuing analysis was performed utilizing SimTraffic to develop traffic simulation models for the AM and PM peak hours under future no build and build traffic conditions. Refer to the attached appendix for the SimTraffic queuing analysis reports.

Based on a review of the maximum queuing results that are based on the average of ten (10) traffic simulation runs, the queues under future build conditions are not expected to exceed those under future no build conditions (at the roundabout intersection) by more than 50 feet [or approximately two (2) vehicles] during the peak hours.

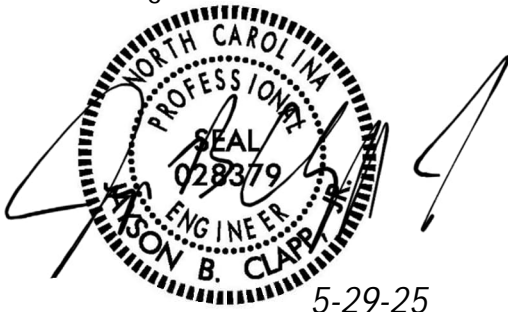
Additionally, maximum queues at the proposed site access locations are not expected to exceed 70 feet [or approximately 3 vehicles] during the peak hours.

Findings and Conclusions

When compared to the future no build conditions, the increase in delays and queues at the roundabout are expected to be minimal with the addition of site trips. Per NCDOT, exclusive [50-foot] left and right turn lanes will be required on Thomasville Road at Access A. In conclusion, the proposed mixed-use development is not expected to have a significant impact to the adjacent transportation network. Refer to the attached appendix for an illustration of the future lane configuration (Figure A-11).

If you should have any questions regarding this analysis, please contact me at (336)202-0629 or via email at jclapp@rfkengineers.com.

Sincerely,
RFK Engineers PLLC



5-29-25

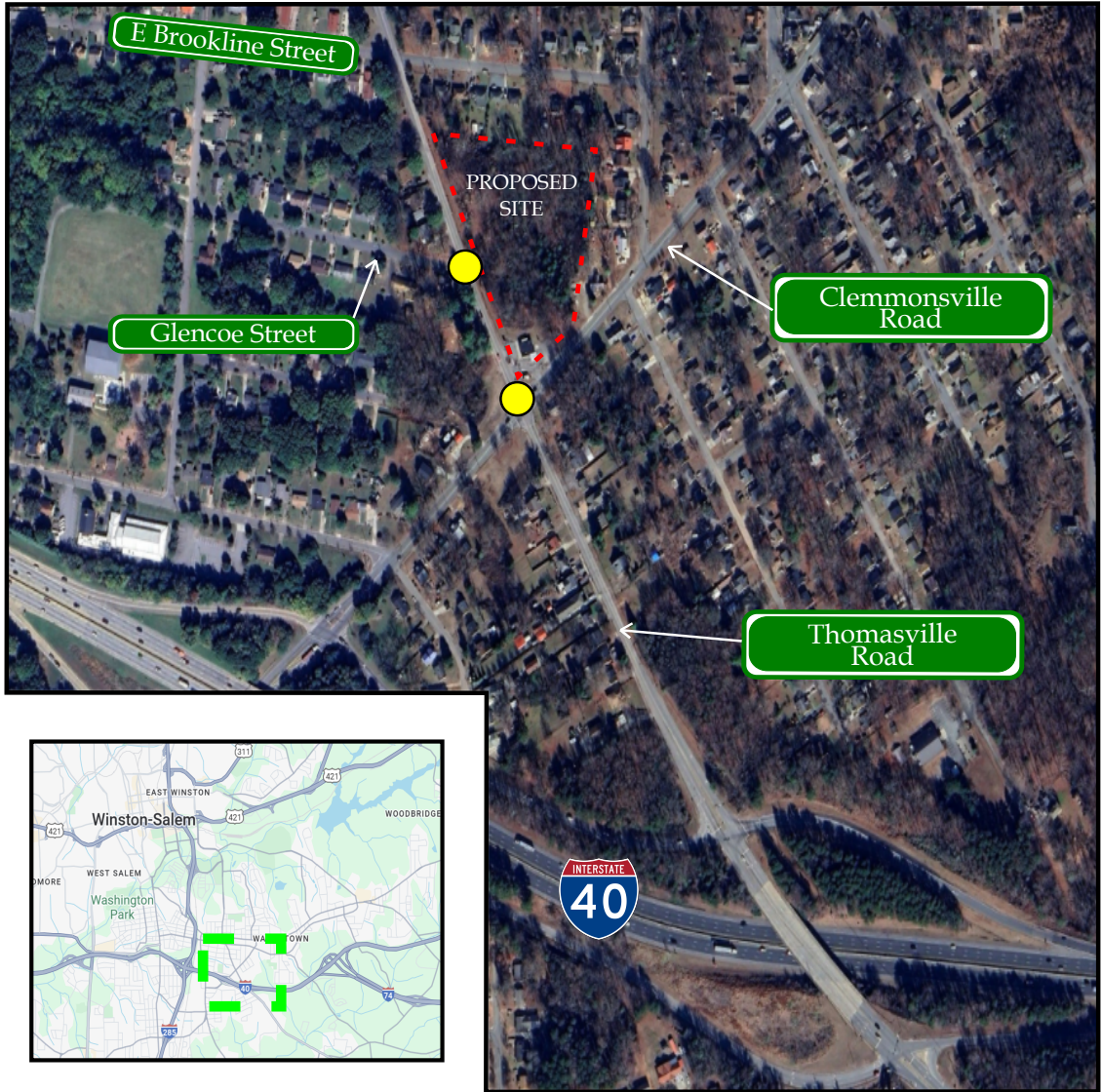
Jayson B. Clapp, Jr., P.E., PTOE
Principal

Attachment

ATTACHMENTS

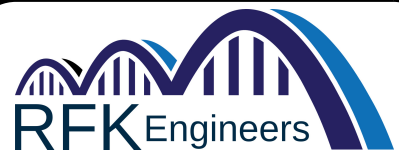
APPENDIX A

Figures



LEGEND

- Proposed Site Location
- Existing Study Intersection
- Study Area

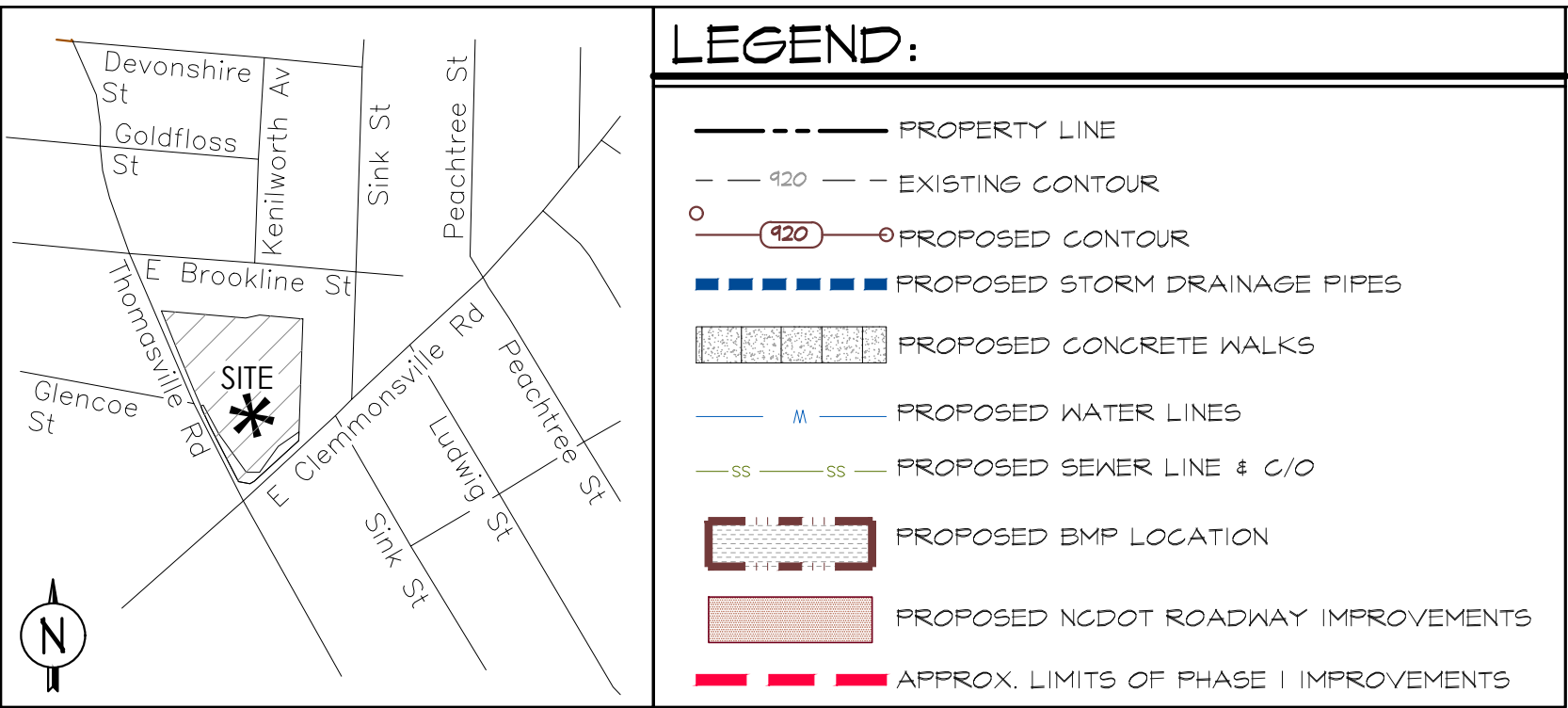


**Triple A Mart Property
Winston-Salem, NC**

Site Location Map

Not to Scale

Figure A-1



ZONING:
Existing Zoning: **RS 9 (Single Family Residential)**
Adjacent Zoning: **RS 9 (Single Family Residential)**
Proposed Zoning: **PB-S (Pedestrian Business-Special Use)**
Proposed Use: Shopping Center Small & Convenience Store w/ Gasoline Sales

OFF STREET PARKING:
Proposed Use(s): Shopping Center Small & Convenience Store w/ Gasoline Sales
Parking Calculation:
Shopping Center Small: 1 spaces per 200 SF GFA = 27,050 SF/ 200 = 135 Spaces
Convenience Store: 1 space per 225 SF GFA = 2,400 sf/ 225 = 11 Spaces
Total Required Parking: 146 Spaces
30% Parking Reduction in PB District: 146 - 44(30% of total) = 102 Spaces Required
Proposed Parking: **102** Spaces (Includes 6 ADA Space)
Required Stacking for Convenience Store: Minimum 3 spaces (9'x16') for 4 or more lanes
Proposed Stacking: 4 or more stacking spaces per lane

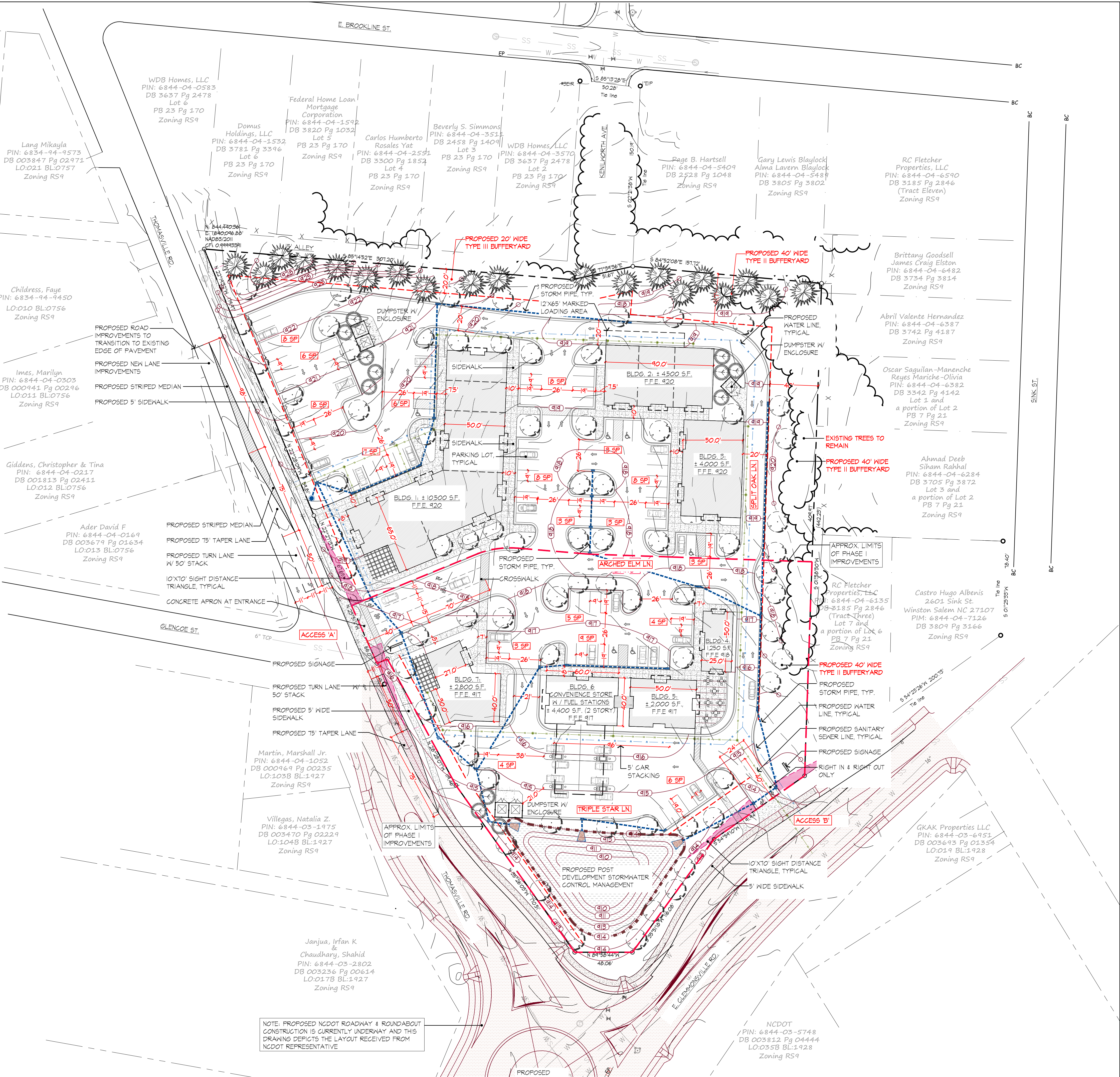
SITE COVERAGE & IMPERVIOUS:
Total Acreage: **4.53** Acres
Site Coverage:
Building To Land: **15** % (Total- 29,450 S.F.=0.68 Acres)
Pavement To Land: **47** % (Total- 93,101 S.F. = 2.14 Acres)
Open Space: **38** %
Total: **100** %
Building Height: **Not to Exceed 60'** as allowed under **PB District Regulations**
WaterShed: Property not located in regulated Watershed

SETBACKS & BUFFER REQUIREMENTS:
Streetyard: 10' wide along parking lot adjacent to Thomasville & E. Clemmonsville Rd.
Interior Parking Lot: 1 large variety tree shall be used/ 5,000 SF of motor vehicle surface area.
Bufferyard Adjacent to RS9 Zoning: Shown 40' wide Type II Buffer
All Landscaping Shown On This Development Plan Is Conceptual & The Final Permit Plans Will Comply With the City of WS Ordinance Requirements

INFRASTRUCTURE:
Water: **X** Private
Sewer: **X** Private
Streets: **X** Private Approx. 1,181 L.F. ±

GENERAL NOTES:
1. The final landscape plan will meet or exceed all the City of Winston Salem's UDO requirements
2. Infrastructure Permit/Construction Plans will be submitted For Grading & Erosion Control Permit
2. All signage will conform with the City of Winston Salem's code requirements and a separate permit will be obtained for the proposed signage.
3. Stormwater Management: Project to meet the City of Winston Salem's Post Construction Stormwater Ordinance Requirements for Quantity & Quality. Project is proposing combination of Underground and/or Above Ground Stormwater Management System & the Infrastructure Permit Plans will be submitted for review & approval.

Tree Save Area Summary Calculations – To Be Used In Conjunction With the Inspections Division Landscaping and Tree Preservation Checklist		
New Development:		Additions to Existing Development:
Total Site Size (in Square Feet): 197,327 S.F.		Total Limits of Land Disturbance (in Square Feet): ____
Total Site Area Excluded From TSA: Square Feet of Proposed R.O.W.s 0_ + Square Feet of Existing Utility Easements 0_ + Square Feet of Existing Water Bodies and Stormwater Ponds ____ = 197,327 S.F.		
Minimum Tree Save Area Required: <input checked="" type="checkbox"/> 10% <input type="checkbox"/> 12%		
Total Required Tree Save Area (in square feet): Total Site Size or Total Limits of Land Disturbance - Excluded Area X Minimum TSA (10_ %) = 19,733 S.F.		
Individual Trees Method Used: ___ Yes ___ No	Tree Stand Method Used: ___ Yes ___ No	New Trees Used For TSA Credit: <input checked="" type="checkbox"/> Yes ___ No
	Number of Trees 6-9" DBH: ___ X 500sf = ____	Number of Large Variety Trees Planted: 27_ X 750sf = 20,250 S.F. Min.
	Number of Trees 9.01-12" DBH: ___ X 750sf = ____	
	Number of Trees 12.01-24" DBH: ___ X 1800sf = ____	
	Number of Trees 24.01-36" DBH: ___ X 3000sf = ____	
	Number of Trees Larger Than 36.01" DBH: ___ X 4000sf = ____	
Total Square Footage of Individual Trees Used to Satisfy Minimum TSA: ____	Total Square Footage of Tree Stands Being Saved to Satisfy Minimum TSA: ____	Total Square Footage of New Trees Planted to Satisfy Minimum TSA: 22,500
Total Required TSA (in Square Feet): 19,733 S.F.		
Total TSA provided (in Square Feet): <u>Min.</u> 20,250 S.F.		



