



AGENDA
CITY OF WATKINSVILLE
October 16, 2024
6:30 PM

WELCOME

CALL TO ORDER

QUORUM CHECK

PLEDGE OF ALLEGIANCE

APPROVAL OF MINUTES

1. September 18, 2024 Regular Meeting

APPROVAL OF AGENDA

ADMINISTRATION

Members of the public wishing to address Mayor and Council may do so at the noted times on the agenda or on request and at discretion of Council. Sec. 2-26(d): Comments shall be only directly relating to agenda items. Speak from the podium. Four minutes per person. Refrain from debate, argument, personal attacks, or irrelevant discussion. Address only the merits of the pending matter, and address remarks directly to council. Council can't speak to potential litigation, attorney client, or personnel matters.

2. Financial Reports – General, Fund Reserve, SPLOST III, TSPLOST, and ARPA Funds
3. Economic Development Reports – Business Licenses, Building Permits
4. Downtown Development Authority Update
5. Police Department

CONSENT AGENDA

6. Approve revision to Policy & Procedure Statement: Government Purchasing Policy, FIN-004
7. Approve appointment of two Downtown Development Authority Board Members, each for four-year terms to expire October 31, 2028.

PUBLIC HEARING

10-minutes/side per Zoning Procedures Law. Sec. 2-26(d): Comments shall be only directly relating to agenda items. Speak from the podium. Four minutes per person. Refrain from debate, argument, personal attacks, or irrelevant discussion. Address only the merits of the pending matter, and address remarks directly to council. Council can't speak to potential litigation, attorney client, or personnel matters.

8. Public Hearing: REZONE of 1180 Greensboro Highway, Tax Parcel #W 08 011, ~17 acres with the split zoning of CC (Corridor Commercial) and DR (Detached Residential) based on prior plats to DT (Downtown) and Main Street, Tax Parcel #W 08 004A ~0.27 acres SM (South Main Street Scenic Corridor) to DT (Downtown); (ATHENS CONSTRUCTION GROUP PROPERTY HOLDINGS, LLC and CK Capital, LLC) - with Development Agreement and Wastewater Capacity Allocation Request

AGENDA
CITY OF WATKINSVILLE
October 16, 2024
6:30 PM

9. Vote: REZONE of 1180 Greensboro Highway, Tax Parcel #W 08 011, ~17 acres with the split zoning of CC (Corridor Commercial) and DR (Detached Residential) based on prior plats to DT (Downtown) and Main Street, Tax Parcel #W 08 004A ~0.27 acres SM (South Main Street Scenic Corridor) to DT (Downtown); (ATHENS CONSTRUCTION GROUP PROPERTY HOLDINGS, LLC and CK Capital, LLC) - with Development Agreement and Wastewater Capacity Allocation Request
- A. Zoning with Development Agreement Vote
 - B. Wastewater Capacity Allocation Request Vote

APPEARANCES

Please note 10-minute time limit for appearances, per guideline of State Zoning Procedures Law.

OLD BUSINESS

10. Approve Christian Church Lease Agreement

NEW BUSINESS

PUBLIC COMMENTS

Sec. 2-26(d): Comments shall be only directly relating to agenda items. Speak from the podium. Four minutes per person. Refrain from debate, argument, personal attacks, or irrelevant discussion. Address only the merits of the pending matter, and address remarks directly to council. Council can't speak to potential litigation, attorney client, or personnel matters.

MAYOR'S REPORT

COUNCIL REPORTS

- Chuck Garrett - Post 1
- Connie Massey – Post 2
- Brett Thomas – Post 3
- Christine Tucker – Post 4
- Jeff Campbell – Post 5

EXECUTIVE SESSION

1. Personnel / 2. Real Estate / 3. Threatened Litigation

ADJOURN

Individuals with disabilities who require certain accommodations in order to allow them to observe and/or participate in this meeting, or who have questions regarding the accessibility of the meeting or the facilities are required to contact the ADA Coordinator at 706-769-5161 promptly to allow the City to make reasonable accommodations for those persons.

MINUTES OF MAYOR AND COUNCIL, CITY OF WATKINSVILLE

September 18, 2024 @ 6:30 PM

These summarize the action at the meeting. A full video recording is at www.cityofwatkinsville.com.

PRESENT: Mayor Brodrick, Councilmembers Tucker, Massey, Garrett, Campbell, Thomas, Attorney Reitman, Manager Dickerson, Engineer Campbell, Clerk Klein, Sergeant Hibler, Finance Director Black.

WELCOME: Mayor opened meeting.

QUORUM CHECK: Mayor acknowledged a quorum.

PLEDGE OF ALLEGIANCE: Students of Colham Ferry Elementary School led pledge of allegiance.

POINT OF PRIVILEGE

1. PROCLAMATION – Constitution Week, September 17 – 23, 2024

Mayor presented proclamation to Laurie Traill.

2. PROCLAMATION – Childhood Cancer Awareness Month

Mayor presented proclamation to local students.

3. PROCLAMATION – Georgia Reads Day, September 30, 2024

Mayor read the Georgia Reads Day proclamation, encouraging all to read.

APPROVAL OF MINUTES

4. August 21, 2024, Regular Meeting

Tucker moved to approve. Campbell second. *Opportunity for discussion.* Carried 5 to 0.

APPROVAL OF AGENDA

Tucker moved to approve agenda. Campbell second. *Opportunity for discussion.* Carried 5 to 0.

ADMINISTRATION. Public Input: Mayor explained if anyone wished to address Council, they could do so as noted on the agenda or at the discretion of Council. Per 2-26(d): comments shall be related to items on the agenda, speak from the podium directly to Council, 4 minutes/person, no debate, argument, attacks, or irrelevant discussion.

5. Financial Reports – General, Fund Reserve, SPLOST III, TSPLOST, and ARPA funds:

Dickerson provided monthly financial reports including balances for each fund except General Fund, explaining there were issues with the new GovTech software between the training and live copy. Dickerson noted the agenda packet would be updated online for the public to view as soon as reports were available.

6. Economic Development Reports – Business Licenses, Building Permits:

Dickerson reported on Occupation Taxes, Building Permits, and Alcohol and Hotel/Motel Excise Taxes.

7. Downtown Development Authority Update:

Tucker attended the Georgia Downtown Association Fall Conference at the end of August and shared insights. Reminder - deadline for applications for DDA Board Member Vacancy is October 4. An email was sent to downtown Businesses and posted on the city website to encourage applicants.

8. Police Department Report:

Sgt. Hibler provided report, including activities, citations, training, and upcoming events.

CONSENT AGENDA: None

PUBLIC HEARING: None

APPEARANCES: None

OLD BUSINESS: None

NEW BUSINESS

9. Approve Service Provider for Employee Health Insurance (Medical/Dental/Vision/Life Insurance/Short-Term and Long-Term Disability)

Dickerson and Sandyn Colwell with Oakbridge Insurance provided the report. Thomas moved to approve Option 1: selection of Angle for medical insurance for 12 months October 1, 2024 - September 30, 2025 at rates on Attachment A and renewal with Anthem Blue Cross Blue Shield (BCBS) for employee dental, vision, short-term disability and long-term disability benefits for 12 months October 1, 2024 - September 30, 2025 at rates on Attachment B. Garrett second. *Opportunity for discussion.* Motion carried 5 to 0.

10. Approve Award and Contract for repair and/or reinforcement existing timber pilings and replacement of 420 linear feet, 6-foot-wide, pedestrian boardwalk at Harris Shoals Park

Dickerson provided a detailed report. Tucker moved to approve Option 1: A. Award Martey Pelfrey the contract for Repair of Pedestrian Boardwalk at Harris Shoals Park for \$118,642.04 per the attached unit pricing (Attachment A) with a not-to-exceed amount of \$123,592.04 B. Contract with Marty Pelfrey for Repair of Pedestrian Boardwalk at Harris Shoals Park (Attachment B), and C. Mayor and City Clerk to sign all relevant documents. Campbell second. *Opportunity for discussion.* Motion carried 5 to 0.

11. Approve Award and Contract for rehabilitation, resurfacing, and striping of Mulberry Street (0.124 miles from Third Street to dead end) and Cemetery Road (single land road, 0.29 miles in total length, north side of Simonton Bridge Road across from Spring Circle

Dickerson provided a detailed report. Tucker moved to approve Option 1: Award All About Asphalt the contract for FY25 LMIG Resurfacing Projects to rehabilitate and pave Mulberry Street (0.124 miles from Third Street to dead end) and Cemetery Road (0.084 miles from Simonton Bridge Road to Simonton Bridge Road for an estimated cost of \$108,064.53 (Attachment A) and authorize: A. City Manager and City Engineer to negotiate with the contractor an add alternate to widen and resurface the entrance road to Thomas Farm Preserve (73 Simonton Bridge Road) for which funds from 2021 Special Purpose Local Option Sales Tax III (SPLOST III) Roads, Streets, and Bridges have been previously appropriated by Council; B. City Manager and Attorney to finalize draft contract agreement with All About Asphalt for construction of above noted FY25 LMIG Resurfacing Projects and the add alternate to widen and resurface the entrance road to Thomas Farm Preserve (73 Simonton Bridge Road) for which funds from 2021 Special Purpose Local Option Sales Tax III (SPLOST III): Roads, Streets, and Bridges have been previously appropriated by Council; and C. Mayor and City Clerk to sign all relevant documents. Campbell second. *Opportunity for discussion.* Motion carried 5 to 0.

12. Approve Award and Contract for installation of approximately 1,880 linear feet of ADA-compliant pedestrian and bicycle friendly, concrete sidewalk (ranging from 10-foot wide to 6-foot wide) along Simonton Bridge Road from the Simonton Place neighborhood to Cemetery Road and extension of 30" RCP near Watkinsville Cemetery and extension of 18" CMP near Simonton Place as part of the Simonton Bridge Road/Mulberry Connector Project

Dickerson provided a detailed report. Tucker moved to approve Option 1: A. Award Gantt Construction & Maintenance, LLC the contract for Phase 1 of the Simonton Bridge road/Mulberry Connector project to include installation of approximately 1,880 linear feet of ADA-compliant pedestrian and bicycle friendly, concrete sidewalk (from 10-foot wide to 6-foot wide) along Simonton Bridge Road from Simonton Place neighborhood to Cemetery Road, and extension of an existing 30" RCP near Watkinsville Cemetery and an 18" CMP near Simonton Place for an estimated cost of \$168,496.55 with up to a 20% contingency. (See Attachment A); B. Contract agreement with Gantt Construction & Maintenance, LLC for construction of the above noted Phase 1 of the Simonton Bridge Road/Mulberry Connector project (See Attachment B), and C. Mayor and City Clerk to sign all relevant documents. Thomas second. *Opportunity for discussion.* Motion carried 5 to 0.

13. City Manager Contract

Mayor Brodrick provided comments. He shared that many cities and counties have contracts for their managers. The contract is modeled on the Oconee County contract with the County Administrator with additional input from Attorney Reitman based on other contracts he has seen. Brodrick noted the contract continues through September 2026. Reitman added that the contract document references that the Manager would be evaluated on the anniversary of employment; however, Reitman recommended that the performance review be synchronized with that of other city employees. Mayor noted the Manager's review is currently at the same time as other city employees in April. Tucker moved to approve the City Manager Agreement with the change noted for the timing of the performance review. Campbell second. *Opportunity for discussion.* Motion carried 5 to 0.

PUBLIC COMMENTS

Bob Smith, Watkinsville, Georgia resident, said the manager agreement did not include the salary. He expressed concerns about flooding at Harris Shoals Park. He commented about the city borrowing money and questioned how it would be repaid. Smith stated his concern that qualification for city council occurred in March this year and not August and questioned the city's effort to notify the public. Mr. Smith exited the Chambers.

Mayor responded that the city has a dedicated millage to repay the funds borrowed to purchase the Thomas Farm at an interest rate of 1.63%. The loan for the sidewalks will be paid using SPLOST and TSPLOST funds already designated.

Johnny Lay, Thrasher Drive resident, shared his concern that the sign on the trailer in his yard has come to be a problem. He shared that he moved the sign to his back yard.

Lawrence Stueck, 13 Barnett Shoals Road resident, requested some trees be planted at Rocket Field to shade the sidewalks on 2nd and 3rd Streets, the playground, and the pétanque court.

MAYOR'S REPORT

Mayor provided updates and announcements on the following:

Apalachee High School Shooting – please remember to pray for Apalachee; Thomas Farm Preserve Update; School Street culvert work; Harris Shoals Park invasive species workday, 9/28 from 9AM to 12PM; December 8 Christmas Parade at 4PM and Christmas Tree Lighting at 6PM; Traffic Advisory October 4 – 9: installation of roundabout in sharp curve on Norton Road; Thanked Public Works Department for all their hard work.

COUNCIL REPORTS

Chuck Garrett: fun time working with Public Works Employees patching a section of 1st Street.

Connie Massey: attended Constitution Day event at the courthouse. She appreciates ancestors and constitution. She shared that there was not a big crowd and would like to see more participation in the future.

Brett Thomas: announced the return of "Fall for Watkinsville" Decorating Contest during October. He encouraged all to decorate. He also saw on Facebook that Texas Roadhouse will be donating 100% of proceeds to Apalachee Schools on Monday September 23rd and encouraged all to go to Texas Roadhouse for lunch and dinner.

Christine Tucker: no report.

Jeff Campbell: no report.

ADJOURN

At 7:44 PM, Tucker moved to adjourn. Campbell second. *Opportunity for discussion.* Carried 5 to 0.

RESPECTFULLY SUBMITTED,

JULIE A. KLEIN, CMC

City of Watkinsville
Balance Sheet
September 2024

Account Description	Balance
Assets	
CASH & CASH EQUIVALENTS	-29.85
CASH IN BANK-OPERATING	80,043.33
HARRIS SHOALS PARK ACCT	-50.00
CAPITAL IMPROVEMENT ACCOUNT	203,004.32
CONFISCATED ASSETS FUND	1,053.86
PETTY CASH	50.00
MONEY MARKET - OSB	2,498,105.65
SWEEP ACCOUNT	1,034,240.79
PROPERTY TAXES REC-CURR	5,291.96
ALLOW. DOUBTFUL ACCTS -PROP TAX	-1,629.80
LOCAL OPTION SALES TAX RE	74,641.74
*ACCOUNTS RECEIVABLE	33,440.63
OTHER TAXES RECEIVABLE	11,088.80
DUE FROM OTHER FUNDS	1,411.61
DUE FROM HOTEL MOTEL TAX FUND	-7,000.22
DUE FROM OTHER GOVERNMENTS	86.00
DUE FROM CEMETERY FUND	11,400.00
DUE FROM MUNICIPAL COURT FUND	28,021.35
DUE FROM SPLOST II	173.96
PAYROLL ASSET	12.55
ESTIMATED REVENUE	34,500.00
Total Assets	4,007,856.68
Liabilities & Fund Balance	
ACCOUNTS PAYABLE .	-110,249.97
ACCRUED WAGES PAYABLE	980.52
FICA TAXES PAYABLE	19,507.57
FEDERAL WITHHOLDING	10,341.54
STATE WITHHOLDING	6,614.01
EMP. GARNISH WITHHOLDING	595.16
EMPLOYEE RETIREMENT	6,181.18
EMPLOYEE LIFE INSURANCE	4,965.22
DENTAL INSURANCE	4,006.59
VISION INSURANCE	679.50
OTHER PAYROLL LIABILITIES	7,167.83
OTHER PAYROLL LIABILITIES	726.77
PAYROLL LIABILITIES	23,519.96
DUE TO OCONEE COUNTY	256,641.97
DUE FROM CAPITAL IMPROVEMENTS	-15,308.40
DUE TO SPLOST II FUND	0.10
UNAVAILABLE PROPERTY TAXES	1,560.14
ACCOUNTS PAYABLE	-14,731.00
APPROPRIATED BUDGET	34,500.00
Total Liabilities	237,698.69
UNRESERVED/UNDESIGNATED	1,530,500.47
ASSIGNED - CAPITAL PROJECTS	320,711.00
OPENING BALANCE EQUITY	43,901.33
RETAINED EARNINGS	1,357,205.72
RETAINED EARNINGS.	28,164.71
FUND BALANCE - RESTRICTED	500,000.00
Total	3,780,483.23
Revenue	477,235.78
Less Expenses	753,892.74
Net	-276,656.96
Total Fund Balance	3,503,826.27
Total Liabilities & Fund Balance	3,741,524.96

As per Edmunds the Balance Sheet will not be in balance at this time because the prior year expenses and revenues are not closed to fund balance. Retained Earnings is the account that is improperly stated at this time

City of Watkinsville
September 2024
Expense Report

Account Description	2025 Budget	Current	YTD Expense	Budget Balance	% Used
GOVERNMENT BODY	\$ 12,600.00	\$ 1,130.33	\$ 3,390.99	\$ 9,209.01	27%
MAYOR	\$ 9,700.00	\$ -	\$ 125.00	\$ 9,575.00	1%
GENERAL ADMINISTRATIVE	\$ 489,029.00	\$ 63,686.45	\$ 160,564.18	\$ 328,464.82	33%
GENERAL ADMIN BUILDING	\$ 54,313.00	\$ 4,178.80	\$ 9,290.81	\$ 45,022.19	17%
MUNICIPAL COURT-JUDICAL	\$ 178,514.00	\$ 11,899.89	\$ 40,282.34	\$ 138,231.66	23%
POLICE	\$ 913,153.00	\$ 47,052.80	\$ 176,227.32	\$ 736,925.68	19%
FIRE	\$ 15,000.00	\$ -	\$ -	\$ 15,000.00	0%
HIGHWAY & STREETS	\$ 613,525.00	\$ 45,901.86	\$ 151,504.31	\$ 462,020.69	25%
STREET LIGHTING	\$ 58,200.00	\$ 368.16	\$ 11,206.25	\$ 46,993.75	19%
CEMETRY DEPARTMENT	\$ 10,000.00	\$ -	\$ -	\$ 10,000.00	0%
PARKS-CULTURE & RECREATION	\$ 397,580.00	\$ 28,166.37	\$ 90,930.79	\$ 306,649.21	23%
LIBRARY	\$ 58,362.00	\$ -	\$ -	\$ 58,362.00	0%
HOUSING & DEVELOPMENT	\$ 223,646.00	\$ -	\$ 1,802.50	\$ 221,843.50	1%
CODE ENFORCEMENT	\$ 88,635.00	\$ 8,793.42	\$ 24,726.17	\$ 63,908.83	28%
TOURISM-EDA	\$ 123,798.00	\$ 1,693.91	\$ 13,897.21	\$ 109,900.79	11%
Final Totals	\$ 3,246,055.00	\$ 212,871.99	\$ 683,947.87	\$ 2,562,107.13	21%

***Due to use of new software beginning July 1 (per Edmunds manager) there are entries that will be reversed back to the 23-24 budget for audit purposes. ***

City of Watkinsville
September 24
Revenue Report

Description	2025 Budget	Current Revenue	YTD Revenue	Budget Balance	% Used
PROPERTY TAXES	\$ 671,860.00	\$ 2,507.37	\$ 2,723.07	\$ 669,136.93	0%
MOTOR VEHICLE TAX	\$ 141,000.00	\$ -	\$ 52,630.62	\$ 88,369.38	37%
REAL ESTATE TRANS	\$ 18,540.00	\$ -	\$ 9,834.52	\$ 8,705.48	53%
ELECTRIC FRANCHISE FEE	\$ 201,500.00	\$ -	\$ -	\$ 201,500.00	0%
GAS FRANCHISE FEE	\$ 22,000.00	\$ 5,999.51	\$ 5,999.51	\$ 16,000.49	27%
CABLE FRANCHISE FEE	\$ 38,880.00	\$ 39.00	\$ 8,558.27	\$ 30,321.73	22%
TELEPHONE FRANCHISE FEE	\$ 6,800.00	\$ -	\$ 1,600.33	\$ 5,199.67	24%
LOCAL OPTION SALES & USE TAX	\$ 980,132.00	\$ 83,909.94	\$ 246,308.59	\$ 733,823.41	25%
HOTEL/MOTEL EXCISE TAX	\$ -	\$ -	\$ 5,619.62	\$ (5,619.62)	0%
ALCOHOLIC BEVERAGE	\$ 53,904.00	\$ 6,082.77	\$ 17,935.58	\$ 35,968.42	33%
BUSINESS & OCCUPATIONAL	\$ 84,500.00	\$ 405.00	\$ 2,092.00	\$ 82,408.00	2%
INSURANCE PREMIUM TAX	\$ 267,155.00	\$ -	\$ 65.00	\$ 267,090.00	0%
BUILDING PERMITS	\$ 306,108.00	\$ 7,242.00	\$ 34,956.00	\$ 271,152.00	11%
GMA PUBLIC SAFETY GRANT	\$ 6,000.00	\$ -	\$ -	\$ 6,000.00	0%
MUNICIPAL FINES	\$ 220,000.00	\$ 5,680.77	\$ 20,223.18	\$ 199,776.82	9%
MUNICIPAL FINES.MUNICIPAL COURT	\$ 2,000.00	\$ -	\$ -	\$ 2,000.00	0%
INTEREST EARNED	\$ 174,000.00	\$ 12,462.07	\$ 49,672.40	\$ 124,327.60	29%
HARRIS SHOALS PARK RENT	\$ 3,500.00	\$ 140.00	\$ 575.00	\$ 2,925.00	16%
ROCKET FIELD PARK RENTAL	\$ 8,800.00	\$ 410.00	\$ 3,310.00	\$ 5,490.00	38%
MISCELLANEOUS REVENUE	\$ 6,000.00	\$ 4,264.10	\$ 15,132.09	\$ (9,132.09)	252%
TRANSFER IN - FUND BALANCE	\$ 33,376.00	\$ -	\$ -	\$ 33,376.00	0%
Final Totals	\$ 3,246,055.00	\$ 129,142.53	\$ 477,235.78	\$ 2,768,819.22	15%

Revised 9/30/2024

City of Watkinsville SPLOST III Project Categories	SPLOST III Referendum Funds (Approved)	SPLOST III Referendum Funds (Total revenues projected @ 83%) ¹	SPLOST III Funds Required (Expended)	SPLOST III Funds (Encumbered Expenditures)	TOTAL SPLOST III Funds (Expended & Encumbered)	Balance of Funds Available (Based on Projected Revenues & Actual Expenses & Encumbrances)
Public Safety Facilities & Equipment	\$ 540,000.00	\$ 540,000	\$ 156,116.73	\$ 230,013.02	\$ 386,129.75	\$ 153,870.25
Recreational, Park & Greenspace	\$ 1,356,000.00	\$ 1,356,000	\$ 927,572.48	\$ 185,560.20	\$ 1,113,132.68	\$ 242,867.32
Roads, Streets, & Bridges	\$ 3,299,144.00	\$ 2,361,743	\$ 809,531.13	\$ 1,602,315.00	\$ 2,411,846.13	\$ (50,103.13)
Multi-Purpose Government Facilities, Signage, and/or Equipment	\$ 384,000.00	\$ 384,000	\$ 90,706.89	\$ 35,632.11	\$ 126,339.00	\$ 257,661.00
Totals	\$ 5,579,144.00	\$ 4,641,743.00	\$ 1,983,927.23	\$ 2,053,520.33	\$ 4,037,447.56	\$ 604,295.44

¹ Revenue projection of 83% of referendum is \$64,469 per month over the course of the 72 month period. Actual average monthly revenues received to date is \$82,833.52.

SPLOST III Revenues (Received to Date)	SPLOST III Revenues (Anticipated over next 37 months based on 83% projected)	TOTAL Estimated SPLOST III Revenues (Anticipated)	Balance of Funds (Anticipated)	Difference between Projected and Anticipated (To date)
\$ 2,994,110.99	\$ 2,385,340.15	\$ 5,379,451.14	\$ 1,342,003.58	\$ 737,708.14

City of Watkinsville, Georgia
2021 Special Purpose Local Option Sales Tax (SPLOST) III Comparison

Project begins: Oct. 1, 2021 (FY22) and ends September 30, 2027 (FY28)

8.63% per IGA with Oconee County (Dated: June 25, 2020)

	FY2022	FY2023	FY2024	FY2025	FY25 vs. FY24 % change
July		\$ 74,424.62	\$ 85,280.77	\$ 88,772.49	4.09%
August		\$ 77,913.33	\$ 87,624.56	\$ 93,079.59	6.23%
September		\$ 80,772.95	\$ 84,998.46		
October	\$ 68,680.05	\$ 82,330.58	\$ 91,086.92		
November	\$ 75,312.79	\$ 87,173.33	\$ 90,171.16		
December	\$ 83,869.19	\$ 104,910.42	\$ 104,085.83		
January	\$ 65,579.43	\$ 81,899.84	\$ 82,194.88		
February	\$ 64,517.17	\$ 77,822.37	\$ 81,948.83		
March	\$ 72,601.34	\$ 85,431.58	\$ 87,216.05		
April	\$ 72,503.02	\$ 82,119.94	\$ 85,832.05		
May	\$ 73,438.17	\$ 84,427.09	\$ 92,128.31		
June	\$ 74,294.64	\$ 83,215.53	\$ 91,516.06		
Total	\$ 650,795.80	\$ 1,002,441.58	\$ 1,064,083.88	\$ 181,852.08	
Monthly Average	\$ 72,310.64	\$ 83,536.80	\$ 88,673.66	\$ 90,926.04	6.15%

SPLOST III Revenues to Date	\$ 2,899,173.34
LMIG Grant Funds	\$ 184,696.65
Interest to Date	\$ 94,937.65
Check not cleared	\$ -
Expenses to Date	\$ 1,983,927.23
	<u>\$ 1,194,880.41</u>

9.30.2024 Bank Balance \$ 1,194,880.41

9/30/2024

City of Watkinsville TSPLOST Project Categories	T-SPLOST Referendum Funds (BALLOT AMOUNT)	TSPLOST Referendum Funds (Total revenues projected @ 85%) ¹	TSPLOST Funds Required (Expended)	TSPLOST Funds (Encumbered Expenditures)	TOTAL TSPLOST Funds (Expended & Encumbered)	Balance of Funds Available (Based on Projected Revenues & Actual Expenses & Encumbrances)
Sidewalk construction and repairs, Multi-Use Trails, Side Paths, Greenways, High Visibility Crossings	\$ 2,482,515	\$ 2,112,126	\$ 186,415.55	\$ 1,572,871.95	\$ 1,759,287.50	\$ 352,839
Traffic Efficiency Improvements	\$ 1,379,175	\$ 1,173,403	\$ -	\$ -	\$ -	\$ 1,173,403
Road resurfacing and rehabilitation and Investment in roadway infrastructure	\$ 1,655,010	\$ 1,408,084	\$ 576,115.47	\$ 519,372.47	\$ 1,095,487.94	\$ 312,596
Totals	\$ 5,516,700	\$ 4,693,614	\$ 762,531.02	\$ 2,092,244.42	\$ 2,854,775.44	\$ 1,838,838

¹ Revenue projection of 85% of referendum is \$78,226.90 per month over the course of the 60-month period. Actual average monthly revenues received to date is \$72,636.83

TSPLOST Revenues (Received to Date)	TSPLOST Revenues (Anticipated over next 43 months based on 85% projected)	TOTAL Estimated TSPLOST Revenues (Anticipated)	Balance of Funds (Anticipated)	Difference between Projected and Anticipated (To date)
\$ 1,308,121.88	\$ 3,363,756.61	\$ 4,671,878.49	\$ 1,817,103.05	\$ (21,735.39)

City of Watkinsville, Georgia
2022 Transportation Special Purpose Local Option Sales Tax (TSPLOST) Comparison

Project begins: April 1, 2023 (FY23) and ends March 31, 2028 (FY28)

7.77% per IGA with Oconee County (Dated: July 13, 2022)

	FY2023	FY2024	FY2025	FY25 vs. FY24 % change
July		\$ 68,848.60	\$ 74,338.03	7.97%
August		\$ 72,800.33	\$ 77,157.00	5.98%
September		\$ 69,339.48		
October		\$ 72,971.02		
November		\$ 73,758.17		
December		\$ 86,819.51		
January		\$ 67,486.03		
February		\$ 70,522.44		
March		\$ 72,075.18		
April	\$ 66,772.51	\$ 71,655.95		
May	\$ 68,813.88	\$ 75,243.02		
June	\$ 69,819.46	\$ 76,405.43		
Total	\$ 205,405.85	\$ 877,925.16	\$ 151,495.03	
Monthly Average	\$ 68,468.62	\$ 73,160.43	\$ 75,747.52	3.54%

TSPLOST Revenues to Date \$ 1,234,826.04
 LMIG Funds \$ 47,108.89
 Interest to Date \$ 26,186.95
 Checks not cleared \$ -
 Expenses to Date \$ 762,531.02
 \$ 498,481.97

9.30.2024 Bank Balance \$ 545,590.86

City of Watkinsville
American Rescue Plan (ARP) Act Funds
30-Sep-24

Description	Revenues	Fiscal Year Received
Contingency - Standard Allowance: Revenue Replacement/Lost Revenue (Tranche #1) 7.08.2021	\$ 548,204.50	FY22
Contingency - Standard Allowance: Revenue Replacement/Lost Revenue (Tranche #2) 7.15.2022	\$ 548,204.50	FY23
Georgia SFRF First Responders Supplement	\$ 7,535.50	FY22 - Pass thru
Interest Paid to Date	\$ 1,788.72	FY22
Interest Paid to Date	\$ 29,128.66	FY23
Interest Paid to Date	\$ 14,072.45	FY24
Interest Paid to Date	\$ 1,259.55	FY25
Total Revenues	\$ 1,150,193.88	

NOTE: On April 20, 2022, City Council voted affirmatively to select the Standard Allowance of up to \$10 million for "government services" under the eligible category of Revenue Replacement/Lost Revenue. So although each of the following expenses reference an "Eligible Use," funds are not required to be spent in these categories and are simply being used for internal tracking purposes.

Description	Expenses	Fiscal Year Incurred
Check order	\$ 372.36	FY22
City Employee Essential Worker Pay & Retention Bonus (12/15/21) (Eligible Use #2: Essential Worker)	\$ 17,244.16	FY22
Stormwater Improvements Harden Hill Road (Eligible Use #4: Water/Stormwater)	\$ 152,554.20	FY22
Public Safety Premium Pay Retention Initiative (Eligible Use #2: Essential Worker)	\$ 62,500.00	FY22
Public Safety Personnel (Eligible Use #2: Essential Worker)	\$ 87,500.00	FY22
Christmas Pole Lighted Decorations (Eligible Use #3: Lost Revenue)	\$ 7,000.00	FY22
Georgia SFRF First Responders Supplement	\$ 7,000.00	FY22 - Pass thru
Georgia SFRF First Responders Supplement (Grossed Up Taxes) transfer to GF for reimbursement	\$ 535.50	FY22 - Pass thru
100-Acre Thomas Family Farm Purchase (Eligible Use #3: Lost Revenue)	\$ 710,000.00	FY24
Thomas Farm Preserve 10' aggregate trail, Path B aggregate shoulder, land and pond clearing	\$ 69,976.00	
Public Safety Premium Pay Retention Initiative (Eligible Use #2: Essential Worker) Grossed Up Taxes	\$ 4,000.00	FY25
Appropriation of remaining balance (after 6.19.2024) to Thomas Farm Preserve	\$ 24,011.66	FY25
<i>Appropriated</i> Public Safety Premium Pay Retention Initiative (Eligible Use #2: Essential Worker)	\$ 7,500.00	FY25

Total Expended (Thru 9.30.2024)	\$ 1,114,682.22
Total Encumbered (Thru 9.30.2024)	\$ 35,511.66

9.30.2024 Balance \$ (0.00)

Watkinsville Building Permits Issued
Sep-24

DATE APPLIED FOR PERMIT	COMPANY OR INDIVIDUAL NAME	ADDRESS	DESCRIPTION	VALUATION	PERMIT #	PERMIT FEE	TRADE PERMIT	SUB TOTAL FEE SPLIT 67%/33%	CITY	BV
September 13, 2024	Bluepoint Construction	1070 Watson Lane F1	NSFR Townhome	\$250,000.00	24-0074	\$1,277.00	\$280.00	\$1,557.00	\$513.81	\$1,043.19
September 13, 2024	Bluepoint Construction	1094 Watson Lane F2	NSFR Townhome	\$250,000.00	24-0075	\$1,277.00	\$280.00	\$1,557.00	\$513.81	\$1,043.19
September 13, 2024	Bluepoint Construction	1120 Watson Lane F3	NSFR Townhome	\$250,000.00	24-0076	\$1,277.00	\$280.00	\$1,557.00	\$513.81	\$1,043.19
September 13, 2024	Bluepoint Construction	1144 Watson Lane F4	NSFR Townhome	\$250,000.00	24-0077	\$1,277.00	\$280.00	\$1,557.00	\$513.81	\$1,043.19
September 13, 2024	Bluepoint Construction	1170 Watson Lane F5	NSFR Townhome	\$250,000.00	24-0078	\$1,277.00	\$280.00	\$1,557.00	\$513.81	\$1,043.19
September 13, 2024	Bluepoint Construction	1194 Watson Lane F6	NSFR Townhome	\$250,000.00	24-0079	\$1,277.00	\$280.00	\$1,557.00	\$513.81	\$1,043.19
September 13, 2024	Bluepoint Construction	1260 Watson Lane F7	NSFR Townhome	\$250,000.00	24-0080	\$1,277.00	\$280.00	\$1,557.00	\$513.81	\$1,043.19
September 13, 2024	Bluepoint Construction	1284 Watson Lane F8	NSFR Townhome	\$250,000.00	24-0081	\$1,277.00	\$280.00	\$1,557.00	\$513.81	\$1,043.19
September 13, 2024	Bluepoint Construction	1310 Watson Lane F9	NSFR Townhome	\$250,000.00	24-0082	\$1,277.00	\$280.00	\$1,557.00	\$513.81	\$1,043.19
September 13, 2024	Bluepoint Construction	1334 Watson Lane F10	NSFR Townhome	\$250,000.00	24-0083	\$1,277.00	\$280.00	\$1,557.00	\$513.81	\$1,043.19
September 13, 2024	Bluepoint Construction	1360 Watson Lane F11	NSFR Townhome	\$250,000.00	24-0084	\$1,277.00	\$280.00	\$1,557.00	\$513.81	\$1,043.19
September 12, 2024	Caliber Electrical Servi	39 Durham Street	T-Pole	\$2,500.00	24-0100	\$0.00	\$70.00	\$70.00	\$23.10	\$46.90
September 12, 2024	Superior Air Managem	1725 Electric Ave Ste 125	HVAC	\$15,000.00	24-0101M	\$0.00	\$70.00	\$70.00	\$23.10	\$46.90
September 13, 2024	Gibbs Capital Construc	1725 Electric Ave Ste 100	Commercial Remodel	\$900,000.00	24-0102	\$5,342.00	\$0.00	\$5,342.00	\$1,762.86	\$3,579.14
September 13, 2024	James Blose	1221 Jacob Drive	Concrete Pad for Basetball Goal	\$9,000.00	24-0103	\$82.00	\$0.00	\$82.00	\$27.06	\$54.94
September 30, 2024	Mark Carey	1071 Camden Park Drive	Residential Addition	\$167,000.00	24-0104	\$352.00	\$0.00	\$352.00	\$116.16	\$235.84
						\$19,823.00	\$3,220.00	\$23,043.00	\$7,604.19	\$15,438.81

BUSINESS & ALCOHOL LICENSING FEES		SEPT. 2024	
Occupational Tax Applications/Renewals			
Business Name	Tax Amount	Date Paid	Paid w/ Check #
Castellum Medical Consultants LLC dba Watkinsville Urgent Care	\$ 149.00	9/9/2024	2751
Magic Hands by Tamika Sanders	\$ 65.00	9/16/2024	5075
New Key Solutions	\$ 101.00	9/11/2024	1832
ACG Enterprises Inc (11 S Main St)	\$ 90.00	9/20/2024	1504
Occupation Tax Payments	\$ 405.00		
Insurance Payments (full report available upon request)			
Alcohol Applications			
Alcohol License Payments	\$ -		
Total Licensing Fees	\$ 405.00		

FY 2025 EXCISE TAXES

ALCOHOL	
	Excise Tax Paid
July	2,499.68
August	1,392.95
September	117.02
October	-
November	-
December	-
January	-
February	-
March	-
April	-
May	-
June	-
Total	4,009.65

ALL STVR . HOTEL/MOTEL	
	Excise Tax Paid
July	2,040.85
August	743.88
September	353.47
October	-
November	-
December	-
January	-
February	-
March	-
April	-
May	-
June	-
Total	3,138.20

Total Excise Taxes for 2025	\$ 7,147.85
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City of Watkinsville
Police Department
191 VFW Drive
Watkinsville, GA 30677
Office: (706) 769-5161
Fax: (706) 769-4760
cityofwatkinsville.com



October 2024 Council Report

Completed/Scheduled Training:

- Officer Stearns completed her Criminal Investigations Course
- Officer Krish is slated to attend a Gang Recognition Course down in Forsyth next week
- Sergeant Hibler attended the area's Chief of Police meeting in Greensboro

Police Vehicles:

- The New Patrol Truck was dropped off in Augusta as planned, they are currently upfitting it.

Events Scheduled/Completed:

- Georgia Home Partners hosted the 8th Annual Run for Responders 5k, on the 6th, raising over \$22,000 for First Responders in Oconee County.
- On the 19th, the Oconee Chamber of Commerce will host the 50th Annual Fall Festival on Rocket Field. Please be aware that traffic in and around town will be heavier than normal, they are anticipating a larger crowd than previous years.



City of Watkinsville

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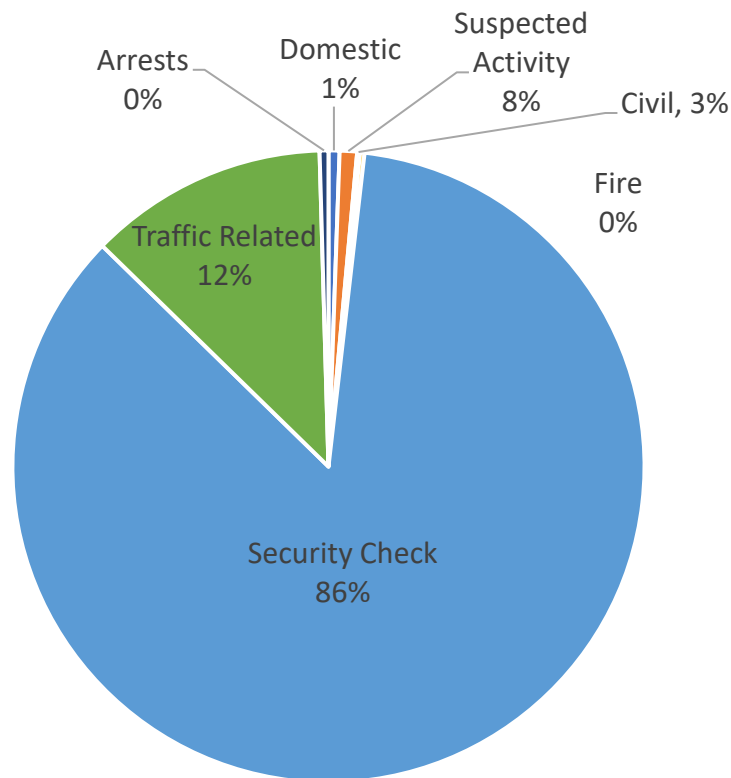
cityofwatkinsville.com



Department Statistics:

- Arrests since July: 4
 - Driving w/o a Valid License / Driving without Insurance
 - Simple Battery
 - Driving w/o a Valid License / Speeding
 - Simple Possession / Speeding
- Total Calls for Service: 192
- Property Security Checks: 768
- Reports Generated: 24
- Total Citations Issued: 48
- Total Warnings Issued: 62
- Total Incident Reports: 17
- Total Accident Reports: 7

Watkinsville Police Calls - September 2024



■ Domestic ■ Sus. Activity ■ Civil ■ Fire ■ Security Check ■ Traffic Related ■ Arrests



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Public Notice

Norton Road now has a new roundabout installed in the sharp curve. Please be mindful of this when travelling in that area. When approaching a roundabout, treat the entrance to the intersection as a "Yield."



**CITY OF WATKINSVILLE
POLICY/PROCEDURE STATEMENT**

Subject: Government Purchasing Policy
Function: Purchasing
Policy Number: FIN-004

I. PURPOSE

The City is funded by tax dollars. The City's purchasing policies and procedures have been established to ensure that tax dollars are spent in the most economical way- to ensure the maximum value is obtained for every public dollar spent. The City uses competitive means for purchase of all products and services when possible and believes in open, fair competition. However, the City will seek to purchase from local vendors whenever possible and, as defined herein, may award a purchase if the price is within five percent (5%) of the non-local vendor's price who otherwise would have received the award of the contract or purchase. The purchasing levels in this policy are subject to periodic review and may be changed with Council approval based on inflation and other factors.

This policy is to state the City's requirements regarding purchasing responsibility and authority, define purchasing functions, outline purchasing procedures, describe departmental relationships, responsibilities and participation in the procurement cycle, and define internal controls as they relate to purchasing goods and services with public funds.

II. SCOPE

This purchasing policy covers the procurement of all goods and services by the City including all contractual and purchase agreements of the City. The procurement function includes the initial agreement/purchase, renewals, changes and/or re-negotiations. This policy establishes the specific responsibility and authority of the procurement of goods and services.

III. EXCEPTIONS

The provisions of this policy do not apply in the following instances or procurements:

- A. A good is available from only one (1) source or supply, or when standardization or compatibility is the overriding consideration.
- B. The purchase is per a contract with (1) the United States of America or an agency thereof or (2) any government unit or agency thereof within the United States for the purchase, lease, or other acquisition of goods.
- C. The purchase is regulated by other Federal and State laws, i.e., O.C.G.A §36-91-1.
- D. A special emergency exists involving the health and safety of the people or their property.
- E. The purchase is for:
 - 1. Land or other goods whose inherent nature is unique and cannot be competitively compared to other goods within its class.
 - 2. Printed copyright material including published books, maps, periodicals and technical pamphlets (not including software for computer systems), except where a greater savings can be realized by a quantity purchase.
 - 3. Real property, real estate brokerage and appraising, abstract of titles for real property, title insurance for real property, and other related costs of acquisition of real property.

4. Subscriptions, dues, and memberships, and board member fees established during the budget process.
5. Services provided directly to individual citizens and employees including reimbursements and other miscellaneous payments.
6. Utilities, including but not limited to electricity and telephone service.
7. Employee benefits and health related services procured through a quote and negotiating process conducted by an expert in the field, or to maintain continuity of employee health records.
8. Travel, conferences, training, speakers, instructors, facilitators, and meeting expenses, or other expenditures covered by another City policy.
9. Items for resale that require a particular manufacturer to enhance their marketability.
10. Legal advertisements.
11. Legal services, litigation, and legal expenses.
12. Goods or services required for confidential and secure investigations, apprehensions, and detentions of individuals suspected of or convicted of criminal offenses by law enforcement personnel.
13. Seized property included in a Court Order authorizing disposal.

IV. DEFINITIONS

When used in this policy, the following words, terms, and phrases shall be the meaning ascribed to them herein, except where the context clearly indicates a different meaning.

BID means offer submitted in response to public notice of intended sale or purchase.

BID BOND means a bond that legally binds the bidder to execute a contract and provide required post award documents, such as a certificate of insurance and/or performance and payment bonds, or forfeit the amount of the bond.

BIDDER means one who submits an offer in response to public notice of an intended sale or purchase.

BID OPENING means publicly opening the bid envelopes and making the bids available for public inspection.

BOND means financial protection against damages, an agreement executed by a bidder or vendor and another party to guarantee the performance of certain obligations or duties to the purchaser.

FINANCE DIRECTOR means the person(s) employed directly or contractually by the City to manage the financial policies and operations of the city.

COMPETITIVE AWARD means a procurement based on outcome of one of the competitive processes in this Policy, where award is made based on the lowest quotation or Bid submitted by a responsible and responsive Bidder or to the most qualified or advantageous Proposer based on the factors identified for the procurement. A Competitive Award can be made even if only a single bid or proposal has been received from a Bidder or Proposer who is determined to be responsible and responsive.

CONSTRUCTION means building, altering, improving or demolishing a public structure or building or other public improvements to public real property. "Construction" does not mean routine operation, repair and/or maintenance of existing structures, buildings or property.

CONTRACT means a legally binding mutual agreement between two parties, and an agreement, regardless of form or title, for City's procurement or disposition of goods or services. Contracts also

include change orders, modifications, amendments, and supplemental agreements with respect to the foregoing. Every Contract must be duly authorized and approved by the Council prior to execution.

EMPLOYEE means an individual drawing a salary or wage from the City regardless of full or part-time status. The term shall encompass all members of the Governing Authority without regard to whether or not such individual is compensated.

GIFTS or FAVORS means anything or any service of value.

LOCAL VENDOR means a vendor which operates and maintains a brick and mortar business within the corporate limits of the City; has a current Occupation Tax Certificate; and has paid in full all taxes owed the City.

LOCAL VENDOR PREFERENCE means all informal and formal procurements excluding construction projects; professional and consulting services; federally funded projects; and online/electronic sealed bid/reverse auctions. A local vendor's bid may be awarded if the bid is within ~~two~~ five percent (~~25~~%) of the non-local vendor's bid who otherwise would have received the award of the contract.

PROFESSIONAL SERVICES means those services which are defined by statute as a "profession" or "professional service" and require a license or accreditation, including, but not limited to, certified public accountants, architecture, landscape architecture, interior design, licensed or accredited appraisers or licensed or accredited financial analysts providing opinions of value, professional engineering, land surveying, and law,. Professional Services include but are not limited to evaluations, consultations, management systems, management consulting, compiling statistical data, support of planning and operating activities, appraisal services, and research and development studies or reports.

REQUEST FOR PROPOSAL (RFP) means a document used in purchasing complex services when the competitive sealed bid is neither practical nor advantageous, the RFP process considers both quality of the solution offered and price to obtain the best overall value.

RESPONSIBLE BIDDER means a vendor who has the capability in all respects to perform fully the contract requirements; and the experience, integrity, perseverance, reliability, capacity, facilities, equipment, and credit which will assure good faith performance.

RESPONSIVE BIDDER means a vendor who has submitted a bid that conforms in all administrative and material respects to the requirements stated in the Invitation to Bid.

SEALED BID means an offer submitted in response to a formal procurement solicitation in a closed sealed envelope to be opened at a specific time and place.

SEALED PROPOSAL means an offer submitted in response to a formal procurement solicitation in a closed sealed envelope where the technical response and cost are separated to be opened and the participant's names read aloud at specific time and place.

SERVICES means any performance of effort or labor, for which the City has contracted, other than Professional Services or services classified as construction.

SOLE SOURCE / SINGLE SOURCE means that only one vendor possesses the unique and singularly available capability to meet the requirement of the solicitation, such as technical qualifications, ability to deliver at a particular time, or services from a public utility.

SPECIFICATION OR SCOPE OF WORK means specifications that are the detailed and exact description of the requested materials and/or services. They should accurately describe the physical, functional, and/or performance requirements of the items and/or services requested.

SURPLUS PROPERTY means City-owned property that is no longer required or has no practical use by the City.

USER DEPARTMENT means the organizational unit which has the authority and responsibility for determining the need for an item or service, its related specifications, and need date. The User is responsible for funding the need and advising the Finance Director of the approved funding and the specific budget account number. The User is responsible for authorizing the purchases of all materials, services, repairs, leases, and rentals in which the negotiated price exceeds the approved funding.

VENDOR means any individual or business conducting business or seeking to do business with the City; one who sells goods and/or services; a supplier.

V. ETHICS IN PROCUREMENT

Each person involved in the procurement process must adhere to a high standard of ethics. Actions such as acceptance of gratuities and kickbacks are expressly prohibited. Any employee involved in the purchasing function should seek to avoid even the appearance or perception of impropriety. All employees shall conduct themselves according to the highest standards. Unethical actions by employees or vendors will result in discipline up to termination. The National Institute of Governmental Purchasing (NIGP) Code of Ethics should be used as the guideline. The following principles are to be maintained:

Consider the best interest of the City in all transactions;

Purchase without prejudice, seeking to obtain the maximum value for each expenditure per required quality standards;

Subscribe to and work for honesty and truth in purchasing and avoid all conflict of interest;

Avoid all unethical practices and appearance of same; and

Strive consistently for knowledge of materials and supplies required for use by the City.

A. Employee Conflict of Interest

It is unethical for any City employee, official, contractor or service provider to transact business or participate directly or indirectly in a contract if:

1. The employee or official or any member of the employee's or official's immediate family has a substantial interest or financial interest pertaining to the contract, except the purchase of goods and services from businesses which a member of the Council or other City employee has a financial interest is authorized per O.C.G.A. § 36-1-14, or the contract is awarded per O.C.G.A. § 45-10-22 and § 45-10-24, or the transaction is excepted from said restrictions by O.C.G.A. § 45-10-25;
2. Any other person, business or organization with whom the employee or official or any member of an employee's or official's immediate family is negotiating or has an arrangement concerning prospective employment is involved in the contract;

B. Gratuities, Rebates, or Kickbacks

1. **Gratuities.** It is unethical for any person to offer, give or agree to give any City employee or official, or for any City employee or official to solicit, demand, accept, or agree to accept from another person a gratuity or rebate or an offer of employment in connection with any decision, approval, disapproval, recommendation or preparation of any part of a

program requirement or a purchase request, influencing the content of any specification or procurement standard, rendering of advice, investigation, auditing, or in any other advisory capacity in any proceeding or application, request for ruling, determination, claim or controversy, or other particular matter, pertaining to any program requirement or a contract or subcontract, or to any solicitation or proposal therefor.

2. Kickbacks and rebates. It is unethical for any payment, gratuity, or offer of employment to be made by or on behalf of a subcontractor under a contract to the prime contractor or higher tier subcontractor, or any person associated therewith, as an inducement for the award of a subcontract or order.
3. Contract clause. The prohibition against gratuities, rebates, and kickbacks in this Section shall be conspicuously set forth in every contract and solicitation therefor.
4. Cash. It is impermissible for a City official or employee to accept a gift in cash or cash equivalent (e.g. stocks or other forms of securities) of any amount.

C. Prohibition Against Contingent Fees

It is unethical for a person to be retained or to retain a person, to solicit or secure a City contract upon any agreement or understanding for a commission, percentage, brokerage, or contingent fee, except for retention of bona fide employees or bona fide established commercial selling agencies for the purpose of securing business.

D. Use of Confidential Information

It shall be unethical for any City employee or official knowingly to use confidential information for actual or anticipated personal gain or for the actual or anticipated personal gain of any other person.

E. Unauthorized Purchases

No purchases of materials, supplies, equipment, and services shall be made in the name of City or its departments except as required for official use by City or its departments. Purchases in the name of City or a department for personal use by an individual or for other than official use are prohibited, and no City funds will be expended or advanced therefor.

F. Penalties and Sanctions

1. Legal or disciplinary action. The Manager or Council may take appropriate legal and/or disciplinary actions against any City official, vendor, contractor, organization, or person in violation hereof.
2. Administrative penalties for employees. The Manager may impose any one or more of the penalties or sanctions prescribed in the Human Resources Policies and Procedures on a City employee for violations of the standards in this Section as appropriate to the situation.
3. Administrative penalties for outside contractors/vendors. Council may impose any one or more of the following penalties or sanctions on a vendor/contractor or other person or organization for violations of these standards: written warnings or reprimands; debarment or suspension, or termination of contracts.

VI. RESPONSIBILITIES

A. City Manager

The Manager will serve as the Purchasing Agent for the City. The purchasing agent shall have the following duties:

1. Negotiating City contracts as directed by the Council and with the review and advice of the City Attorney and City Engineer.
2. Advising the Council on the status of negotiations as well as contracts provisions and their impacts on the City.
3. Negotiating for the sale/disposal of all surplus equipment and supplies or real estate of the City.
4. Making recommendations on contract approval, rejection, amendment, renewal, and cancellation.
5. Providing contract administration and supervision of contracts and agreements as directed by the Council. Such tasks shall include, but not limited to monitoring contract amendments, obtaining applicable insurance certificates and monitoring applicable progress.
6. Managing and supervising all purchasing activities.
7. Directing efforts to procure services through advertisements of bids in the legal organ as required by City Ordinances and state law.
8. Requiring bonds, insurance, and/or other protection for the City in procuring goods and services for the City.
9. Terminating solicitations for bids for any goods/services when deemed in the City's best interest. This includes termination for breach of contract or anticipated breach.
10. Consulting with the City Attorney if a contracting party breaches or is reasonably anticipated to breach its contract with the City.
11. Rejecting any and all bids when it is in the City's best interest to do so.

B. Finance Director

The Finance Director will be responsible for:

1. Maintaining a perpetual or periodic inventory record of:
 - a. titles of all requests for proposals and method of source selections used;
 - b. all contracts authorized by Council, method of source selection used, and total dollar amount;
 - c. all emergency contracts awarded;
 - d. all change orders or contract modifications authorized by Council or Manager, dollar amount, and reason;
 - e. an explanation of any changes, and costs involved, in the scope of services made between time a contract is awarded and time that a resolution authorizing the contract is sent to Council for adoption.
2. Arranging for, and assisting the Manager with, the sale/disposal of all surplus equipment and supplies or real estate of the City.
3. Recommending and assisting with the implementation of policies and procedures to provide for compliance with Georgia laws related to bidding, contracting, and purchasing, by examining the applicable laws and developing procedures for bidding, contracting, and procurement.

4. Working with the Manager to plan and implement processes for the ongoing protection of the City's interests.
5. Assisting and coordinating as necessary any grant applications and submissions as directed by the Manager.

C. Department Director

Department Directors will be responsible for:

1. Determining the need for goods/services and providing appropriate documentation as outlined in this policy.
2. Determining the proper funding and budget account for the purchase.
3. Determining the specifications including quantity, quality, dimensions, duration, and all other necessary specifications essential to the determination of what is to be procured. The specifications must, where applicable, conform to approved City standards for identity and continuity.
4. Transmitting the required information to the Manager who will authorize purchase of goods/services on the basis of information in items 1, 2, and 3 above.

D. Eligibility / Vendor Requirements

Anyone contracting with the City must complete the appropriate contractor requirements prior to work. The following are the contractor requirement documents:

1. Vendor Application. This form must be submitted to be considered an active vendor, contractor, or subcontractor for the City.
2. W-9. This form must be completed by all vendors, contractors, or subcontractors performing a service. The form must be signed and include a social security number or employer identification number.
3. SAVE Affidavit. This form must be completed by all vendors, contractors or subcontractors performing a service.
4. E-Verify Affidavit. This form must be completed by vendors, contractors, or subcontractors performing a service on real property for the City and have more than one employee including the owner. Vendors, contractors, or subcontractors that only have one employee including the owner should not complete this form.
5. Certificate of Insurance. Any vendor, contractor, or subcontractor performing a service on the City's property must submit a valid certificate of insurance. This is a certificate issued by the insurance agency of the vendor, contractor, or subcontractor. The City shall not contract with a vendor, contractor, or subcontractor that cannot provide a certificate of insurance when appropriate.

Any exemptions to this policy must have prior approval from the Manager.

VII. PROCUREMENT PROCESS

	\$0.01 - \$2,500	\$2,500.01 - \$7,500	\$7,500.01 - \$19,999.99	\$20,000 - \$65,000	\$65,000.01+ all purchases
Bid/ Proposals & Forms	1. Purchase Receipt or Invoice	1. Contract as appropriate 2. Three (3) verbal quotes	1. Three (3) written price quotes/ proposals 2. Contract as appropriate	1. Competitive Bid Process 2. Contract approved by Manager 3. Manager notifies City Council of expenditure approval.	1. Competitive Bid Process 2. Contract approved by the Council
			Council approval required only if project has not been previously approved in the annual budget.		
Approvals	Department Director	Department Director	Manager	Manager	Council

A. SOURCE SELECTION

All quotes for goods/services are generated and managed through the user department and all vendor selections shall be made by the user department. When making the vendor selection, staff will choose the lowest, best, responsible, and responsive vendor. In determining where to purchase products and services based on competitive prices and costs in obtaining the purchase, the City shall purchase locally when all of these requirements are equal. In such case of an exception to the lowest bid, sufficient documentation as to the reason for the exception will be required. Price quotations will be obtained per City policies. The City shall not make purchases of products or services from City employees or Council members or businesses owned by members of either unless specially approved by the Council. The City shall have the right to “piggy-back” on other local government contracts if the vendor will extend the same prices, terms, and conditions to the City. This “piggy-back” shall only be made available if competition was sought by said local government.

B. SMALL PURCHASES

Items less than \$2,500 may be purchased at the Department Director’s discretion. The single transaction limit for the City’s procurement card will have the same \$2,500 limit. Departments are encouraged to use the procurement card where possible when making small purchases.

C. QUOTES

Items between \$2,500 and \$7,500 will require at least three (3) documented quotes. The quote documentation should include the vendor, name of vendor representative, contact information, date, and amount of verbal quote.

- D. WRITTEN QUOTES** Items over \$7,500 but under \$20,000 will require at least three (3) written quotes. The request for quotes and return quote shall be in writing. The return quote shall include vendor, name of vendor representative, contact information, date, amount of quote, and length of time quoted price will be honored.

- E. SEALED PURCHASING PROCESSES** - The Finance Director will assist the City Manager with the request for sealed bids and Request for Proposals (RFP) on goods and services requisitioned that exceed \$20,000. The user department is responsible for submitting the specifications and/or scope to be used in the bid/RFP. These requests are always made in writing, using clear and adequate product or service specifications. Sealed bids/RFPs will be publicly advertised for a minimum of two (2) consecutive weeks in the City's legal organ and on the City website. Bids/RFPs can also be sent directly to vendors recommended by the user department.

NOTE: Public Works Construction Projects. Georgia State Law requires all local governments to obtain bids or proposals for public works construction projects costing \$200,000 or more and requires Payment Bonds and Performance Bonds for 100% of the contract amount. See O.C.G.A. 32-4-113 (a). In addition, the City requires a 5% Bid Bond.

- 1. Sealed Bid Process** – The sealed bid process shall be governed by the following components/parameters:

Receipt of Bids: No bid shall be eligible for consideration by the City unless it is placed in a sealed envelope or package and actually received by the Manager's office by the date and time specified in the bid request. The Finance Director or the Manager's designee shall cause all bids to be stamped with the date and time of receipt and secured until the designated opening time. A bid delivered late shall under no circumstances be eligible for consideration by the City and shall be returned unopened to the bidder.

Bid Openings: Bids shall be opened publicly in the presence of one or more witnesses on the date and at the time and place designated in the Bid Letter. The name of each Bidder, the purchase price contained in each bid, and such other information as the Manager deems appropriate shall be announced as the bids are opened. A record of bid information shall be recorded and available for public inspection.

Modification of Bids: Any clerical mistake patently obvious on the face of the bid may, subject to the limitations described below, be corrected upon written request and verification submitted by the Bidder. A non-material omission in a bid may be corrected if the Manager determines the correction to be in the City's best interests. Omissions affecting or relating to price or insurance shall be deemed material and shall not be corrected after the bid opening:

Withdrawal of Bids: Bids may be withdrawn at any time prior to the bid opening. After bids have been publicly opened, the bidder shall give notice in writing of his/her claim of right to withdraw his bid within two business days after the conclusion of the

bid opening procedure. If a bid is withdrawn under the authority of this provision, the lowest remaining responsive bid shall be deemed to be the low bid.

Bid Evaluation: Bids shall be evaluated based on requirements in the specifications.

Disqualification of Bids: The following bids shall be disqualified: a bid arriving after the set time for submittal; a bid which is incomplete in any material aspect; a bid submitted without required bonds or insurance; or a bid submitted by a company on the ineligible source list.

Bid Cancellation: A Bid may be cancelled prior to opening date or any or all bids may be rejected in whole or in part as may be specified in the solicitation where it is in the best interest of the City per regulations set forth by the Manager or, as a result of improper conduct on the part of a City employee. The reasons for any cancellation shall be made part of the bid file.

Modification of Specifications after Bid Opening: The City reserves the right to negotiate with the lowest, responsive, and responsible bidder after the bids have been opened and before an award is made in an effort to make sure that the specifications and budget have been met. This will allow staff to add or delete parts for equipment or value engineer a project in the City's best interest. On construction projects the negotiations will be conducted with the design firm and Manager before a recommendation is made for the award of the bid.

Negotiation with Lowest Responsive and Responsible Bidder: Once a bid has been opened and accepted, the City reserves the right to negotiate with the lowest responsive and responsible bidder to ensure that the bid meets the approved budget and specification.

Sealed Bid Award: Sealed bids less than \$20,000 are subject to approval by the Manager and shall be awarded to the lowest, responsive and responsible bidder(s). Sealed bids \$20,000 or more are subject to approval by the Council and shall be awarded to the lowest, responsive, and responsible bidder(s).

- 2. Request for Proposal Process** - The Finance Director will assist the Manager with soliciting Requests for Proposals (RFP) when use of the sealed bid process is either not practicable or not advantageous to the City. The RFP process is generally used when the quality, availability, or capability is overriding in relation to price in the procurement of technical supplies or services. An RFP can also be advantageous when an initial installation needs to be evaluated together with subsequent maintenance and service capabilities according to priorities and requirements in the City's best interest. An RFP may be solicited when the marketplace will respond better to a solicitation permitting not only a range of alternate proposals, but also an evaluation and discussion of them before making the award. RFPs will generally be solicited on a project-by-project basis.

Professional services may be solicited in multi-year increments deemed beneficial to the City based on the investment of staff time and return on such investment through savings on existing prices for service; however, the City must appropriate funds each year for a multi-year service and an appropriation clause should be included in the contract for such services.

The sealed RFP process shall be governed by the following:

Determination of a Scope of Services: Department Director shall submit to Manager a scope of services to be used in the solicitation of Letters of Interest, Statement of Qualifications, and/or Price Proposals from qualified firms.

Dissemination of Proposals: Proposals shall be disseminated through a formal, advertised Request for Proposal.

Receipt of Proposals: No proposal shall be eligible for consideration unless placed in a sealed envelope or package and actually received by the Manager's Office by the date and time specified in the RFP. The Finance Director or the Manager's designee shall cause all proposals to be stamped with the date and time of receipt and secured until the designated opening time. A proposal delivered late shall under no circumstances be eligible for consideration by the City and shall be returned unopened to the bidder.

Proposal Opening: Proposals shall be opened publicly in the presence of one or more witnesses on the date and at the time and place designated in the RFP. The name of each proposer shall be announced but no other information shall be disclosed nor shall the proposals be considered an "open record" until a contract is awarded.

Proposal Cancellation: An RFP may be cancelled prior to opening date or any or all proposals may be rejected in whole or in part as may be specified in the solicitation where it is in the best interest of the City per regulations set forth by the City or, as a result of improper conduct on the part of a City employee. The reasons for any cancellation shall be made part of the proposal file.

Evaluation of Proposals: Each proposal shall be evaluated to determine whether it is responsive to the scope of services and other terms and conditions contained in the RFP. In evaluating the proposals, the evaluating team may communicate with each Proposer to clarify and amplify each Proposer's proposal. No information concerning any other Proposer's proposal shall be communicated in any way to the Proposer.

Request of Supplemental Information: Additional information may be requested of Proposers.

Responsive and Responsible Proposal: Award shall be made to the responsible Proposer whose proposal is determined to be the most advantageous to the City based upon but not limited exclusively to price and the evaluation factors set forth in the RFP.

Approval of Proposals: All proposals where cost is \$20,000 or more shall be approved or rejected by the Council.

Rejection of Proposals: The City reserves the right to reject any or all proposals if it determines such rejection to be in the best interest of the City.

Disqualification of Proposals: The following types of proposals shall be disqualified: a proposal arrives after the set time for submittal; a proposal submitted without required bonds or insurance; or a proposal submitted by a company on the Ineligible Source List.

F. Emergency Purchasing

From time to time, occasions arise which dictate immediate action to purchase items to prevent disruption of operations. The Manager shall grant the authority to purchase commodities and services where there exists an emergency constituting a threat to public

health, safety, and/or welfare or to the soundness and integrity of public property or to the delivery of essential services and where the adverse effect of such emergency may worsen materially with passage of time.

If the emergency occurs after normal business hours and the Manager is unavailable, the Department Directors will be given the same authority as the Manager. The documentation of such purchases are to be submitted to the Manager and Finance Director as soon as possible following the emergency.

Adherence to these regulations and procedures concerning dollar amounts and bidding will be followed as closely as circumstances will allow. All emergencies will be well-documented and reports given to the Manager.

G. Other

1. Brand Name Purchases: The Manager may elect to purchase brand name products or services when the goods comprise a major brand system, program or service previously selected by the City and due to operational effectiveness, future enhancements or additions, or maintenance or storage of spare parts precludes the mixing of brands, manufacturers, etc.
2. Sole Source Purchases: A contract may be awarded, or a purchase made without competition when the City determines that there is only one source for the required products, supply services, or construction items. The Manager shall conduct negotiations as appropriate, as to the price, delivery, and terms to determine reasonableness of price.
3. Grants/Donations: Periodically, the City may be given private/public grants and donations from sources such as the State and Federal Government and private corporations. These types of solicitations are more restrictive and will dictate the procurement process and methodology the City is to follow for an award.
4. State Contract: A contract may be awarded or a purchase made without competition when the City determines that the pricing available through the Georgia Department of Administrative Services is below market rates. The Manager shall conduct negotiations as appropriate, as to the price, delivery, and terms to determine reasonableness of the overall procurement.
5. Responsible for Prices: The final determination of price and terms of goods, materials or services shall. Subject to dollar amount limitations herein, rest with the Manager.
6. Records: The Manager shall document all contracts, purchases, agreements for services, and leases and to maintain said documents consistent with the records retention policy of the City. All agreements or contracts must be in writing.
7. Negotiations of Agreements: All negotiations of agreements for supplies, materials, or services, shall be conducted by the Manager. The Manager may grant this authority to the department director.
8. Approvals:
 - a. It is the responsibility of the Finance Director to secure all necessary approvals of the Manager or their designee, or legal authority, in writing, when necessary to protect the City prior to execution of a contract or purchase agreement.
 - b. The Finance Director may make any authorized purchase for which payment will be made in a current, routine manner following receipt of the goods or services.

Procurement by leasing, long-term financing, advance payments/deposits, or any other special non-routine method must be approved in advance by the Manager or designee.

- c. The Manager or designee is authorized to approve budgeted capital purchases or contracts up to \$20,000 without obtaining Council approval. The department director is responsible for making the recommendation for the award.
- d. Council must approve any non-budgeted purchase or contract over \$20,000. The department director is responsible for submitting the recommendation for this award which the Manager will present to City Council during a public meeting.
- e. Finance may issue a formal purchase order number when requested or required. If a purchase order number is issued, the department director must appropriately document the purchase and specific budget account number prior to the issuance of the purchase order number.
- f. In the case of contracts (other than routine purchases), leases, or service agreements (either new or renewals), the approval process is necessary. All such documents will be forwarded to the Manager, who will acquire the necessary reviews and legal input from the City Attorney prior to execution of any agreement, contract, or lease. When said contracts, leases, or service agreements are up for renewal or expiration, the Manager will notify the user department for approval to either maintain the contract or bid a new contract. The Attorney will review the contract for form, completeness, insurance considerations, legal implications, and any other items dictated by each situation. A copy of the signed contract will be distributed to the user department and filed with the City Clerk.

Once a contract is awarded by the City the contract may be amended without rebidding such contract, provided that such amendment shall not result in a variance in price exceeding ten percent (10%) in totality of the original contract amount. Change order amounts may not be executed in smaller increments to circumvent the change order policy.

The City Clerk will be responsible for maintaining a file of all current contracts, leases, or service agreements.

- 9. Delivery, Quality, and Payment: The user department shall ensure the quality, delivery, and payment of required goods and services.
- 10. Disputes: Final adjudication of any dispute between the vendor and user department shall be made by the Manager with input from both the City Attorney and department director as well as with general oversight by the Council.
- 11. Vendor Visits/Demonstrations: In most cases, contact with vendors will be by the user department and in conjunction with the Manager as necessary. All vendors must coordinate with the Manager before visiting any other department during an open competitive purchasing process.
- 12. Return of Goods and/or Cancellation of Agreements: All return of goods must be initiated by the user department.
- 13. Receiving of Goods: The user department shall ensure that purchased goods and equipment are received, inspected, and verified as to condition.

14. Use of State/Co-Op Contracts: The Manager may, independent of the requirements of bid process of this article, procure supplies, services or construction items through the contract established through competitive means by the purchasing division of the State of Georgia, national Co-Ops (i.e.-U.S. Communities), and collaborative purchasing agreements when deemed to be in the best interest of the City.
15. Change Orders: The Manager will review all change orders and direct the Finance Director to adjust encumbrances as applicable. Change orders will be processed to correct the account distribution, quantity, addition/deletion of line items, change in description, and unit price. If a quoted price is equal to or less than \$10,000 in totality, the Department Director will approve. If a quoted price for a change order is over \$10,000 but the total procurement remains less than \$20,000 in totality, the requisition will be sent to the Manager for approval. Any requisition with a change order where the total procurement equals more than \$20,000 in totality requires Council approval. The department cannot use the change order process to circumvent the Purchasing Policy. Additionally, an available appropriation must exist for all change order amounts prior to approval.

VIII. Surplus Property and Disposal Procedures.

A. Surplus Property.

It is the policy of the City to dispose of Surplus Property in a manner that will serve a “public purpose.” Disposal of Surplus Property may occur by sale or donation to another government agency. Regardless of the manner of disposition, the City will determine the economic value of the Surplus Property in a manner that is both transparent and accountable for the benefit of City staff, decision makers, and citizens. It is in the City’s best interest to have a documented Surplus Property process to provide guidance and authority for the disposal of Surplus Property. This policy applies to all City non-real property (i.e. personal property) determined to be “Surplus Property.”

The City Manager has the authority to dispose of surplus valued at \$500 or less per item. Council approval is required for surplus valued at more than \$500 per item.

Surplus items may be disposed of by any of the following methods:

Advertise for Sealed Bids. The sale shall be made to the highest, most responsive bidder.

Public Auction. A notice of the auction shall be published in a newspaper having general circulation in the city not less than fifteen (15) days nor more than sixty (60) days prior to the date of the auction. The notice shall identify the goods to be sold and set out the date, time, place (includes online auction site), and terms of the sale, as determined by the purchasing manager.

Other. The Council may authorize the disposition of goods by any other lawful means when, because of the unusual character of the goods to be disposed of or unusual circumstances affecting the disposition of the goods, it appears to the Council to be in the City's best interest to do so.

Computer and Electronic Data Storage Equipment are defined as any equipment that contains electronic data or has contained electronic data. Such items shall be properly wiped of all data prior to disposition via surplus. This includes, but is not limited to

computers, laptops, tablets, servers, backup tapes and media switches, routers and hubs, phones, printers, fax machines, copiers, scanners, monitors, and external hard drives.

Seized and unclaimed property within the Police Department shall be handled and disposed of per applicable Federal, State, and local requirements.

The Finance Director shall maintain a record that describes generally the goods disposed, to whom the goods were conveyed, and the consideration received for the goods. The Manager shall make periodic reports to the Council concerning disposition of goods made pursuant to this section.

IX. PAYMENT OF RECURRING INVOICES

Direct entry of invoices after department director approval may be initiated to streamline procedures for initiating routine payments such as the following:

Utility Bills, Insurance premiums, Postage expenses, Conferences, training, and meeting pre-paid expenses, Reimbursements as shown on an approved Travel Expense Report, and Court Fees.

The above is not all-inclusive. Questions shall be directed to the Finance Director.

X. EXCEPTIONS: Any and all exceptions to this policy must be approved by the Council.

Recommended by: _____ **Date:** _____

Sharyn E. Dickerson, City Manager

Approved by Mayor and Council: _____

Brian Brodrick, Mayor

Attest: _____

Julie A. Klein, City Clerk:

Date: _____

Effective Date: _____

CITY OF WATKINSVILLE

STAFF REPORT

MEETING DATE: OCTOBER 16, 2024 CITY COUNCIL MEETING

GENERAL INFORMATION

Applicant:	CK Capital, LLC
Agenda Item:	REZONE of 1180 Greensboro Highway
Owner:	Athens Construction Group Property Holdings, LLC
Project Location:	1180 Greensboro Hwy Watkinsville, GA
Acreage:	17.26 acres total (16.99 acres for W 08 011 and 0.27 acres for W 08 004A)
Existing Zoning:	Corridor Commercial, Detached Residential & South Main Street Scenic Corridor (W 08 004A)
Existing Use:	Vacant Concrete Pipe Plant for the majority of the area
Proposed Request:	Downtown District (DT) for proposed residential use including Attached Residential

Watkinsville Zoning defines the proposed zoning for this project as:

Downtown

Downtown is intended to be the civic and commercial heart of Watkinsville with a focus on retail and services to provide for local needs. Office, civic, residential, entertainment, and recreational uses shall also be incorporated into the district

1180 Greensboro Watkinsville:



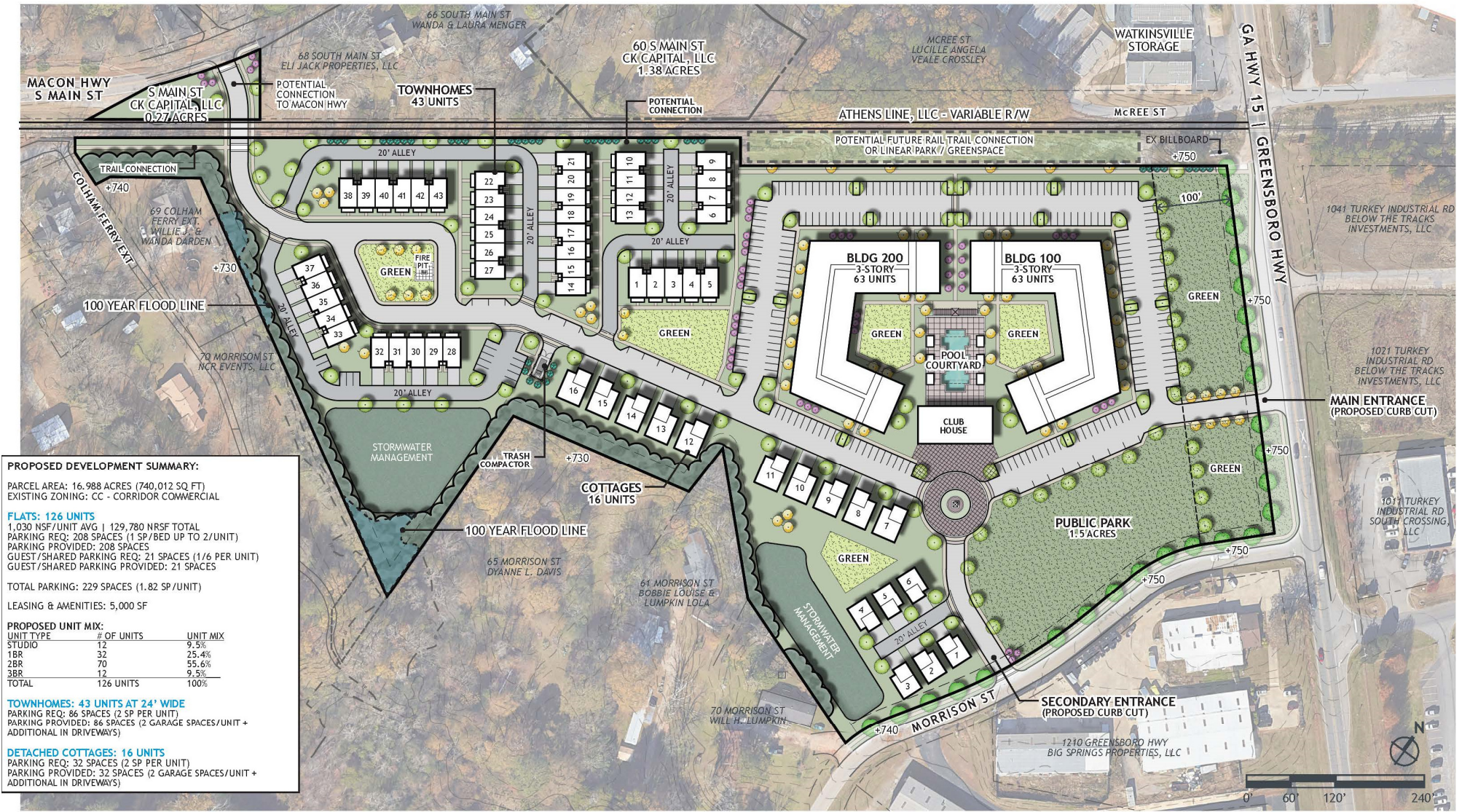
View of Property from Greensboro Hwy and Morrison Intersection facing NW



View of property from Railroad facing NE



Conceptual Master Plan
 1180 Greensboro Hwy | Watkinsville, GA



PROJECT OVERVIEW

Applicant has requested rezone to Downtown Zoning and submitted a Conceptual Master Planning and Design dated 8/7/24 proposing 126 Apartment Units, 43 Townhomes, and 16 Detached Cottages with associated parking and access.

Applicant previously submitted a signed and sealed Traffic Report from Travis Pruitt & Associates dated 2/28/2024 with a total of 9 intersections studied in the scope of the report indicating projected Average Daily Trips of 4,236 due to this proposed development. Revised Rezone Report from 9/3/24 indicates a reduced projected 1,310 daily trips due to the revised residential only proposed development.

Applicant has indicated 1.5 acres of Public Park Area and a “POTENTIAL CONNECTION TO MACON HWY” on the 8/7/24 Concept Master Plan.

Applicant shall clarify the proposed plans for the green areas indicated on the plans, specifically the approximately 100 ft wide green area along State Route 15.



CITY OF
WATKINSVILLE

PETITION FOR AMENDMENT

Date: Sept 3, 2024 Tax Map and Parcel Number(s) W 08 011

PROPERTY ADDRESS 1180 Greensboro Highway

USE REQUESTED: residential development (single family and multi-family) - proposed
Downtown zoning

Parts 1 and/or Part 2 below must be signed and notarized when petition is submitted.

- a) If you are the sole owner of the property and not the petitioner complete Part 1.
- b) If you are the petitioner and not the sole owner of the property complete Part 2.
- c) If you are the sole owner and petitioner complete Part 1.
- d) If there are multiple owners each must complete a separate Part 1 and include it in the application.

Part 1. The undersigned states under oath that he/she is the owner of the property and the application is true and complete. The owner also states under oath that the petitioner below is authorized to act on their behalf in the filing of this application.

PRINT NAME Mark Jennings, Athens Construction Group Property Holdings, LLC

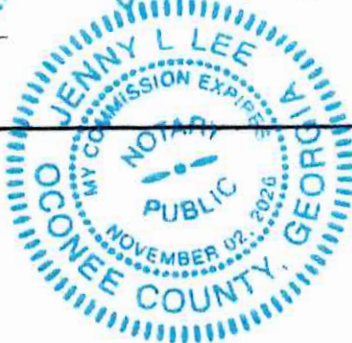
ADDRESS 2300 Pete Dickens Road, Bogart, GA 30622

PHONE 706-850-6477

SIGNATURE Mark Jennings

Sworn to and subscribed before me this 26th Day of March 2024

Jenny L Lee
NOTARY PUBLIC





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Part 2. The undersigned states under oath that he/she is the petitioner and is authorized to act on the owner's behalf in the filing of this application and the application is true and complete.

PRINT NAME Chad Keller, CK Capital
ADDRESS 1041 Commerc Court, Bogart GA 3062
PHONE 706-286-5371
SIGNATURE _____

Sworn to and subscribed before me this 3rd Day of Sept
Amy Huger
NOTARY PUBLIC



ATTORNEY/AGENT

Check One: ☐ Attorney ☒ Agent
Frank Pittman, Pittman & Greer Engineering
TYPE OR PRINT ATTORNEY / AGENT NAME

SIGNATURE OF ATTORNEY / AGENT
1050 Barber Creek Drive, Bldg 400

ADDRESS
Watkinsville GA 30677
CITY & STATE ZIP CODE

[Signature] 706-419-9244
PETITIONER'S SIGNATURE PHONE NUMBER



CITY OF
WATKINSVILLE

DISCLOSURE OF CAMPAIGN CONTRIBUTIONS

APPLICANT

Chad Keller

ADDRESS

1041 Commerce Court, Bogart GA 30622

706-286-5371

PHONE NUMBER

CK Capital

BUSINESS REPRESENTED

Check one of the following:

☒ (A) The applicant here certifies, under oath, that he or she has not made any campaign contributions or gifts having an aggregate total value of \$250 or more to any local government official of Watkinsville, Georgia, as defined by O.C.G.A. 36-67A-1(5).

☐ (B) The Applicant here certifies, under oath, that he or she has made the following campaign contributions or gifts having an aggregate total value of \$250.00 or more to a local government official of Watkinsville, Georgia as defined by O.C.G.A.36-67A-1 (5).