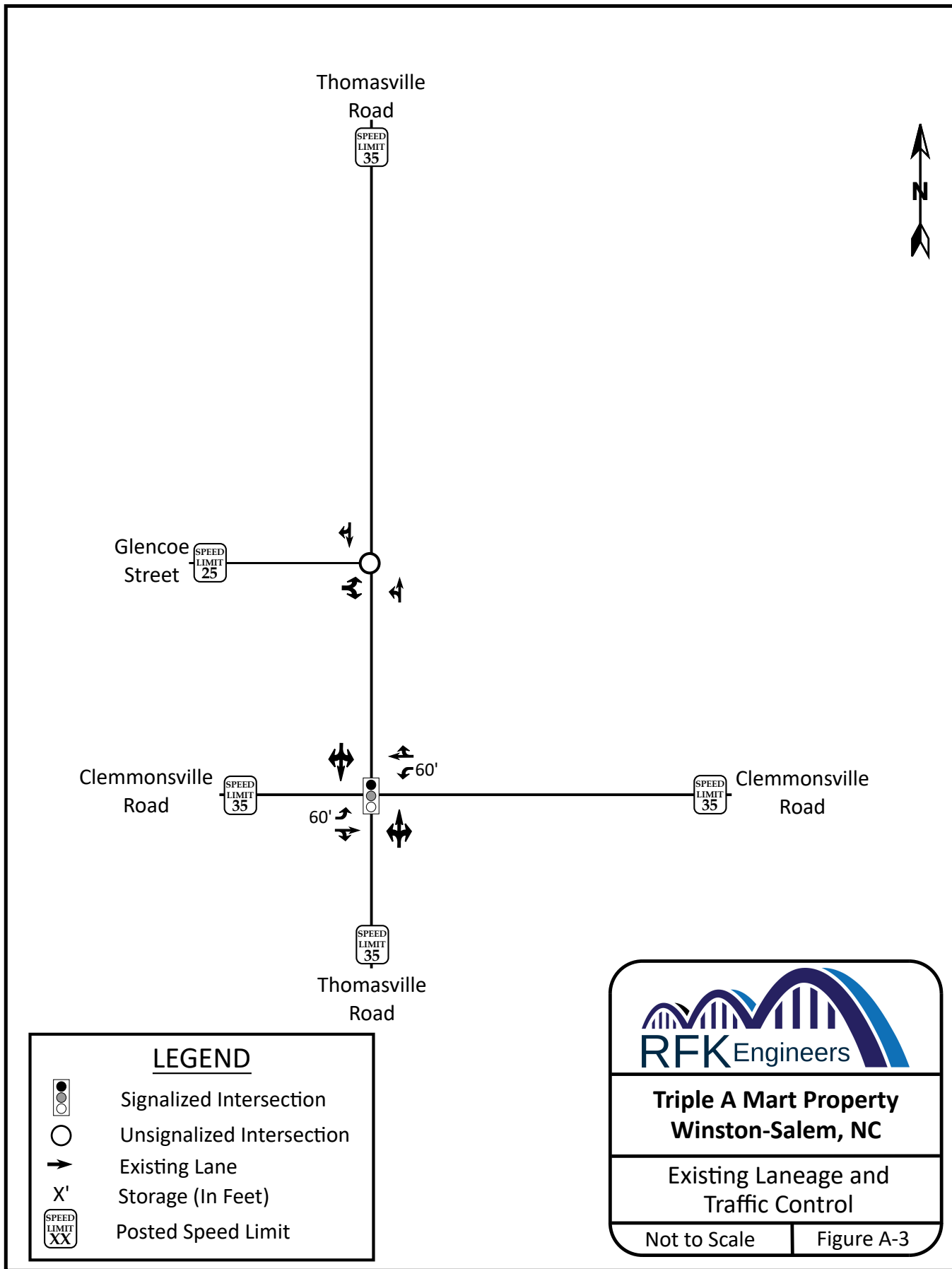
MLA GROUP
LAND PLANNING • LANDSCAPE ARCHITECTURE
5603 Hundley Road
Winston-Salem, NC 27106
336.765.1923
WWW.MILLERLA.COM
TURNING LAND INTO LANDMARKS
NC CORPORATE LICENSE #C-100

5/29/25
C-100
DESIGN GROUP

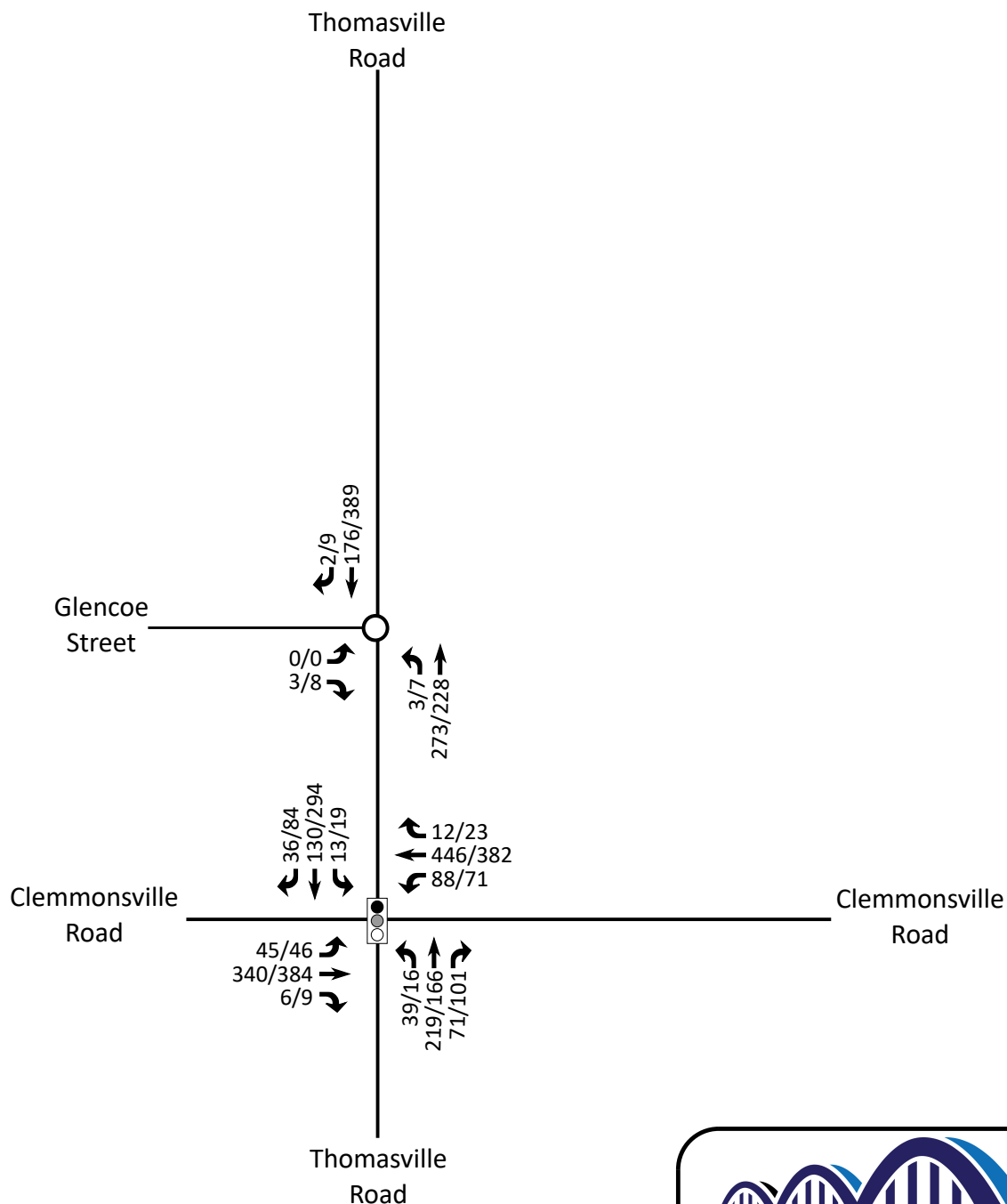
**THE SHOPPES AT
WAUGHTOWN CIRCLE**
1035 E CLEMMONSVILLE RD.
WINSTON SALEM, NC

Date: 28TH APRIL, 2025
Revisions:
5/5/25 PER CWS COMMENTS
5/24/25 PER CWS COMMENTS
Drawn By ARM
Checked By GSM
Project # LA-24-18



SCALE: 1" = 40'
"BEFORE YOU DIG" LINE
1-800-632-4949 OR 8-1-1

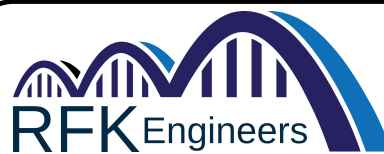


*Glencoe Street intersection not analyzed under existing conditions due to low volumes.



LEGEND

-  Signalized Intersection
-  Unsignalized Intersection
- X / Y → Weekday AM / PM Peak Hour Traffic

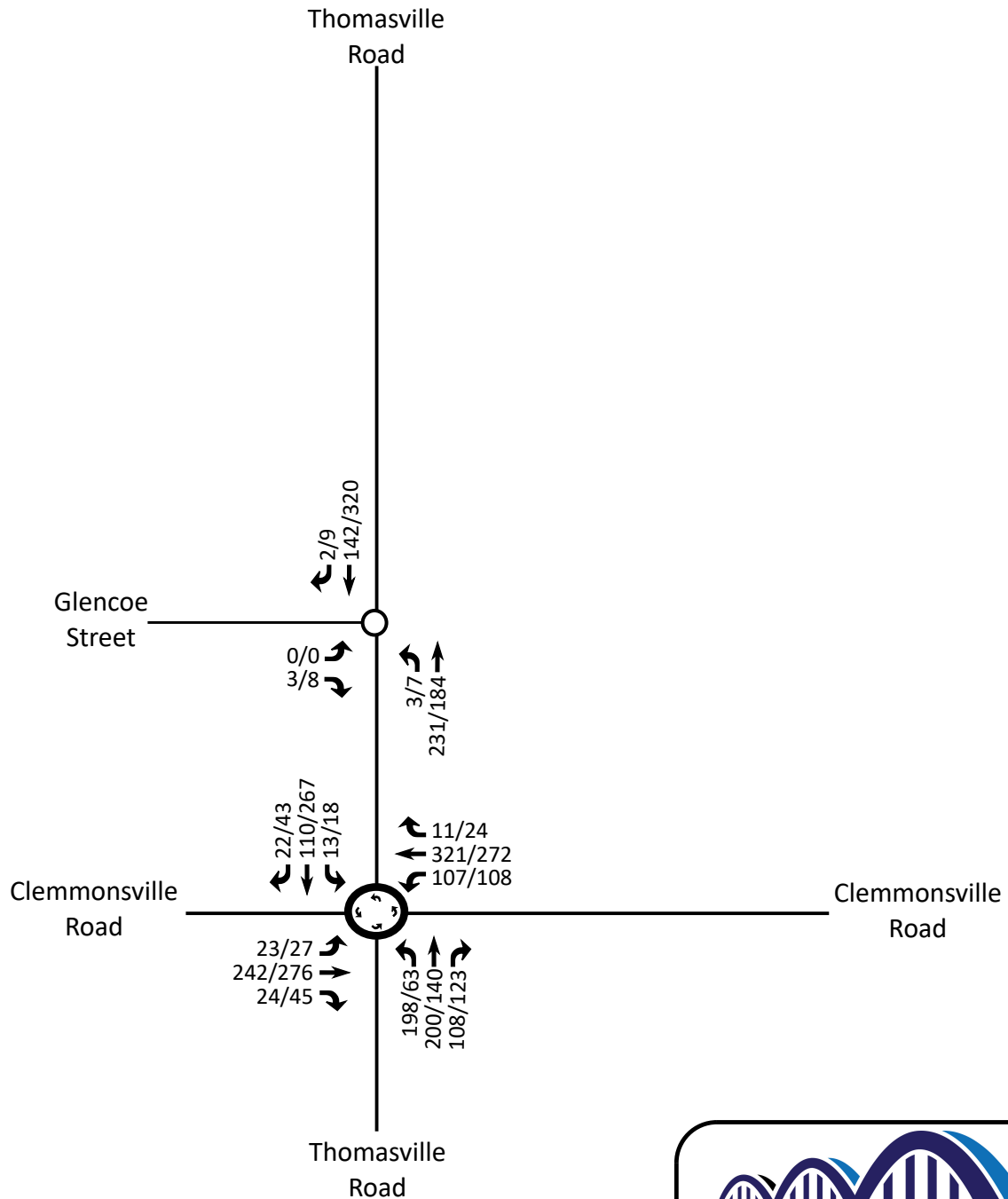


**Triple A Mart Property
Winston-Salem, NC**



Existing (2025) Traffic

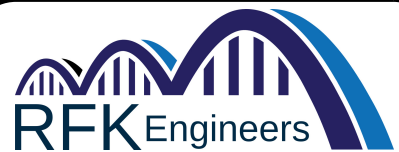
Not to Scale

Figure A-4



LEGEND

-  Roundabout Intersection
-  Unsignalized Intersection
- X / Y → Weekday AM / PM Peak Hour Traffic

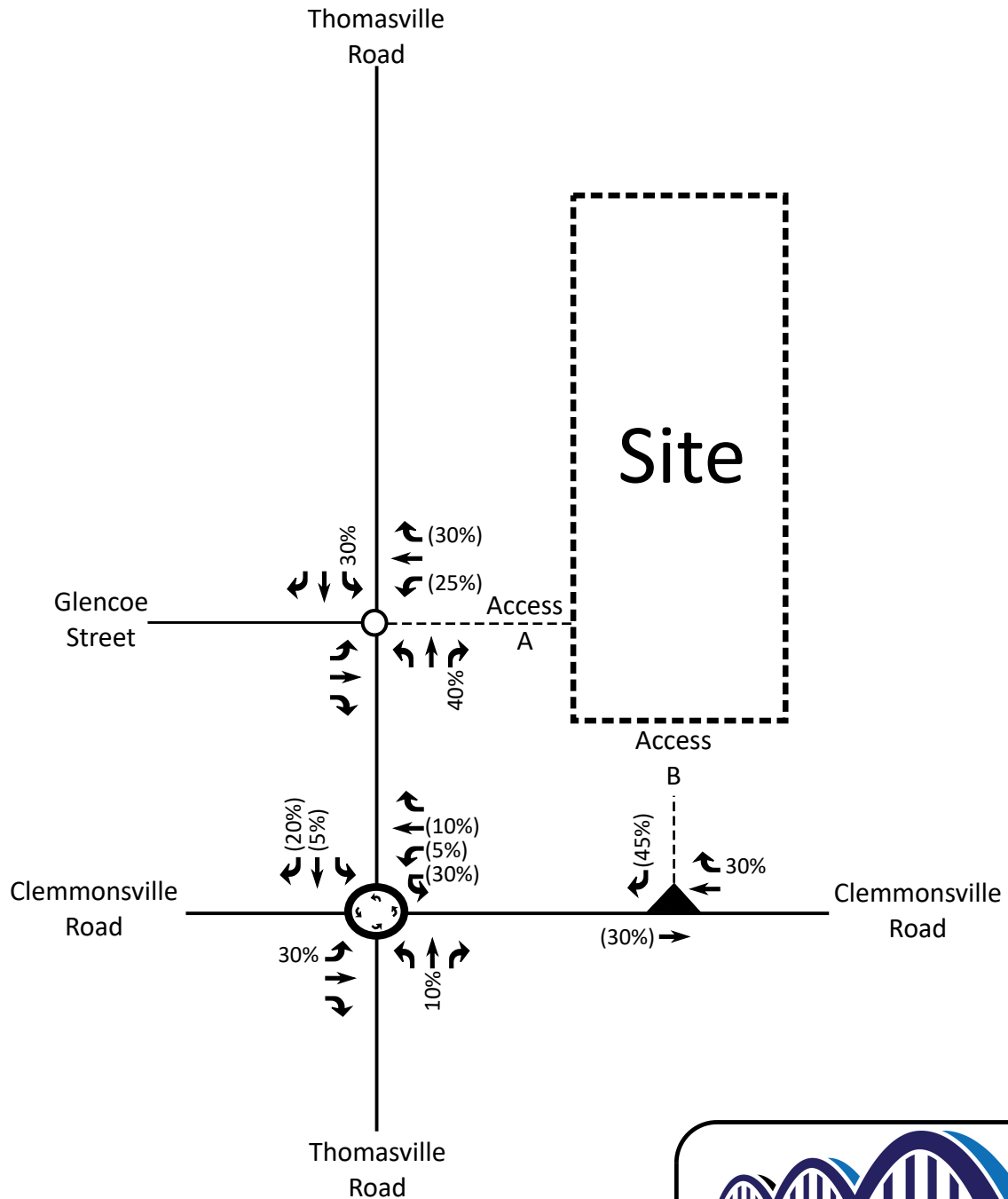


**Triple A Mart Property
Winston-Salem, NC**

No Build (2030) Traffic

Not to Scale

Figure A-5



LEGEND



Roundabout Intersection



Unsignalized Intersection



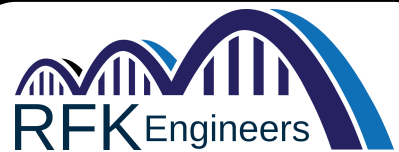
Right In/Right Out Intersection

X%

Entering Trips

(X%)

Exiting Trips

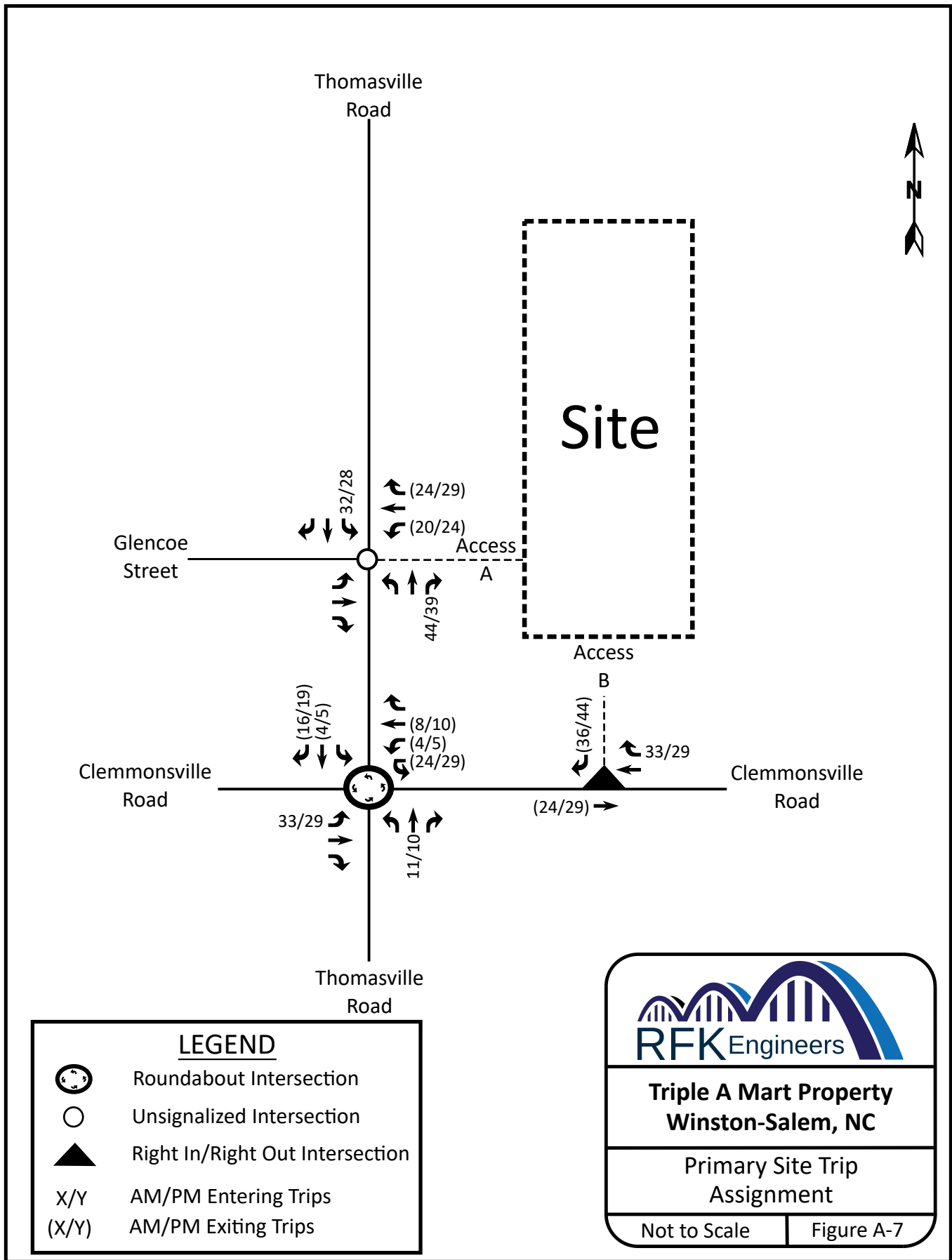


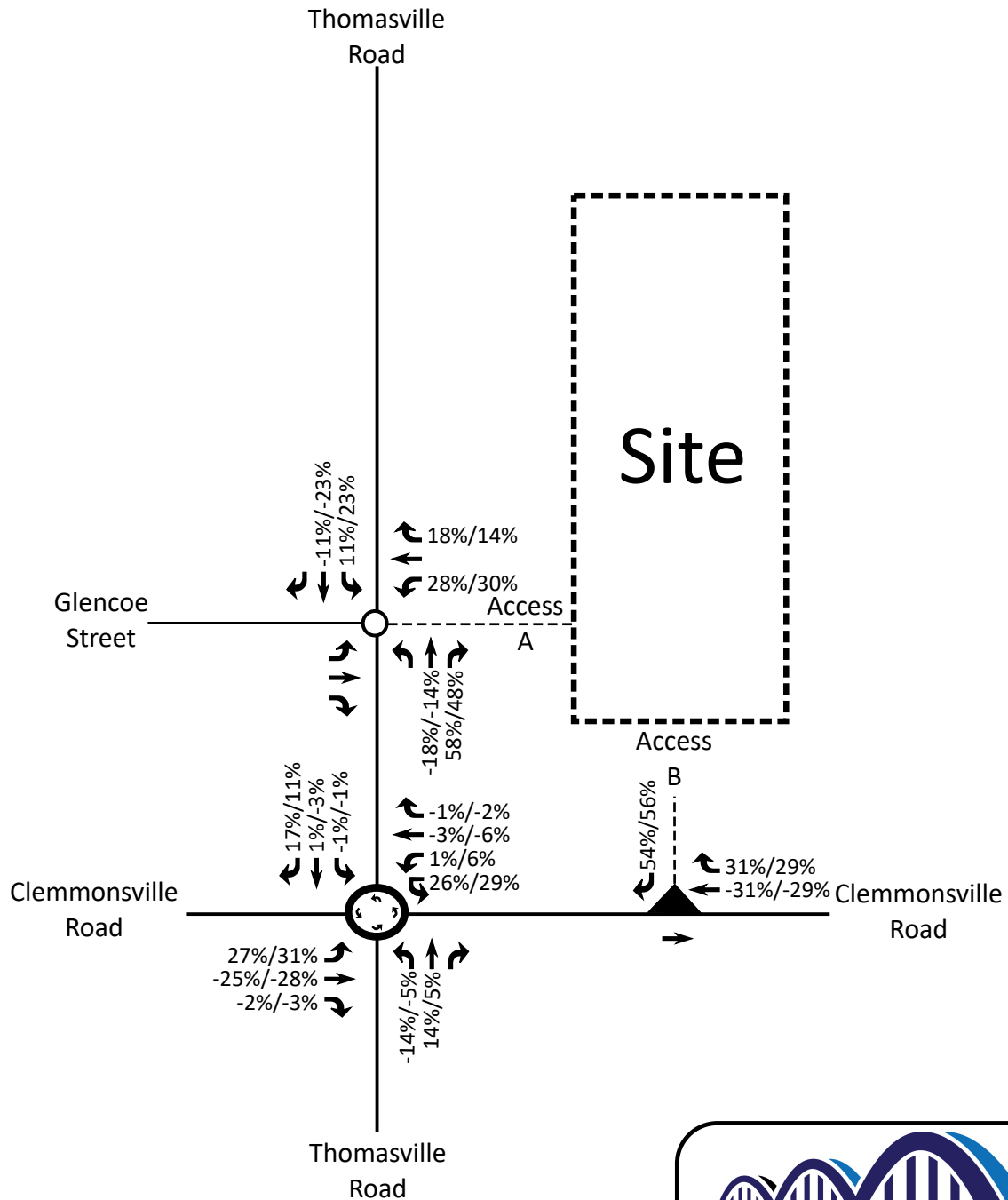
**Triple A Mart Property
Winston-Salem, NC**

Primary Site Trip
Distribution

Not to Scale

Figure A-6





LEGEND



Roundabout Intersection



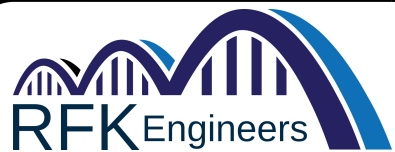
Unsignalized Intersection



Right In/Right Out Intersection

X/Y

AM/PM Distributions

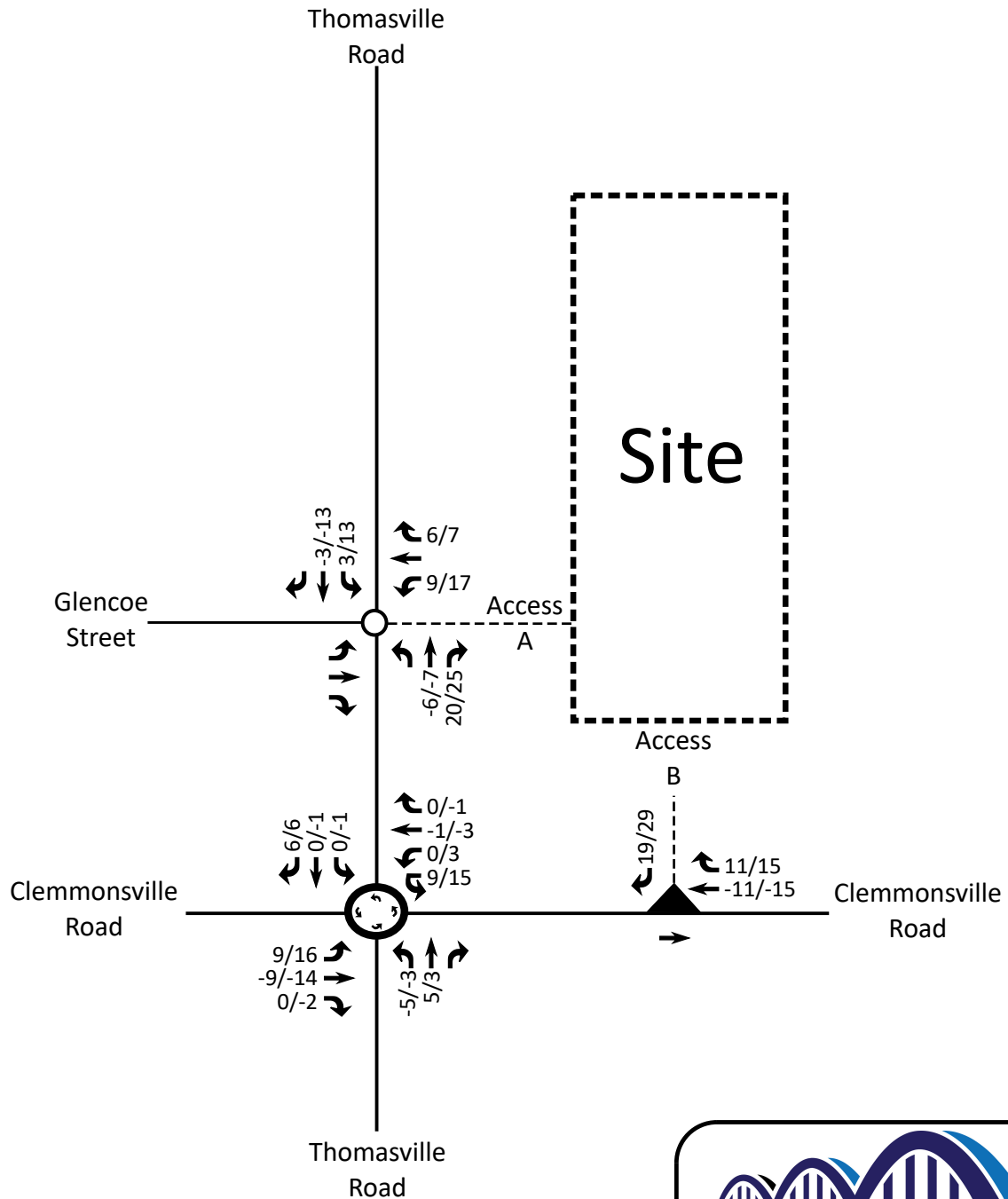


**Triple A Mart Property
Winston-Salem, NC**

**Pass-By Site Trip
Distribution**

Not to Scale

Figure A-8



LEGEND



Roundabout Intersection



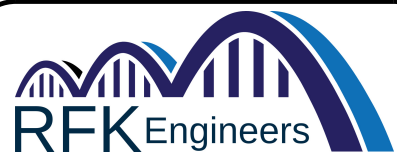
Unsignalized Intersection



Right In/Right Out Intersection

X/Y

AM/PM Trips

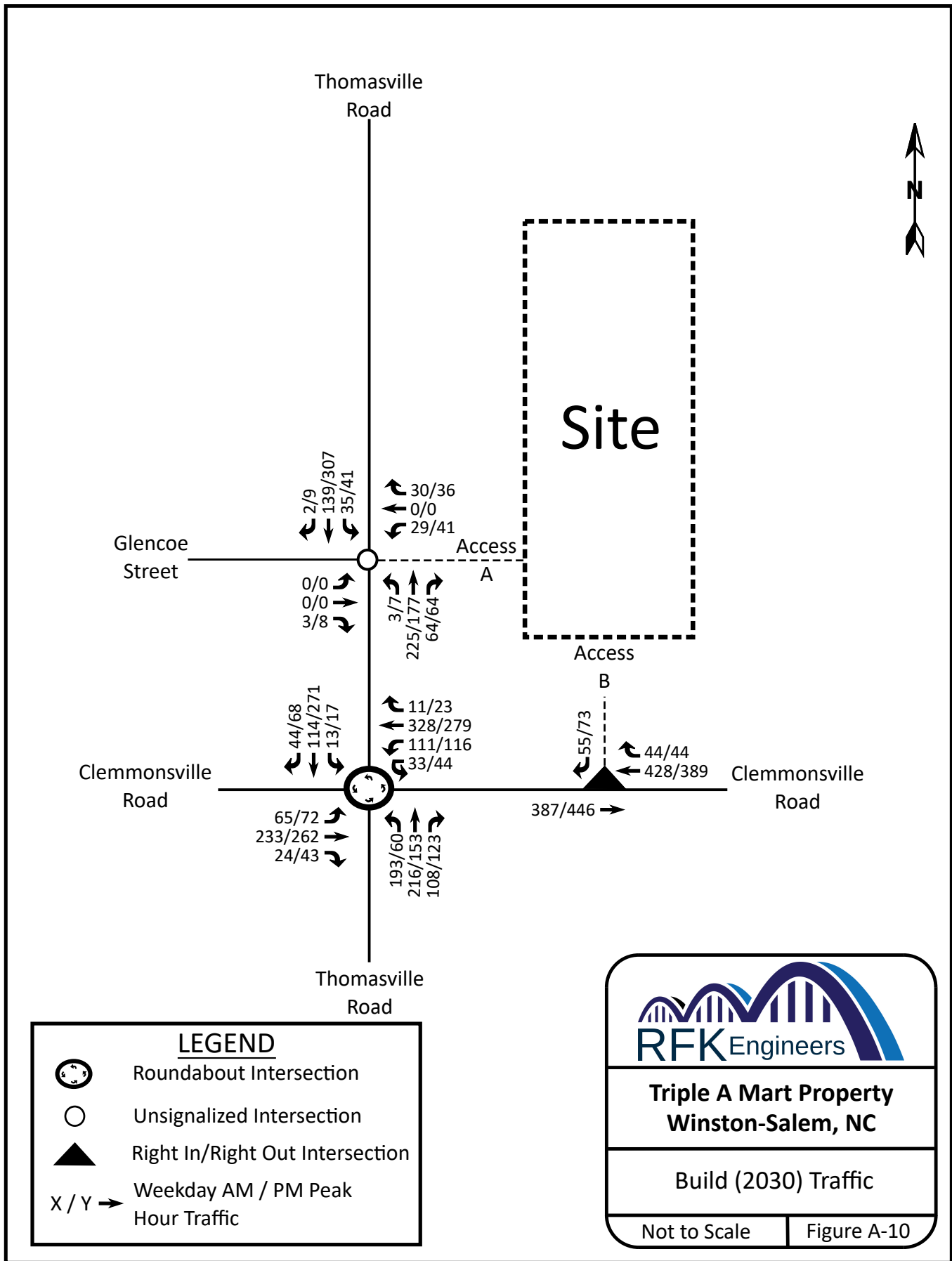


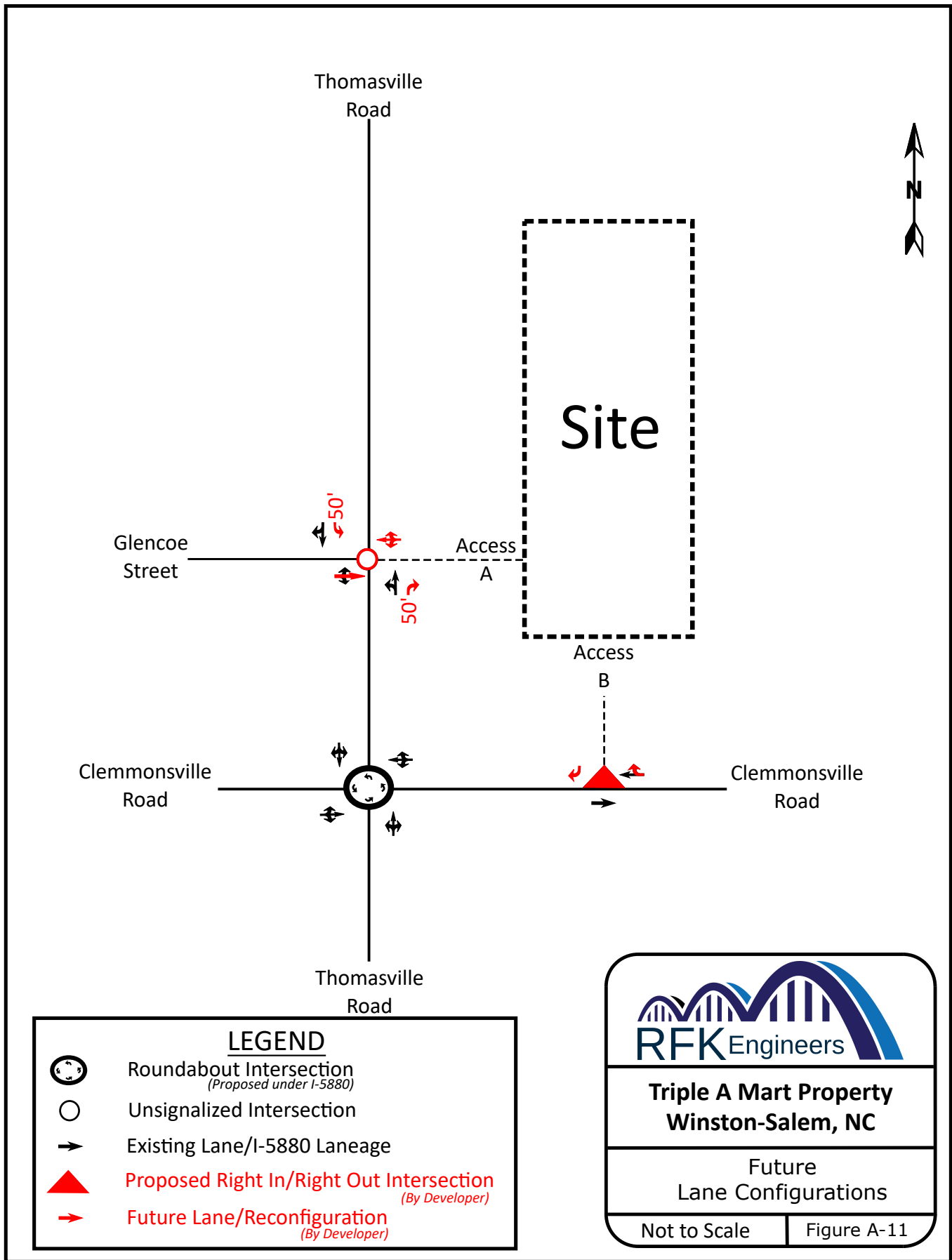
**Triple A Mart Property
Winston-Salem, NC**

**Pass-By Site Trip
Assignment**

Not to Scale

Figure A-9





APPENDIX B

Existing Traffic Counts



TRAFFIC DATA COLLECTION

File Name : Winston-Salem(Thomasville Rd and Clemmons ville Rd)
 Site Code :
 Start Date : 2/25/2025
 Page No : 1