Please list total value of contribution(s) dates and names of the local Government Official:

NA

Describe in detail any gifts listed above (example: quantity and nature, etc.):

NA



CITY OF
WATKINSVILLE

IMPACT ANALYSIS

1. Map and Parcel #: W 08 011
2. Road Name(s): Greensboro Highway, Morrison Street, Main Street
3. Use Request: Residential development
4. Petitioner's Name: Chad Keller
Address: 1041 Commerce Court, Bogart GA 30622
Daytime Telephone No.: 706-286-5371

Analyze the impact of the requested use and answer the following questions:

The following standards governing the exercise of the City's zoning power are to be considered by the Mayor and Council in balancing the interest of the public health, safety, morality and/or general welfare against the unrestricted use of property:

1. Is the request consistent with the existing land use pattern? yes
2. Does the request create an isolated district unrelated to adjacent and nearby districts? no
3. Does the request create a possible increase or over-taxing of the load on public facilities including, but not limited to, school, utilities, and streets? no
4. Does the request create costs to the City and other governmental entities in providing, improving, increasing or maintaining public utilities, schools, streets, law enforcement, fire protection and other public services? no
5. Does the request impact the environment, including, but not limited to drainage, soil erosion and sedimentation, flooding, air quality and water quality? no
6. Does the request allow uses which will be a detriment to the value of adjacent property in accordance with existing regulations? no
7. Are there substantial reasons why the property cannot be used and developed in accordance with the existing regulations? yes
8. What is the aesthetic effect of the existing and proposed use of the property as it relates to the surrounding area? significant improvement
9. Is the proposed zoning amendment consistent with the comprehensive land use plan? yes
10. What are the possible effects of the proposed zoning amendment on the character of the zoning district, a particular piece of property, neighborhood, a particular area or the community as a whole? positive effect



CITY OF
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11. Is the proposed zoning amendment consistent with the purpose of the overall zoning scheme, with due consideration given to whether or not the proposed zoning change will carry out the purposes of these zoning regulations? yes
12. Does a site specific request include a specific site plan? yes
13. The consideration of the preservation of the integrity of residential neighborhoods shall be considered to carry great weight. Does the request affect residential neighborhoods? no
14. If property fronts on a major thoroughfare and also adjoins an established residential neighborhood, the factor of preservation in the residential neighborhood shall be considered to carry great weight. Does the request affect residential neighborhoods? no
15. Does the property affected by the zoning decision have a reasonable economic use as currently zoned? no
16. Are there other conditions that exist that affect the use and development of the property in question and support either approval or denial of the zoning action? no

LEGAL DESCRIPTION

All that tract, or parcel of land, lying and being in Oconee County, Georgia, G.M.D. 239, containing 16.988 acres, more or less, and being more particularly described as:

Beginning at the centerline intersection of Georgia Highway 15 and Morrison Street; thence South 72 degrees 12 minutes 56 seconds West, 54.99 feet to a pin, being the TRUE POINT OF BEGINNING; thence continuing along the 50 foot right-of-way of Morrison Street South 45 degrees 11 minutes 07 seconds West, 92.51 feet to a point; thence continuing along an Arc with a radius of 211.15 feet, South 29 degrees 51 minutes 49 seconds West, with an arclength of 112.93 feet and a chord length of 111.59 feet to a point; thence along a line South 14 degrees 32 minutes 31 seconds West, 73.80 feet to a point; thence along an Arc with a radius of 684.25 feet, South 23 degrees 50 minutes 10 seconds West, with an arclength of 221.99 feet and a chord length of 221.02 feet to a point; thence South 33 degrees 07 minutes 50 seconds West, 85.57 feet to a point; thence along an Arc with a radius of 173.23 feet, South 22 degrees 58 minutes 18 seconds West, with an arclength of 61.43 feet and a chordlength of 61.11 feet to a point; thence North 70 degrees 07 minutes 24 seconds West, 232.27 feet to a point; thence North 45 degrees 24 minutes 18 seconds West, 205.02 feet to a point; thence South 02 degrees 05 minutes 32 seconds West, 73.65 feet to a point; thence South 77 degrees 24 minutes 34 seconds West, 254.97 feet to a point; thence South 00 degrees 58 minutes 54 seconds East, 295.18 feet to a point; thence North 59 degrees 59 minutes 12 seconds West, 413.95 feet to a point; thence North 59 degrees 43 minutes 19 seconds West, 199.58 feet to a point; thence South 54 degrees 49 minutes 53.85 seconds West, 120.78 feet to a point; thence South 27 degrees 01 minutes 09 seconds West, 21.84 feet to a point; thence North 69 degrees 12 minutes 32 seconds West, 50.52 feet to a point; thence North 36 degrees 12 minutes 32 seconds West, 19.81 feet to a point; thence North 54 degrees 03 minutes 24 seconds East, 889.59 feet to a point; thence South 35 degrees 56 minutes 36 seconds East, 37.38 feet to a point; thence North 54 degrees 03 minutes 24 seconds East, 650.00 feet to a point; thence South 43 degrees 19 minutes 11 seconds East, 496.38 feet to a point, THAT BEING THE TRUE POINT OF BEGINNING.



CITY OF
WATKINSVILLE
APPLICATION FOR REZONE

EXCERPTS OF ORDINANCE

Chapter 14.03. Rezoning application.

A. *Application Requirements.*

1. A rezoning application must be filed with the City Clerk at least 45 days prior to the *MAYOR* and *COUNCIL* meeting at which the request will be heard.
2. A rezoning application must contain the following information:
 - a. A survey of the property prepared by a licensed surveyor showing existing and proposed *STRUCTURES* and uses, access drives, easements, environmental features, utilities, Buffers, existing zoning, and any other relevant supporting documentation reasonably required by the City to assist in rendering a decision, including concept plans.
 - b. A list of adjoining property owners as shown on the tax rolls.
 - c. Any additional relevant information the applicant or the Clerk reasonably believes to be pertinent.
 - d. Payment of the application fee, as determined by Mayor and Council Resolution. The fee is waived if the *APPLICANT* is the City of Watkinsville.
 - e. A signed statement certifying *APPLICANT* or the owner represented by the *APPLICANT* has one hundred percent (100%) ownership or leasehold interest in the property. In case of a lease, the owner must also sign.
3. Once the application is submitted it cannot be amended. Incomplete applications will not be processed.

B. *Rezoning Application Review.*

1. Zoning Administrator Written Analysis.
 - a. The *ZONING ADMINISTRATOR* shall present the application and all its supporting documents, along with a written analysis of the requested zoning's impact, at the public hearing. The written analysis shall show that the *ZONING ADMINISTRATOR* has considered the proposed change in relation to the Standard of Review of § 14.03.C.

C. *Public Hearing and Procedures.*

1. *Public Hearing Required.*
 - a. Before enacting an amendment to this Ordinance, a public hearing must be held by the Mayor and Council.



CITY OF
WATKINSVILLE

2. *Applicant Notification.*

- a. The City Manager or his/her designee must notify the applicant of the date, time, and place of the required public hearing.

3. *Publication of Notice.*

- a. Not less than fifteen (15) days, and not more than forty-five (45) days prior to the date of the public hearing, the City Clerk shall cause to be advertised the date, time, place and purpose of the public hearing in a newspaper of general circulation in Watkinsville, GA.

4. *Sign.*

- a. Not less than fifteen (15) days prior to the public hearing, the City Clerk shall cause the applicant to have posted in a conspicuous place on the lot or parcel to be rezoned, one (1) or more signs, which shall provide adequate notice of the zoning action. Each sign shall be approximately 32" in height and 24" in width and shall provide adequate notice of the zoning action. At a minimum, the sign must contain the following information: date, time, and location of the hearing, current zoning classification and proposed zoning classification, and a telephone number interested persons can call for additional information.
- b. If, because of circumstances peculiar to the location of the property to be posted, the sign will either be inconspicuous or invisible from any well-traveled right-of-way, the sign(s) shall be posted on the property to be rezoned and on other property in such a location that it is likely to be seen by persons potentially interested in the decision.

5. *Mayor and Council Action.*

- a. The Mayor and Council shall hold a public hearing on the application in accordance with §[Chapter] 14.06. After the hearing, the Mayor and Council shall consider the Standards of Review of §[Chapter] 14.03.C and approve, approve with conditions, or deny the application.
- b. Within seven (7) days of its decision, the City Clerk shall notify the applicant in writing.

6. *Withdrawal.*

- a. If a rezoning application is withdrawn in writing by the applicant at any time after the publication of the newspaper notice and posting of the required sign, but prior to the public hearing, the same property may not be considered for rezoning until the expiration of sixty (60) days immediately following the withdrawal of the rezoning application. The withdrawal must be in writing and signed by the applicant.
- b. The application will be considered to have been withdrawn if the applicant, his/her authorized agent or his/her attorney fails to appear at the public hearing. By withdrawing in this manner, the same property may not be considered for rezoning until



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WATKINSVILLE

the expiration of sixty (60) days from the date of the scheduled public hearing for which the applicant failed to appear.

7. *Denial.*

- a. If the rezoning application is denied by the Mayor and Council, then the same property may not be considered for rezoning until the expiration of six (6) months immediately following the denial of the rezoning by the Mayor and Council.

D. *Standards of Review (Zoning Amendment Criteria).*

1. In the consideration of a rezoning application, the Mayor and Council shall consider factors relevant in balancing the interest in promoting the public health, safety, morals or general welfare against the right of the individual to the unrestricted use of property and must specifically consider the following factors as they may be relevant to the application:
 - a. The existing land use pattern;
 - b. The possible creation of an isolated district unrelated to adjacent and nearby districts;
 - c. The population density pattern and possible increase or overtaxing of the load on public facilities including, but not limited to, school, utilities, public safety, and streets;
 - d. The cost to the City and other governmental entities in providing, improving, increasing or maintaining public utilities, schools, streets and other public safety measures;
 - e. The possible impact on the environment, including but not limited to, drainage, soil erosion and sedimentation, flooding, air quality and water quality;
 - f. Whether the proposed zoning map amendment will be a deterrent to the value or improvement or development of adjacent property in accordance with existing regulations;
 - g. Whether there are substantial reasons why the property cannot be used in accordance with existing regulations;
 - h. The aesthetic effect of existing and future use of the property as it relates to the surrounding area;
 - i. The extent to which the proposed zoning map amendment is consistent with the comprehensive plan;
 - j. The possible effect of the proposed zoning map amendment on the character of a zoning district, a particular piece of property, neighborhood, a particular area, or the community;
 - k. The relation that the proposed zoning map amendment bears to the purpose of the overall zoning scheme, with due consideration given to whether or not the proposed change will help carry out the purposes of these zoning regulations;



CITY OF
WATKINSVILLE

1. The consideration of the preservation of the integrity of residential neighborhoods shall be considered to carry great weight.
2. After hearing evidence at the zoning hearing, the Mayor and Council shall apply the evidence of the Standards of Review (Zoning Amendment Criteria) in making its decision. It will not be required that the Mayor and Council consider every criterion contained in the Standards of Review. It shall be the duty of the applicant to carry the burden of proof that the proposed rezoning promotes the public health, safety, morality or general welfare.

(Amd. of 12-21-2022)

SUMMARY OF DEADLINES AND PROCEDURES

1. Pre-application review is requested prior to formal submittal of the application.
2. The application must be complete and submitted in proper form at least 45 days prior to a hearing. Fees are to be paid, by check or money order, at the time of filing. Checks without pre-printed account information will not be accepted.
3. Applications preferably should be submitted in-person by the applicant or an authorized agent. Applications submitted via courier or mail makes it harder to immediately communicate with the applicant about any potential deficiency or any ambiguity.
4. Applicant is requested to submit any revisions to site plans, letters of intent, proposed conditions, etc. to the City immediately. Last minute revisions may delay the dates of public hearings.
5. The applicant must attend the public hearing.
6. Any staff analysis will be available from the City typically a day before the hearing.



CITY OF
WATKINSVILLE

CHECK SHEET FOR TEXT AMENDMENTS THAT ARE PARCEL SPECIFIC

NARRATIVE DESCRIPTION OF REQUEST: The applicant shall set forth a written justification for the requested zoning amendment. For any site specific application, this should include factual information such as requested use, acreage, square footage of buildings, number of residential structures, number of parking spaces, any special conditions, any subdivision of property, setbacks, existing and proposed buildings, parking, driveways, buffers, landscape areas, streams, and other features. If the request is for a text amendment, applicant shall state the exact language of any zoning ordinance text amendment requested

PLAT: The plat of the property must be prepared and sealed by a professional engineer or land surveyor registered in Georgia, and include: The complete boundaries of the subject property and all buildings and structures existing thereon; and Notation as to the total acreage or square footage.

LEGAL DESCRIPTION: Must match the plat.

IMPACT ANALYSIS: Complete the form answering all questions regarding the impact of the use with respect to each standard and factor.

STANDARDS OF REVIEW: Complete the form answering all questions regarding the standards of review.

DISCLOSURE FORM: If the owner, petitioner and/or the agent for the petitioner has made a campaign contribution to any member of the Mayor and Council for \$250 or more within the past 2 years, the form must be completed. If not, the petitioner must circle "No" and complete the top of the form indicating name, signature and date.

LEGAL DESCRIPTION

All that tract, or parcel of land, lying and being in Oconee County, Georgia, G.M.D. 239, containing 16.988 acres, more or less, and being more particularly described as:

Beginning at the centerline intersection of Georgia Highway 15 and Morrison Street; thence South 72 degrees 12 minutes 56 seconds West, 54.99 feet to a pin, being the TRUE POINT OF BEGINNING; thence continuing along the 50 foot right-of-way of Morrison Street South 45 degrees 11 minutes 07 seconds West, 92.51 feet to a point; thence continuing along an Arc with a radius of 211.15 feet, South 29 degrees 51 minutes 49 seconds West, with an arclength of 112.93 feet and a chord length of 111.59 feet to a point; thence along a line South 14 degrees 32 minutes 31 seconds West, 73.80 feet to a point; thence along an Arc with a radius of 684.25 feet, South 23 degrees 50 minutes 10 seconds West, with an arclength of 221.99 feet and a chord length of 221.02 feet to a point; thence South 33 degrees 07 minutes 50 seconds West, 85.57 feet to a point; thence along an Arc with a radius of 173.23 feet, South 22 degrees 58 minutes 18 seconds West, with an arclength of 61.43 feet and a chord length of 61.11 feet to a point; thence North 70 degrees 07 minutes 24 seconds West, 232.27 feet to a point; thence North 45 degrees 24 minutes 18 seconds West, 205.02 feet to a point; thence South 02 degrees 05 minutes 32 seconds West, 73.65 feet to a point; thence South 77 degrees 24 minutes 34 seconds West, 254.97 feet to a point; thence South 00 degrees 58 minutes 54 seconds East, 295.18 feet to a point; thence North 59 degrees 59 minutes 12 seconds West, 413.95 feet to a point; thence North 59 degrees 43 minutes 19 seconds West, 199.58 feet to a point; thence South 54 degrees 49 minutes 53.85 seconds West, 120.78 feet to a point; thence South 27 degrees 01 minutes 09 seconds West, 21.84 feet to a point; thence North 69 degrees 12 minutes 32 seconds West, 50.52 feet to a point; thence North 36 degrees 12 minutes 32 seconds West, 19.81 feet to a point; thence North 54 degrees 03 minutes 24 seconds East, 889.59 feet to a point; thence South 35 degrees 56 minutes 36 seconds East, 37.38 feet to a point; thence North 54 degrees 03 minutes 24 seconds East, 650.00 feet to a point; thence South 43 degrees 19 minutes 11 seconds East, 496.38 feet to a point, THAT BEING THE TRUE POINT OF BEGINNING.

9040303858
PARTICIPANT ID
P2018000150

BK:2018 PG:150-150

FILED IN OFFICE
CLERK OF COURT
11/09/2018 02:07 PM
ANGELA ELDER-JOHNSON,
CLERK
SUPERIOR COURT
OCONEE COUNTY, GA

Angela Elder-Johnson

THIS MAP IS RESERVED FOR RECORDING INFORMATION

LEGEND OF SURVEY
ABBREVIATIONS/SYMBOLS

CL	CENTERLINE
DB	DEED BOOK
FND	FOUND
IPS	1/2" CAPPED REBAR SET
OTF	STAMPED LSF 1010
OTF	OPEN TOP PIPE FOUND
P	PROPERTY LINE
PB	PLAT BOOK
PKF	PK NAIL FOUND
PKS	PK NAIL SET
PGB	POINT OF BEGINNING
POC	POINT OF COMMENCEMENT
R/W	RIGHT-OF-WAY
RFB	REBAR FOUND
SWB	STATE WATERS BUFFER
TP	TAX PARCEL NUMBER
O	1/2" CAPPED REBAR SET
	STAMPED LSF 1010
●	(UNLESS OTHERWISE NOTED)
●	IRON PIN FOUND
●	(AS DESCRIBED)
○	COMPUTED POINT (NO PIN)

Current Owner:
Smith Setzer & Sons of Ga, Inc.



COMPREHENSIVE ENGINEERING SERVICES
CIVIL ENGINEERING
LAND SURVEYING
LAND PLANNING
CONSTRUCTION STAKING
LANDSCAPE ARCHITECTURE
SOIL MAPPING & SEPTIC SYSTEMS
WETLAND & ENVIRONMENTAL MONITORING

2410 HOG MOUNTAIN ROAD
SUITE 103
WATKINSVILLE, GA 30677
706-613-8900
706-425-9631 (FAX)
abe@ABEconsultinginc.com
www.ABEconsultinginc.com

Retracement Survey for:

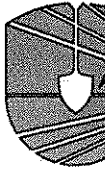
Pipe Plant
Development
Partners, LLC

1180 Greensboro Hwy
Watkinsville, Ga.
Oconee County
221st G.M.D.

Being those parcels described in Deed Books JJ
page 300, UU page 153 & 41 page 448 and
depicted on plats found in Plat Books 2 page
82, 3 page 60 & 7 page 124.

TOTAL PROJECT AREA: 16.989 ACRES
TAX PARCEL #: W 08 011 & W 08 002M
EXISTING ZONING: DETACHED RESIDENTIAL
& CORRIDOR COMMERCIAL

Call Before
You Dig...

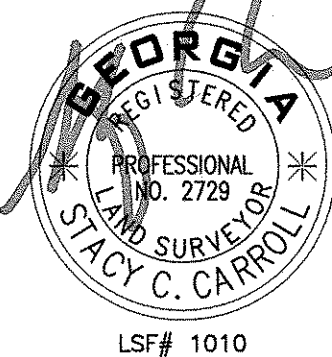


Utilities

PROTECTION CENTER
Georgia 1-800-282-7411

COPYRIGHT © 2018 ABE CONSULTING, INC. RESERVES COPYRIGHT AND OTHER
RIGHTS TO THE STRICT USE OF THESE DOCUMENTS FOR THE ORIGINAL
PROJECT FOR WHICH THEY WERE INTENDED. ANY CHANGES OR ALTERATIONS
MADE TO THIS MAP OF SURVEY WITHOUT THE WRITTEN APPROVAL OF ABE
CONSULTING, INC. VOID THE SEAL SHOWN HEREON AND ANY LIABILITY
ASSOCIATED WITH THIS PROJECT. THE ORIGINAL DRAWINGS ARE KEPT ON FILE
FOR VERIFICATION OF ANY CHANGES, REPRODUCTIONS, MODIFICATIONS, OR
ASSIGNMENTS ARE STRICTLY PROHIBITED.

I HEREBY CERTIFY THAT THIS SURVEY WAS PREPARED IN
CONFORMITY WITH THE TECHNICAL STANDARDS FOR PROPERTY
SURVEYS IN GEORGIA AS SET FORTH IN CHAPTER 180-7 OF
THE RULES OF THE GEORGIA BOARD OF REGISTRATION FOR
ENGINEERS AND LAND SURVEYORS AND AS SET FORTH IN
THE GEORGIA PLAT ACT O.C.G.A. 15-6-67.



DATE

PREPARED:

11-1-18

PROJECT #:

18-027-54

REVISIONS DATE

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...

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Course	Bearing	Distance
1	S 54°49'54"W	120.78'
2	S 27°01'09"W	21.84'
3	N 69°12'32"W	50.52'
4	N 36°12'32"W	19.81'
5	S 69°12'32"E	155.48'
6	S 29°06'25"W	115.00'
7	S 00°58'54"E	109.66'
8	N 64°59'05"W	24.25'
9	N 35°01'05"W	50.39'
10	N 00°58'54"W	87.31'

Supplemental notes:
The actual limits of the stockpiles of concrete pipe
located on the subject property could not be
determined and may cross the property lines in some
areas.

SURVEYOR'S NOTES:

- THIS MAP OF SURVEY WAS PREPARED WITHOUT THE BENEFIT OF A TITLE ABSTRACT.
- THE PROPERTY SHOWN HEREON IS SUBJECT TO EASEMENTS, RESTRICTIONS, RESERVATIONS, RIGHTS-OF-WAY AND OTHER ENCUMBRANCES, BOTH PUBLIC AND PRIVATE.
- UNDERGROUND UTILITIES AND FOUNDATIONS, IF ANY, HAVE NOT BEEN LOCATED.
- THIS MAP OF SURVEY IS NOT VALID UNLESS IT BEARS THE REGISTRANT'S ORIGINAL SIGNATURE, IN RED INK, PLACED ACROSS THE REGISTRANT'S SEAL.
- BEARINGS AND COORDINATES SHOWN HEREON ARE BASED ON THE STATE PLANE COORDINATE SYSTEM OF 1983 DERIVED FROM GPS OBSERVATIONS UTILIZING THE GPS NETWORK.
- ZONING AND SETBACK INFORMATION, IF SHOWN, SHOULD BE VERIFIED BY THE APPROPRIATE PLANNING/ZONING AGENCY PRIOR TO DESIGN OR CONSTRUCTION ACTIVITIES.

SURVEY CLOSURE STATEMENT

THE FIELD SURVEY UPON WHICH THIS PLAT IS BASED, UTILIZED REDUNDANT LINEAR MEASUREMENTS TO DETERMINE THE RELATIVE POSITIONAL ACCURACY. THE POSITIONAL TOLERANCE OF THE OBSERVED POSITIONS WAS FOUND TO BE 0.06 FEET PLUS 50 PARTS PER MILLION OR BETTER. THIS PLAT HAS BEEN CALCULATED FOR CLOSURE AND WAS FOUND TO BE ACCURATE WITHIN ONE FOOT IN 934,786 FEET. A TOPCON 503GT WAS USED TO OBTAIN ALL LINEAR AND ANGULAR MEASUREMENTS AND A CARLSON BRX6 DUAL FREQUENCY RECEIVER WAS USED TO SET CONTROL AND DERIVE STATE PLANE COORDINATES. THE FIELDWORK WAS COMPLETED ON 10-31-18.

SURVEYOR'S CERTIFICATE

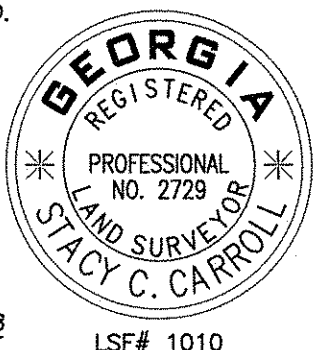
THIS PLAT IS A RETRACEMENT OF AN EXISTING PARCEL OR PARCELS OF LAND AND DOES NOT SUBDIVIDE OR CREATE A NEW PARCEL. THE RECORDING INFORMATION OF THE DOCUMENTS, MAPS, PLATS, OR OTHER INSTRUMENTS WHICH CREATED THE PARCEL OR PARCELS ARE STATED HEREON. RECORDATION OF THIS PLAT DOES NOT IMPLY APPROVAL OF ANY LOCAL JURISDICTION, AVAILABILITY OF PERMITS, COMPLIANCE WITH LOCAL REGULATIONS OR REQUIREMENTS, NOR SUITABILITY FOR ANY USE OR PURPOSE OF THE LAND. FURTHERMORE, THE UNDERSIGNED LAND SURVEYOR CERTIFIES THAT THIS PLAT COMPLIES WITH THE MINIMUM TECHNICAL STANDARDS FOR PROPERTY SURVEYS IN GEORGIA AS SET FORTH IN THE RULES AND REGULATIONS OF THE GEORGIA BOARD OF REGISTRATION FOR PROFESSIONAL ENGINEERS AND LAND SURVEYORS AND AS SET FORTH IN O.C.G.A. SECTION 15-6-67.

STACY C. CARROLL, GEORGIA RLS #2729

11-1-18

DATE

LSF# 1010



CITY OF
WATKINSVILLE

PETITION FOR AMENDMENT

W 08 004A

Date: April 1, 2024 Tax Map and Parcel Number(s) _____

PROPERTY ADDRESS 0 Main Street

USE REQUESTED: Downtown zoning to allow for driveway to development of 1180
Greensboro Highway

Parts 1 and/or Part 2 below must be signed and notarized when petition is submitted.

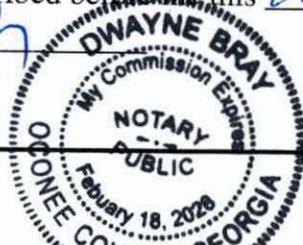
- a) If you are the sole owner of the property and not the petitioner complete Part 1.
- b) If you are the petitioner and not the sole owner of the property complete Part 2.
- c) If you are the sole owner and petitioner complete Part 1.
- d) If there are multiple owners each must complete a separate Part 1 and include it in the application.

Part 1. The undersigned states under oath that he/she is the owner of the property and the application is true and complete. The owner also states under oath that the petitioner below is authorized to act on their behalf in the filing of this application.

PRINT NAME Chad Keller, CK Capital LLC
ADDRESS 1041 Commerce Court, Bogart GA 30622
PHONE 706-286-5371
SIGNATURE _____

Sworn to and subscribed before me this 28 Day of March 2024

NOTARY PUBLIC





CITY OF
WATKINSVILLE

Part 2. The undersigned states under oath that he/she is the petitioner and is authorized to act on the owner's behalf in the filing of this application and the application is true and complete.

PRINT NAME _____
ADDRESS _____
PHONE _____
SIGNATURE _____

Sworn to and subscribed before me this _____ Day of _____ 20__

NOTARY PUBLIC

ATTORNEY/AGENT

Check One: [] Attorney [^x] Agent

Frank Pittman, Pittman & Greer Engineering

TYPE OR PRINT ATTORNEY / AGENT NAME

SIGNATURE OF ATTORNEY / AGENT

1050 Barber Creek Drive, Bldg 400

ADDRESS

Watkinsville Ga 30677

CITY & STATE

ZIP CODE

706-286-5371

[Signature]
PETITIONER'S SIGNATURE

PHONE NUMBER



CITY OF
WATKINSVILLE

DISCLOSURE OF CAMPAIGN CONTRIBUTIONS

Chad Keller

APPLICANT

1041 Commerce Court, Bogart, GA 30622

ADDRESS

706-286-5371

PHONE NUMBER

BUSINESS REPRESENTED

Check one of the following:

 x (A) The applicant here certifies, under oath, that he or she has not made any campaign contributions or gifts having an aggregate total value of \$250 or more to any local government official of Watkinsville, Georgia, as defined by O.C.G.A. 36-67A-1(5).

 (B) The Applicant here certifies, under oath, that he or she has made the following campaign contributions or gifts having an aggregate total value of \$250.00 or more to a local government official of Watkinsville, Georgia as defined by O.C.G.A.36-67A-1 (5).

Please list total value of contribution(s) dates and names of the local Government Official:

NA

Describe in detail any gifts listed above (example: quantity and nature, etc.):

NA



CITY OF
WATKINSVILLE

IMPACT ANALYSIS

- W 08 004A
1. Map and Parcel #: _____
 2. Road Name(s): Main Street
 3. Use Request: _____
 4. Petitioner's Name: Chad Keller
Address: 1041 Commerce Court, Bogart GA 30622
Daytime Telephone No.: 706-286-5371

Analyze the impact of the requested use and answer the following questions:

The following standards governing the exercise of the City's zoning power are to be considered by the Mayor and Council in balancing the interest of the public health, safety, morality and/or general welfare against the unrestricted use of property:

1. Is the request consistent with the existing land use pattern? yes
2. Does the request create an isolated district unrelated to adjacent and nearby districts? no
3. Does the request create a possible increase or over-taxing of the load on public facilities including, but not limited to, school, utilities, and streets? no
4. Does the request create costs to the City and other governmental entities in providing, improving, increasing or maintaining public utilities, schools, streets, law enforcement, fire protection and other public services? no
5. Does the request impact the environment, including, but not limited to drainage, soil erosion and sedimentation, flooding, air quality and water quality? no
6. Does the request allow uses which will be a detriment to the value of adjacent property in accordance with existing regulations? no
7. Are there substantial reasons why the property cannot be used and developed in accordance with the existing regulations? yes
8. What is the aesthetic effect of the existing and proposed use of the property as it relates to the surrounding area? substantial improvement
9. Is the proposed zoning amendment consistent with the comprehensive land use plan?
10. What are the possible effects of the proposed zoning amendment on the character of the zoning district, a particular piece of property, neighborhood, a particular area or the community as a whole? no effect



CITY OF
WATKINSVILLE

11. Is the proposed zoning amendment consistent with the purpose of the overall zoning scheme, with due consideration given to whether or not the proposed zoning change will carry out the purposes of these zoning regulations? yes
12. Does a site specific request include a specific site plan? yes
13. The consideration of the preservation of the integrity of residential neighborhoods shall be considered to carry great weight. Does the request affect residential neighborhoods? no
14. If property fronts on a major thoroughfare and also adjoins an established residential neighborhood, the factor of preservation in the residential neighborhood shall be considered to carry great weight. Does the request affect residential neighborhoods? no
15. Does the property affected by the zoning decision have a reasonable economic use as currently zoned? no
16. Are there other conditions that exist that affect the use and development of the property in question and support either approval or denial of the zoning action? no

LEGAL DESCRIPTION

All that tract, or parcel of land, lying and being in Oconee County, Georgia, G.M.D. 239, containing 0.267 acres, more or less, and being more particularly described as:

Beginning at the mag nail at the centerline intersection of South Main Street and Jackson Street; thence North 68 degrees 13 minutes 19 seconds East, 41.62 feet to a point, being the TRUE POINT OF BEGINNING; thence South 35 degrees 56 minutes 32 seconds East, 94.56 feet to a point; thence South 54 degrees 02 minutes 26 seconds West, 230.02 feet to a point; thence North 26 degrees 09 minutes 26 seconds East, 91.12 feet to a point; thence along a curve with a radius of 980.40 feet, North 34 degrees 57 minutes 02 seconds East, with an arclength of 158.37 feet and a chord length of 158.20 feet to a point, THAT BEING THE TRUE POINT OF BEGINNING.

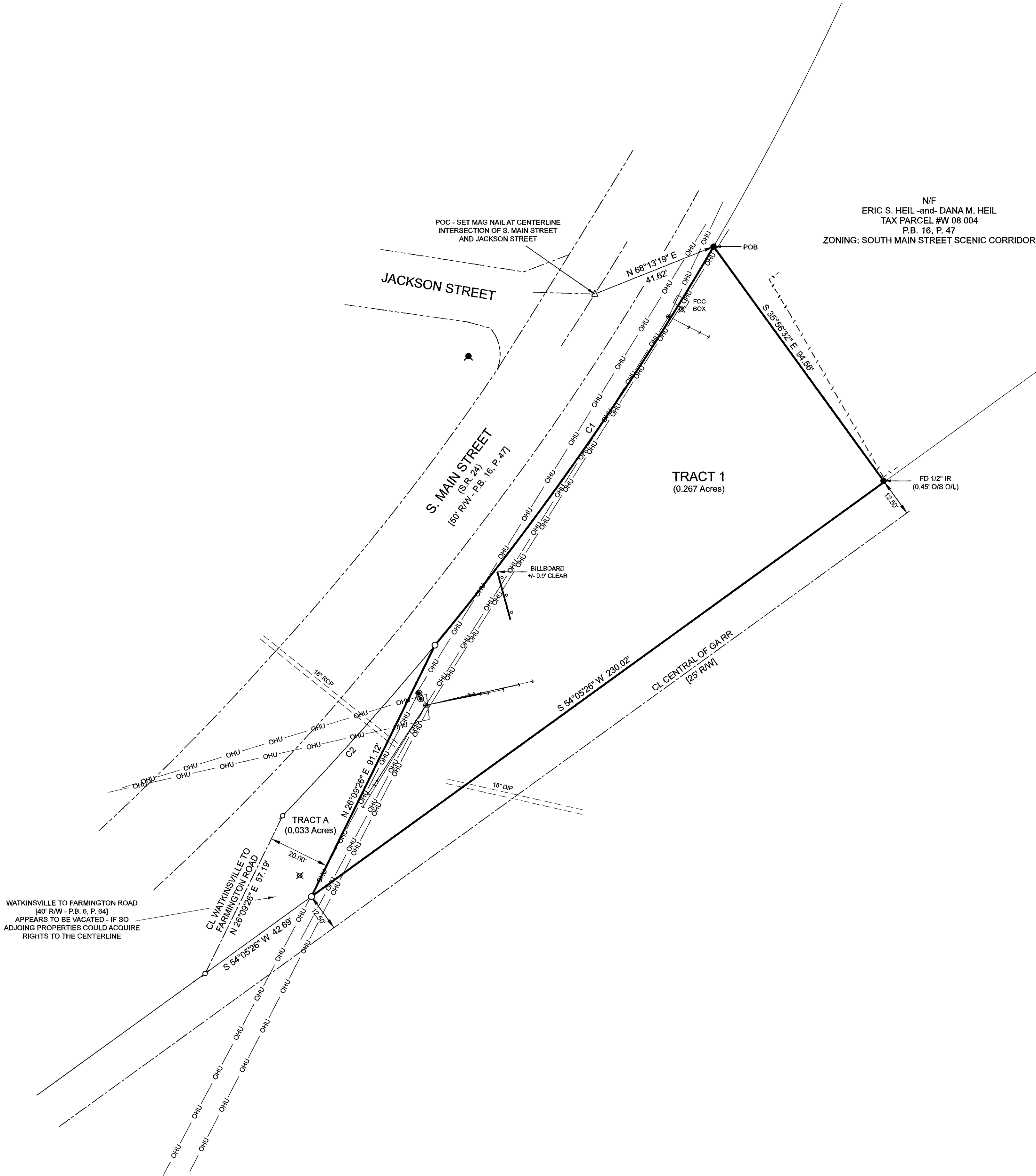
0560404934
PARTICIPANT ID

P2023000081
BK:2023 PG:81-81

FILED IN OFFICE
CLERK OF COURT
06/14/2023 03:02 PM
ANGELA ELDER-JOHNSON, CLERK
SUPERIOR COURT
OCONEE COUNTY, GA

Angela Elder-Johnson

CURVE	RADIUS	ARC LENGTH	CHORD LENGTH	CHORD BEARING
C1	960.40'	158.37'	158.20'	N 34°57'02" E
C2	980.40'	74.41'	74.39'	N 41°45'10" E



- SURVEYOR'S NOTES:**
- THIS MAP OF SURVEY WAS PREPARED WITHOUT THE BENEFIT OF A TITLE ABSTRACT.
 - THE PROPERTY SHOWN HEREON MAY BE SUBJECT TO EASEMENTS, RESTRICTIONS, RESERVATIONS, RIGHTS-OF-WAY, STATE WATER AND OTHER BUFFERS AND OTHER ENCUMBRANCES. SAID EASEMENTS, RESTRICTIONS, RESERVATIONS, RIGHTS-OF-WAY, STATE WATER AND OTHER BUFFERS AND OTHER ENCUMBRANCES MAY NOT BE SHOWN HEREON.
 - IT IS OUTSIDE MY AREA OF EXPERTISE TO DELINEATE WETLANDS OR DETERMINE IF THE CORRECT SITE CONDITIONS EXIST FOR WETLAND AREAS, THEREFORE WETLANDS, IF EXISTING ON SUBJECT PROPERTY, ARE NOT SHOWN.
 - UNDERGROUND UTILITIES OR FOUNDATIONS WERE NOT LOCATED.
 - THIS MAP OF SURVEY IS NOT VALID UNLESS IT BEARS THE REGISTRANT'S ORIGINAL SIGNATURE, IN BLUE INK, PLACED ACROSS THE REGISTRANT'S SEAL.
 - BEARINGS ARE BASED ON GRID NORTH (GA WEST ZONE) WHICH WAS ESTABLISHED USING RTK GPS ON THE eggs NETWORK.
 - ZONING AND SETBACK INFORMATION, IF SHOWN, SHOULD BE VERIFIED BY THE APPROPRIATE PLANNING/ZONING AGENCY PRIOR TO DESIGN OR CONSTRUCTION ACTIVITIES.
 - THE FIELD WORK WAS COMPLETED ON JUNE 14, 2023 AND WAS PERFORMED USING A CARLSON BRx7 BASE AND ROVER. THE RELATIVE POSITIONAL ACCURACY DOES NOT EXCEED 0.07 FEET. ALL DISTANCES SHOWN ARE GROUND DISTANCES.
 - THIS MAP OF SURVEY HAS BEEN CALCULATED FOR CLOSURE AND IS FOUND TO BE ACCURATE WITHIN ONE FOOT IN 53,083 FEET.

RIGHT SURVEYING LLC

LSF1369
PH: 706-424-2516
richtsurveying@gmail.com

1030 Pops Way,
Bogart, GA 30622

BOUNDARY SURVEY FOR:

ROBERT H. SMITH

SOUTH MAIN STREET
WATKINSVILLE, GEORGIA 30677
OCONEE COUNTY
G.M.D. 221

BEING A SURVEY OF THAT PARCEL OF LAND DESCRIBED IN DEED BOOK 88, PAGE 580 (SEE ALSO DEED BOOK F, PAGE 51 FOR INFORMATION), LESS TRACT IN DEED BOOK 107, PAGE 350, PUBLIC RECORDS OF OCONEE COUNTY, GA

TOTAL AREA: 0.267 ACRES
TAX PARCEL #: W 08 004A
ZONING: SOUTH MAIN STREET SCENIC CORRIDOR

REPRODUCTIONS, MODIFICATIONS OR ASSIGNMENTS OF THIS DOCUMENT WITHOUT THE WRITTEN APPROVAL OF RIGHT SURVEYING LLC ARE PROHIBITED AND MAY INVALIDATE THE SEAL AND ANY LIABILITY THAT RIGHT SURVEYING LLC MAY HAVE IN THIS DOCUMENT.

MURREE ST
JACKSON ST
ECCLESLEY ST
CL WATKINSVILLE TO FARMINGTON ROAD

SITE

LOCATION MAP - NTS

LEGEND OF SURVEY ABBREVIATIONS/SYMBOLS

A ARC LENGTH

AC AIR CONDITIONER

BSL BUILDING SETBACK LINE

CL CENTERLINE

CM CONCRETE MONUMENT

CMP CORRUGATED METAL PIPE

CONC CONCRETE

COV COVERED

DB DEED BOOK

DE DRAINAGE EASEMENT

DIP DUCTILE IRON PIPE

ENCR ENCROACHMENT

EP EDGE OF PAVEMENT

ESMT EASEMENT

ET ELECTRIC TRANSFORMER

FES FLAIED END SECTION

FD FOUND

FOC FIBER OPTIC CABLE

INV INVERT

IP IRON PIPE

IPC IRON PIPE WITH CAP

IR IRON REBAR

IRC IRON REBAR WITH CAP

M MEASURED

MH MANHOLE

NF NOW OR FORMERLY

NTS NOT TO SCALE

OIL ON LINE

P PLAT

PB PLAT BOOK

POI PEDESTAL DROP INLET

PG PAGE

POB POINT OF BEGINNING

POC POINT OF COMMENCEMENT

RA RADIAL/RADIUS

RCP REINFORCED CONCRETE PIPE

RW RIGHT-OF-WAY

SWB STATE WATERS BUFFER

SWCB SINGLE WING CATCH BASIN

SS SANITARY SEWER

SSMH SANITARY SEWER MANHOLE

TYP TYPICAL

UE UTILITY EASEMENT

FD 1/2" IR

FD SPIKE NAIL

SET 1/2" IRC PLUS 3136 (FUTURE)

SET MAG NAIL

BACKFLOW PREVENTER

BENCHMARK/CONTROL

BOLLARD

BURIED CABLE POST

CABLE TV PEDESTAL

CATCH BASIN (SINGLE WING)

CATCH BASIN (DOUBLE WING)

CHAIN LINK FENCE

ELECTRIC BOX

ELECTRIC MANHOLE

ELECTRIC METER

ELECTRIC PEDESTAL

FIRE HYDRANT

GAS BOX

GAS LINE (BURIED)

GAS METER

GAS POST

GAS VALVE

GAS VENT STACK

GATEWATER VALVE

GREASE TRAP MH

GUY/ANCHOR

IRRIGATION CONTROL VALVE

MAILBOX

METAL LIGHT POLE

OVERHEAD UTILITIES

PHONE LINE (BURIED)

POWER (BURIED)

SANITARY SEWER CLEAN-OUT

SS LINE (BURIED)

SANITARY SEWER MANHOLE

SIGN

STORM SEWER MANHOLE

STORM SEWER LINE (BURIED)

STREET/PARKING LIGHT

STUB (GAS)

TELEPHONE PEDESTAL

TRAFFIC SIGNAL BOX

WATER LINE (BURIED)

WATER METER

WELL

WOOD FENCE

WOODWIRE FENCE

WOOD POLE

MAPLE TREE

PINE TREE

This plat is a retracement of an existing parcel or parcels of land and does not subdivide or create a new parcel or make any changes to any real property boundaries. The recording information of the documents, maps, plats or other instruments which created the parcel or parcels are stated hereon.

RECORDATION OF THIS PLAT DOES NOT IMPLY APPROVAL OF ANY LOCAL JURISDICTION, AVAILABILITY OF PERMITS, COMPLIANCE WITH LOCAL REGULATIONS OR REQUIREMENTS, OR SUITABILITY FOR ANY USE OR PURPOSE OF THE LAND. Furthermore, the undersigned land surveyor certifies that this plat complies with the minimum technical standards for property surveys in Georgia as set forth in the rules and regulations of the Georgia Board of Registration for Professional Engineers and Land Surveyors and as set forth in O.C.G.A. Section 15-6-67.

CRAIG M. RIGHT

N

GRID NORTH - GA WEST

DATE PREPARED:
5-26-2023

PROJECT #:
23-001BSP

REVISIONS:

DATE:

6-14-2023

ADDED TIE FROM POC - R/W INFO - TRACT A CALLS/WORDING

6-14-23

GRAPHIC SCALE

0' 10' 20' 40' 60'

SCALE: 1" = 20'

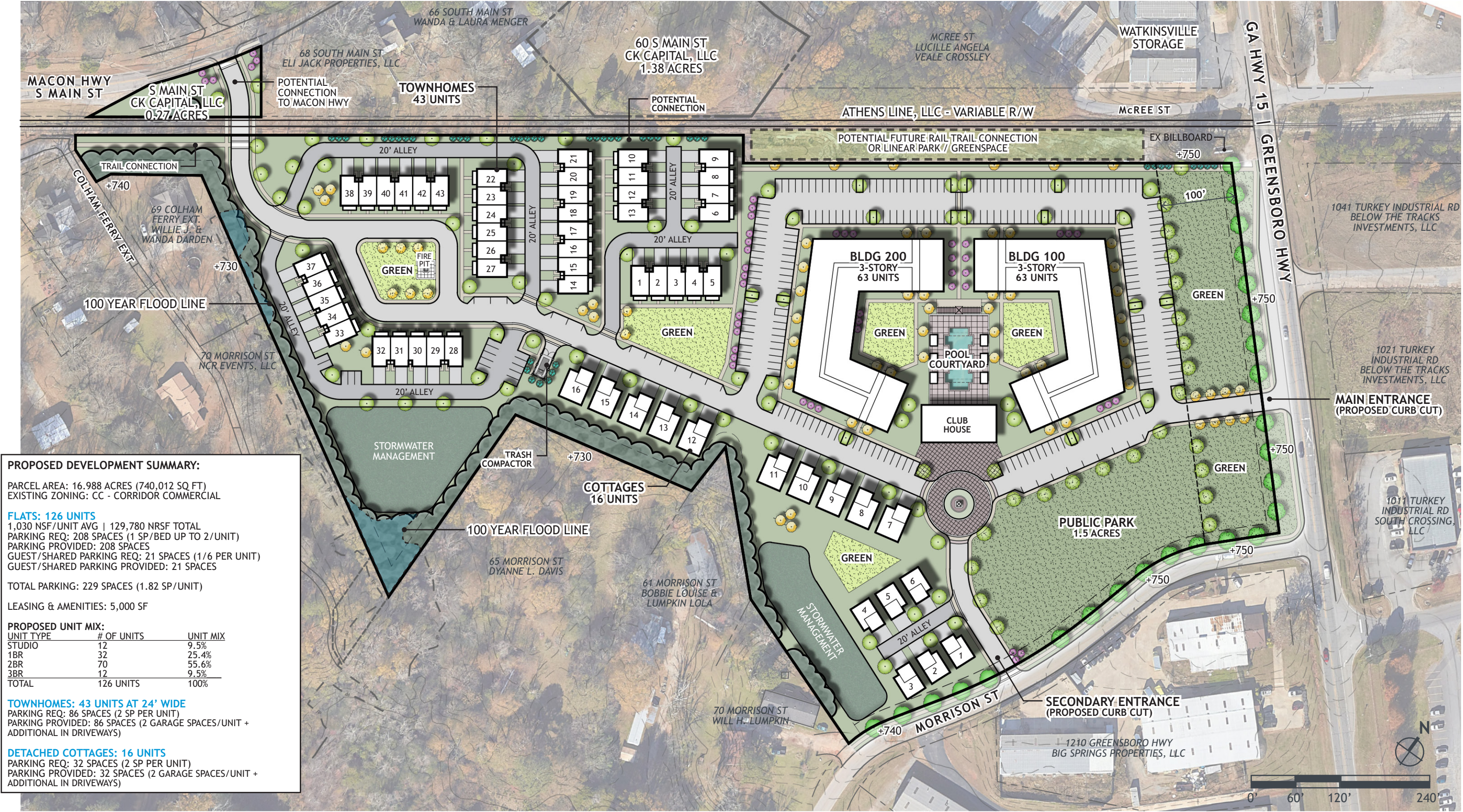
SHEET #

1

1

Conceptual Master Plan

1180 Greensboro Hwy | Watkinsville, GA



1180 GREENSBORO HIGHWAY
REZONING REPORT (submitted 09/03/2024)

PROPERTY INFORMATION

Property Address: 1180 Greensboro Highway and 0 South Main Street

Parcel ID: W 08 011 & W 08 004A

Owner: Athens Construction Group Property Holdings, LLC c/o Mark Jennings and CK Capital, LLC c/o Chad Keller

Existing Zoning: Corridor Commercial (W 08 011) and South Main Street Scenic Corridor (W 08 004A)

Proposed Zoning: Downtown

Adjacent Zonings and Uses: North: Corridor Commercial (self storage)
 South: Corridor Commercial (light industrial and self storage)
 East: Employment Center (light industrial)
 West: Detached Residential & South Main Street Scenic Corridor (single family homes or lots)

Existing Use: undeveloped (former concrete pipe plant site)

Proposed Use: residential consisting of 126 flats, 43 townhomes, and 16 cottages

Property Area: 17.26 acres total (16.99 acres for W 08 011 and 0.27 acres for W 08 004A)

SITE DESCRIPTION

The site at 1180 Greensboro Highway is a 16.99 acre tract on the western side of Greensboro Highway just south of the Athens Line Railroad. It is the location of a former concrete pipe manufacturing facility that was in use from the 1960's through the 2010's. The facility closed in 2019 and the plant was demolished in 2021 with the property remaining vacant and undeveloped since that time.

The site is currently zoned Corridor Commercial. The site is in close proximity and walking distance to the core Watkinville downtown district which consists of restaurants, retail, residential, and industrial uses.

Site accessibility is currently from Greensboro Highway and Morrison Streets. By including the small parcel on Main Street (W 08 004A) it will allow for access to Main Street when a railroad crossing permit is achievable.

The site is currently cleared and slopes east to west to low points at the western edge of the property. The property is bordered to the north by the railroad, the east by Greensboro Highway, the south by Morrison Street, and the west by single family homes or lots.

PROJECT DESCRIPTION

The proposed development will be a multi-faceted residential development consisting of flats, townhomes, and cottages. Access to the site will be from a main entrance along Greensboro Highway with a secondary entrance on Morrison Street. A third entrance from Main Street is planned and will be

constructed when a railroad crossing is allowed. The developer will put the funds in escrow for the construction of this entrance.

Residential uses will include up to 126 flats consisting of studios, one bedroom, two bedroom, and three bedroom units in 2 total buildings consisting of 3-stories. There will also be 43 attached townhomes with alley-loaded garages that will be made available for sale and 16 detached for-sale cottages. These for-sale units will also be catered towards young professionals, families, and empty nesters. Residential amenities will include a pool, fitness center, clubhouse, and outdoor greenspace. There will also be a 1.5 acre public park open to anyone, not just residents of the development.

ECONOMIC IMPACT OF PROPOSED DEVELOPMENT

After development of the property, it will have a significant effect on the economy of Watkinsville and Oconee County. In addition to the substantial increase in property taxes, the residents that will live here will not only spend money in the commercial businesses onsite but will be within walking distance of downtown and spend money in existing Watkinsville commercial establishments as well.

LOCAL BENEFITS

In addition the economic impact of the development, there will be other local benefits. There is a proposed 1.5 acre public park which will be open to the public and open for private events held by people outside of the development. There will be sidewalk and greenspace that will be available for use by neighbors and others who may not have places to enjoy these features. The project will provide more residents to enjoy the existing retail establishments in Watkinsville.

The project backs up to the railroad and the design is such that if/when the railroad becomes a greenway to be used by locals, the project could allow for parking for access to the greenway.

ZONING REQUEST

This zoning request is to change the existing Corridor Commercial Zoning of W 08 011 and South Main Street Scenic Corridor zoning of W 08 004A to Downtown zoning. This zoning class is required for the development of a residential project as proposed. The existing Corridor Commercial zoning is “intended primarily for large-scale retail development that is more auto-oriented in nature, targeting retail, services and office developments”. The proposed residential development will blend more with surrounding residential areas than a large-scale retail development. The proposed development will have larger scale buildings up near Greensboro Highway with townhomes and cottages in the areas adjacent to existing residences. This will make a nice transition from the single family homes to the south and west.

Due to the unique project and design challenges, a Development Agreement with the City of Watkinsville is being requested to address this type of project. The requested Development Agreement will be approved as a condition of zoning approval making the proposed project binding. As a condition to this, the development agreement will be executed before any permits, site or building, are to be issued.

LANDSCAPING AND BUFFERING

Landscaping will be abundant throughout the development to include street trees, parking lot trees, parking screening, lush greenery around buildings and immense areas of green open space to enjoy.

There will be natural buffering between the development and all residential properties and planted buffering along the railway.

TRAFFIC IMPACT

A traffic impact study was conducted for the project in a previous iteration and is included with the zoning request. The traffic impact study studied 9 intersections in the vicinity of the project with and without the Main Street entrance. Under both scenarios, all 9 intersections will continue to operate at acceptable levels of service. Because the proposed traffic generated by the development is significantly less than the generated traffic associated with the traffic study, the traffic study was not re-conducted.

The traffic study was conducted with a projected ADT of 4,236 daily trips, an AM Peak generator of 164, and a PM peak generator of 329. The revised development plan as submitted consists of 1,310 daily trips, an AM peak generator of 95, and a PM peak generator of 114. The revised proposal produces 31% of the daily traffic produced by the previous development proposal.

Trip Generation

Land Use (ITE Code)	Intensity	Independent Variable	ADT	AM Peak Hour			PM Peak Hour		
				Enter	Exit	Total	Enter	Exit	Total
Single Family Attached Residential (215)	43	Units	310	6	18	24	16	10	26
Multifamily Housing (Low-Rise) (220)	126	Units	849	14	45	59	45	27	72
Single Family Detached Housing (210)	16	Units	151	3	9	12	10	6	16
Total			1310			95			114

UTILITY SERVICE

Water and sanitary sewer will be provided by Oconee County Water Resources. Demands for water and sewer usage is anticipated to be 48,100 gpd. See submitted sewer capacity application.

A sanitary sewer main and water main exists in the right-of-way of Greensboro Highway. There is also a water main the right-of-way of Greensboro Highway.

GARBAGE COLLECTION

Garbage collection will be handled by private contractor. There will be multiple dumpster corrals and/or compactors onsite to provide trash and recycling.

PUBLIC SERVICES

It is not anticipated that the request will cause a strain on public services. Public services, which include physical facilities and staff capacity, exist sufficient to service the proposed rezoning and development.

STORMWATER MANAGEMENT AND ENVIRONMENTAL CONCERNS

As the project is developed, Stormwater Management will be per the City of Watkinsville Stormwater Code and the GA State Stormwater Manual. Erosion and Sedimentation Control Plans will be submitted and adhered to, to ensure no adverse environmental impacts on the property or adjacent properties. No adverse effects are anticipated in regard to noise or air pollution from the project. The proposed stormwater management facilities will be above ground facilities and could be earthen dams or concrete wall dams.

CITY OF WATKINSVILLE ZONING AMENDMENT CRITERIA

THE EXISTING LAND USE PATTERN.

The proposed Downtown zoning district is in keeping with the surrounding properties. This development is on the edge of downtown Watkinsville commercial businesses and adjacent to residential properties. The proposed residential component is adjacent to other residential development and will provide residents to utilize existing commercial establishments in Watkinsville.

THE POSSIBLE CREATION OF AN ISOLATED DISTRICT UNRELATED TO ADJACENT AND NEARBY DISTRICTS

The proposed Downtown zoning district is in keeping with the surrounding properties. This development is on the edge of downtown Watkinsville commercial businesses and adjacent to residential properties. The proposed residential component is adjacent to other residential development and will provide residents to utilize existing commercial establishments in Watkinsville.

THE POPULATION DENSITY PATTERN AND POSSIBLE INCREASE OR OVERTAXING OF THE LOAD ON PUBLIC FACILITIES INCLUDING, BUT NOT LIMITED TO, SCHOOL, UTILITIES, PUBLIC SAFETY, AND STREETS

A traffic impact study has been completed and shows that the intersections in the area of the project will continue to function as required. Oconee County schools are below capacity currently. Utilities will be available to the site before development commences and the revenue generated by the project will more than cover any additional public safety expenses related to the project.

THE COST TO THE CITY AND OTHER GOVERNMENTAL ENTITIES IN PROVIDING, IMPROVING, INCREASING OR MAINTAINING PUBLIC UTILITIES, SCHOOLS, STREETS AND OTHER PUBLIC SAFETY MEASURES

There will be no cost to the city for providing any services to the development. All utilities and roadways associated with the development will be paid for by the developer.

THE POSSIBLE IMPACT ON THE ENVIRONMENT, INCLUDING BUT NOT LIMITED TO, DRAINAGE, SOIL EROSION AND SEDIMENTATION, FLOODING, AIR QUALITY AND WATER QUALITY

As the project is developed, Stormwater Management will be per the City of Watkinsville Stormwater Code and the GA State Stormwater Manual. Erosion and Sedimentation Control Plans will be submitted and adhered to, to ensure no adverse environmental impacts on the property or adjacent properties. No adverse effects are anticipated in regard to noise or air pollution from the project.

WHETHER THE PROPOSED ZONING MAP AMENDMENT WILL BE A DETERRENT TO THE VALUE OR IMPROVEMENT OR DEVELOPMENT OF ADJACENT PROPERTY IN ACCORDANCE WITH EXISTING REGULATIONS

The adjacent properties are mostly older commercial properties. The redevelopment of this old abandoned property will be a boon on neighboring property values and redevelopment potential.

WHETHER THERE ARE SUBSTANTIAL REASONS WHY THE PROPERTY CANNOT BE USED IN ACCORDANCE WITH EXISTING REGULATIONS

The need for a large-scale commercial only development in this location is not sustainable. The market is not there for a project that would fall under the existing zoning class. The only viable commercial development for this location would likely be a self-storage facility which would not be a well-liked development as the entry point into Watkinsville.

THE AESTHETIC EFFECT OF EXISTING AND FUTURE USE OF THE PROPERTY AS IT RELATES TO THE SURROUNDING AREA

The existing aesthetics of the property is an eyesore with a demolished old concrete pipe plant site. The future aesthetics will be of a new, vibrant project that will be a welcoming addition to Watkinsville.

THE EXTENT TO WHICH THE PROPOSED ZONING MAP AMENDMENT IS CONSISTENT WITH THE COMPREHENSIVE PLAN

The Comprehensive Plan calls for this parcel to be Corridor Commercial but this is not an isolated district request as the property adjacent to this property is Downtown. This development would continue this Downtown district which would then stop at a natural stopping point being Morrison Street.

THE POSSIBLE EFFECT OF THE PROPOSED ZONING AMENDMENT ON THE CHARACTER OF A ZONING DISTRICT, A PARTICULAR PIECE OF THE PROPERTY, NEIGHBORHOOD, A PARTICULAR AREA, OR THE COMMUNITY

This rezoning would not effect the character of any surrounding zoning classes as it is adjacent to other Downtown zoned property and a residential project consisting of flats, townhomes, and cottages would be a logical transition between commercial only properties and residential properties.

THE RELATION THAT THE PROPOSED ZONING MAP AMENDMENT BEARS TO THE PURPOSE OF THE OVERALL ZONING SCHEME, WITH DUE CONSIDERATION GIVEN TO WHETHER OR NOT THE PROPOSED CHANGE WILL HELP CARRY OUT THE PURPOSES OF THESE ZONING REGULATIONS

The proposed zoning class would be in keeping with the adjacent Downtown zoning class and the use would be a logical transition between commercial heavy projects and residential only property.

TRAFFIC IMPACT STUDY

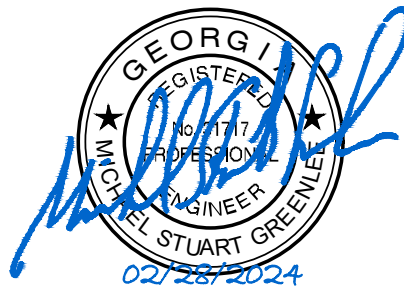
Oconee Pipe Plant

1180 Greensboro Highway
Athens-Clarke County, Georgia

TPA Job No. 1-23-0580



1586 Mars Hill Road, Suite A
Watkinsville, Georgia 30677
(706) 310-1551



FOR THE FIRM
Travis Pruitt & Associates, Inc.

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INTRODUCTION

The proposed development is mixed-use located at 1180 Greensboro Highway in Oconee County, Georgia. The property is 16.99 acres and located on Tax Parcel W 08 011. The development will include 9-apartment structures consisting of 200 units, 30 townhomes, and approximately 40,000 SF of commercial/retail space. In addition, the project will include an internal roadway network designed to public road standards with internal sidewalks, storm water management facilities, and associated parking.

The proposed project driveways are located along Greensboro Highway, Morrison Street, and South Main Street. The driveways will be designated as Proposed Driveway #1, Proposed Driveway #2, and Proposed Driveway #3, respectively. Each of the project access points will be a 2-lane road designed to public roadway standards and will be stop controlled at its intersection with the existing roadway.

The project will be analyzed under two different scenarios. Scenario 1 will analyze the project impacts with implementation of Proposed Driveway #1, located along Greensboro Highway, and Proposed Driveway #2, located along Morrison Street. Scenario 2 will analyze the project impacts with implementation of Proposed Driveway #1, located along Greensboro Highway, Proposed Driveway #2, located along Morrison Street and Proposed Driveway #3, located along South Main Street.

The properties to the southwest are zoned Detached Residential. The southeastern border of the parcel is bounded by Morrison Street. The northeastern border of the plot is bounded by Greensboro Highway and northwestern border is the existing Athens Line, LLC railroad.

The development is expected to be completed and occupied in three years.

The purpose of this study is to determine the impact of this development on Greensboro Highway, South Main Street, South Barnett Shoals Road and the existing roadway network. Figure 1 is a vicinity map for the subject property and Figure 2 is a site plan that shows the location of the proposed access points for the project. The scope of the study includes analyses of the following intersections for Scenario 1:

- #1 Greensboro Highway / Proposed Driveway #1
- #2 Greensboro Highway / Morrison Street
- #3 Greensboro Highway / Industrial Boulevard
- #4 Morrison Street / Proposed Driveway #2
- #5 Greensboro Highway / McRee Street / Depot Street
- #6 South Barnett Shoals Road / South 3rd Street / Depot Street
- #7 South Main Street / South Barnett Shoals Road / Greensboro Highway
- #8 South Main Street / McRee Street
- #9 South Main Street / Jackson Street

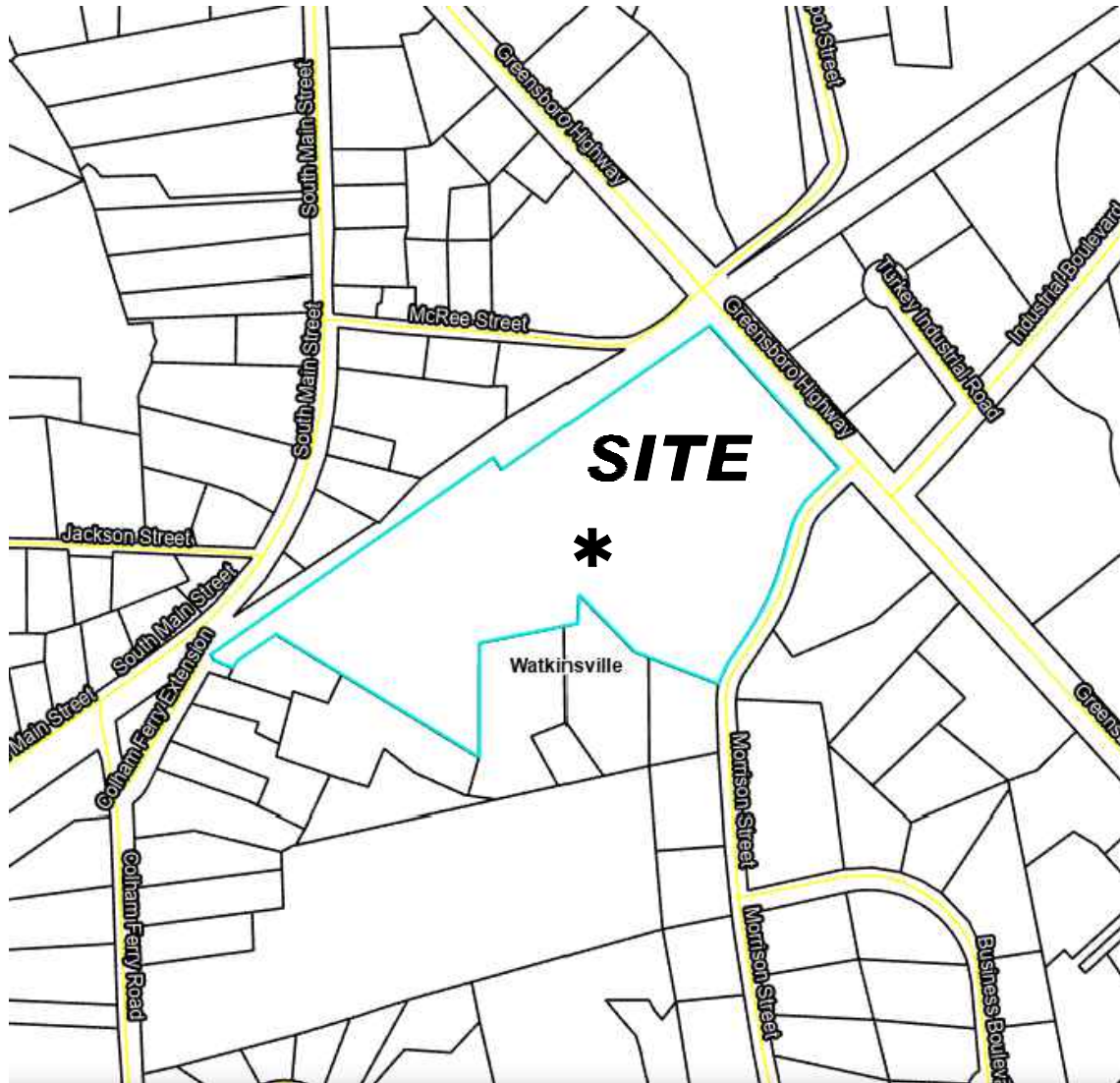
The scope of the study includes analyses of the following intersections for Scenario 2:

- #1 Greensboro Highway / Proposed Driveway #1
- #2 Greensboro Highway / Morrison Street



- #3 Greensboro Highway / Industrial Boulevard
- #4 Morrison Street / Proposed Driveway #2
- #5 Greensboro Highway / McRee Street / Depot Street
- #6 South Barnett Shoals Road / South 3rd Street / Depot Street
- #7 South Main Street / South Barnett Shoals Road / Greensboro Highway
- #8 South Main Street / McRee Street
- #9 South Main Street / Jackson Street / Proposed Driveway #3

FIGURE 1
VICINITY MAP



VICINITY MAP

OCONEE PIPE PLANT TIA

1180 GREENSBORO HWY
OCONEE COUNTY, GEORGIA

DATE: 02/28/2024

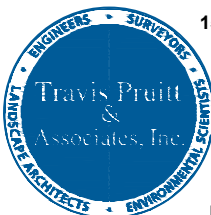
SCALE: NTS

CN: 230580 Traffic

JN: 1-23-0601

FN:

Sheet No. **FIGURE 1**



1586 Mars Hill Road, Suite A
Athens, Georgia 30677
Phone: (706) 310-1551
Fax: (706) 310-1789
www.travispruitt.com

Contact Person:

Michael Greenlee
Mgreenlee@travispruitt.com

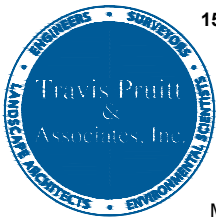
FIGURE 2 SITE PLAN

Conceptual Master Plan
1180 Greensboro Hwy | Watkinsville, GA



CK CAPITAL | FEBRUARY 20, 2024 | DRAFT

NILES BOLTON ASSOCIATES



1586 Mars Hill Road, Suite A
Athens, Georgia 30677
Phone: (706) 310-1551
Fax: (706) 310-1789
www.travispruitt.com

Contact Person:
MICHAEL GREENLEE
mgreenlee@travispruitt.com

SITE PLAN

OCONEE PIPE PLANT TIA

1180 GREENSBORO HWY
OCONEE COUNTY, GEORGIA

DATE: 02/28/2024

SCALE: NTS

CN: 230580 Traffic

JN: 230580

FN:

Sheet No. **FIGURE 2**



SCENARIO 1

I. EXISTING TRAFFIC CONDITIONS

The study area for the traffic impact study has been defined to include the following intersections:

- #1 Greensboro Highway / Proposed Driveway #1
- #2 Greensboro Highway / Morrison Street
- #3 Greensboro Highway / Industrial Boulevard
- #4 Morrison Street / Proposed Driveway #2
- #5 Greensboro Highway / McRee Street / Depot Street
- #6 South Barnett Shoals Road / South 3rd Street / Depot Street
- #7 South Main Street / South Barnett Shoals Road / Greensboro Highway
- #8 South Main Street / McRee Street
- #9 South Main Street / Jackson Street

Table 1 below lists the relevant cross section data for the existing road in the study area.

Table 1. Existing Roadway Conditions

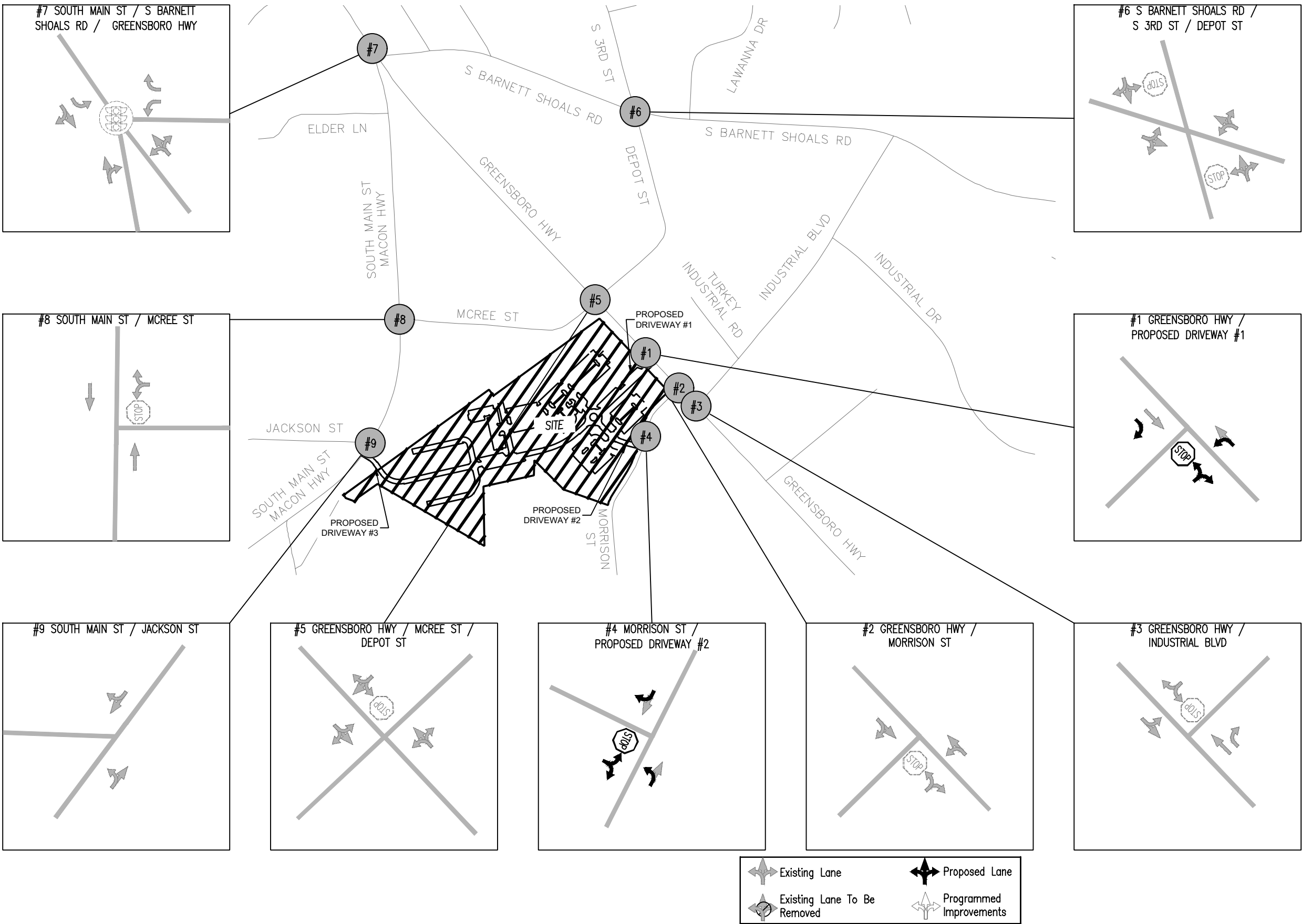
Roadway Name	Speed Limit	Cross Section	Maintained By	Lanes	Bike & Ped Facilities	Turn Lanes	Signals	Stop Control
Greensboro Highway	35 mph	Rural	GDOT	2	Sidewalk on eastern side of the road. It runs from the railroad to the signal at the intersection of Greensboro Highway, South Barnett Shoals Road, and South Main Street.	Right turn lanes at major commercial driveways.	Greensboro Highway/ South Barnett Shoals Road/ South Main Street	Minor approaches along Greensboro Highway
South Main Street	35 mph	Rural	GDOT	2	Sidewalk on left side starting at Jackson Street and continuing to the signal.	Right turn lane at Shell gas station	Greensboro Highway/ South Barnett Shoals Road/ South Main Street	McRee Street
South Barnett	25 mph	Rural	Oconee County	2	Sidewalk on both sides.	Right Turn and Left	Greensboro Highway/	Lawanna Drive/ 3 rd



Shoals Road						Turn Lane at Signal	South Barnett Shoals Road/ South Main Street	Street/ 2 nd Street/ Dooley Street
South 3 rd Street	25 mph	Urban	Watkinsville City	2	None	None	None	None
Depot Street	25 mph	Urban	Watkinsville City	2	None	None	None	None
Jackson Street	25 mph	Urban	Watkinsville City	1	None	None	None	None
McRee Street	15 mph	Urban	Watkinsville City	1	None	None	None	None
Morrison Street	25 mph	Urban	Watkinsville City	2	Sidewalk on Left Side beginning just before Harmony Bend and ending at Melody Bend.	None	None	Business Boulevard/ Lumpkin Lane/ Harmony Bend/ Melody Bend
Industrial Boulevard	25 mph	Urban	Watkinsville City	2	None	None	None	Industrial Drive/Turkey Industrial Road

A lane diagram for the study intersections is given in Figure 3. AM and PM turning movement counts were made at the existing studied intersections. These counts are shown in Figure 4 through 12, and the original counts are provided in the Appendix.