Groups Printed- Cars + - Trucks

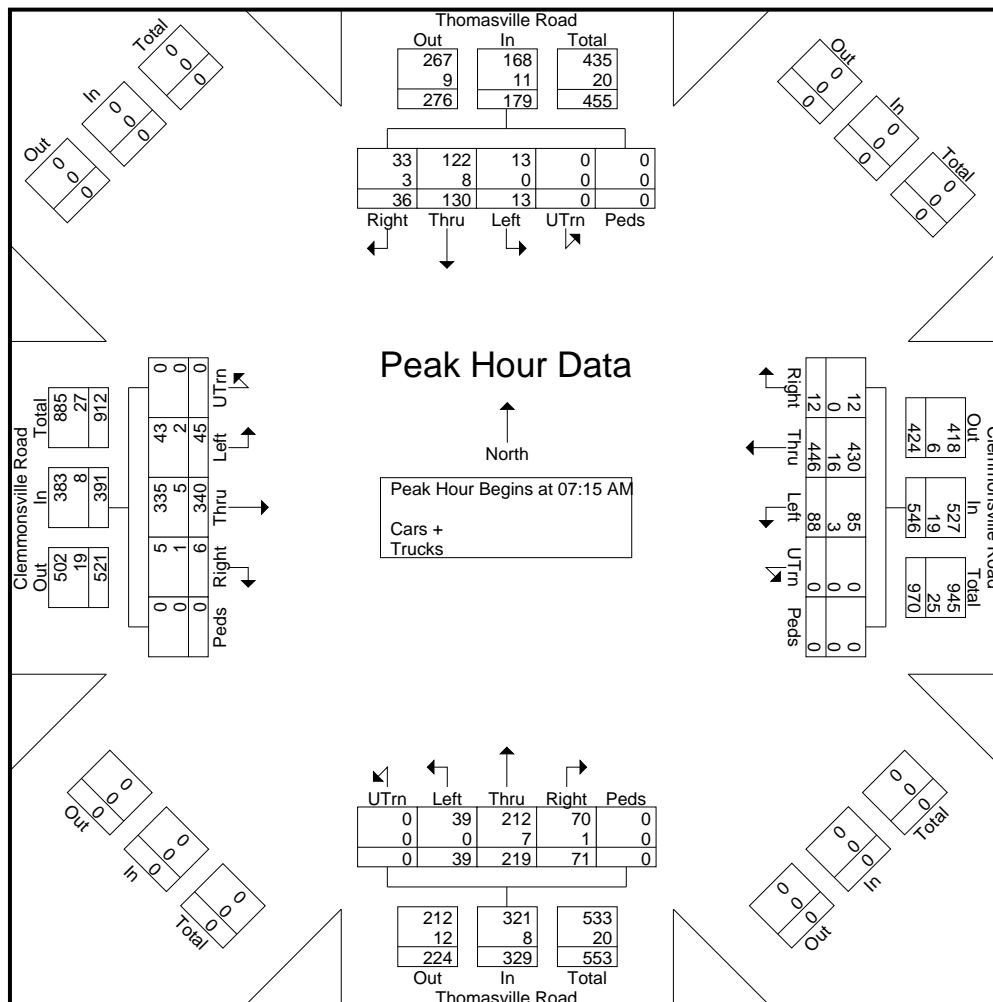
	Thomasville Road Southbound						Clemmons ville Road Westbound						Thomasville Road Northbound						Clemmons ville Road Eastbound						
Start Time	UTrn	Left	Thru	Right	Peds	App. Total	UTrn	Left	Thru	Right	Peds	App. Total	UTrn	Left	Thru	Right	Peds	App. Total	UTrn	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	0	1	27	10	0	38	0	25	75	2	0	102	0	4	32	19	0	55	0	5	73	3	0	81	276
07:15 AM	0	3	30	8	0	41	0	30	105	3	0	138	0	6	42	17	0	65	0	9	100	1	0	110	354
07:30 AM	0	3	23	8	0	34	0	23	125	2	0	150	0	14	44	20	0	78	0	5	76	1	0	82	344
07:45 AM	0	3	39	10	0	52	0	15	125	3	0	143	0	15	70	19	0	104	0	16	96	2	0	114	413
Total	0	10	119	36	0	165	0	93	430	10	0	533	0	39	188	75	0	302	0	35	345	7	0	387	1387
08:00 AM	0	4	38	10	0	52	0	20	91	4	0	115	0	4	63	15	0	82	0	15	68	2	0	85	334
08:15 AM	0	2	24	13	0	39	0	11	84	4	0	99	2	10	43	12	1	68	0	10	55	4	0	69	275
08:30 AM	0	1	12	14	0	27	0	18	84	3	0	105	0	3	31	8	0	42	0	6	46	1	0	53	227
08:45 AM	0	1	26	5	0	32	0	10	67	3	0	80	0	4	34	16	0	54	0	7	54	1	0	62	228
Total	0	8	100	42	0	150	0	59	326	14	0	399	2	21	171	51	1	246	0	38	223	8	0	269	1064
Grand Total	0	18	219	78	0	315	0	152	756	24	0	932	2	60	359	126	1	548	0	73	568	15	0	656	2451
Apprch %	0	5.7	69.5	24.8	0		0	16.3	81.1	2.6	0		0.4	10.9	65.5	23	0.2		0	11.1	86.6	2.3	0		
Total %	0	0.7	8.9	3.2	0	12.9	0	6.2	30.8	1	0	38	0.1	2.4	14.6	5.1	0	22.4	0	3	23.2	0.6	0	26.8	
Cars +	0	18	207	70	0	295	0	148	737	24	0	909	2	58	348	125	1	534	0	69	556	14	0	639	2377
% Cars +	0	100	94.5	89.7	0	93.7	0	97.4	97.5	100	0	97.5	100	96.7	96.9	99.2	100	97.4	0	94.5	97.9	93.3	0	97.4	97
Trucks	0	0	12	8	0	20	0	4	19	0	0	23	0	2	11	1	0	14	0	4	12	1	0	17	74
% Trucks	0	0	5.5	10.3	0	6.3	0	2.6	2.5	0	0	2.5	0	3.3	3.1	0.8	0	2.6	0	5.5	2.1	6.7	0	2.6	3



TRAFFIC DATA COLLECTION

File Name : Winston-Salem(Thomasville Rd and Clemmons Rd)
 Site Code :
 Start Date : 2/25/2025
 Page No : 2

	Thomasville Road Southbound						Clemmonsville Road Westbound						Thomasville Road Northbound						Clemmonsville Road Eastbound							
Start Time	UTrn	Left	Thru	Right	Peds	App. Total	UTrn	Left	Thru	Right	Peds	App. Total	UTrn	Left	Thru	Right	Peds	App. Total	UTrn	Left	Thru	Right	Peds	App. Total	Int. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																										
Peak Hour for Entire Intersection Begins at 07:15 AM																										
07:15 AM	0	3	30	8	0	41	0	30	105	3	0	138	0	6	42	17	0	65	0	9	100	1	0	110	354	
07:30 AM	0	3	23	8	0	34	0	23	125	2	0	150	0	14	44	20	0	78	0	5	76	1	0	82	344	
07:45 AM	0	3	39	10	0	52	0	15	125	3	0	143	0	15	70	19	0	104	0	16	96	2	0	114	413	
08:00 AM	0	4	38	10	0	52	0	20	91	4	0	115	0	4	63	15	0	82	0	15	68	2	0	85	334	
Total Volume	0	13	130	36	0	179	0	88	446	12	0	546	0	39	219	71	0	329	0	45	340	6	0	391	1445	
% App. Total	0	7.3	72.6	20.1	0		0	16.1	81.7	2.2	0		0	11.9	66.6	21.6	0		0	11.5	87	1.5	0			
PHF	.000	.813	.833	.900	.000	.861	.000	.733	.892	.750	.000	.910	.000	.650	.782	.888	.000	.791	.000	.703	.850	.750	.000	.857	.875	
Cars +	0	13	122	33	0	168	0	85	430	12	0	527	0	39	212	70	0	321	0	43	335	5	0	383	1399	
% Cars +	0	100	93.8	91.7	0	93.9	0	96.6	96.4	100	0	96.5	0	100	96.8	98.6	0	97.6	0	95.6	98.5	83.3	0	98.0	96.8	
Trucks	0	0	8	3	0	11	0	3	16	0	0	19	0	0	7	1	0	8	0	2	5	1	0	8	46	
% Trucks	0	0	6.2	8.3	0	6.1	0	3.4	3.6	0	0	3.5	0	0	3.2	1.4	0	2.4	0	4.4	1.5	16.7	0	2.0	3.2	





TRAFFIC DATA COLLECTION

File Name : Winston-Salem(Thomasville Rd and Clemmons ville Rd)
 Site Code :
 Start Date : 2/25/2025
 Page No : 1

Groups Printed- Cars + - Trucks

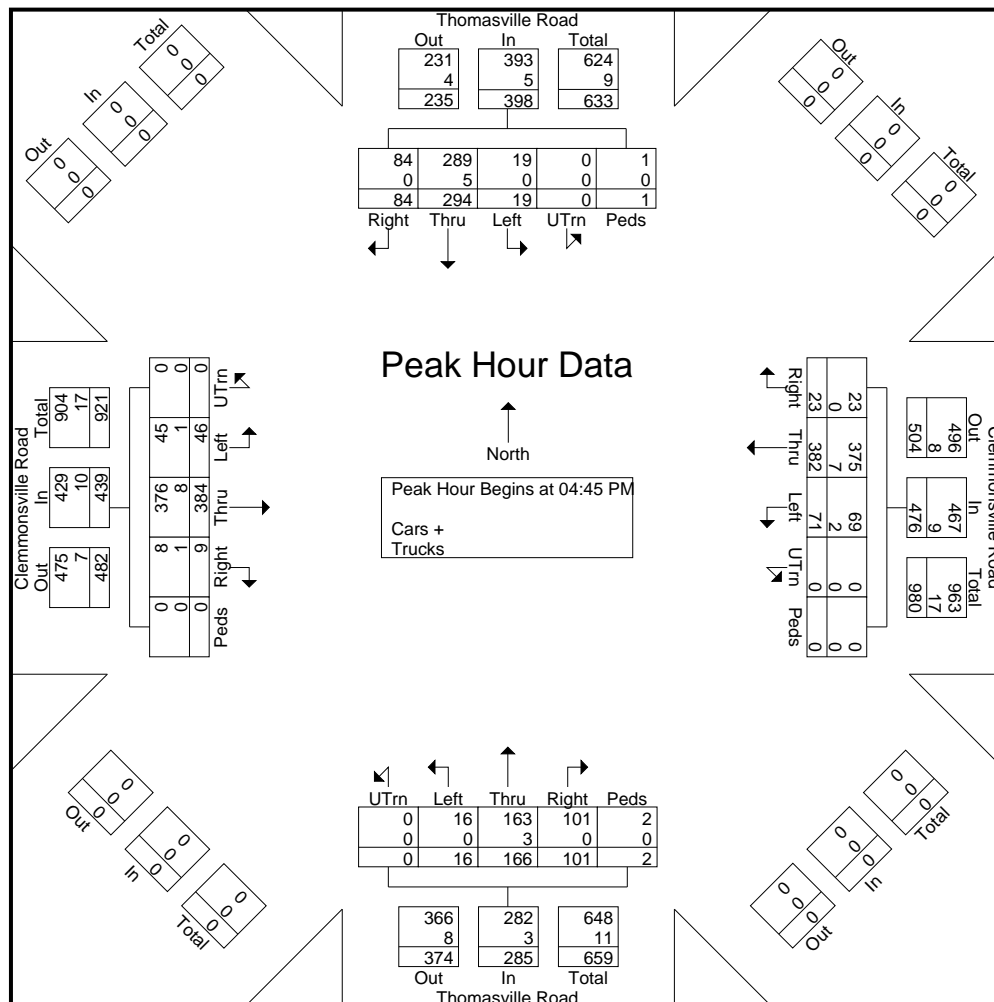
	Thomasville Road Southbound						Clemmons ville Road Westbound						Thomasville Road Northbound						Clemmons ville Road Eastbound						
Start Time	UTrn	Left	Thru	Right	Peds	App. Total	UTrn	Left	Thru	Right	Peds	App. Total	UTrn	Left	Thru	Right	Peds	App. Total	UTrn	Left	Thru	Right	Peds	App. Total	Int. Total
04:00 PM	0	8	49	13	0	70	0	17	109	5	0	131	0	3	33	27	0	63	0	9	102	1	0	112	376
04:15 PM	0	6	53	14	0	73	0	25	115	5	0	145	0	2	41	25	0	68	0	12	106	1	0	119	405
04:30 PM	0	3	40	19	1	63	0	17	84	3	0	104	0	9	39	29	0	77	0	13	86	5	0	104	348
04:45 PM	0	2	65	18	0	85	0	15	84	6	0	105	0	5	43	23	0	71	0	11	105	1	0	117	378
Total	0	19	207	64	1	291	0	74	392	19	0	485	0	19	156	104	0	279	0	45	399	8	0	452	1507
05:00 PM	0	5	67	20	0	92	0	17	99	7	0	123	0	4	35	25	2	66	0	11	103	3	0	117	398
05:15 PM	0	6	82	20	0	108	0	21	100	3	0	124	0	3	44	35	0	82	0	13	84	2	0	99	413
05:30 PM	0	6	80	26	1	113	0	18	99	7	0	124	0	4	44	18	0	66	0	11	92	3	0	106	409
05:45 PM	0	5	33	16	0	54	0	15	97	6	0	118	0	6	36	23	0	65	0	18	113	3	0	134	371
Total	0	22	262	82	1	367	0	71	395	23	0	489	0	17	159	101	2	279	0	53	392	11	0	456	1591
Grand Total	0	41	469	146	2	658	0	145	787	42	0	974	0	36	315	205	2	558	0	98	791	19	0	908	3098
Apprch %	0	6.2	71.3	22.2	0.3		0	14.9	80.8	4.3	0		0	6.5	56.5	36.7	0.4		0	10.8	87.1	2.1	0		
Total %	0	1.3	15.1	4.7	0.1	21.2	0	4.7	25.4	1.4	0	31.4	0	1.2	10.2	6.6	0.1	18	0	3.2	25.5	0.6	0	29.3	
Cars +	0	41	458	145	2	646	0	138	770	42	0	950	0	35	310	203	2	550	0	95	777	18	0	890	3036
% Cars +	0	100	97.7	99.3	100	98.2	0	95.2	97.8	100	0	97.5	0	97.2	98.4	99	100	98.6	0	96.9	98.2	94.7	0	98	98
Trucks	0	0	11	1	0	12	0	7	17	0	0	24	0	1	5	2	0	8	0	3	14	1	0	18	62
% Trucks	0	0	2.3	0.7	0	1.8	0	4.8	2.2	0	0	2.5	0	2.8	1.6	1	0	1.4	0	3.1	1.8	5.3	0	2	2



TRAFFIC DATA COLLECTION

File Name : Winston-Salem(Thomasville Rd and Clemmons ville Rd)
 Site Code :
 Start Date : 2/25/2025
 Page No : 2

	Thomasville Road Southbound						Clemmonsville Road Westbound						Thomasville Road Northbound						Clemmonsville Road Eastbound						
Start Time	UTrn	Left	Thru	Right	Peds	App. Total	UTrn	Left	Thru	Right	Peds	App. Total	UTrn	Left	Thru	Right	Peds	App. Total	UTrn	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																									
Peak Hour for Entire Intersection Begins at 04:45 PM																									
04:45 PM	0	2	65	18	0	85	0	15	84	6	0	105	0	5	43	23	0	71	0	11	105	1	0	117	378
05:00 PM	0	5	67	20	0	92	0	17	99	7	0	123	0	4	35	25	2	66	0	11	103	3	0	117	398
05:15 PM	0	6	82	20	0	108	0	21	100	3	0	124	0	3	44	35	0	82	0	13	84	2	0	99	413
05:30 PM	0	6	80	26	1	113	0	18	99	7	0	124	0	4	44	18	0	66	0	11	92	3	0	106	409
Total Volume	0	19	294	84	1	398	0	71	382	23	0	476	0	16	166	101	2	285	0	46	384	9	0	439	1598
% App. Total	0	4.8	73.9	21.1	0.3		0	14.9	80.3	4.8	0		0	5.6	58.2	35.4	0.7		0	10.5	87.5	2.1	0		
PHF	.000	.792	.896	.808	.250	.881	.000	.845	.955	.821	.000	.960	.000	.800	.943	.721	.250	.869	.000	.885	.914	.750	.000	.938	.967
Cars +	0	19	289	84	1	393	0	69	375	23	0	467	0	16	163	101	2	282	0	45	376	8	0	429	1571
% Cars +	0	100	98.3	100	100	98.7	0	97.2	98.2	100	0	98.1	0	100	98.2	100	100	98.9	0	97.8	97.9	88.9	0	97.7	98.3
Trucks	0	0	5	0	0	5	0	2	7	0	0	9	0	0	3	0	0	3	0	1	8	1	0	10	27
% Trucks	0	0	1.7	0	0	1.3	0	2.8	1.8	0	0	1.9	0	0	1.8	0	0	1.1	0	2.2	2.1	11.1	0	2.3	1.7





TRAFFIC DATA COLLECTION

File Name : Winston-Salem(Thomasville Rd and Glencoe St)
 Site Code :
 Start Date : 2/25/2025
 Page No : 1

Groups Printed- Cars + - Trucks

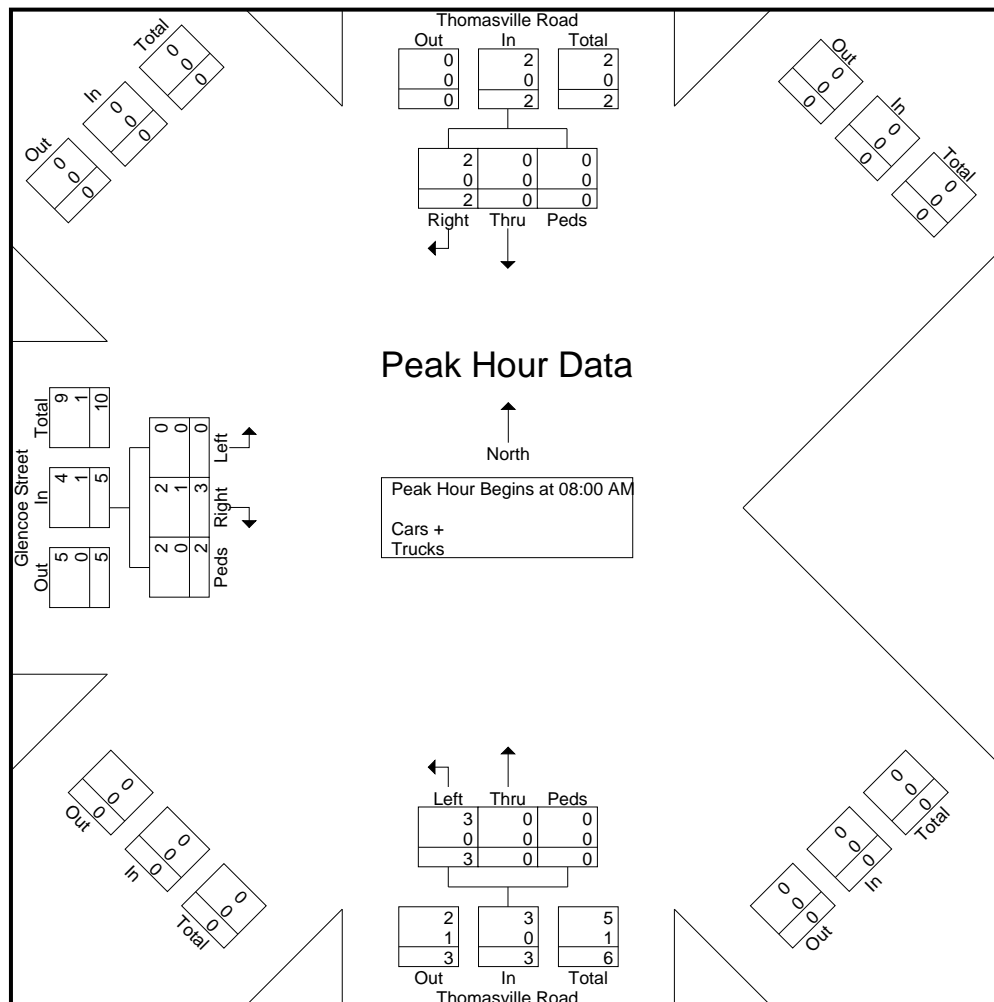
	Thomasville Road Southbound				Thomasville Road Northbound				Glencoe Street Eastbound				
Start Time	Thru	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Left	Right	Peds	App. Total	Int. Total
07:00 AM	0	0	0	0	1	0	0	1	0	0	0	0	1
07:15 AM	0	0	0	0	0	0	0	0	1	3	0	4	4
07:30 AM	0	0	0	0	1	0	0	1	0	0	0	0	1
07:45 AM	0	1	0	1	1	0	0	1	0	0	0	0	2
Total	0	1	0	1	3	0	0	3	1	3	0	4	8
08:00 AM	0	0	0	0	1	0	0	1	0	0	1	1	2
08:15 AM	0	1	0	1	0	0	0	0	0	0	1	1	2
08:30 AM	0	0	0	0	1	0	0	1	0	1	0	1	2
08:45 AM	0	1	0	1	1	0	0	1	0	2	0	2	4
Total	0	2	0	2	3	0	0	3	0	3	2	5	10
Grand Total	0	3	0	3	6	0	0	6	1	6	2	9	18
Apprch %	0	100	0		100	0	0		11.1	66.7	22.2		
Total %	0	16.7	0	16.7	33.3	0	0	33.3	5.6	33.3	11.1	50	
Cars +	0	3	0	3	6	0	0	6	1	5	2	8	17
% Cars +	0	100	0	100	100	0	0	100	100	83.3	100	88.9	94.4
Trucks	0	0	0	0	0	0	0	0	0	1	0	1	1
% Trucks	0	0	0	0	0	0	0	0	0	16.7	0	11.1	5.6