FIGURE 3
SCENARIO 1: LANE DIAGRAM



DATE: 02/28/2024
SCALE: NTS
CN: 230580 Traffic
JN: 230580
FN:

4317 Park Drive, Suite 400
Norcross, Georgia 30093
Phone: (770) 416-7511
Fax: (770) 416-6759
www.travispruitt.com
Contact Person:
MICHAEL GREENLEE
mgreenlee@travispruitt.com

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LANE DIAGRAM SCENARIO 1

OCONEE PIPE PLANT TIA

1180 GREENSBORO HWY
OCONEE COUNTY, GEORGIA

REVISIONS						
7						
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Figure 4

EXISTING TRAFFIC
AM & PM PEAK HOUR TURNING MOVEMENTS

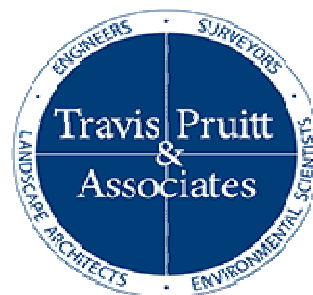
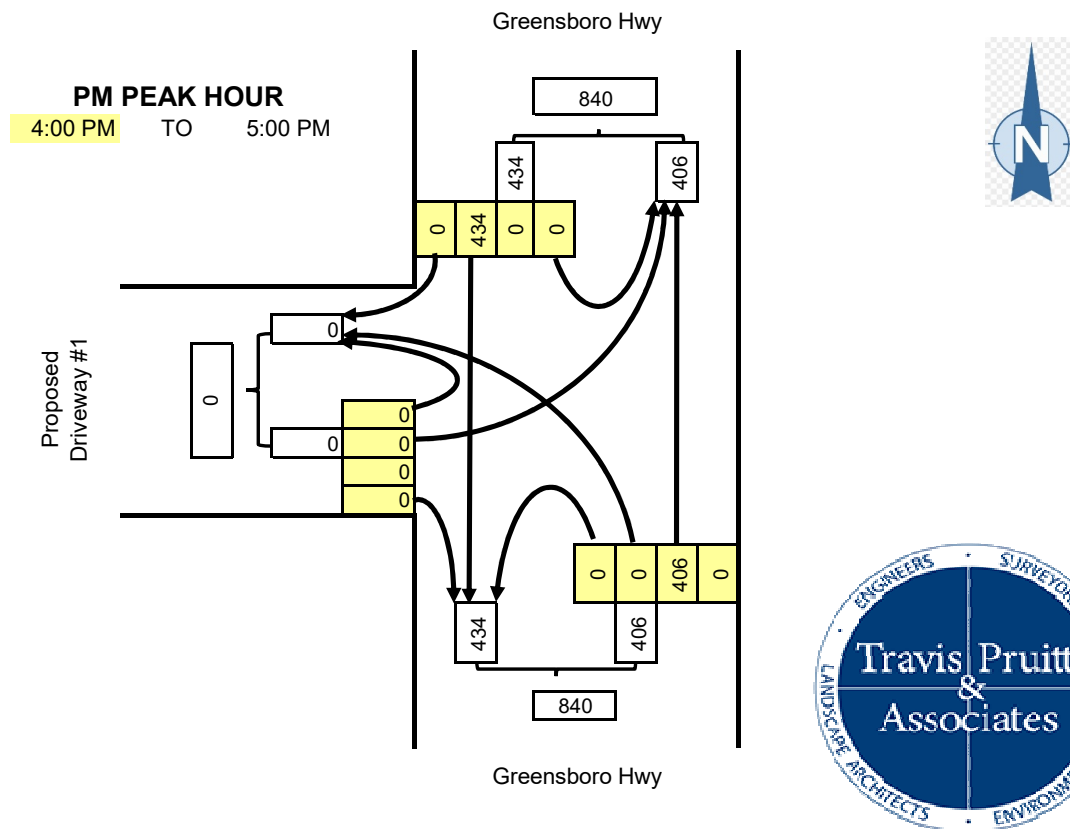
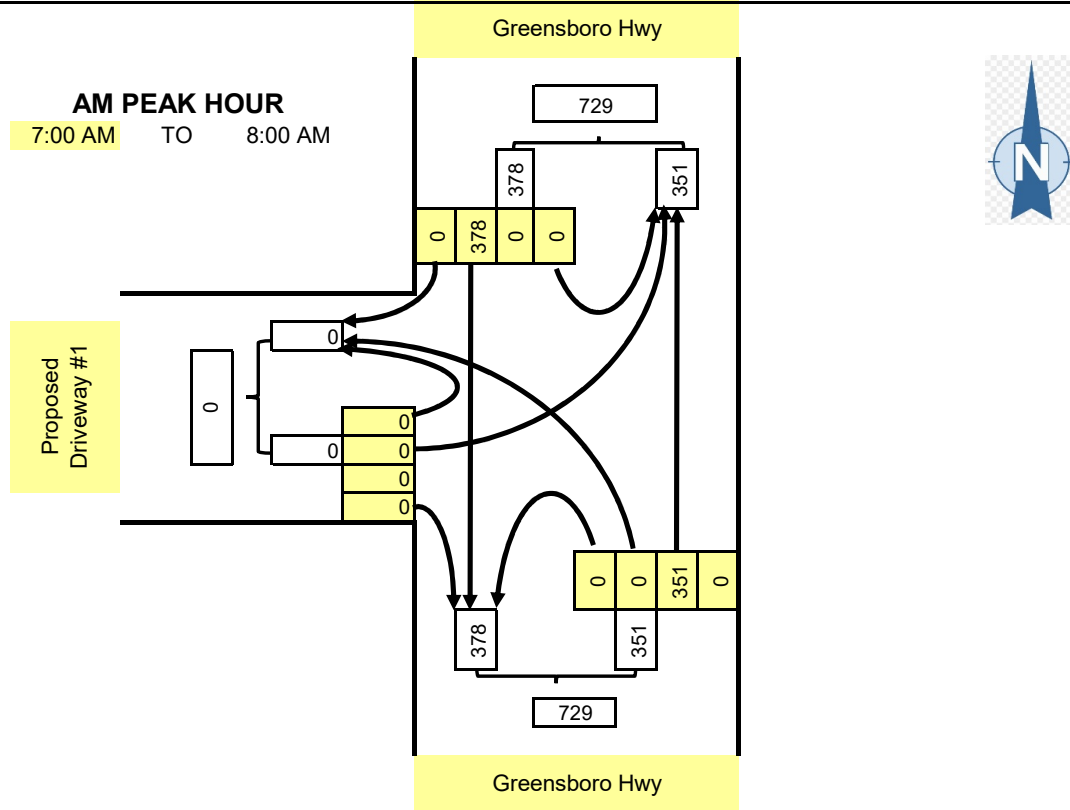


Figure 5

EXISTING TRAFFIC
AM & PM PEAK HOUR TURNING MOVEMENTS

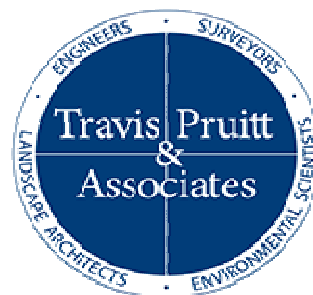
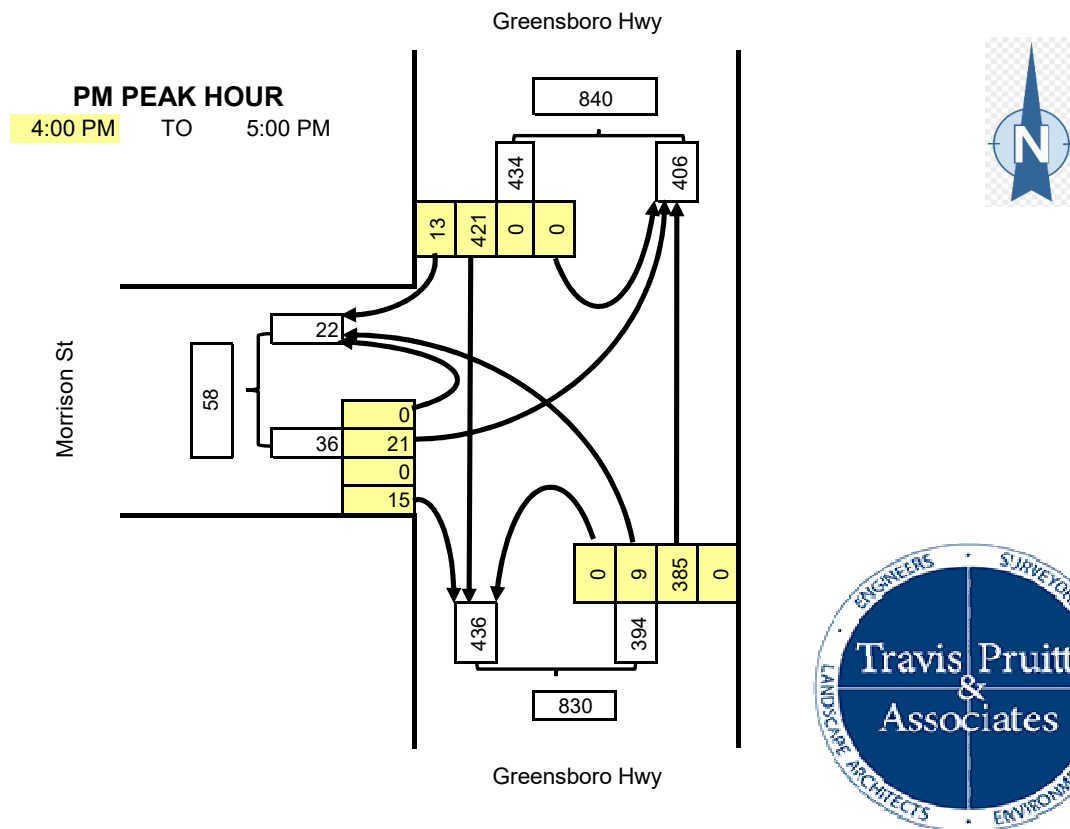
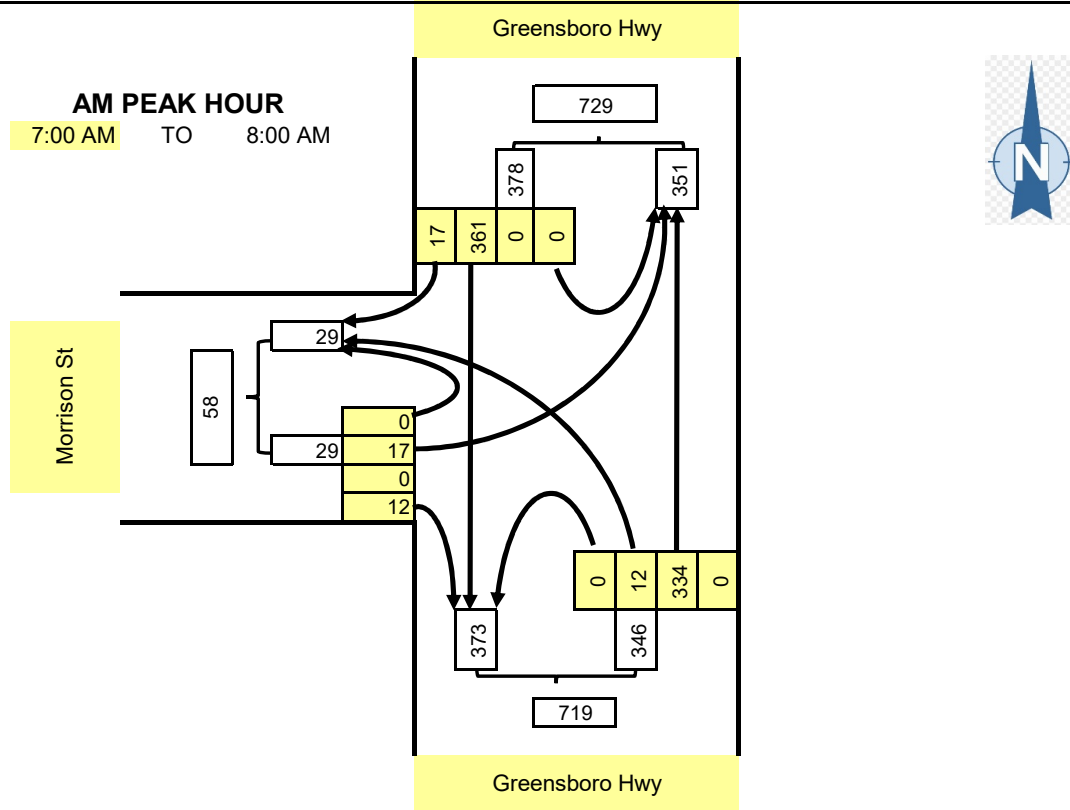
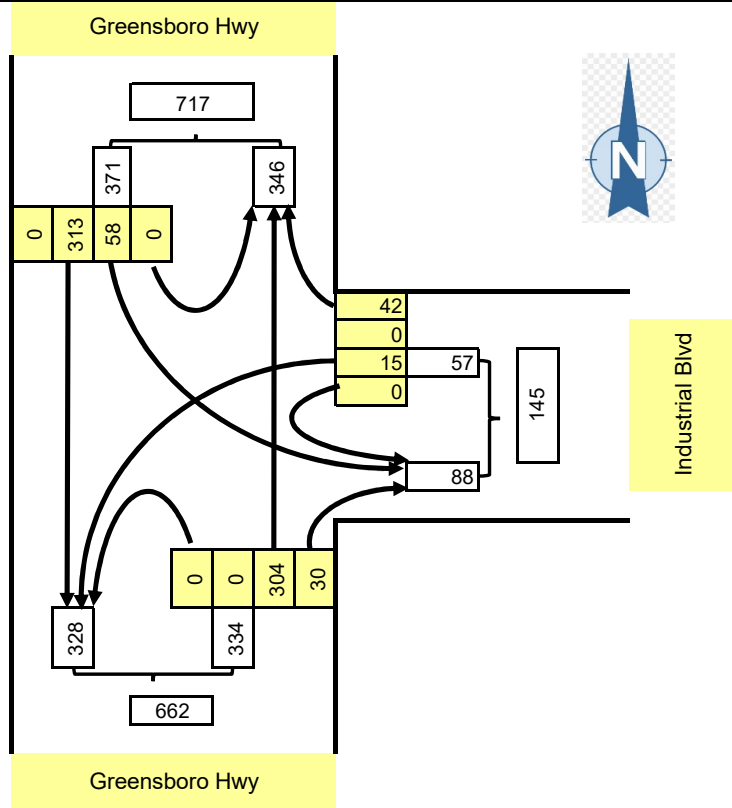


Figure 6

EXISTING TRAFFIC
AM & PM PEAK HOUR TURNING MOVEMENTS

AM PEAK HOUR

7:00 AM TO 8:00 AM



PM PEAK HOUR

4:00 PM TO 5:00 PM

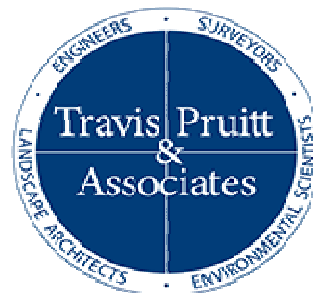
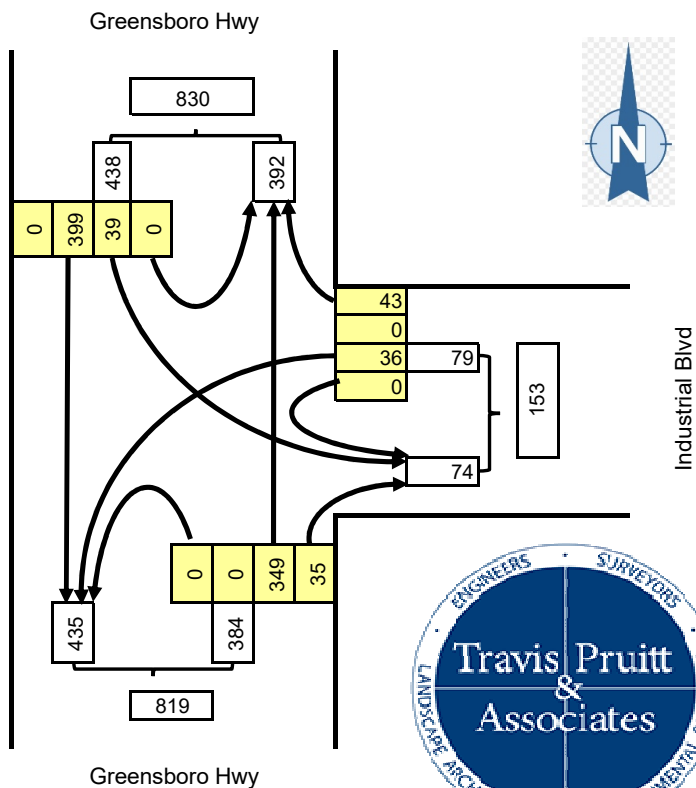


Figure 7

EXISTING TRAFFIC
AM & PM PEAK HOUR TURNING MOVEMENTS

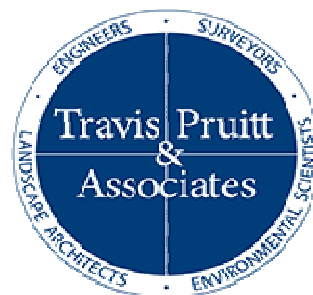
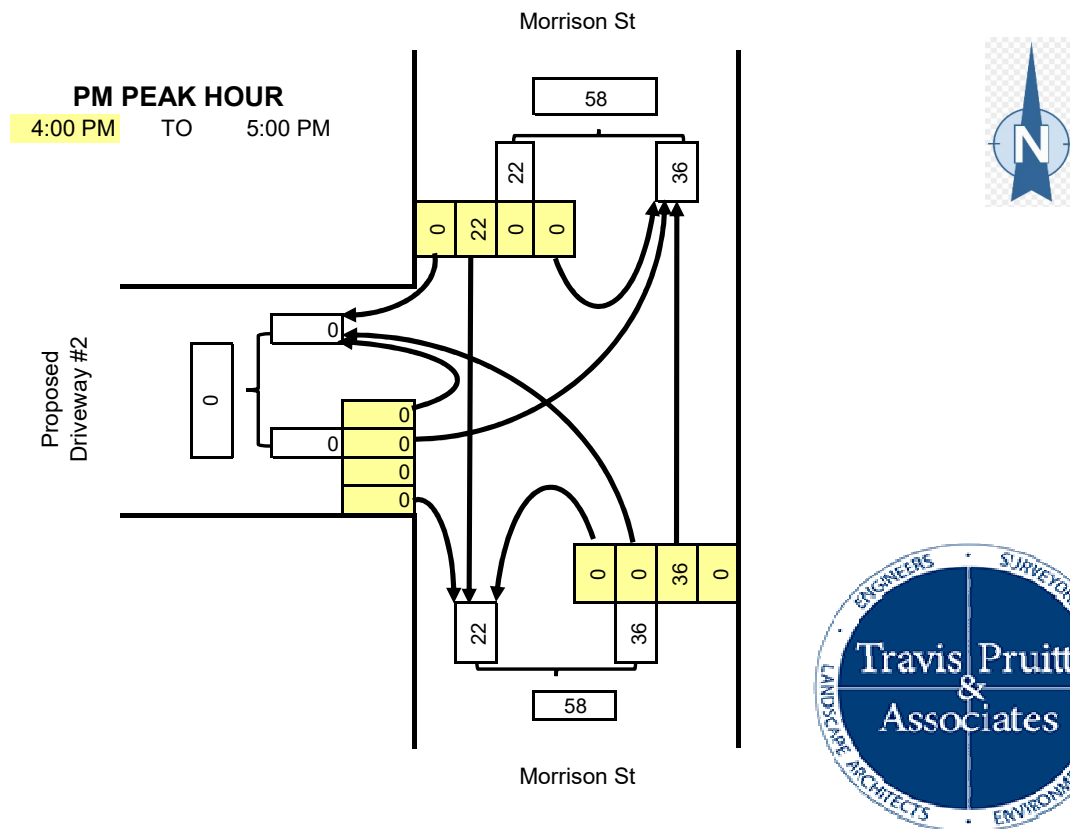
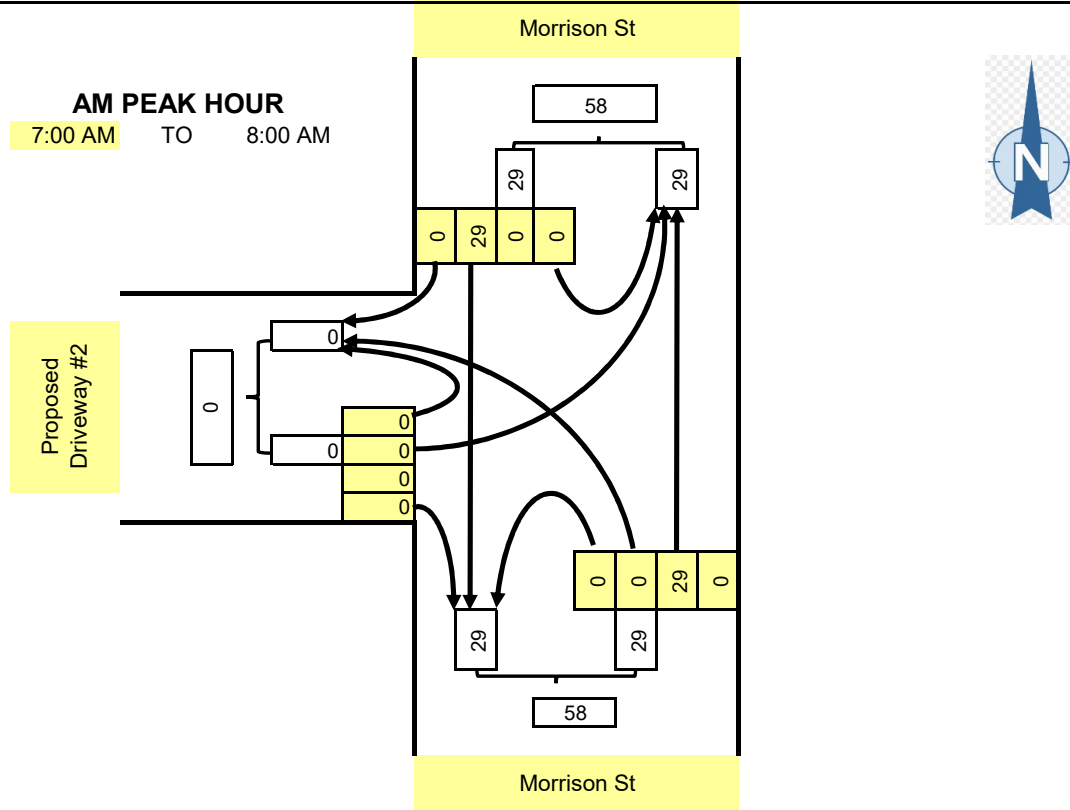


Figure 8

EXISTING TRAFFIC
AM & PM PEAK HOUR TURNING MOVEMENTS

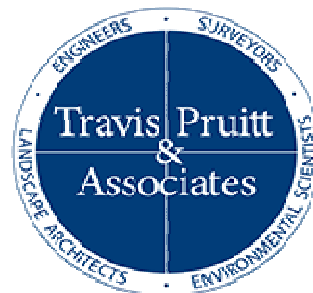
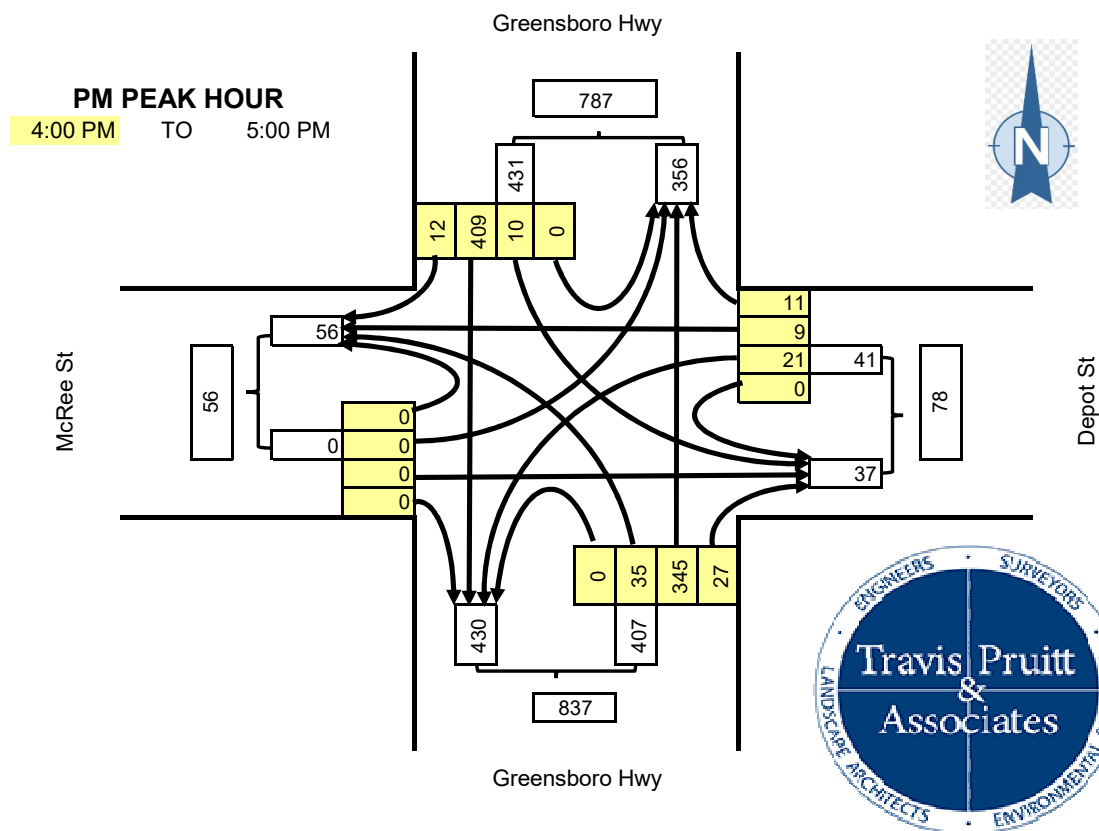
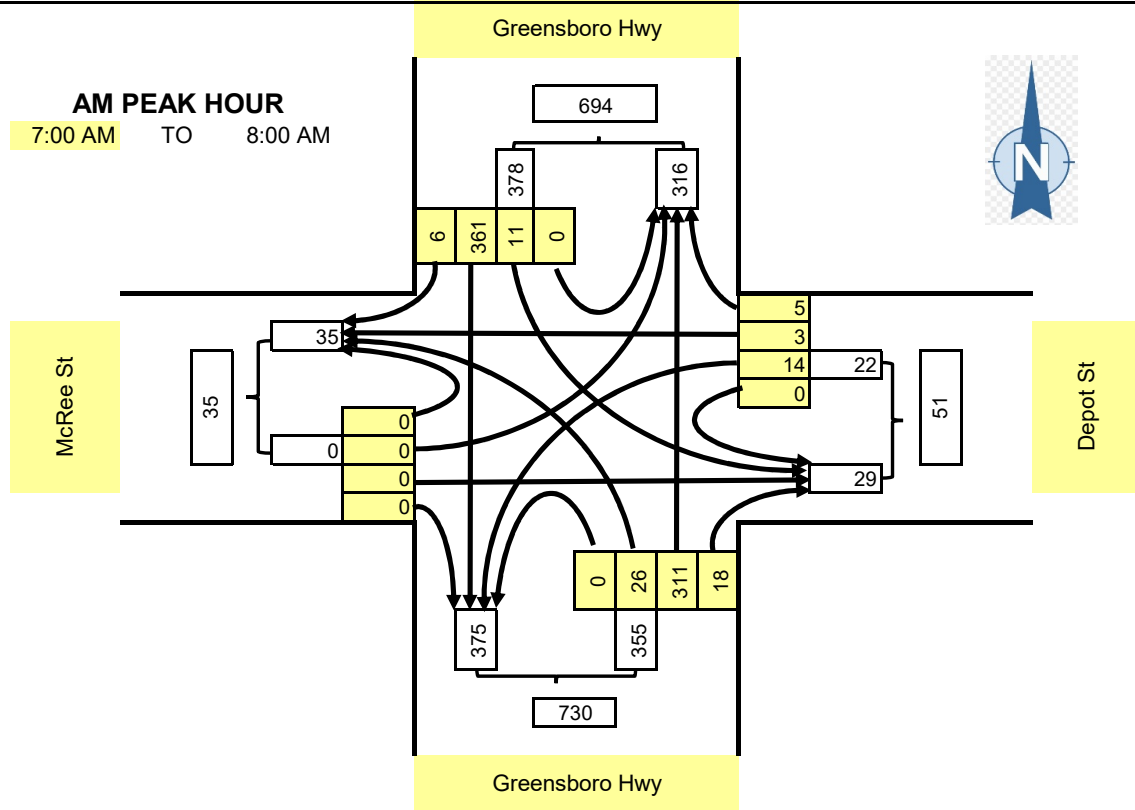


Figure 9

EXISTING TRAFFIC
AM & PM PEAK HOUR TURNING MOVEMENTS

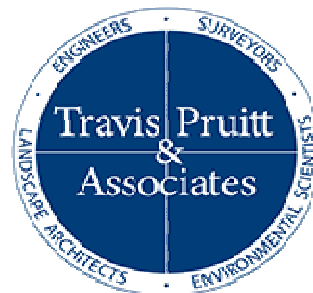
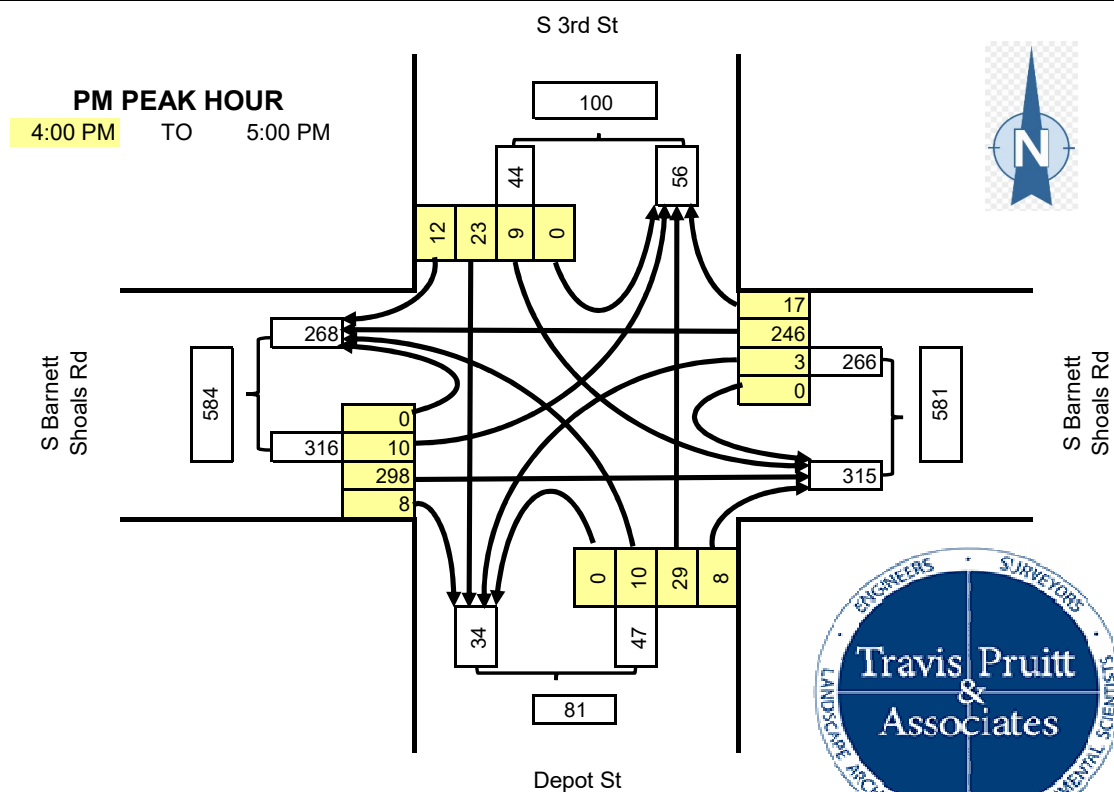
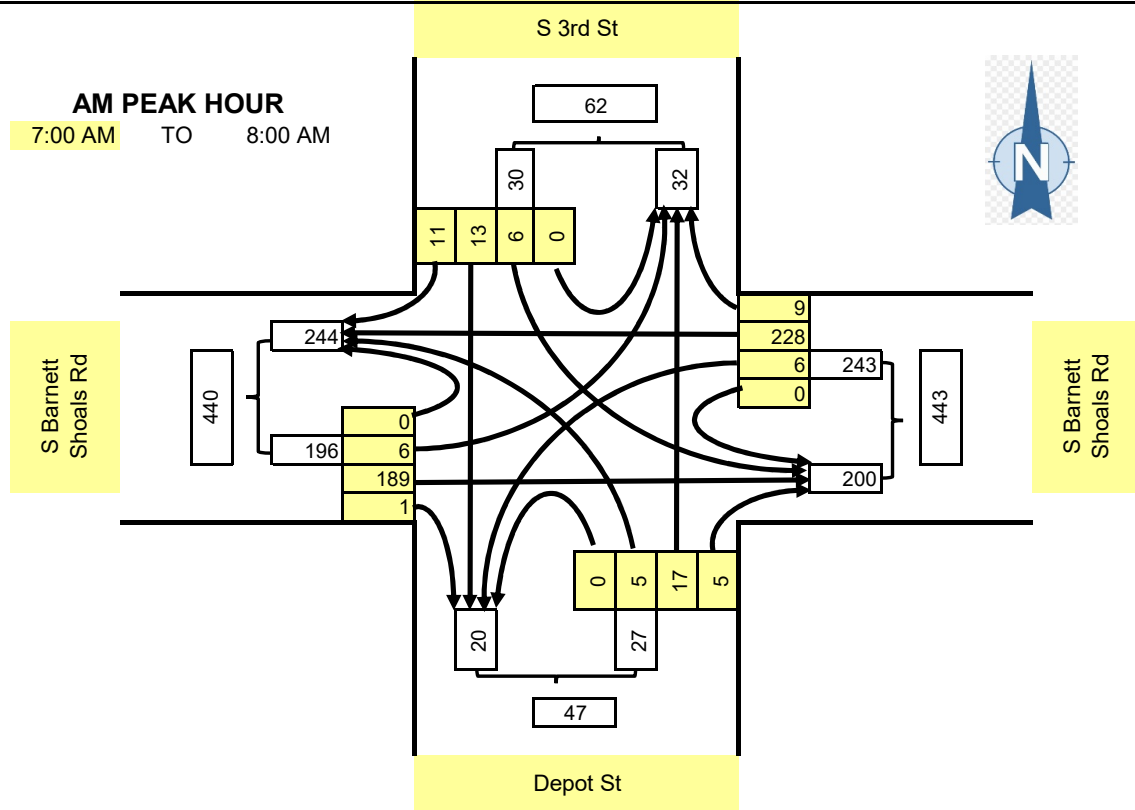


Figure 10

EXISTING TRAFFIC
AM & PM PEAK HOUR TURNING MOVEMENTS

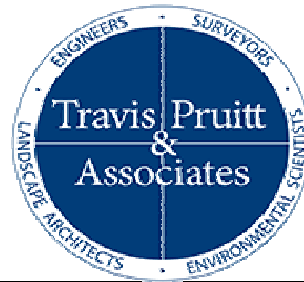
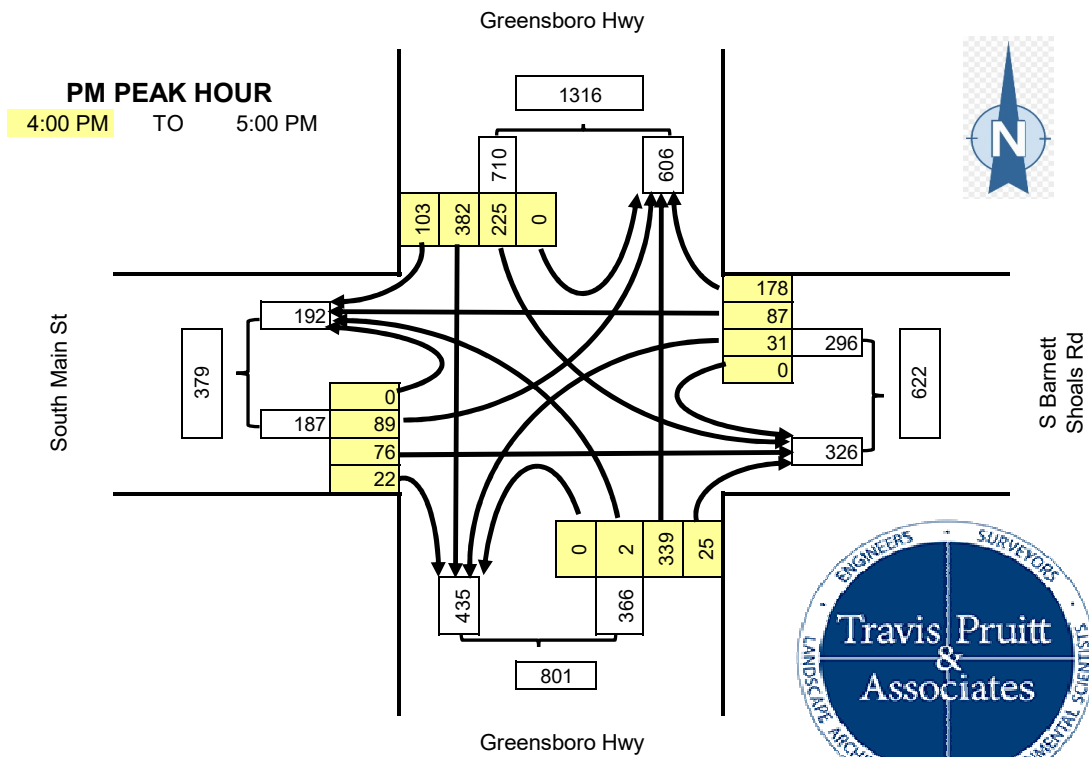
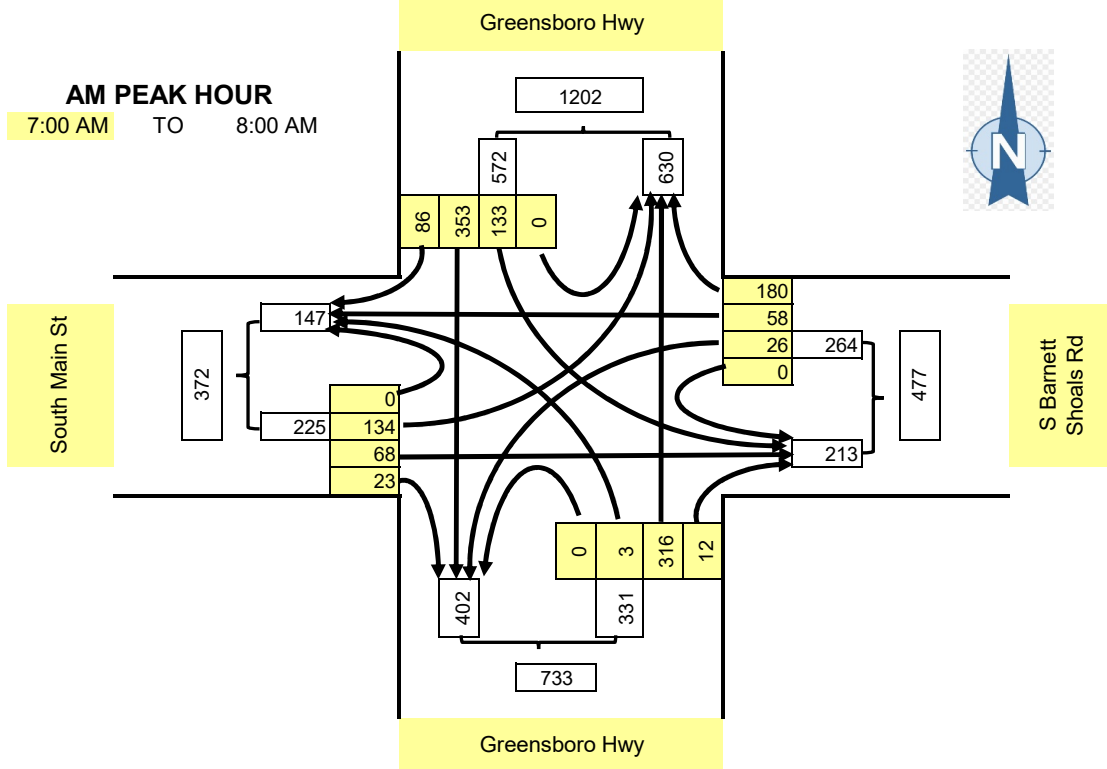
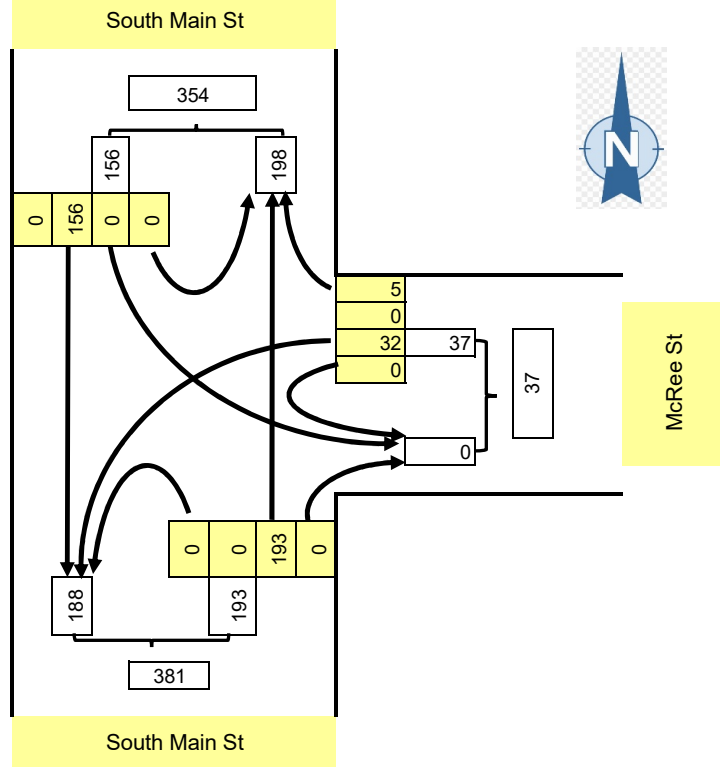


Figure 11

EXISTING TRAFFIC
AM & PM PEAK HOUR TURNING MOVEMENTS

AM PEAK HOUR

7:00 AM TO 8:00 AM



PM PEAK HOUR

4:00 PM TO 5:00 PM

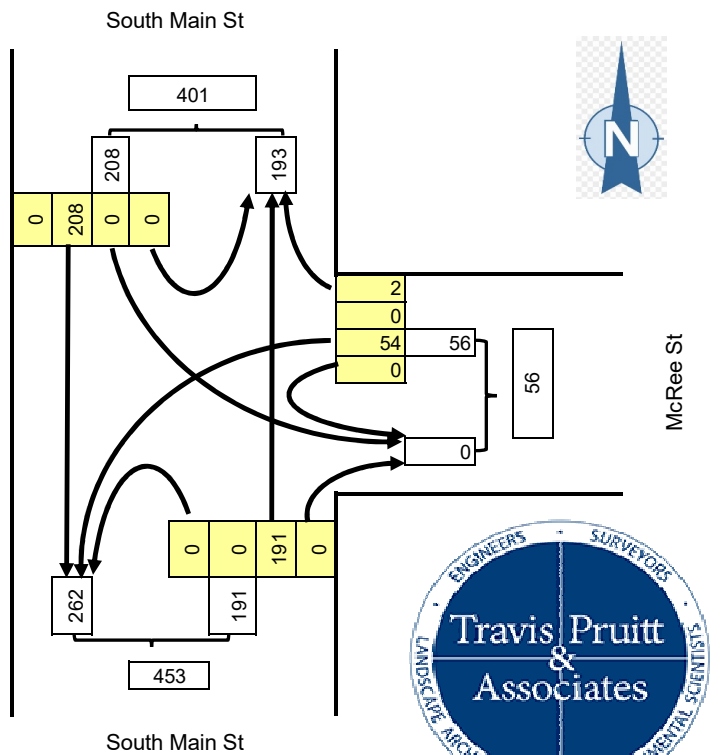
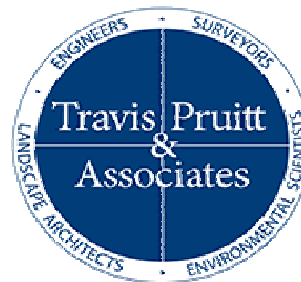
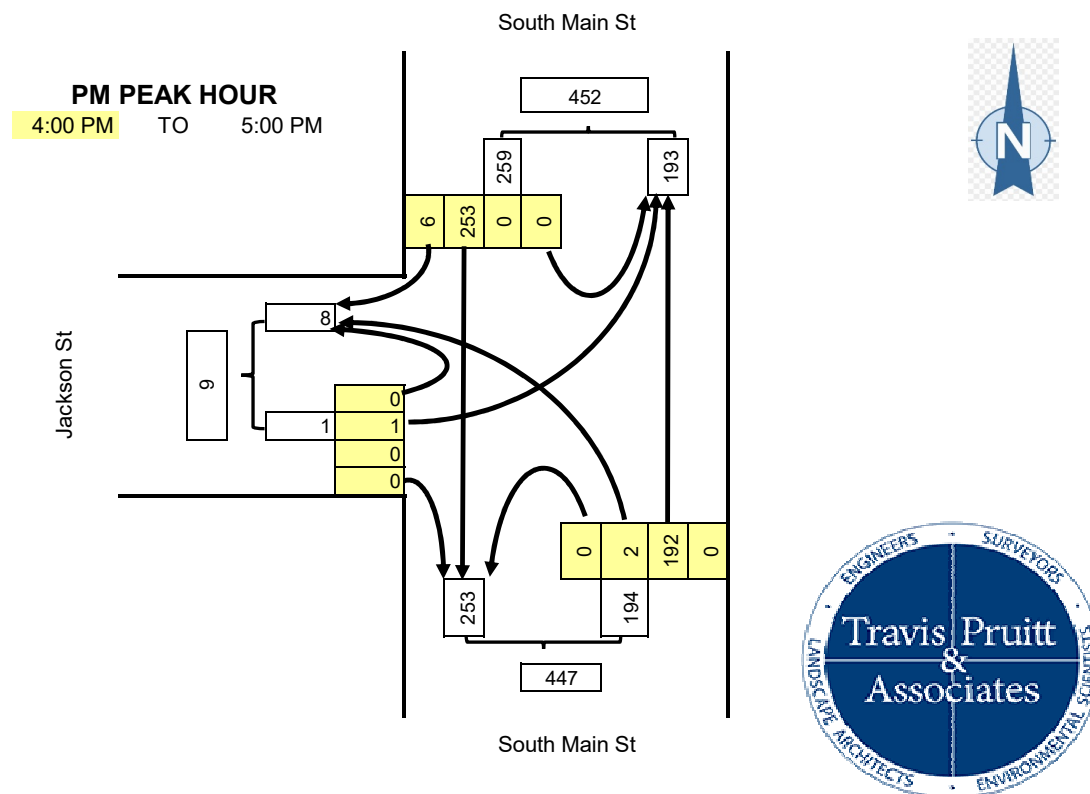
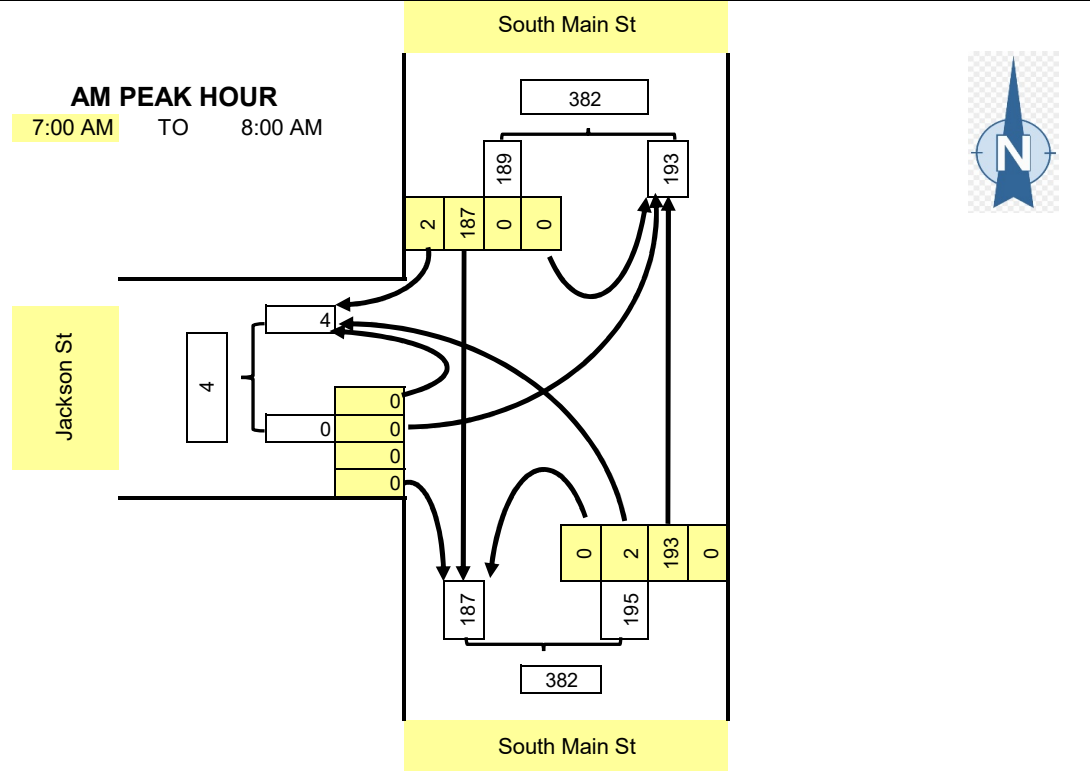


Figure 12

EXISTING TRAFFIC
AM & PM PEAK HOUR TURNING MOVEMENTS





TRIP GENERATION

The typical procedure for determining the traffic generated by a new development is to apply the rates or equations developed by the Institute of Transportation Engineers (ITE) as published in the Trip Generation Manual – 11th Edition. The rates or equations in this informational report are calculated from nationally collected data. This method was used to establish the trip generation for the proposed development.

The results of the trip generation for the Oconee Pipe Plant are given in Table 2.

Table 2. Trip Generation Results

Trip Generation									
Land Use (ITE Code)	Intensity	Independent Variable	ADT	AM Peak Hour			PM Peak Hour		
			2-Way	Enter	Exit	Total	Enter	Exit	Total
Single-Family Attached Housing (215)	30	Dwelling Units	178	2	8	10	8	6	14
Multifamily Housing (Low-Rise) (220)	200	Dwelling Units	1,357	20	65	85	67	40	107
Shopping Plaza (821)	40	1000 Sq. Ft. GLA	2,701	43	26	69	102	106	208
Total			4,236	65	99	164	177	152	329

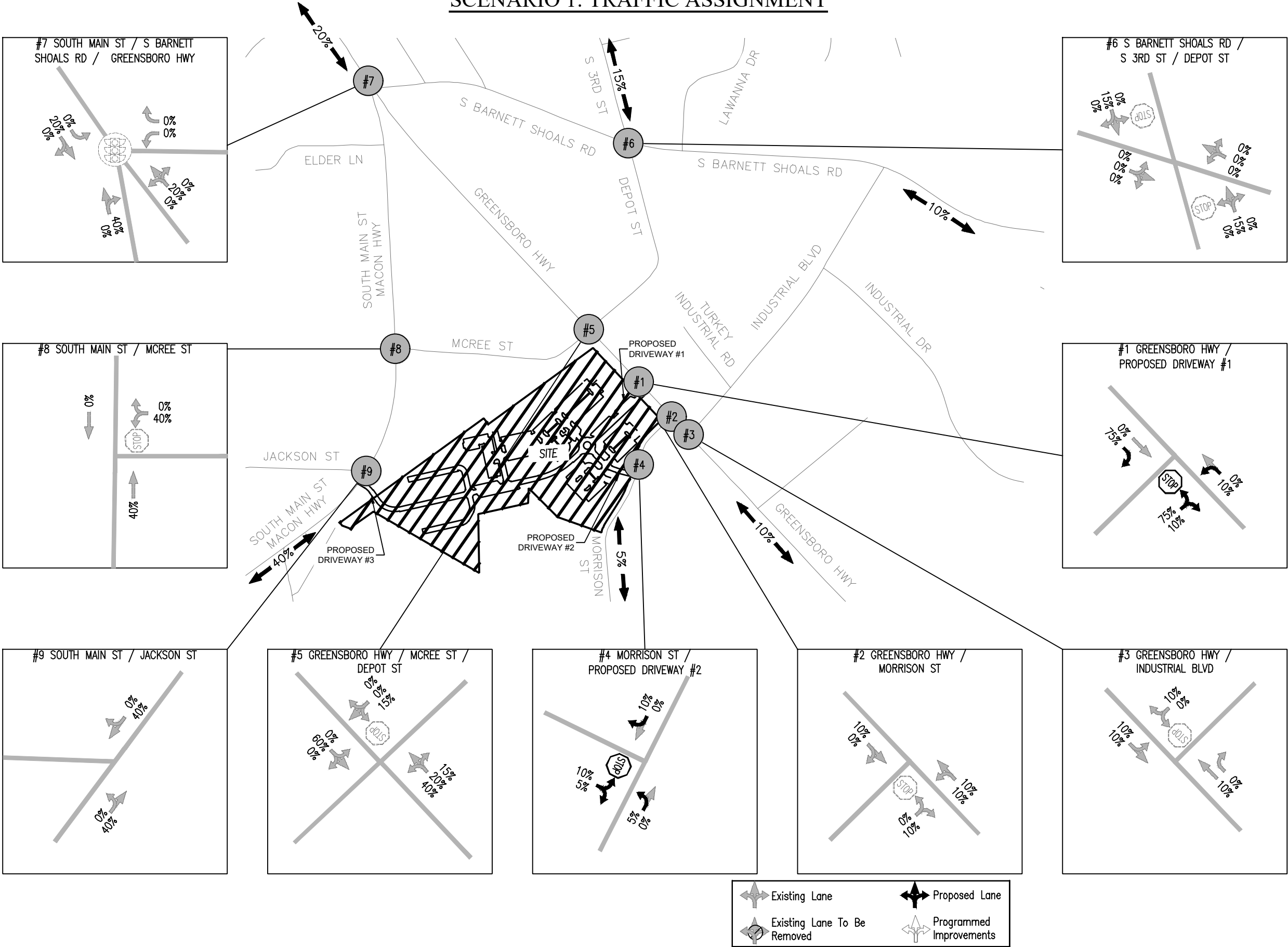


II. TRAFFIC ASSIGNMENT

The assignment of traffic to the existing street network has been developed in accordance with an analysis of the existing traffic volumes, a general knowledge of the area, and analysis of its existing development.

Figure 13 shows the assignment of traffic generated by the proposed project to the surrounding road network. Figure 14 shows the project traffic for the AM and PM peak hour periods.

FIGURE 13
SCENARIO 1: TRAFFIC ASSIGNMENT



DATE: 02/28/2024

SCALE: NTS

CN: 230580 Traffic

JN: 230580

FN:

Sheet No. **FIGURE 13**

4317 Park Drive, Suite 400
Norcross, Georgia 30093
Phone: (770) 416-7511
Fax: (770) 416-6759
www.travispruitt.com

Contact Person:
MICHAEL GREENLEE
mgreenlee@travispruitt.com

Travis Pruitt & Associates, Inc.
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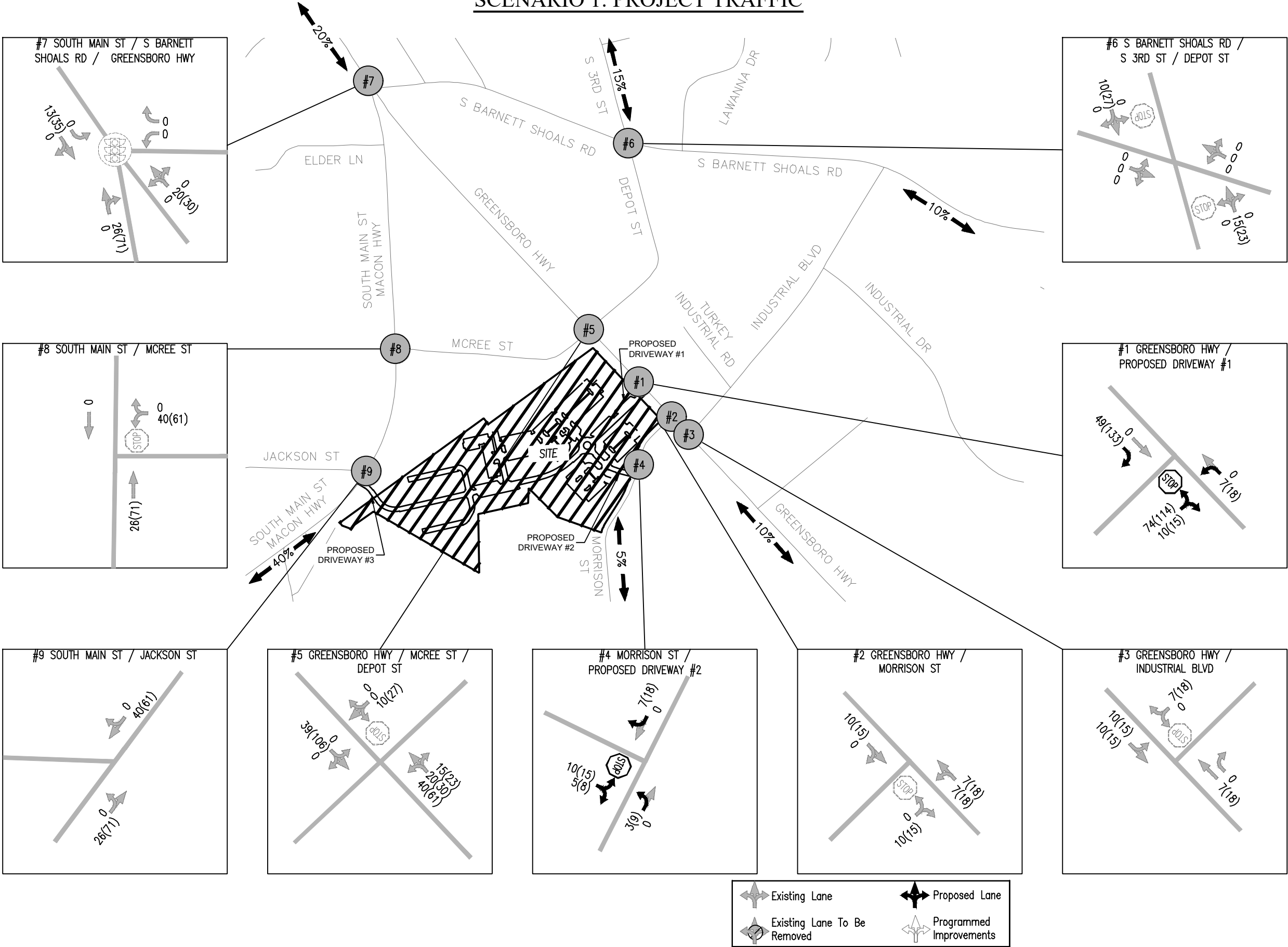
TRAFFIC ASSIGNMENT SCENARIO 1

OCONEE PIPE PLANT TIA

1180 GREENSBORO HWY
OCONEE COUNTY, GEORGIA

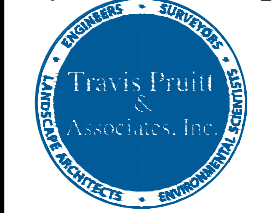
REVISIONS						
NO.	DATE	DESCRIPTION	BY	CHKD	APPD	REVISION
7						
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FIGURE 14
SCENARIO 1: PROJECT TRAFFIC



DATE: 02/28/2024
SCALE: NTS
CN: 230580 Traffic
JN: 230580
FN:
Sheet No. **FIGURE 14**

4317 Park Drive, Suite 400
Norcross, Georgia 30093
Phone: (770) 416-7511
Fax: (770) 416-6759
www.travispruitt.com
Contact Person:
MICHAEL GREENLEE
mgreenlee@travispruitt.com



PROJECT TRAFFIC SCENARIO 1
OCONEE PIPE PLANT TIA
1180 GREENSBORO HWY
OCONEE COUNTY, GEORGIA

REVISIONS						
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III. CAPACITY ANALYSIS

Capacity analyses of the study intersections were completed using procedures in the *Highway Capacity Manual (HCM), 2010 Update*. This is the usual methodology for the analysis of traffic conditions. The software program *Synchro 11* was used to perform the analyses. The capacity analysis printouts are included in the Appendix.

Operating conditions are evaluated in terms of levels of service (LOS). Levels of service A through E are normally considered acceptable levels of service for un-signalized intersections. Levels of service for signalized intersections are reported in composite fashion; i.e., one LOS for the entire intersection and are presented in terms of control delay. Individual turning movements at signalized intersections may experience poor levels of service, particularly where those volumes are relatively low, while the intersection as whole has an acceptable level of service. This is because the major movements on the major roadway are given priority in assigning green signal time. Levels of service A through D are considered to be acceptable peak hour operations for signalized intersections. Level of service E is normally acceptable for stop-controlled approaches and for left turns from the major street at un-signalized intersections. Level of service F is generally considered an unacceptable peak hour condition, except at low volume, stop-controlled approaches.

Traffic conditions at un-signalized intersections with stop control on the minor street only are evaluated for the minor street approach(es) and for the left turn from the major street. Unsignalized through-traffic on the major street is assumed to have no delay as there is no control (no stop sign). Poor levels of service for minor street approaches to un-signalized intersections are not uncommon, because the continuous flow traffic will always have the priority. The LOS criteria for signalized and un-signalized intersections are shown in Table 3.

Table 3. Level of Service Delay Criteria

LEVEL OF SERVICE	CONTROL DELAY (seconds per vehicle)		
	Signalized Intersection	Un-signalized Intersection	Roundabout
A	<10	<10	<10
B	>10 and <20	>10 and <15	>10 and <20
C	>20 and <35	>15 and <25	>20 and <35
D	>35 and <55	>25 and <35	>35 and <50
E	>55 and <80	>35 and <50	>50 and <70
F	>80	>50	>70



IV. EXISTING CONDITIONS

Based on the existing conditions and traffic counts the level of service was analyzed for each of the study intersections. The results of the capacity analysis for existing traffic are given in Table 4. Calculation reports for each intersection are provided in the Appendix.

Table 4. Levels of Service - Existing

INTERSECTION	CONTROL	APPROACH	LEVEL OF SERVICE (Approach Delay)			
			AM		PM	
			LOS	DELAY	LOS	DELAY
#1 Greensboro Highway / Proposed Driveway #1	Unsignalized	EB	N/A	N/A	N/A	N/A
		WB	N/A	N/A	N/A	N/A
		NB	N/A	N/A	N/A	N/A
		SB	N/A	N/A	N/A	N/A
#2 Greensboro Highway / Morrison Street	Unsignalized	EB	B	14.8	C	17.3
		WB	N/A	N/A	N/A	N/A
		NB	A	0.3	A	0.2
		SB	A	0.0	A	0.0
#3 Greensboro Highway / Industrial Boulevard	Unsignalized	EB	N/A	N/A	N/A	N/A
		WB	B	12.8	C	18.0
		NB	A	0.0	A	0.0
		SB	A	1.3	A	1.7
#4 Morrison Street / Proposed Driveway #2	Unsignalized	EB	N/A	N/A	N/A	N/A
		WB	N/A	N/A	N/A	N/A
		NB	N/A	N/A	N/A	N/A
		SB	N/A	N/A	N/A	N/A
#5 Greensboro Highway / McRee Street / Depot Street	Unsignalized	EB	N/A	N/A	N/A	N/A
		WB	C	16.0	C	19.2
		NB	A	0.6	A	0.7
		SB	A	0.2	A	0.2
#6 South Barnett Shoals Road / South 3rd Street / Depot Street	Unsignalized	EB	A	0.2	A	0.3
		WB	A	0.2	A	0.1
		NB	B	13.5	C	17.7
		SB	B	12.8	C	16.0
#7 South Main Street / South Barnett Shoals Road / Greensboro Highway	Signalized	NWB	C	20.3	B	19.5
		WB	B	11.6	B	12.5
		NB	D	40.1	C	27.7
		SB	B	13.8	B	14.4
		Intersection LOS	B	19.3	B	16.8



#8 South Main Street / McRee Street	Unsignalized	EB	N/A	N/A	N/A	N/A
		WB	B	11.6	B	12.4
		NB	A	0.0	A	0.0
		SB	A	0.0	A	0.0
#9 South Main Street / Jackson Street	Unsignalized	EB	N/A	N/A	N/A	N/A
		WB	N/A	N/A	N/A	N/A
		NB	A	0.1	A	0.1
		SB	A	0.0	A	0.0

Analysis:

In the Existing traffic conditions, all intersections function at acceptable levels of service in both the AM and PM peak hours.



V. EXISTING PLUS BACKGROUND CONDITIONS

In the Existing Plus Background conditions, the existing traffic was increased at a rate of 1% per year for the 3-year project buildout period and the study intersections were re-analyzed to determine their levels of service. Figure 15 – Figure 23 show the projected turning movements at each study intersection. Table 5 summarizes the projected LOS for each intersection based on these conditions. Calculation reports are included in Appendix.

Table 5. Levels of Service – Existing+Background

INTERSECTION	CONTROL	APPROACH	LEVEL OF SERVICE (Approach Delay)			
			AM		PM	
			LOS	DELAY	LOS	DELAY
#1 Greensboro Highway / Proposed Driveway #1	Unsignalized	EB	N/A	N/A	N/A	N/A
		WB	N/A	N/A	N/A	N/A
		NB	N/A	N/A	N/A	N/A
		SB	N/A	N/A	N/A	N/A
#2 Greensboro Highway / Morrison Street	Unsignalized	EB	B	15.1	C	17.8
		WB	N/A	N/A	N/A	N/A
		NB	A	0.3	A	0.7
		SB	A	0.0	A	0.0
#3 Greensboro Highway / Industrial Boulevard	Unsignalized	EB	N/A	N/A	N/A	N/A
		WB	B	13.0	C	18.8
		NB	A	0.0	A	0.0
		SB	A	1.3	A	1.7
#4 Morrison Street / Proposed Driveway #2	Unsignalized	EB	N/A	N/A	N/A	N/A
		WB	N/A	N/A	N/A	N/A
		NB	N/A	N/A	N/A	N/A
		SB	N/A	N/A	N/A	N/A
#5 Greensboro Highway / McRee Street / Depot Street	Unsignalized	EB	N/A	N/A	N/A	N/A
		WB	C	16.4	C	20.0
		NB	A	0.6	A	0.7
		SB	A	0.2	A	0.2
#6 South Barnett Shoals Road / South 3rd Street / Depot Street	Unsignalized	EB	A	0.2	A	0.2
		WB	A	0.2	A	0.1
		NB	B	13.7	C	18.3
		SB	B	12.9	C	16.5
#7 South Main Street / South Barnett Shoals Road / Greensboro Highway	Signalized	NWB	C	23.2	C	20.0
		WB	B	11.8	B	12.7
		NB	D	40.9	C	27.8
		SB	B	14.3	B	15.0
		Intersection LOS	C	20.4	B	17.2



#8 South Main Street / McRee Street	Unsignalized	EB	N/A	N/A	N/A	N/A
		WB	B	11.7	B	12.6
		NB	A	0.0	A	0.0
		SB	A	0.0	A	0.0
#9 South Main Street / Jackson Street	Unsignalized	EB	N/A	N/A	N/A	N/A
		WB	N/A	N/A	N/A	N/A
		NB	A	0.1	A	0.1
		SB	A	0.0	A	0.0

Analysis:

In the Existing Plus Background traffic conditions, all intersections continue to function at acceptable levels of service in both the AM and PM peak hours.

15

EXISTING + BACKGROUND TRAFFIC AM & PM PEAK HOUR TURNING MOVEMENTS

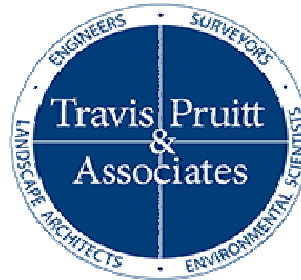


Figure 16

**EXISTING + BACKGROUND TRAFFIC
AM & PM PEAK HOUR TURNING MOVEMENTS**

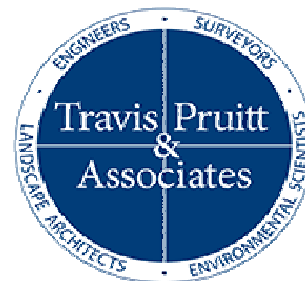
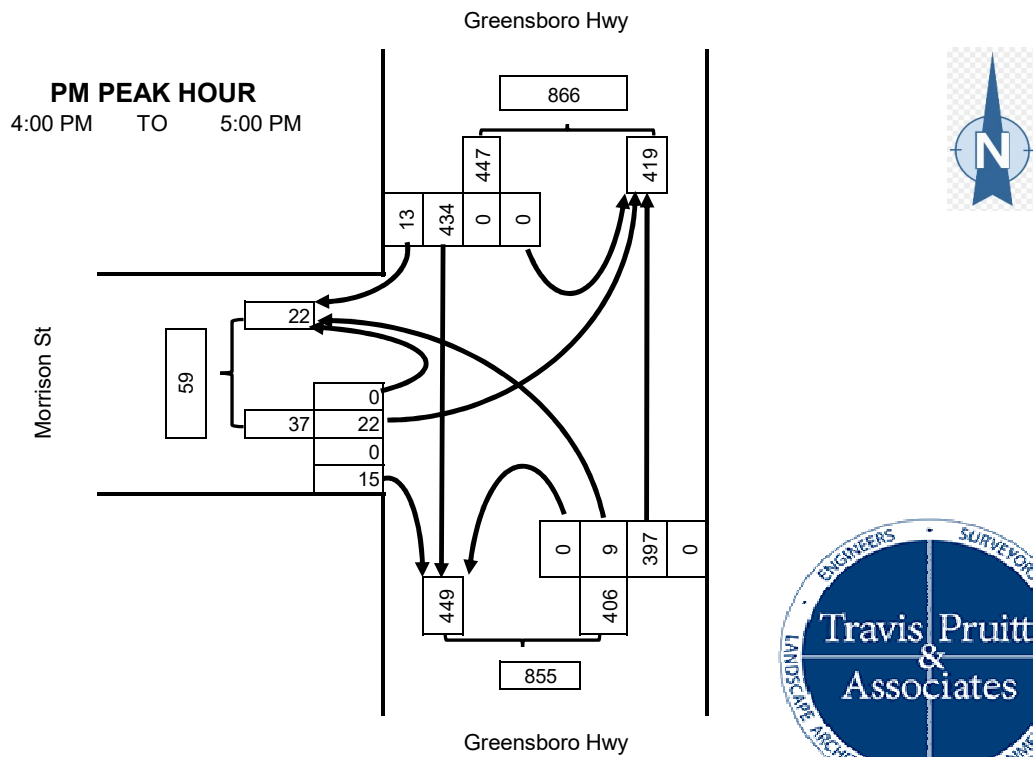
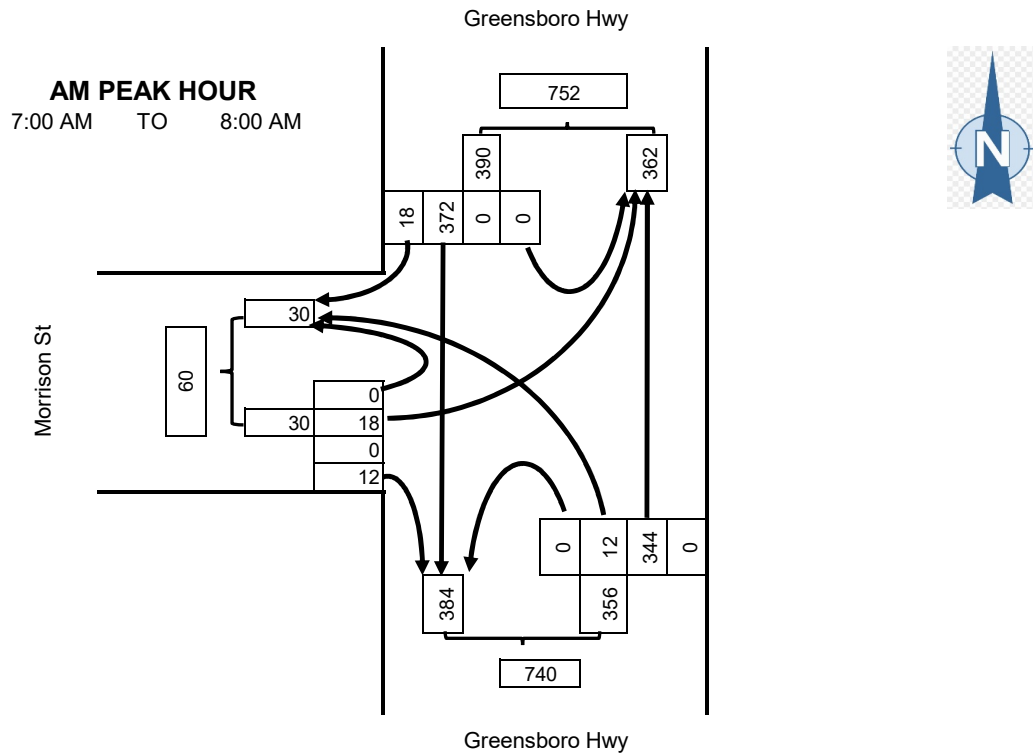
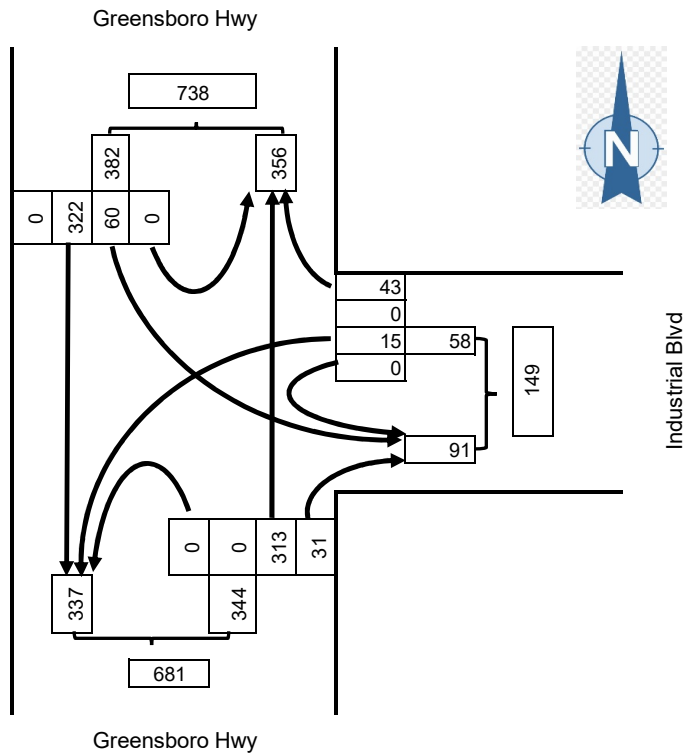


Figure 17

**EXISTING + BACKGROUND TRAFFIC
AM & PM PEAK HOUR TURNING MOVEMENTS**

AM PEAK HOUR
7:00 AM TO 8:00 AM



PM PEAK HOUR
4:00 PM TO 5:00 PM

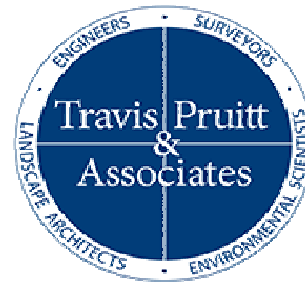
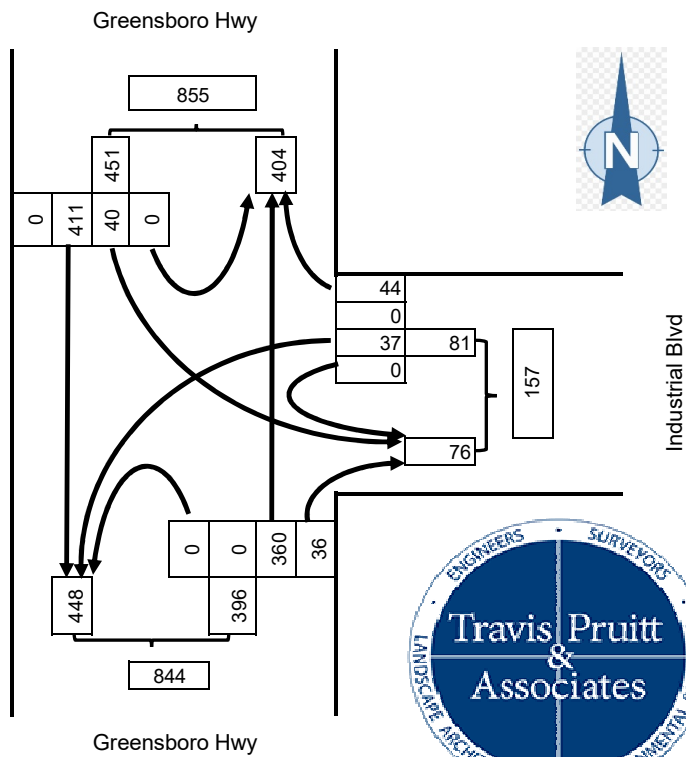


Figure 18

**EXISTING + BACKGROUND TRAFFIC
AM & PM PEAK HOUR TURNING MOVEMENTS**

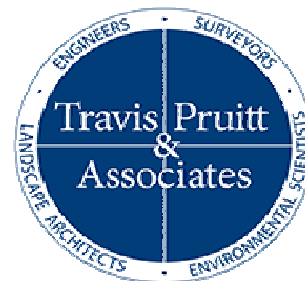
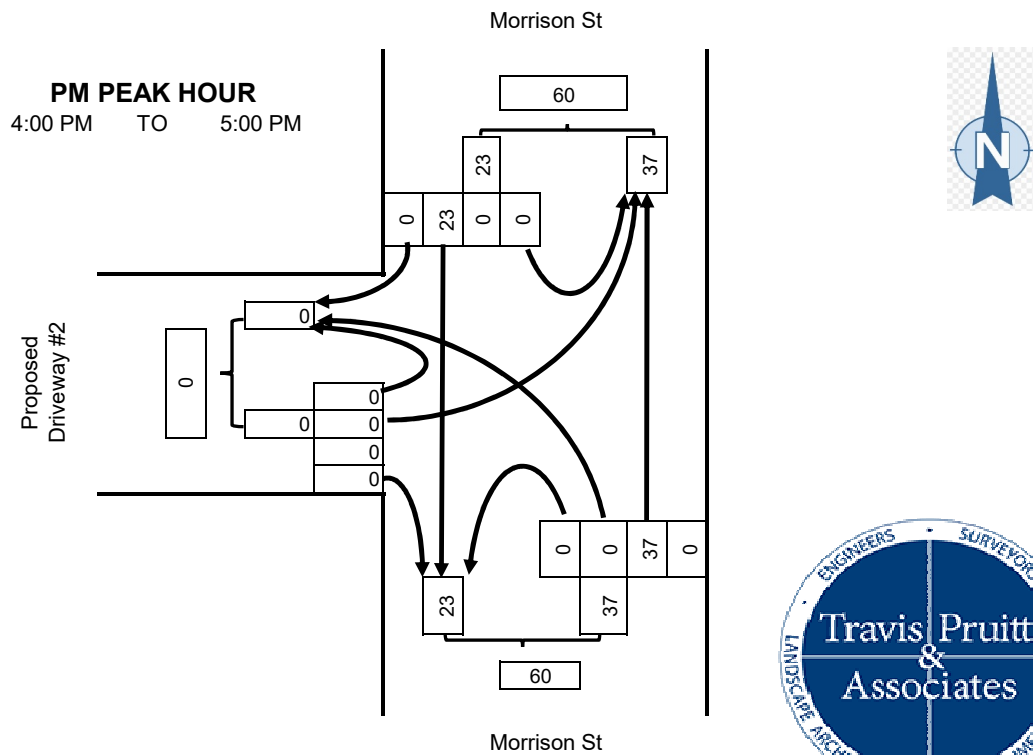
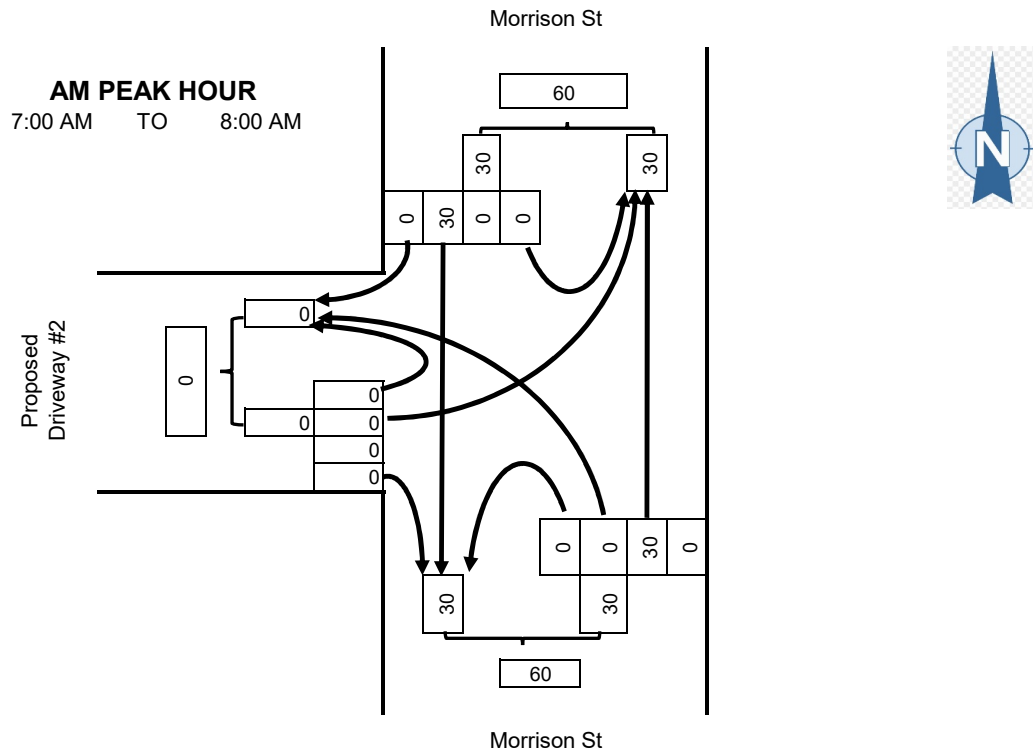


Figure 19

**EXISTING + BACKGROUND TRAFFIC
AM & PM PEAK HOUR TURNING MOVEMENTS**

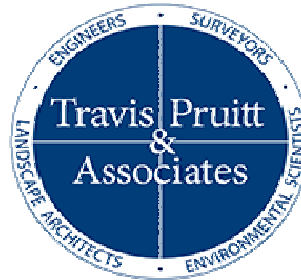
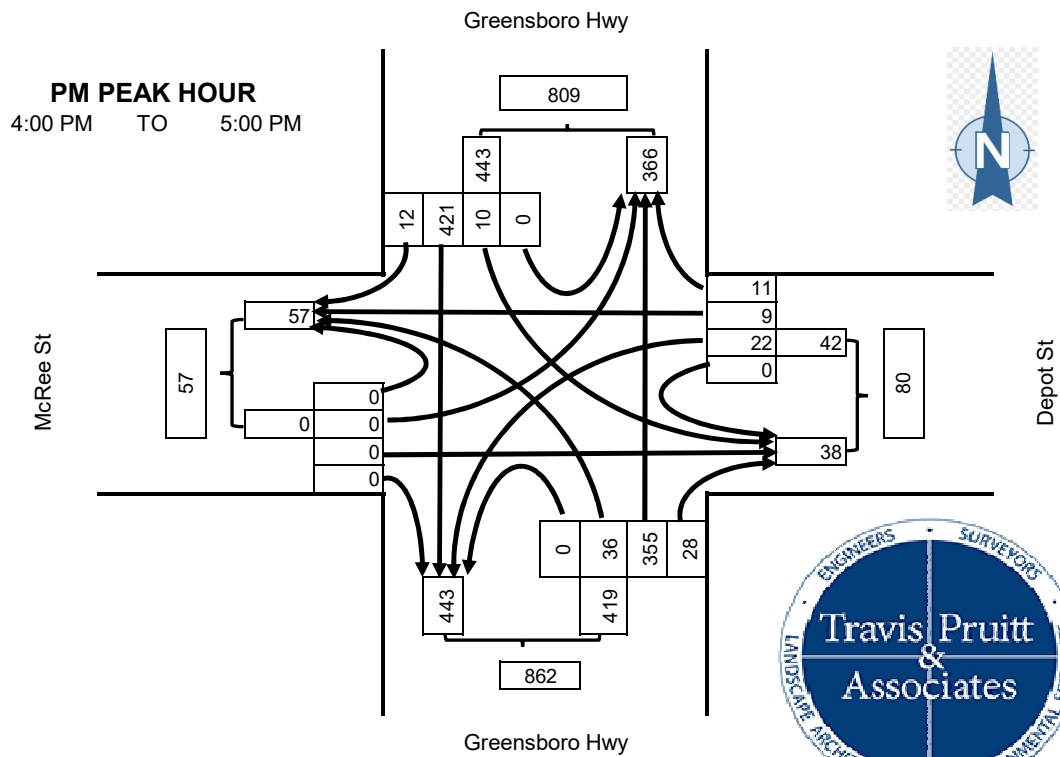
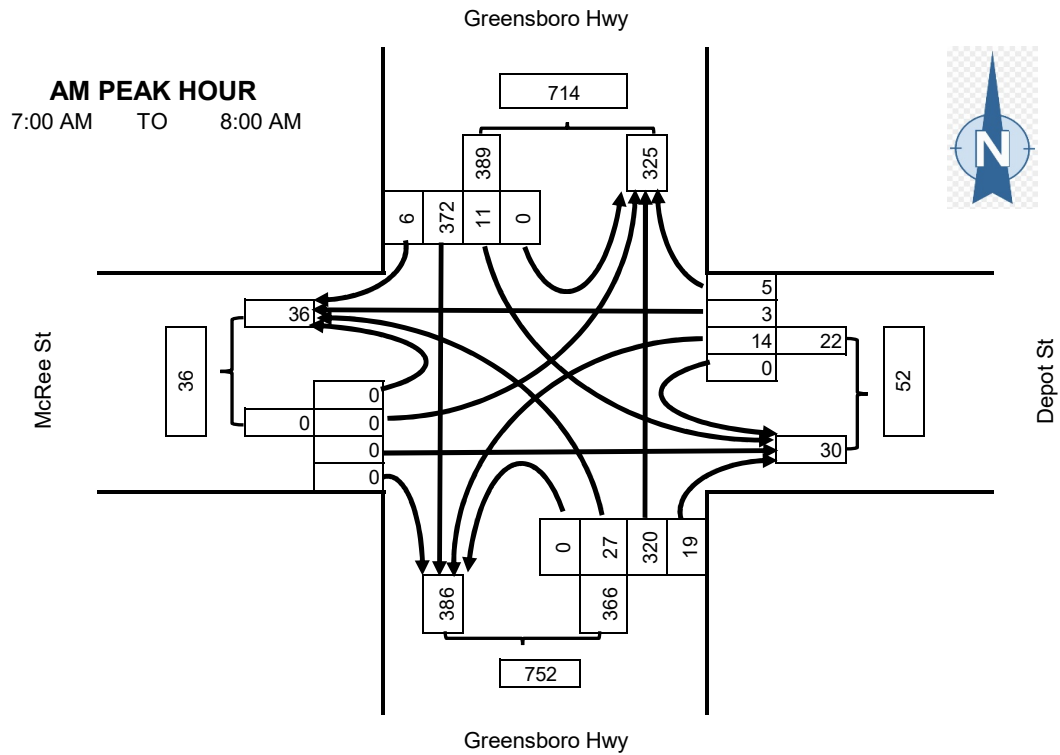


Figure 20

EXISTING + BACKGROUND TRAFFIC
AM & PM PEAK HOUR TURNING MOVEMENTS

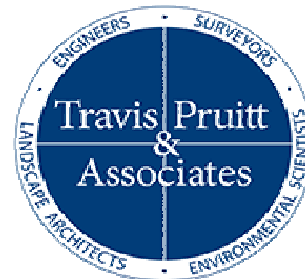
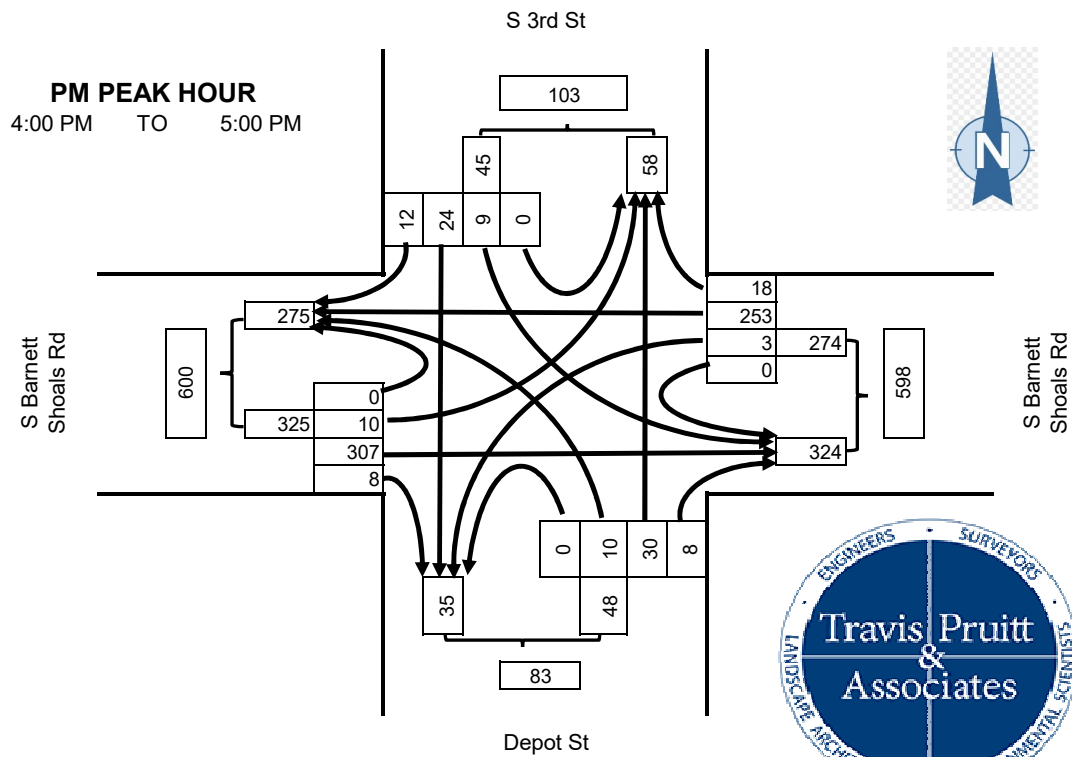
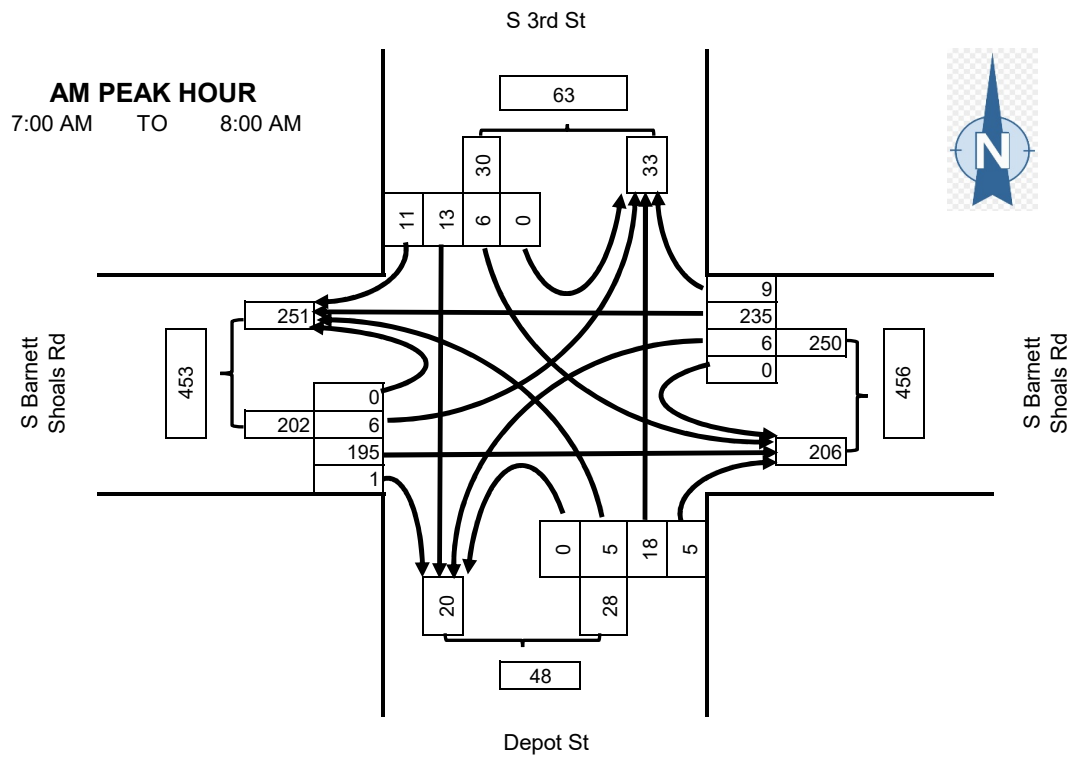


Figure 21

**EXISTING + BACKGROUND TRAFFIC
AM & PM PEAK HOUR TURNING MOVEMENTS**

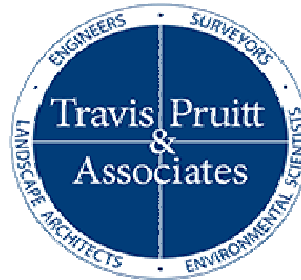
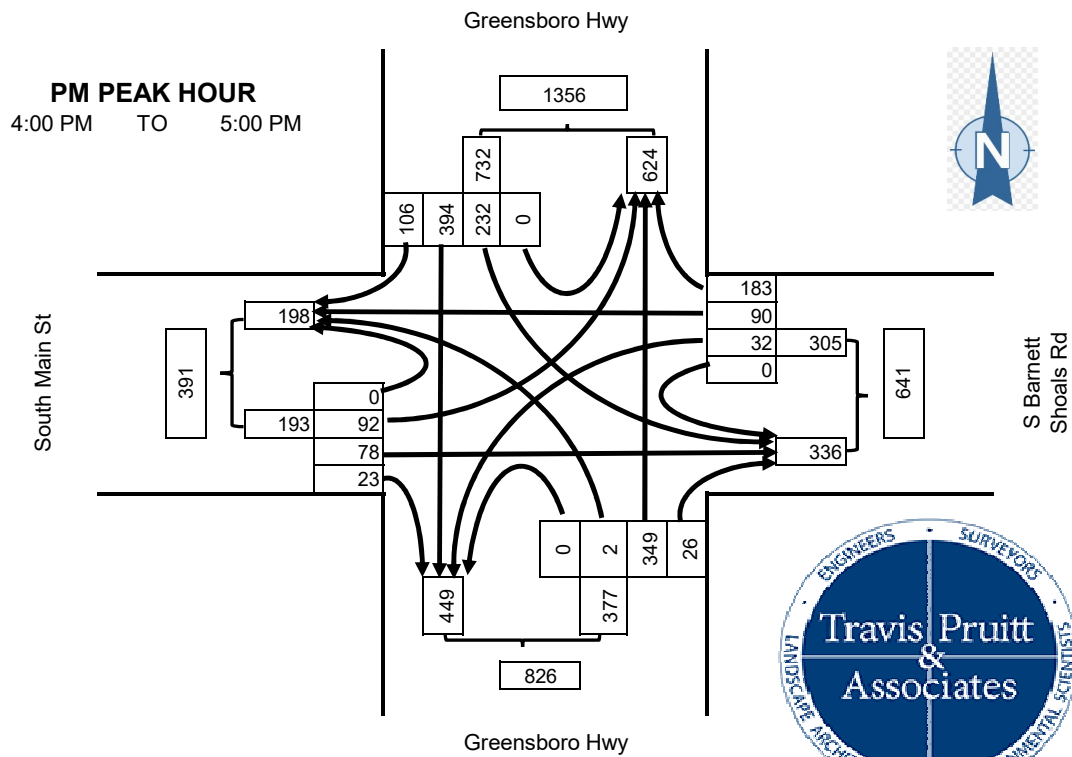
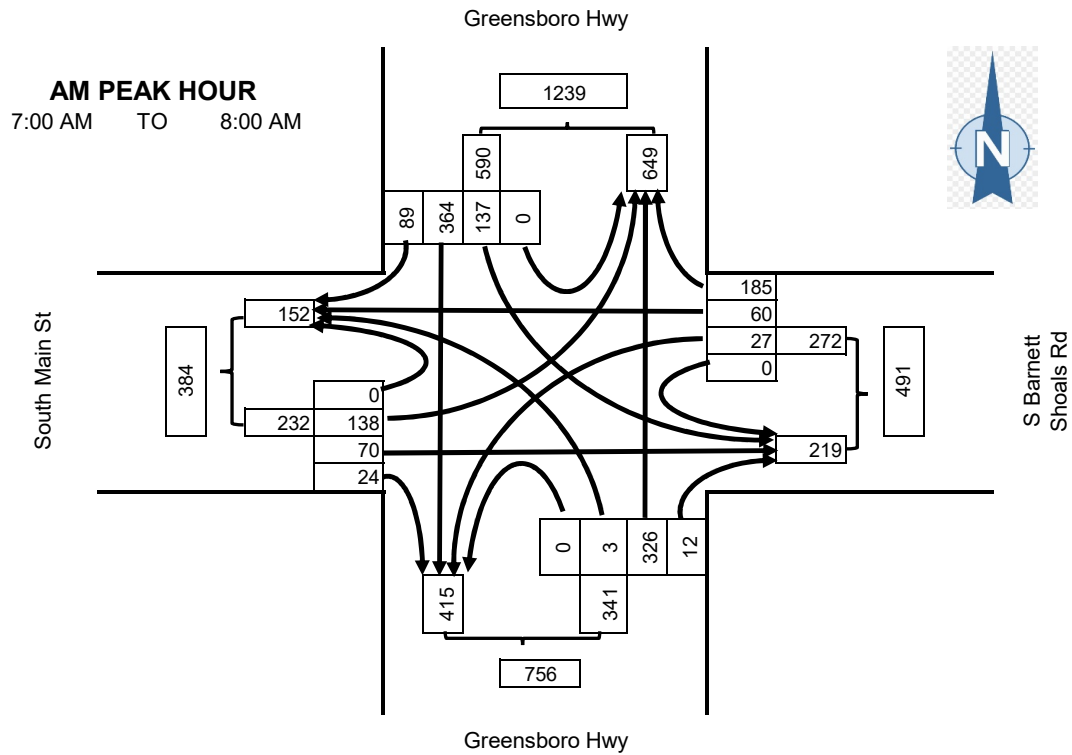
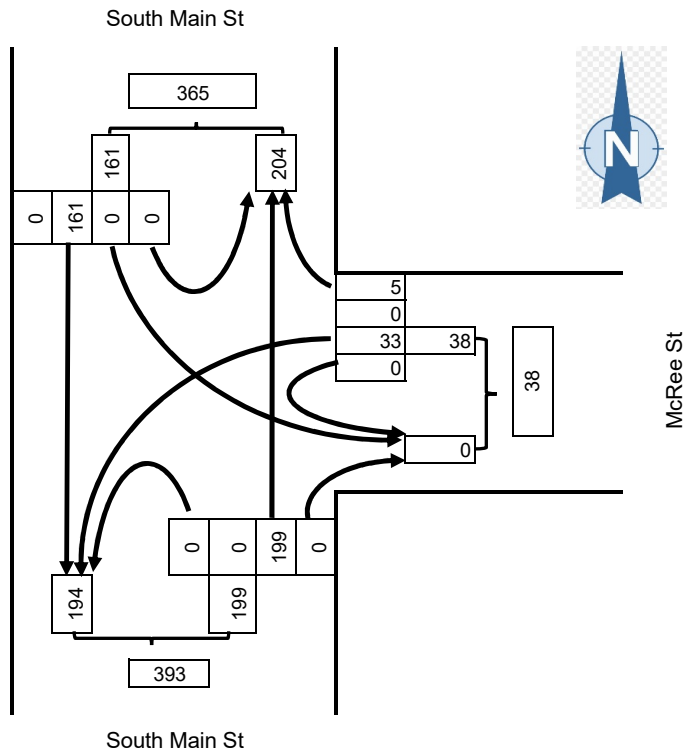


Figure 22

**EXISTING + BACKGROUND TRAFFIC
AM & PM PEAK HOUR TURNING MOVEMENTS**

AM PEAK HOUR
7:00 AM TO 8:00 AM



PM PEAK HOUR
4:00 PM TO 5:00 PM

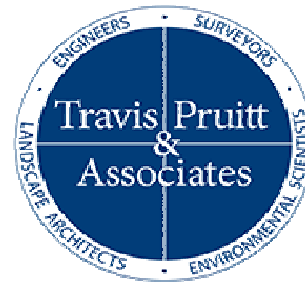
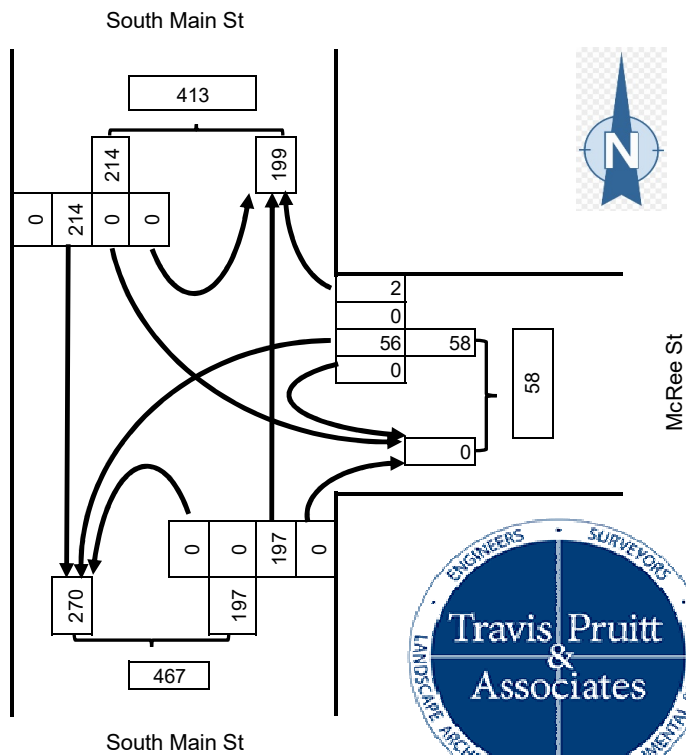
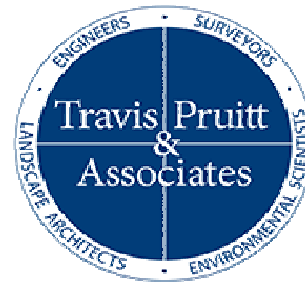
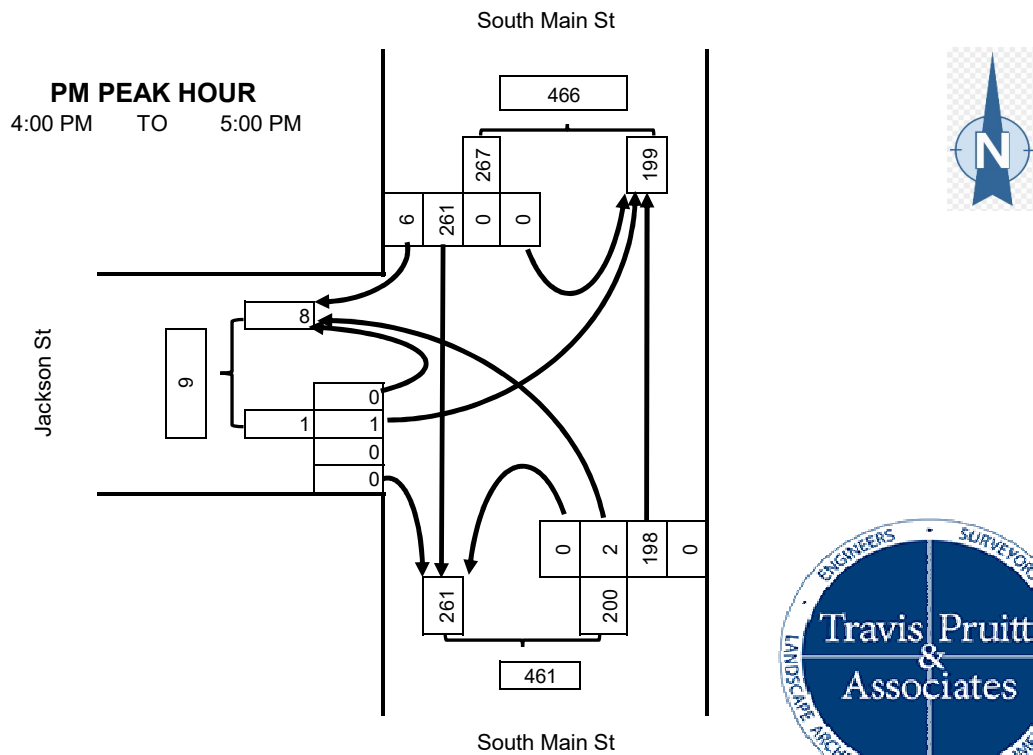
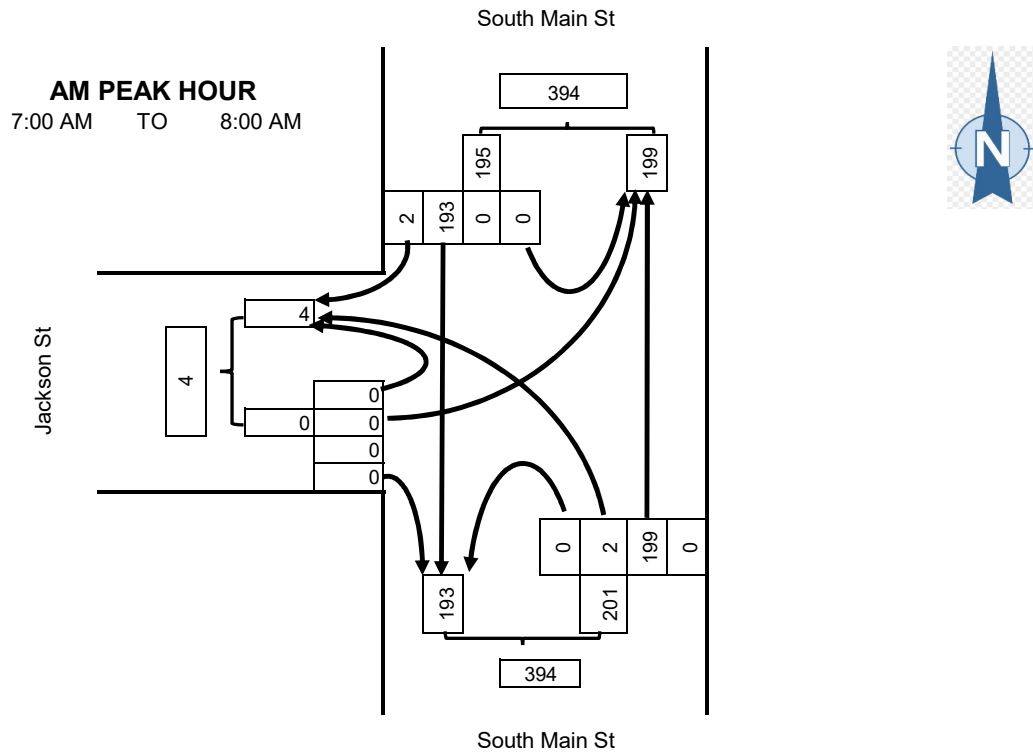


Figure 23

**EXISTING + BACKGROUND TRAFFIC
AM & PM PEAK HOUR TURNING MOVEMENTS**





VI. EXISTING PLUS BACKGROUND PLUS PROJECT CONDITIONS

In the Existing Plus Background Plus Project conditions, the existing traffic was increased at a rate of 1% per year for the 3-year project buildout period and the project traffic was distributed to the study intersections and re-analyzed to determine their levels of service. Note that the peak hour factor was set to 0.92 for all approaches in this condition. Figure 24– Figure 32 show the projected turning movements at each study intersection. Table 6 summarizes the projected LOS for each intersection based on these conditions. Calculation reports are included in Appendix.

Table 6. Levels of Service – Existing+Background+Project

INTERSECTION	CONTROL	APPROACH	LEVEL OF SERVICE (Approach Delay)			
			AM		PM	
			LOS	DELAY	LOS	DELAY
#1 Greensboro Highway / Proposed Driveway #1	Unsignalized	EB	C	18.6	D	29
		WB	N/A	N/A	N/A	N/A
		NB	A	0.2	A	0.4
		SB	A	0.0	A	0.0
#2 Greensboro Highway / Morrison Street	Unsignalized	EB	B	14.1	A	8.9
		WB	N/A	N/A	N/A	N/A
		NB	A	0.4	A	1.4
		SB	A	0.0	A	0.0
#3 Greensboro Highway / Industrial Boulevard	Unsignalized	EB	N/A	N/A	N/A	N/A
		WB	B	12.8	C	17.0
		NB	A	0.0	A	0.0
		SB	A	1.4	A	1.0
#4 Morrison Street / Proposed Driveway #2	Unsignalized	EB	A	8.8	A	8.3
		WB	N/A	N/A	N/A	N/A
		NB	A	0.7	A	8.5
		SB	A	0.0	A	8.4
#5 Greensboro Highway / McRee Street / Depot Street	Unsignalized	EB	N/A	N/A	N/A	N/A
		WB	C	20.3	E	37.7
		NB	A	1.3	A	1.6
		SB	A	0.2	A	0.2
#6 South Barnett Shoals Road / South 3rd Street / Depot Street	Unsignalized	EB	A	0.2	A	0.2
		WB	A	0.2	A	0.1
		NB	B	13.2	C	16.6
		SB	B	12.6	C	16.1
#7 South Main Street / South Barnett Shoals	Signalized	NWB	B	18.1	C	23.4
		WB	A	9.8	B	13.0
		NB	C	31.6	C	31.8



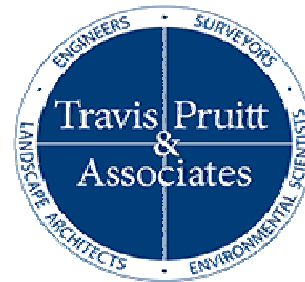
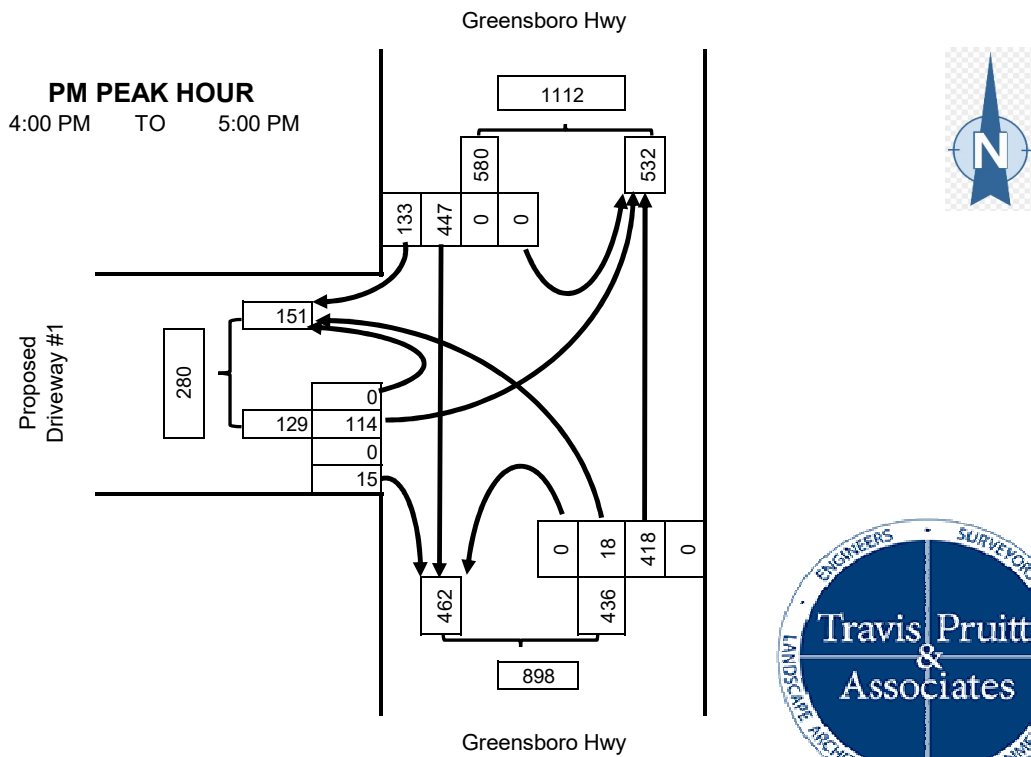
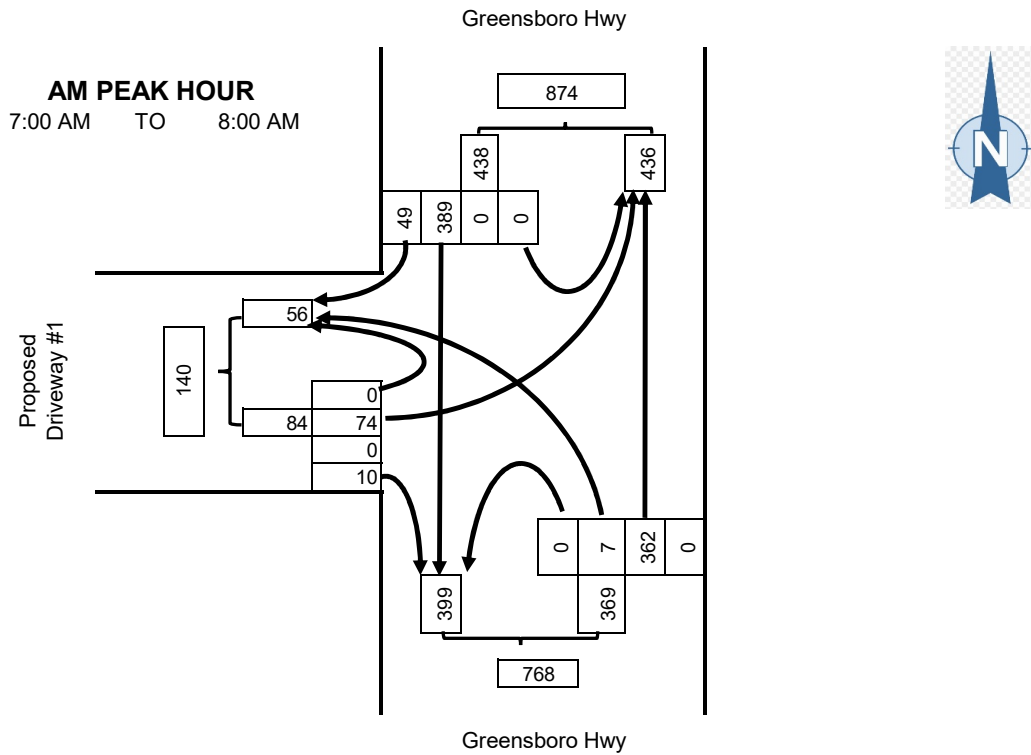
Road / Greensboro Highway		SB	B	14.7	C	17.6
		Intersection LOS	B	17.6	C	20.3
#8 South Main Street / McRee Street	Unsignalized	EB	N/A	N/A	N/A	N/A
		WB	B	12.0	B	14.3
		NB	A	0.0	A	0.0
		SB	A	0.0	A	0.0
#9 South Main Street / Jackson Street	Unsignalized	EB	N/A	N/A	N/A	N/A
		WB	N/A	N/A	N/A	N/A
		NB	A	0.1	A	0.1
		SB	A	0.0	A	0.0

Analysis:

In the Existing Plus Background Plus Project traffic conditions, all intersections continue to function at acceptable levels of service in both the AM and PM peak hours with the addition of the project traffic. The WB approach at intersection #5 operates at LOS E during the PM peak hour. As the WB approach of Depot Street at Greensboro Highway is the minor approach to a two-way, stop-controlled intersection, delay is expected and a LOS E or F is considered acceptable.

Figure 24

EXISTING + BACKGROUND + PROJECT TRAFFIC
AM & PM PEAK HOUR TURNING MOVEMENTS



25

EXISTING + BACKGROUND + PROJECT TRAFFIC

AM PEAK HOUR

7:00 AM TO 8:00 AM



PM PEAK HOUR

4:00 PM TO 5:00 PM

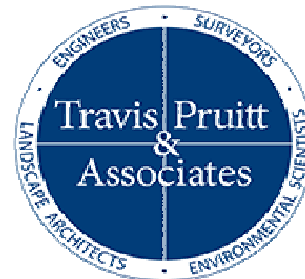
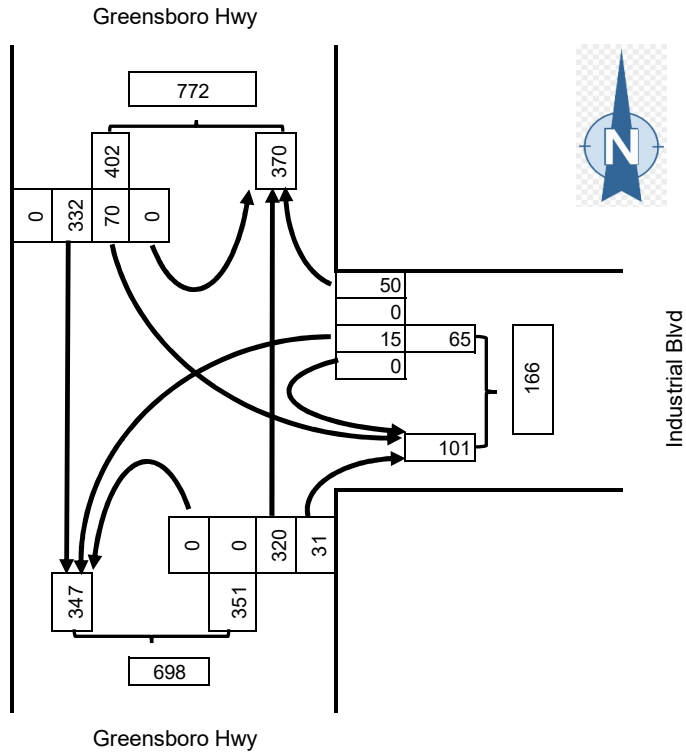


Figure 26

EXISTING + BACKGROUND + PROJECT TRAFFIC
AM & PM PEAK HOUR TURNING MOVEMENTS

AM PEAK HOUR
7:00 AM TO 8:00 AM



PM PEAK HOUR
4:00 PM TO 5:00 PM

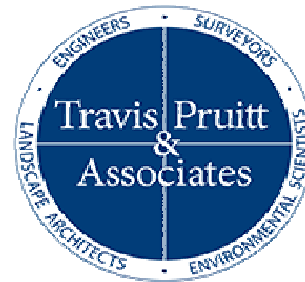
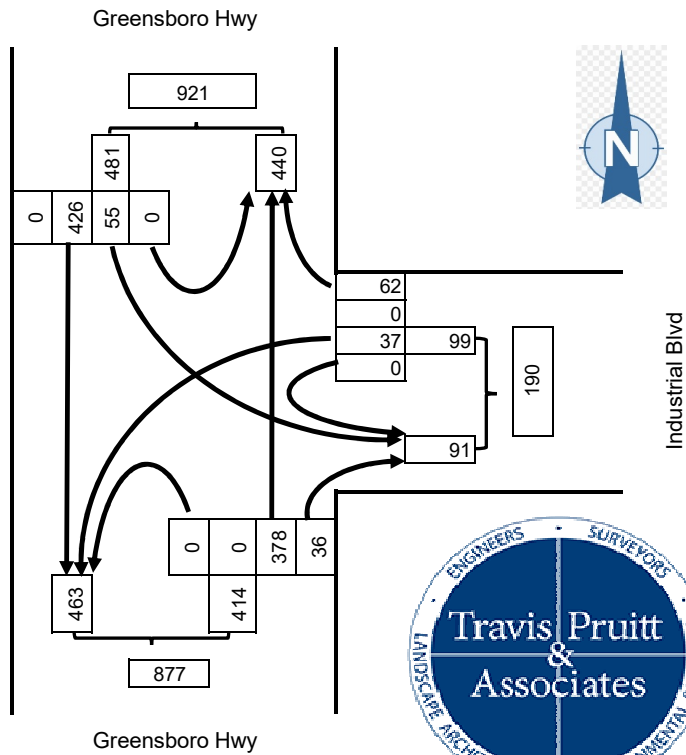
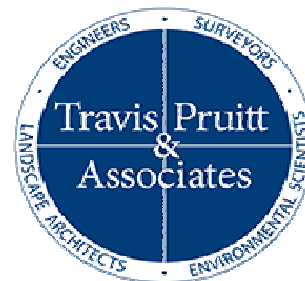
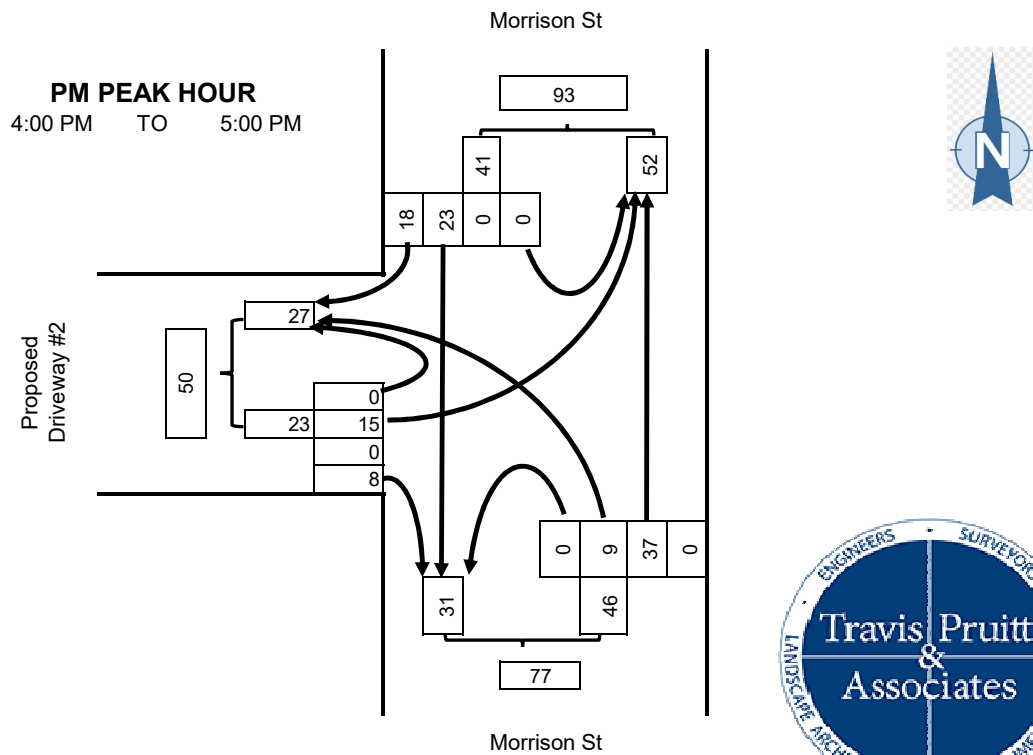
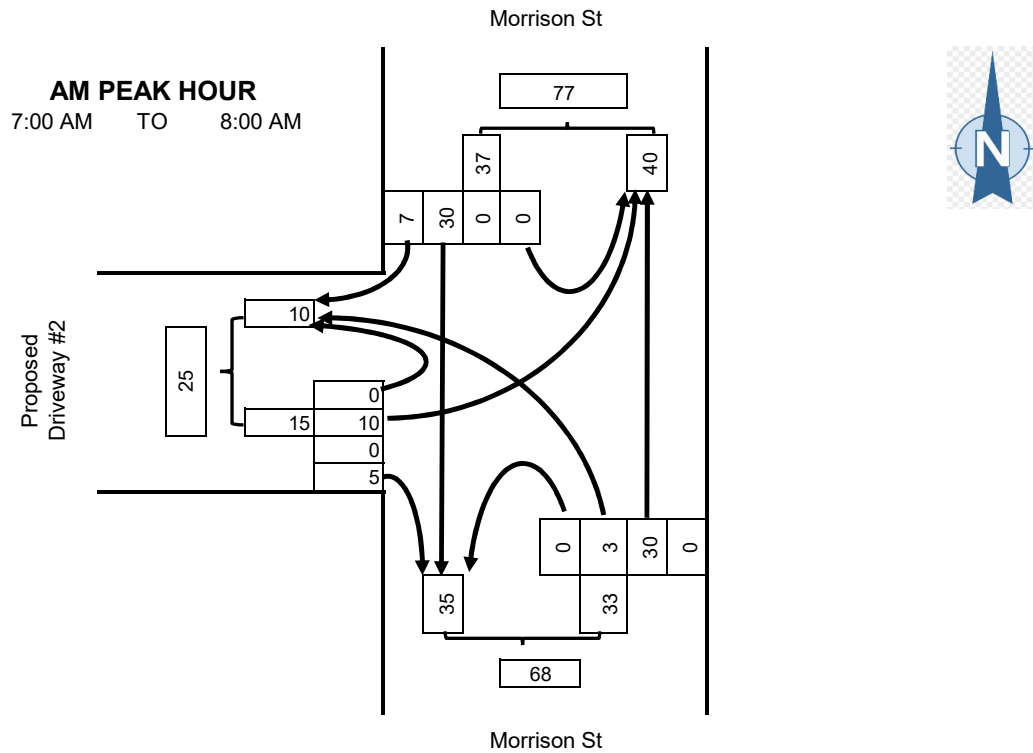


Figure 27

EXISTING + BACKGROUND + PROJECT TRAFFIC
AM & PM PEAK HOUR TURNING MOVEMENTS

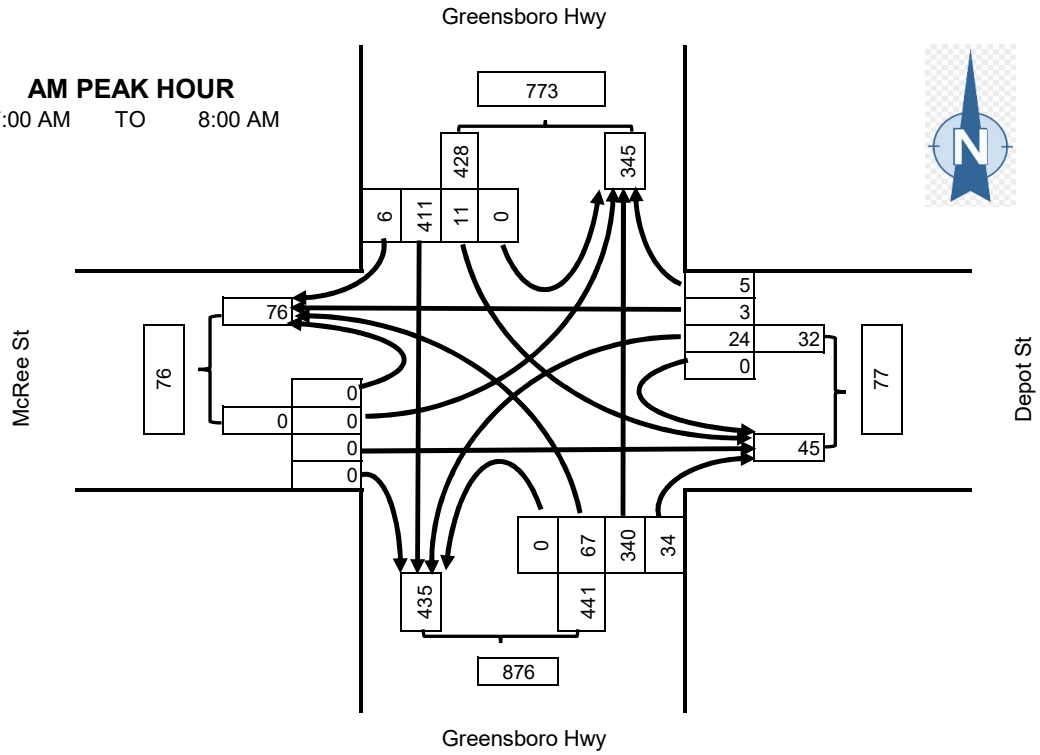


28

EXISTING + BACKGROUND + PROJECT TRAFFIC

AM PEAK HOUR

7:00 AM TO 8:00 AM



PM PEAK HOUR

4:00 PM TO 5:00 PM

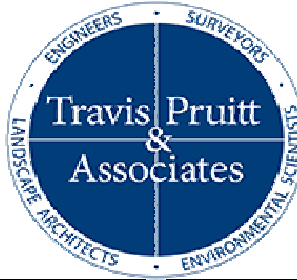
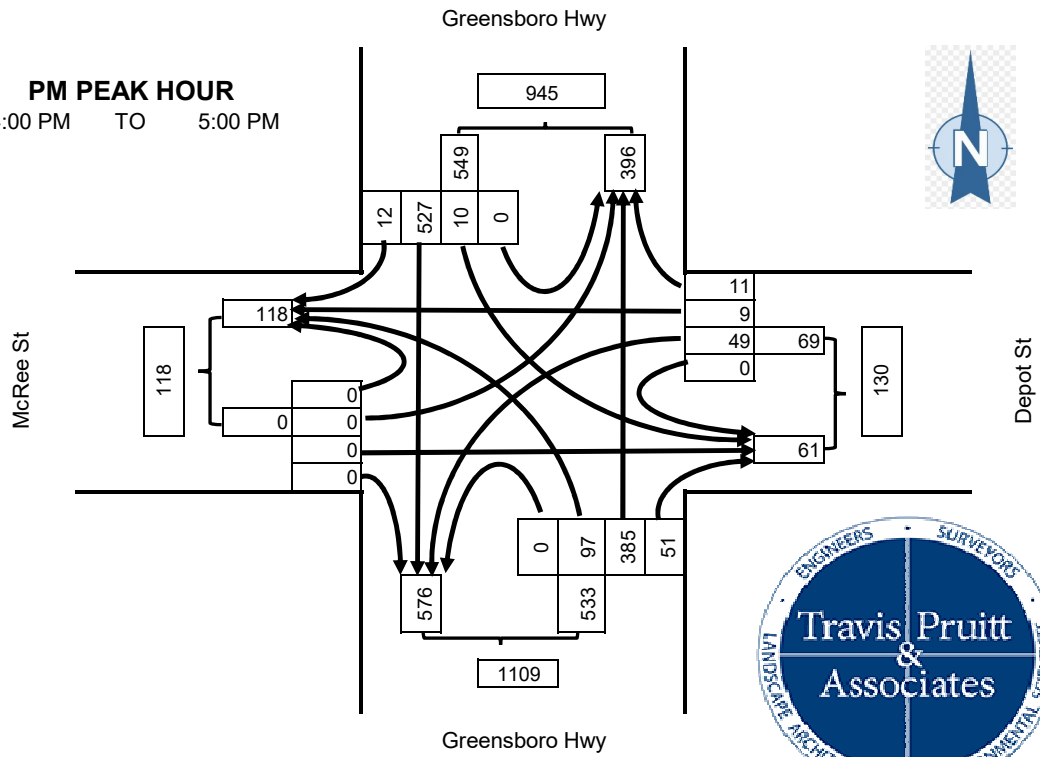


Figure 29

EXISTING + BACKGROUND + PROJECT TRAFFIC
AM & PM PEAK HOUR TURNING MOVEMENTS

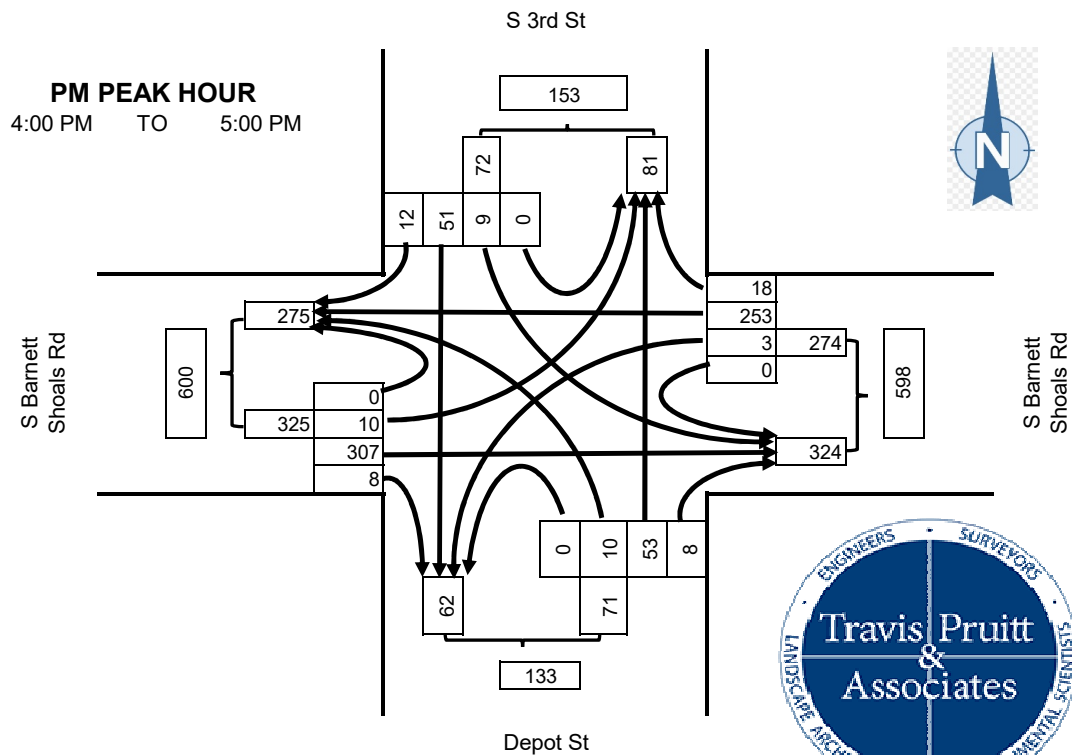
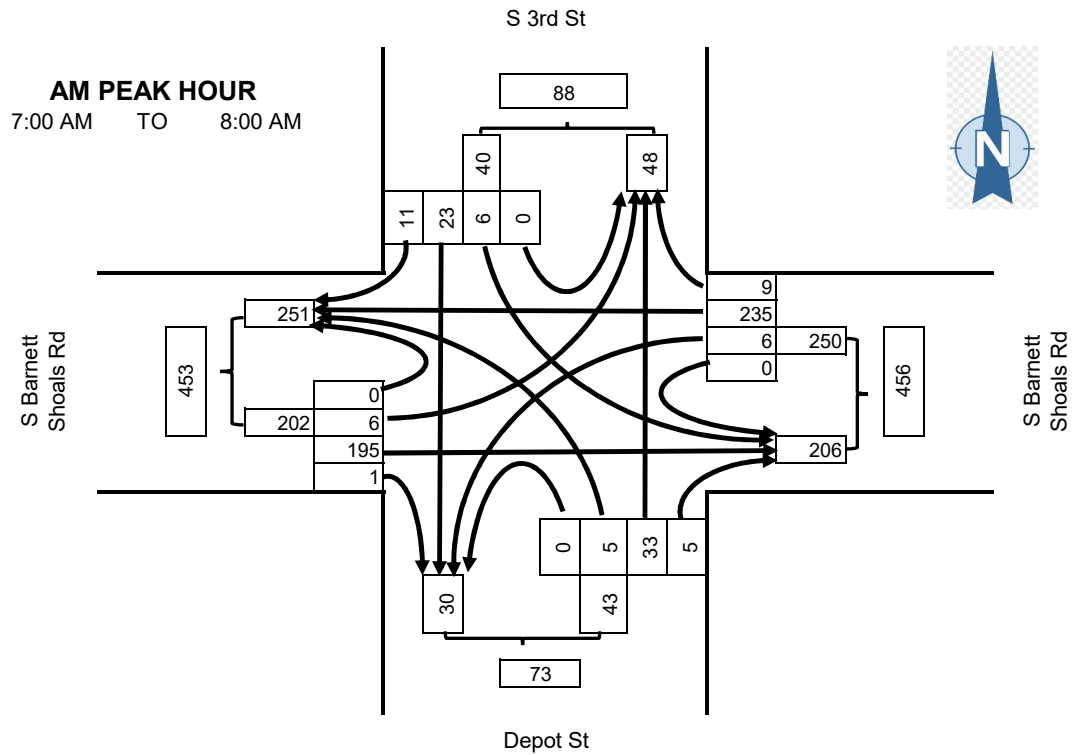


Figure 30

**EXISTING + BACKGROUND + PROJECT TRAFFIC
AM & PM PEAK HOUR TURNING MOVEMENTS**

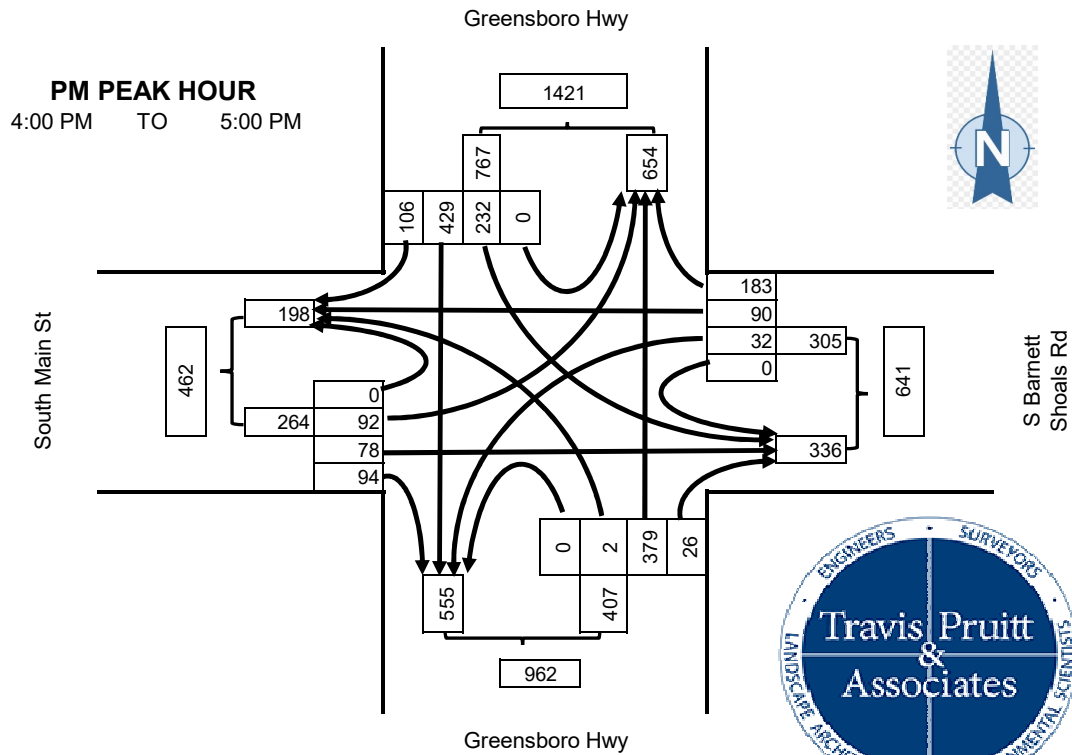
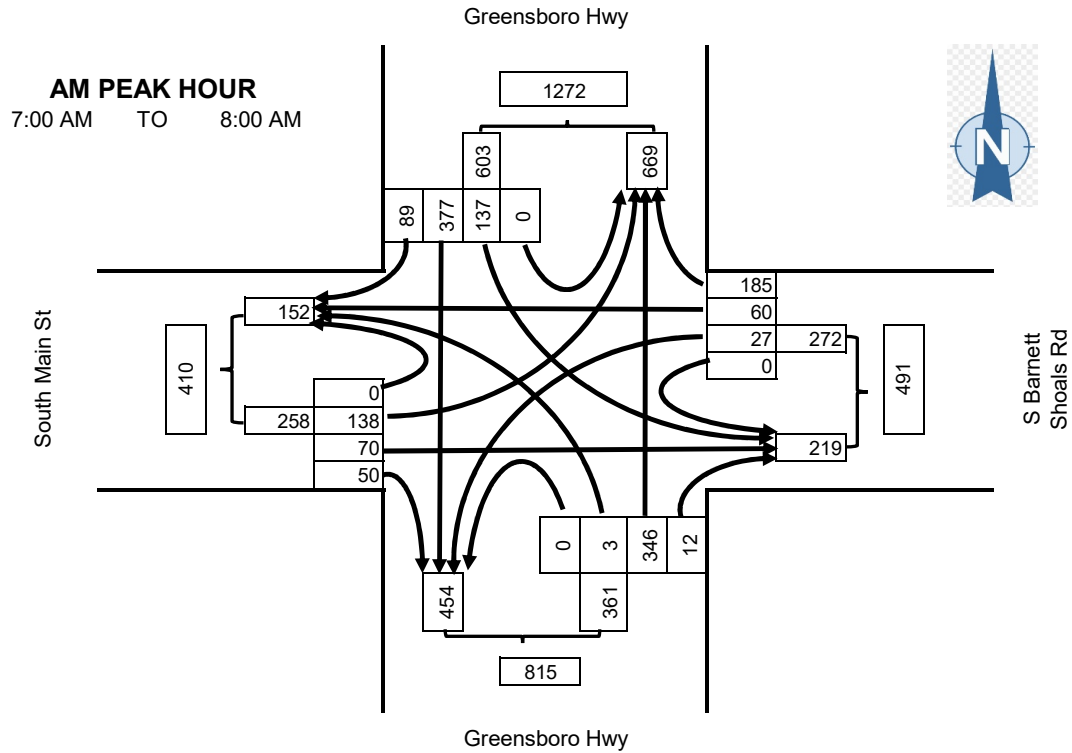
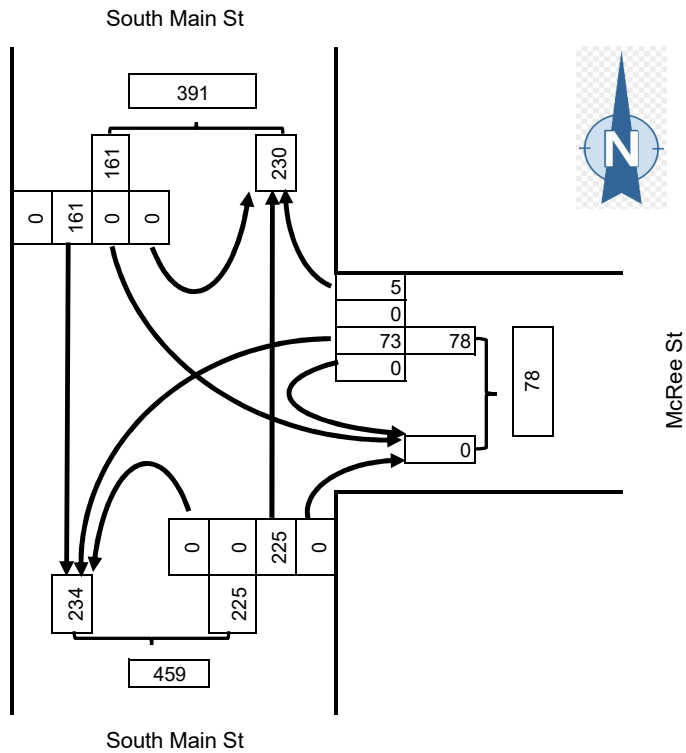


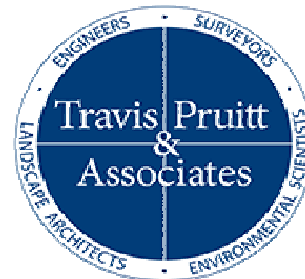
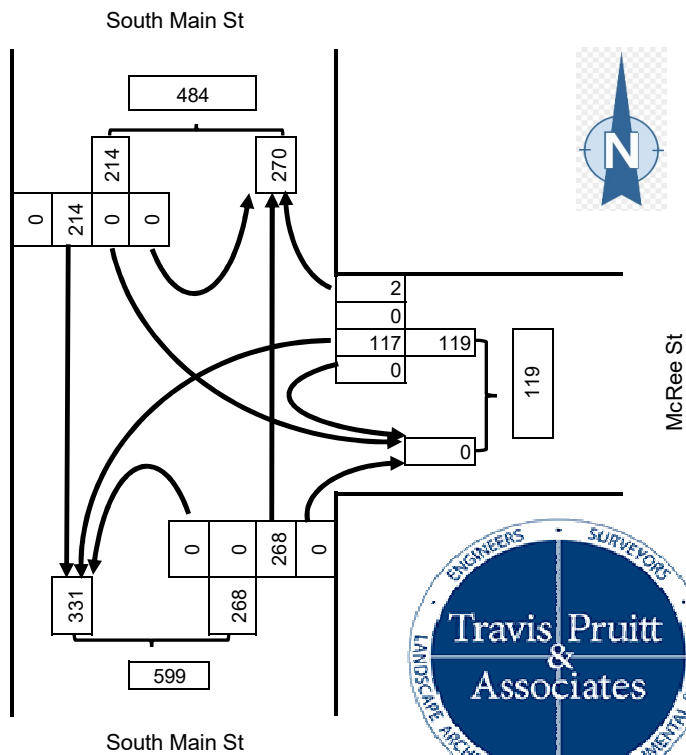
Figure 31

**EXISTING + BACKGROUND + PROJECT TRAFFIC
AM & PM PEAK HOUR TURNING MOVEMENTS**

AM PEAK HOUR
7:00 AM TO 8:00 AM



PM PEAK HOUR
4:00 PM TO 5:00 PM



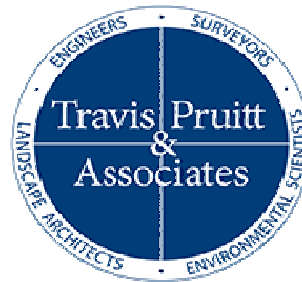
32

EXISTING + BACKGROUND + PROJECT TRAFFIC

AM PEAK HOUR



PM PEAK HOUR





VII. QUEUE LENGTHS

Queue lengths for each leg of the study intersections were calculated based on the Existing Plus Background Plus Project traffic. These queue lengths are shown in Table 7 - Table 15 and calculations are included in Appendix. All queue lengths are in feet and represent the 95% queue lengths.

Table 7. #1 Greensboro Highway / Proposed Driveway #1

Existing + Background + Project Conditions											
	EB			WB			NB			SB	
		LR						LT		T	R
AM		25						0		0	0
PM		62.5						2.5		0	0

Analysis

Queue lengths are less than the available storage.

Table 8. #2 Greensboro Highway / Morrison Street

Existing + Background + Project Conditions											
	EB			WB			NB			SB	
		LR						LT		TR	
AM		7.5						0		2.5	
PM		12.5						0		2.5	

Analysis

Queue lengths are less than the available storage.

Table 9. #3 Greensboro Highway / Industrial Boulevard

Existing + Background + Project Conditions											
	EB			WB			NB			SB	
					LR			T	R		LT
AM					12.5			0	0		5
PM					27.5			0	0		5

Analysis

Queue lengths are less than the available storage.



Table 10. #4 Morrison Street / Proposed Driveway #2

Existing + Background + Project Conditions											
	EB			WB			NB			SB	
		LR						LT			TR
AM		2.5						0			0
PM		2.5						0			0

Analysis

Queue lengths are less than the available storage.

Table 11. #5 Greensboro Highway / McRee Street / Depot Street

Existing + Background + Project Conditions											
	EB			WB			NB			SB	
					LTR			LTR			LTR
AM					10			5			0
PM					45			10			0

Analysis

Queue lengths are less than the available storage.

Table 12. #6 South Barnett Shoals Road / South 3rd Street / Depot Street

Existing + Background + Project Conditions											
	EB			WB			NB			SB	
		LTR			LTR			LTR			LTR
AM		0			0			7.5			7.5
PM		0			0			17.5			17.5

Analysis

Queue lengths are less than the available storage.

Table 13. #7 South Main Street / South Barnett Shoals Road / Greensboro Highway

Existing + Background + Project Conditions											
	NWB			WB			NB			SB	
		LTR		LT		R		LTR		L	T
AM		199		80		0		190		80	299
PM		291		106		0		201		140	425

Analysis

Queue lengths are less than the available storage.



Table 14. #8 South Main Street / McRee Street

Existing + Background + Project Conditions											
	EB			WB			NB			SB	
					LTR			T			T
AM					12.5			0			0
PM					25			0			0

Analysis

Queue lengths are less than the available storage.

Table 15. #9 South Main Street / Jackson Street

Existing + Background + Project Conditions											
	EB			WB			NB			SB	
								LT			TR
AM								0			0
PM								0			0

Analysis

Queue lengths are less than the available storage.



VIII. EXISTING PLUS BACKGROUND (5 YEARS AFTER BUILDOUT) PLUS PROJECT CONDITIONS

In the Existing Plus Background (5 years after buildout) Plus Project conditions, the existing traffic was increased at a rate of 1% per year for the 3-year project buildout period then grown for an additional 5 years after the project has been built out before the project traffic is added and re-analyzed to determine the levels of service. Note that the peak hour factor was set to 0.92 for all approaches in this condition. Figure 31– Figure 41 show the projected turning movements at each study intersection. Table 16 summarizes the projected LOS for each intersection based on these conditions. Calculation reports are included in Appendix.

Table 16. Levels of Service – Existing+B5+Project

INTERSECTION	CONTROL	APPROACH	LEVEL OF SERVICE (Approach Delay)			
			AM		PM	
			LOS	DELAY	LOS	DELAY
#1 Greensboro Highway / Proposed Driveway #1	Unsignalized	EB	C	19.7	D	32.3
		WB	N/A	N/A	N/A	N/A
		NB	A	0.2	A	0.4
		SB	A	0.0	A	0.0
#2 Greensboro Highway / Morrison Street	Unsignalized	EB	B	14.5	C	17.2
		WB	N/A	N/A	N/A	N/A
		NB	A	0.4	A	0.5
		SB	A	0.0	A	0.0
#3 Greensboro Highway / Industrial Boulevard	Unsignalized	EB	N/A	N/A	N/A	N/A
		WB	B	13.3	C	18.2
		NB	A	0.0	A	0.0
		SB	A	1.4	A	1.0
#4 Morrison Street / Proposed Driveway #2	Unsignalized	EB	A	8.8	A	8.9
		WB	N/A	N/A	N/A	N/A
		NB	A	0.6	A	1.4
		SB	A	0.0	A	0.0
#5 Greensboro Highway / McRee Street / Depot Street	Unsignalized	EB	N/A	N/A	N/A	N/A
		WB	C	21.6	E	43.1
		NB	A	1.3	A	1.6
		SB	A	0.2	A	0.2
#6 South Barnett Shoals Road / South 3rd Street / Depot Street	Unsignalized	EB	A	0.2	A	0.3
		WB	A	0.2	A	0.1
		NB	B	13.5	C	17.4
		SB	B	12.9	C	16.9
#7 South Main Street / South Barnett Shoals	Signalized	NWB	B	19.1	C	25.4
		WB	A	9.8	B	13.1
		NB	C	32.1	C	32.6



Road / Greensboro Highway		SB	B	15.6	B	19.0
		Intersection LOS	B	18.3	C	21.5
#8 South Main Street / McRee Street	Unsignalized	EB	N/A	N/A	N/A	N/A
		WB	B	12.2	B	14.7
		NB	A	0.0	A	0.0
		SB	A	0.0	A	0.0
#9 South Main Street / Jackson Street	Unsignalized	EB	N/A	N/A	N/A	N/A
		WB	N/A	N/A	N/A	N/A
		NB	A	0.1	A	0.1
		SB	A	0.0	A	0.0

Analysis:

In the Existing Plus Background (5 years after buildout) Plus Project traffic conditions, all intersections continue to function at acceptable levels of service in both the AM and PM peak hours with the addition of the project traffic. The WB approach at intersection #5 operates at LOS E during the PM peak hour. As the WB approach of Depot Street at Greensboro Highway is the minor approach to a two-way, stop-controlled intersection, delay is expected and a LOS E or F is considered acceptable.

Figure 33

EXISTING + BACKGROUND @ 8 YEARS + PROJECT
AM & PM PEAK HOUR TURNING MOVEMENTS

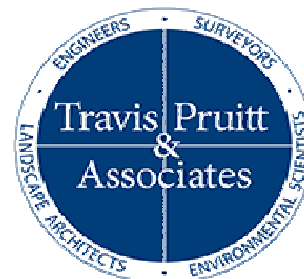
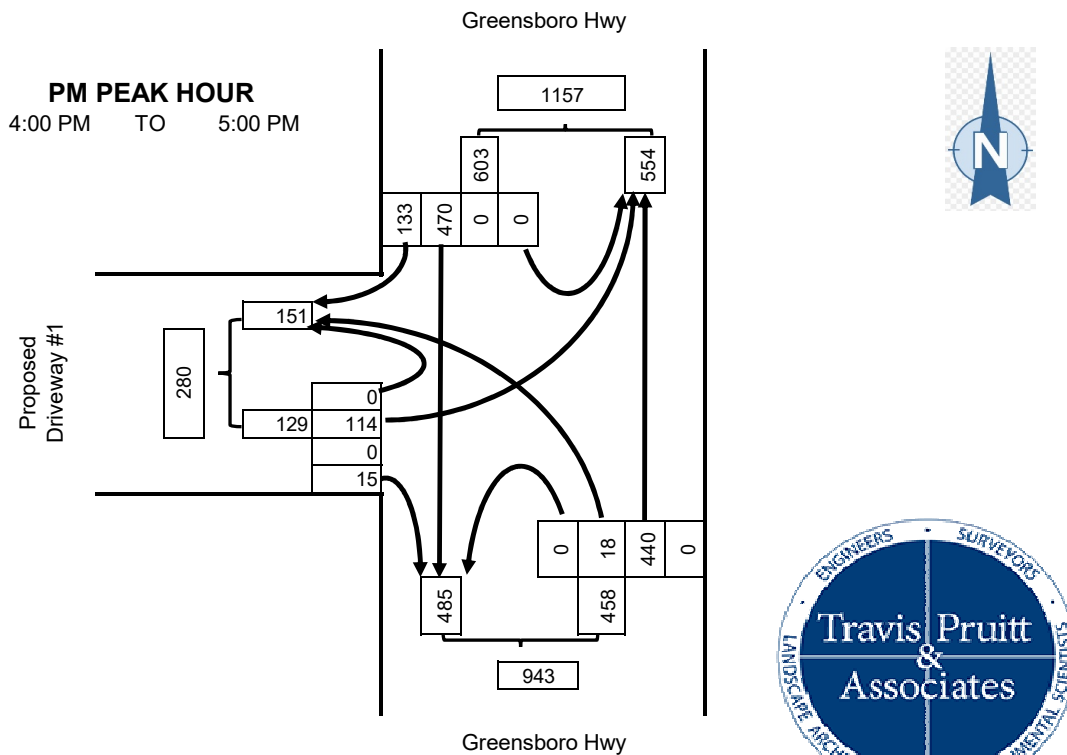
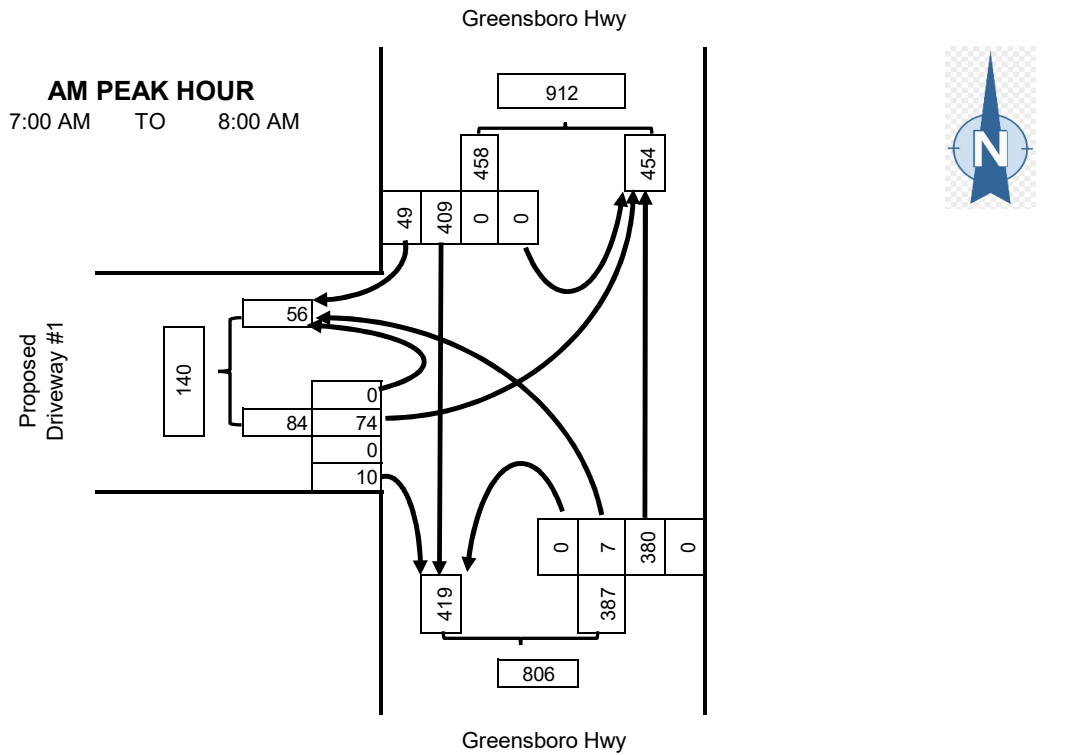


Figure 34

EXISTING + BACKGROUND @ 8 YEARS + PROJECT
AM & PM PEAK HOUR TURNING MOVEMENTS

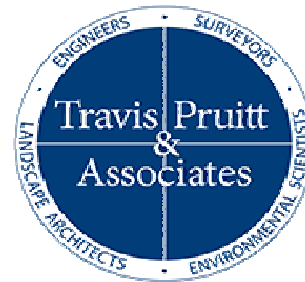
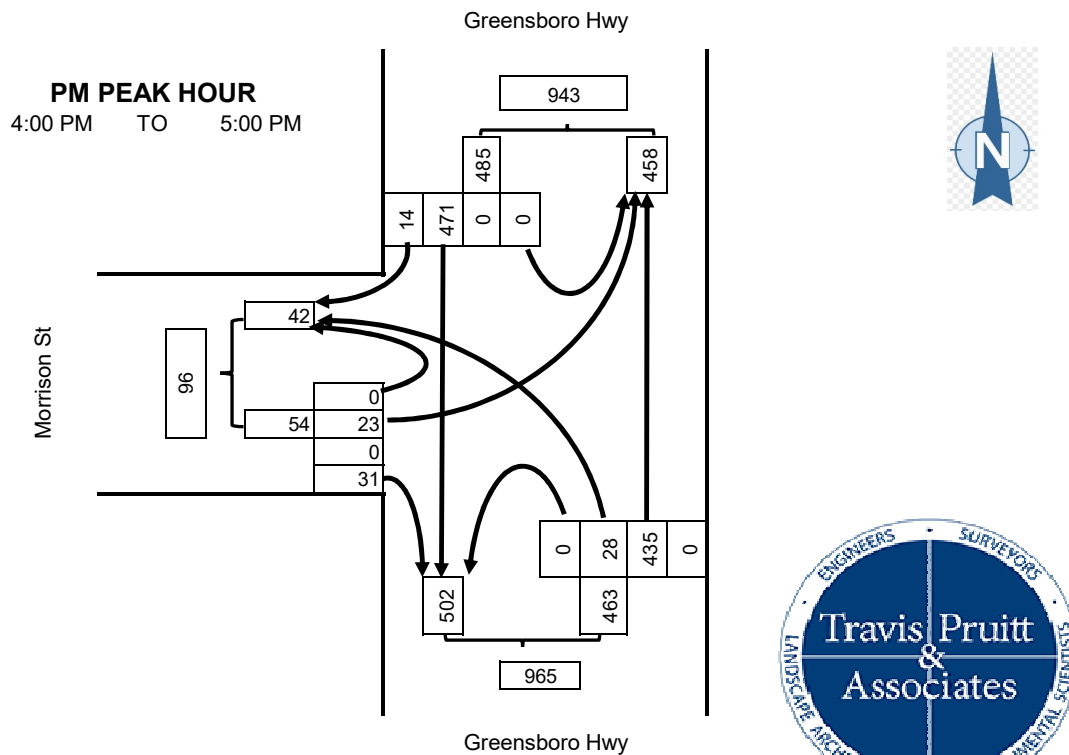
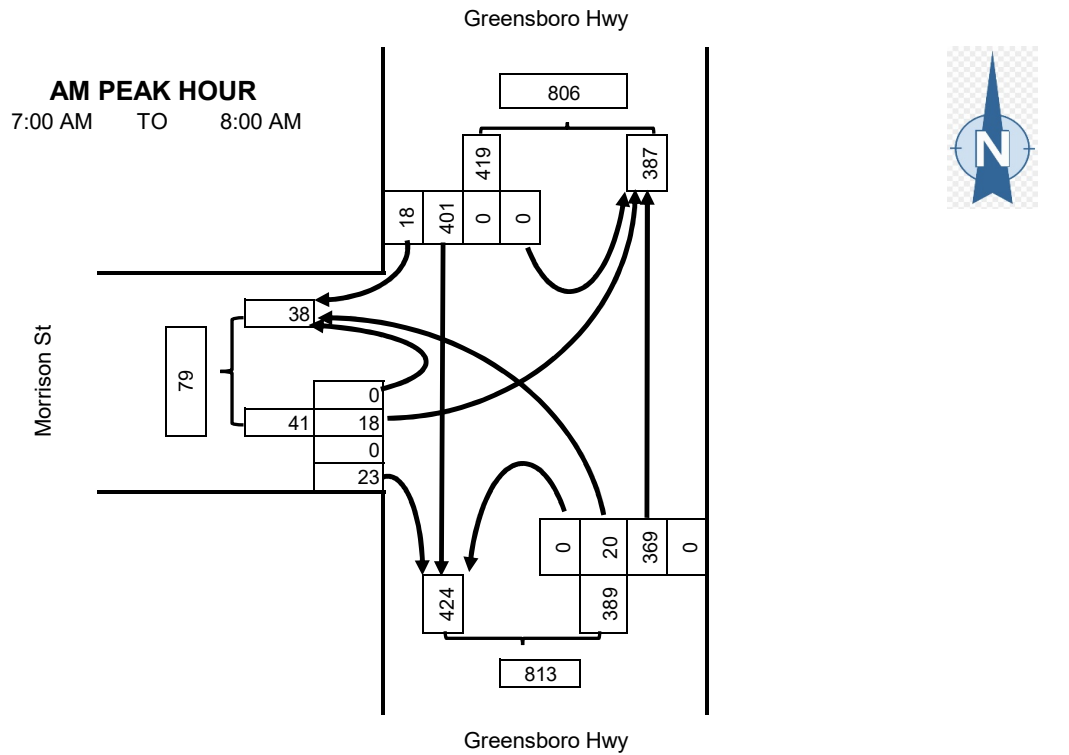
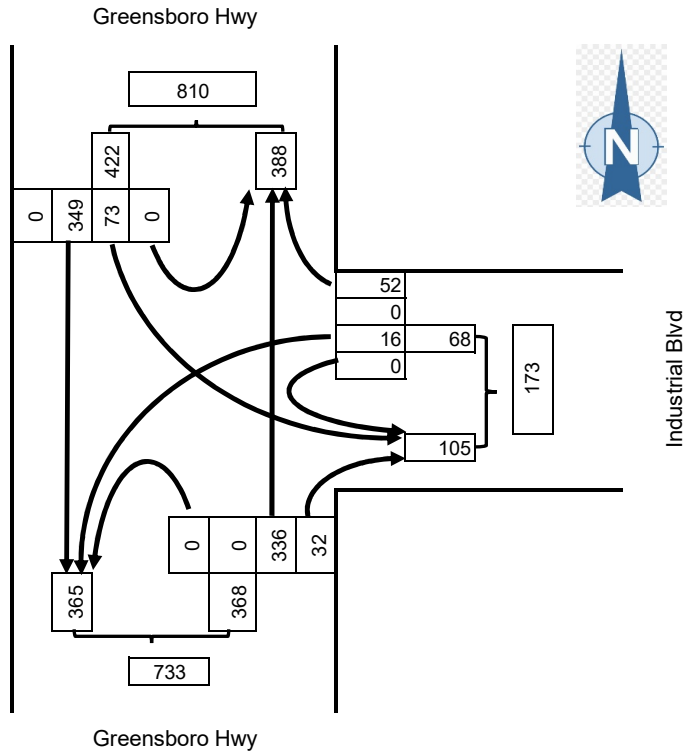


Figure 35

EXISTING + BACKGROUND @ 8 YEARS + PROJECT
AM & PM PEAK HOUR TURNING MOVEMENTS

AM PEAK HOUR
7:00 AM TO 8:00 AM



PM PEAK HOUR
4:00 PM TO 5:00 PM

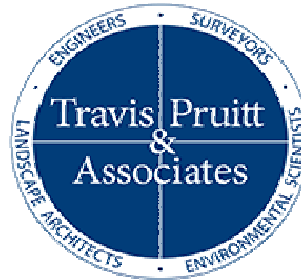
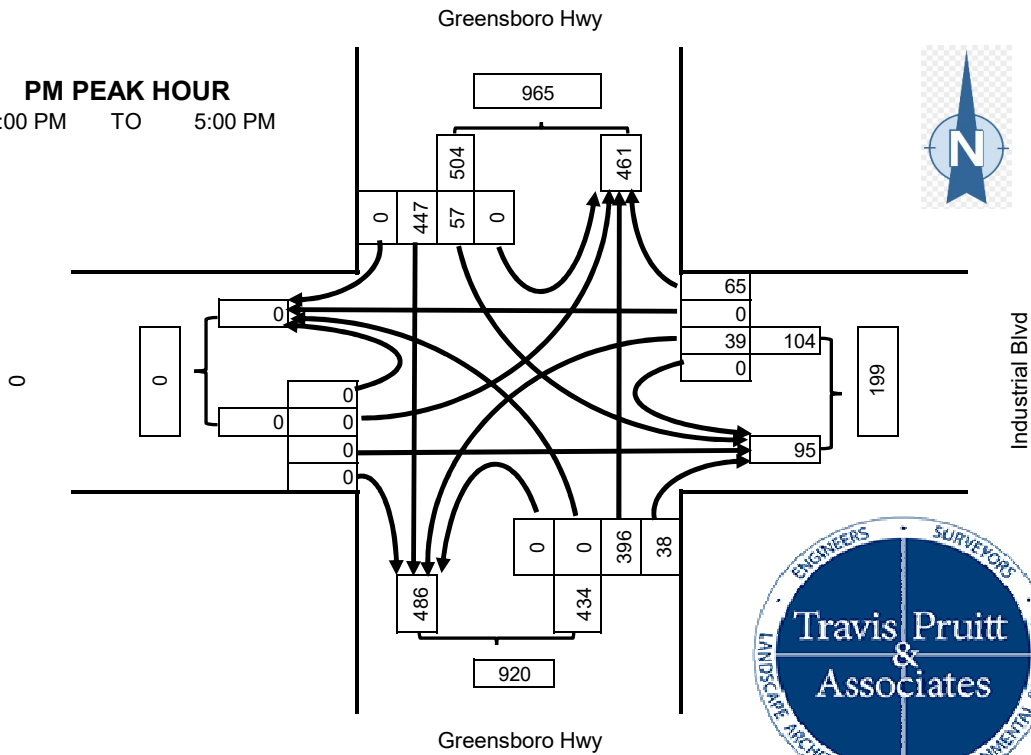


Figure 36

EXISTING + BACKGROUND @ 8 YEARS + PROJECT
AM & PM PEAK HOUR TURNING MOVEMENTS

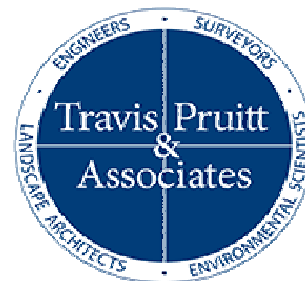
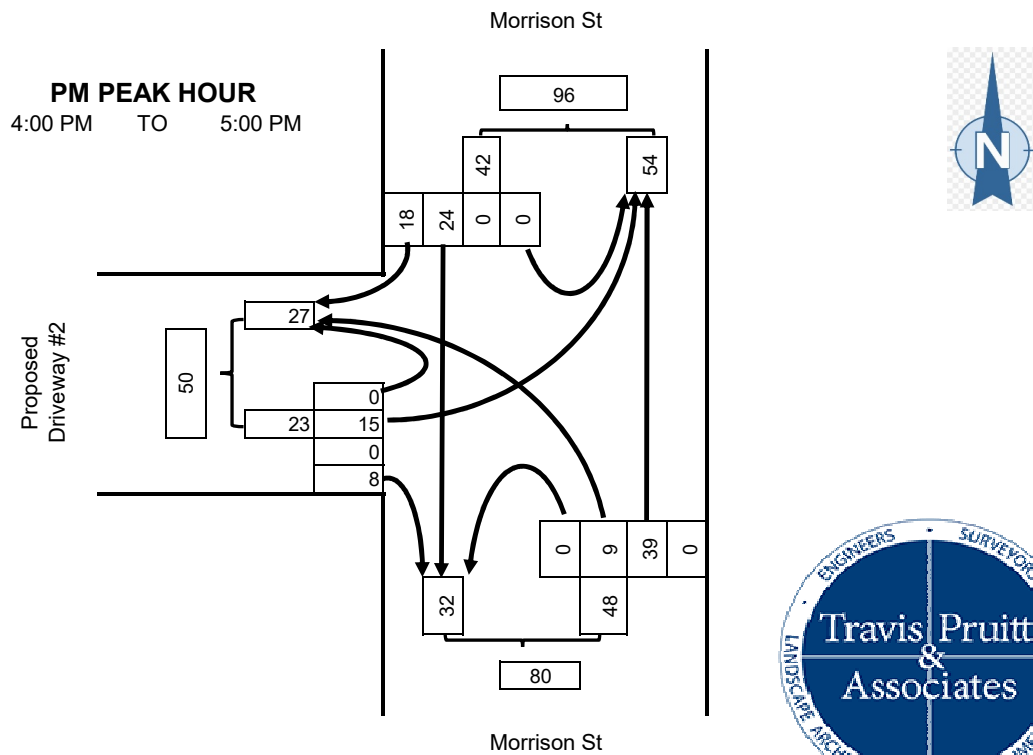
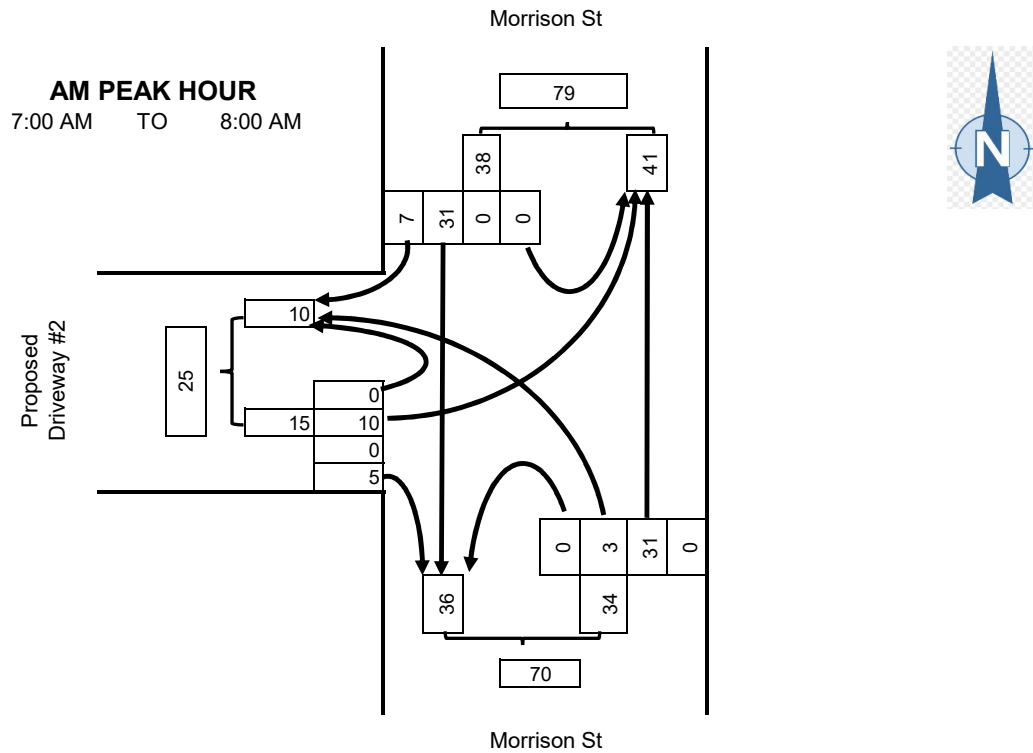