TRAFFIC DATA COLLECTION

File Name : Winston-Salem(Thomasville Rd and Glencoe St)
 Site Code :
 Start Date : 2/25/2025
 Page No : 2

	Thomasville Road Southbound				Thomasville Road Northbound				Glencoe Street Eastbound				
Start Time	Thru	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Left	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 08:00 AM													
08:00 AM	0	0	0	0	1	0	0	1	0	0	1	1	2
08:15 AM	0	1	0	1	0	0	0	0	0	0	1	1	2
08:30 AM	0	0	0	0	1	0	0	1	0	1	0	1	2
08:45 AM	0	1	0	1	1	0	0	1	0	2	0	2	4
Total Volume	0	2	0	2	3	0	0	3	0	3	2	5	10
% App. Total	0	100	0		100	0	0		0	60	40		
PHF	.000	.500	.000	.500	.750	.000	.000	.750	.000	.375	.500	.625	.625
Cars +	0	2	0	2	3	0	0	3	0	2	2	4	9
% Cars +	0	100	0	100	100	0	0	100	0	66.7	100	80.0	90.0
Trucks	0	0	0	0	0	0	0	0	0	1	0	1	1
% Trucks	0	0	0	0	0	0	0	0	0	33.3	0	20.0	10.0





File Name : Winston-Salem(Thomasville Rd and Glencoe St)
Site Code :
Start Date : 2/25/2025
Page No : 1

Groups Printed- Cars + - Trucks

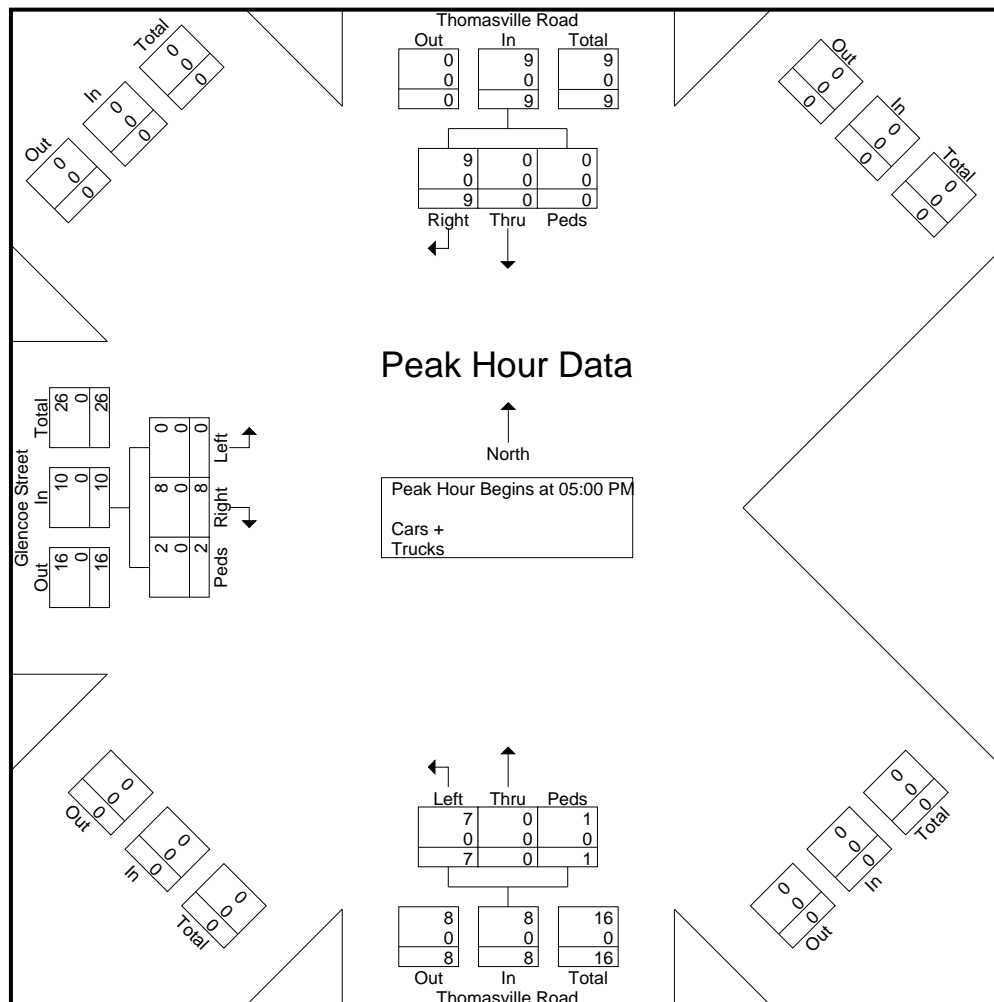
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TRAFFIC DATA COLLECTION

File Name : Winston-Salem(Thomasville Rd and Glencoe St)
 Site Code :
 Start Date : 2/25/2025
 Page No : 2

	Thomasville Road Southbound				Thomasville Road Northbound				Glencoe Street Eastbound				
Start Time	Thru	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Left	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 05:00 PM													
05:00 PM	0	2	0	2	0	0	0	0	0	2	0	2	4
05:15 PM	0	4	0	4	2	0	1	3	0	2	2	4	11
05:30 PM	0	1	0	1	3	0	0	3	0	3	0	3	7
05:45 PM	0	2	0	2	2	0	0	2	0	1	0	1	5
Total Volume	0	9	0	9	7	0	1	8	0	8	2	10	27
% App. Total	0	100	0		87.5	0	12.5		0	80	20		
PHF	.000	.563	.000	.563	.583	.000	.250	.667	.000	.667	.250	.625	.614
Cars +	0	9	0	9	7	0	1	8	0	8	2	10	27
% Cars +	0	100	0	100	100	0	100	100	0	100	100	100	100
Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0
% Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0



APPENDIX C

Traffic Forecast Information

(I-5880)

Final Report

NCDOT State TIP Project No. I-5880

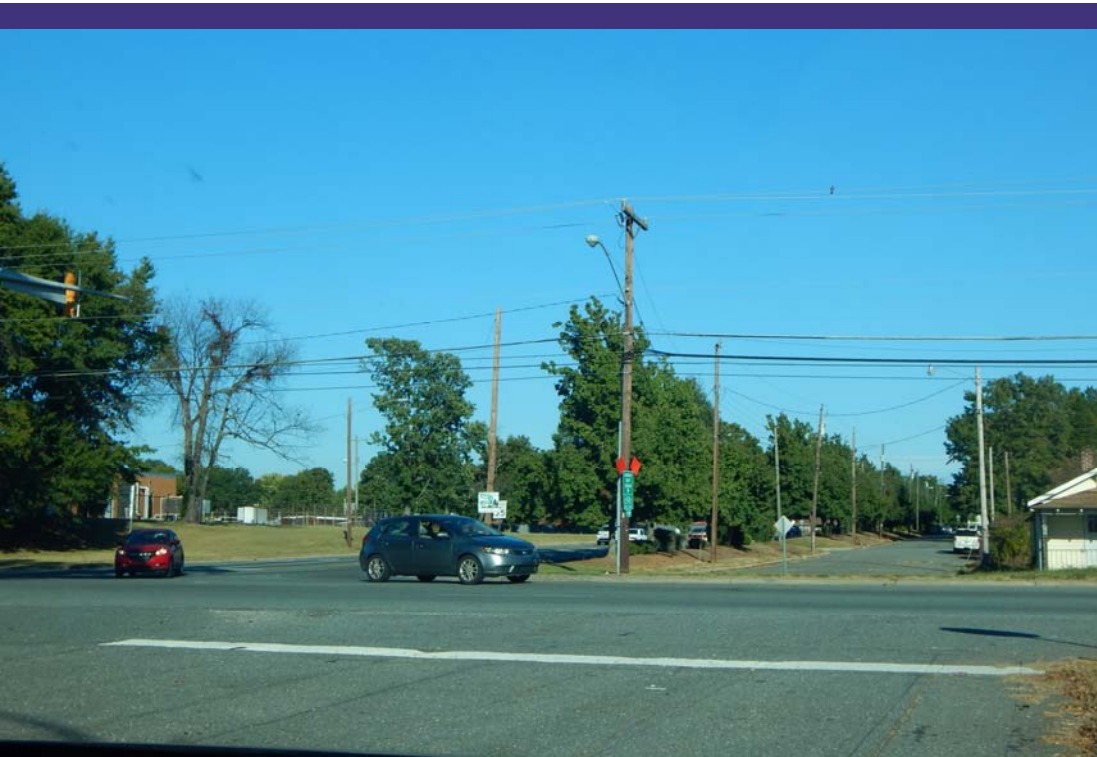
Interchange Improvement of I-40 with NC 109 (Thomasville Road) 109

Convert Half Interchange to Diamond

Winston Salem, Forsyth County

WBS # 53080.1.1

MAY 2018



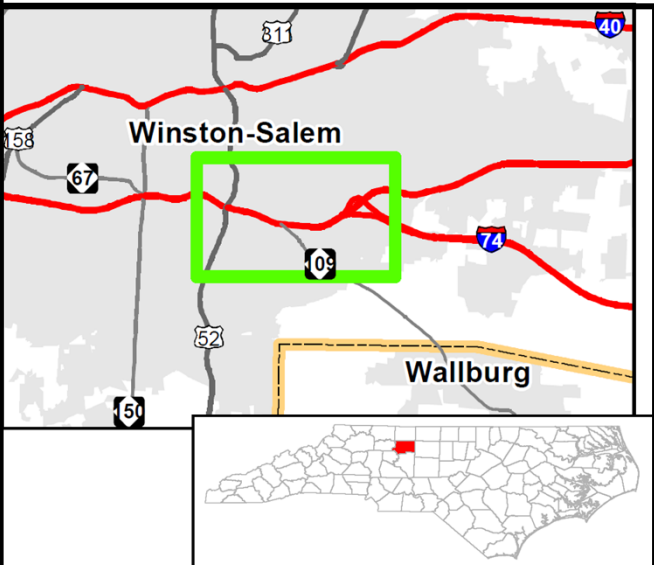
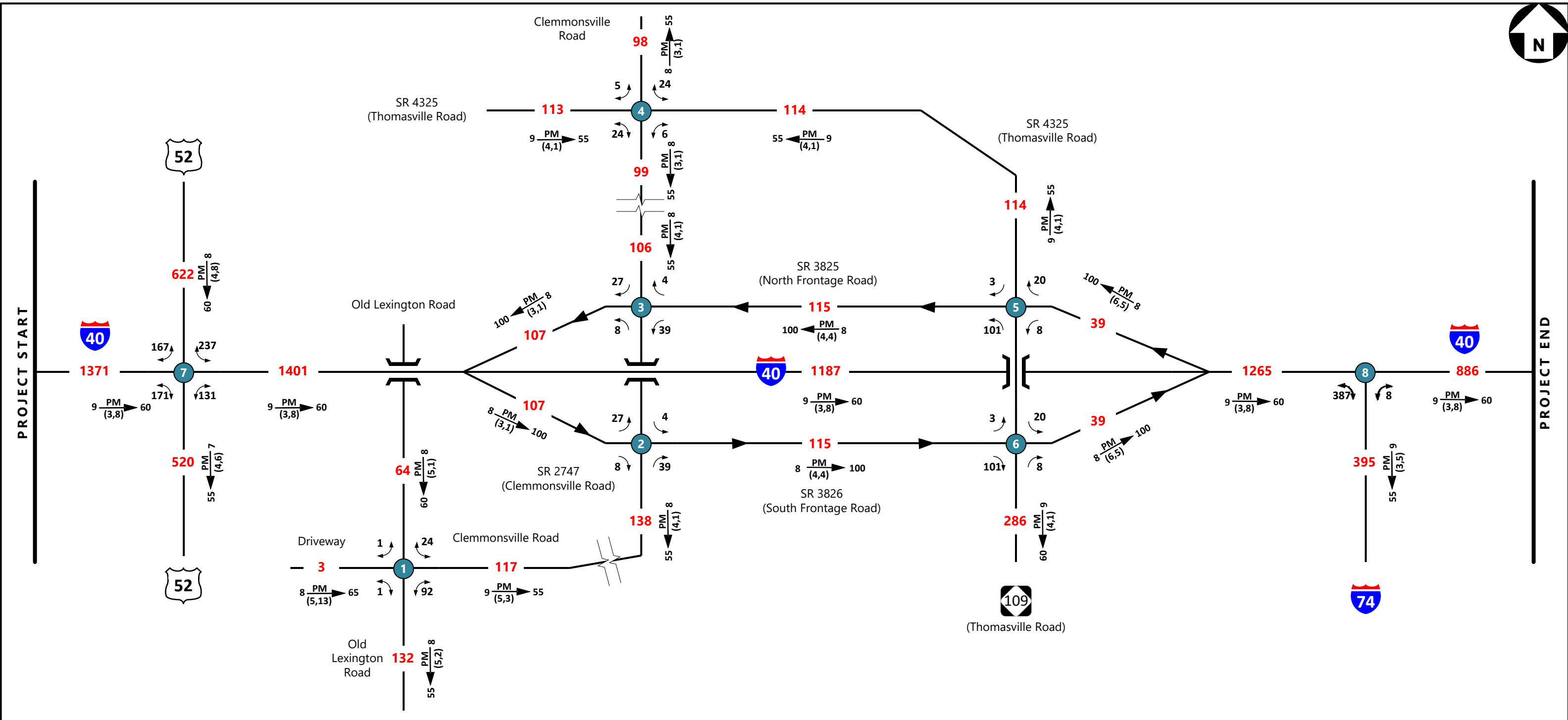
PREPARED FOR



HDR

PREPARED BY





2030 Average Annual Daily Traffic

No-Build Alternative With MTP Projects

(Scenario 5) SHEET 1 OF 1

LEGEND

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

— Existing Roadway

PM Peak Hour

D Peak Hour Directional Split (%)

Indicates Direction of D

Duals, TTSTs (%)

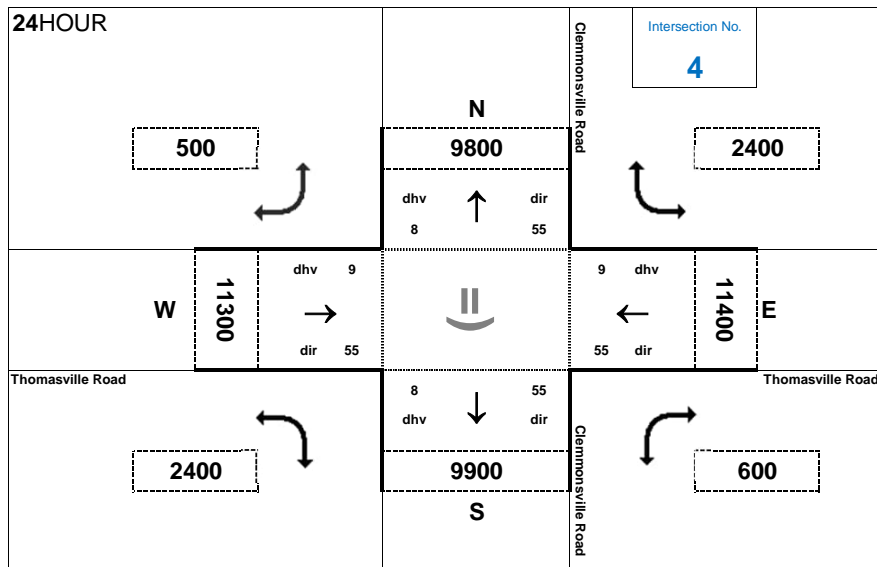
K Design Hour Factor (%)

X Movement Prohibited

1- Less than 50 VPD

D ← PM
(d,t) K

TIP: I-5880
WBS: 53080.1.1
DIVISION: 9
COUNTY: Forsyth
DATE: May 4, 2018
PREPARED BY: VHB Engineering NC, P.C.
LOCATION: I-40/US 311 at NC 109 (Thomasville Road) / SR 2747 (Clemmons Road)
PROJECT: Split Diamond Interchange Improvements

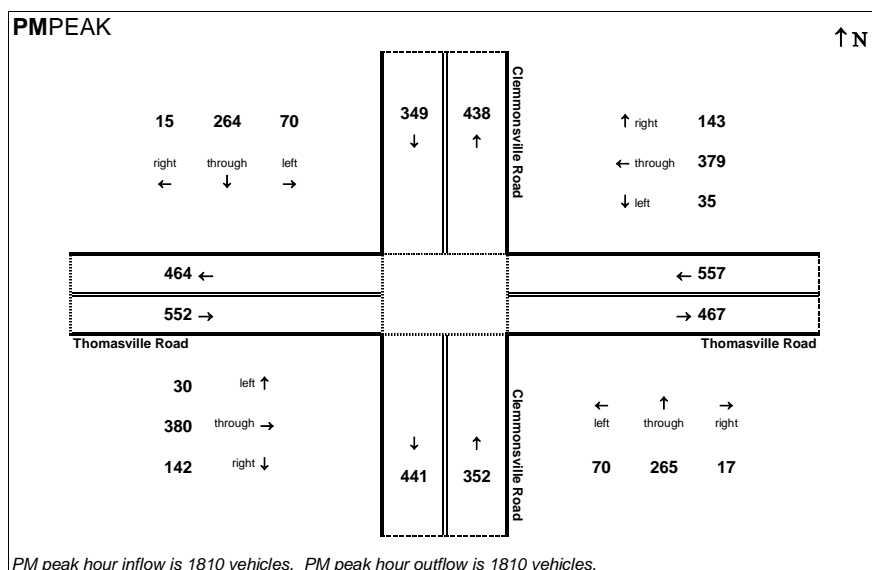
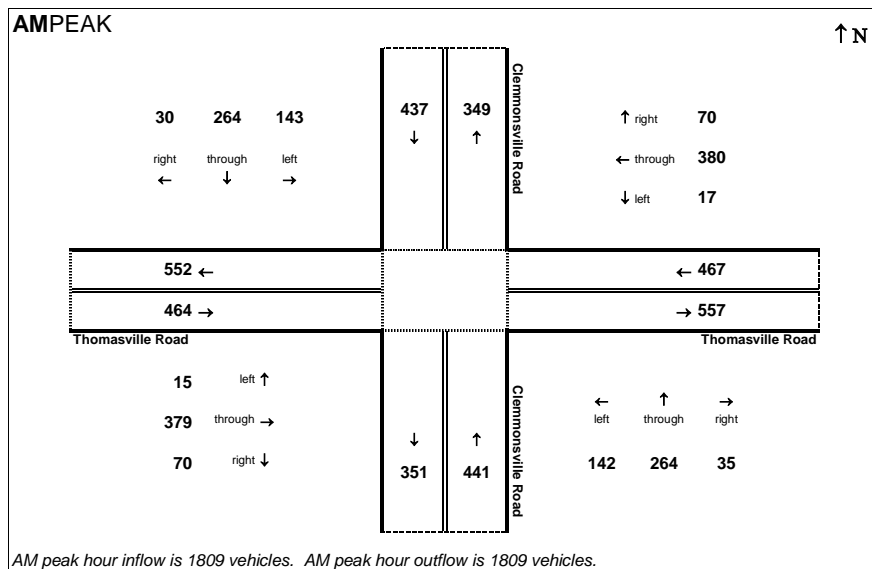