Figure 37

EXISTING + BACKGROUND @ 8 YEARS + PROJECT
AM & PM PEAK HOUR TURNING MOVEMENTS

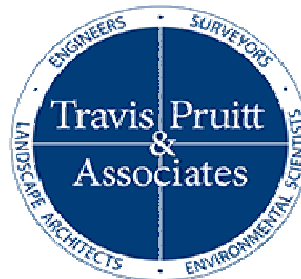
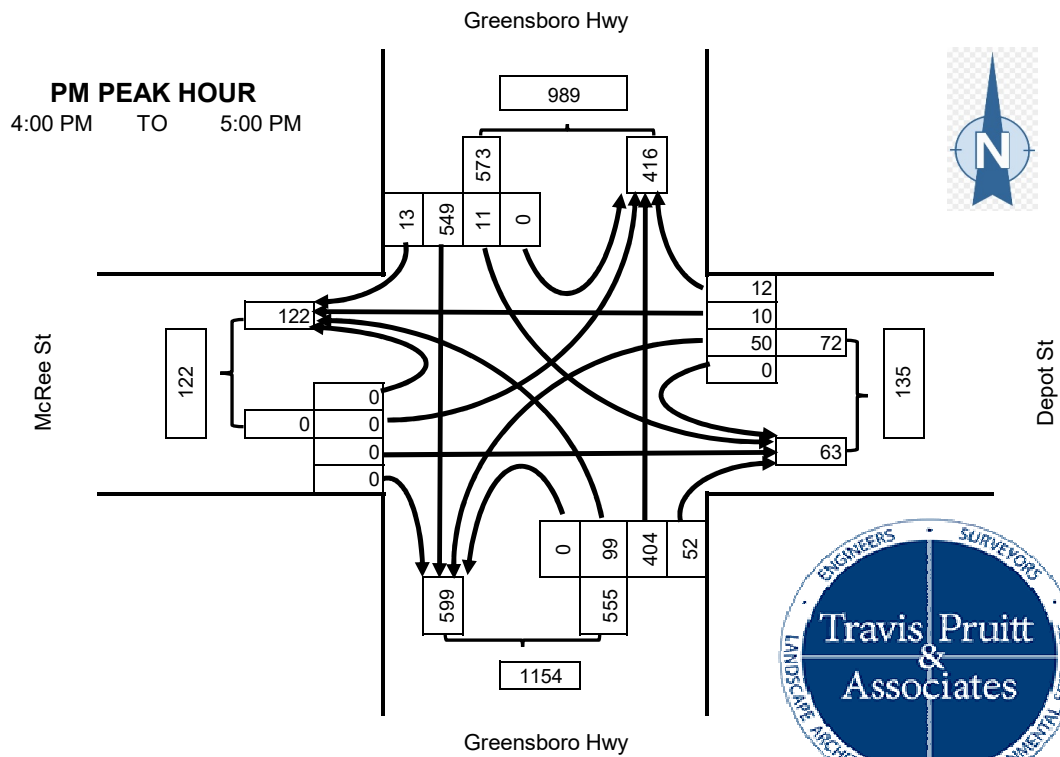
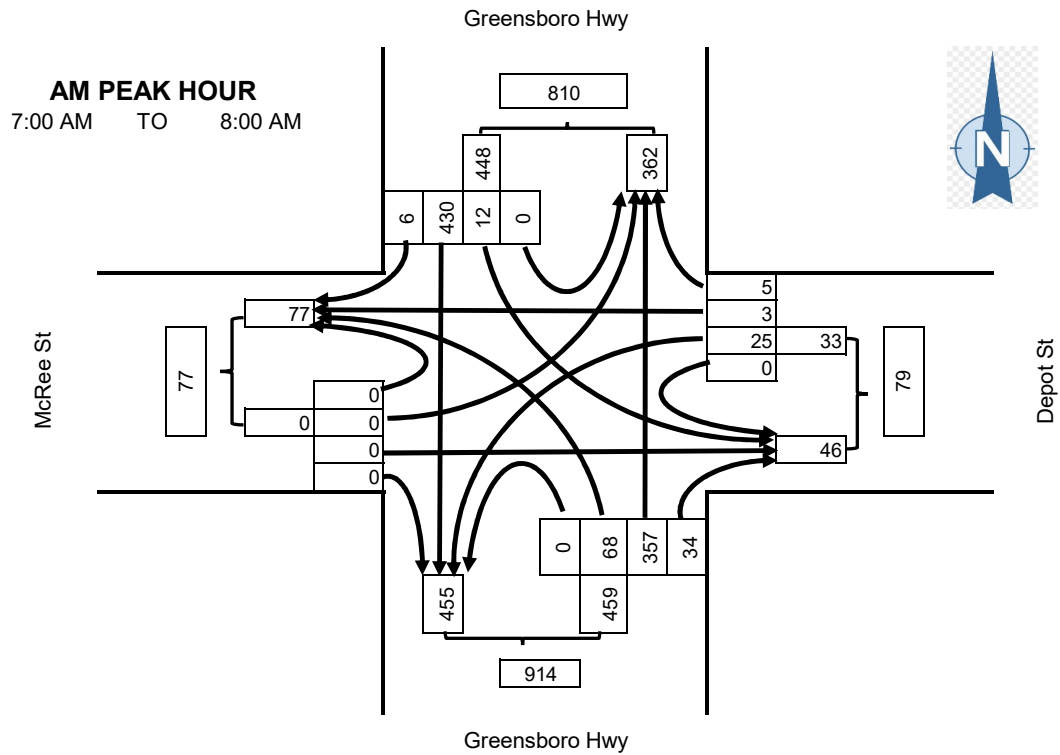


Figure 38

EXISTING + BACKGROUND @ 8 YEARS + PROJECT
AM & PM PEAK HOUR TURNING MOVEMENTS

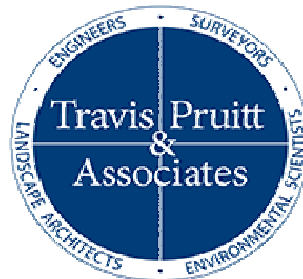
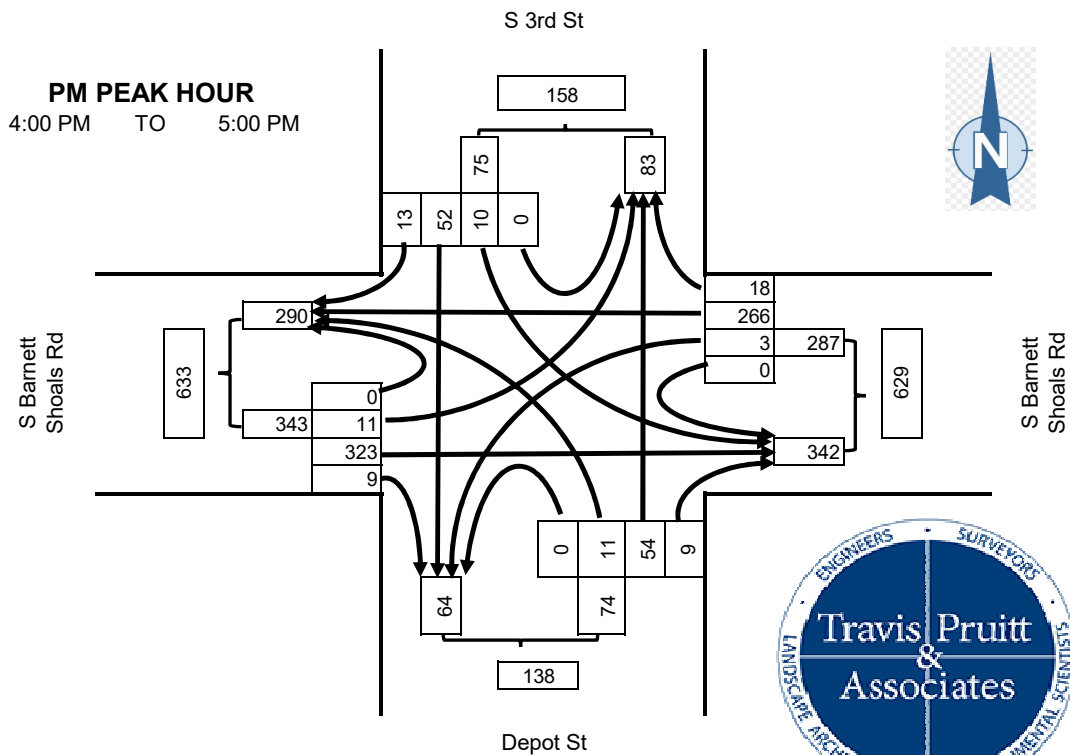
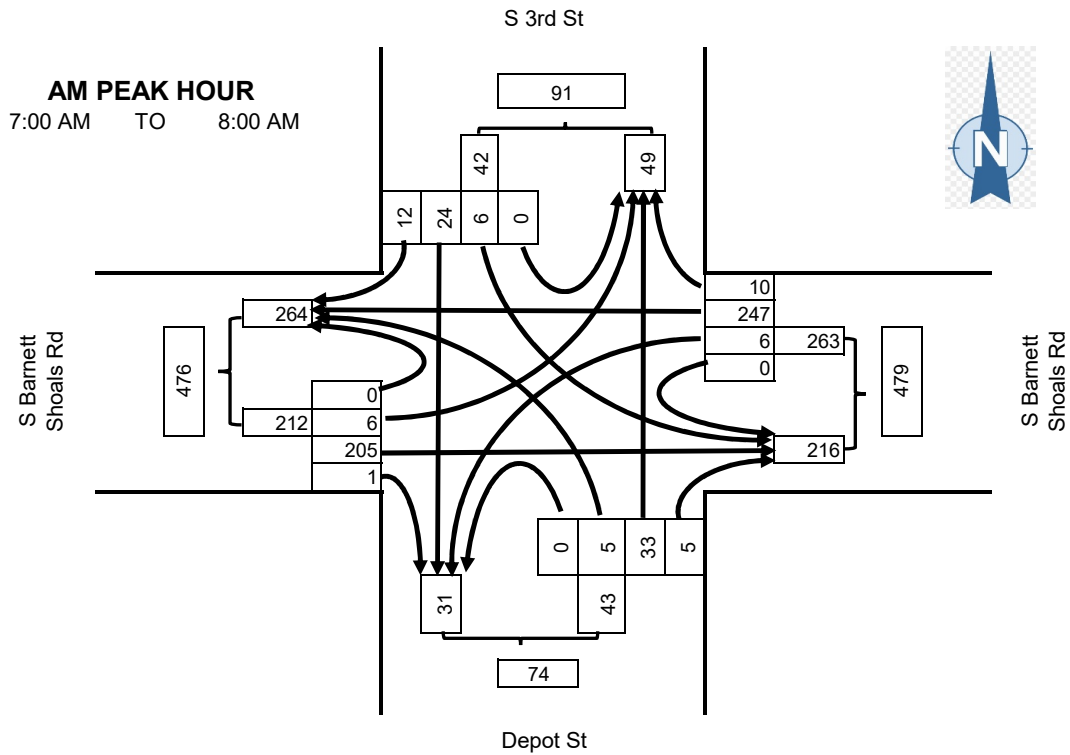
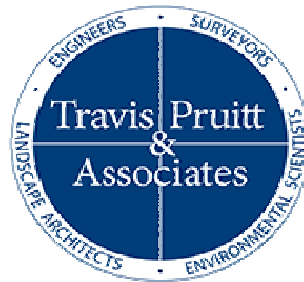
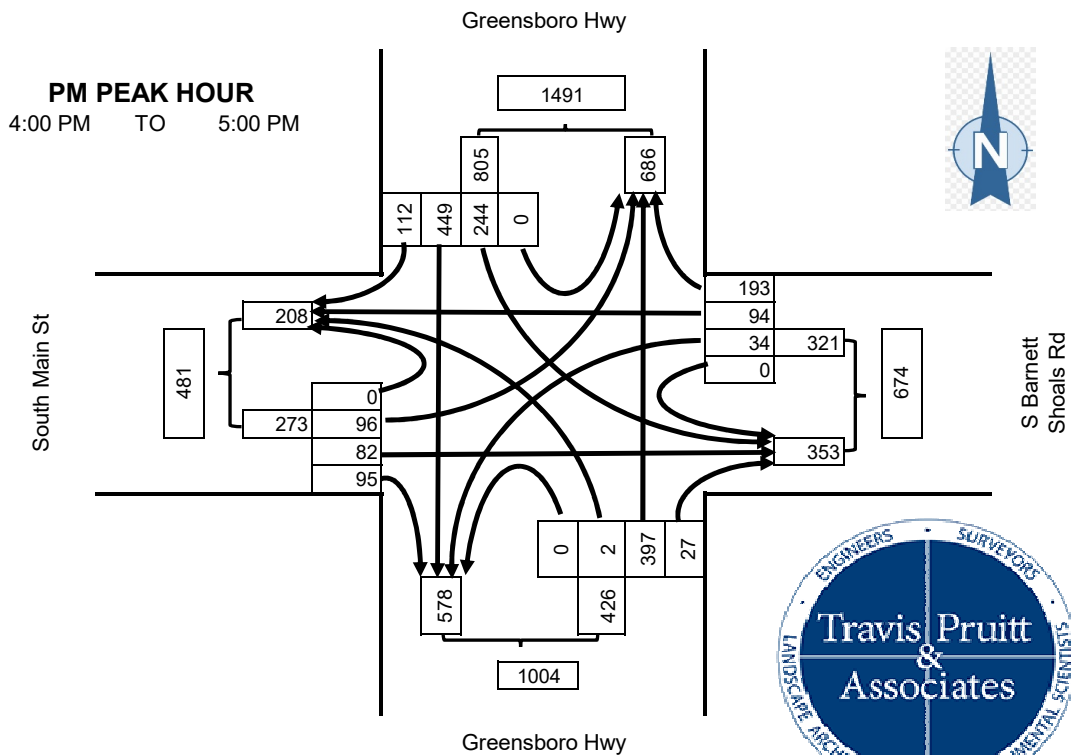
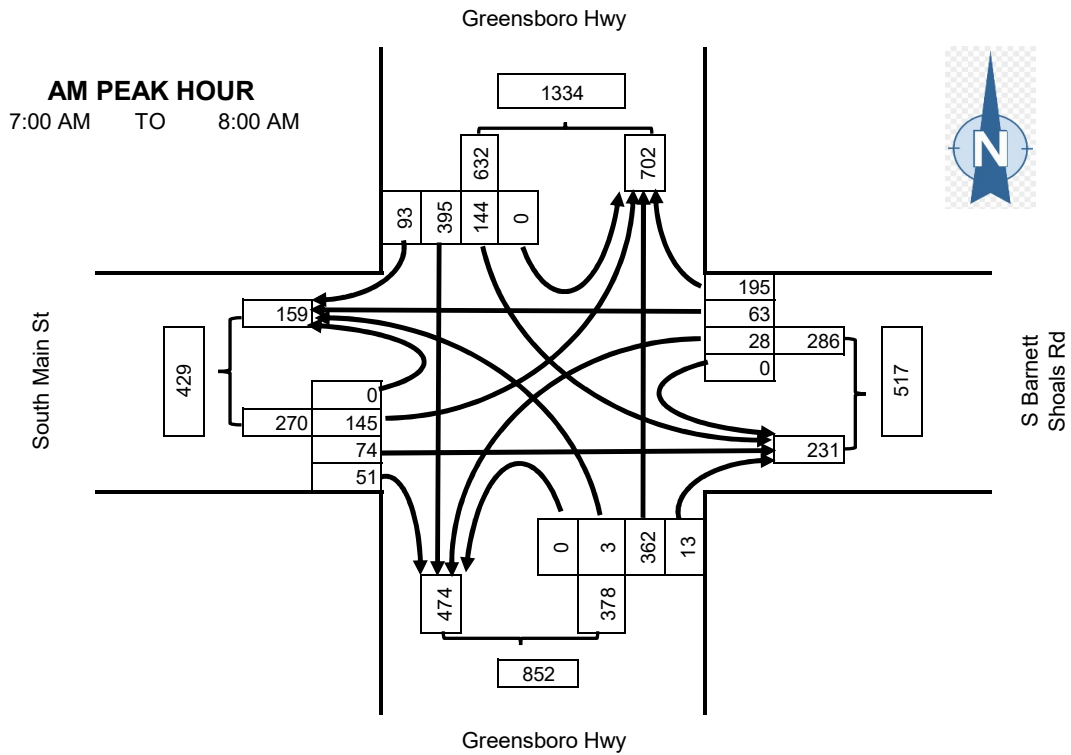


Figure 39

**EXISTING + BACKGROUND @ 8 YEARS + PROJECT
AM & PM PEAK HOUR TURNING MOVEMENTS**



40

EXISTING + BACKGROUND @ 8 YEARS + PROJECT AM & PM PEAK HOUR TURNING MOVEMENTS

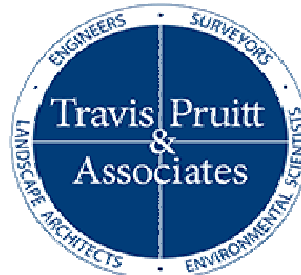
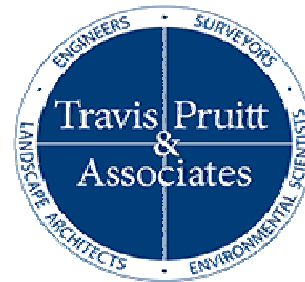
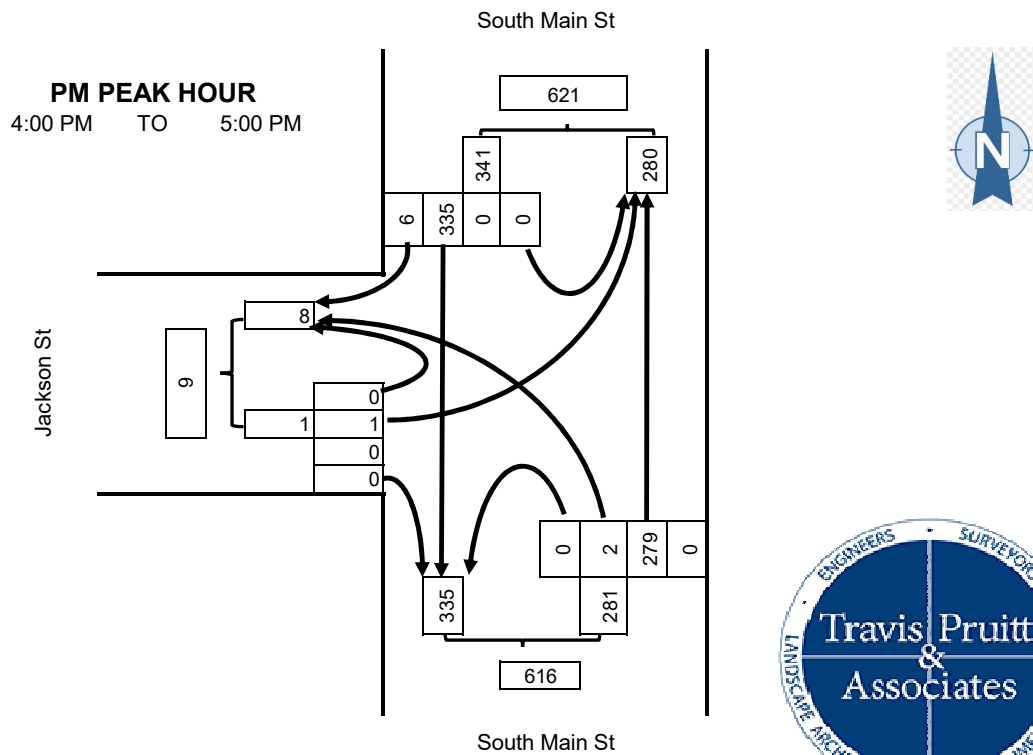
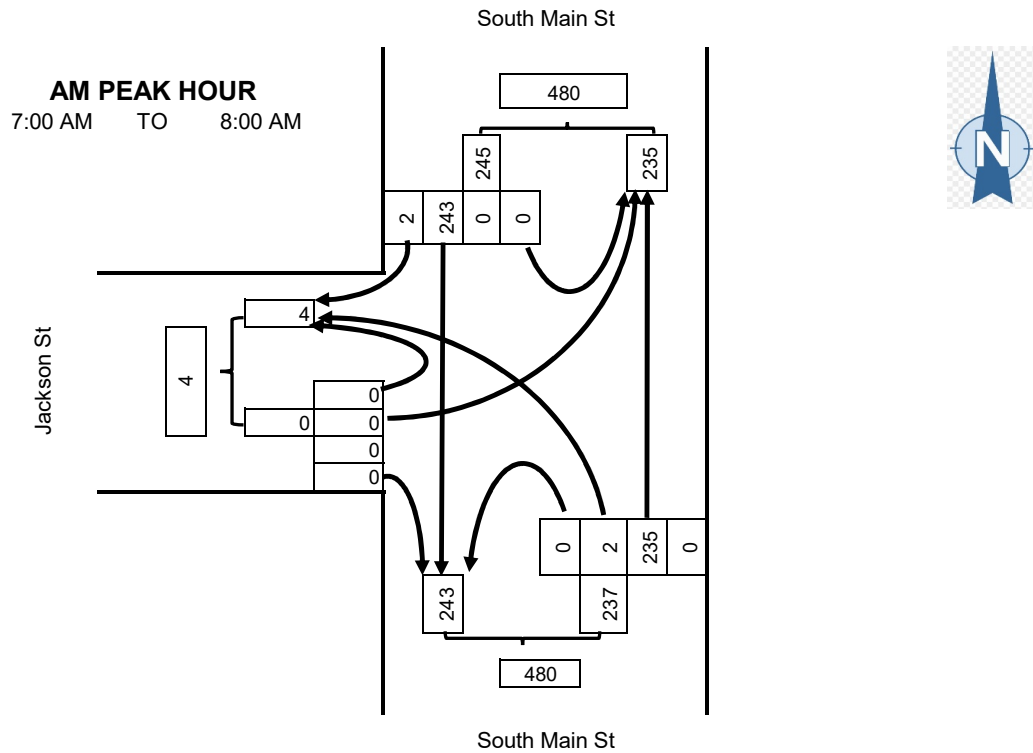


Figure 41

EXISTING + BACKGROUND @ 8 YEARS + PROJECT
AM & PM PEAK HOUR TURNING MOVEMENTS





IX. CONCLUSIONS AND RECOMMENDATIONS

Conclusions

The proposed development is mixed-use located at 1180 Greensboro Highway in Oconee County, Georgia. The property is 16.99 acres and located on Tax Parcel W 08 011. The development will include 9-apartment structures consisting of 200 units, 30 townhomes, and approximately 40,000 SF of commercial/retail space. In addition, the project will include an internal roadway network designed to public road standards with internal sidewalks, storm water management facilities, and associated parking.

The proposed project driveways are located along Greensboro Highway, Morrison Street, and South Main Street. The driveways will be designated as Proposed Driveway #1, Proposed Driveway #2, and Proposed Driveway #3, respectively. Each of the project access points will be a 2-lane road designed to public roadway standards and will be stop controlled at its intersection with the existing roadway.

The project will be analyzed under two different scenarios. Scenario 1 will analyze the project impacts with implementation of Proposed Driveway #1, located along Greensboro Highway, and Proposed Driveway #2, located along Morrison Street. Scenario 2 will analyze the project impacts with implementation of Proposed Driveway #1, located along Greensboro Highway, Proposed Driveway #2, located along Morrison Street and Proposed Driveway #3, located along South Main Street.

The properties to the southwest are zoned Detached Residential. The southeastern border of the parcel is bounded by Morrison Street. The northeastern border of the plot is bounded by Greensboro Highway and northwestern border is the existing Athens Line, LLC railroad.

The development is expected to be completed and occupied in three years.

The purpose of this study is to determine the impact of this development on Greensboro Highway, South Main Street, South Barnett Shoals Road and the existing roadway network. Figure 1 is a vicinity map for the subject property and Figure 2 is a site plan that shows the location of the proposed access points for the project. The scope of the study includes analyses of the following intersections for Scenario 1:

- #1 Greensboro Highway / Proposed Driveway #1
- #2 Greensboro Highway / Morrison Street
- #3 Greensboro Highway / Industrial Boulevard
- #4 Morrison Street / Proposed Driveway #2
- #5 Greensboro Highway / McRee Street / Depot Street
- #6 South Barnett Shoals Road / South 3rd Street / Depot Street
- #7 South Main Street / South Barnett Shoals Road / Greensboro Highway
- #8 South Main Street / McRee Street
- #9 South Main Street / Jackson Street



The existing conditions were studied to determine the level of service at each of the study intersections listed above. Under the existing conditions, each of the intersections operates at acceptable levels of service in the AM and PM peak hours.

A traffic analysis was performed to evaluate how each of the study intersections will operate under the proposed conditions. The existing traffic was grown at 1% per year for 3 years to generate the expected background traffic growth. The traffic generated by the proposed development was then added to the background traffic and the projected buildout conditions were analyzed and a capacity analyses was performed.

The scope of this study includes the analysis of 9 intersections within the vicinity of the subject property in each of the following traffic conditions:

- Existing
- Existing + Background
- Existing + Background + Project
- Existing + Background (5 years after project buildout) + Project

With or without the development of the Oconee Pipe Plant Mixed-Use Development as projected in this study, traffic will continue to grow, congestion and delay will increase, and roadway improvements will be required. The following are the conclusions based on the analysis of the data:

Intersection #1: Greensboro Highway / Proposed Driveway #1

1. The intersection of Greensboro Highway / Proposed Driveway #1 operates at acceptable levels of service with and without the addition of background and project traffic.

Intersection #2: Greensboro Highway / Morrison Street

1. The intersection of Greensboro Highway / Morrison Street operates at acceptable levels of service with and without the addition of background and project traffic.

Intersection #3: Greensboro Highway / Industrial Boulevard

1. The intersection of Greensboro Highway / Industrial Boulevard operates at acceptable levels of service with and without the addition of background and project traffic.

Intersection #4: Morrison Street / Proposed Driveway #2

1. The intersection of Morrison Street / Proposed Driveway #2 operates at acceptable levels of service with and without the addition of background and project traffic.

Intersection #5: Greensboro Highway / McRee Street / Depot Street



1. The intersection of Greensboro Highway / McRee Street / Depot Street operates at acceptable levels of service with and without the addition of background traffic.
2. With the addition of project traffic, the queue lengths and delay for the westbound approach increase in the PM peak hour period.

Intersection #6: South Barnett Shoals Road / South 3rd Street / Depot Street

1. The intersection of South Barnett Shoals Road / South 3rd Street / Depot Street operates at acceptable levels of service with and without the addition of background and project traffic.

Intersection #7: South Main Street / South Barnett Shoals Road / Greensboro Highway

1. The intersection of South Main Street / South Barnett Shoals Road / Greensboro Highway operates at acceptable levels of service with and without the addition of background and project traffic.

Intersection #8: South Main Street / McRee Street

1. The intersection of South Main Street / McRee Street operates at acceptable levels of service with and without the addition of background and project traffic.

Intersection #9: South Main Street / Jackson Street

1. The intersection of South Main Street / Jackson Street operates at acceptable levels of service with and without the addition of background and project traffic.

Recommendations

As traffic develops along this roadway network, we recommend that the developer of the facility and roadway network address the following items as outlined below:

#1 Greensboro Highway / Proposed Driveway #1

1. Proposed Driveway #1 will be a two-lane, full-access stop-controlled driveway which will serve as the westbound approach to its intersection with Greensboro Highway (GA Highway 15), which is a GDOT maintained roadway within GDOT-maintained right-of-way. The roadway will have one ingress lane and one egress lane.
2. Proposed Driveway #1 will be located approximately 184 feet (centerline to centerline) north of the existing intersection of Greensboro Highway / Morrison Street.
3. Proposed Driveway #1 will be located approximately 415 feet (centerline to centerline) south of the existing intersection of Greensboro Highway / Depot Street.
4. Greensboro Highway will continue to be free-flowing and Proposed Driveway #1 will be stop-controlled at its intersection with Greensboro Highway.
5. With the posted 45-mph speed limit on Greensboro Highway, the southbound right turn lane is required to have a minimum of 175 feet of full width storage length with a taper of 100 feet, per the GDOT Regulations for Driveway & Encroachment Control Manual.



6. The width of the deceleration lane shall be no less than 12 feet with 30" curb and gutter per GDOT detail 9032B.
7. Proposed Driveway #1 shall have minimum 25-foot radii and 12-foot wide lanes.
8. Signing and marking shall be in accordance with the MUTCD, GDOT and City of Watkinsville County requirements.
9. The turn lane shall be paved in accordance with the GDOT specifications.
10. Associated drainage improvements as deemed necessary for the construction of the deceleration or turn lane shall be required.
11. All design and construction must meet GDOT standards and specifications, as appropriate.

#2 Greensboro Highway / Morrison Street

1. No improvements are required.

#3 Greensboro Highway / Industrial Boulevard

1. No improvements are required.

#4 Morrison Street / Proposed Driveway #2

1. Proposed Driveway #2 will be a two-lane, full-access stop-controlled driveway which will serve as the southbound approach to its intersection with Morrison Street, which is a City of Watkinsville-maintained roadway within City of Watkinsville-maintained right-of-way. The roadway will have one ingress lane and one egress lane.
2. Proposed Driveway #2 will be located approximately 354 feet (centerline to centerline) west of the existing intersection of Greensboro Highway / Morrison Street.
3. Morrison Street will continue to be free-flowing and Proposed Driveway #2 will be stop-controlled at its intersection with Morrison Street.
4. With the posted 25-mph speed limit on Morrison Street, the westbound right turn lane is required to have a minimum of 100 feet of full width storage length with a taper of 100 feet and a minimum 25-foot taper on the acceleration side, per the City of Watkinsville Code.
5. The width of the deceleration lane shall be no less than 24 feet from the centerline of Morrison Street to the start of the gutter. The curb and gutter shall be 24" width per GDOT detail 9032B.
6. Proposed Driveway #2 shall have minimum 25-foot radii and 12-foot wide lanes.
7. Signing and marking shall be in accordance with the MUTCD, GDOT and City of Watkinsville County requirements.
8. Utilities and drainage must be relocated from underneath the turn lane by the developer.
9. All design and construction must meet GDOT standards and specifications, as appropriate.

#5 Greensboro Highway / McRee Street / Depot Street

1. No improvements are required.

#6 South Barnett Shoals road / South 3rd Street / Depot Street

1. No improvements are required.



#7 South Main Street / South Barnett Shoals Road / Greensboro Road

1. GDOT should consider signal timing adjustments as project traffic volumes continue to increase in this developing central business district. With or without the development of the Oconee Pipe Plant Mixed-Use Development, traffic will continue to increase on the roadway network and congestion and delays at the intersection will also increase.

#8 South Main Street / McRee Street

2. No improvements are required.

#9 South Main Street / Jackson Street

1. No improvements are required.



SCENARIO 2

X. EXISTING TRAFFIC CONDITIONS

The study area for the traffic impact study has been defined to include the following intersections:

- #1 Greensboro Highway / Proposed Driveway #1
- #2 Greensboro Highway / Morrison Street
- #3 Greensboro Highway / Industrial Boulevard
- #4 Morrison Street / Proposed Driveway #2
- #5 Greensboro Highway / McRee Street / Depot Street
- #6 South Barnett Shoals Road / South 3rd Street / Depot Street
- #7 South Main Street / South Barnett Shoals Road / Greensboro Highway
- #8 South Main Street / McRee Street
- #9 South Main Street / Jackson Street / Proposed Driveway #3

In Scenario 2, Proposed Driveway #3 is added to the development. With the third point of access, the project traffic is reallocated and rerouted through the roadway network as shown in the traffic assignment and project traffic.

Table 17 below lists the relevant cross section data for the existing road in the study area.

Table 17. Existing Roadway Conditions

Roadway Name	Speed Limit	Cross Section	Maintained By	Lanes	Bike & Ped Facilities	Turn Lanes	Signals	Stop Control
Greensboro Highway	35 mph	Rural	GDOT	2	Sidewalk on eastern side of the road. It runs from the railroad to the signal at the intersection of Greensboro Highway, South Barnett Shoals Road, and South Main Street.	Right turn lanes at major commercial driveways.	Greensboro Highway/ South Barnett Shoals Road/ South Main Street	Minor approaches along Greensboro Highway
South Main Street	35 mph	Rural	GDOT	2	Sidewalk on left side starting at Jackson Street and continuing to	Right turn lane at Shell gas station	Greensboro Highway/ South Barnett Shoals Road/ South	McRee Street

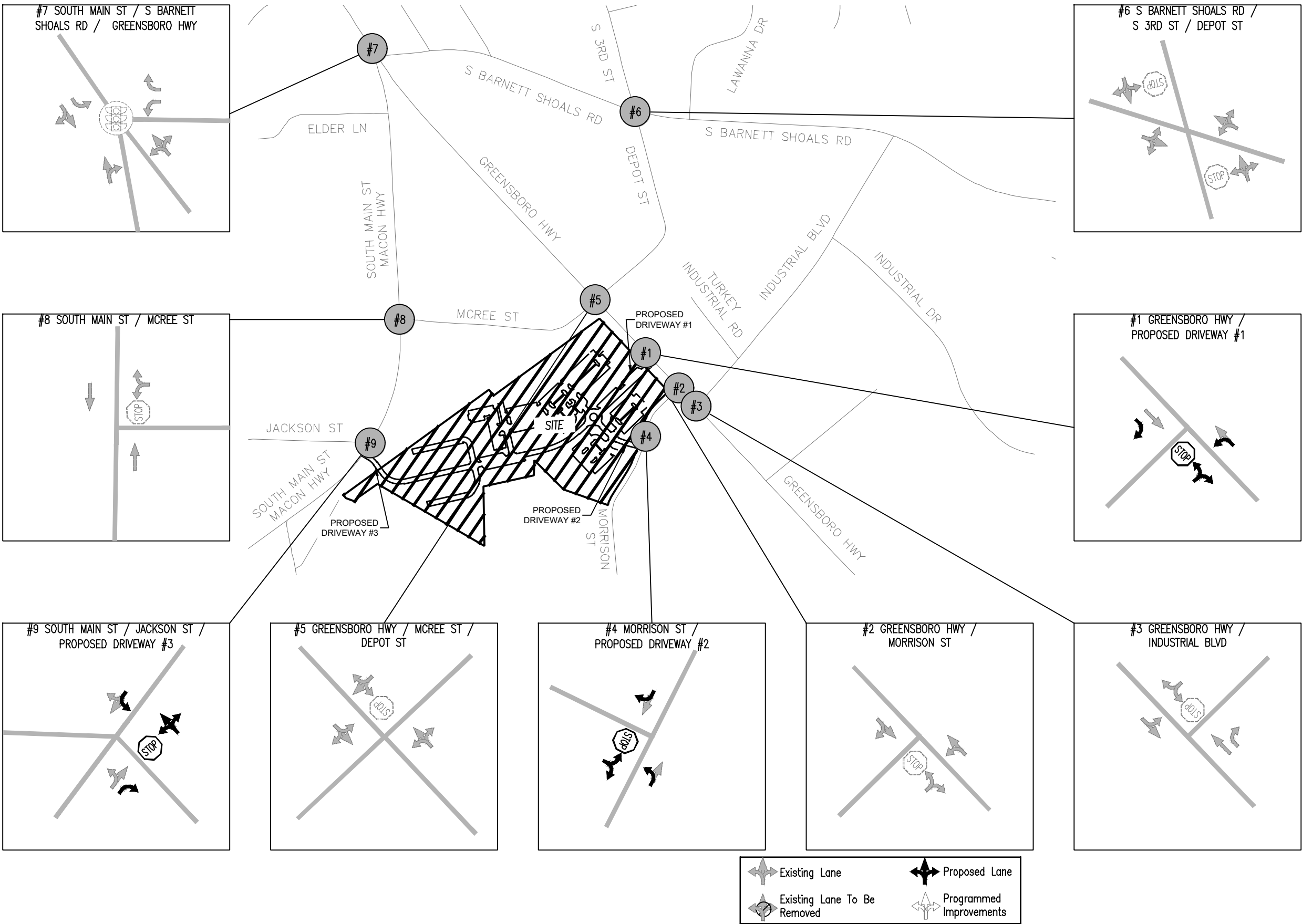


**OCONEE PIPE PLANT
1180 GREENSBORO HIGHWAY
FEBRUARY 28, 2024**

					the signal.		Main Street	
South Barnett Shoals Road	25 mph	Rural	Oconee County	2	Sidewalk on both sides.	Right Turn and Left Turn Lane at Signal	Greensboro Highway/ South Barnett Shoals Road/ South Main Street	Lawanna Drive/ 3 rd Street/ 2 nd Street/ Dooley Street
South 3 rd Street	25 mph	Urban	Watkinsville City	2	None	None	None	None
Depot Street	25 mph	Urban	Watkinsville City	2	None	None	None	None
Jackson Street	25 mph	Urban	Watkinsville City	1	None	None	None	None
McRee Street	15 mph	Urban	Watkinsville City	1	None	None	None	None
Morrison Street	25 mph	Urban	Watkinsville City	2	Sidewalk on Left Side beginning just before Harmony Bend and ending at Melody Bend.	None	None	Business Boulevard/ Lumpkin Lane/ Harmony Bend/ Melody Bend
Industrial Boulevard	25 mph	Urban	Watkinsville City	2	None	None	None	Industrial Drive/Turkey Industrial Road

A lane diagram for the study intersections is given in Figure 42. AM and PM turning movement counts were made at the existing studied intersections. These counts are shown in Figure 43 through 51, and the original counts are provided in the Appendix.

FIGURE 42
SCENARIO 2: LANE DIAGRAM



DATE: 02/28/2024
SCALE: NTS
CN: 230580 Traffic
JN: 230580
FN:
Sheet No. **FIGURE 42**

4317 Park Drive, Suite 400
Norcross, Georgia 30093
Phone: (770) 416-7511
Fax: (770) 416-6759
www.travispruitt.com

Travis Pruitt & Associates, Inc.
ENGINEERS • SURVEYORS
ARCHITECTS • ENVIRONMENTAL SCIENTISTS

Contact Person:
MICHAEL GREENLEE
mgreenlee@travispruitt.com

LANE DIAGRAM SCENARIO 2

OCONEE PIPE PLANT TIA

1180 GREENSBORO HWY
OCONEE COUNTY, GEORGIA

REVISIONS				
7				
6				
5				
4				
3				
2				
1				

Figure 43

EXISTING TRAFFIC
AM & PM PEAK HOUR TURNING MOVEMENTS

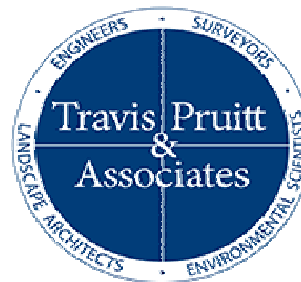
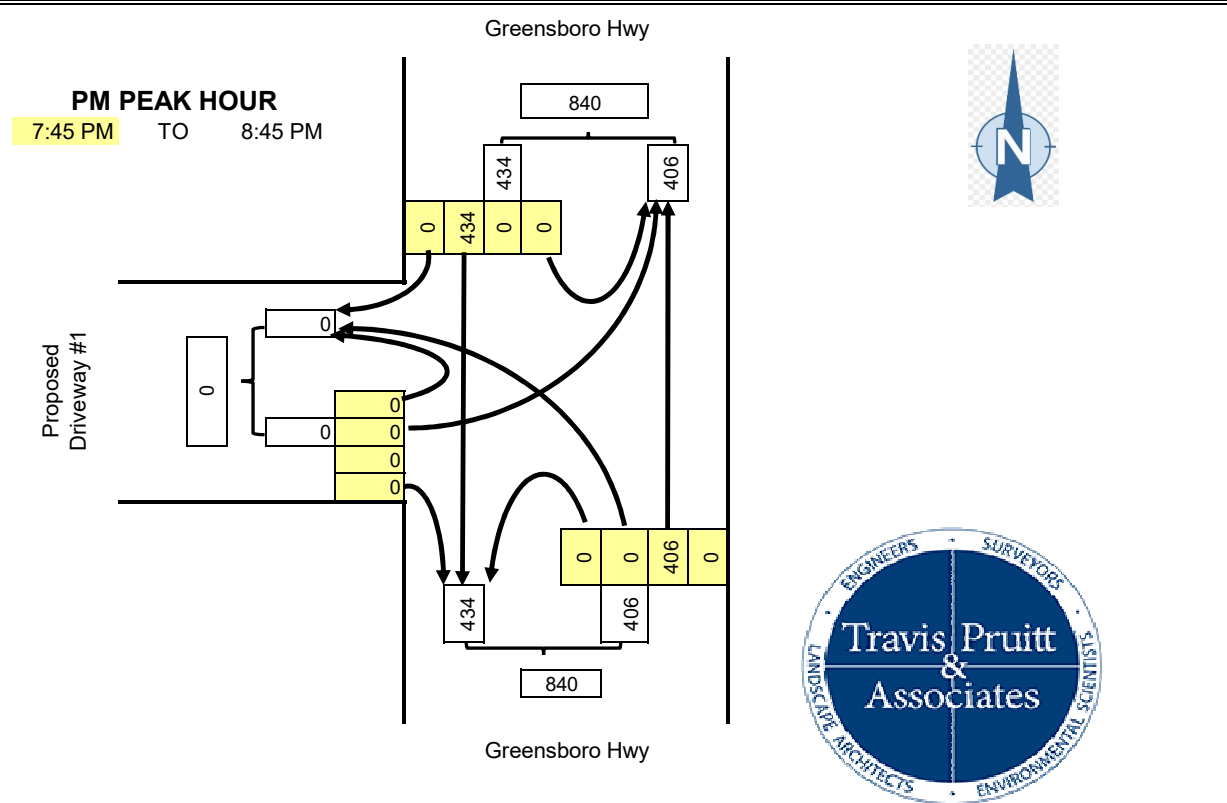
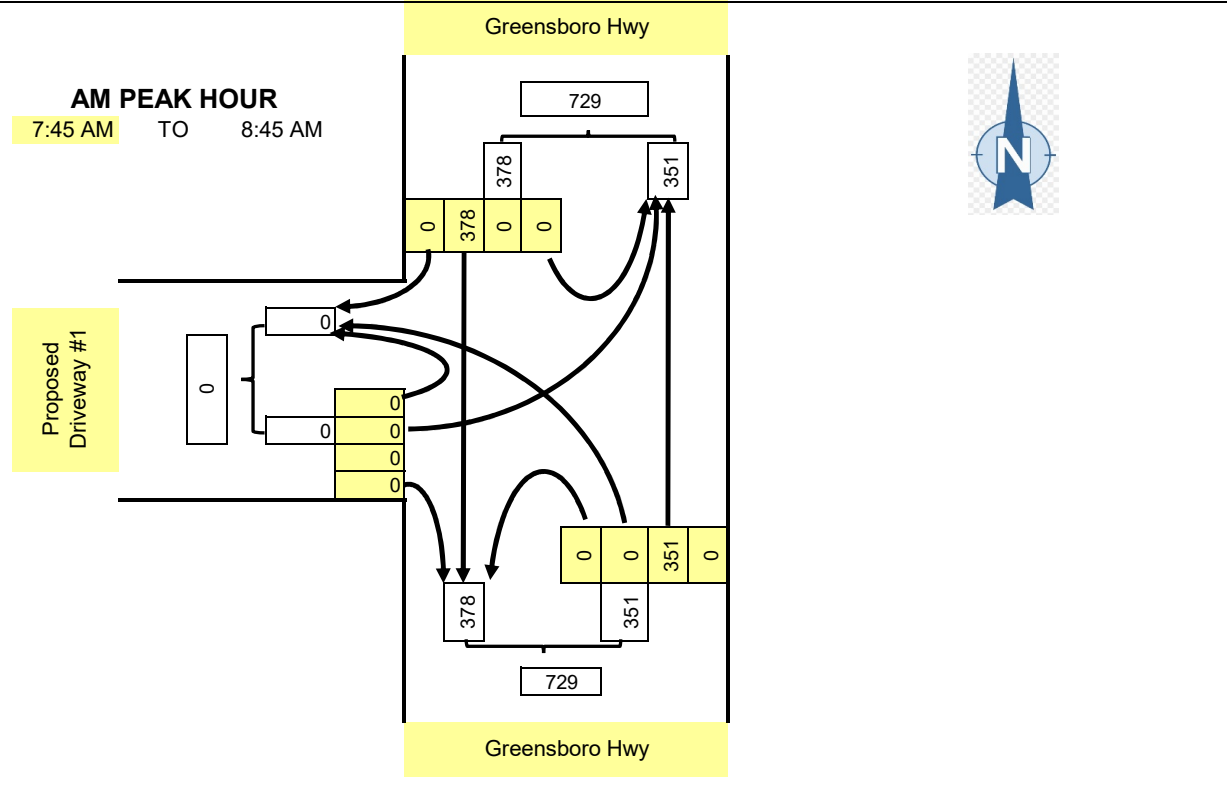


Figure 44

EXISTING TRAFFIC
AM & PM PEAK HOUR TURNING MOVEMENTS

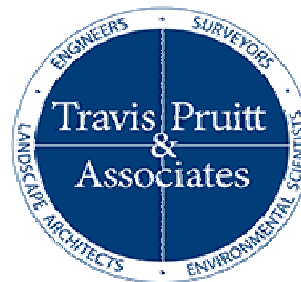
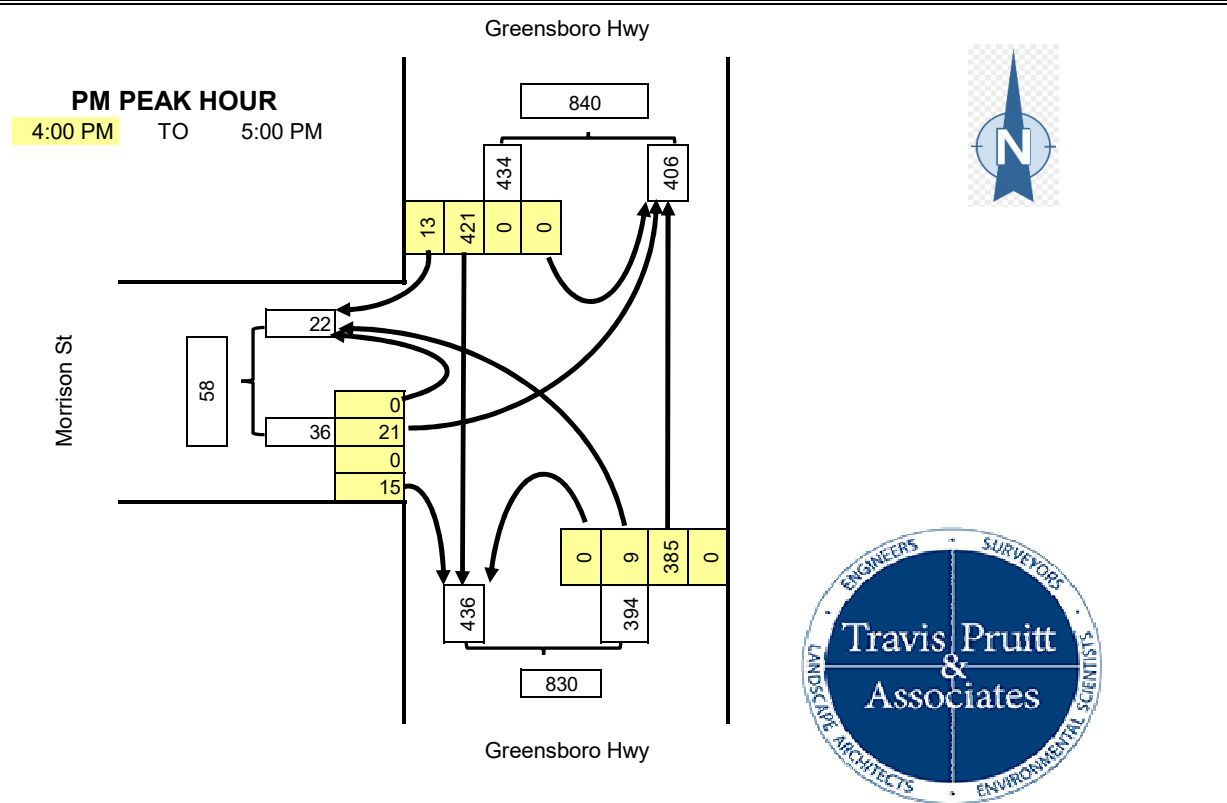
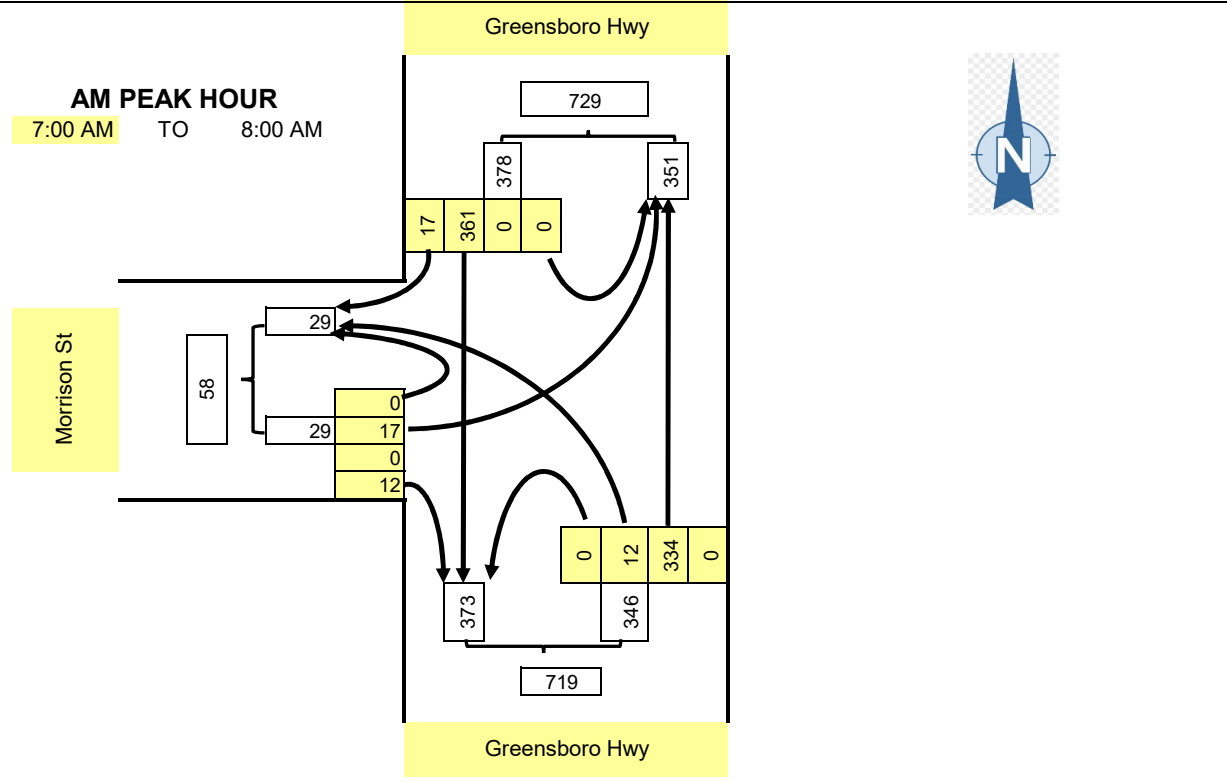
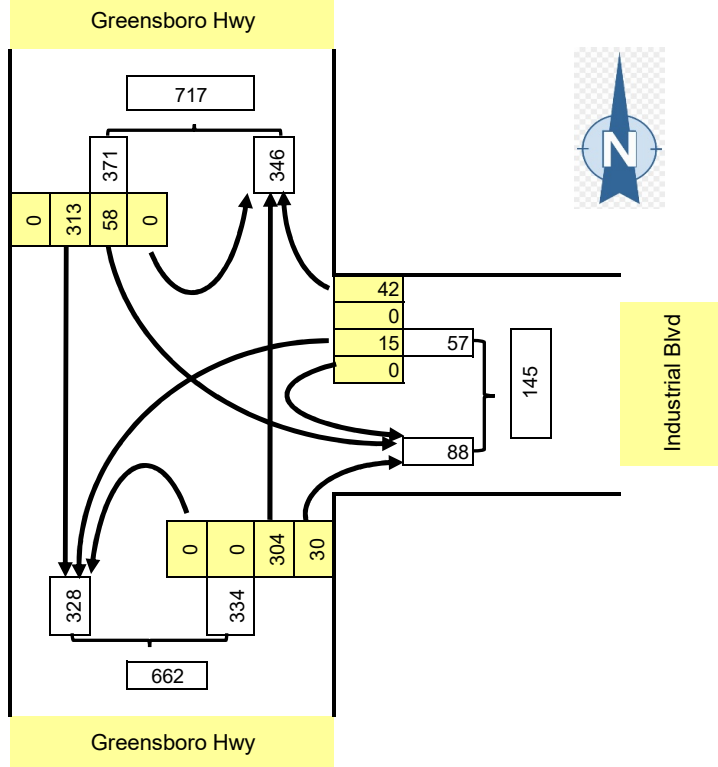


Figure 45

EXISTING TRAFFIC
AM & PM PEAK HOUR TURNING MOVEMENTS

AM PEAK HOUR

7:00 AM TO 8:00 AM



PM PEAK HOUR

4:00 PM TO 5:00 PM

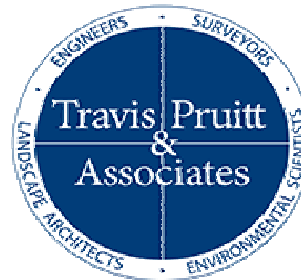
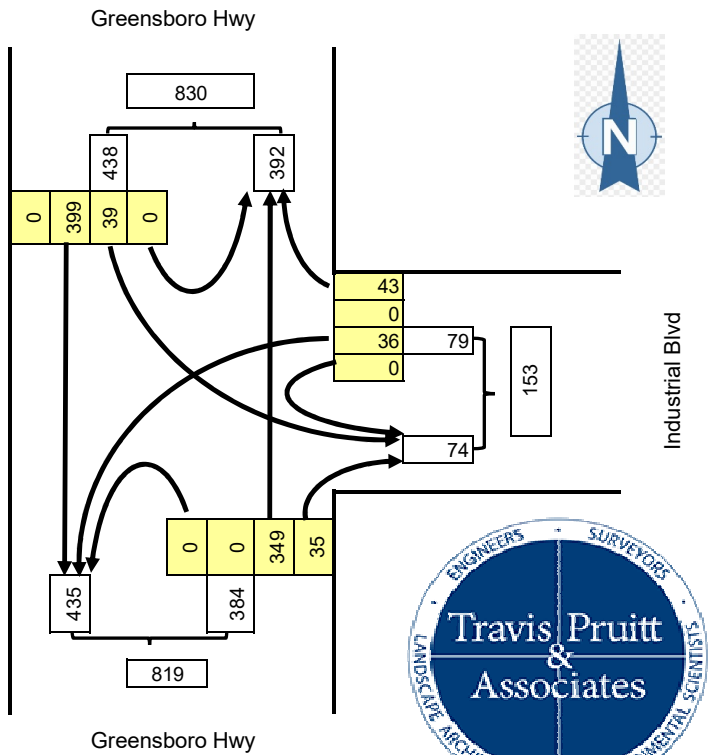


Figure 46

EXISTING TRAFFIC
AM & PM PEAK HOUR TURNING MOVEMENTS

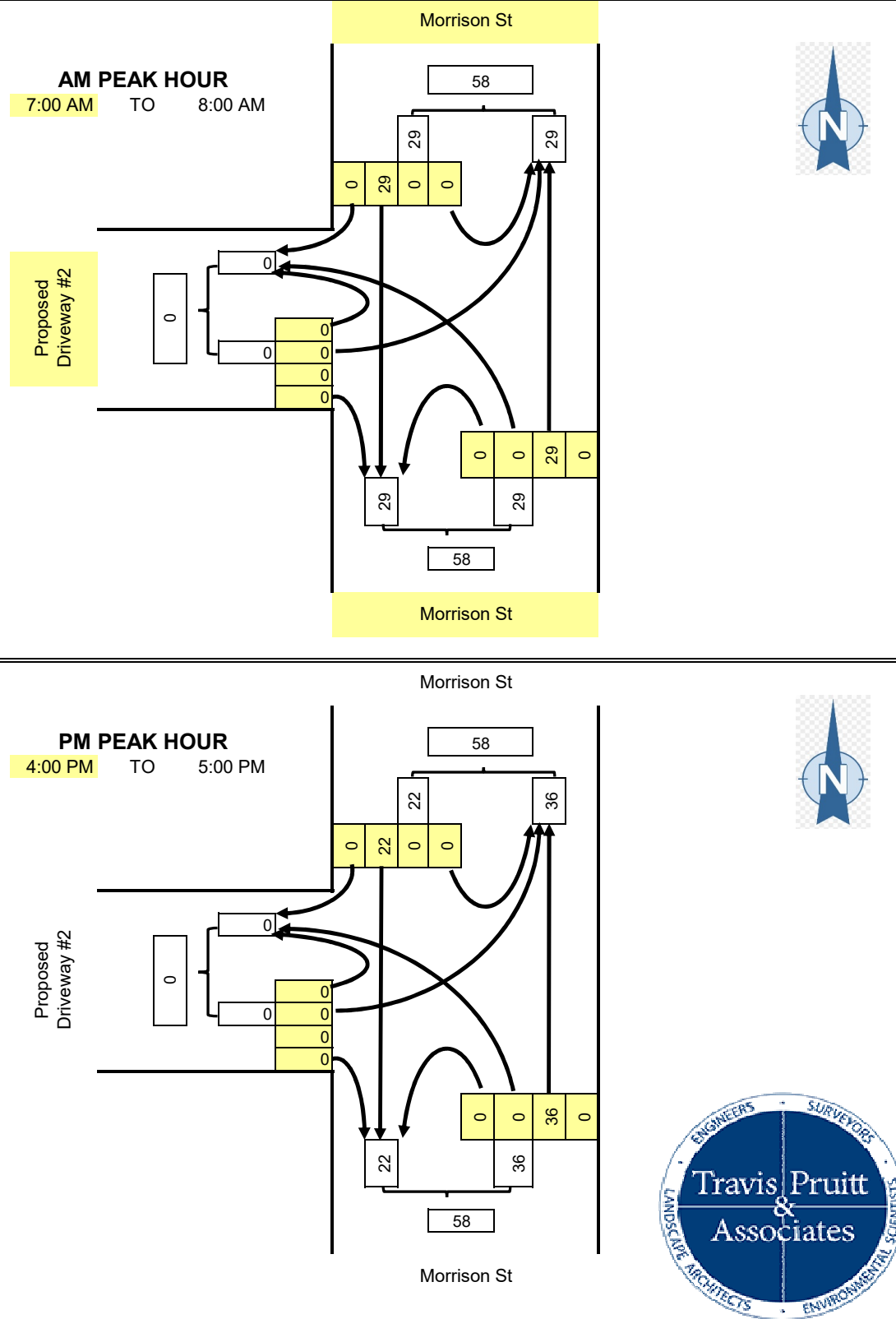


Figure 47

EXISTING TRAFFIC
AM & PM PEAK HOUR TURNING MOVEMENTS

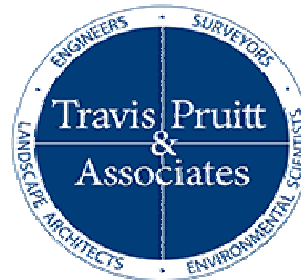
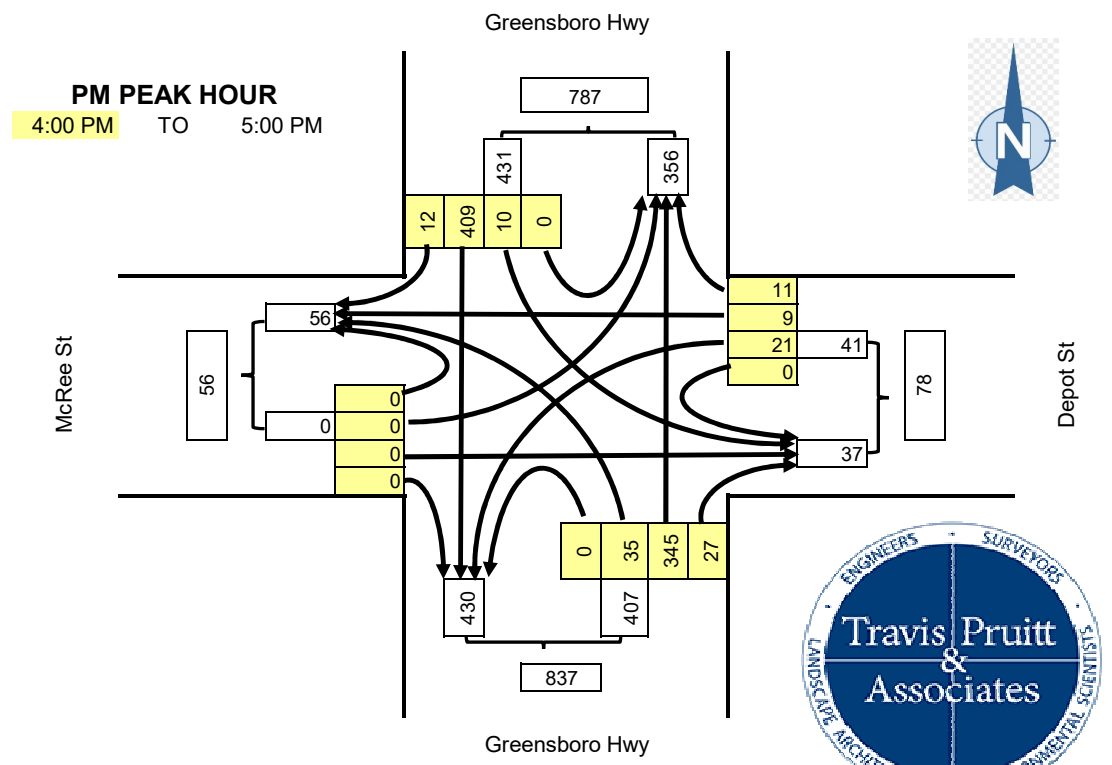
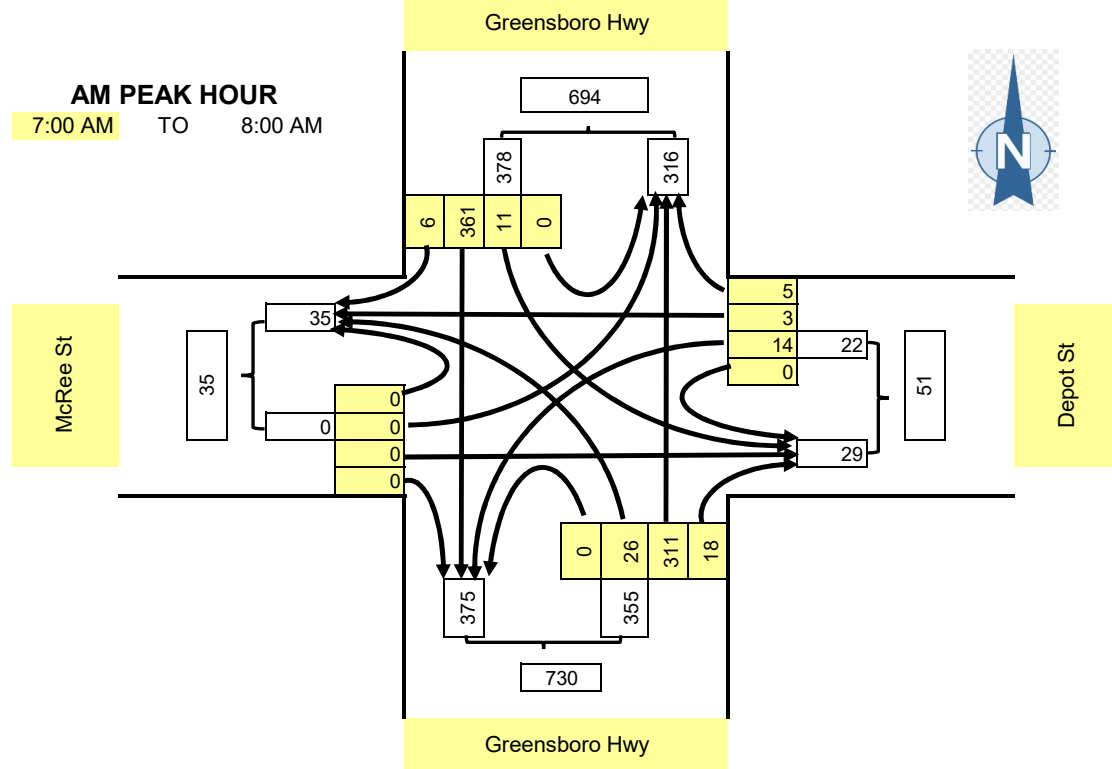


Figure 48

EXISTING TRAFFIC
AM & PM PEAK HOUR TURNING MOVEMENTS

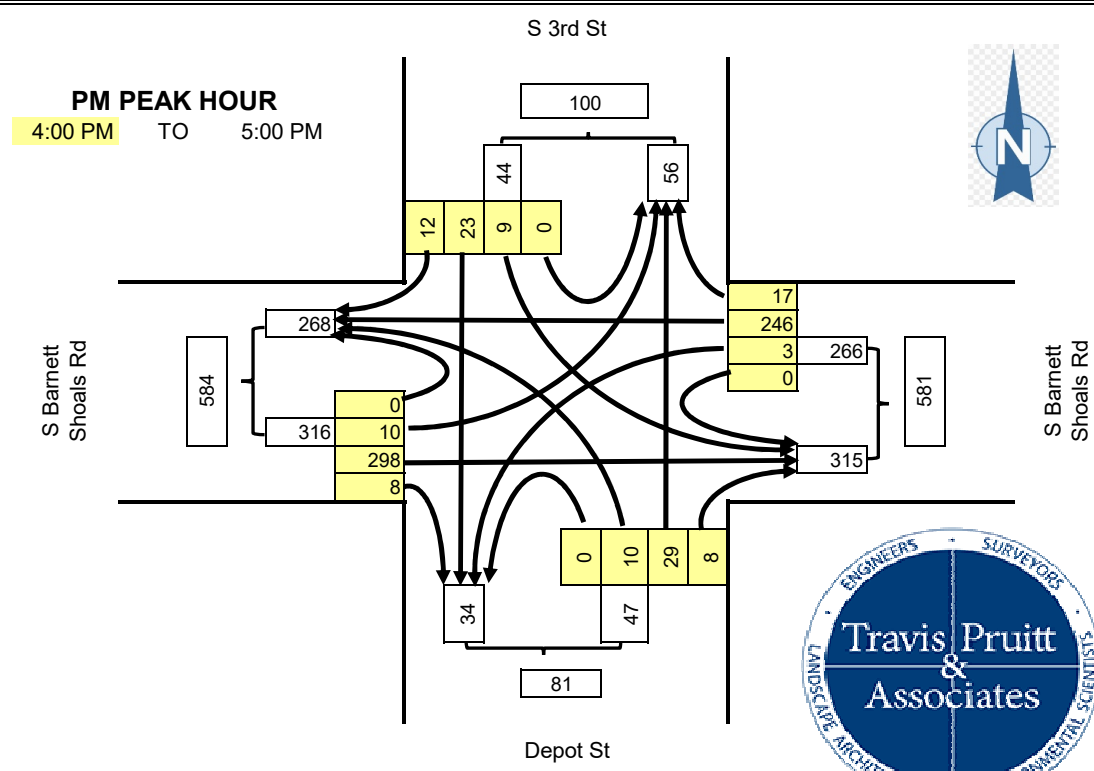
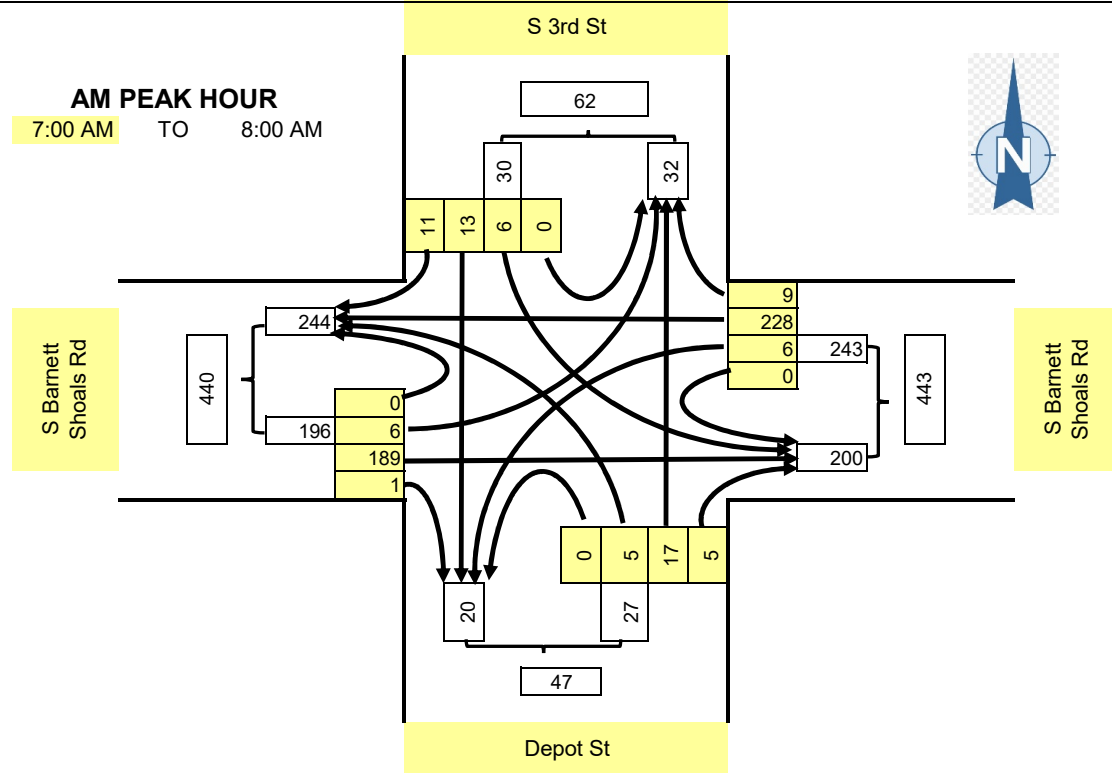


Figure 49

EXISTING TRAFFIC
AM & PM PEAK HOUR TURNING MOVEMENTS

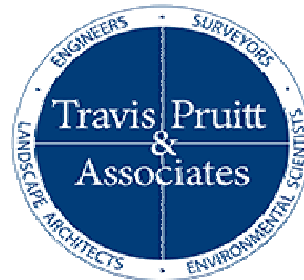
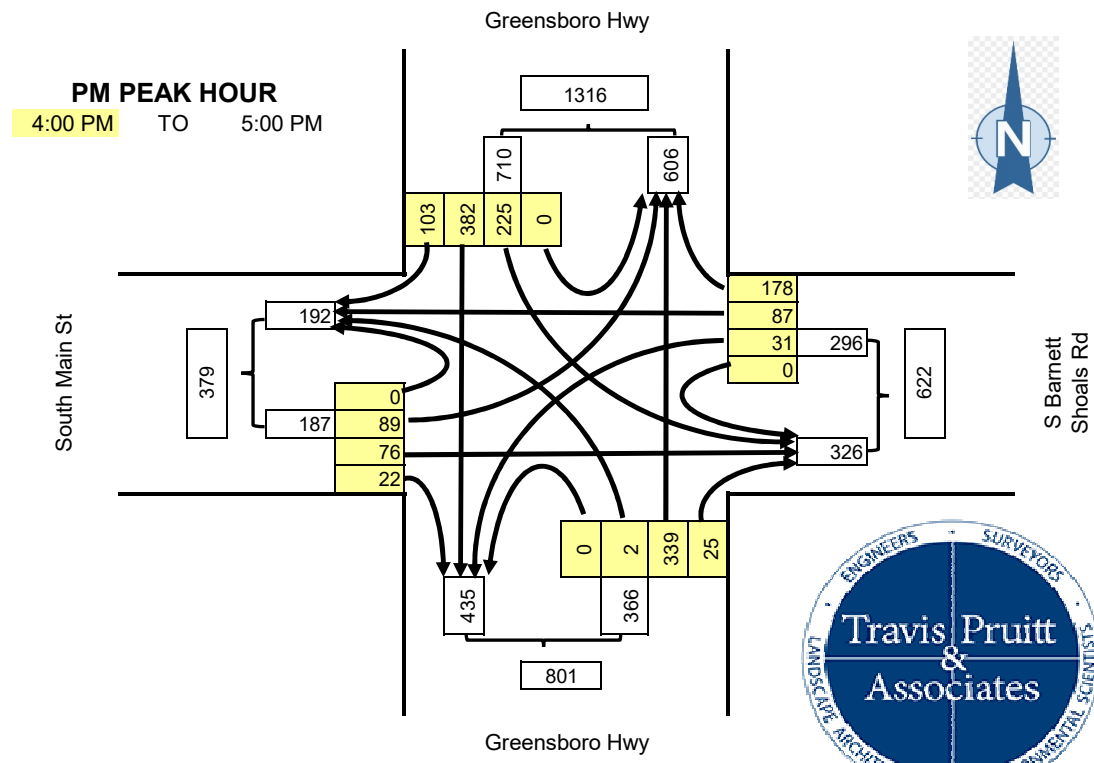
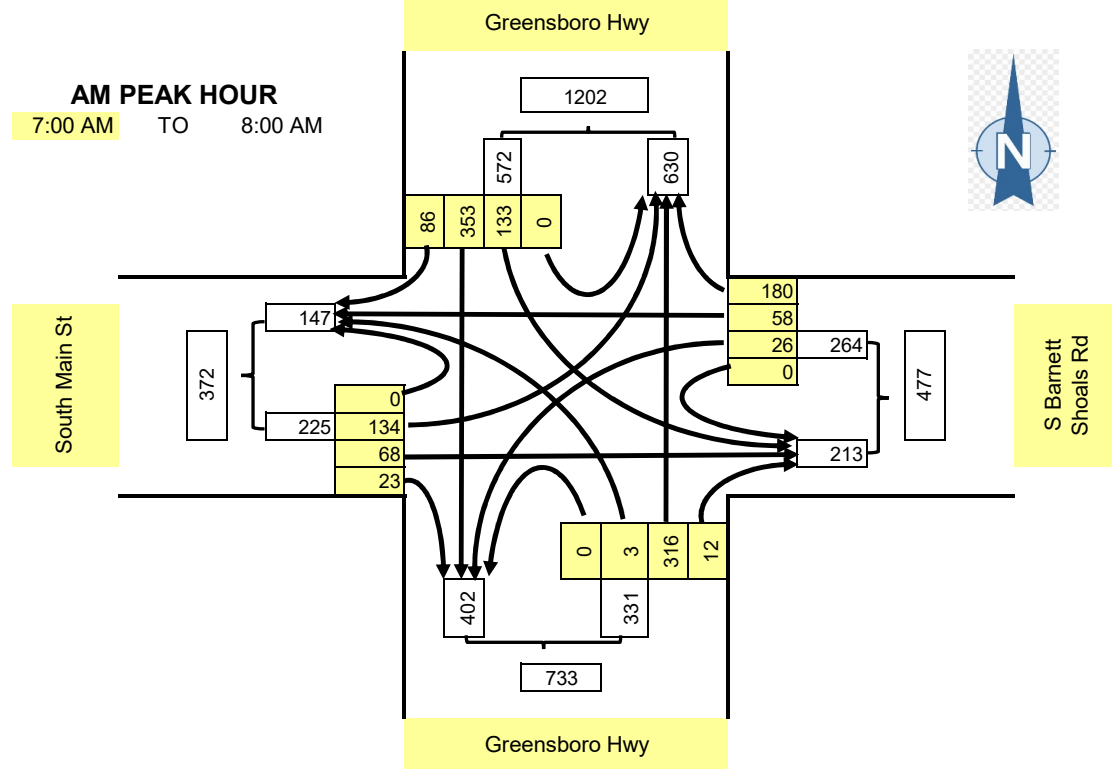
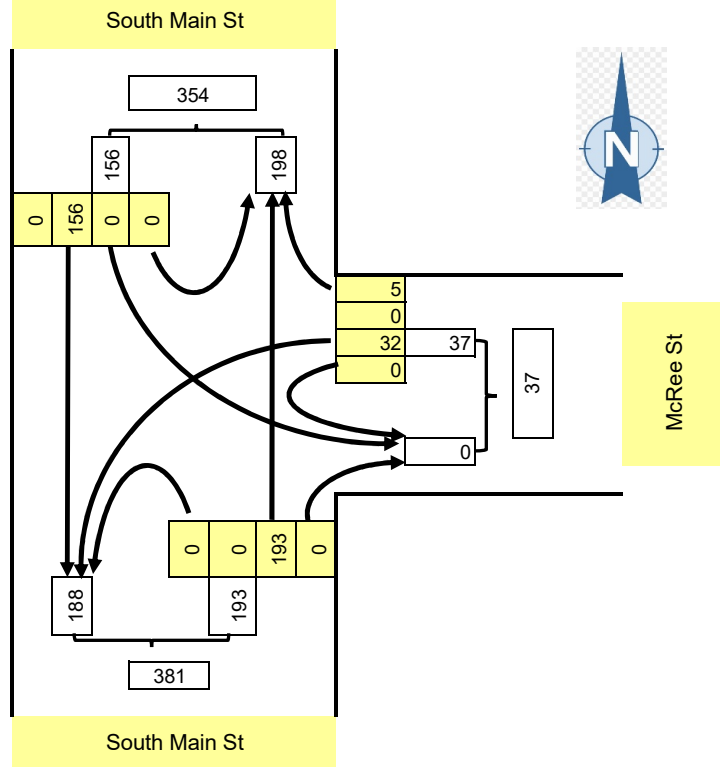


Figure 50

EXISTING TRAFFIC
AM & PM PEAK HOUR TURNING MOVEMENTS

AM PEAK HOUR

7:00 AM TO 8:00 AM



PM PEAK HOUR

4:00 PM TO 5:00 PM

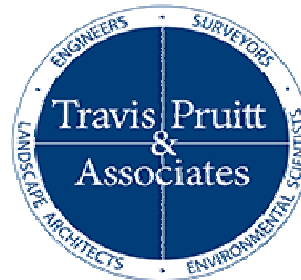
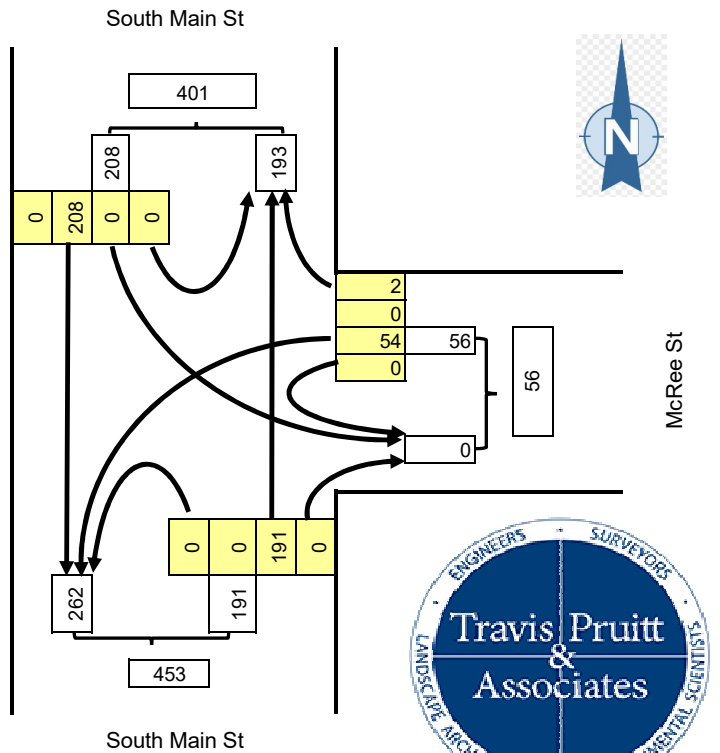
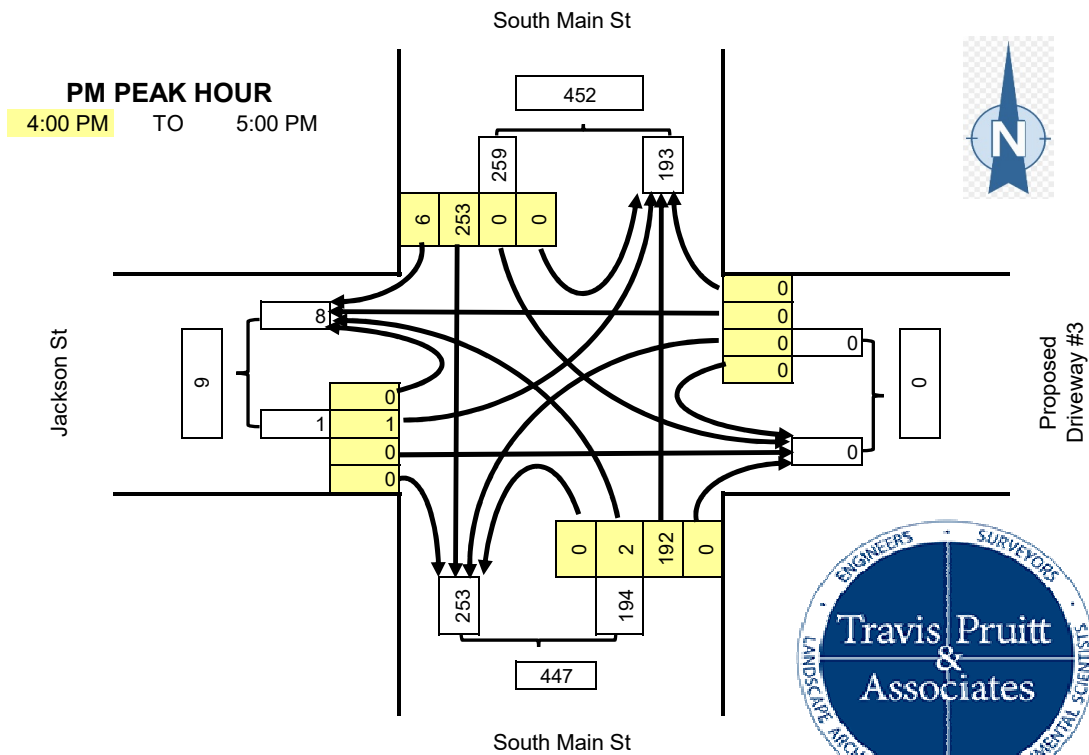
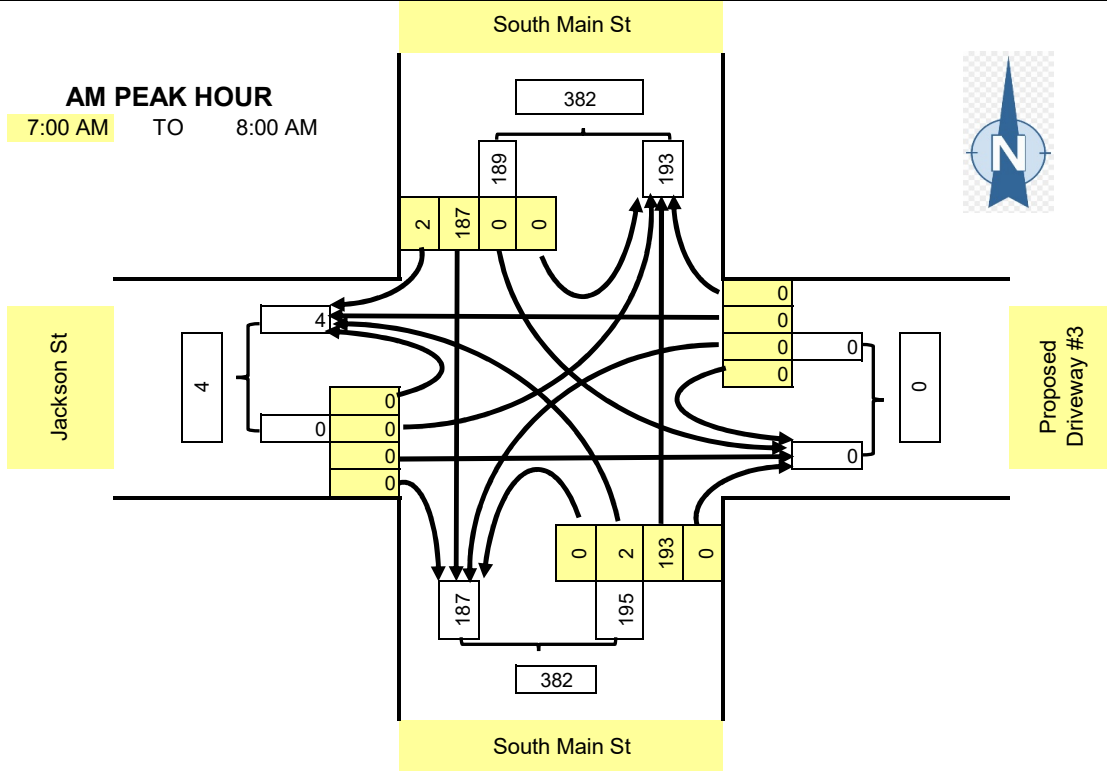


Figure 51

EXISTING TRAFFIC
AM & PM PEAK HOUR TURNING MOVEMENTS





TRIP GENERATION

The typical procedure for determining the traffic generated by a new development is to apply the rates or equations developed by the Institute of Transportation Engineers (ITE) as published in the Trip Generation Manual – 11th Edition. The rates or equations in this informational report are calculated from nationally collected data. This method was used to establish the trip generation for the proposed development.

The results of the trip generation for the Oconee Pipe Plant are given in Table 18.

Table 18. Trip Generation Results

Trip Generation									
Land Use (ITE Code)	Intensity	Independent Variable	ADT	AM Peak Hour			PM Peak Hour		
			2-Way	Enter	Exit	Total	Enter	Exit	Total
Single-Family Attached Housing (215)	30	Dwelling Units	178	2	8	10	8	6	14
Multifamily Housing (Low-Rise) (220)	200	Dwelling Units	1,357	20	65	85	67	40	107
Shopping Plaza (821)	40	1000 Sq. Ft. GLA	2,701	43	26	69	102	106	208
Total			4,236	65	99	164	177	152	329

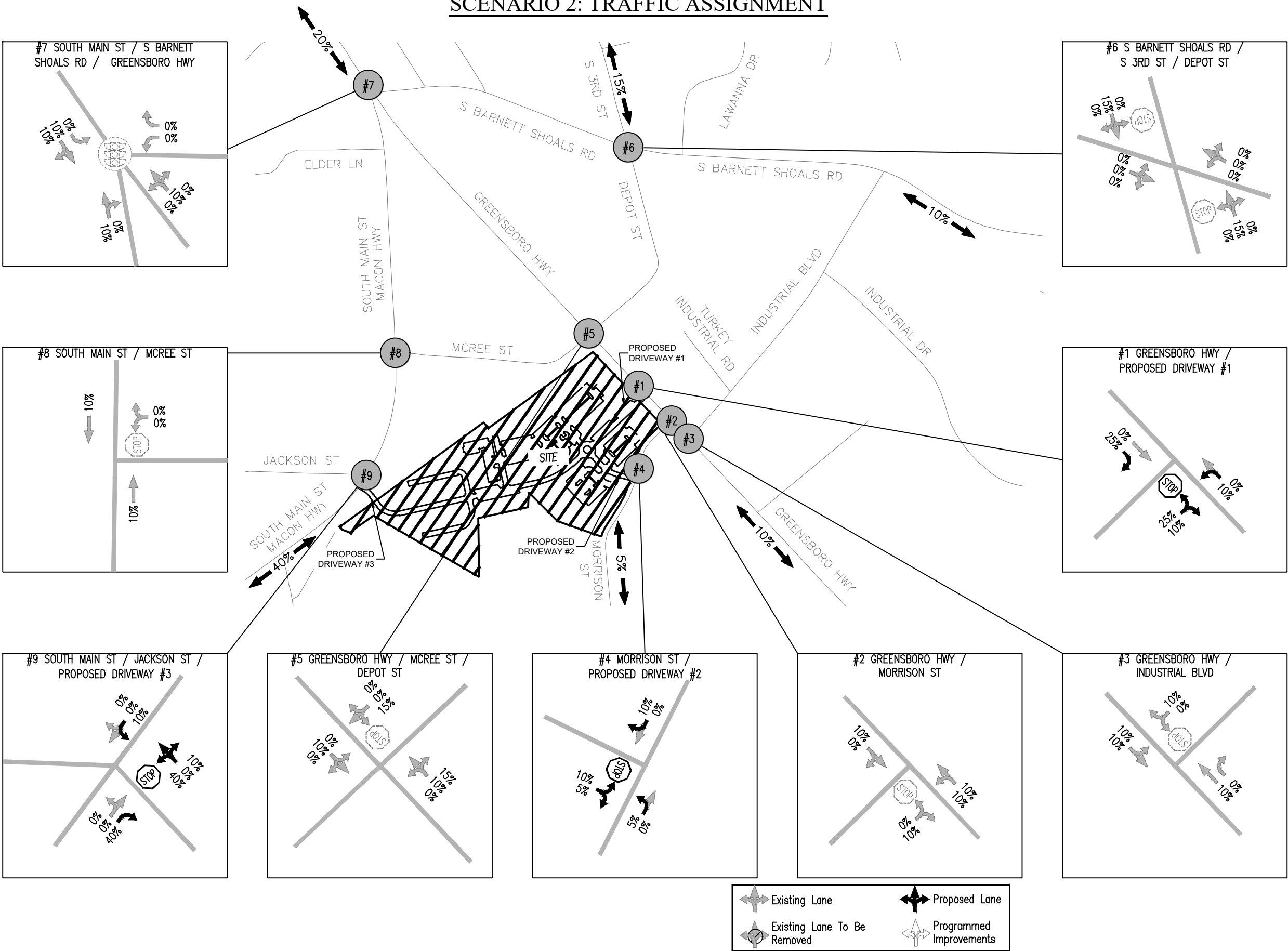


XI. TRAFFIC ASSIGNMENT

The assignment of traffic to the existing street network has been developed in accordance with an analysis of the existing traffic volumes, a general knowledge of the area, and analysis of its existing development.

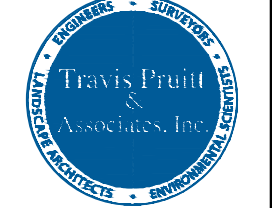
Figure 52 shows the assignment of traffic generated by the proposed project to the surrounding road network. Figure 52 shows the project traffic for the AM and PM peak hour periods.

FIGURE 52
SCENARIO 2: TRAFFIC ASSIGNMENT



DATE: 02/28/2024
SCALE: NTS
CN: 230580 Traffic
JN: 230580
FN:
Sheet No. **FIGURE 52**

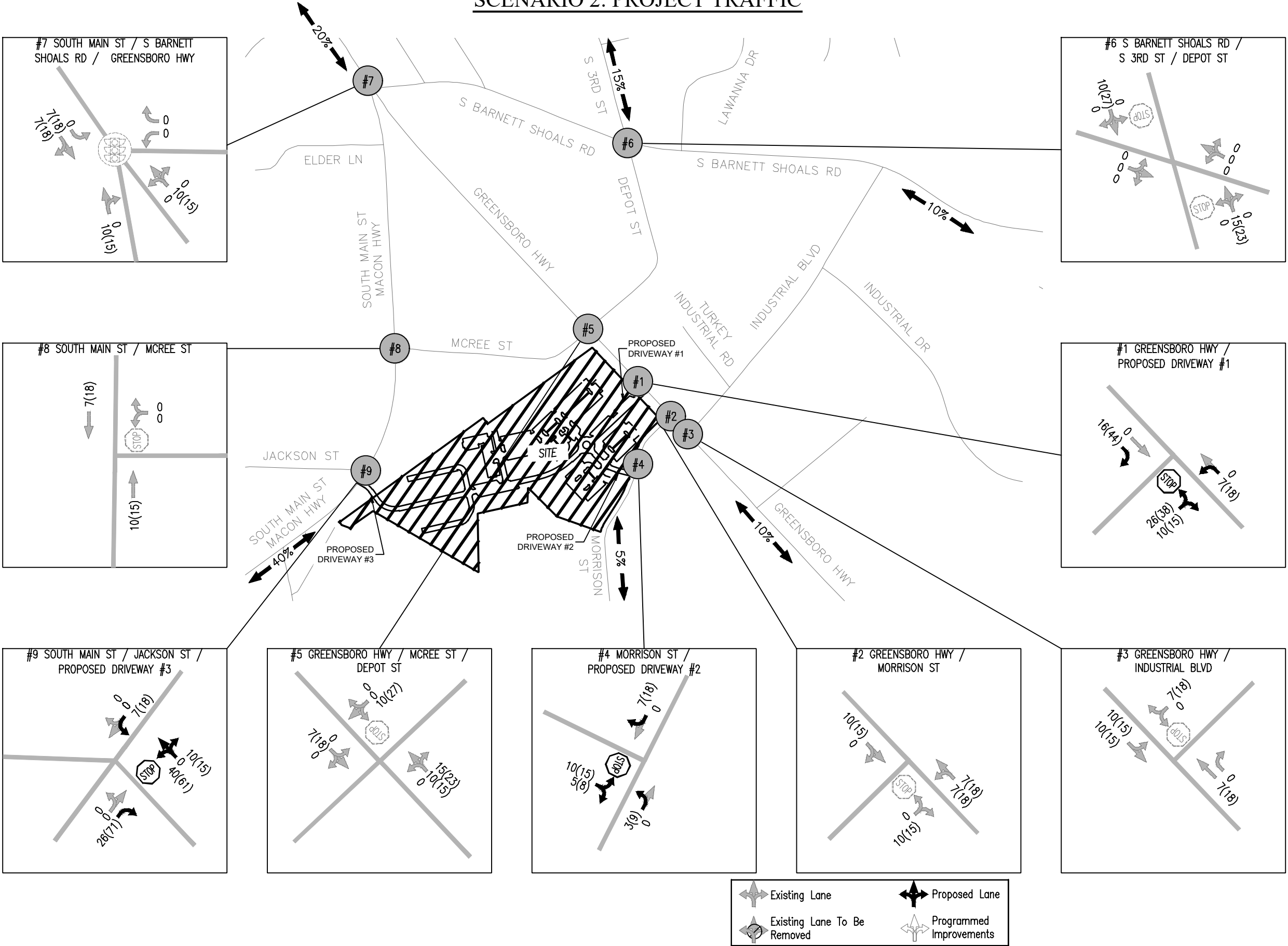
4317 Park Drive, Suite 400
Norcross, Georgia 30093
Phone: (770) 416-7511
Fax: (770) 416-6759
www.travispruitt.com
Contact Person:
MICHAEL GREENLEE
mgreenlee@travispruitt.com



TRAFFIC ASSIGNMENT SCENARIO 2
OCONEE PIPE PLANT TIA
1180 GREENSBORO HWY
OCONEE COUNTY, GEORGIA

REVISIONS						
7						
6						
5						
4						
3						
2						
1						

FIGURE 53
SCENARIO 2: PROJECT TRAFFIC



DATE: 02/28/2024
SCALE: NTS
CN: 230580 Traffic
JN: 230580
FN:
Sheet No. **FIGURE 53**

4317 Park Drive, Suite 400
Norcross, Georgia 30093
Phone: (770) 416-7511
Fax: (770) 416-6759
www.travispruitt.com
Contact Person:
MICHAEL GREENLEE
mgreenlee@travispruitt.com



PROJECT TRAFFIC SCENARIO 2
OCONEE PIPE PLANT TIA
1180 GREENSBORO HWY
OCONEE COUNTY, GEORGIA

REVISIONS						
7						
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XII. CAPACITY ANALYSIS

Capacity analyses of the study intersections were completed using procedures in the *Highway Capacity Manual (HCM), 2010 Update*. This is the usual methodology for the analysis of traffic conditions. The software program *Synchro 11* was used to perform the analyses. The capacity analysis printouts are included in the Appendix.

Operating conditions are evaluated in terms of levels of service (LOS). Levels of service A through E are normally considered acceptable levels of service for un-signalized intersections. Levels of service for signalized intersections are reported in composite fashion; i.e., one LOS for the entire intersection and are presented in terms of control delay. Individual turning movements at signalized intersections may experience poor levels of service, particularly where those volumes are relatively low, while the intersection as whole has an acceptable level of service. This is because the major movements on the major roadway are given priority in assigning green signal time. Levels of service A through D are considered to be acceptable peak hour operations for signalized intersections. Level of service E is normally acceptable for stop-controlled approaches and for left turns from the major street at un-signalized intersections. Level of service F is generally considered an unacceptable peak hour condition, except at low volume, stop-controlled approaches.

Traffic conditions at un-signalized intersections with stop control on the minor street only are evaluated for the minor street approach(es) and for the left turn from the major street. Unsignalized through-traffic on the major street is assumed to have no delay as there is no control (no stop sign). Poor levels of service for minor street approaches to un-signalized intersections are not uncommon, because the continuous flow traffic will always have the priority. The LOS criteria for signalized and un-signalized intersections are shown in Table 19.

Table 19. Level of Service Delay Criteria

LEVEL OF SERVICE	CONTROL DELAY (seconds per vehicle)		
	Signalized Intersection	Un-signalized Intersection	Roundabout
A	<10	<10	<10
B	>10 and <20	>10 and <15	>10 and <20
C	>20 and <35	>15 and <25	>20 and <35
D	>35 and <55	>25 and <35	>35 and <50
E	>55 and <80	>35 and <50	>50 and <70
F	>80	>50	>70



XIII. EXISTING CONDITIONS

Based on the existing conditions and traffic counts the level of service was analyzed for each of the study intersections. The results of the capacity analysis for existing traffic are given in Table 20. Calculation reports for each intersection are provided in the Appendix.

Table 20. Levels of Service - Existing

INTERSECTION	CONTROL	APPROACH	LEVEL OF SERVICE (Approach Delay)			
			AM		PM	
			LOS	DELAY	LOS	DELAY
#1 Greensboro Highway / Proposed Driveway #1	Unsignalized	EB	N/A	N/A	N/A	N/A
		WB	N/A	N/A	N/A	N/A
		NB	N/A	N/A	N/A	N/A
		SB	N/A	N/A	N/A	N/A
#2 Greensboro Highway / Morrison Street	Unsignalized	EB	B	14.8	C	17.3
		WB	N/A	N/A	N/A	N/A
		NB	A	0.3	A	0.2
		SB	A	0.0	A	0.0
#3 Greensboro Highway / Industrial Boulevard	Unsignalized	EB	N/A	N/A	N/A	N/A
		WB	B	12.8	C	18.0
		NB	A	0.0	A	0.0
		SB	A	1.3	A	1.7
#4 Morrison Street / Proposed Driveway #2	Unsignalized	EB	N/A	N/A	N/A	N/A
		WB	N/A	N/A	N/A	N/A
		NB	N/A	N/A	N/A	N/A
		SB	N/A	N/A	N/A	N/A
#5 Greensboro Highway / McRee Street / Depot Street	Unsignalized	EB	N/A	N/A	N/A	N/A
		WB	C	16.0	C	19.2
		NB	A	0.6	A	0.7
		SB	A	0.2	A	0.2
#6 South Barnett Shoals Road / South 3rd Street / Depot Street	Unsignalized	EB	A	0.2	A	0.3
		WB	A	0.2	A	0.1
		NB	B	13.5	C	17.7
		SB	B	12.8	C	16.0
#7 South Main Street / South Barnett Shoals Road / Greensboro Highway	Signalized	NWB	C	20.3	B	19.5
		WB	B	11.6	B	12.5
		NB	D	40.1	C	27.7
		SB	B	13.8	B	14.4
		Intersection LOS	B	19.3	B	16.8



#8 South Main Street / McRee Street	Unsignalized	EB	N/A	N/A	N/A	N/A
		WB	B	11.6	B	12.4
		NB	A	0.0	A	0.0
		SB	A	0.0	A	0.0
#9 South Main Street / Jackson Street	Unsignalized	EB	N/A	N/A	N/A	N/A
		WB	N/A	N/A	N/A	N/A
		NB	A	0.1	A	0.1
		SB	A	0.0	A	0.0

Analysis:

In the Existing traffic conditions, all intersections function at acceptable levels of service in both the AM and PM peak hours.



XIV. EXISTING PLUS BACKGROUND CONDITIONS

In the Existing Plus Background conditions, the existing traffic was increased at a rate of 1% per year for the 3-year project buildout period and the study intersections were re-analyzed to determine their levels of service. Figure 54 – Figure 62 show the projected turning movements at each study intersection. Table 21 summarizes the projected LOS for each intersection based on these conditions. Calculation reports are included in Appendix.

Table 21. Levels of Service – Existing+Background

INTERSECTION	CONTROL	APPROACH	LEVEL OF SERVICE (Approach Delay)			
			AM		PM	
			LOS	DELAY	LOS	DELAY
#1 Greensboro Highway / Proposed Driveway #1	Unsignalized	EB	N/A	N/A	N/A	N/A
		WB	N/A	N/A	N/A	N/A
		NB	N/A	N/A	N/A	N/A
		SB	N/A	N/A	N/A	N/A
#2 Greensboro Highway / Morrison Street	Unsignalized	EB	B	15.1	C	17.8
		WB	N/A	N/A	N/A	N/A
		NB	A	0.3	A	0.7
		SB	A	0.0	A	0.0
#3 Greensboro Highway / Industrial Boulevard	Unsignalized	EB	N/A	N/A	N/A	N/A
		WB	B	13.0	C	18.8
		NB	A	0.0	A	0.0
		SB	A	1.3	A	1.7
#4 Morrison Street / Proposed Driveway #2	Unsignalized	EB	N/A	N/A	N/A	N/A
		WB	N/A	N/A	N/A	N/A
		NB	N/A	N/A	N/A	N/A
		SB	N/A	N/A	N/A	N/A
#5 Greensboro Highway / McRee Street / Depot Street	Unsignalized	EB	N/A	N/A	N/A	N/A
		WB	C	16.4	C	20.0
		NB	A	0.6	A	0.7
		SB	A	0.2	A	0.2
#6 South Barnett Shoals Road / South 3rd Street / Depot Street	Unsignalized	EB	A	0.2	A	0.2
		WB	A	0.2	A	0.1
		NB	B	13.7	C	18.3
		SB	B	12.9	C	16.5
#7 South Main Street / South Barnett Shoals Road / Greensboro Highway	Signalized	NWB	C	23.2	C	20.0
		WB	B	11.8	B	12.7
		NB	D	40.9	C	27.8
		SB	B	14.3	B	15.0
		Intersection LOS	C	20.4	B	17.2



#8 South Main Street / McRee Street	Unsignalized	EB	N/A	N/A	N/A	N/A
		WB	B	11.7	B	12.6
		NB	A	0.0	A	0.0
		SB	A	0.0	A	0.0
#9 South Main Street / Jackson Street	Unsignalized	EB	N/A	N/A	N/A	N/A
		WB	N/A	N/A	N/A	N/A
		NB	A	0.1	A	0.1
		SB	A	0.0	A	0.0

Analysis:

In the Existing Plus Background traffic conditions, all intersections continue to function at acceptable levels of service in both the AM and PM peak hours.

Figure 54

**EXISTING + BACKGROUND TRAFFIC
AM & PM PEAK HOUR TURNING MOVEMENTS**

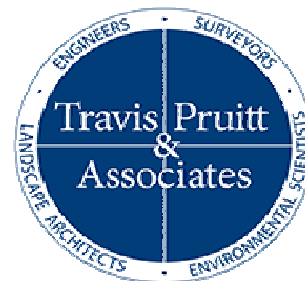
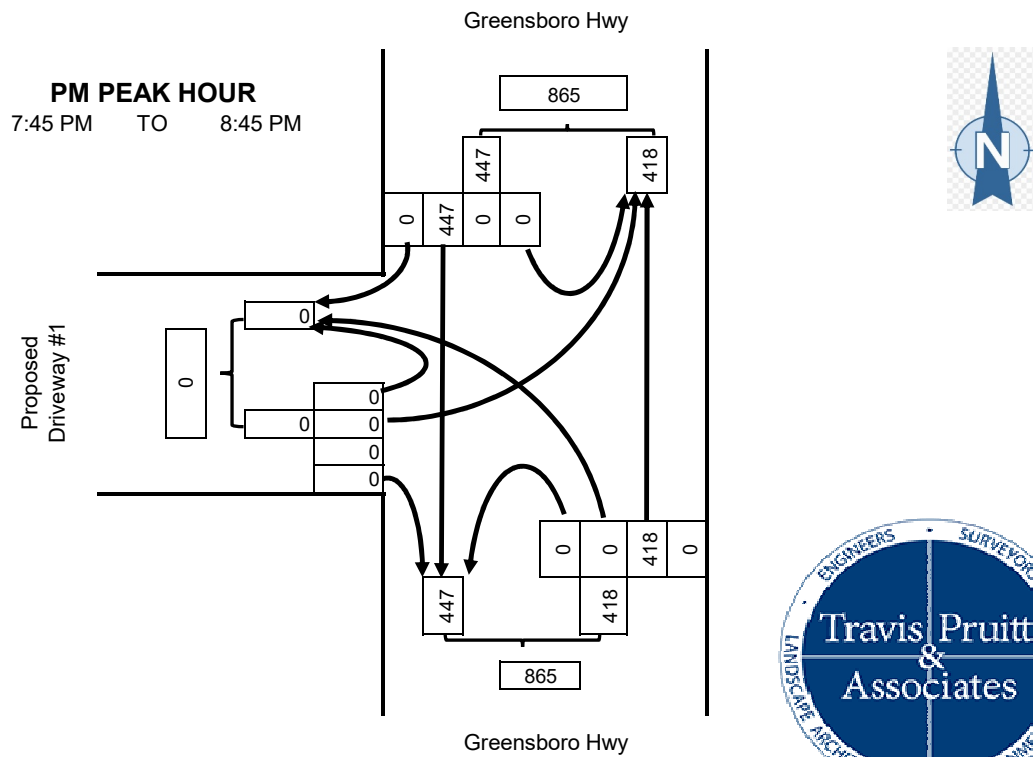
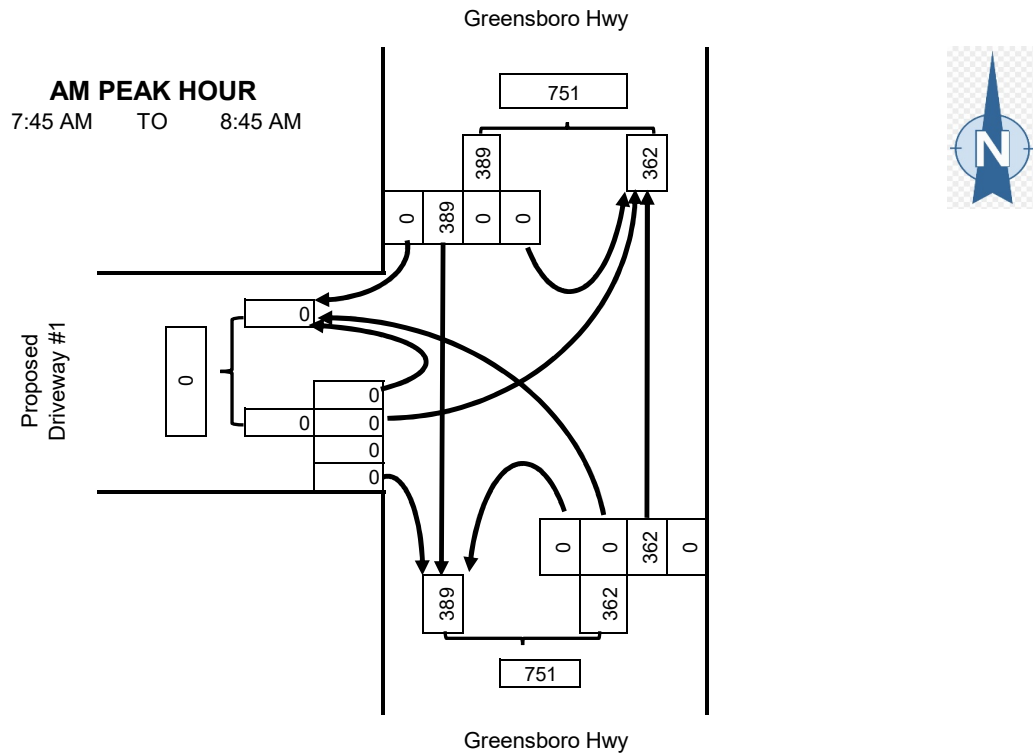


Figure 55

**EXISTING + BACKGROUND TRAFFIC
AM & PM PEAK HOUR TURNING MOVEMENTS**

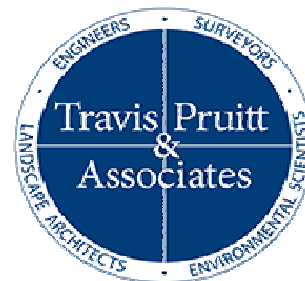
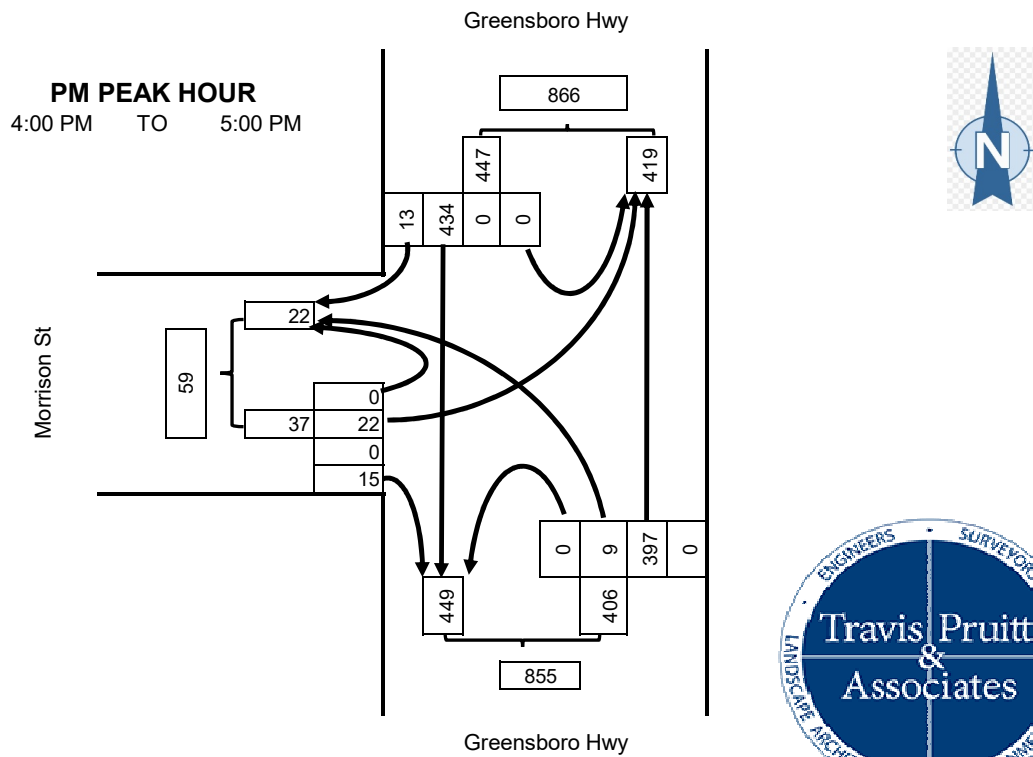
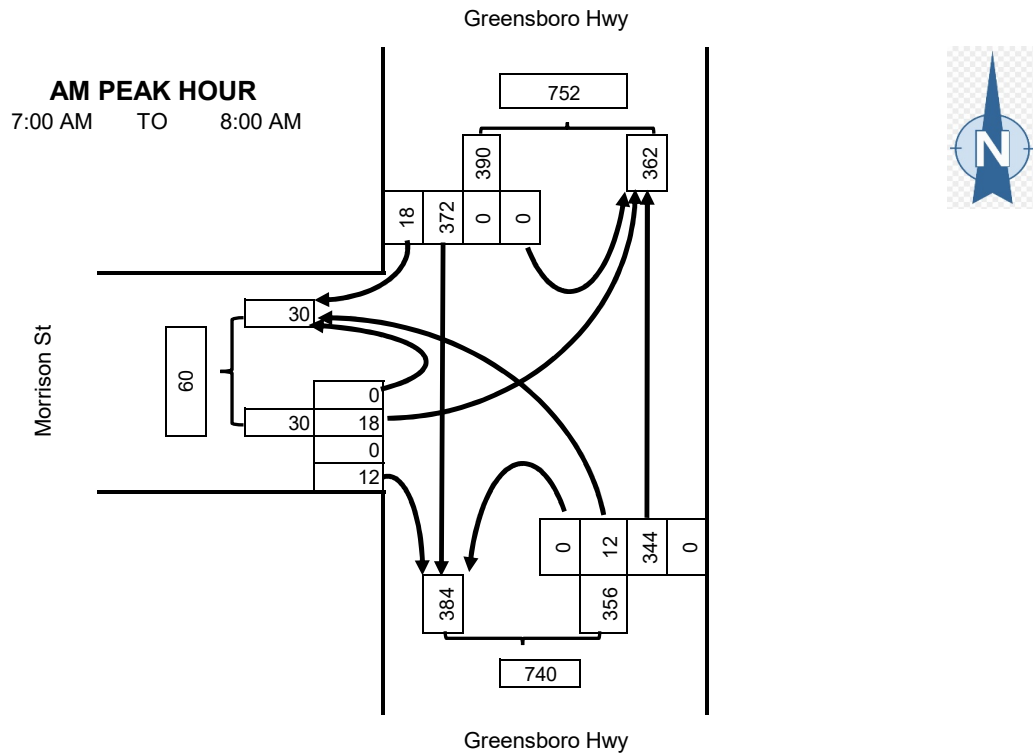
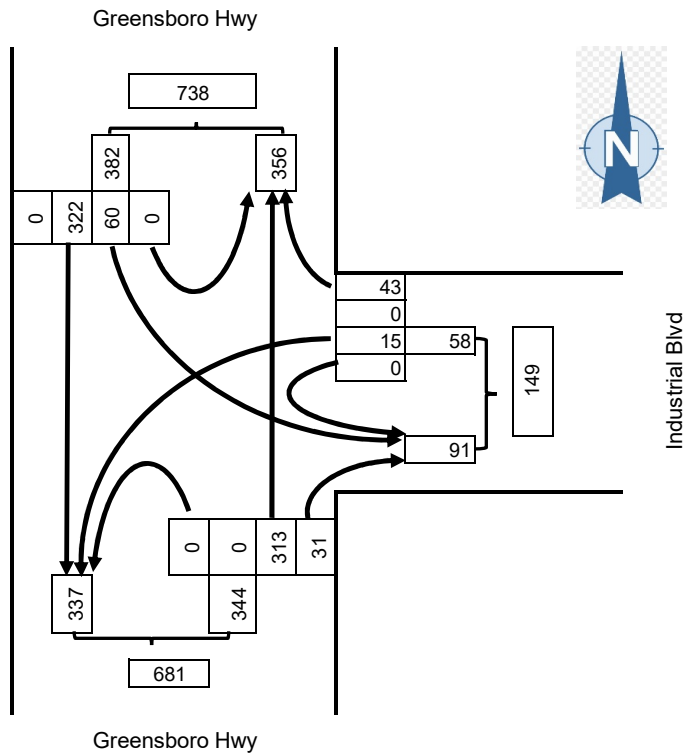


Figure 56

**EXISTING + BACKGROUND TRAFFIC
AM & PM PEAK HOUR TURNING MOVEMENTS**

AM PEAK HOUR
7:00 AM TO 8:00 AM



PM PEAK HOUR
4:00 PM TO 5:00 PM

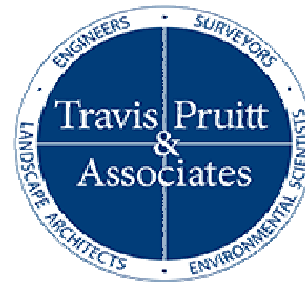
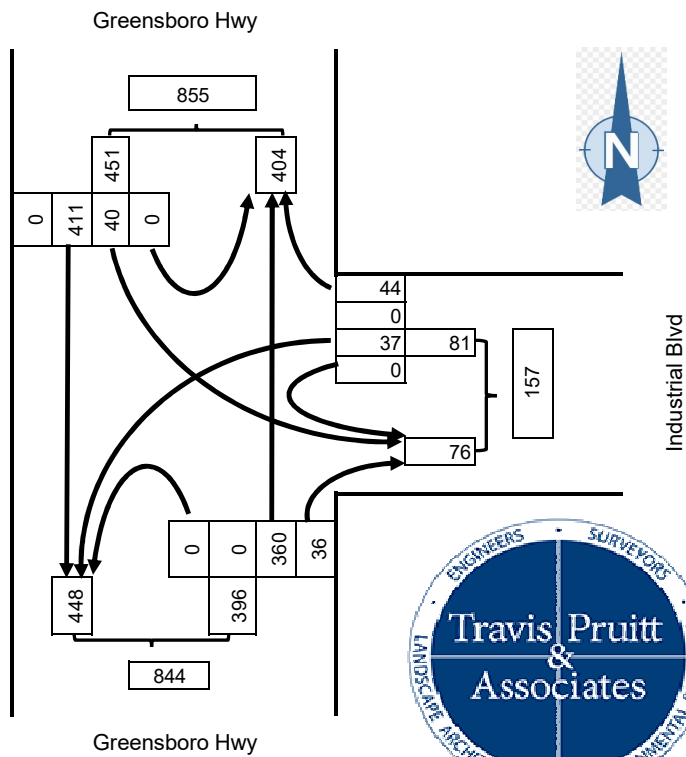


Figure 57

**EXISTING + BACKGROUND TRAFFIC
AM & PM PEAK HOUR TURNING MOVEMENTS**

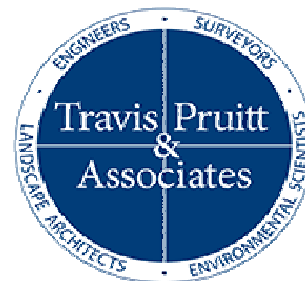
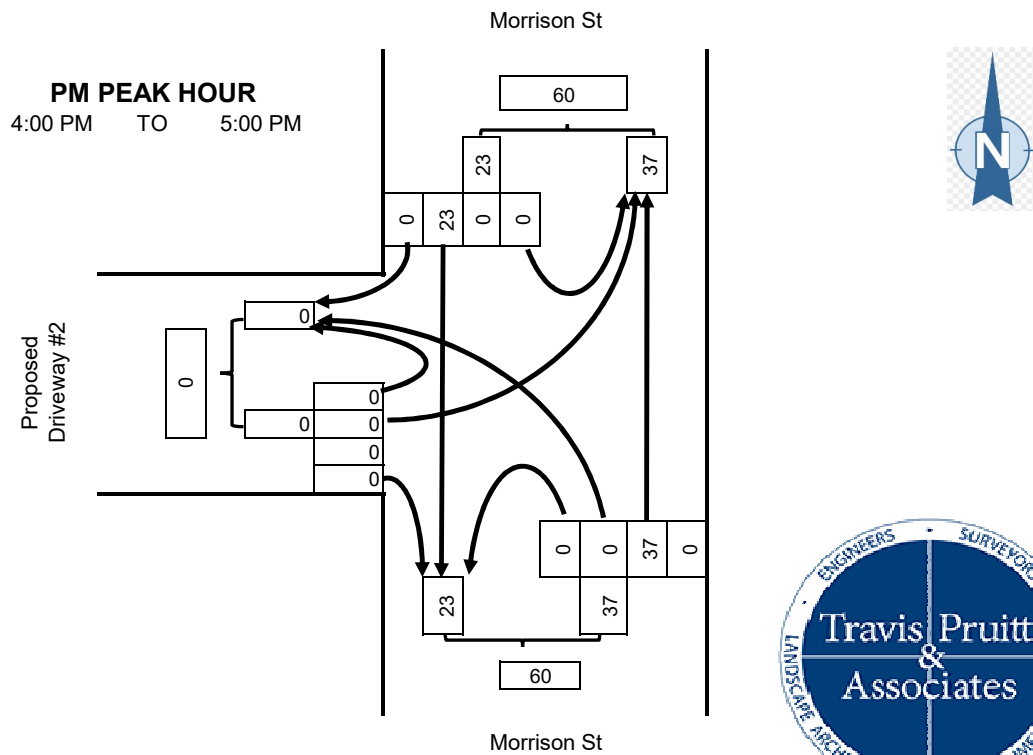
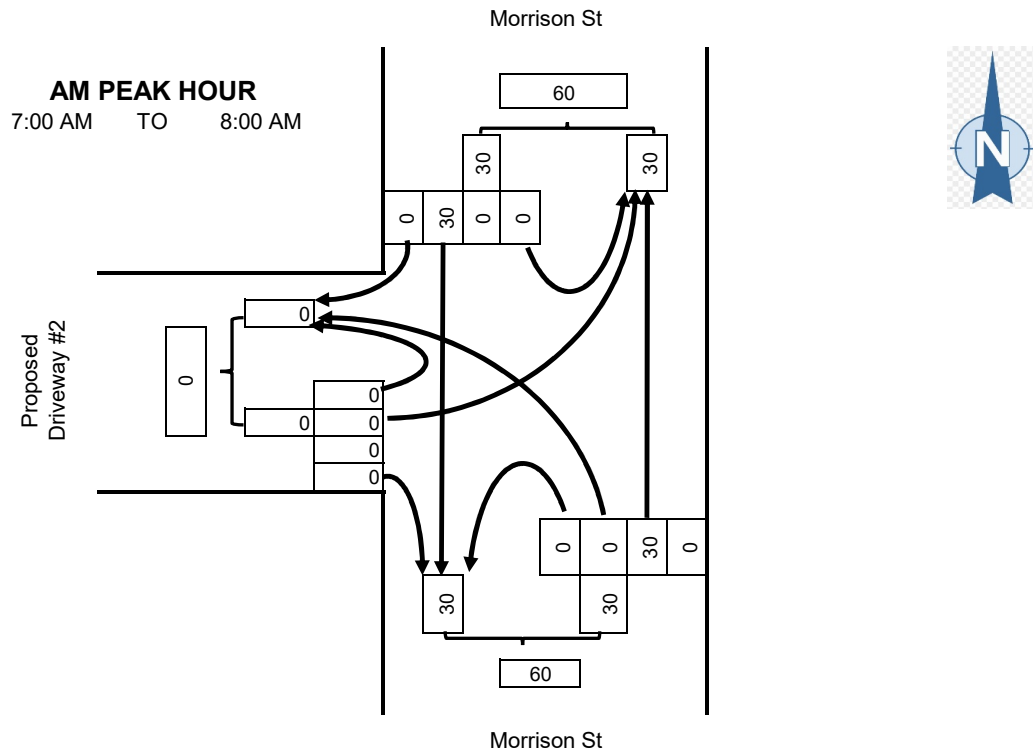


Figure 58

**EXISTING + BACKGROUND TRAFFIC
AM & PM PEAK HOUR TURNING MOVEMENTS**

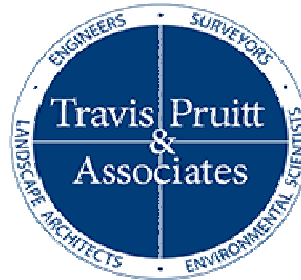
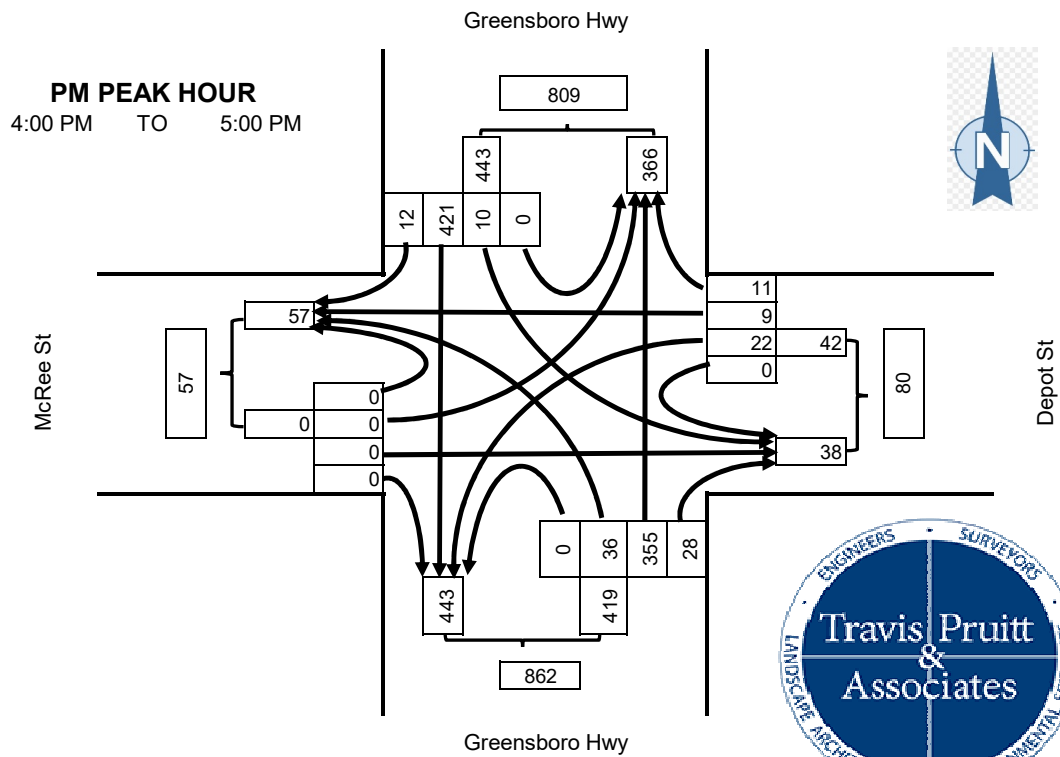
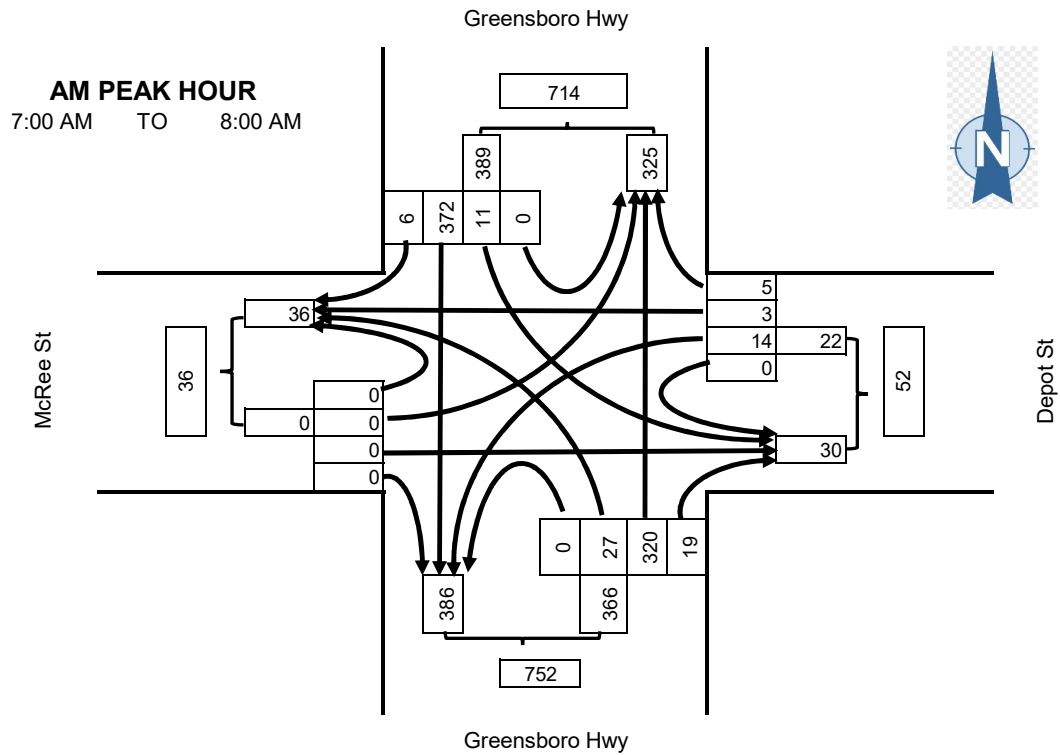


Figure 59

EXISTING + BACKGROUND TRAFFIC
AM & PM PEAK HOUR TURNING MOVEMENTS

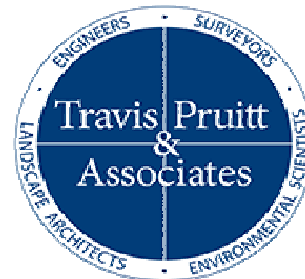
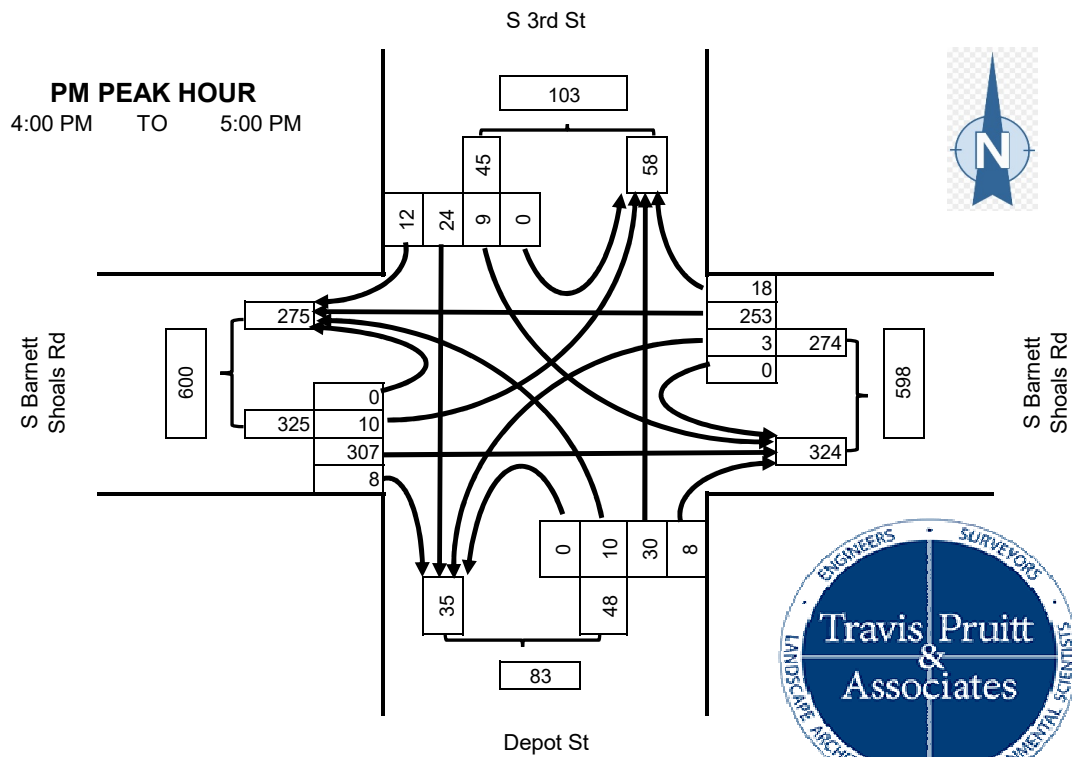
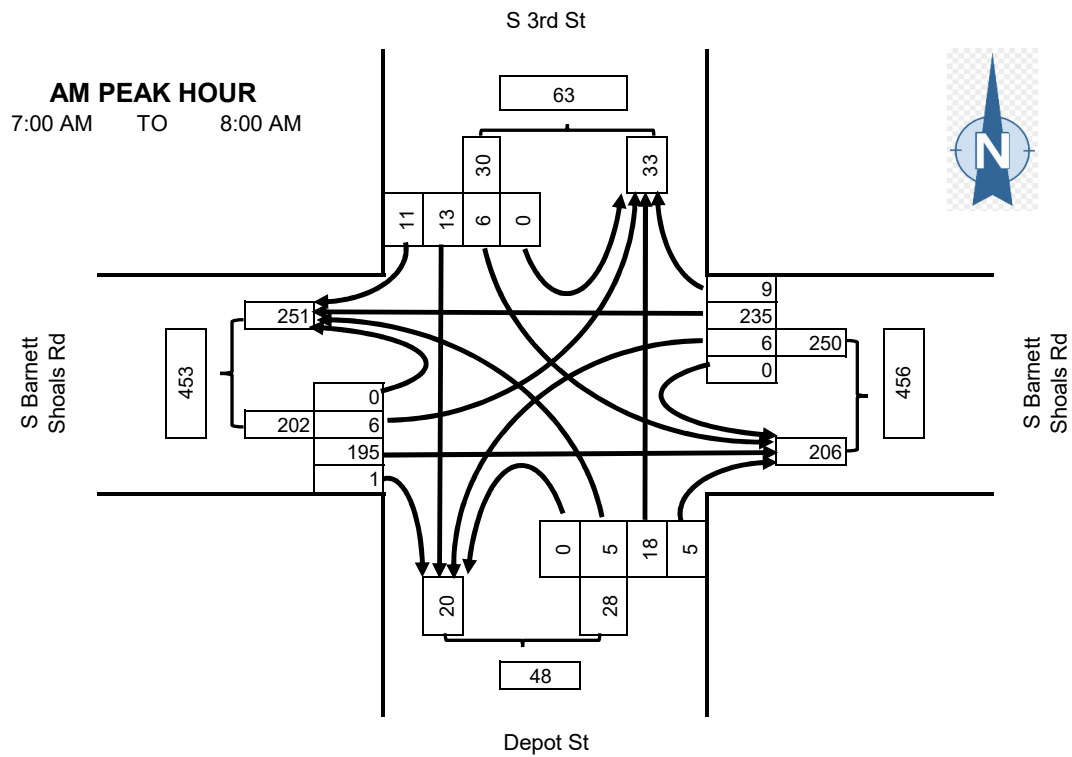
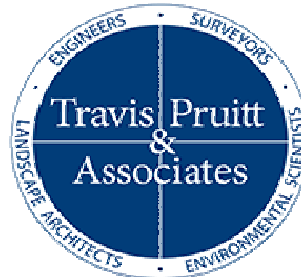
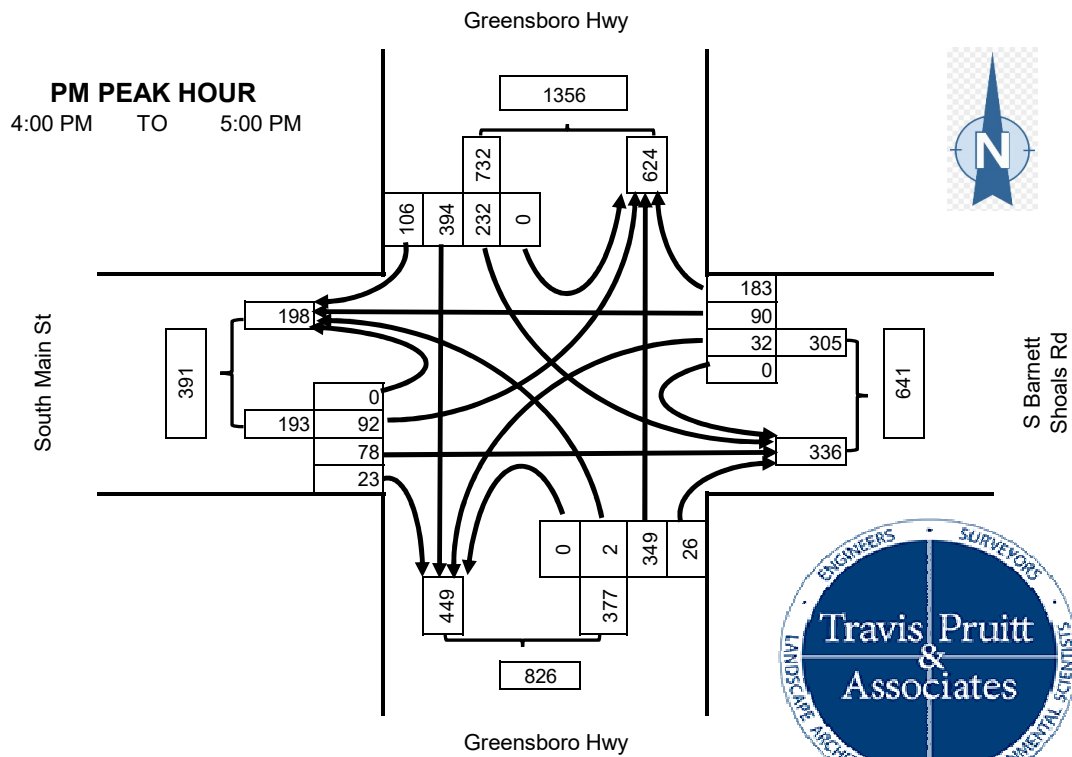
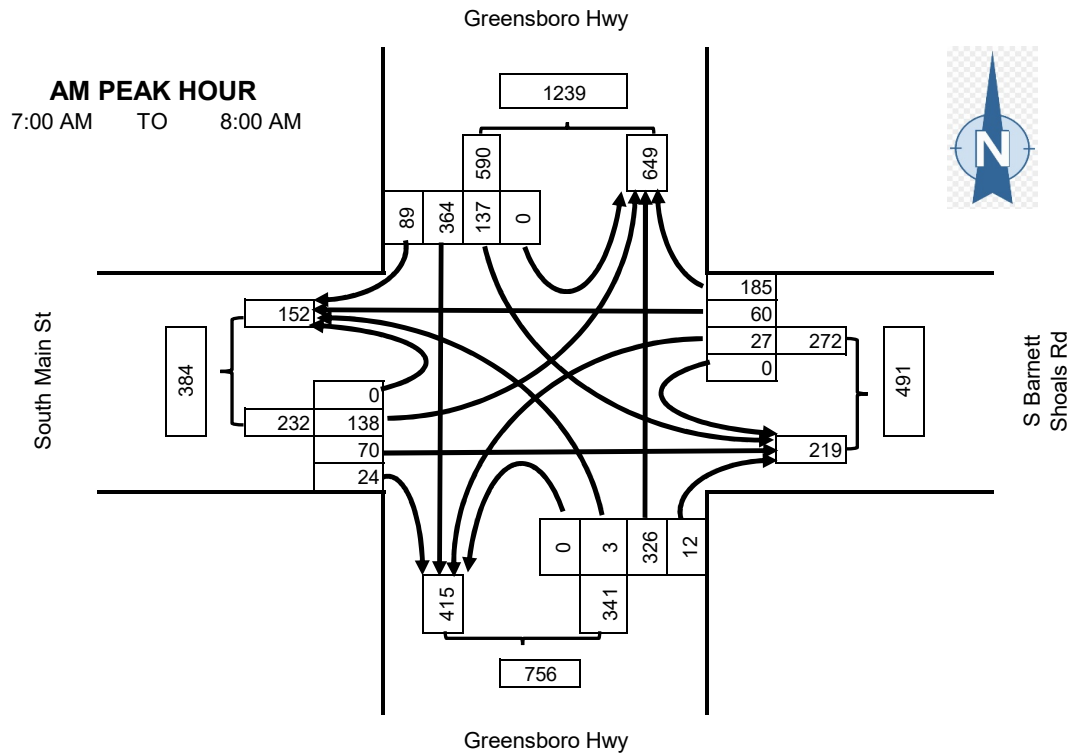


Figure 60

**EXISTING + BACKGROUND TRAFFIC
AM & PM PEAK HOUR TURNING MOVEMENTS**



61

EXISTING + BACKGROUND TRAFFIC

AM PEAK HOUR

7:00 AM TO 8:00 AM



South Main St

McRee St



PM PEAK HOUR

4:00 PM TO 5:00 PM



South Main St

McRee St

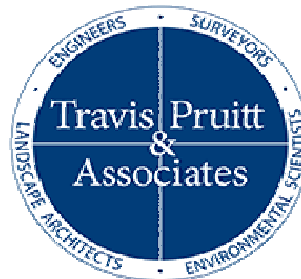
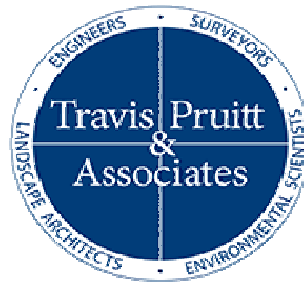
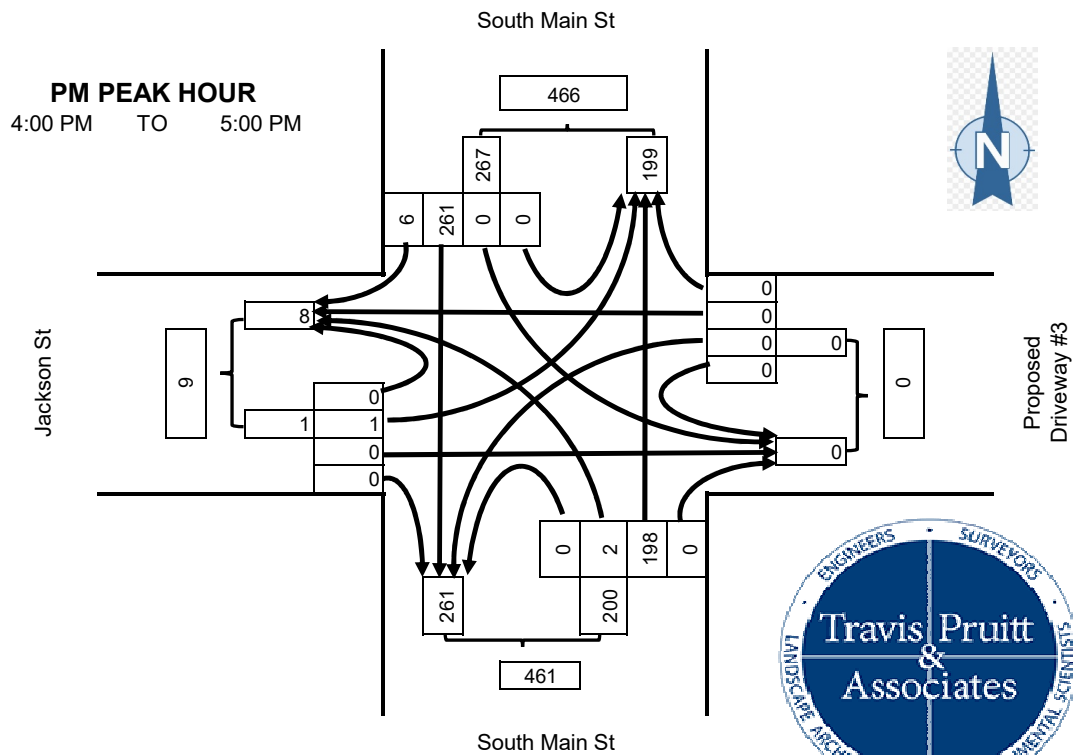
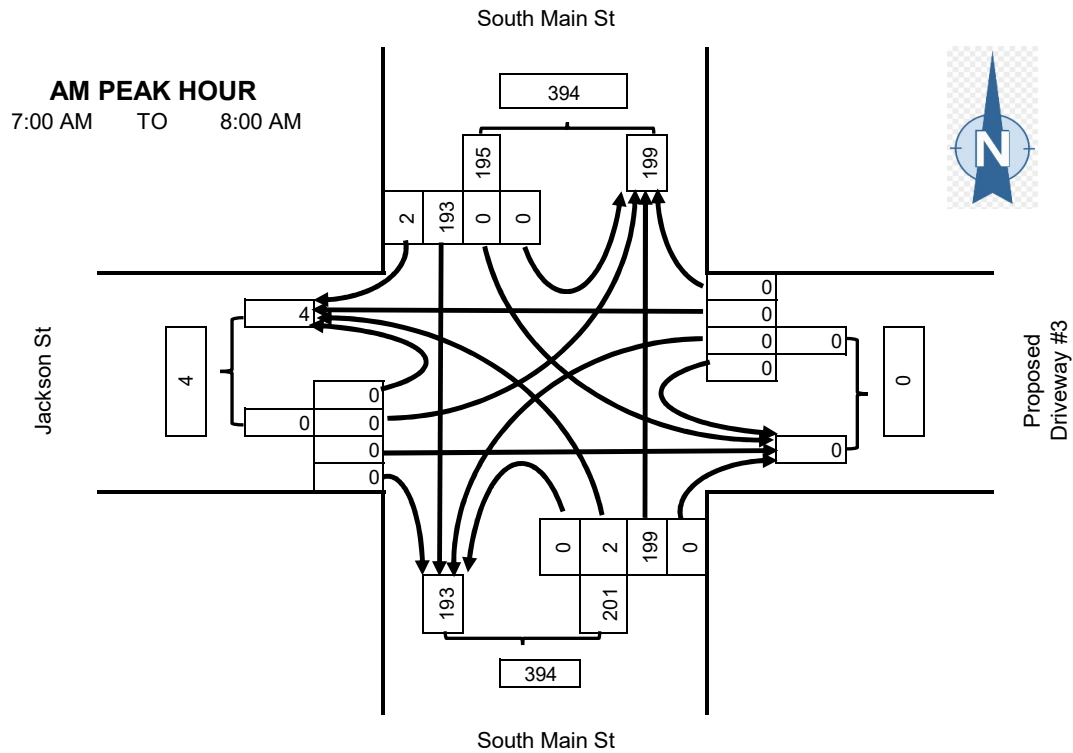


Figure 62

**EXISTING + BACKGROUND TRAFFIC
AM & PM PEAK HOUR TURNING MOVEMENTS**





XV. EXISTING PLUS BACKGROUND PLUS PROJECT CONDITIONS

In the Existing Plus Background Plus Project conditions, the existing traffic was increased at a rate of 1% per year for the 3-year project buildout period and the project traffic was distributed to the study intersections and re-analyzed to determine their levels of service. Note that the peak hour factor was set to 0.92 for all approaches in this condition. Figure 63– Figure 71 show the projected turning movements at each study intersection. Table 22 summarizes the projected LOS for each intersection based on these conditions. Calculation reports are included in Appendix.

Table 22. Levels of Service – Existing+Background+Project

INTERSECTION	CONTROL	APPROACH	LEVEL OF SERVICE (Approach Delay)			
			AM		PM	
			LOS	DELAY	LOS	DELAY
#1 Greensboro Highway / Proposed Driveway #1	Unsignalized	EB	C	15.4	C	18.8
		WB	N/A	N/A	N/A	N/A
		NB	A	0.3	A	0.4
		SB	A	0.3	A	0.0
#2 Greensboro Highway / Morrison Street	Unsignalized	EB	B	14.1	C	16.2
		WB	N/A	N/A	N/A	N/A
		NB	A	0.4	A	0.5
		SB	A	0.0	A	0.0
#3 Greensboro Highway / Industrial Boulevard	Unsignalized	EB	N/A	N/A	N/A	N/A
		WB	B	12.8	C	17.0
		NB	A	0.0	A	0.0
		SB	A	1.4	A	1.0
#4 Morrison Street / Proposed Driveway #2	Unsignalized	EB	A	8.8	A	8.9
		WB	N/A	N/A	N/A	N/A
		NB	A	0.7	A	1.4
		SB	A	0.0	A	0.0
#5 Greensboro Highway / McRee Street / Depot Street	Unsignalized	EB	N/A	N/A	N/A	N/A
		WB	C	16.9	C	22.3
		NB	A	0.6	A	0.7
		SB	A	0.2	A	0.2
#6 South Barnett Shoals Road / South 3rd Street / Depot Street	Unsignalized	EB	A	0.2	A	0.2
		WB	A	0.2	A	0.1
		NB	B	13.2	C	16.6
		SB	B	12.6	C	16.1
#7 South Main Street / South Barnett Shoals	Signalized	NWB	B	17.6	C	21.3
		WB	A	9.8	B	12.6
		NB	C	30.9	C	28.6



Road / Greensboro Highway		SB	B	14.4	B	16.5
		Intersection LOS	B	17.0	B	18.4
#8 South Main Street / McRee Street	Unsignalized	EB	N/A	N/A	N/A	N/A
		WB	B	11.2	B	12.4
		NB	A	0.0	A	0.0
		SB	A	0.0	A	0.0
#9 South Main Street / Jackson Street	Unsignalized	EB	N/A	N/A	N/A	N/A
		WB	B	11.6	B	13.0
		NB	A	0.1	A	0.1
		SB	A	0.3	A	0.5

Analysis:

In the Existing Plus Background Plus Project traffic conditions, all intersections continue to function at acceptable levels of service in both the AM and PM peak hours with the addition of the project traffic.

63

EXISTING + BACKGROUND + PROJECT TRAFFIC

AM PEAK HOUR

7:45 AM TO 8:45 AM



PM PEAK HOUR

7:45 PM TO 8:45 PM

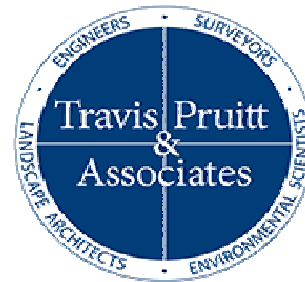


Figure 64

**EXISTING + BACKGROUND + PROJECT TRAFFIC
AM & PM PEAK HOUR TURNING MOVEMENTS**

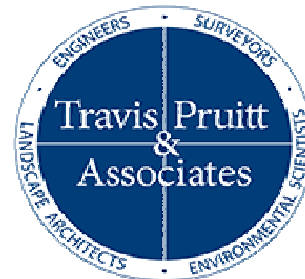
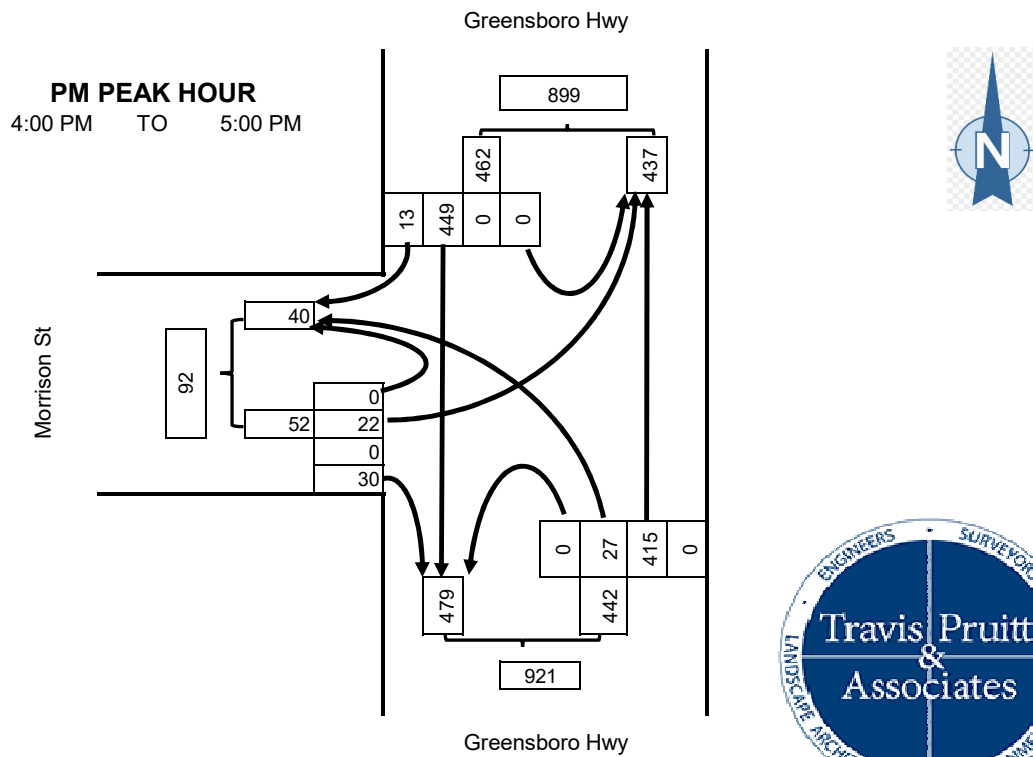
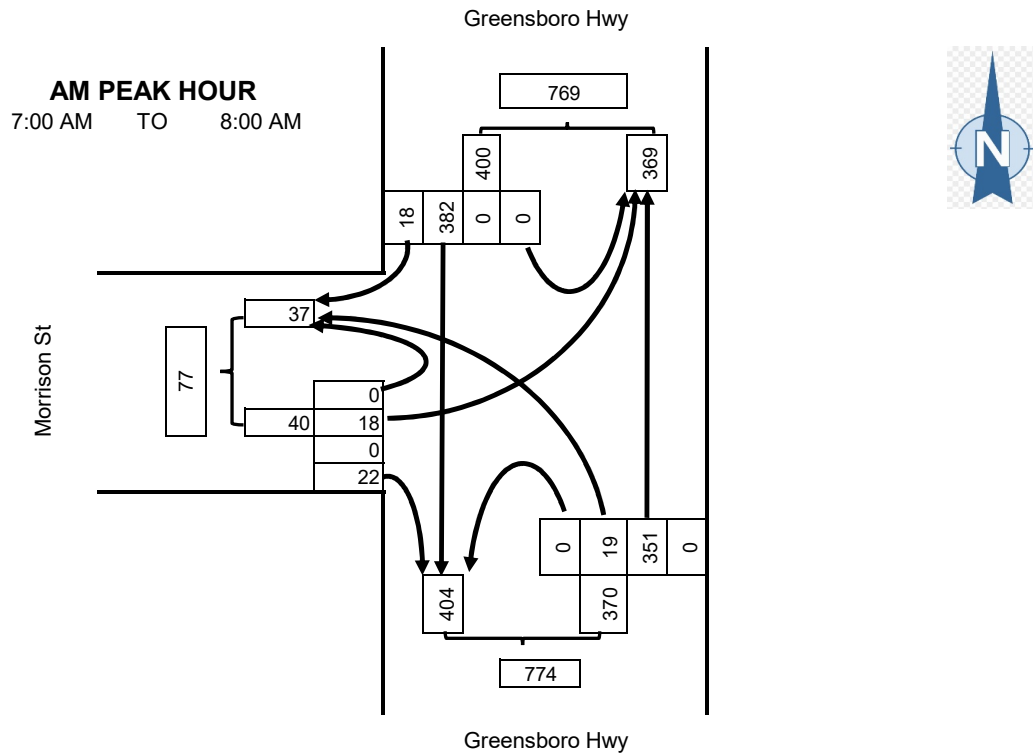
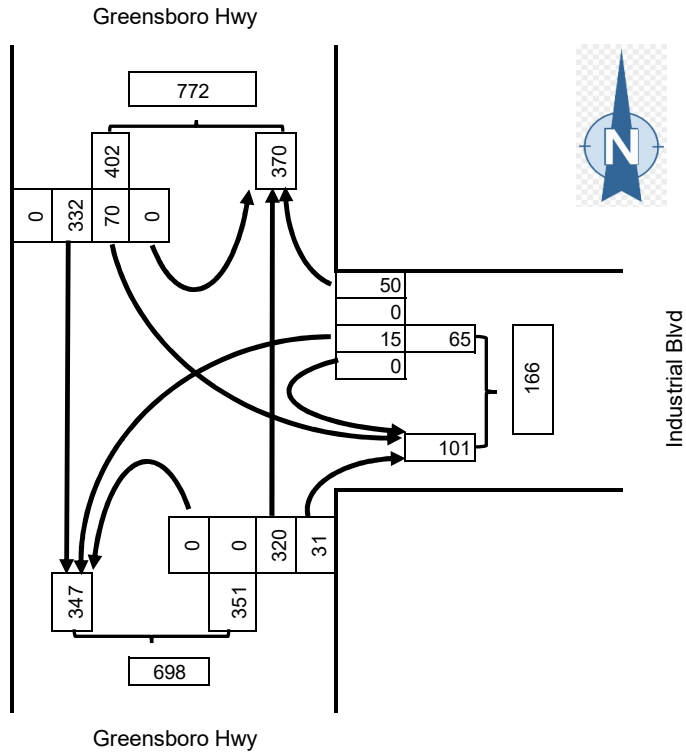


Figure 65

**EXISTING + BACKGROUND + PROJECT TRAFFIC
AM & PM PEAK HOUR TURNING MOVEMENTS**

AM PEAK HOUR
7:00 AM TO 8:00 AM



PM PEAK HOUR
4:00 PM TO 5:00 PM

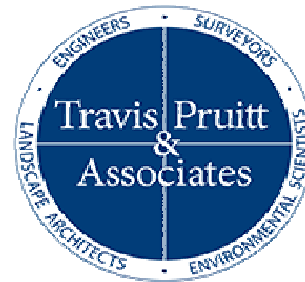
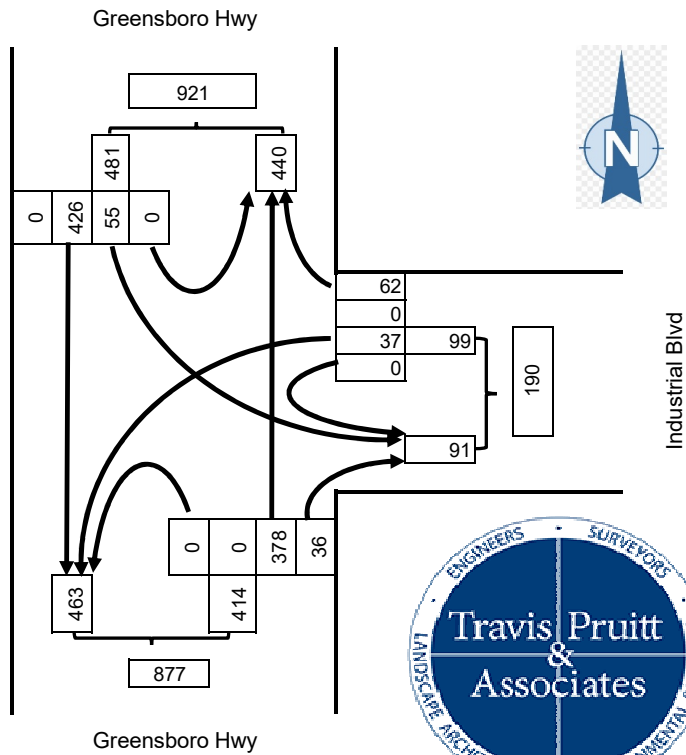


Figure 66

EXISTING + BACKGROUND + PROJECT TRAFFIC
AM & PM PEAK HOUR TURNING MOVEMENTS

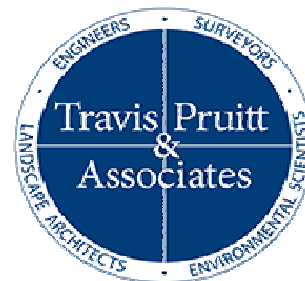
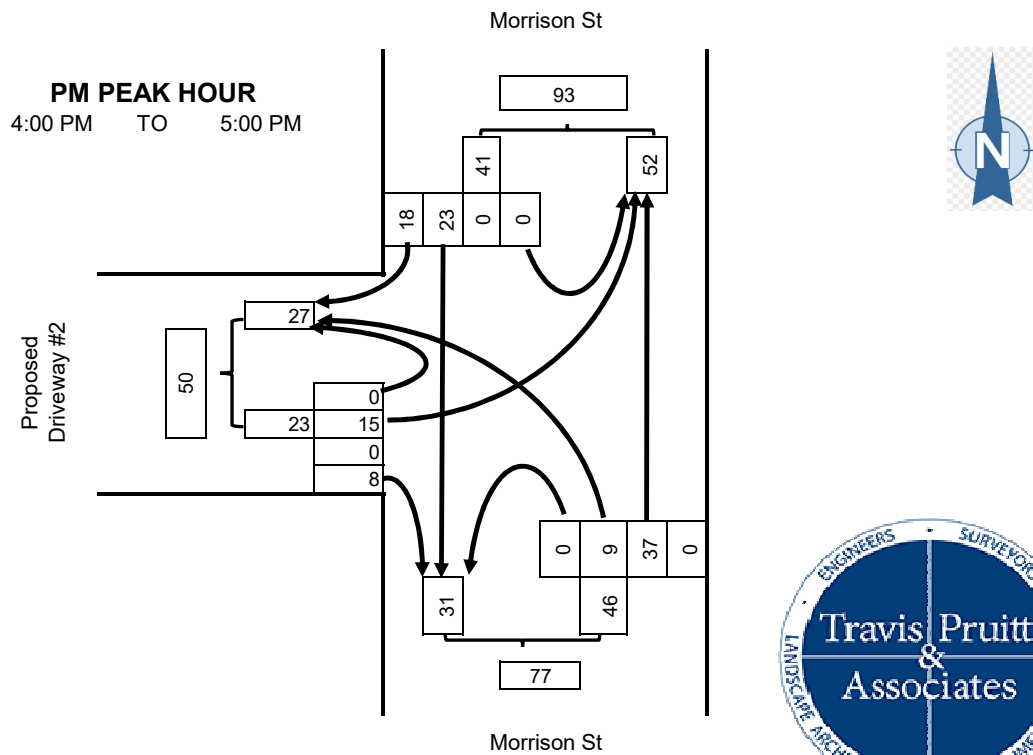
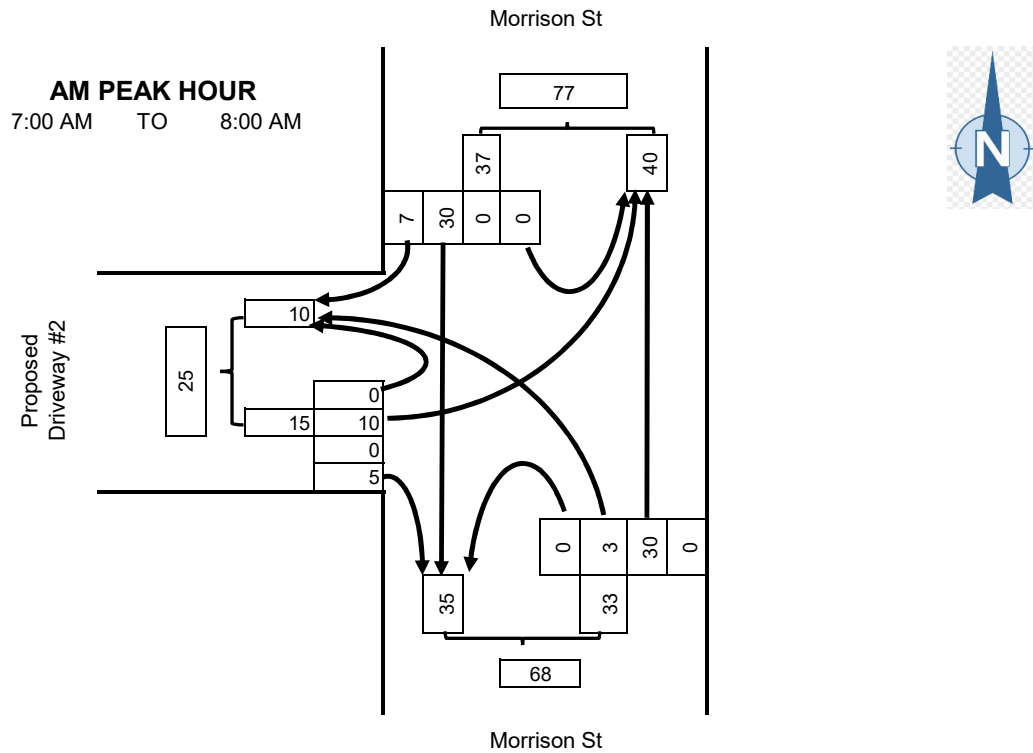