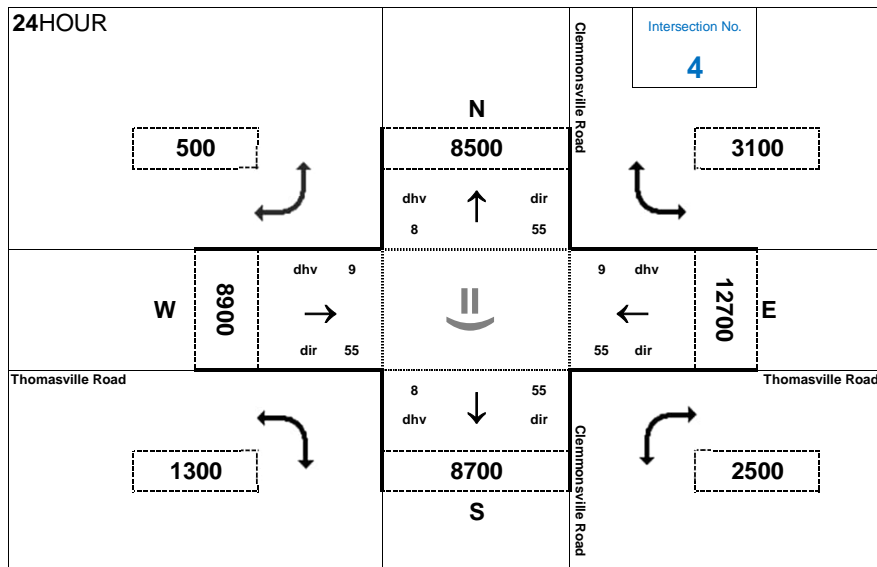
Peak Hour Volume Breakouts Report:
No Build 2030 with MTP projects complete

Traffic Forecast Release Date:
May 2018

Traffic Data Year:
2030

Project:
No Build 2030 with MTPs



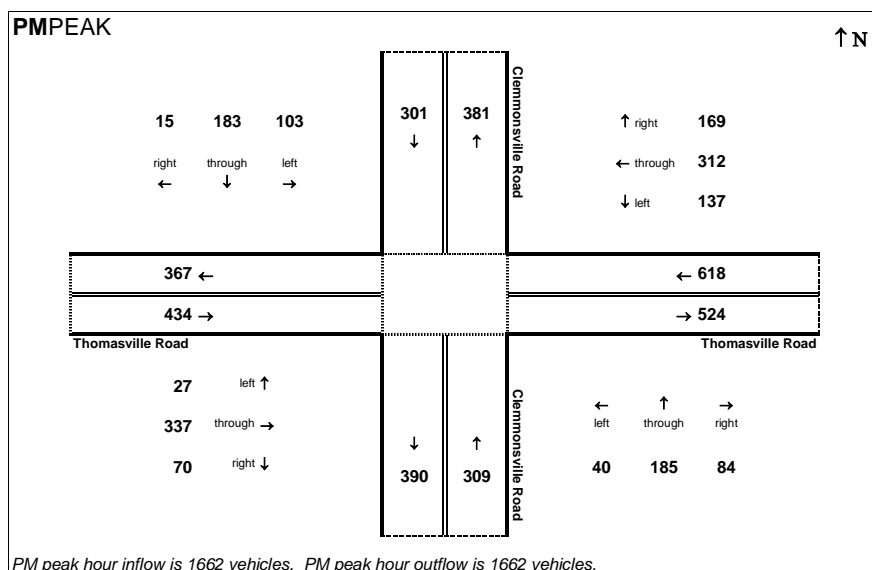
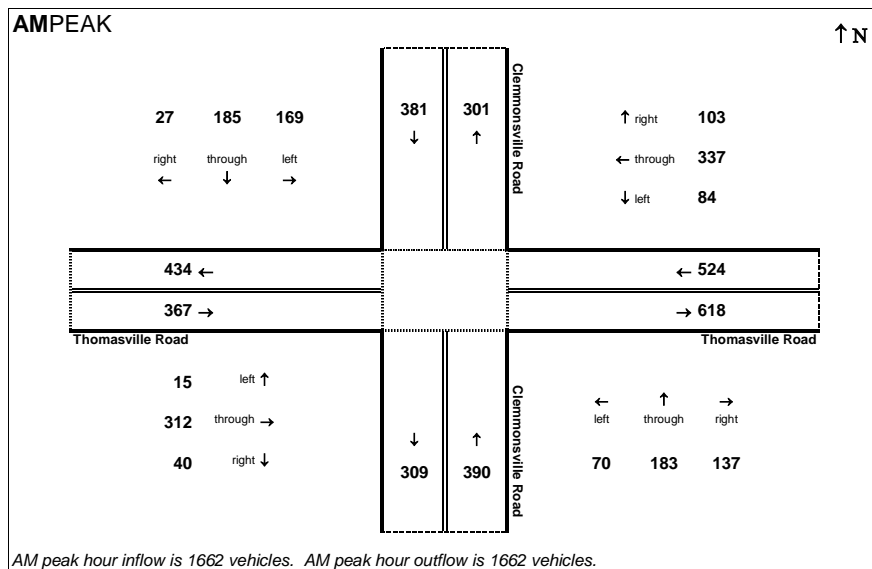


Peak Hour Volume Breakouts Report:
Build 2030 with MTP projects complete

Traffic Forecast Release Date:
May 2018

Traffic Data Year:
2030

Project:
Build 2030 with MTPs



Calculated Volume Adjustment for NCDOT STIP I-5880

		I-5880 Forecast Volumes									
		2030 Projected		2030 No-Build		2030 Build		Calculated Adjustment		2030 No-Build	
		AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
1 - Clemmonsville Road & Thomasville Road	SB Right	37	86	70	142	40	70	0.57	0.49	22	43
	SB Through	133	301	379	380	312	337	0.82	0.89	110	267
	SB Left	13	19	15	30	15	27	1.00	0.90	13	18
	SBU	0	0			0	0	0.00	0.00	0	0
	WB Right	12	24	30	15	27	15	0.90	1.00	11	24
	WB Through	457	392	264	264	185	183	0.70	0.69	321	272
	WB Left	90	73	143	70	169	103	1.18	1.47	107	108
	WBU	0	0			0	0	0.00	0.00	0	0
	NB Right	73	104	70	143	103	169	1.47	1.18	108	123
	NB Through	225	170	380	379	337	312	0.89	0.82	200	140
	NB Left	40	16	17	35	84	137	4.94	3.91	198	63
	NBU	0	0			0	0	0.00	0.00	0	0
	EB Right	6	9	35	17	137	84	3.91	4.94	24	45
	EB Through	349	394	264	265	183	185	0.69	0.70	242	276
	EB Left	46	47	142	70	70	40	0.49	0.57	23	27
	EBU	0	0			0	0	0.00	0.00	0	0

ADT 2017
ADT 2040

CLEMMONSVILLE RD

9,400
8,200

400
600

3,700
2,900

10,600
14,300

NC 109
(THOMASVILLE RD)

800
1,800

(THOMASVILLE RD)
NC 109

2,000
2,700

CLEMMONSVILLE RD

8,100
9,200

~~-Y2- PC Sta. 12+79.35~~
~~REV- PT Sta. 12+44.47= LB~~
~~-Y2- PT Sta. 12+44.47 LA~~
 JORNAL SILVA
 PG 1739
 G 50
~~-Y2REV- PC Sta. 12+30.90~~
 (40)
 BEGIN CONSTRUCTION
~~-Y2REV- STA. 10+67~~

<i>PI Sta 6+55.17</i>	<i>PI Sta 7+61.64</i>	<i>PI Sta 8+66.59</i>	<i>PI Sta 10+53.58</i>	<i>PI Sta 12+08.53</i>	<i>PI Sta 13+35.46</i>	<i>PI Sta 17+33.15</i>
$\Delta = 3^{\circ} 59' 06.5''$ (LT)	$\Delta = 14^{\circ} 50' 35.8''$ (LT)	$\Delta = 29^{\circ} 55' 05.0''$ (RT)	$\Delta = 34^{\circ} 45' 09.7''$ (LT)	$\Delta = 27^{\circ} 03' 10.5''$ (RT)	$\Delta = 9^{\circ} 47' 57.2''$ (LT)	$\Delta = 4^{\circ} 12' 02.2''$ (LT)
<i>D = 5' 43" 46.5"</i>	<i>D = 14' 19" 26.2"</i>	<i>D = 28' 38" 52.4"</i>	<i>D = 28' 38" 52.4"</i>	<i>D = 14' 19" 26.2"</i>	<i>D = 14' 19" 26.2"</i>	<i>D = 14' 19" 26.2"</i>
<i>L = 69.55'</i>	<i>L = 103.63'</i>	<i>L = 104.43'</i>	<i>L = 121.31'</i>	<i>L = 188.87'</i>	<i>L = 68.41'</i>	<i>L = 349.71'</i>
<i>T = 34.79'</i>	<i>T = 52.10'</i>	<i>T = 53.44'</i>	<i>T = 121.31'</i>	<i>T = 96.23'</i>	<i>T = 34.29'</i>	<i>T = 174.93'</i>
<i>R = 1,000.00'</i>	<i>R = 400.00'</i>	<i>R = 200.00'</i>	<i>R = 200.00'</i>	<i>R = 400.00'</i>	<i>R = 400.00'</i>	<i>R = 4,770.00'</i>
						<i>R0 = 136'</i>

367 WY
MATCH LINE -Y1- STA. 19+50.00 SFF SHEET 06

APPENDIX D

Capacity Analysis

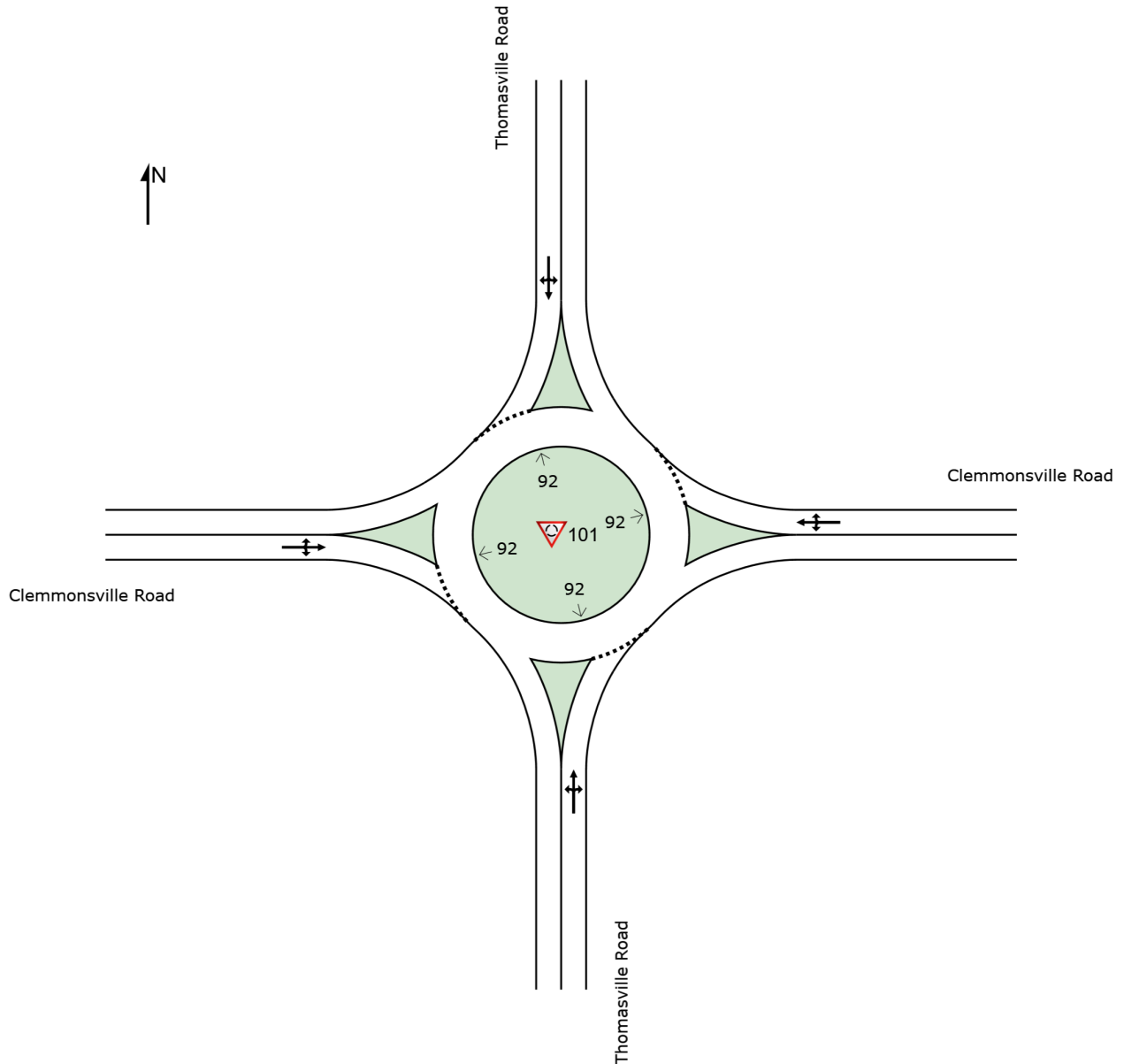
*Clemmons*ville Road
&
Thomasville Road

SITE LAYOUT

 **Site: 101 [2030 No Build AM (Site Folder: Clemmonsville Road & Thomasville Road)]**

Clemmonsville Road and Thomasville Road
Site Category: (None)
Roundabout

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



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Project: C:\Users\ChaseSmith\RFK Projects\25-007 Triple A Mart\Analysis\SIDRA\Clemmonsville Road & Thomasville Road.sip9

MOVEMENT FLOWS FOR SITE (INPUT)

Approach movement input flow rates by movement class (vehicles per 60 mins)

 Site: 101 [2030 No Build AM (Site Folder: Clemmons Road & Thomasville Road)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Clemmons Road and Thomasville Road

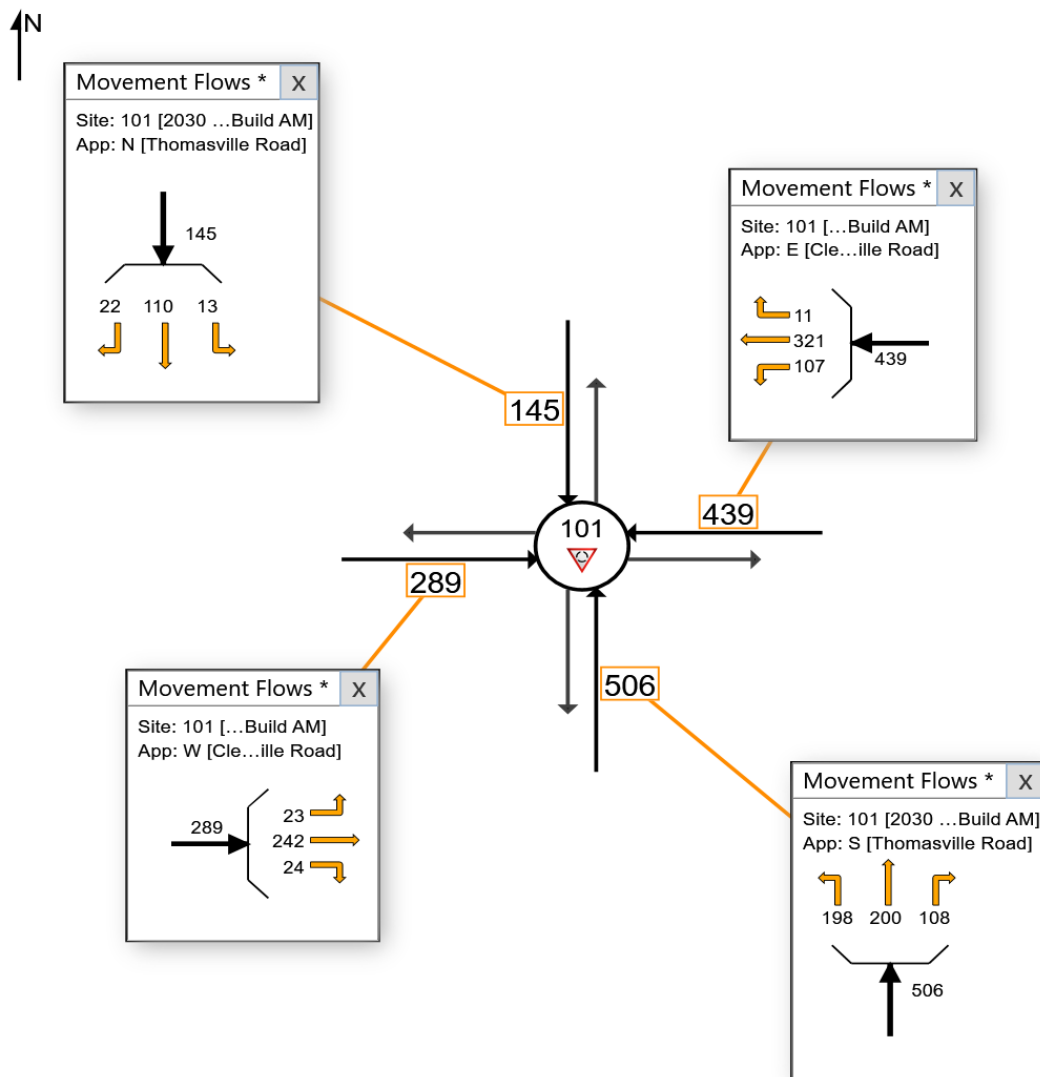
Site Category: (None)

Roundabout


Use the button below to open or close all popup boxes. Click value labels to open selected ones.
Click and drag popup boxes to move to preferred positions.

Close All Popups

All Movement Classes (*)



MOVEMENT SUMMARY

 **Site: 101 [2030 No Build AM (Site Folder: Clemmons ville Road & Thomasville Road)]**

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Clemmons ville Road and Thomasville Road
Site Category: (None)
Roundabout

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total HV]	%	[Total HV]	%	v/c	sec		[Veh. veh	Dist] ft				mph
South: Thomasville Road															
3	L2	All MCs	220	2.0	220	2.0	0.576	11.3	LOS B	5.4	137.7	0.69	0.58	0.91	27.3
8	T1	All MCs	222	2.0	222	2.0	0.576	11.3	LOS B	5.4	137.7	0.69	0.58	0.91	27.7
18	R2	All MCs	120	2.0	120	2.0	0.576	11.3	LOS B	5.4	137.7	0.69	0.58	0.91	27.6
Approach			562	2.0	562	2.0	0.576	11.3	LOS B	5.4	137.7	0.69	0.58	0.91	27.5
East: Clemmonsville Road															
1	L2	All MCs	119	2.0	119	2.0	0.592	13.3	LOS B	5.2	132.3	0.77	0.77	1.15	26.9
6	T1	All MCs	357	2.0	357	2.0	0.592	13.3	LOS B	5.2	132.3	0.77	0.77	1.15	27.4
16	R2	All MCs	12	2.0	12	2.0	0.592	13.3	LOS B	5.2	132.3	0.77	0.77	1.15	27.2
Approach			488	2.0	488	2.0	0.592	13.3	LOS B	5.2	132.3	0.77	0.77	1.15	27.2
North: Thomasville Road															
7	L2	All MCs	14	2.0	14	2.0	0.249	8.6	LOS A	1.0	26.1	0.65	0.59	0.65	28.8
4	T1	All MCs	122	2.0	122	2.0	0.249	8.6	LOS A	1.0	26.1	0.65	0.59	0.65	29.3
14	R2	All MCs	24	2.0	24	2.0	0.249	8.6	LOS A	1.0	26.1	0.65	0.59	0.65	29.1
Approach			161	2.0	161	2.0	0.249	8.6	LOS A	1.0	26.1	0.65	0.59	0.65	29.2
West: Clemmonsville Road															
5	L2	All MCs	26	2.0	26	2.0	0.311	6.5	LOS A	1.6	40.8	0.48	0.31	0.48	29.6
2	T1	All MCs	269	2.0	269	2.0	0.311	6.5	LOS A	1.6	40.8	0.48	0.31	0.48	30.1
12	R2	All MCs	27	2.0	27	2.0	0.311	6.5	LOS A	1.6	40.8	0.48	0.31	0.48	29.9
Approach			321	2.0	321	2.0	0.311	6.5	LOS A	1.6	40.8	0.48	0.31	0.48	30.0
All Vehicles			1532	2.0	1532	2.0	0.592	10.6	LOS B	5.4	137.7	0.67	0.58	0.87	28.1

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).

Roundabout LOS Method: Same as Sign Control.

Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.

LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).

Roundabout Capacity Model: US HCM 6.

Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

Gap-Acceptance Capacity Formula: Siegloch M1 implied by US HCM 6 Roundabout Capacity Model.

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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Project: C:\Users\ChaseSmith\RFK Projects\25-007 Triple A Mart\Analysis\SIDRA\Clemmons ville Road & Thomasville Road.sip9

MOVEMENT FLOWS FOR SITE (INPUT)

Approach movement input flow rates by movement class (vehicles per 60 mins)

 **Site: 101 [2030 No Build PM (Site Folder: Clemmonsville Road & Thomasville Road)]**

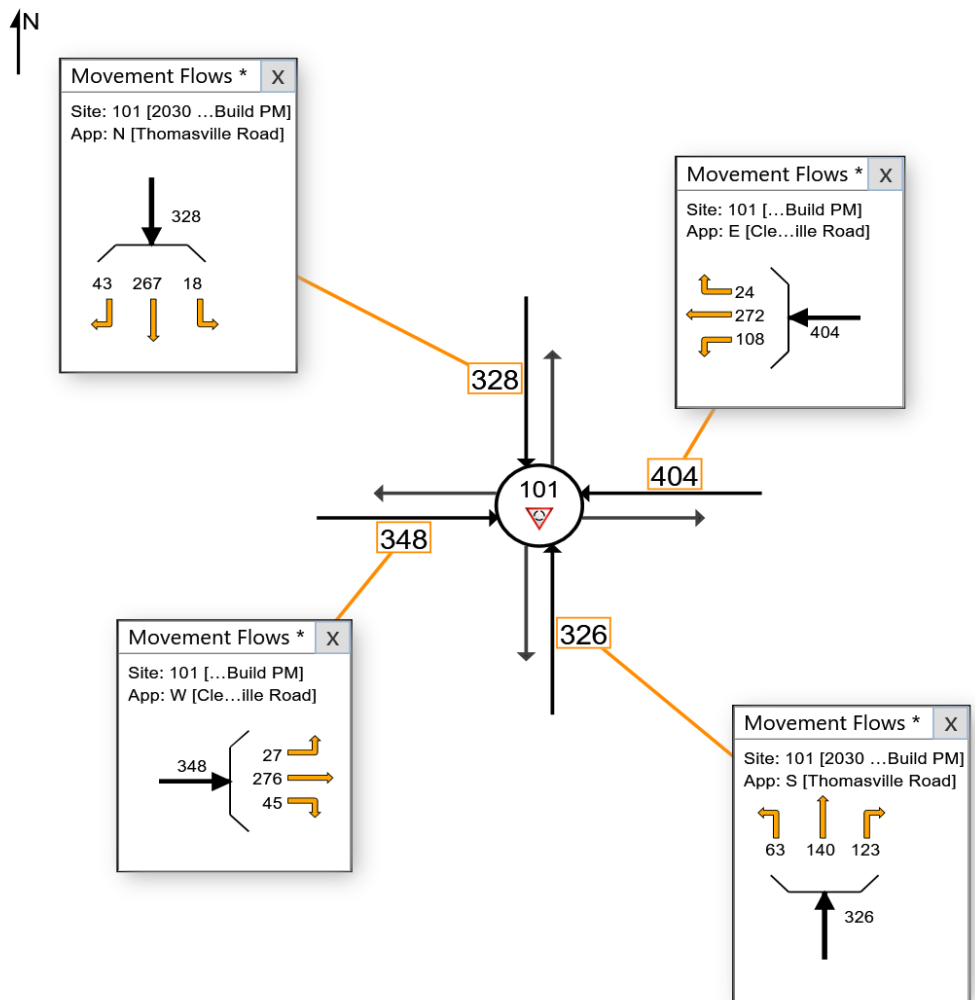
Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Clemmonsville Road and Thomasville Road
Site Category: (None)
Roundabout

Use the button below to open or close all popup boxes. Click value labels to open selected ones.
Click and drag popup boxes to move to preferred positions.

Close All Popups

All Movement Classes (*)



MOVEMENT SUMMARY

 **Site: 101 [2030 No Build PM (Site Folder: Clemmons ville Road & Thomasville Road)]**

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Clemmons ville Road and Thomasville Road

Site Category: (None)

Roundabout

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total HV]	%	[Total HV]	%	v/c	sec		[Veh. veh	Dist]				mph
South: Thomasville Road															
3	L2	All MCs	70	2.0	70	2.0	0.390	8.2	LOS A	2.1	52.5	0.59	0.42	0.59	28.7
8	T1	All MCs	156	2.0	156	2.0	0.390	8.2	LOS A	2.1	52.5	0.59	0.42	0.59	29.2
18	R2	All MCs	137	2.0	137	2.0	0.390	8.2	LOS A	2.1	52.5	0.59	0.42	0.59	29.0
Approach			362	2.0	362	2.0	0.390	8.2	LOS A	2.1	52.5	0.59	0.42	0.59	29.0
East: Clemmons ville Road															
1	L2	All MCs	120	2.0	120	2.0	0.434	8.2	LOS A	2.6	65.2	0.55	0.35	0.55	28.6
6	T1	All MCs	302	2.0	302	2.0	0.434	8.2	LOS A	2.6	65.2	0.55	0.35	0.55	29.1
16	R2	All MCs	27	2.0	27	2.0	0.434	8.2	LOS A	2.6	65.2	0.55	0.35	0.55	28.9
Approach			449	2.0	449	2.0	0.434	8.2	LOS A	2.6	65.2	0.55	0.35	0.55	28.9
North: Thomasville Road															
7	L2	All MCs	20	2.0	20	2.0	0.454	10.3	LOS B	2.8	71.6	0.69	0.62	0.85	28.2
4	T1	All MCs	297	2.0	297	2.0	0.454	10.3	LOS B	2.8	71.6	0.69	0.62	0.85	28.7
14	R2	All MCs	48	2.0	48	2.0	0.454	10.3	LOS B	2.8	71.6	0.69	0.62	0.85	28.5
Approach			364	2.0	364	2.0	0.454	10.3	LOS B	2.8	71.6	0.69	0.62	0.85	28.6
West: Clemmons ville Road															
5	L2	All MCs	30	2.0	30	2.0	0.454	9.9	LOS A	2.9	72.4	0.67	0.57	0.80	28.4
2	T1	All MCs	307	2.0	307	2.0	0.454	9.9	LOS A	2.9	72.4	0.67	0.57	0.80	28.8
12	R2	All MCs	50	2.0	50	2.0	0.454	9.9	LOS A	2.9	72.4	0.67	0.57	0.80	28.6
Approach			387	2.0	387	2.0	0.454	9.9	LOS A	2.9	72.4	0.67	0.57	0.80	28.8
All Vehicles			1562	2.0	1562	2.0	0.454	9.1	LOS A	2.9	72.4	0.62	0.48	0.69	28.8

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).

Roundabout LOS Method: Same as Sign Control.

Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.

LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).

Roundabout Capacity Model: US HCM 6.

Delay Model: HCM Delay Formula (Sto pline Delay: Geometric Delay is not included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

Gap-Acceptance Capacity Formula: Siegloch M1 implied by US HCM 6 Roundabout Capacity Model.

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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Project: C:\Users\jclap\Desktop\RFK Engineers\2025 Projects\25-007 Triple A Mart Property\Review\Clemmons ville Road & Thomasville Road.sip9

MOVEMENT FLOWS FOR SITE (INPUT)

Approach movement input flow rates by movement class (vehicles per 60 mins)

 Site: 101 [2030 Build AM (Site Folder: Clemmonsville Road & Thomasville Road)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Clemmonsville Road and Thomasville Road

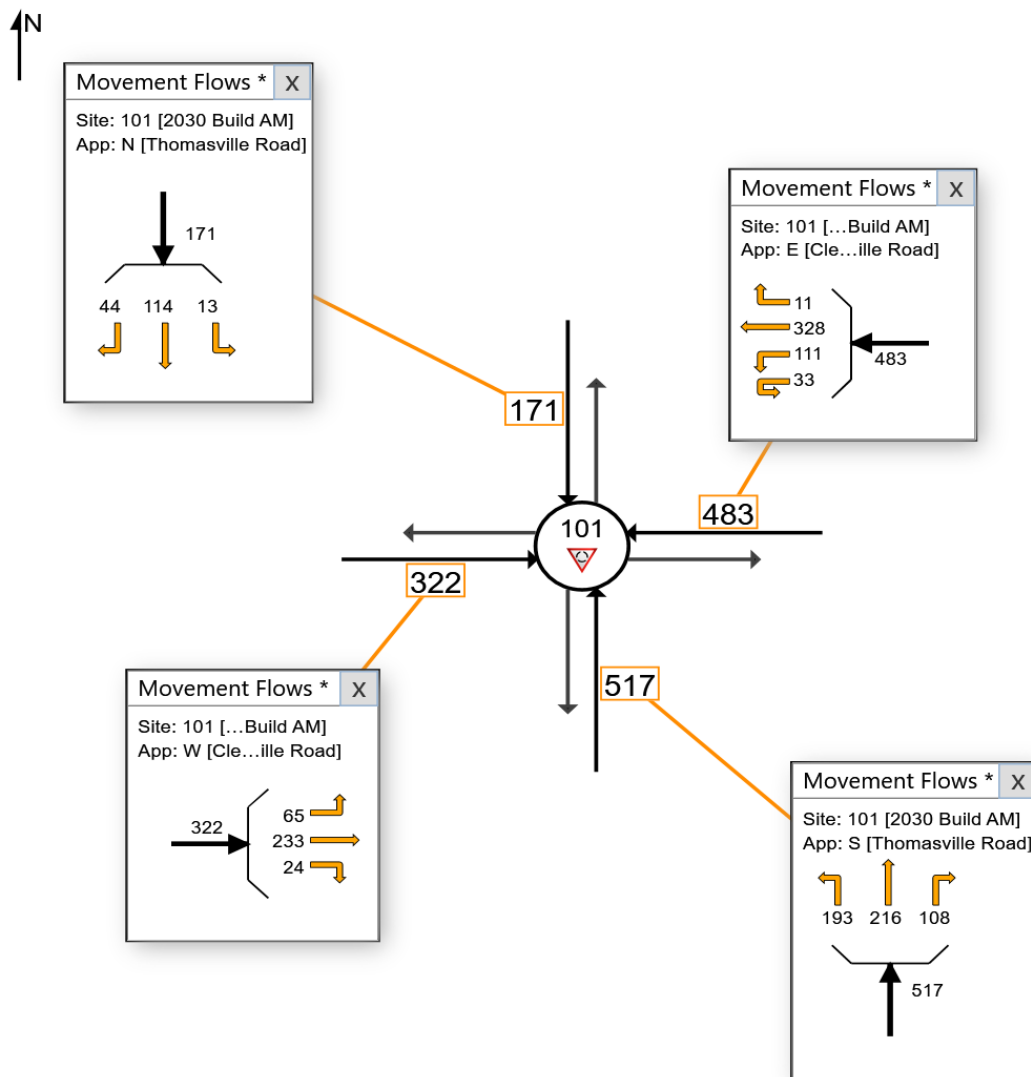
Site Category: (None)

Roundabout

Use the button below to open or close all popup boxes. Click value labels to open selected ones.
Click and drag popup boxes to move to preferred positions.

Close All Popups

All Movement Classes (*)



MOVEMENT SUMMARY

 **Site: 101 [2030 Build AM (Site Folder: Clemmons ville Road & Thomasville Road)]**

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Clemmons ville Road and Thomasville Road
Site Category: (None)
Roundabout

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total HV]	%	[Total HV]	%	v/c	sec		[Veh. veh	Dist]	ft			mph
South: Thomasville Road															
3	L2	All MCs	214	2.0	214	2.0	0.636	13.6	LOS B	6.9	176.4	0.78	0.77	1.21	26.6
8	T1	All MCs	240	2.0	240	2.0	0.636	13.6	LOS B	6.9	176.4	0.78	0.77	1.21	27.0
18	R2	All MCs	120	2.0	120	2.0	0.636	13.6	LOS B	6.9	176.4	0.78	0.77	1.21	26.8
Approach			574	2.0	574	2.0	0.636	13.6	LOS B	6.9	176.4	0.78	0.77	1.21	26.8
East: Clemmonsville Road															
1u	U	All MCs	37	2.0	37	2.0	0.693	17.6	LOS C	7.3	186.0	0.86	0.96	1.49	25.5
1	L2	All MCs	123	2.0	123	2.0	0.693	17.6	LOS C	7.3	186.0	0.86	0.96	1.49	25.5
6	T1	All MCs	364	2.0	364	2.0	0.693	17.6	LOS C	7.3	186.0	0.86	0.96	1.49	25.9
16	R2	All MCs	12	2.0	12	2.0	0.693	17.6	LOS C	7.3	186.0	0.86	0.96	1.49	25.7
Approach			537	2.0	537	2.0	0.693	17.6	LOS C	7.3	186.0	0.86	0.96	1.49	25.8
North: Thomasville Road															
7	L2	All MCs	14	2.0	14	2.0	0.308	9.9	LOS A	1.3	33.5	0.68	0.64	0.71	28.3
4	T1	All MCs	127	2.0	127	2.0	0.308	9.9	LOS A	1.3	33.5	0.68	0.64	0.71	28.8
14	R2	All MCs	49	2.0	49	2.0	0.308	9.9	LOS A	1.3	33.5	0.68	0.64	0.71	28.6
Approach			190	2.0	190	2.0	0.308	9.9	LOS A	1.3	33.5	0.68	0.64	0.71	28.7
West: Clemmonsville Road															
5	L2	All MCs	72	2.0	72	2.0	0.363	7.5	LOS A	1.9	49.1	0.54	0.37	0.54	29.0
2	T1	All MCs	259	2.0	259	2.0	0.363	7.5	LOS A	1.9	49.1	0.54	0.37	0.54	29.5
12	R2	All MCs	27	2.0	27	2.0	0.363	7.5	LOS A	1.9	49.1	0.54	0.37	0.54	29.3
Approach			358	2.0	358	2.0	0.363	7.5	LOS A	1.9	49.1	0.54	0.37	0.54	29.4
All Vehicles			1659	2.0	1659	2.0	0.693	13.2	LOS B	7.3	186.0	0.74	0.73	1.10	27.2

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).

Roundabout LOS Method: Same as Sign Control.

Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.

LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).

Roundabout Capacity Model: US HCM 6.

Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

Gap-Acceptance Capacity Formula: Siegloch M1 implied by US HCM 6 Roundabout Capacity Model.

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT FLOWS FOR SITE (INPUT)

Approach movement input flow rates by movement class (vehicles per 60 mins)

 Site: 101 [2030 Build PM (Site Folder: Clemmonsville Road & Thomasville Road)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Clemmonsville Road and Thomasville Road

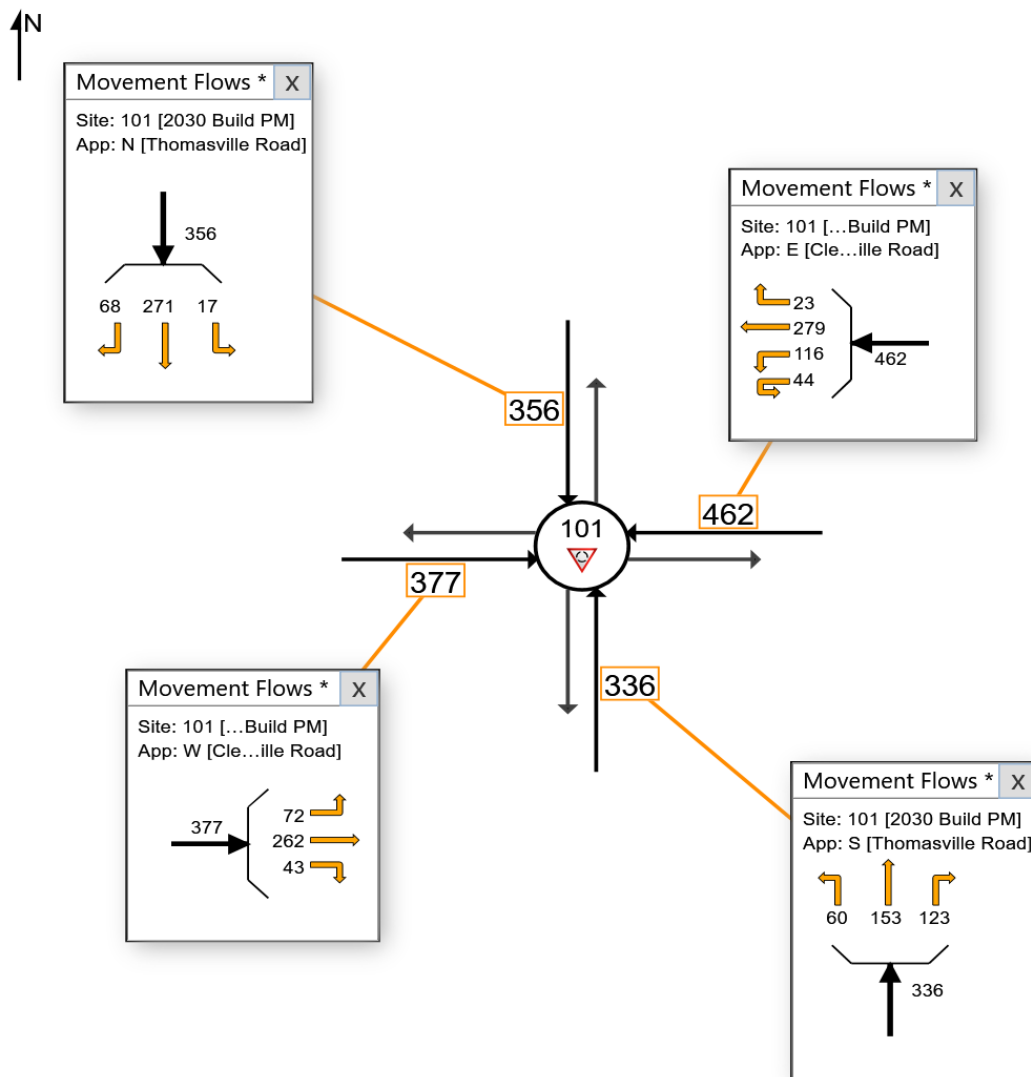
Site Category: (None)

Roundabout

Use the button below to open or close all popup boxes. Click value labels to open selected ones.
Click and drag popup boxes to move to preferred positions.