Figure 67

**EXISTING + BACKGROUND + PROJECT TRAFFIC
AM & PM PEAK HOUR TURNING MOVEMENTS**

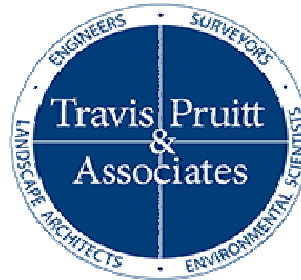
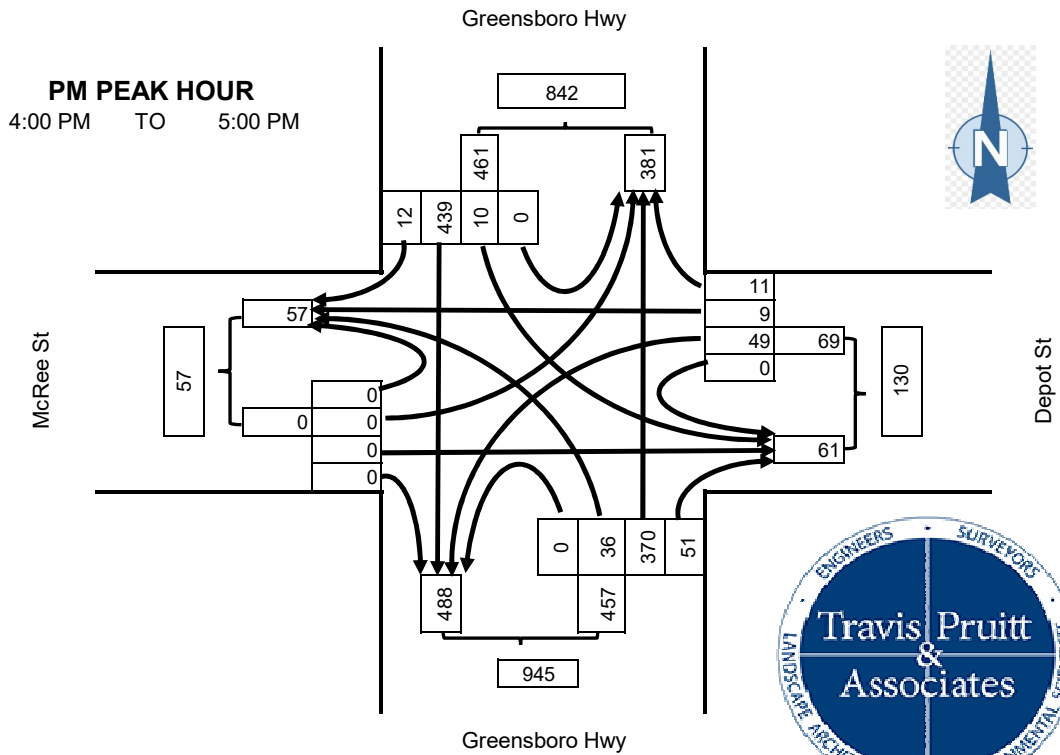
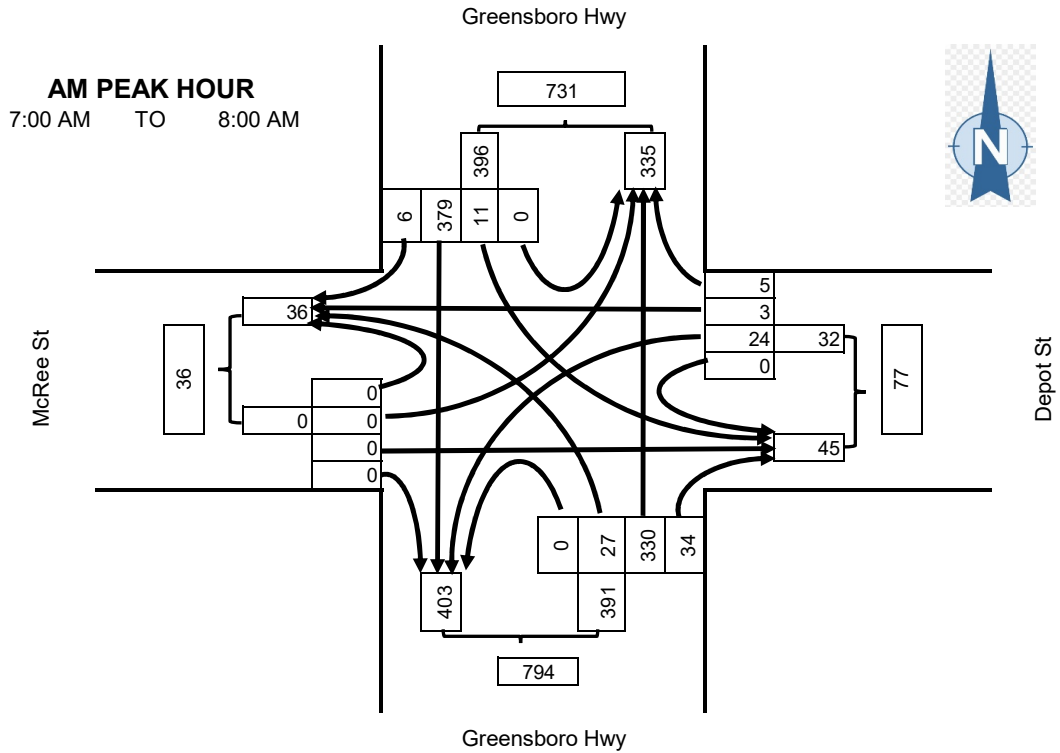


Figure 68

EXISTING + BACKGROUND + PROJECT TRAFFIC
AM & PM PEAK HOUR TURNING MOVEMENTS

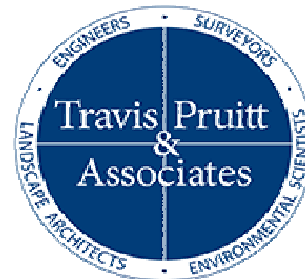
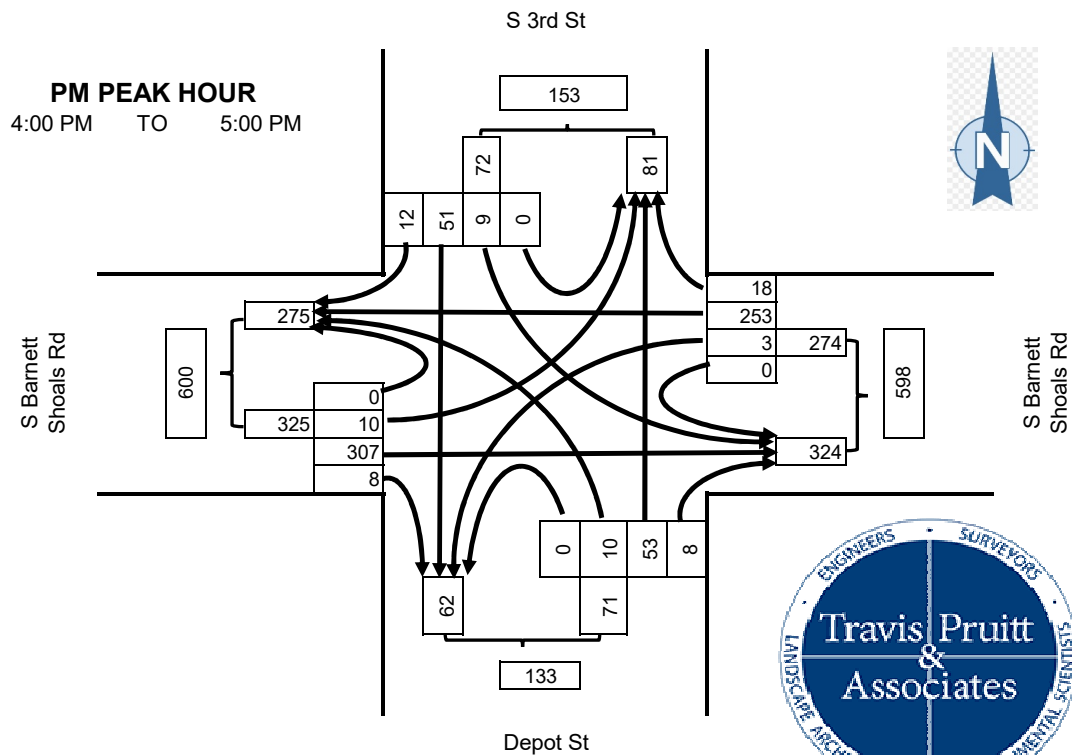
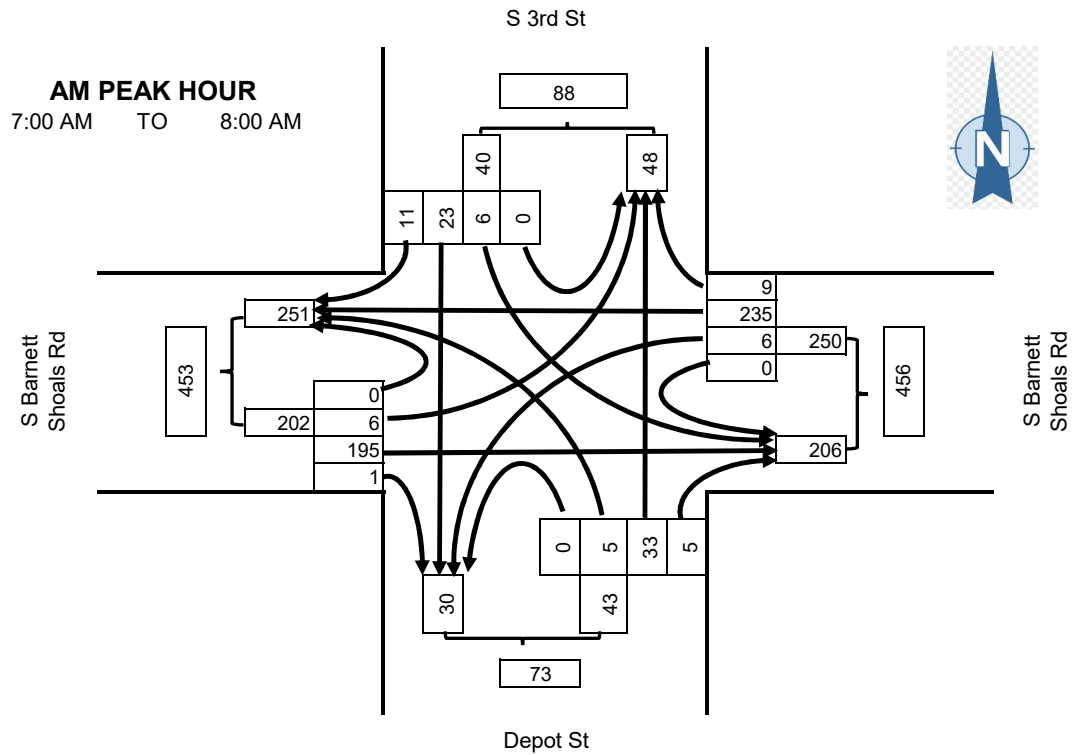


Figure 69

**EXISTING + BACKGROUND + PROJECT TRAFFIC
AM & PM PEAK HOUR TURNING MOVEMENTS**

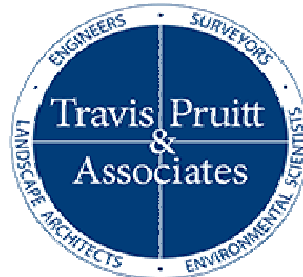
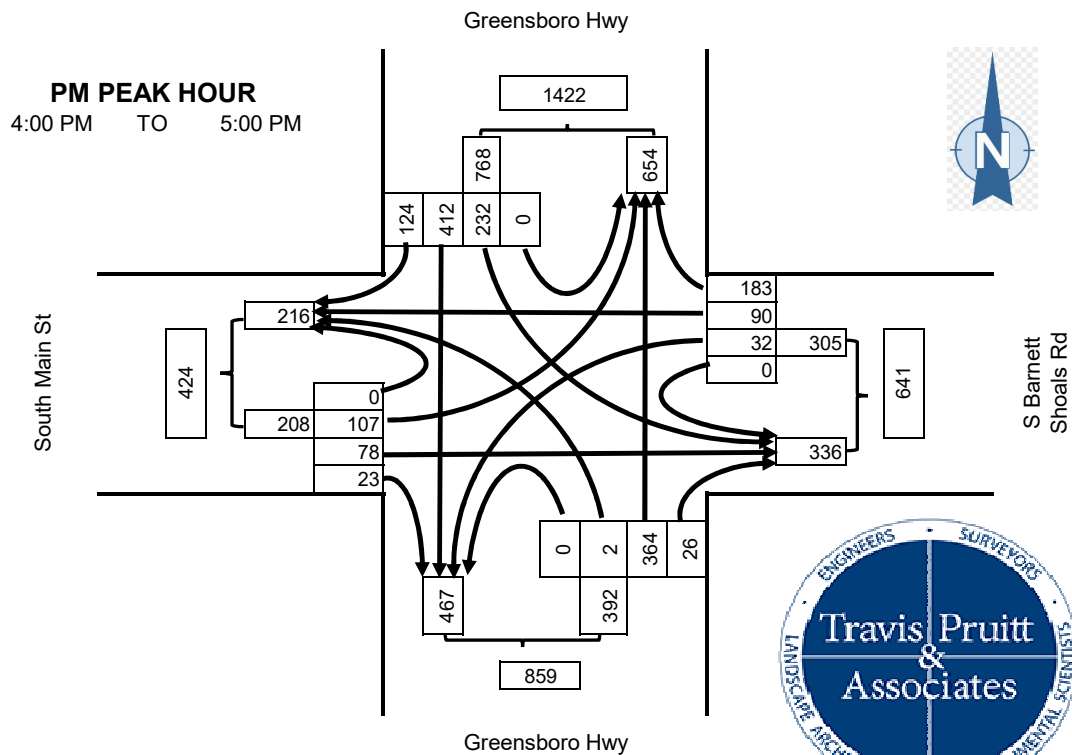
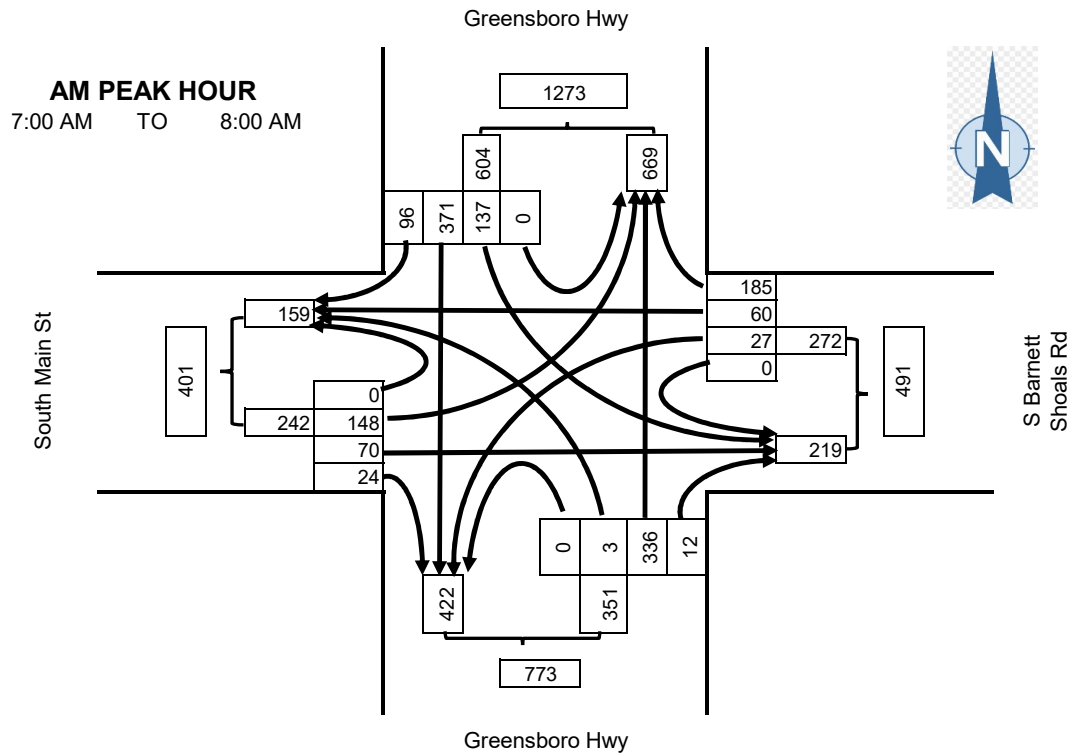
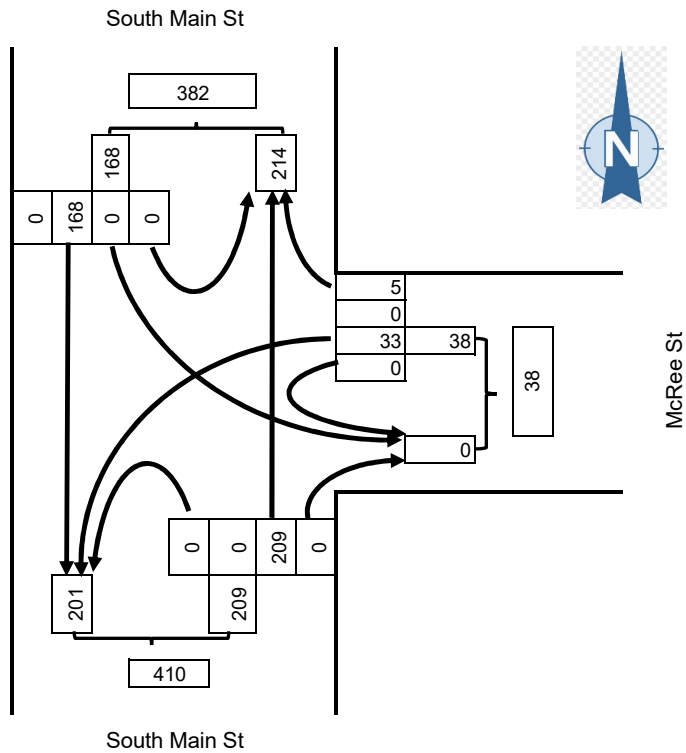


Figure 70

EXISTING + BACKGROUND + PROJECT TRAFFIC
AM & PM PEAK HOUR TURNING MOVEMENTS

AM PEAK HOUR
7:00 AM TO 8:00 AM



PM PEAK HOUR
4:00 PM TO 5:00 PM

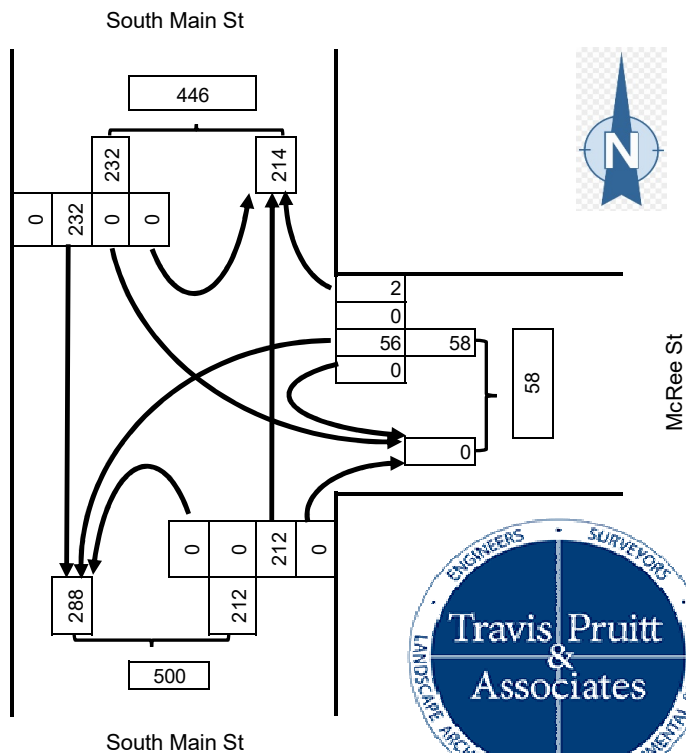
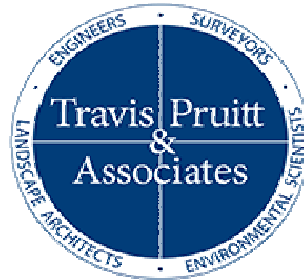
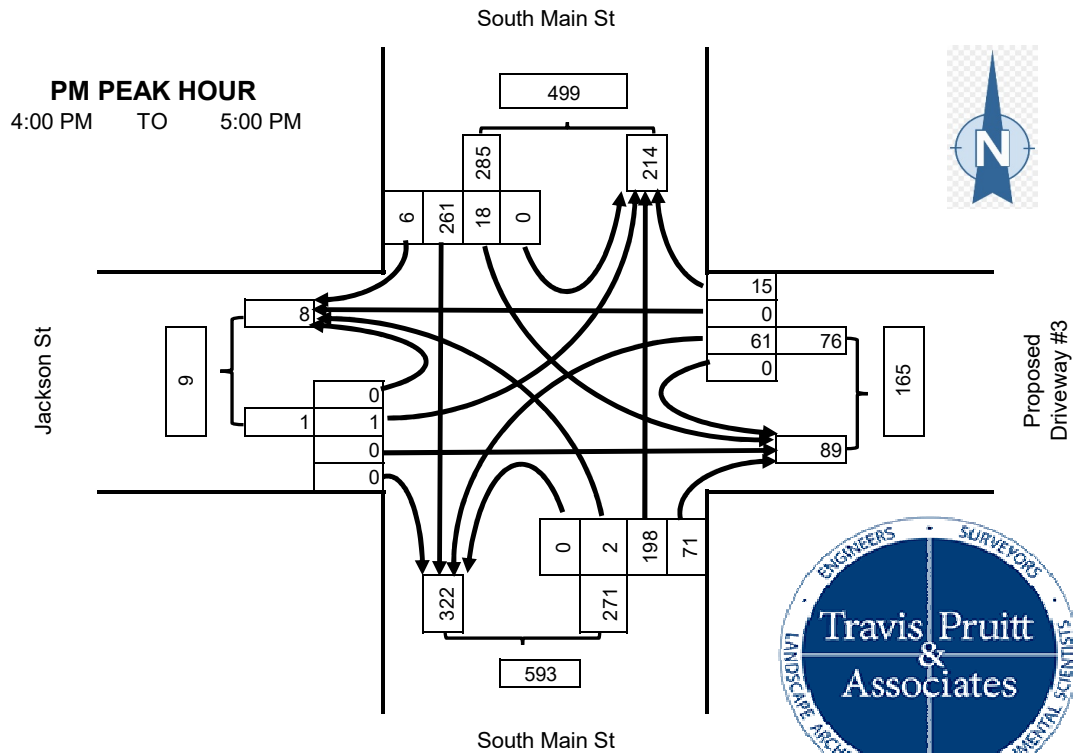
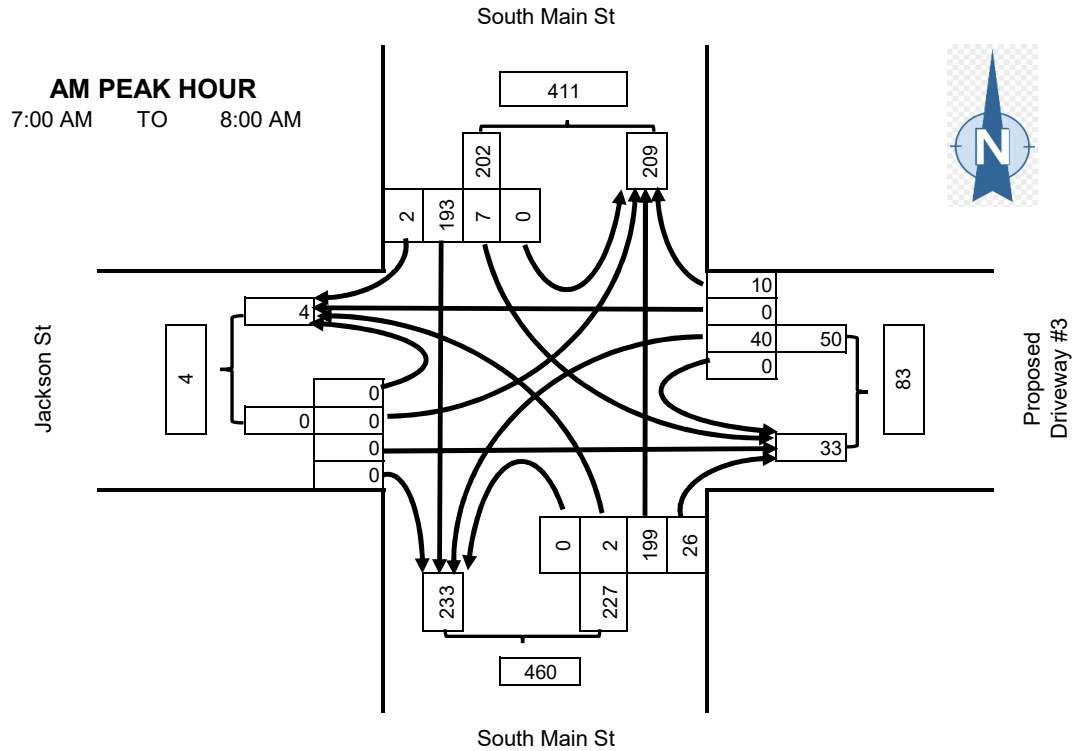


Figure 71

EXISTING + BACKGROUND + PROJECT TRAFFIC
AM & PM PEAK HOUR TURNING MOVEMENTS





XVI. QUEUE LENGTHS

Queue lengths for each leg of the study intersections were calculated based on the Existing Plus Background Plus Project traffic. These queue lengths are show in Table 23 - Table 31 and calculations are included in Appendix. All queue lengths are in feet and represent the 95% queue lengths.

Table 23. #1 Greensboro Highway / Proposed Driveway #1

Existing + Background + Project Conditions											
	EB			WB			NB			SB	
		LR						LT		T	R
AM		7.5						2.5		0	0
PM		12.5						2.5		0	0

Analysis

Queue lengths are less than the available storage.

Table 24. #2 Greensboro Highway / Morrison Street

Existing + Background + Project Conditions											
	EB			WB			NB			SB	
		LR						LT		TR	
AM		7.5						2.5		0	
PM		12.5						2.5		0	

Analysis

Queue lengths are less than the available storage.

Table 25. #3 Greensboro Highway / Industrial Boulevard

Existing + Background + Project Conditions											
	EB			WB			NB			SB	
					LR			T	R		LT
AM					12.5			0	0		5
PM					27.5			0	0		5

Analysis

Queue lengths are less than the available storage.



Table 26. #4 Morrison Street / Proposed Driveway #2

Existing + Background + Project Conditions											
	EB			WB			NB			SB	
		LR						LT			TR
AM		10						0			0
PM		2.5						0			0

Analysis

Queue lengths are less than the available storage.

Table 27. #5 Greensboro Highway / McRee Street / Depot Street

Existing + Background + Project Conditions											
	EB			WB			NB			SB	
					LTR			LTR			R
AM					7.5			2.5		0	0
PM					25			2.5		0	0

Analysis

Queue lengths are less than the available storage.

Table 28. #6 South Barnett Shoals Road / South 3rd Street / Depot Street

Existing + Background + Project Conditions											
	EB			WB			NB			SB	
		LTR			LTR			LTR			LTR
AM		0			0			7.5			7.5
PM		0			0			17.5			17.5

Analysis

Queue lengths are less than the available storage.

Table 29. #7 South Main Street / South Barnett Shoals Road / Greensboro Highway

Existing + Background + Project Conditions											
	NWB			WB			NB			SB	
		LTR		LT		R		LTR		L	T
AM		191		80		0		181		80	298
PM		272		106		0		162		140	427

Analysis

Queue lengths are less than the available storage.



Table 30. #8 South Main Street / McRee Street

Existing + Background + Project Conditions											
	EB			WB			NB			SB	
					LTR			T			T
AM					5			0			0
PM					10			0			0

Analysis

Queue lengths are less than the available storage.

Table 31. #9 South Main Street / Jackson Street

Existing + Background + Project Conditions											
	EB			WB			NB			SB	
					LTR			LT	R		TR
AM					7.5			0	0		0
PM					12.5			0	0		0

Analysis

Queue lengths are less than the available storage.



XVII. EXISTING PLUS BACKGROUND (5 YEARS AFTER BUILDOUT) PLUS PROJECT CONDITIONS

In the Existing Plus Background (5 years after buildout) Plus Project conditions, the existing traffic was increased at a rate of 1% per year for the 3-year project buildout period then grown for an additional 5 years after the project has been built out before the project traffic is added and re-analyzed to determine the levels of service. Note that the peak hour factor was set to 0.92 for all approaches in this condition. Figure 72 – Figure 80 show the projected turning movements at each study intersection. Table 32 summarizes the projected LOS for each intersection based on these conditions. Calculation reports are included in Appendix.

Table 32. Levels of Service – Existing+B5+Project

INTERSECTION	CONTROL	APPROACH	LEVEL OF SERVICE (Approach Delay)			
			AM		PM	
			LOS	DELAY	LOS	DELAY
#1 Greensboro Highway / Proposed Driveway #1	Unsignalized	EB	C	16.0	C	19.9
		WB	N/A	N/A	N/A	N/A
		NB	A	0.2	A	0.3
		SB	A	0.0	A	0.0
#2 Greensboro Highway / Morrison Street	Unsignalized	EB	B	14.5	C	17.1
		WB	N/A	N/A	N/A	N/A
		NB	A	0.4	A	0.5
		SB	A	0.0	A	0.0
#3 Greensboro Highway / Industrial Boulevard	Unsignalized	EB	N/A	N/A	N/A	N/A
		WB	B	13.3	C	18.2
		NB	A	0.0	A	0.0
		SB	A	1.4	A	1.0
#4 Morrison Street / Proposed Driveway #2	Unsignalized	EB	A	8.8	A	8.9
		WB	N/A	N/A	N/A	N/A
		NB	A	0.6	A	1.4
		SB	A	0.0	A	0.0
#5 Greensboro Highway / McRee Street / Depot Street	Unsignalized	EB	N/A	N/A	N/A	N/A
		WB	C	17.8	C	24.7
		NB	A	0.6	A	0.7
		SB	A	0.2	A	0.2
#6 South Barnett Shoals Road / South 3rd Street / Depot Street	Unsignalized	EB	A	0.2	A	0.2
		WB	A	0.2	A	0.1
		NB	B	13.5	C	17.4
		SB	B	12.9	C	16.9
#7 South Main Street / South Barnett Shoals	Signalized	NWB	B	18.5	C	23.2
		WB	A	9.7	B	12.7
		NB	C	31.6	C	29.4



Road / Greensboro Highway		SB	B	15.4	B	17.8
		Intersection LOS	B	17.7	B	19.6
#8 South Main Street / McRee Street	Unsignalized	EB	N/A	N/A	N/A	N/A
		WB	B	11.4	B	12.7
		NB	A	0.0	A	0.0
		SB	A	0.0	A	0.0
#9 South Main Street / Jackson Street	Unsignalized	EB	N/A	N/A	N/A	N/A
		WB	B	11.8	B	13.3
		NB	A	0.1	A	0.1
		SB	A	0.3	A	0.5

Analysis:

In the Existing Plus Background (5 years after buildout) Plus Project traffic conditions, all intersections continue to function at acceptable levels of service in both the AM and PM peak hours with the addition of the project traffic 5 years after project buildout.

Figure 72

**EXISTING + BACKGROUND @ 8 YEARS + PROJECT
AM & PM PEAK HOUR TURNING MOVEMENTS**

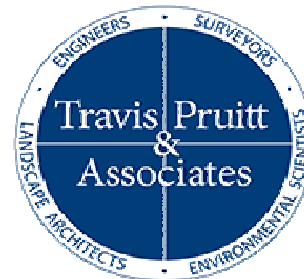
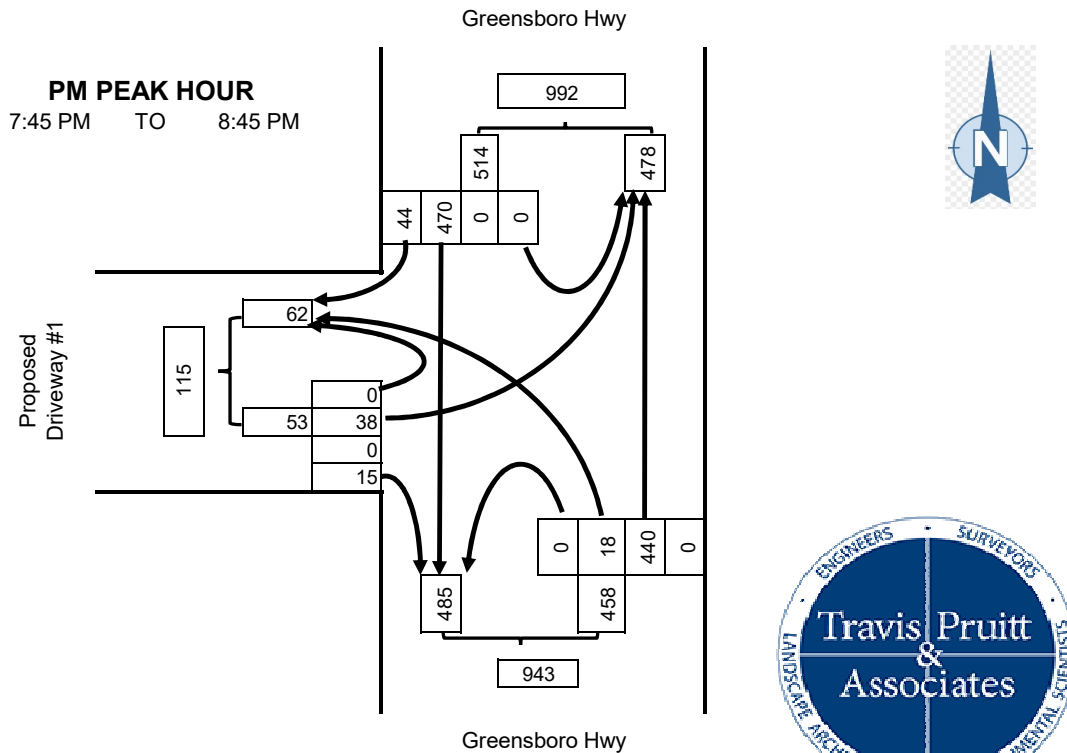
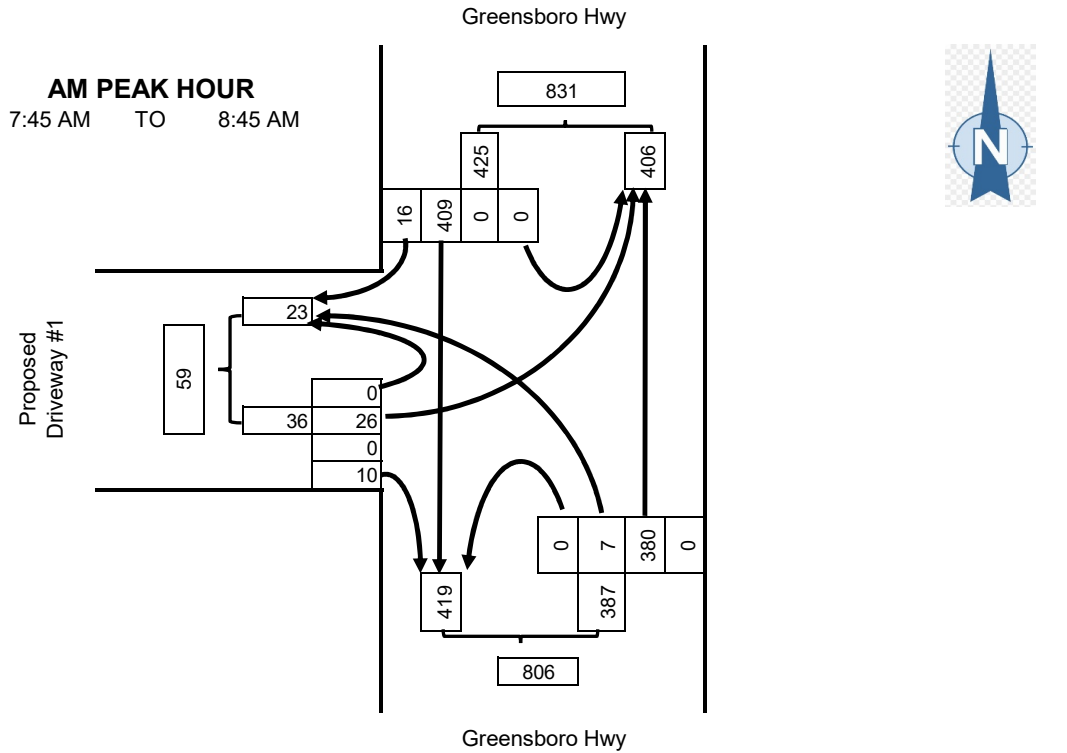


Figure 73

EXISTING + BACKGROUND @ 8 YEARS + PROJECT
AM & PM PEAK HOUR TURNING MOVEMENTS

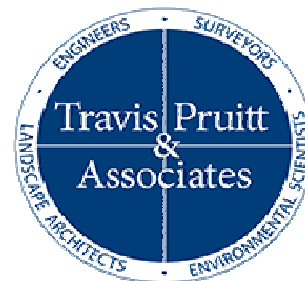
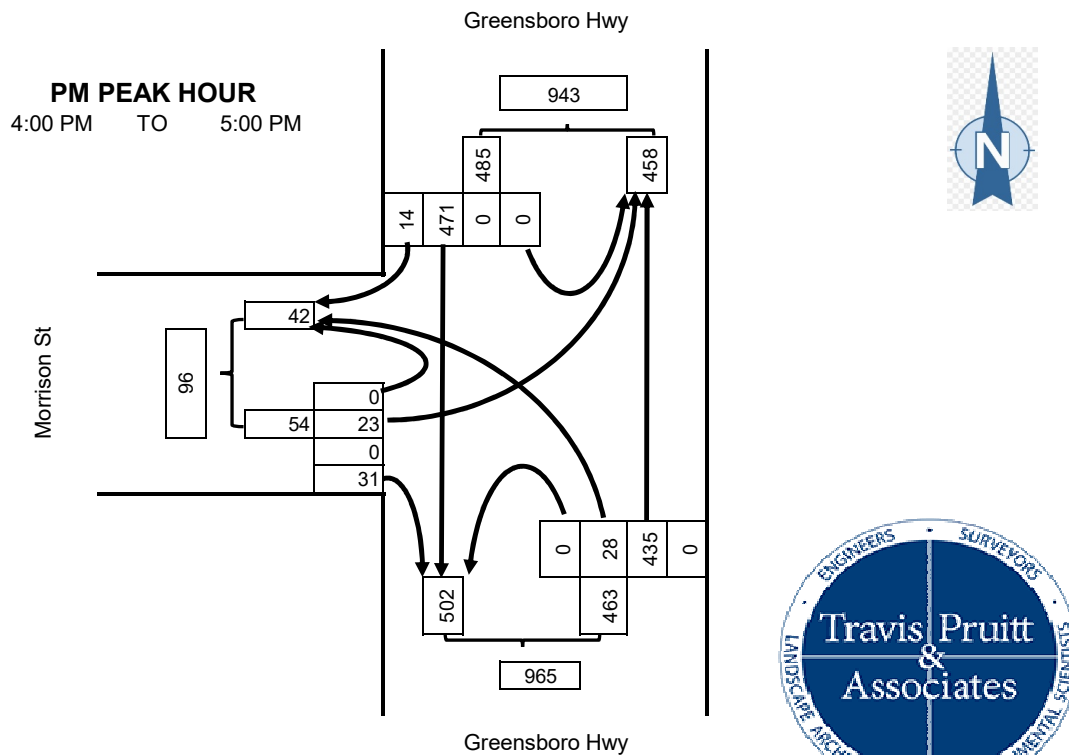
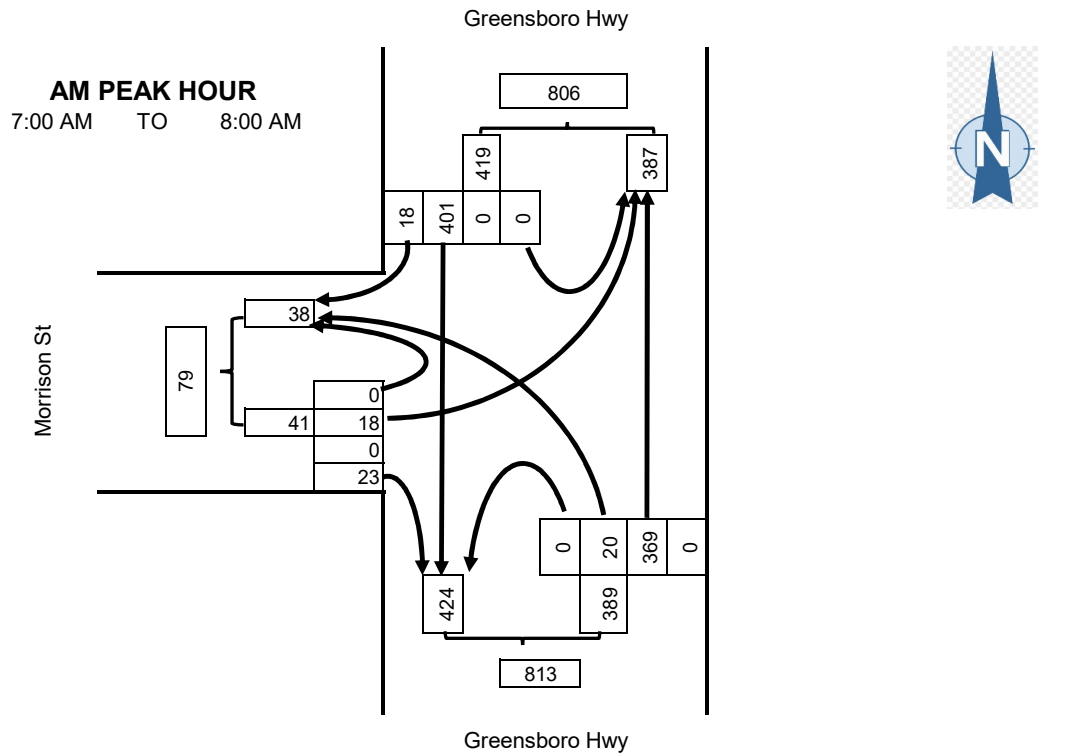
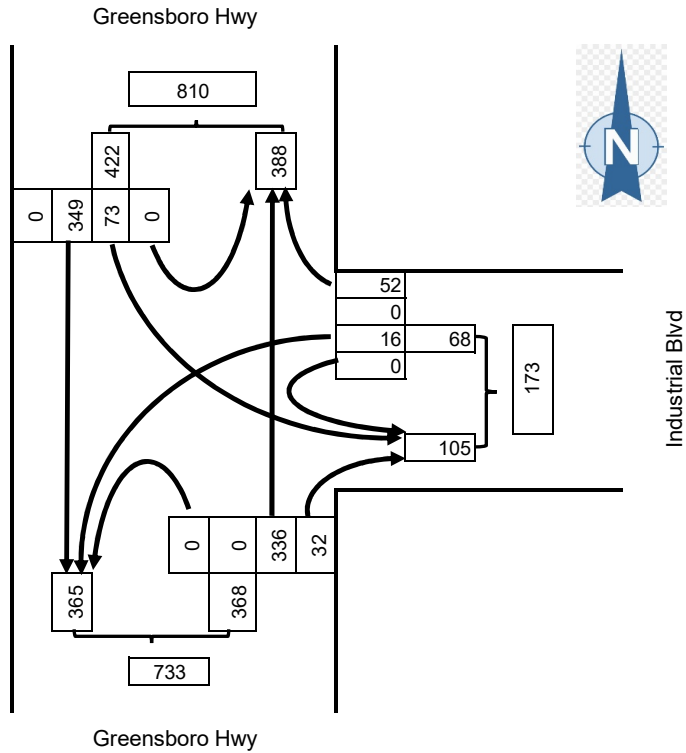


Figure 74

**EXISTING + BACKGROUND @ 8 YEARS + PROJECT
AM & PM PEAK HOUR TURNING MOVEMENTS**

AM PEAK HOUR
7:00 AM TO 8:00 AM



PM PEAK HOUR
4:00 PM TO 5:00 PM

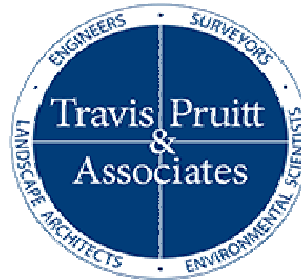
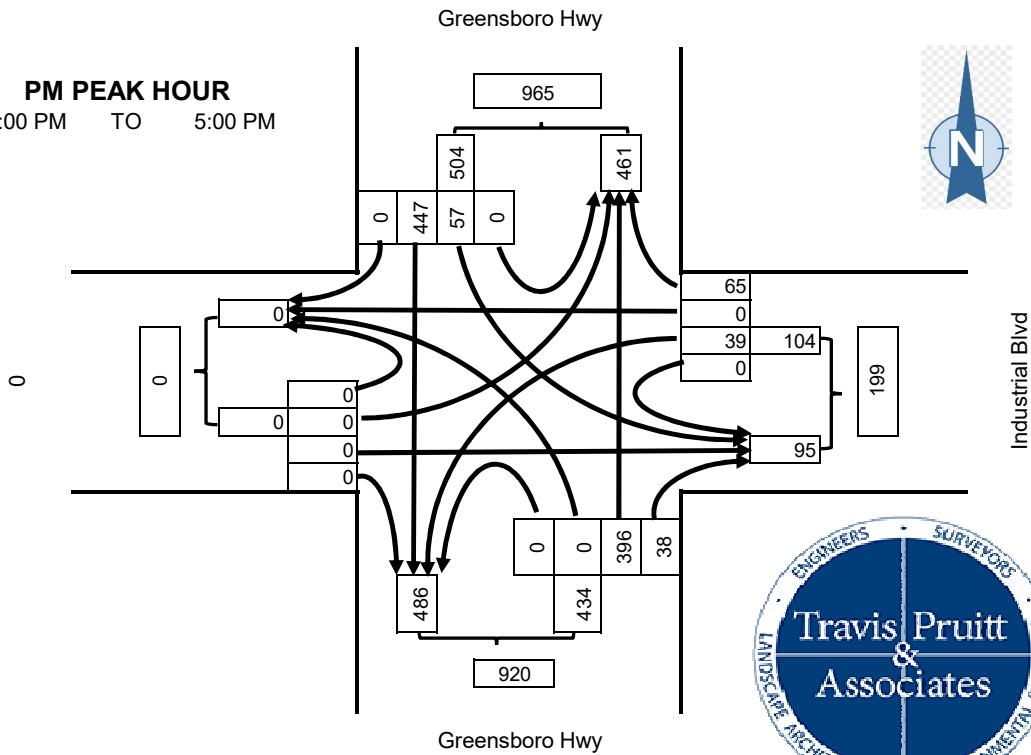


Figure 75

EXISTING + BACKGROUND @ 8 YEARS + PROJECT
AM & PM PEAK HOUR TURNING MOVEMENTS

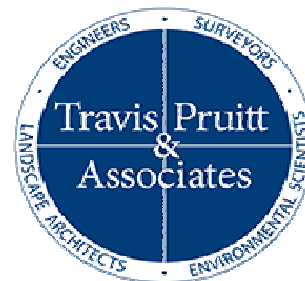
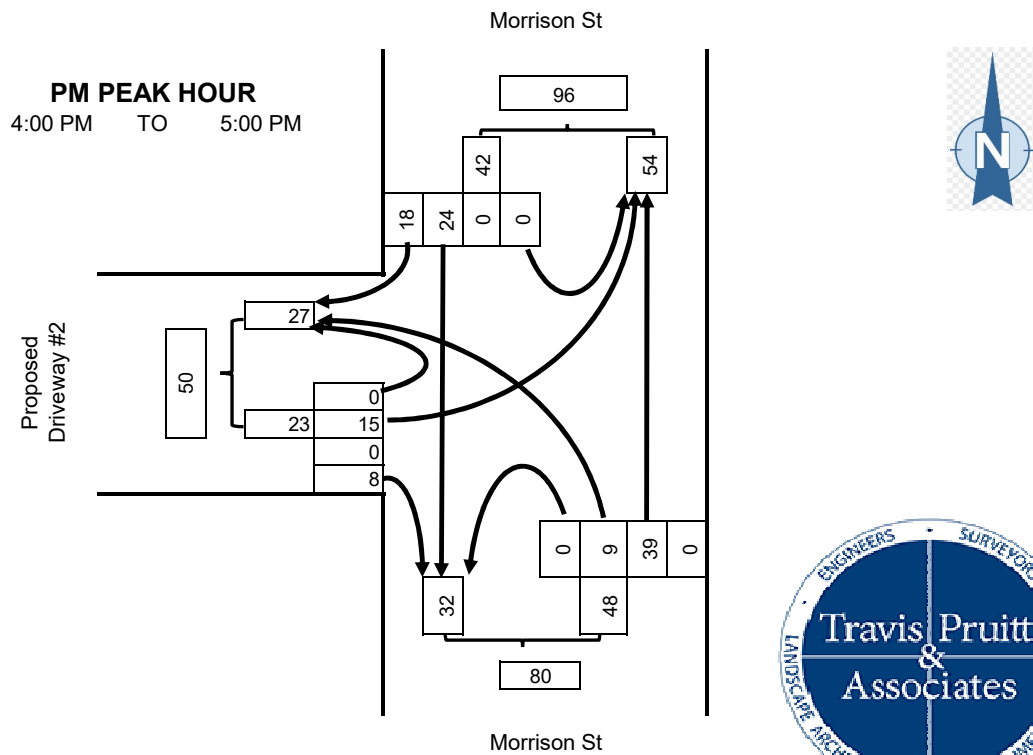
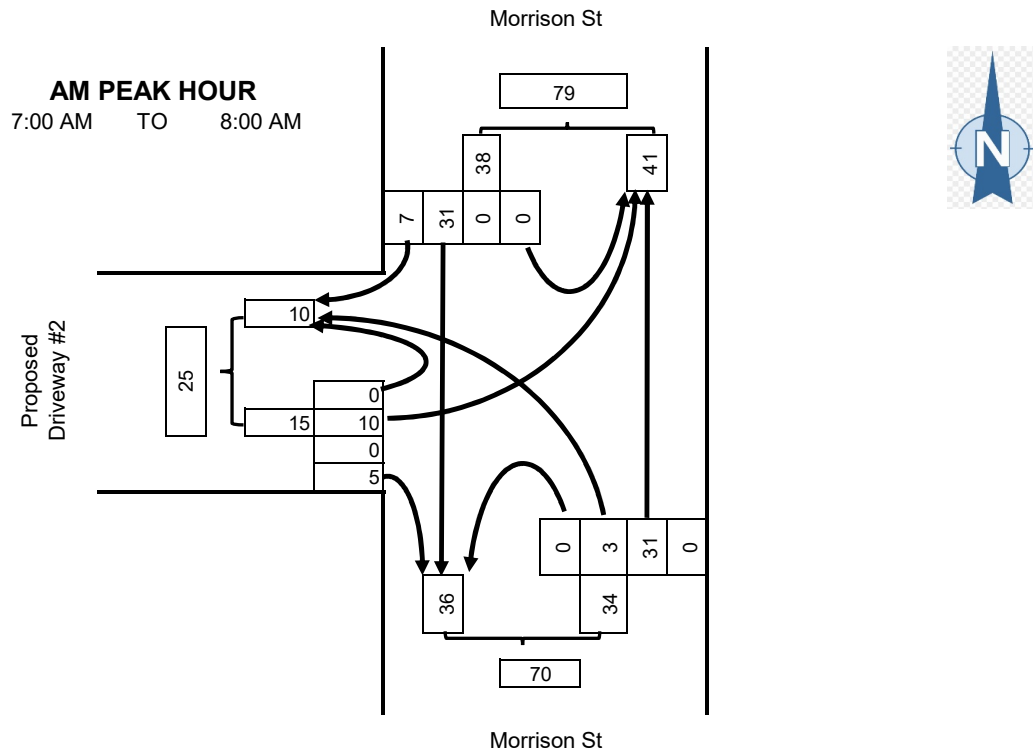


Figure 76

EXISTING + BACKGROUND @ 8 YEARS + PROJECT
AM & PM PEAK HOUR TURNING MOVEMENTS

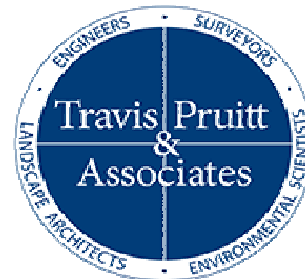
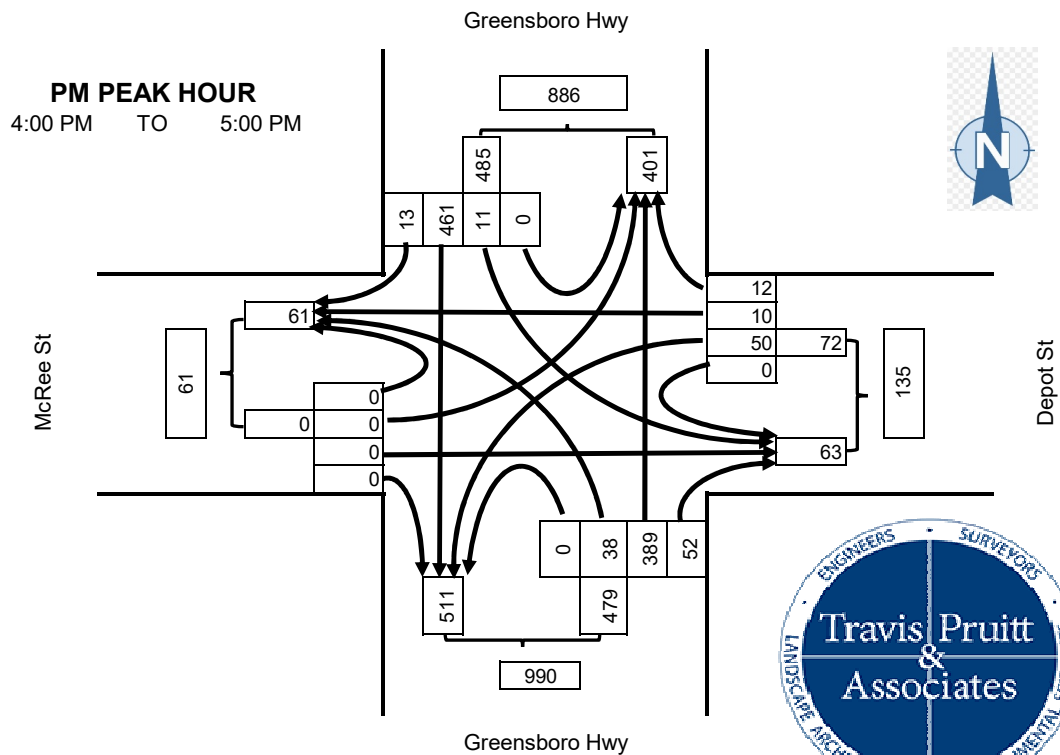
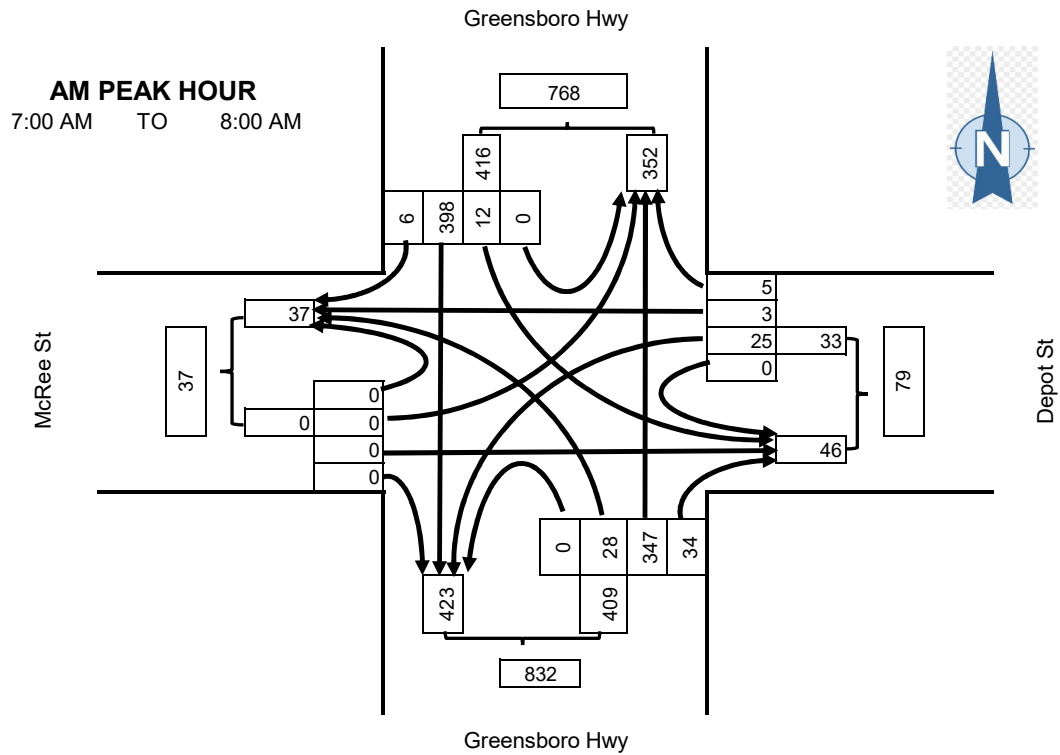


Figure 77

EXISTING + BACKGROUND @ 8 YEARS + PROJECT
AM & PM PEAK HOUR TURNING MOVEMENTS

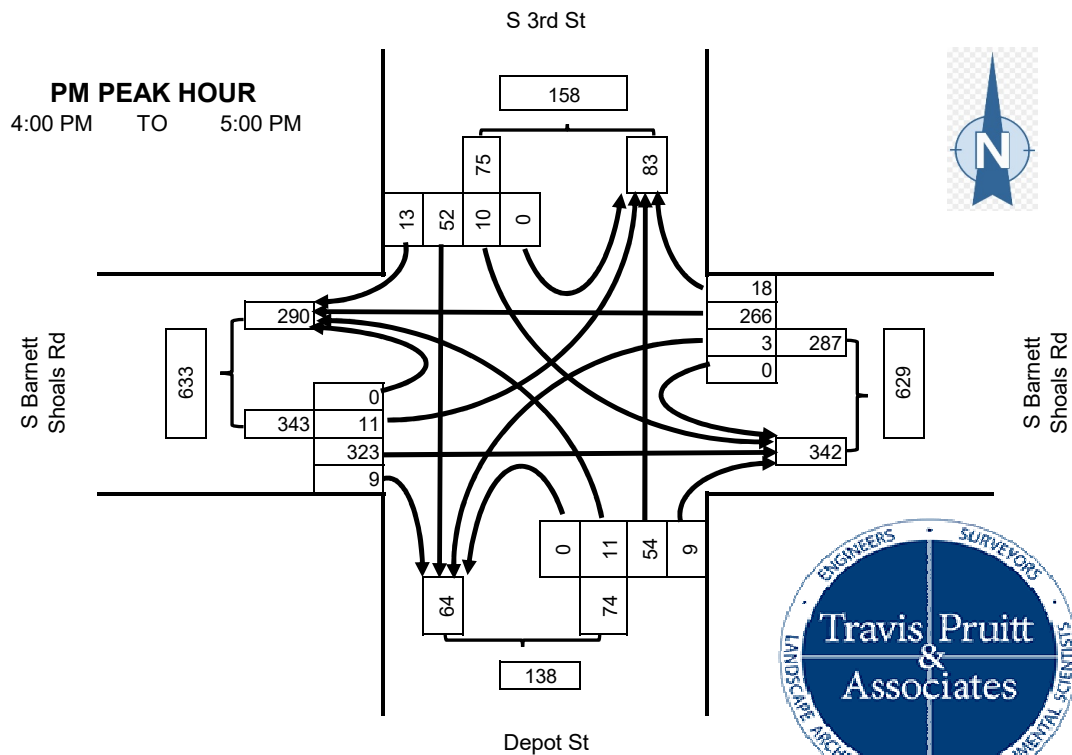
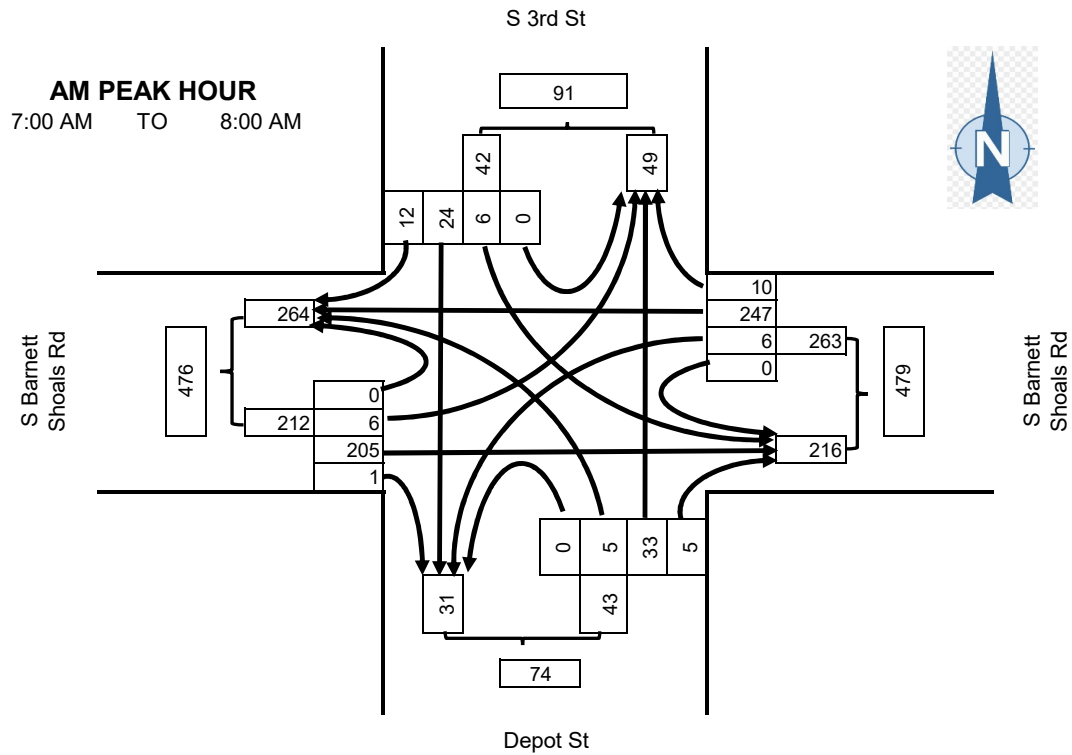


Figure 78

**EXISTING + BACKGROUND @ 8 YEARS + PROJECT
AM & PM PEAK HOUR TURNING MOVEMENTS**

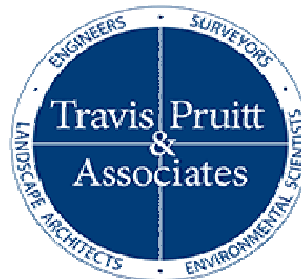
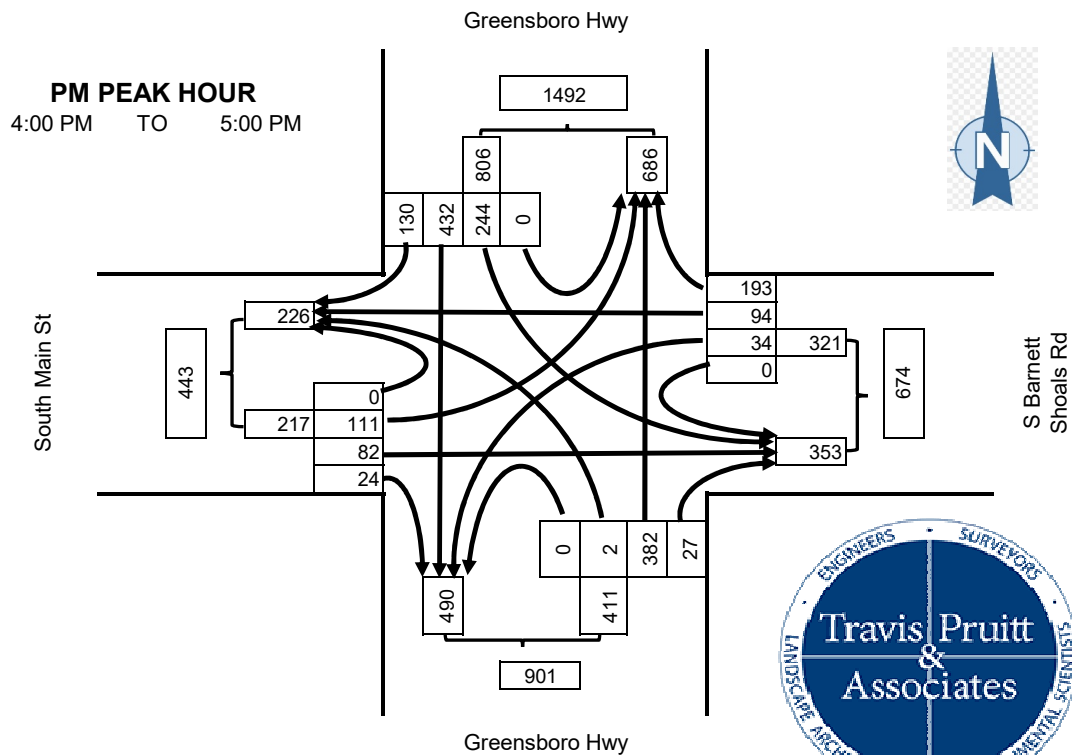
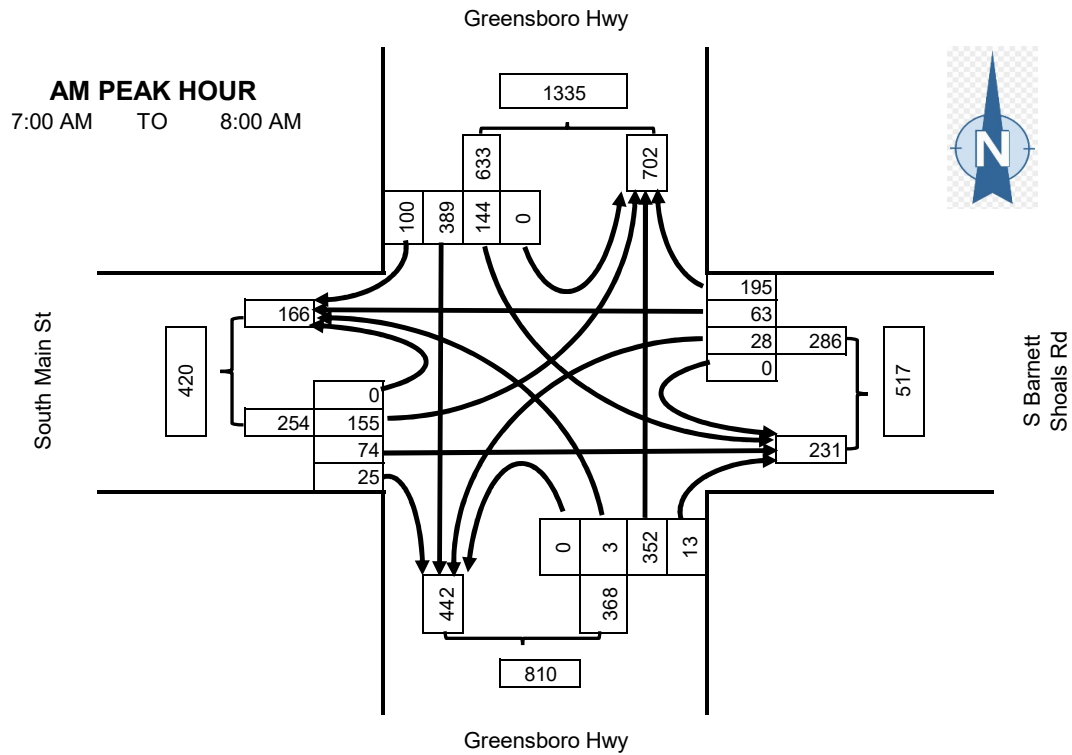
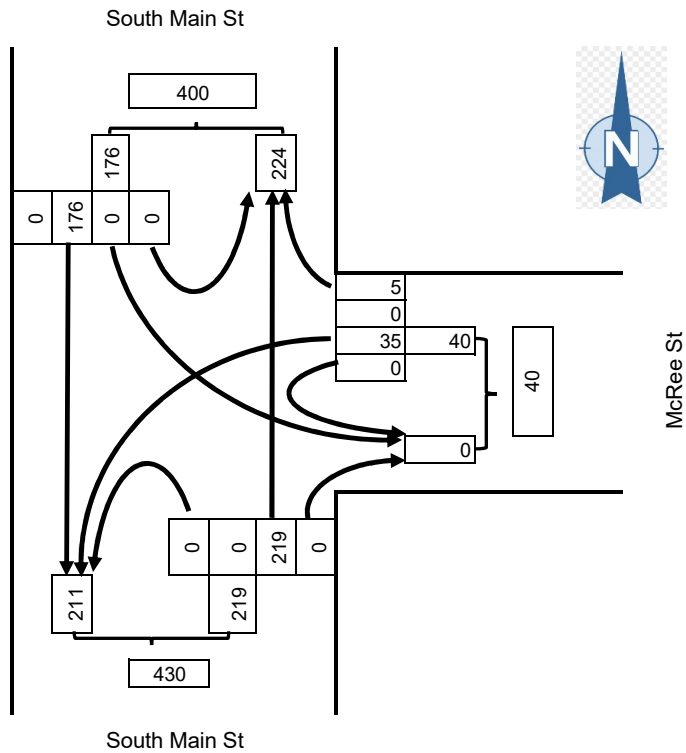


Figure 79

EXISTING + BACKGROUND @ 8 YEARS + PROJECT
AM & PM PEAK HOUR TURNING MOVEMENTS

AM PEAK HOUR
7:00 AM TO 8:00 AM



PM PEAK HOUR
4:00 PM TO 5:00 PM

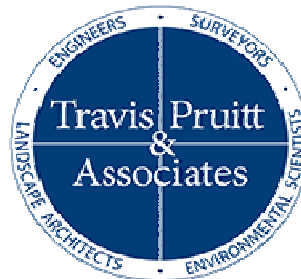
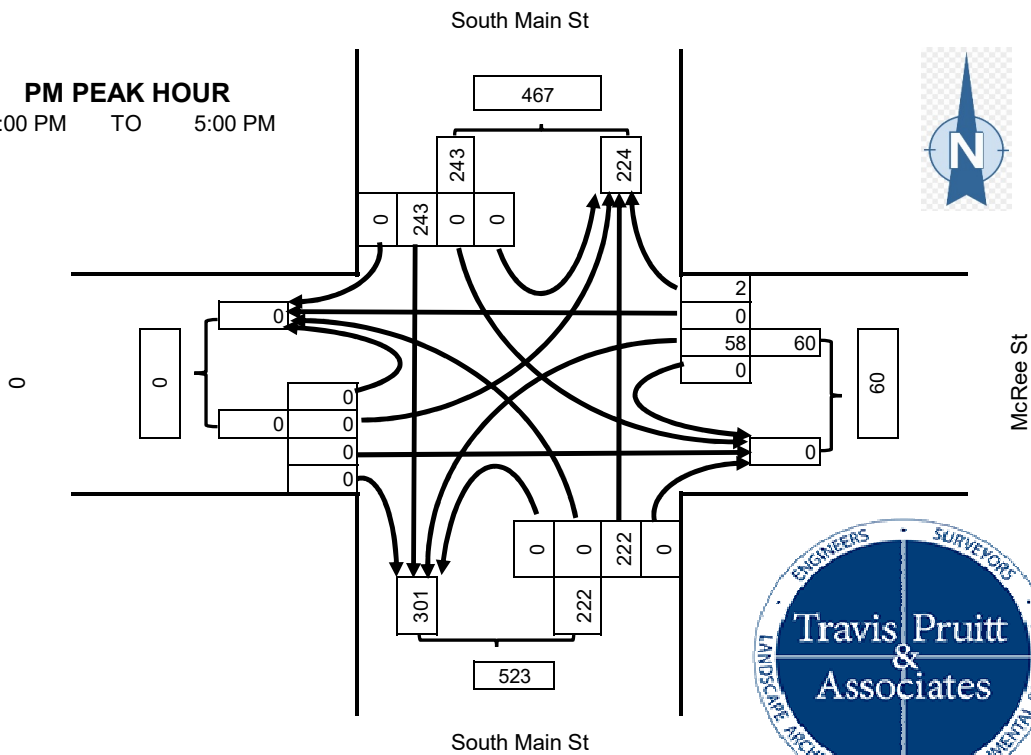
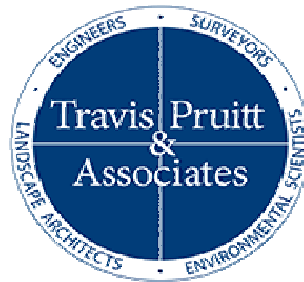
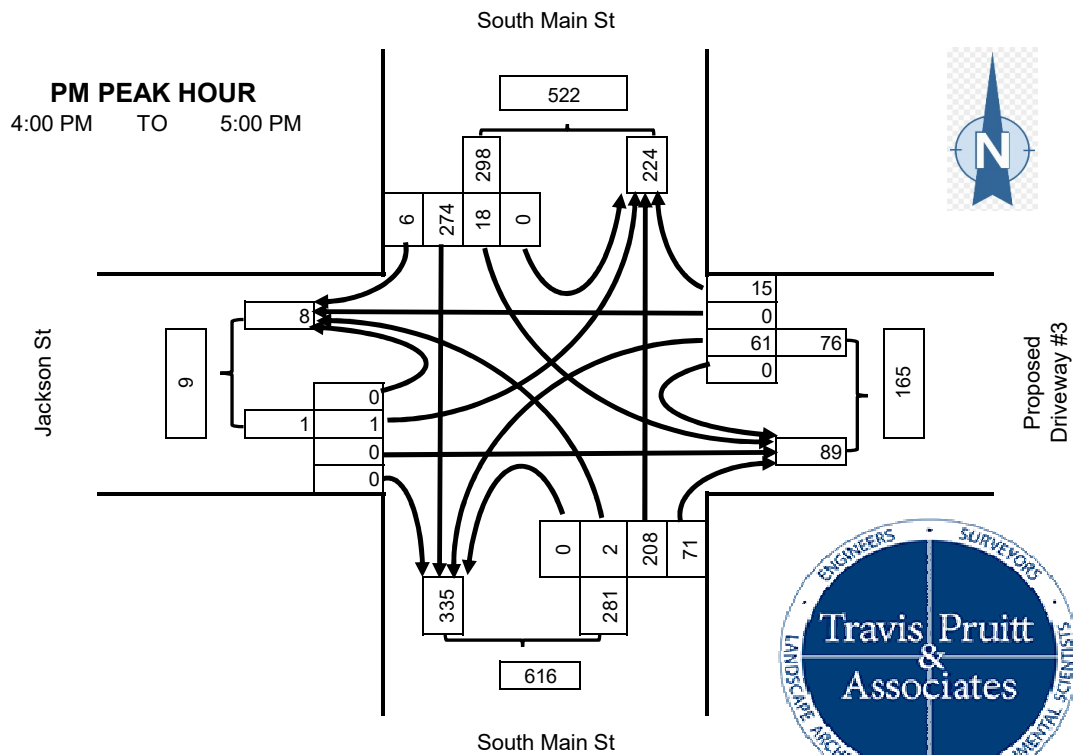
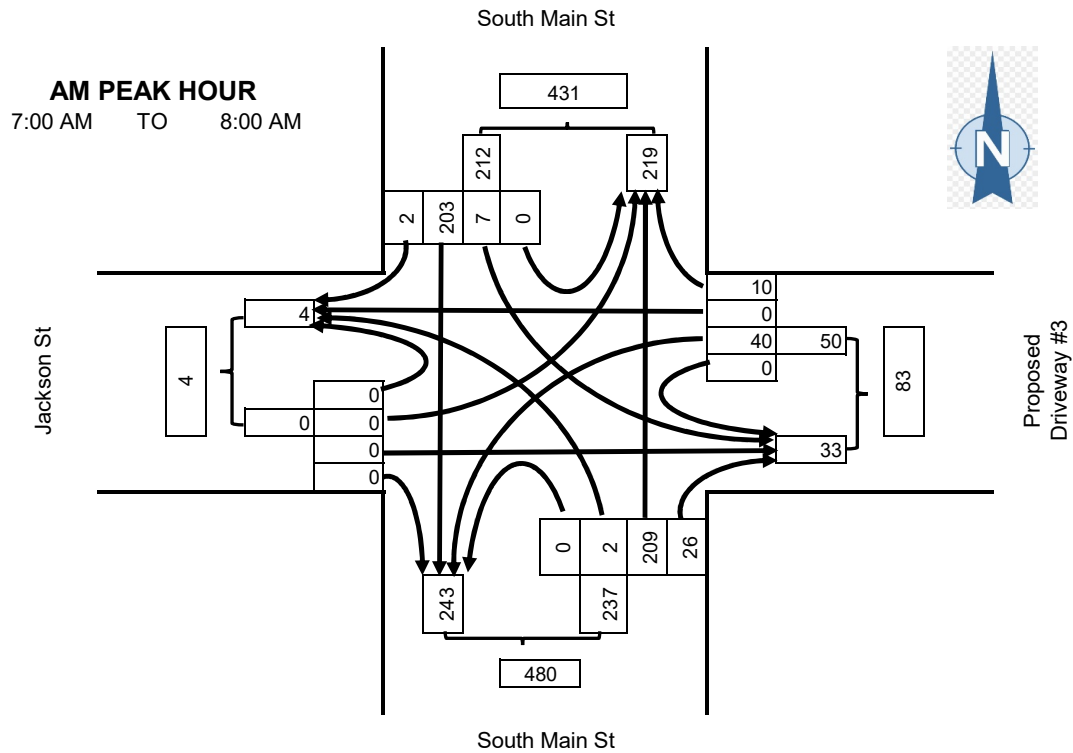


Figure 80

EXISTING + BACKGROUND @ 8 YEARS + PROJECT
AM & PM PEAK HOUR TURNING MOVEMENTS





XVIII. CONCLUSIONS AND RECOMMENDATIONS

Conclusions

The proposed development is mixed-use located at 1180 Greensboro Highway in Oconee County, Georgia. The property is 16.99 acres and located on Tax Parcel W 08 011. The development will include 9-apartment structures consisting of 200 units, 30 townhomes, and approximately 40,000 SF of commercial/retail space. In addition, the project will include an internal roadway network designed to public road standards with internal sidewalks, storm water management facilities, and associated parking.

The proposed project driveways are located along Greensboro Highway, Morrison Street, and South Main Street. The driveways will be designated as Proposed Driveway #1, Proposed Driveway #2, and Proposed Driveway #3, respectively. Each of the project access points will be a 2-lane road designed to public roadway standards and will be stop controlled at its intersection with the existing roadway.