Close All Popups

All Movement Classes (*)



MOVEMENT SUMMARY

 **Site: 101 [2030 Build PM (Site Folder: Clemmons ville Road & Thomasville Road)]**

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Clemmons ville Road and Thomasville Road
Site Category: (None)
Roundabout

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total HV]	%	[Total HV]	%	v/c	sec		[Veh. veh	Dist]				mph
South: Thomasville Road															
3	L2	All MCs	67	2.0	67	2.0	0.439	9.6	LOS A	2.6	67.1	0.66	0.55	0.76	28.2
8	T1	All MCs	170	2.0	170	2.0	0.439	9.6	LOS A	2.6	67.1	0.66	0.55	0.76	28.7
18	R2	All MCs	137	2.0	137	2.0	0.439	9.6	LOS A	2.6	67.1	0.66	0.55	0.76	28.5
Approach			373	2.0	373	2.0	0.439	9.6	LOS A	2.6	67.1	0.66	0.55	0.76	28.5
East: Clemmonsville Road															
1u	U	All MCs	49	2.0	49	2.0	0.530	10.3	LOS B	4.2	107.1	0.66	0.52	0.80	27.7
1	L2	All MCs	129	2.0	129	2.0	0.530	10.3	LOS B	4.2	107.1	0.66	0.52	0.80	27.7
6	T1	All MCs	310	2.0	310	2.0	0.530	10.3	LOS B	4.2	107.1	0.66	0.52	0.80	28.1
16	R2	All MCs	26	2.0	26	2.0	0.530	10.3	LOS B	4.2	107.1	0.66	0.52	0.80	27.9
Approach			513	2.0	513	2.0	0.530	10.3	LOS B	4.2	107.1	0.66	0.52	0.80	27.9
North: Thomasville Road															
7	L2	All MCs	19	2.0	19	2.0	0.526	12.5	LOS B	3.7	94.3	0.75	0.75	1.06	27.5
4	T1	All MCs	301	2.0	301	2.0	0.526	12.5	LOS B	3.7	94.3	0.75	0.75	1.06	27.9
14	R2	All MCs	76	2.0	76	2.0	0.526	12.5	LOS B	3.7	94.3	0.75	0.75	1.06	27.8
Approach			396	2.0	396	2.0	0.526	12.5	LOS B	3.7	94.3	0.75	0.75	1.06	27.9
West: Clemmonsville Road															
5	L2	All MCs	80	2.0	80	2.0	0.525	11.9	LOS B	3.9	98.0	0.73	0.71	1.02	27.5
2	T1	All MCs	291	2.0	291	2.0	0.525	11.9	LOS B	3.9	98.0	0.73	0.71	1.02	27.9
12	R2	All MCs	48	2.0	48	2.0	0.525	11.9	LOS B	3.9	98.0	0.73	0.71	1.02	27.7
Approach			419	2.0	419	2.0	0.525	11.9	LOS B	3.9	98.0	0.73	0.71	1.02	27.8
All Vehicles			1701	2.0	1701	2.0	0.530	11.1	LOS B	4.2	107.1	0.70	0.63	0.91	28.0

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).

Roundabout LOS Method: Same as Sign Control.

Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.

LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).

Roundabout Capacity Model: US HCM 6.

Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

Gap-Acceptance Capacity Formula: Siegloch M1 implied by US HCM 6 Roundabout Capacity Model.

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Site Access Locations

HCM 6th TWSC
2: Thomasville Road & Glencoe Street/Site Access A

2030 Build
Timing Plan: AM Peak

Intersection												
Int Delay, s/veh	2.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔	↔	↔	↔	
Traffic Vol, veh/h	4	4	4	29	4	30	4	225	64	35	139	4
Future Vol, veh/h	4	4	4	29	4	30	4	225	64	35	139	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	50	50	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	-2	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	4	4	32	4	33	4	250	71	39	154	4
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	546	563	156	496	494	250	158	0	0	321	0	0
Stage 1	234	234	-	258	258	-	-	-	-	-	-	-
Stage 2	312	329	-	238	236	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	448	435	890	484	476	789	1422	-	-	1239	-	-
Stage 1	769	711	-	747	694	-	-	-	-	-	-	-
Stage 2	699	646	-	765	710	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	415	420	890	465	460	789	1422	-	-	1239	-	-
Mov Cap-2 Maneuver	415	420	-	465	460	-	-	-	-	-	-	-
Stage 1	767	689	-	745	692	-	-	-	-	-	-	-
Stage 2	663	644	-	732	688	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	12.3		12.1		0.1		1.6					
HCM LOS	B		B									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR					
Capacity (veh/h)	1422	-	-	507	578	1239	-	-				
HCM Lane V/C Ratio	0.003	-	-	0.026	0.121	0.031	-	-				
HCM Control Delay (s)	7.5	0	-	12.3	12.1	8	-	-				
HCM Lane LOS	A	A	-	B	B	A	-	-				
HCM 95th %tile Q(veh)	0	-	-	0.1	0.4	0.1	-	-				

HCM 6th TWSC

3: Clemmonsville Road & Site Access B

2030 Build
Timing Plan: AM Peak

Intersection						
Int Delay, s/veh	0.7					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑			↑
Traffic Vol, veh/h	0	387	428	44	0	55
Future Vol, veh/h	0	387	428	44	0	55
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	-3	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	430	476	49	0	61
Major/Minor	Major1	Major2	Minor2			
Conflicting Flow All	-	0	-	0	-	501
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.318
Pot Cap-1 Maneuver	0	-	-	-	0	570
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	570
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB	WB		SB		
HCM Control Delay, s	0	0		12.1		
HCM LOS	B					
Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1		
Capacity (veh/h)	-	-	-	570		
HCM Lane V/C Ratio	-	-	-	0.107		
HCM Control Delay (s)	-	-	-	12.1		
HCM Lane LOS	-	-	-	B		
HCM 95th %tile Q(veh)	-	-	-	0.4		

HCM 6th TWSC
2: Thomasville Road & Glencoe Street/Site Access A

2030 Build
Timing Plan: PM Peak

Intersection												
Int Delay, s/veh	2.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕	↕	↕	↕	
Traffic Vol, veh/h	4	4	8	41	4	36	7	177	64	41	307	9
Future Vol, veh/h	4	4	8	41	4	36	7	177	64	41	307	9
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	50	50	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	-2	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	4	9	46	4	40	8	197	71	46	341	10

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	709	722	346	658	656	197	351	0	0	268	0	0
Stage 1	438	438	-	213	213	-	-	-	-	-	-	-
Stage 2	271	284	-	445	443	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	349	353	697	378	385	844	1208	-	-	1296	-	-
Stage 1	597	579	-	789	726	-	-	-	-	-	-	-
Stage 2	735	676	-	592	576	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	319	338	697	357	368	844	1208	-	-	1296	-	-
Mov Cap-2 Maneuver	319	338	-	357	368	-	-	-	-	-	-	-
Stage 1	592	559	-	783	720	-	-	-	-	-	-	-
Stage 2	690	671	-	559	556	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	13.4		14.2		0.2		0.9	
HCM LOS	B		B					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1208	-	-	446	481	1296	-
HCM Lane V/C Ratio	0.006	-	-	0.04	0.187	0.035	-
HCM Control Delay (s)	8	0	-	13.4	14.2	7.9	-
HCM Lane LOS	A	A	-	B	B	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.7	0.1	-

HCM 6th TWSC

3: Clemmonsville Road & Site Access B

2030 Build
Timing Plan: PM Peak

Intersection

Int Delay, s/veh 0.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑			↑
Traffic Vol, veh/h	0	446	389	44	0	73
Future Vol, veh/h	0	446	389	44	0	73
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	-3	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	496	432	49	0	81

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	-	0	- 0 - 457
Stage 1	-	-	- - -
Stage 2	-	-	- - -
Critical Hdwy	-	-	- - 6.22
Critical Hdwy Stg 1	-	-	- - -
Critical Hdwy Stg 2	-	-	- - -
Follow-up Hdwy	-	-	- - 3.318
Pot Cap-1 Maneuver	0	-	- - 0 604
Stage 1	0	-	- - 0 -
Stage 2	0	-	- - 0 -
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	- - 604
Mov Cap-2 Maneuver	-	-	- - -
Stage 1	-	-	- - -
Stage 2	-	-	- - -

Approach	EB	WB	SB
HCM Control Delay, s	0	0	11.9
HCM LOS			B

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	604
HCM Lane V/C Ratio	-	-	-	0.134
HCM Control Delay (s)	-	-	-	11.9
HCM Lane LOS	-	-	-	B
HCM 95th %tile Q(veh)	-	-	-	0.5

Warrant for Left and Right-Turn Lanes

AT GRADE, UNSIGNALIZED INTERSECTIONS

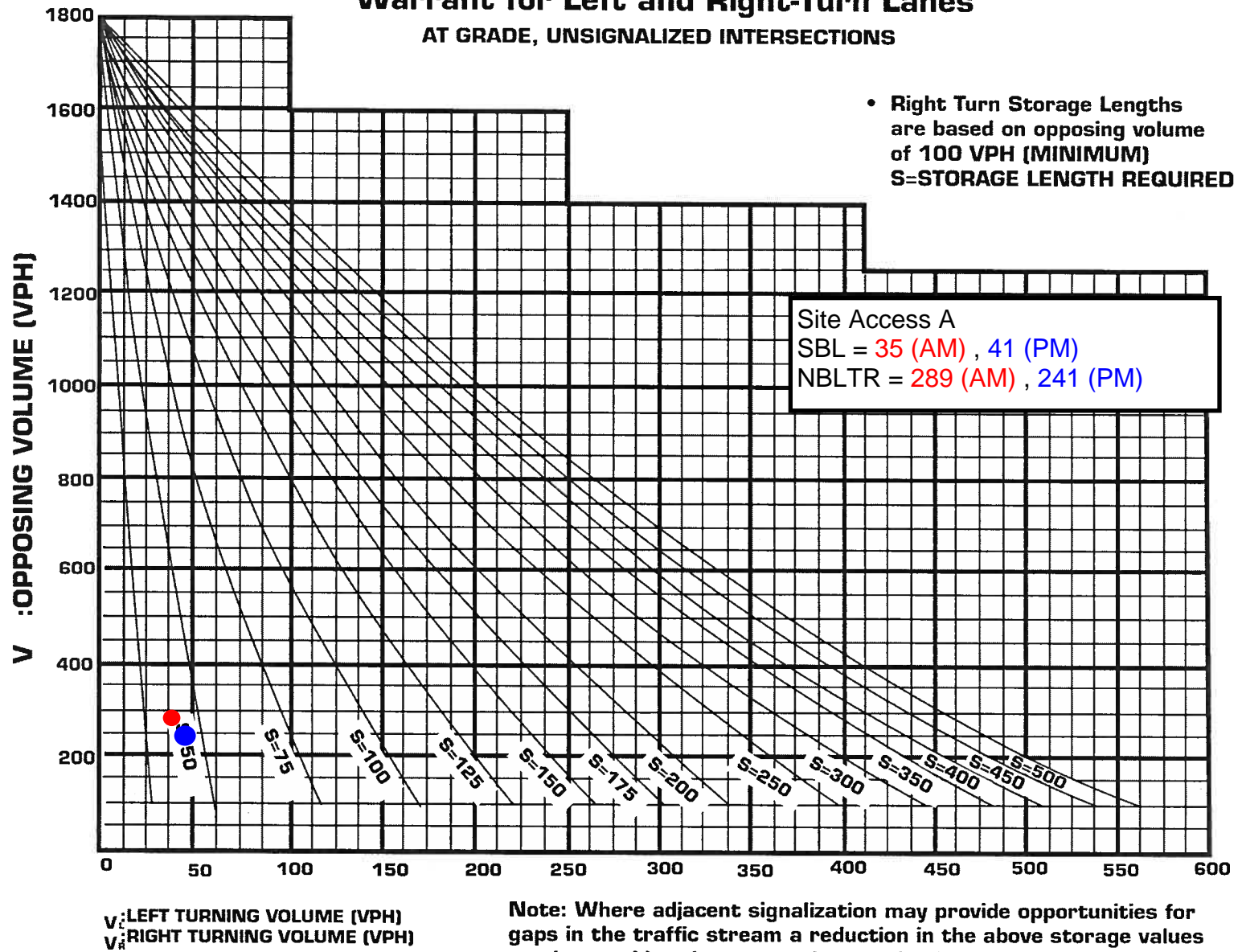
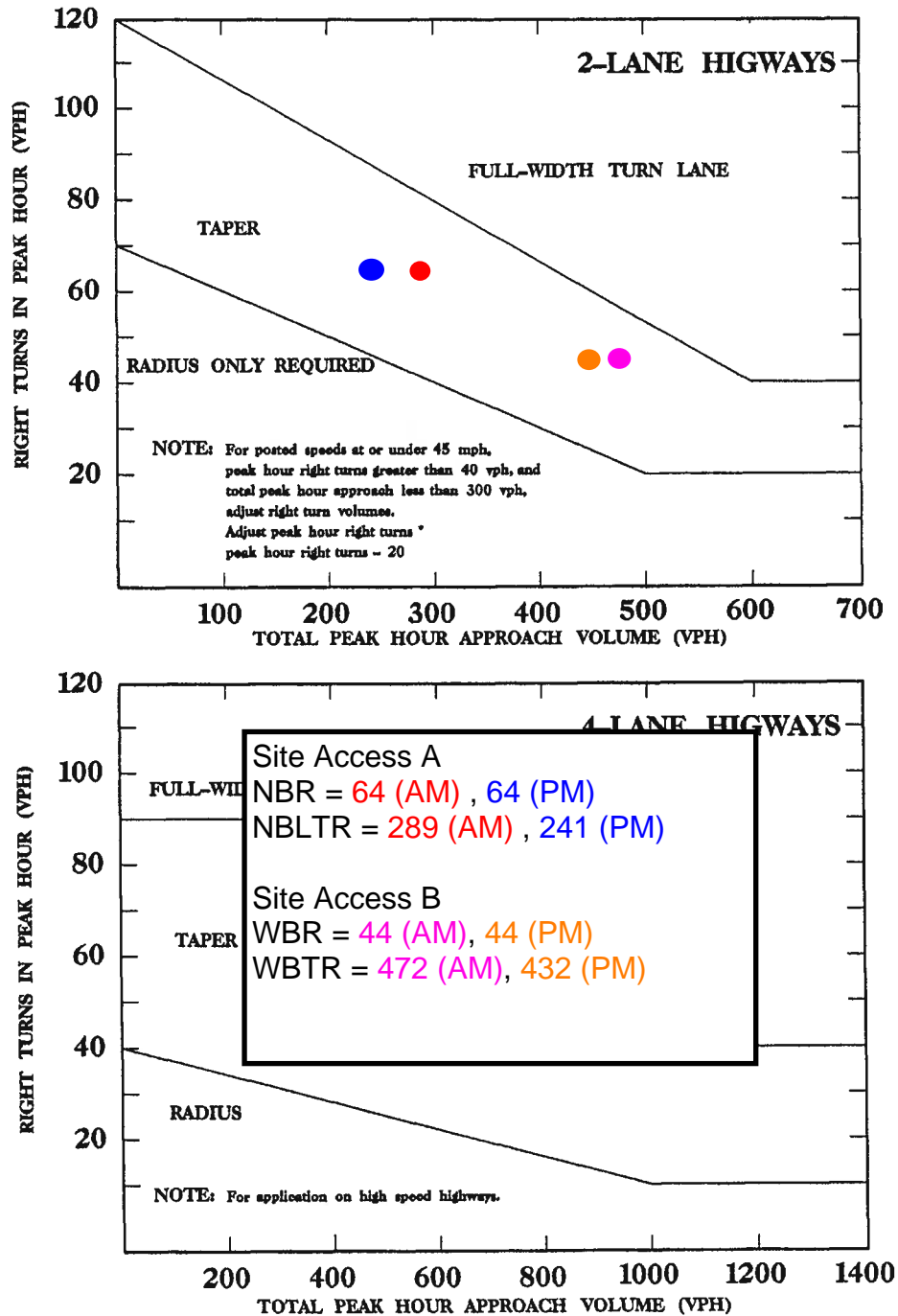


FIGURE 4

9 - 1
F - 4 C

RIGHT TURN LANE WARRANTS



APPENDIX E

SimTraffic Queuing Analysis

*Future (2030) No Build
Traffic Conditions*

Queuing and Blocking Report

2030 No-Build

AM Peak

Intersection: 1: Thomasville Road & Clemmons Road

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	71	153	157	68
Average Queue (ft)	26	55	57	27
95th Queue (ft)	59	114	115	59
Link Distance (ft)	980	956	935	930
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Network Summary

Network wide Queuing Penalty: 0

Queuing and Blocking Report

2030 No-Build

PM Peak

Intersection: 1: Thomasville Road & Clemmons ville Road

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	102	98	83	99
Average Queue (ft)	39	37	32	41
95th Queue (ft)	78	77	66	82
Link Distance (ft)	980	956	935	930
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Network Summary

Network wide Queuing Penalty: 0

*Future (2030) Build
Traffic Conditions*

Queuing and Blocking Report

2030 Build

AM Peak

Intersection: 1: Thomasville Road & Clemmonsville Road

Movement	EB	WB	NB	SB
Directions Served	LTR	ULTR	LTR	LTR
Maximum Queue (ft)	93	188	205	72
Average Queue (ft)	34	72	76	30
95th Queue (ft)	73	143	159	61
Link Distance (ft)	980	219	935	260
Upstream Blk Time (%)		0		
Queuing Penalty (veh)		0		
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 2: Thomasville Road & Glencoe Street/Site Access A

Movement	EB	WB	NB	NB	SB
Directions Served	LTR	LTR	LT	R	L
Maximum Queue (ft)	21	55	9	4	24
Average Queue (ft)	4	23	0	0	5
95th Queue (ft)	15	45	5	3	18
Link Distance (ft)	863	473	260		
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)				50	50
Storage Blk Time (%)					0
Queuing Penalty (veh)					0

Intersection: 3: Clemmonsville Road & Site Access B

Movement	WB	SB
Directions Served	TR	R
Maximum Queue (ft)	16	62
Average Queue (ft)	1	26
95th Queue (ft)	10	49
Link Distance (ft)	1274	528
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 0

Intersection: 1: Thomasville Road & Clemmonsville Road

Movement	EB	WB	NB	SB
Directions Served	LTR	ULTR	LTR	LTR
Maximum Queue (ft)	134	125	102	112
Average Queue (ft)	49	48	39	43
95th Queue (ft)	100	98	82	90
Link Distance (ft)	980	219	935	260
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 2: Thomasville Road & Glencoe Street/Site Access A

Movement	EB	WB	NB	NB	SB
Directions Served	LTR	LTR	LT	R	L
Maximum Queue (ft)	24	67	31	4	33
Average Queue (ft)	5	26	2	0	6
95th Queue (ft)	17	50	16	3	22
Link Distance (ft)	863	473	260		
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)				50	50
Storage Blk Time (%)			0		0
Queuing Penalty (veh)			0		0

Intersection: 3: Clemmonsville Road & Site Access B

Movement	SB
Directions Served	R
Maximum Queue (ft)	66
Average Queue (ft)	29
95th Queue (ft)	51
Link Distance (ft)	528
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Network Summary

Network wide Queuing Penalty: 0