The project will be analyzed under two different scenarios. Scenario 1 will analyze the project impacts with implementation of Proposed Driveway #1, located along Greensboro Highway, and Proposed Driveway #2, located along Morrison Street. Scenario 2 will analyze the project impacts with implementation of Proposed Driveway #1, located along Greensboro Highway, Proposed Driveway #2, located along Morrison Street and Proposed Driveway #3, located along South Main Street.

The properties to the southwest are zoned Detached Residential. The southeastern border of the parcel is bounded by Morrison Street. The northeastern border of the plot is bounded by Greensboro Highway and northwestern border is the existing Athens Line, LLC railroad.

The development is expected to be completed and occupied in three years.

The purpose of this study is to determine the impact of this development on Greensboro Highway, South Main Street, South Barnett Shoals Road and the existing roadway network. Figure 1 is a vicinity map for the subject property and Figure 2 is a site plan that shows the location of the proposed access points for the project. The scope of the study includes analyses of the following intersections for Scenario 1:

- #1 Greensboro Highway / Proposed Driveway #1
- #2 Greensboro Highway / Morrison Street
- #3 Greensboro Highway / Industrial Boulevard
- #4 Morrison Street / Proposed Driveway #2
- #5 Greensboro Highway / McRee Street / Depot Street
- #6 South Barnett Shoals Road / South 3rd Street / Depot Street
- #7 South Main Street / South Barnett Shoals Road / Greensboro Highway
- #8 South Main Street / McRee Street
- #9 South Main Street / Jackson Street/ Proposed Driveway #3



The existing conditions were studied to determine the level of service at each of the study intersections listed above. Under the existing conditions, each of the intersections operates at acceptable levels of service in the AM and PM peak hours.

A traffic analysis was performed to evaluate how each of the study intersections will operate under the proposed conditions. The existing traffic was grown at 1% per year for 3 years to generate the expected background traffic growth. The traffic generated by the proposed development was then added to the background traffic and the projected buildout conditions were analyzed and a capacity analyses was performed.

The scope of this study includes the analysis of 9 intersections within the vicinity of the subject property in each of the following traffic conditions:

- Existing
- Existing + Background
- Existing + Background + Project
- Existing + Background (5 years after project buildout) + Project

With or without the development of the Oconee Pipe Plant Mixed-Use Development as projected in this study, traffic will continue to grow, congestion and delay will increase, and roadway improvements will be required. The following are the conclusions based on the analysis of the data:

Intersection #1: Greensboro Highway / Proposed Driveway #1

1. The intersection of Greensboro Highway / Proposed Driveway #1 operates at acceptable levels of service with and without the addition of background and project traffic.

Intersection #2: Greensboro Highway / Morrison Street

1. The intersection of Greensboro Highway / Morrison Street operates at acceptable levels of service with and without the addition of background and project traffic.

Intersection #3: Greensboro Highway / Industrial Boulevard

1. The intersection of Greensboro Highway / Industrial Boulevard operates at acceptable levels of service with and without the addition of background and project traffic.

Intersection #4: Morrison Street / Proposed Driveway #2

1. The intersection of Morrison Street / Proposed Driveway #2 operates at acceptable levels of service with and without the addition of background and project traffic.

Intersection #5: Greensboro Highway / McRee Street / Depot Street



1. The intersection of Greensboro Highway / McRee Street / Depot Street operates at acceptable levels of service with and without the addition of background traffic.
2. With the addition of project traffic, the queue lengths and delay for the westbound approach increase in the PM peak hour period.

Intersection #6: South Barnett Shoals Road / South 3rd Street / Depot Street

1. The intersection of South Barnett Shoals Road / South 3rd Street / Depot Street operates at acceptable levels of service with and without the addition of background and project traffic.

Intersection #7: South Main Street / South Barnett Shoals Road / Greensboro Highway

1. The intersection of South Main Street / South Barnett Shoals Road / Greensboro Highway operates at acceptable levels of service with and without the addition of background and project traffic.

Intersection #8: South Main Street / McRee Street

1. The intersection of South Main Street / McRee Street operates at acceptable levels of service with and without the addition of background and project traffic.

Intersection #9: South Main Street / Jackson Street

1. The intersection of South Main Street / Jackson Street operates at acceptable levels of service with and without the addition of background and project traffic.

Recommendations

As traffic develops along this roadway network, we recommend that the developer of the facility and roadway network address the following items as outlined below:

#1 Greensboro Highway / Proposed Driveway #1

1. Proposed Driveway #1 will be a two-lane, full-access stop-controlled driveway which will serve as the westbound approach to its intersection with Greensboro Highway (GA Highway 15), which is a GDOT maintained roadway within GDOT-maintained right-of-way. The roadway will have one ingress lane and one egress lane.
2. Proposed Driveway #1 will be located approximately 184 feet (centerline to centerline) north of the existing intersection of Greensboro Highway / Morrison Street.
3. Proposed Driveway #1 will be located approximately 415 feet (centerline to centerline) south of the existing intersection of Greensboro Highway / Depot Street.
4. Greensboro Highway will continue to be free-flowing and Proposed Driveway #1 will be stop-controlled at its intersection with Greensboro Highway.
5. With the posted 45-mph speed limit on Greensboro Highway, the southbound right turn lane is required to have a minimum of 175 feet of full width storage length with a taper of 100 feet, per the GDOT Regulations for Driveway & Encroachment Control Manual.



6. The width of the deceleration lane shall be no less than 12 feet with 30" curb and gutter per GDOT detail 9032B.
7. Proposed Driveway #1 shall have minimum 25-foot radii and 12-foot wide lanes.
8. Signing and marking shall be in accordance with the MUTCD, GDOT and City of Watkinsville County requirements.
9. The turn lane shall be paved in accordance with the GDOT specifications.
10. Associated drainage improvements as deemed necessary for the construction of the deceleration or turn lane shall be required.
11. All design and construction must meet GDOT standards and specifications, as appropriate.

#2 Greensboro Highway / Morrison Street

1. No improvements are required.

#3 Greensboro Highway / Industrial Boulevard

1. No improvements are required.

#4 Morrison Street / Proposed Driveway #2

1. Proposed Driveway #2 will be a two-lane, full-access stop-controlled driveway which will serve as the southbound approach to its intersection with Morrison Street, which is a City of Watkinsville-maintained roadway within City of Watkinsville-maintained right-of-way. The roadway will have one ingress lane and one egress lane.
2. Proposed Driveway #2 will be located approximately 354 feet (centerline to centerline) west of the existing intersection of Greensboro Highway / Morrison Street.
3. Morrison Street will continue to be free-flowing and Proposed Driveway #2 will be stop-controlled at its intersection with Morrison Street.
4. With the posted 25-mph speed limit on Morrison Street, the westbound right turn lane is required to have a minimum of 100 feet of full width storage length with a taper of 100 feet and a minimum 25-foot taper on the acceleration side, per the City of Watkinsville Code.
5. The width of the deceleration lane shall be no less than 24 feet from the centerline of Morrison Street to the start of the gutter. The curb and gutter shall be 24" width per GDOT detail 9032B.
6. Proposed Driveway #2 shall have minimum 25-foot radii and 12-foot wide lanes.
7. Signing and marking shall be in accordance with the MUTCD, GDOT and City of Watkinsville County requirements.
8. Utilities and drainage must be relocated from underneath the turn lane by the developer.
9. All design and construction must meet GDOT standards and specifications, as appropriate.

#5 Greensboro Highway / McRee Street / Depot Street

1. No improvements are required.

#6 South Barnett Shoals road / South 3rd Street / Depot Street

1. No improvements are required.



#7 South Main Street / South Barnett Shoals Road / Greensboro Road

1. GDOT should consider signal timing adjustments as project traffic volumes continue to increase in this developing central business district. With or without the development of the Oconee Pipe Plant Mixed-Use Development, traffic will continue to increase on the roadway network and congestion and delays at the intersection will also increase.

#8 South Main Street / McRee Street

1. No improvements are required.

#9 South Main Street / Jackson Street / Proposed Driveway #3

1. Proposed Driveway #3 will be a two-lane, full-access stop-controlled driveway which will serve as the westbound approach to its intersection with South Main Street (GA Highway 24 Business), which is a GDOT maintained roadway within GDOT-maintained right-of-way. The roadway will have one ingress lane and one egress lane.
2. Proposed Driveway #3 will be located at the existing intersection of the existing intersection of South Main Street / Jackson Street.
3. South Main Street will continue to be free-flowing and Proposed Driveway #3 will be stop-controlled at its intersection with South Main Street.
4. With the posted 35-mph speed limit on South Main Street, the northbound right turn lane is required to have a minimum of 100 feet of full width storage length with a taper of 50 feet, per the GDOT Regulations for Driveway & Encroachment Control Manual.
5. The width of the deceleration lane shall be no less than 12 feet with 30" curb and gutter per GDOT detail 9032B.
6. Proposed Driveway #3 shall have minimum 25-foot radii and 12-foot wide lanes.
7. Signing and marking shall be in accordance with the MUTCD, GDOT and City of Watkinsville County requirements.
8. The turn lane shall be paved in accordance with the GDOT specifications.
9. Associated drainage improvements as deemed necessary for the construction of the deceleration or turn lane shall be required.
10. All design and construction must meet GDOT standards and specifications, as appropriate.






XIX. APPENDIX A – SCENARIO 1

- A. CAPACITY ANALYSIS – EXISTING AM
- B. CAPACITY ANALYSIS – EXISTING PM
- C. CAPACITY ANALYSIS – EXISTING + BACKGROUND AM
- D. CAPACITY ANALYSIS – EXISTING + BACKGROUND PM
- E. CAPACITY ANALYSIS – EXISTING + BACKGROUND + PROJECT AM
- F. CAPACITY ANALYSIS – EXISTING + BACKGROUND + PROJECT PM
- G. CAPACITY ANALYSIS – EXISTING + BACKGROUND (5 YEARS AFTER BUILDOUT) + PROJECT AM
- H. CAPACITY ANALYSIS – EXISTING + BACKGROUND (5 YEARS AFTER BUILDOUT) + PROJECT PM
- I. CAPACITY ANALYSIS – EXISTING + BACKGROUND + PROJECT SIGNALIZED INTERSECTION QUEUES
- J. TRAFFIC COUNTS

Intersection

Int Delay, s/veh 1

Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	361	17	12	334	17	12
Future Vol, veh/h	361	17	12	334	17	12
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	-	-	0	0	-
Peak Hour Factor	84	84	95	95	58	58
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	430	20	13	352	29	21

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	450
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	4.12
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	2.218
Pot Cap-1 Maneuver	-	-	1110
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	1110
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	SE	NW	NE
HCM Control Delay, s	0	0.3	14.8
HCM LOS			B

Minor Lane/Major Mvmt	NELn1	NWL	NWT	SET	SER
Capacity (veh/h)	418	1110	-	-	-
HCM Lane V/C Ratio	0.12	0.011	-	-	-
HCM Control Delay (s)	14.8	8.3	0	-	-
HCM Lane LOS	B	A	A	-	-
HCM 95th %tile Q(veh)	0.4	0	-	-	-

HCM 2010 TWSC

3: Greensboro Hwy & Industrial Blvd

02/19/2024

Intersection

Int Delay, s/veh 1.6

Movement

	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations		↕	↕	↕	↕	↕
Traffic Vol, veh/h	58	313	304	30	15	42
Future Vol, veh/h	58	313	304	30	15	42
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	85	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	86	86	90	90	86	86
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	67	364	338	33	17	49

Major/Minor

	Major1	Major2	Minor2
Conflicting Flow All	371	0	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	4.12	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	2.218	-	-
Pot Cap-1 Maneuver	1188	-	-
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1188	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach

	SE	NW	SW
HCM Control Delay, s	1.3	0	12.8
HCM LOS			B

Minor Lane/Major Mvmt

	NWT	NWR	SEL	SETSWLn1
Capacity (veh/h)	-	-	1188	-
HCM Lane V/C Ratio	-	-	0.057	-
HCM Control Delay (s)	-	-	8.2	0
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0.2	-



















Intersection												
Int Delay, s/veh	0.9											
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↔	↔		↔						↔	
Traffic Vol, veh/h	11	361	6	26	311	18	0	0	0	14	3	5
Future Vol, veh/h	11	361	6	26	311	18	0	0	0	14	3	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	80	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	-	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	81	81	81	94	94	94	92	92	92	69	69	69
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	14	446	7	28	331	19	0	0	0	20	4	7
Major/Minor	Major1			Major2			Minor2					
Conflicting Flow All	350	0	0	453	0	0				875	878	341
Stage 1	-	-	-	-	-	-				397	397	-
Stage 2	-	-	-	-	-	-				478	481	-
Critical Hdwy	4.12	-	-	4.12	-	-				6.42	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-				5.42	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-				5.42	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-				3.518	4.018	3.318
Pot Cap-1 Maneuver	1209	-	-	1108	-	-				320	287	701
Stage 1	-	-	-	-	-	-				679	603	-
Stage 2	-	-	-	-	-	-				624	554	-
Platoon blocked, %	-	-	-	-	-	-				-	-	-
Mov Cap-1 Maneuver	1209	-	-	1108	-	-				305	0	701
Mov Cap-2 Maneuver	-	-	-	-	-	-				305	0	-
Stage 1	-	-	-	-	-	-				669	0	-
Stage 2	-	-	-	-	-	-				605	0	-
Approach	SE			NW			SW					
HCM Control Delay, s	0.2			0.6			16					
HCM LOS							C					
Minor Lane/Major Mvmt	NWL	NWT	NWR	SEL	SET	SERSWLn1						
Capacity (veh/h)	1108	-	-	1209	-	-	358					
HCM Lane V/C Ratio	0.025	-	-	0.011	-	-	0.089					
HCM Control Delay (s)	8.3	0	-	8	0	-	16					
HCM Lane LOS	A	A	-	A	A	-	C					
HCM 95th %tile Q(veh)	0.1	-	-	0	-	-	0.3					




Intersection												
Int Delay, s/veh	1.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	6	189	1	6	228	9	5	17	5	6	13	11
Future Vol, veh/h	6	189	1	6	228	9	5	17	5	6	13	11
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	70	70	70	88	88	88	84	84	84	75	75	75
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	9	270	1	7	259	10	6	20	6	8	17	15
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	269	0	0	271	0	0	583	572	271	580	567	264
Stage 1	-	-	-	-	-	-	289	289	-	278	278	-
Stage 2	-	-	-	-	-	-	294	283	-	302	289	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
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	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1295	-	-	1292	-	-	424	430	768	426	433	775
Stage 1	-	-	-	-	-	-	719	673	-	728	680	-
Stage 2	-	-	-	-	-	-	714	677	-	707	673	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1295	-	-	1292	-	-	399	424	768	403	427	775
Mov Cap-2 Maneuver	-	-	-	-	-	-	399	424	-	403	427	-
Stage 1	-	-	-	-	-	-	713	668	-	722	676	-
Stage 2	-	-	-	-	-	-	678	673	-	675	668	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.2			0.2			13.5			12.8		
HCM LOS							B			B		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	457	1295	-	-	1292	-	-	504				
HCM Lane V/C Ratio	0.07	0.007	-	-	0.005	-	-	0.079				
HCM Control Delay (s)	13.5	7.8	0	-	7.8	0	-	12.8				
HCM Lane LOS	B	A	A	-	A	A	-	B				
HCM 95th %tile Q(veh)	0.2	0	-	-	0	-	-	0.3				

HCM Signalized Intersection Capacity Analysis

7: S Main St & Greensboro Hwy & S Barnett Shoals Rd

02/19/2024

												
Movement	WBL2	WBL	WBR	NBT	NBR	NBR2	SBL2	SBL	SBT	NWL	NWR	NWR2
Lane Configurations												
Traffic Volume (vph)	26	58	180	134	68	23	133	353	86	3	316	12
Future Volume (vph)	26	58	180	134	68	23	133	353	86	3	316	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.0	4.5			4.5		4.5	4.5		
Lane Util. Factor		1.00	1.00	1.00			1.00		1.00	1.00		
Frt		1.00	0.85	0.95			1.00		1.00	0.87		
Flt Protected		0.95	1.00	1.00			0.95		0.96	1.00		
Satd. Flow (prot)		1770	1583	1761			1770		1791	1613		
Flt Permitted		0.95	1.00	1.00			0.95		0.95	1.00		
Satd. Flow (perm)		1770	1583	1761			1770		1770	1612		
Peak-hour factor, PHF	0.86	0.86	0.86	0.82	0.82	0.82	0.86	0.86	0.86	0.90	0.90	0.92
Adj. Flow (vph)	30	67	209	163	83	28	155	410	100	3	351	13
RTOR Reduction (vph)	0	0	0	6	0	0	0	0	0	91	0	0
Lane Group Flow (vph)	0	97	209	268	0	0	155	0	510	276	0	0
Turn Type	Perm	Prot	Free	NA			pm+pt	Perm	NA	Perm		
Protected Phases		4		3			1		6			
Permitted Phases	4		Free				6	6		2		
Actuated Green, G (s)		8.5	80.0	15.9			42.1		42.1	28.9		
Effective Green, g (s)		8.5	80.0	15.9			42.1		42.1	28.9		
Actuated g/C Ratio		0.11	1.00	0.20			0.53		0.53	0.36		
Clearance Time (s)		4.5		4.5			4.5		4.5	4.5		
Vehicle Extension (s)		3.0		3.0			3.0		3.0	3.0		
Lane Grp Cap (vph)		188	1583	349			931		931	582		
v/s Ratio Prot				c0.15			0.02					
v/s Ratio Perm		0.05	0.13				0.07		c0.29	0.17		
v/c Ratio		0.52	0.13	0.77			0.17		0.55	0.47		
Uniform Delay, d1		33.8	0.0	30.3			9.8		12.6	19.7		
Progression Factor		1.00	1.00	1.00			1.00		1.00	1.00		
Incremental Delay, d2		2.4	0.2	9.8			0.1		2.3	0.6		
Delay (s)		36.2	0.2	40.1			9.9		14.9	20.3		
Level of Service		D	A	D			A		B	C		
Approach Delay (s)		11.6		40.1					13.8	20.3		
Approach LOS		B		D					B	C		
Intersection Summary												
HCM 2000 Control Delay			19.3		HCM 2000 Level of Service					B		
HCM 2000 Volume to Capacity ratio			0.64									
Actuated Cycle Length (s)			80.0		Sum of lost time (s)					18.0		
Intersection Capacity Utilization			76.8%		ICU Level of Service					D		
Analysis Period (min)			15									
c Critical Lane Group												

Intersection						
Int Delay, s/veh	1.6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	32	5	193	0	0	156
Future Vol, veh/h	32	5	193	0	0	156
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	54	54	83	83	85	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	59	9	233	0	0	184

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	417	233	0
Stage 1	233	-	-
Stage 2	184	-	-
Critical Hdwy	6.42	6.22	-
Critical Hdwy Stg 1	5.42	-	-
Critical Hdwy Stg 2	5.42	-	-
Follow-up Hdwy	3.518	3.318	-
Pot Cap-1 Maneuver	592	806	-
Stage 1	806	-	-
Stage 2	848	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	592	806	-
Mov Cap-2 Maneuver	592	-	-
Stage 1	806	-	-
Stage 2	848	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.6	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBTWBLn1	SBT
Capacity (veh/h)	- 614	-
HCM Lane V/C Ratio	- 0.112	-
HCM Control Delay (s)	- 11.6	-
HCM Lane LOS	- B	-
HCM 95th %tile Q(veh)	- 0.4	-

HCM Unsignalized Intersection Capacity Analysis

9: S Main St/SMain St & Jackson St




02/20/2024



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations				↕	↕	
Traffic Volume (veh/h)	0	0	2	193	187	2
Future Volume (Veh/h)	0	0	2	193	187	2
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.87	0.87	0.76	0.76
Hourly flow rate (vph)	0	0	2	222	246	3
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	474	248	249			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	474	248	249			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	100			
cM capacity (veh/h)	549	791	1317			
Direction, Lane #	NB 1	SB 1				
Volume Total	224	249				
Volume Left	2	0				
Volume Right	0	3				
cSH	1317	1700				
Volume to Capacity	0.00	0.15				
Queue Length 95th (ft)	0	0				
Control Delay (s)	0.1	0.0				
Lane LOS	A					
Approach Delay (s)	0.1	0.0				
Approach LOS						
Intersection Summary						
Average Delay			0.0			
Intersection Capacity Utilization			15.1%	ICU Level of Service		A
Analysis Period (min)			15			

HCM 2010 TWSC
2: Morrison St & Greensboro Hwy

02/19/2024

Intersection						
Int Delay, s/veh	1.1					
Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	421	13	9	385	21	15
Future Vol, veh/h	421	13	9	385	21	15
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	-	-	0	0	-
Peak Hour Factor	85	85	86	86	62	62
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	495	15	10	448	34	24
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	510	0	971	503
Stage 1	-	-	-	-	503	-
Stage 2	-	-	-	-	468	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1055	-	280	569
Stage 1	-	-	-	-	607	-
Stage 2	-	-	-	-	630	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1055	-	276	569
Mov Cap-2 Maneuver	-	-	-	-	276	-
Stage 1	-	-	-	-	607	-
Stage 2	-	-	-	-	622	-
Approach	SE		NW		NE	
HCM Control Delay, s	0		0.2		17.3	
HCM LOS					C	
Minor Lane/Major Mvmt	NELn1	NWL	NWT	SET	SER	
Capacity (veh/h)	351	1055	-	-	-	
HCM Lane V/C Ratio	0.165	0.01	-	-	-	
HCM Control Delay (s)	17.3	8.4	0	-	-	
HCM Lane LOS	C	A	A	-	-	
HCM 95th %tile Q(veh)	0.6	0	-	-	-	

HCM 2010 TWSC
3: Greensboro Hwy & Industrial Blvd

02/19/2024

Intersection

Int Delay, s/veh 2.8

Movement SEL SET NWT NWR SWL SWR

Lane Configurations 

Traffic Vol, veh/h 39 399 349 35 36 43

Future Vol, veh/h 39 399 349 35 36 43

Conflicting Peds, #/hr 0 0 0 0 0 0

Sign Control Free Free Free Free Stop Stop

RT Channelized - None - None - None

Storage Length - - - 85 0 -

Veh in Median Storage, # - 0 0 - 0 -

Grade, % - 0 0 - 0 -

Peak Hour Factor 87 87 96 96 55 55

Heavy Vehicles, % 2 2 2 2 2 2

Mvmt Flow 45 459 364 36 65 78

Major/Minor Major1 Major2 Minor2

Conflicting Flow All 400 0 - 0 913 364

Stage 1 - - - - 364 -

Stage 2 - - - - 549 -

Critical Hdwy 4.12 - - - 6.42 6.22

Critical Hdwy Stg 1 - - - - 5.42 -

Critical Hdwy Stg 2 - - - - 5.42 -

Follow-up Hdwy 2.218 - - - 3.518 3.318

Pot Cap-1 Maneuver 1159 - - - 304 681

Stage 1 - - - - 703 -

Stage 2 - - - - 579 -

Platoon blocked, % - - - -

Mov Cap-1 Maneuver 1159 - - - 288 681

Mov Cap-2 Maneuver - - - - 288 -

Stage 1 - - - - 666 -

Stage 2 - - - - 579 -

Approach SE NW SW

HCM Control Delay, s 0.7 0 18

HCM LOS C

Minor Lane/Major Mvmt NWT NWR SEL SETSWLn1

Capacity (veh/h) - - 1159 - 420





HCM Lane V/C Ratio - - 0.039 - 0.342

HCM Control Delay (s) - - 8.2 0 18

HCM Lane LOS - - A A C

HCM 95th %tile Q(veh) - - 0.1 - 1.5



















Intersection												
Int Delay, s/veh	1.5											
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↔	↔		↔						↔	
Traffic Vol, veh/h	10	409	12	35	345	27	0	0	0	21	9	11
Future Vol, veh/h	10	409	12	35	345	27	0	0	0	21	9	11
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	80	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	-	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	84	84	84	87	87	87	92	92	92	68	68	68
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	12	487	14	40	397	31	0	0	0	31	13	16
Major/Minor	Major1			Major2			Minor2					
Conflicting Flow All	428	0	0	501	0	0				1011	1018	413
Stage 1	-	-	-	-	-	-				493	493	-
Stage 2	-	-	-	-	-	-				518	525	-
Critical Hdwy	4.12	-	-	4.12	-	-				6.42	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-				5.42	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-				5.42	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-				3.518	4.018	3.318
Pot Cap-1 Maneuver	1131	-	-	1063	-	-				265	237	639
Stage 1	-	-	-	-	-	-				614	547	-
Stage 2	-	-	-	-	-	-				598	529	-
Platoon blocked, %	-	-	-	-	-	-				-	-	-
Mov Cap-1 Maneuver	1131	-	-	1063	-	-				248	0	639
Mov Cap-2 Maneuver	-	-	-	-	-	-				248	0	-
Stage 1	-	-	-	-	-	-				605	0	-
Stage 2	-	-	-	-	-	-				568	0	-
Approach	SE			NW			SW					
HCM Control Delay, s	0.2			0.7			19.2					
HCM LOS							C					
Minor Lane/Major Mvmt	NWL	NWT	NWR	SEL	SET	SERSWLn1						
Capacity (veh/h)	1063	-	-	1131	-	-	314					
HCM Lane V/C Ratio	0.038	-	-	0.011	-	-	0.192					
HCM Control Delay (s)	8.5	0	-	8.2	0	-	19.2					
HCM Lane LOS	A	A	-	A	A	-	C					
HCM 95th %tile Q(veh)	0.1	-	-	0	-	-	0.7					

Intersection												
Int Delay, s/veh	3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	10	298	8	3	246	17	10	29	8	9	23	12
Future Vol, veh/h	10	298	8	3	246	17	10	29	8	9	23	12
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	85	85	85	79	79	79	56	56	56	73	73	73
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	12	351	9	4	311	22	18	52	14	12	32	16
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	333	0	0	360	0	0	734	721	356	743	714	322
Stage 1	-	-	-	-	-	-	380	380	-	330	330	-
Stage 2	-	-	-	-	-	-	354	341	-	413	384	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
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	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1226	-	-	1199	-	-	336	353	688	331	357	719
Stage 1	-	-	-	-	-	-	642	614	-	683	646	-
Stage 2	-	-	-	-	-	-	663	639	-	616	611	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1226	-	-	1199	-	-	302	347	688	284	351	719
Mov Cap-2 Maneuver	-	-	-	-	-	-	302	347	-	284	351	-
Stage 1	-	-	-	-	-	-	634	607	-	675	643	-
Stage 2	-	-	-	-	-	-	614	636	-	545	604	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.3			0.1			17.7			16		
HCM LOS							C			C		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	366	1226	-	-	1199	-	-	386				
HCM Lane V/C Ratio	0.229	0.01	-	-	0.003	-	-	0.156				
HCM Control Delay (s)	17.7	8	0	-	8	0	-	16				
HCM Lane LOS	C	A	A	-	A	A	-	C				
HCM 95th %tile Q(veh)	0.9	0	-	-	0	-	-	0.5				

HCM Signalized Intersection Capacity Analysis

7: S Main St & Greensboro Hwy & S Barnett Shoals Rd

02/19/2024




												
Movement	WBL2	WBL	WBR	NBT	NBR	NBR2	SBL2	SBL	SBT	NWL	NWR	NWR2
Lane Configurations												
Traffic Volume (vph)	31	87	178	89	76	22	225	382	103	2	339	25
Future Volume (vph)	31	87	178	89	76	22	225	382	103	2	339	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.0	4.5			4.5		4.5	4.5		
Lane Util. Factor		1.00	1.00	1.00			1.00		1.00	1.00		
Frt		1.00	0.85	0.93			1.00		1.00	0.87		
Flt Protected		0.95	1.00	1.00			0.95		0.96	1.00		
Satd. Flow (prot)		1770	1583	1731			1770		1792	1612		
Flt Permitted		0.95	1.00	1.00			0.95		0.95	1.00		
Satd. Flow (perm)		1770	1583	1731			1770		1770	1612		
Peak-hour factor, PHF	0.84	0.84	0.84	0.92	0.92	0.92	0.96	0.96	0.96	0.95	0.95	0.95
Adj. Flow (vph)	37	104	212	97	83	24	234	398	107	2	357	26
RTOR Reduction (vph)	0	0	0	6	0	0	0	0	0	96	0	0
Lane Group Flow (vph)	0	141	212	198	0	0	234	0	505	289	0	0
Turn Type	Perm	Prot	Free	NA			pm+pt	Perm	NA	Perm		
Protected Phases		4		3			1		6			
Permitted Phases	4		Free				6	6		2		
Actuated Green, G (s)		8.9	66.4	12.6			31.4		31.4	21.7		
Effective Green, g (s)		8.9	66.4	12.6			31.4		31.4	21.7		
Actuated g/C Ratio		0.13	1.00	0.19			0.47		0.47	0.33		
Clearance Time (s)		4.5		4.5			4.5		4.5	4.5		
Vehicle Extension (s)		3.0		3.0			3.0		3.0	3.0		
Lane Grp Cap (vph)		237	1583	328			837		837	526		
v/s Ratio Prot				c0.11			0.02					
v/s Ratio Perm		0.08	0.13				0.11		c0.29	0.18		
v/c Ratio		0.59	0.13	0.60			0.28		0.60	0.55		
Uniform Delay, d1		27.1	0.0	24.6			10.6		12.9	18.3		
Progression Factor		1.00	1.00	1.00			1.00		1.00	1.00		
Incremental Delay, d2		4.0	0.2	3.1			0.2		3.2	1.2		
Delay (s)		31.0	0.2	27.7			10.8		16.1	19.5		
Level of Service		C	A	C			B		B	B		
Approach Delay (s)		12.5		27.7					14.4	19.5		
Approach LOS		B		C					B	B		
Intersection Summary												
HCM 2000 Control Delay			16.8				HCM 2000 Level of Service			B		
HCM 2000 Volume to Capacity ratio			0.66									
Actuated Cycle Length (s)			66.4				Sum of lost time (s)			18.0		
Intersection Capacity Utilization			81.4%				ICU Level of Service			D		
Analysis Period (min)			15									
c Critical Lane Group												

HCM 2010 TWSC
8: SMain St/S Main St & McKee St

02/19/2024

Intersection

Int Delay, s/veh 2.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	54	2	191	0	0	208
Future Vol, veh/h	54	2	191	0	0	208
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	58	58	94	94	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	93	3	203	0	0	231

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	434	203	0
Stage 1	203	-	-
Stage 2	231	-	-
Critical Hdwy	6.42	6.22	-
Critical Hdwy Stg 1	5.42	-	-
Critical Hdwy Stg 2	5.42	-	-
Follow-up Hdwy	3.518	3.318	-
Pot Cap-1 Maneuver	579	838	-
Stage 1	831	-	-
Stage 2	807	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	579	838	-
Mov Cap-2 Maneuver	579	-	-
Stage 1	831	-	-
Stage 2	807	-	-

Approach	WB	NB	SB
HCM Control Delay, s	12.4	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBTWBLn1	SBT
Capacity (veh/h)	- 585	-
HCM Lane V/C Ratio	- 0.165	-
HCM Control Delay (s)	- 12.4	-
HCM Lane LOS	- B	-
HCM 95th %tile Q(veh)	- 0.6	-

HCM Unsignalized Intersection Capacity Analysis

9: S Main St/SMain St & Jackson St




02/20/2024



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations				↕	↕	
Traffic Volume (veh/h)	0	0	2	192	253	6
Future Volume (Veh/h)	0	0	2	192	253	6
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.95	0.95	0.80	0.80
Hourly flow rate (vph)	0	0	2	202	316	8
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	526	320	324			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	526	320	324			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	100			
cM capacity (veh/h)	511	721	1236			
Direction, Lane #	NB 1	SB 1				
Volume Total	204	324				
Volume Left	2	0				
Volume Right	0	8				
cSH	1236	1700				
Volume to Capacity	0.00	0.19				
Queue Length 95th (ft)	0	0				
Control Delay (s)	0.1	0.0				
Lane LOS	A					
Approach Delay (s)	0.1	0.0				
Approach LOS						
Intersection Summary						
Average Delay			0.0			
Intersection Capacity Utilization			17.0%	ICU Level of Service		A
Analysis Period (min)			15			

HCM 2010 TWSC
2: Morrison St & Greensboro Hwy

02/19/2024

Intersection						
Int Delay, s/veh	1					
Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	372	18	12	334	18	12
Future Vol, veh/h	372	18	12	334	18	12
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	-	-	0	0	-
Peak Hour Factor	84	84	95	95	58	58
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	443	21	13	352	31	21
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	464	0	832	454
Stage 1	-	-	-	-	454	-
Stage 2	-	-	-	-	378	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1097	-	339	606
Stage 1	-	-	-	-	640	-
Stage 2	-	-	-	-	693	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1097	-	334	606
Mov Cap-2 Maneuver	-	-	-	-	334	-
Stage 1	-	-	-	-	640	-
Stage 2	-	-	-	-	683	-
Approach	SE		NW		NE	
HCM Control Delay, s	0		0.3		15.1	
HCM LOS					C	
Minor Lane/Major Mvmt	NELn1	NWL	NWT	SET	SER	
Capacity (veh/h)	407	1097	-	-	-	
HCM Lane V/C Ratio	0.127	0.012	-	-	-	
HCM Control Delay (s)	15.1	8.3	0	-	-	
HCM Lane LOS	C	A	A	-	-	
HCM 95th %tile Q(veh)	0.4	0	-	-	-	

HCM 2010 TWSC
3: Greensboro Hwy & Industrial Blvd

02/19/2024

Intersection

Int Delay, s/veh 1.6

Movement SEL SET NWT NWR SWL SWR

Lane Configurations 

Traffic Vol, veh/h 60 322 313 31 15 43

Future Vol, veh/h 60 322 313 31 15 43

Conflicting Peds, #/hr 0 0 0 0 0 0

Sign Control Free Free Free Free Stop Stop

RT Channelized - None - None - None

Storage Length - - - 85 0 -

Veh in Median Storage, # - 0 0 - 0 -

Grade, % - 0 0 - 0 -

Peak Hour Factor 86 86 90 90 86 86

Heavy Vehicles, % 2 2 2 2 2 2

Mvmt Flow 70 374 348 34 17 50

Major/Minor Major1 Major2 Minor2

Conflicting Flow All 382 0 - 0 862 348

Stage 1 - - - - 348 -

Stage 2 - - - - 514 -

Critical Hdwy 4.12 - - - 6.42 6.22

Critical Hdwy Stg 1 - - - - 5.42 -

Critical Hdwy Stg 2 - - - - 5.42 -

Follow-up Hdwy 2.218 - - - 3.518 3.318

Pot Cap-1 Maneuver 1176 - - - 325 695

Stage 1 - - - - 715 -

Stage 2 - - - - 600 -

Platoon blocked, % - - - -

Mov Cap-1 Maneuver 1176 - - - 301 695

Mov Cap-2 Maneuver - - - - 301 -

Stage 1 - - - - 661 -

Stage 2 - - - - 600 -

Approach SE NW SW

HCM Control Delay, s 1.3 0 13

HCM LOS B

Minor Lane/Major Mvmt NWT NWR SEL SETSWLn1

Capacity (veh/h) - - 1176 - 519

HCM Lane V/C Ratio - - 0.059 - 0.13

HCM Control Delay (s) - - 8.3 0 13

HCM Lane LOS - - A A B

HCM 95th %tile Q(veh) - - 0.2 - 0.4

Intersection





Int Delay, s/veh 0.9

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↔	↔		↔						↔	
Traffic Vol, veh/h	11	372	6	27	320	19	0	0	0	14	3	5
Future Vol, veh/h	11	372	6	27	320	19	0	0	0	14	3	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	80	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	-	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	81	81	81	94	94	94	92	92	92	69	69	69
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	14	459	7	29	340	20	0	0	0	20	4	7

Major/Minor	Major1			Major2			Minor2		
Conflicting Flow All	360	0	0	466	0	0	899	902	350
Stage 1	-	-	-	-	-	-	408	408	-
Stage 2	-	-	-	-	-	-	491	494	-
Critical Hdwy	4.12	-	-	4.12	-	-	6.42	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	5.42	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	5.42	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318
Pot Cap-1 Maneuver	1199	-	-	1095	-	-	309	277	693
Stage 1	-	-	-	-	-	-	671	597	-
Stage 2	-	-	-	-	-	-	615	546	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1199	-	-	1095	-	-	294	0	693
Mov Cap-2 Maneuver	-	-	-	-	-	-	294	0	-
Stage 1	-	-	-	-	-	-	660	0	-
Stage 2	-	-	-	-	-	-	595	0	-

Approach	SE	NW	SW
HCM Control Delay, s	0.2	0.6	16.4
HCM LOS			C








Minor Lane/Major Mvmt	NWL	NWT	NWR	SEL	SET	SERSWLn1
Capacity (veh/h)	1095	-	-	1199	-	- 347
HCM Lane V/C Ratio	0.026	-	-	0.011	-	- 0.092
HCM Control Delay (s)	8.4	0	-	8	0	- 16.4
HCM Lane LOS	A	A	-	A	A	- C
HCM 95th %tile Q(veh)	0.1	-	-	0	-	- 0.3




Intersection												
Int Delay, s/veh	1.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	6	195	1	6	235	9	5	18	5	6	13	11
Future Vol, veh/h	6	195	1	6	235	9	5	18	5	6	13	11
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	70	70	70	88	88	88	84	84	84	75	75	75
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	9	279	1	7	267	10	6	21	6	8	17	15
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	277	0	0	280	0	0	600	589	280	597	584	272
Stage 1	-	-	-	-	-	-	298	298	-	286	286	-
Stage 2	-	-	-	-	-	-	302	291	-	311	298	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
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	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1286	-	-	1283	-	-	413	421	759	415	423	767
Stage 1	-	-	-	-	-	-	711	667	-	721	675	-
Stage 2	-	-	-	-	-	-	707	672	-	699	667	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1286	-	-	1283	-	-	388	415	759	391	417	767
Mov Cap-2 Maneuver	-	-	-	-	-	-	388	415	-	391	417	-
Stage 1	-	-	-	-	-	-	705	662	-	715	671	-
Stage 2	-	-	-	-	-	-	672	668	-	666	662	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.2			0.2			13.7			12.9		
HCM LOS							B			B		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	446	1286	-	-	1283	-	-	493				
HCM Lane V/C Ratio	0.075	0.007	-	-	0.005	-	-	0.081				
HCM Control Delay (s)	13.7	7.8	0	-	7.8	0	-	12.9				
HCM Lane LOS	B	A	A	-	A	A	-	B				
HCM 95th %tile Q(veh)	0.2	0	-	-	0	-	-	0.3				

HCM Signalized Intersection Capacity Analysis

7: S Main St & Greensboro Hwy & S Barnett Shoals Rd

02/19/2024

												
Movement	WBL2	WBL	WBR	NBT	NBR	NBR2	SBL2	SBL	SBT	NWL	NWR	NWR2
Lane Configurations												
Traffic Volume (vph)	27	60	185	138	70	24	137	364	89	3	326	12
Future Volume (vph)	27	60	185	138	70	24	137	364	89	3	326	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.0	4.5			4.5		4.5	4.5		
Lane Util. Factor		1.00	1.00	1.00			1.00		1.00	1.00		
Frt		1.00	0.85	0.95			1.00		1.00	0.87		
Flt Protected		0.95	1.00	1.00			0.95		0.96	1.00		
Satd. Flow (prot)		1770	1583	1761			1770		1791	1613		
Flt Permitted		0.95	1.00	1.00			0.95		0.95	1.00		
Satd. Flow (perm)		1770	1583	1761			1770		1770	1612		
Peak-hour factor, PHF	0.86	0.86	0.86	0.82	0.82	0.82	0.86	0.86	0.86	0.90	0.90	0.92
Adj. Flow (vph)	31	70	215	168	85	29	159	423	103	3	362	13
RTOR Reduction (vph)	0	0	0	6	0	0	0	0	0	92	0	0
Lane Group Flow (vph)	0	101	215	276	0	0	159	0	526	286	0	0
Turn Type	Perm	Prot	Free	NA			pm+pt	Perm	NA	Perm		
Protected Phases		4		3			1		6			
Permitted Phases	4		Free				6	6		2		
Actuated Green, G (s)		8.6	80.0	16.1			41.8		41.8	28.5		
Effective Green, g (s)		8.6	80.0	16.1			41.8		41.8	28.5		
Actuated g/C Ratio		0.11	1.00	0.20			0.52		0.52	0.36		
Clearance Time (s)		4.5		4.5			4.5		4.5	4.5		
Vehicle Extension (s)		3.0		3.0			3.0		3.0	3.0		
Lane Grp Cap (vph)		190	1583	354			924		924	574		
v/s Ratio Prot				c0.16			0.02					
v/s Ratio Perm		0.06	0.14				0.07		c0.30	0.18		
v/c Ratio		0.53	0.14	0.78			0.17		0.57	0.50		
Uniform Delay, d1		33.8	0.0	30.3			10.0		13.0	20.2		
Progression Factor		1.00	1.00	1.00			1.00		1.00	1.00		
Incremental Delay, d2		2.8	0.2	10.7			0.1		2.5	3.1		
Delay (s)		36.6	0.2	40.9			10.1		15.5	23.2		
Level of Service		D	A	D			B		B	C		
Approach Delay (s)		11.8		40.9					14.3	23.2		
Approach LOS		B		D					B	C		
Intersection Summary												
HCM 2000 Control Delay			20.4				HCM 2000 Level of Service			C		
HCM 2000 Volume to Capacity ratio			0.66									
Actuated Cycle Length (s)			80.0				Sum of lost time (s)			18.0		
Intersection Capacity Utilization			78.8%				ICU Level of Service			D		
Analysis Period (min)			15									
c Critical Lane Group												

Intersection						
Int Delay, s/veh	1.6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	33	5	199	0	0	161
Future Vol, veh/h	33	5	199	0	0	161
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	54	54	83	83	85	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	61	9	240	0	0	189

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	429	240	0
Stage 1	240	-	-
Stage 2	189	-	-
Critical Hdwy	6.42	6.22	-
Critical Hdwy Stg 1	5.42	-	-
Critical Hdwy Stg 2	5.42	-	-
Follow-up Hdwy	3.518	3.318	-
Pot Cap-1 Maneuver	583	799	-
Stage 1	800	-	-
Stage 2	843	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	583	799	-
Mov Cap-2 Maneuver	583	-	-
Stage 1	800	-	-
Stage 2	843	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.7	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBTWBLn1	SBT
Capacity (veh/h)	- 605	-
HCM Lane V/C Ratio	- 0.116	-
HCM Control Delay (s)	- 11.7	-
HCM Lane LOS	- B	-
HCM 95th %tile Q(veh)	- 0.4	-

HCM Unsignalized Intersection Capacity Analysis

9: S Main St/SMain St & Jackson St




02/20/2024



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations				↕	↕	
Traffic Volume (veh/h)	0	0	2	199	193	2
Future Volume (Veh/h)	0	0	2	199	193	2
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.87	0.87	0.76	0.76
Hourly flow rate (vph)	0	0	2	229	254	3
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	488	256	257			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	488	256	257			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	100			
cM capacity (veh/h)	538	783	1308			
Direction, Lane #	NB 1	SB 1				
Volume Total	231	257				
Volume Left	2	0				
Volume Right	0	3				
cSH	1308	1700				
Volume to Capacity	0.00	0.15				
Queue Length 95th (ft)	0	0				
Control Delay (s)	0.1	0.0				
Lane LOS	A					
Approach Delay (s)	0.1	0.0				
Approach LOS						
Intersection Summary						
Average Delay			0.0			
Intersection Capacity Utilization			15.4%	ICU Level of Service		A
Analysis Period (min)			15			

HCM 2010 TWSC
2: Morrison St & Greensboro Hwy

02/19/2024

Intersection						
Int Delay, s/veh	1.1					
Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	434	13	9	385	22	15
Future Vol, veh/h	434	13	9	385	22	15
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	-	-	0	0	-
Peak Hour Factor	85	85	86	86	62	62
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	511	15	10	448	35	24
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	526	0	987	519
Stage 1	-	-	-	-	519	-
Stage 2	-	-	-	-	468	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1041	-	274	557
Stage 1	-	-	-	-	597	-
Stage 2	-	-	-	-	630	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1041	-	270	557
Mov Cap-2 Maneuver	-	-	-	-	270	-
Stage 1	-	-	-	-	597	-
Stage 2	-	-	-	-	622	-
Approach	SE		NW		NE	
HCM Control Delay, s	0		0.2		17.8	
HCM LOS					C	
Minor Lane/Major Mvmt	NELn1	NWL	NWT	SET	SER	
Capacity (veh/h)	341	1041	-	-	-	
HCM Lane V/C Ratio	0.175	0.01	-	-	-	
HCM Control Delay (s)	17.8	8.5	0	-	-	
HCM Lane LOS	C	A	A	-	-	
HCM 95th %tile Q(veh)	0.6	0	-	-	-	





HCM 2010 TWSC
3: Greensboro Hwy & Industrial Blvd

02/19/2024

Intersection

Int Delay, s/veh 2.9

Movement SEL SET NWT NWR SWL SWR

Lane Configurations						
Traffic Vol, veh/h	40	411	360	36	37	44
Future Vol, veh/h	40	411	360	36	37	44
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	85	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	87	87	96	96	55	55
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	46	472	375	38	67	80

Major/Minor Major1 Major2 Minor2

Conflicting Flow All	413	0	-	0	939	375
Stage 1	-	-	-	-	375	-
Stage 2	-	-	-	-	564	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1146	-	-	-	293	671
Stage 1	-	-	-	-	695	-
Stage 2	-	-	-	-	569	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	1146	-	-	-	277	671
Mov Cap-2 Maneuver	-	-	-	-	277	-
Stage 1	-	-	-	-	657	-
Stage 2	-	-	-	-	569	-





Approach SE NW SW

HCM Control Delay, s	0.7	0	18.8
HCM LOS			C

Minor Lane/Major Mvmt NWT NWR SEL SETSWLn1

Capacity (veh/h)	-	-	1146	-	407
HCM Lane V/C Ratio	-	-	0.04	-	0.362
HCM Control Delay (s)	-	-	8.3	0	18.8
HCM Lane LOS	-	-	A	A	C
HCM 95th %tile Q(veh)	-	-	0.1	-	1.6








Intersection												
Int Delay, s/veh	1.6											
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↔	↔		↔						↔	
Traffic Vol, veh/h	10	421	12	36	355	28	0	0	0	22	9	11
Future Vol, veh/h	10	421	12	36	355	28	0	0	0	22	9	11
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	80	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	-	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	84	84	84	87	87	87	92	92	92	68	68	68
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	12	501	14	41	408	32	0	0	0	32	13	16
Major/Minor	Major1			Major2			Minor2					
Conflicting Flow All	440	0	0	515	0	0				1038	1045	424
Stage 1	-	-	-	-	-	-				506	506	-
Stage 2	-	-	-	-	-	-				532	539	-
Critical Hdwy	4.12	-	-	4.12	-	-				6.42	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-				5.42	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-				5.42	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-				3.518	4.018	3.318
Pot Cap-1 Maneuver	1120	-	-	1051	-	-				256	229	630
Stage 1	-	-	-	-	-	-				606	540	-
Stage 2	-	-	-	-	-	-				589	522	-
Platoon blocked, %	-	-	-	-	-	-				-	-	-
Mov Cap-1 Maneuver	1120	-	-	1051	-	-				239	0	630
Mov Cap-2 Maneuver	-	-	-	-	-	-				239	0	-
Stage 1	-	-	-	-	-	-				597	0	-
Stage 2	-	-	-	-	-	-				558	0	-
Approach	SE			NW			SW					
HCM Control Delay, s	0.2			0.7			20					
HCM LOS							C					
Minor Lane/Major Mvmt	NWL	NWT	NWR	SEL	SET	SERSWLn1						
Capacity (veh/h)	1051	-	-	1120	-	-	301					
HCM Lane V/C Ratio	0.039	-	-	0.011	-	-	0.205					
HCM Control Delay (s)	8.6	0	-	8.2	0	-	20					
HCM Lane LOS	A	A	-	A	A	-	C					
HCM 95th %tile Q(veh)	0.1	-	-	0	-	-	0.8					

Intersection												
Int Delay, s/veh	3.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	10	307	8	3	253	18	10	30	8	9	24	12
Future Vol, veh/h	10	307	8	3	253	18	10	30	8	9	24	12
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	85	85	85	79	79	79	56	56	56	73	73	73
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	12	361	9	4	320	23	18	54	14	12	33	16
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	343	0	0	370	0	0	754	741	366	764	734	332
Stage 1	-	-	-	-	-	-	390	390	-	340	340	-
Stage 2	-	-	-	-	-	-	364	351	-	424	394	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
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	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1216	-	-	1189	-	-	326	344	679	321	347	710
Stage 1	-	-	-	-	-	-	634	608	-	675	639	-
Stage 2	-	-	-	-	-	-	655	632	-	608	605	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1216	-	-	1189	-	-	291	338	679	273	341	710
Mov Cap-2 Maneuver	-	-	-	-	-	-	291	338	-	273	341	-
Stage 1	-	-	-	-	-	-	626	601	-	667	636	-
Stage 2	-	-	-	-	-	-	604	629	-	536	598	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.2			0.1			18.3			16.5		
HCM LOS							C			C		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	356	1216	-	-	1189	-	-	374				
HCM Lane V/C Ratio	0.241	0.01	-	-	0.003	-	-	0.165				
HCM Control Delay (s)	18.3	8	0	-	8	0	-	16.5				
HCM Lane LOS	C	A	A	-	A	A	-	C				
HCM 95th %tile Q(veh)	0.9	0	-	-	0	-	-	0.6				

HCM Signalized Intersection Capacity Analysis




7: S Main St & Greensboro Hwy & S Barnett Shoals Rd

02/19/2024

												
Movement	WBL2	WBL	WBR	NBT	NBR	NBR2	SBL2	SBL	SBT	NWL	NWR	NWR2
Lane Configurations												
Traffic Volume (vph)	32	90	183	92	78	23	232	394	106	2	349	26
Future Volume (vph)	32	90	183	92	78	23	232	394	106	2	349	26
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.0	4.5			4.5		4.5	4.5		
Lane Util. Factor		1.00	1.00	1.00			1.00		1.00	1.00		
Frt		1.00	0.85	0.93			1.00		1.00	0.87		
Flt Protected		0.95	1.00	1.00			0.95		0.96	1.00		
Satd. Flow (prot)		1770	1583	1731			1770		1792	1612		
Flt Permitted		0.95	1.00	1.00			0.95		0.95	1.00		
Satd. Flow (perm)		1770	1583	1731			1770		1770	1612		
Peak-hour factor, PHF	0.84	0.84	0.84	0.92	0.92	0.92	0.96	0.96	0.96	0.95	0.95	0.95
Adj. Flow (vph)	38	107	218	100	85	25	242	410	110	2	367	27
RTOR Reduction (vph)	0	0	0	6	0	0	0	0	0	96	0	0
Lane Group Flow (vph)	0	145	218	204	0	0	242	0	520	300	0	0
Turn Type	Perm	Prot	Free	NA			pm+pt	Perm	NA	Perm		
Protected Phases		4		3			1		6			
Permitted Phases	4		Free				6	6		2		
Actuated Green, G (s)		9.0	66.8	12.9			31.4		31.4	21.8		
Effective Green, g (s)		9.0	66.8	12.9			31.4		31.4	21.8		
Actuated g/C Ratio		0.13	1.00	0.19			0.47		0.47	0.33		
Clearance Time (s)		4.5		4.5			4.5		4.5	4.5		
Vehicle Extension (s)		3.0		3.0			3.0		3.0	3.0		
Lane Grp Cap (vph)		238	1583	334			832		832	526		
v/s Ratio Prot				c0.12			0.02					
v/s Ratio Perm		0.08	0.14				0.11		c0.29	0.19		
v/c Ratio		0.61	0.14	0.61			0.29		0.62	0.57		
Uniform Delay, d1		27.2	0.0	24.6			10.9		13.3	18.6		
Progression Factor		1.00	1.00	1.00			1.00		1.00	1.00		
Incremental Delay, d2		4.4	0.2	3.1			0.2		3.5	1.4		
Delay (s)		31.6	0.2	27.8			11.1		16.8	20.0		
Level of Service		C	A	C			B		B	C		
Approach Delay (s)		12.7		27.8					15.0	20.0		
Approach LOS		B		C					B	C		
Intersection Summary												
HCM 2000 Control Delay			17.2		HCM 2000 Level of Service					B		
HCM 2000 Volume to Capacity ratio			0.68									
Actuated Cycle Length (s)			66.8		Sum of lost time (s)					18.0		
Intersection Capacity Utilization			83.5%		ICU Level of Service					E		
Analysis Period (min)			15									
c Critical Lane Group												

HCM 2010 TWSC
8: SMain St/S Main St & McKee St

02/19/2024

Intersection						
Int Delay, s/veh	2.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	56	2	197	0	0	214
Future Vol, veh/h	56	2	197	0	0	214
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	58	58	94	94	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	97	3	210	0	0	238
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	448	210	0	-	-	-
Stage 1	210	-	-	-	-	-
Stage 2	238	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	-	-
Pot Cap-1 Maneuver	568	830	-	0	0	-
Stage 1	825	-	-	0	0	-
Stage 2	802	-	-	0	0	-
Platoon blocked, %			-			-
Mov Cap-1 Maneuver	568	830	-	-	-	-
Mov Cap-2 Maneuver	568	-	-	-	-	-
Stage 1	825	-	-	-	-	-
Stage 2	802	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	12.6	0	0			
HCM LOS	B					
Minor Lane/Major Mvmt	NBTWBLn1		SBT			
Capacity (veh/h)	- 574		-			
HCM Lane V/C Ratio	- 0.174		-			
HCM Control Delay (s)	- 12.6		-			
HCM Lane LOS	- B		-			
HCM 95th %tile Q(veh)	- 0.6		-			

HCM Unsignalized Intersection Capacity Analysis

9: S Main St/SMain St & Jackson St

02/20/2024











Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations				↕	↕	
Traffic Volume (veh/h)	0	0	2	198	261	6
Future Volume (Veh/h)	0	0	2	198	261	6
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.95	0.95	0.80	0.80
Hourly flow rate (vph)	0	0	2	208	326	8
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	542	330	334			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	542	330	334			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	100			
cM capacity (veh/h)	501	712	1225			
Direction, Lane #	NB 1	SB 1				
Volume Total	210	334				
Volume Left	2	0				
Volume Right	0	8				
cSH	1225	1700				
Volume to Capacity	0.00	0.20				
Queue Length 95th (ft)	0	0				
Control Delay (s)	0.1	0.0				
Lane LOS	A					
Approach Delay (s)	0.1	0.0				
Approach LOS						
Intersection Summary						
Average Delay			0.0			
Intersection Capacity Utilization			17.4%	ICU Level of Service		A
Analysis Period (min)			15			




Intersection						
Int Delay, s/veh	1.8					
Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations	↑	↗		↖	↘	
Traffic Vol, veh/h	389	49	7	362	74	10
Future Vol, veh/h	389	49	7	362	74	10
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	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	423	53	8	393	80	11
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	476	0	832	423
Stage 1	-	-	-	-	423	-
Stage 2	-	-	-	-	409	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1086	-	339	631
Stage 1	-	-	-	-	661	-
Stage 2	-	-	-	-	671	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1086	-	336	631
Mov Cap-2 Maneuver	-	-	-	-	336	-
Stage 1	-	-	-	-	661	-
Stage 2	-	-	-	-	665	-
Approach	SE		NW		NE	
HCM Control Delay, s	0		0.2		18.6	
HCM LOS	C					
Minor Lane/Major Mvmt	NELn1	NWL	NWT	SET	SER	
Capacity (veh/h)	356	1086	-	-	-	
HCM Lane V/C Ratio	0.256	0.007	-	-	-	
HCM Control Delay (s)	18.6	8.3	0	-	-	
HCM Lane LOS	C	A	A	-	-	
HCM 95th %tile Q(veh)	1	0	-	-	-	

HCM 2010 TWSC
2: Morrison St & Greensboro Hwy

02/20/2024

Intersection						
Int Delay, s/veh	0.9					
Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	382	18	19	351	18	22
Future Vol, veh/h	382	18	19	351	18	22
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	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	415	20	21	382	20	24
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	435	0	849	425
Stage 1	-	-	-	-	425	-
Stage 2	-	-	-	-	424	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1125	-	331	629
Stage 1	-	-	-	-	659	-
Stage 2	-	-	-	-	660	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1125	-	323	629
Mov Cap-2 Maneuver	-	-	-	-	323	-
Stage 1	-	-	-	-	659	-
Stage 2	-	-	-	-	644	-
Approach	SE		NW		NE	
HCM Control Delay, s	0		0.4		14.1	
HCM LOS	B					
Minor Lane/Major Mvmt	NELn1	NWL	NWT	SET	SER	
Capacity (veh/h)	441	1125	-	-	-	
HCM Lane V/C Ratio	0.099	0.018	-	-	-	
HCM Control Delay (s)	14.1	8.3	0	-	-	
HCM Lane LOS	B	A	A	-	-	
HCM 95th %tile Q(veh)	0.3	0.1	-	-	-	





Intersection						
Int Delay, s/veh	1.7					
Movement	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Traffic Vol, veh/h	70	332	320	31	15	50
Future Vol, veh/h	70	332	320	31	15	50
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	85	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	76	361	348	34	16	54
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	382	0	-	0	861	348
Stage 1	-	-	-	-	348	-
Stage 2	-	-	-	-	513	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1176	-	-	-	326	695
Stage 1	-	-	-	-	715	-
Stage 2	-	-	-	-	601	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1176	-	-	-	300	695
Mov Cap-2 Maneuver	-	-	-	-	300	-
Stage 1	-	-	-	-	657	-
Stage 2	-	-	-	-	601	-
Approach	SE	NW		SW		
HCM Control Delay, s	1.4	0		12.8		
HCM LOS	B					
Minor Lane/Major Mvmt	NWT	NWR	SEL	SET	SWLn1	
Capacity (veh/h)	-	-	1176	-	533	
HCM Lane V/C Ratio	-	-	0.065	-	0.133	
HCM Control Delay (s)	-	-	8.3	0	12.8	
HCM Lane LOS	-	-	A	A	B	
HCM 95th %tile Q(veh)	-	-	0.2	-	0.5	

Intersection						
Int Delay, s/veh	1.8					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	10	5	3	30	30	7
Future Vol, veh/h	10	5	3	30	30	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	11	5	3	33	33	8
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	76	37	41	0	-	0
Stage 1	37	-	-	-	-	-
Stage 2	39	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	927	1035	1568	-	-	-
Stage 1	985	-	-	-	-	-
Stage 2	983	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	925	1035	1568	-	-	-
Mov Cap-2 Maneuver	925	-	-	-	-	-
Stage 1	983	-	-	-	-	-
Stage 2	983	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	8.8	0.7		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1568	-	959	-	-	
HCM Lane V/C Ratio	0.002	-	0.017	-	-	
HCM Control Delay (s)	7.3	0	8.8	-	-	
HCM Lane LOS	A	A	A	-	-	
HCM 95th %tile Q(veh)	0	-	0.1	-	-	

HCM 2010 TWSC
5: Greensboro Hwy & Depot St

02/20/2024



















Intersection												
Int Delay, s/veh	1.5											
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↔	↔		↔						↔	
Traffic Vol, veh/h	11	411	6	67	340	34	0	0	0	24	3	5
Future Vol, veh/h	11	411	6	67	340	34	0	0	0	24	3	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	80	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	-	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	12	447	7	73	370	37	0	0	0	26	3	5
Major/Minor	Major1			Major2			Minor2					
Conflicting Flow All	407	0	0	454	0	0				1010	1013	389
Stage 1	-	-	-	-	-	-				535	535	-
Stage 2	-	-	-	-	-	-				475	478	-
Critical Hdwy	4.12	-	-	4.12	-	-				6.42	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-				5.42	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-				5.42	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-				3.518	4.018	3.318
Pot Cap-1 Maneuver	1152	-	-	1107	-	-				266	239	659
Stage 1	-	-	-	-	-	-				587	524	-
Stage 2	-	-	-	-	-	-				626	556	-
Platoon blocked, %	-	-	-	-	-	-				-	-	-
Mov Cap-1 Maneuver	1152	-	-	1107	-	-				240	0	659
Mov Cap-2 Maneuver	-	-	-	-	-	-				240	0	-
Stage 1	-	-	-	-	-	-				579	0	-
Stage 2	-	-	-	-	-	-				572	0	-
Approach	SE			NW			SW					
HCM Control Delay, s	0.2			1.3			20.3					
HCM LOS							C					
Minor Lane/Major Mvmt	NWL	NWT	NWR	SEL	SET	SERSWLn1						
Capacity (veh/h)	1107	-	-	1152	-	-	270					
HCM Lane V/C Ratio	0.066	-	-	0.01	-	-	0.129					
HCM Control Delay (s)	8.5	0	-	8.2	0	-	20.3					
HCM Lane LOS	A	A	-	A	A	-	C					
HCM 95th %tile Q(veh)	0.2	-	-	0	-	-	0.4					

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	6	195	1	6	235	9	5	33	5	6	23	11
Future Vol, veh/h	6	195	1	6	235	9	5	33	5	6	23	11
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	7	212	1	7	255	10	5	36	5	7	25	12
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	265	0	0	213	0	0	520	506	213	521	501	260
Stage 1	-	-	-	-	-	-	227	227	-	274	274	-
Stage 2	-	-	-	-	-	-	293	279	-	247	227	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
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	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1299	-	-	1357	-	-	467	469	827	466	472	779
Stage 1	-	-	-	-	-	-	776	716	-	732	683	-
Stage 2	-	-	-	-	-	-	715	680	-	757	716	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1299	-	-	1357	-	-	437	463	827	432	466	779
Mov Cap-2 Maneuver	-	-	-	-	-	-	437	463	-	432	466	-
Stage 1	-	-	-	-	-	-	771	712	-	728	679	-
Stage 2	-	-	-	-	-	-	674	676	-	710	712	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.2			0.2			13.2			12.6		
HCM LOS							B			B		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	484	1299	-	-	1357	-	-	517				
HCM Lane V/C Ratio	0.097	0.005	-	-	0.005	-	-	0.084				
HCM Control Delay (s)	13.2	7.8	0	-	7.7	0	-	12.6				
HCM Lane LOS	B	A	A	-	A	A	-	B				
HCM 95th %tile Q(veh)	0.3	0	-	-	0	-	-	0.3				

HCM Signalized Intersection Capacity Analysis

7: S Main St & Greensboro Hwy & S Barnett Shoals Rd

02/20/2024

												
Movement	WBL2	WBL	WBR	NBT	NBR	NBR2	SBL2	SBL	SBT	NWL	NWR	NWR2
Lane Configurations												
Traffic Volume (vph)	27	60	185	138	70	50	137	378	89	3	346	12
Future Volume (vph)	27	60	185	138	70	50	137	378	89	3	346	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.0	4.5			4.5		4.5	4.5		
Lane Util. Factor		1.00	1.00	1.00			1.00		1.00	1.00		
Frt		1.00	0.85	0.94			1.00		1.00	0.87		
Flt Protected		0.95	1.00	1.00			0.95		0.96	1.00		
Satd. Flow (prot)		1770	1583	1746			1770		1790	1613		
Flt Permitted		0.95	1.00	1.00			0.95		0.95	1.00		
Satd. Flow (perm)		1770	1583	1746			1770		1770	1612		
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	29	65	201	150	76	54	149	411	97	3	376	13
RTOR Reduction (vph)	0	0	0	11	0	0	0	0	0	92	0	0
Lane Group Flow (vph)	0	94	201	269	0	0	149	0	508	300	0	0
Turn Type	Perm	Prot	Free	NA			pm+pt	Perm	NA	Perm		
Protected Phases		4		3			1		6			
Permitted Phases	4		Free				6	6		2		
Actuated Green, G (s)		7.4	67.9	14.5			32.5		32.5	24.2		
Effective Green, g (s)		7.4	67.9	14.5			32.5		32.5	24.2		
Actuated g/C Ratio		0.11	1.00	0.21			0.48		0.48	0.36		
Clearance Time (s)		4.5		4.5			4.5		4.5	4.5		
Vehicle Extension (s)		3.0		3.0			3.0		3.0	3.0		
Lane Grp Cap (vph)		192	1583	372			847		847	574		
v/s Ratio Prot				c0.15			0.01					
v/s Ratio Perm		0.05	0.13				0.07		c0.29	0.19		
v/c Ratio		0.49	0.13	0.72			0.18		0.60	0.52		
Uniform Delay, d1		28.5	0.0	24.8			10.1		12.9	17.3		
Progression Factor		1.00	1.00	1.00			1.00		1.00	1.00		
Incremental Delay, d2		2.0	0.2	6.8			0.1		3.1	0.9		
Delay (s)		30.4	0.2	31.6			10.2		16.1	18.1		
Level of Service		C	A	C			B		B	B		
Approach Delay (s)		9.8		31.6					14.7	18.1		
Approach LOS		A		C					B	B		
Intersection Summary												
HCM 2000 Control Delay			17.6		HCM 2000 Level of Service					B		
HCM 2000 Volume to Capacity ratio			0.67									
Actuated Cycle Length (s)			67.9		Sum of lost time (s)					18.0		
Intersection Capacity Utilization			82.4%		ICU Level of Service					E		
Analysis Period (min)			15									
c Critical Lane Group												

HCM 2010 TWSC
8: SMain St & McKee St

02/20/2024

Intersection						
Int Delay, s/veh	2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	W	N	N	S	S
Traffic Vol, veh/h	73	5	225	0	0	161
Future Vol, veh/h	73	5	225	0	0	161
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	79	5	245	0	0	175
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	420	245	0	-	-	-
Stage 1	245	-	-	-	-	-
Stage 2	175	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	-	-
Pot Cap-1 Maneuver	590	794	-	0	0	-
Stage 1	796	-	-	0	0	-
Stage 2	855	-	-	0	0	-
Platoon blocked, %			-			-
Mov Cap-1 Maneuver	590	794	-	-	-	-
Mov Cap-2 Maneuver	590	-	-	-	-	-
Stage 1	796	-	-	-	-	-
Stage 2	855	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	12	0	0			
HCM LOS	B					
Minor Lane/Major Mvmt	NBTWBLn1		SBT			
Capacity (veh/h)	- 600		-			
HCM Lane V/C Ratio	- 0.141		-			
HCM Control Delay (s)	- 12		-			
HCM Lane LOS	- B		-			
HCM 95th %tile Q(veh)	- 0.5		-			

HCM Unsignalized Intersection Capacity Analysis

9: S Main St/SMain St & Jackson St





02/20/2024



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations				↕	↕	
Traffic Volume (veh/h)	0	0	2	225	232	2
Future Volume (Veh/h)	0	0	2	225	232	2
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	2	245	252	2
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	502	253	254			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	502	253	254			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	100			
cM capacity (veh/h)	528	786	1311			
Direction, Lane #	NB 1	SB 1				
Volume Total	247	254				
Volume Left	2	0				
Volume Right	0	2				
cSH	1311	1700				
Volume to Capacity	0.00	0.15				
Queue Length 95th (ft)	0	0				
Control Delay (s)	0.1	0.0				
Lane LOS	A					
Approach Delay (s)	0.1	0.0				
Approach LOS						
Intersection Summary						
Average Delay			0.0			
Intersection Capacity Utilization			16.8%	ICU Level of Service		A
Analysis Period (min)			15			

Intersection

Int Delay, s/veh 3.4

Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	447	133	18	418	114	15
Future Vol, veh/h	447	133	18	418	114	15
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	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	486	145	20	454	124	16




Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	631
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	4.12
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	2.218
Pot Cap-1 Maneuver	-	-	951
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	951
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-






Approach	SE	NW	NE
HCM Control Delay, s	0	0.4	29
HCM LOS			D

Minor Lane/Major Mvmt	NELn1	NWL	NWT	SET	SER
Capacity (veh/h)	287	951	-	-	-
HCM Lane V/C Ratio	0.489	0.021	-	-	-
HCM Control Delay (s)	29	8.9	0	-	-
HCM Lane LOS	D	A	A	-	-
HCM 95th %tile Q(veh)	2.5	0.1	-	-	-

HCM 2010 TWSC
2: Morrison St & Greensboro Hwy

02/20/2024

Intersection						
Int Delay, s/veh	1.1					
Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	449	13	27	415	22	30
Future Vol, veh/h	449	13	27	415	22	30
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	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	488	14	29	451	24	33
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	502	0	1004	495
Stage 1	-	-	-	-	495	-
Stage 2	-	-	-	-	509	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1062	-	268	575
Stage 1	-	-	-	-	613	-
Stage 2	-	-	-	-	604	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1062	-	258	575
Mov Cap-2 Maneuver	-	-	-	-	258	-
Stage 1	-	-	-	-	613	-
Stage 2	-	-	-	-	582	-
Approach	SE		NW		NE	
HCM Control Delay, s	0		0.5		16.2	
HCM LOS					C	
Minor Lane/Major Mvmt	NELn1	NWL	NWT	SET	SER	
Capacity (veh/h)	378	1062	-	-	-	
HCM Lane V/C Ratio	0.15	0.028	-	-	-	
HCM Control Delay (s)	16.2	8.5	0	-	-	
HCM Lane LOS	C	A	A	-	-	
HCM 95th %tile Q(veh)	0.5	0.1	-	-	-	

Intersection						
Int Delay, s/veh	2.2					
Movement	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Traffic Vol, veh/h	55	426	378	36	37	62
Future Vol, veh/h	55	426	378	36	37	62
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	85	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	60	463	411	39	40	67
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	450	0	-	0	994	411
Stage 1	-	-	-	-	411	-
Stage 2	-	-	-	-	583	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1110	-	-	-	272	641
Stage 1	-	-	-	-	669	-
Stage 2	-	-	-	-	558	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1110	-	-	-	252	641
Mov Cap-2 Maneuver	-	-	-	-	252	-
Stage 1	-	-	-	-	620	-
Stage 2	-	-	-	-	558	-
Approach	SE	NW		SW		
HCM Control Delay, s	1	0		17		
HCM LOS				C		
Minor Lane/Major Mvmt	NWT	NWR	SEL	SET	SWLn1	
Capacity (veh/h)	-	-	1110	-	406	
HCM Lane V/C Ratio	-	-	0.054	-	0.265	
HCM Control Delay (s)	-	-	8.4	0	17	
HCM Lane LOS	-	-	A	A	C	
HCM 95th %tile Q(veh)	-	-	0.2	-	1.1	

Intersection

Int Delay, s/veh 2.4

Movement EBL EBR NBL NBT SBT SBRLane Configurations 

Traffic Vol, veh/h 15 8 9 37 23 18

Future Vol, veh/h 15 8 9 37 23 18

Conflicting Peds, #/hr 0 0 0 0 0 0

Sign Control Stop Stop Free Free Free Free

RT Channelized - None - None - None

Storage Length - - - - - -

Veh in Median Storage, # 0 - - 0 0 -

Grade, % 0 - - 0 0 -

Peak Hour Factor 92 92 92 92 92 92

Heavy Vehicles, % 2 2 2 2 2 2

Mvmt Flow 16 9 10 40 25 20

Major/Minor Minor2 Major1 Major2

Conflicting Flow All 95 35 45 0 - 0

Stage 1 35 - - - - -

Stage 2 60 - - - - -

Critical Hdwy 6.42 6.22 4.12 - - -

Critical Hdwy Stg 1 5.42 - - - - -

Critical Hdwy Stg 2 5.42 - - - - -

Follow-up Hdwy 3.518 3.318 2.218 - - -

Pot Cap-1 Maneuver 905 1038 1563 - - -

Stage 1 987 - - - - -

Stage 2 963 - - - - -

Platoon blocked, % - - -

Mov Cap-1 Maneuver 899 1038 1563 - - -

Mov Cap-2 Maneuver 899 - - - - -

Stage 1 980 - - - - -

Stage 2 963 - - - - -

Approach EB NB SB

HCM Control Delay, s 8.9 1.4 0

HCM LOS A

Minor Lane/Major Mvmt NBL NBT EBLn1 SBT SBR

Capacity (veh/h) 1563 - 943 - -

HCM Lane V/C Ratio 0.006 - 0.027 - -

HCM Control Delay (s) 7.3 0 8.9 - -

HCM Lane LOS A A A - -

HCM 95th %tile Q(veh) 0 - 0.1 - -

HCM 2010 TWSC
5: Greensboro Hwy & Depot St

02/20/2024



















Intersection												
Int Delay, s/veh	3.1											
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↔	↔		↔						↔	
Traffic Vol, veh/h	12	527	10	97	385	51	0	0	0	49	9	11
Future Vol, veh/h	12	527	10	97	385	51	0	0	0	49	9	11
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	80	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	-	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	13	573	11	105	418	55	0	0	0	53	10	12
Major/Minor	Major1			Major2			Minor2					
Conflicting Flow All	473	0	0	584	0	0				1261	1266	446
Stage 1	-	-	-	-	-	-				656	656	-
Stage 2	-	-	-	-	-	-				605	610	-
Critical Hdwy	4.12	-	-	4.12	-	-				6.42	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-				5.42	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-				5.42	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-				3.518	4.018	3.318
Pot Cap-1 Maneuver	1089	-	-	991	-	-				188	169	612
Stage 1	-	-	-	-	-	-				516	462	-
Stage 2	-	-	-	-	-	-				545	485	-
Platoon blocked, %	-	-	-	-	-	-				-	-	-
Mov Cap-1 Maneuver	1089	-	-	991	-	-				158	0	612
Mov Cap-2 Maneuver	-	-	-	-	-	-				158	0	-
Stage 1	-	-	-	-	-	-				507	0	-
Stage 2	-	-	-	-	-	-				466	0	-
Approach	SE			NW			SW					
HCM Control Delay, s	0.2			1.6			37.7					
HCM LOS							E					
Minor Lane/Major Mvmt	NWL	NWT	NWR	SEL	SET	SERSWLn1						
Capacity (veh/h)	991	-	-	1089	-	-	183					
HCM Lane V/C Ratio	0.106	-	-	0.012	-	-	0.41					
HCM Control Delay (s)	9.1	0	-	8.3	0	-	37.7					
HCM Lane LOS	A	A	-	A	A	-	E					
HCM 95th %tile Q(veh)	0.4	-	-	0	-	-	1.8					

Intersection												
Int Delay, s/veh	3.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	10	307	8	3	253	18	10	53	8	9	51	12
Future Vol, veh/h	10	307	8	3	253	18	10	53	8	9	51	12
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	334	9	3	275	20	11	58	9	10	55	13
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	295	0	0	343	0	0	686	662	339	685	656	285
Stage 1	-	-	-	-	-	-	361	361	-	291	291	-
Stage 2	-	-	-	-	-	-	325	301	-	394	365	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
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	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1266	-	-	1216	-	-	362	382	703	362	385	754
Stage 1	-	-	-	-	-	-	657	626	-	717	672	-
Stage 2	-	-	-	-	-	-	687	665	-	631	623	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1266	-	-	1216	-	-	313	377	703	312	380	754
Mov Cap-2 Maneuver	-	-	-	-	-	-	313	377	-	312	380	-
Stage 1	-	-	-	-	-	-	650	619	-	709	670	-
Stage 2	-	-	-	-	-	-	617	663	-	559	616	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.2			0.1			16.6			16.1		
HCM LOS							C			C		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	386	1266	-	-	1216	-	-	402				
HCM Lane V/C Ratio	0.2	0.009	-	-	0.003	-	-	0.195				
HCM Control Delay (s)	16.6	7.9	0	-	8	0	-	16.1				
HCM Lane LOS	C	A	A	-	A	A	-	C				
HCM 95th %tile Q(veh)	0.7	0	-	-	0	-	-	0.7				

HCM Signalized Intersection Capacity Analysis




7: S Main St & Greensboro Hwy & S Barnett Shoals Rd

02/20/2024

												
Movement	WBL2	WBL	WBR	NBT	NBR	NBR2	SBL2	SBL	SBT	NWL	NWR	NWR2
Lane Configurations												
Traffic Volume (vph)	32	90	183	92	78	94	232	429	106	2	379	26
Future Volume (vph)	32	90	183	92	78	94	232	429	106	2	379	26
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.0	4.5			4.5		4.5	4.5		
Lane Util. Factor		1.00	1.00	1.00			1.00		1.00	1.00		
Frt		1.00	0.85	0.91			1.00		1.00	0.87		
Flt Protected		0.95	1.00	1.00			0.95		0.96	1.00		
Satd. Flow (prot)		1770	1583	1699			1770		1791	1612		
Flt Permitted		0.95	1.00	1.00			0.95		0.95	1.00		
Satd. Flow (perm)		1770	1583	1699			1770		1770	1612		
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	35	98	199	100	85	102	252	466	115	2	412	28
RTOR Reduction (vph)	0	0	0	25	0	0	0	0	0	97	0	0
Lane Group Flow (vph)	0	133	199	262	0	0	252	0	581	345	0	0
Turn Type	Perm	Prot	Free	NA			pm+pt	Perm	NA	Perm		
Protected Phases		4		3			1		6			
Permitted Phases	4		Free				6	6		2		
Actuated Green, G (s)		8.7	68.2	14.6			31.4		31.4	21.8		
Effective Green, g (s)		8.7	68.2	14.6			31.4		31.4	21.8		
Actuated g/C Ratio		0.13	1.00	0.21			0.46		0.46	0.32		
Clearance Time (s)		4.5		4.5			4.5		4.5	4.5		
Vehicle Extension (s)		3.0		3.0			3.0		3.0	3.0		
Lane Grp Cap (vph)		225	1583	363			814		814	515		
v/s Ratio Prot				c0.15			0.02					
v/s Ratio Perm		0.08	0.13				0.12		c0.33	0.21		
v/c Ratio		0.59	0.13	0.72			0.31		0.71	0.67		
Uniform Delay, d1		28.1	0.0	24.9			11.6		14.8	20.1		
Progression Factor		1.00	1.00	1.00			1.00		1.00	1.00		
Incremental Delay, d2		4.1	0.2	6.9			0.2		5.3	3.3		
Delay (s)		32.2	0.2	31.8			11.8		20.1	23.4		
Level of Service		C	A	C			B		C	C		
Approach Delay (s)		13.0		31.8					17.6	23.4		
Approach LOS		B		C					B	C		
Intersection Summary												
HCM 2000 Control Delay			20.3				HCM 2000 Level of Service			C		
HCM 2000 Volume to Capacity ratio			0.76									
Actuated Cycle Length (s)			68.2				Sum of lost time (s)			18.0		
Intersection Capacity Utilization			91.7%				ICU Level of Service			F		
Analysis Period (min)			15									
c Critical Lane Group												

HCM 2010 TWSC
8: SMain St & McKee St

02/20/2024

Intersection						
Int Delay, s/veh	2.8					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	117	2	268	0	0	214
Future Vol, veh/h	117	2	268	0	0	214
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	127	2	291	0	0	233
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	524	291	0	-	-	-
Stage 1	291	-	-	-	-	-
Stage 2	233	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	-	-
Pot Cap-1 Maneuver	514	748	-	0	0	-
Stage 1	759	-	-	0	0	-
Stage 2	806	-	-	0	0	-
Platoon blocked, %			-			-
Mov Cap-1 Maneuver	514	748	-	-	-	-
Mov Cap-2 Maneuver	514	-	-	-	-	-
Stage 1	759	-	-	-	-	-
Stage 2	806	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	14.3	0	0			
HCM LOS	B					
Minor Lane/Major Mvmt	NBTWBLn1		SBT			
Capacity (veh/h)	-	517	-			
HCM Lane V/C Ratio	-	0.25	-			
HCM Control Delay (s)	-	14.3	-			
HCM Lane LOS	-	B	-			
HCM 95th %tile Q(veh)	-	1	-			

HCM Unsignalized Intersection Capacity Analysis

9: S Main St/SMain St & Jackson St

02/20/2024










Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations				↕	↕	
Traffic Volume (veh/h)	0	0	2	198	261	6
Future Volume (Veh/h)	0	0	2	198	261	6
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.95	0.95	0.80	0.80
Hourly flow rate (vph)	0	0	2	208	326	8
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	542	330	334			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	542	330	334			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	100			
cM capacity (veh/h)	501	712	1225			
Direction, Lane #	NB 1	SB 1				
Volume Total	210	334				
Volume Left	2	0				
Volume Right	0	8				
cSH	1225	1700				
Volume to Capacity	0.00	0.20				
Queue Length 95th (ft)	0	0				
Control Delay (s)	0.1	0.0				
Lane LOS	A					
Approach Delay (s)	0.1	0.0				
Approach LOS						
Intersection Summary						
Average Delay			0.0			
Intersection Capacity Utilization			17.4%	ICU Level of Service		A
Analysis Period (min)			15			

Intersection						
Int Delay, s/veh	1.9					
Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations	↑	↗		↖	↘	
Traffic Vol, veh/h	409	49	7	380	74	10
Future Vol, veh/h	409	49	7	380	74	10
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	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	445	53	8	413	80	11
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	498	0	874	445
Stage 1	-	-	-	-	445	-
Stage 2	-	-	-	-	429	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1066	-	320	613
Stage 1	-	-	-	-	646	-
Stage 2	-	-	-	-	657	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1066	-	317	613
Mov Cap-2 Maneuver	-	-	-	-	317	-
Stage 1	-	-	-	-	646	-
Stage 2	-	-	-	-	650	-
Approach	SE		NW		NE	
HCM Control Delay, s	0		0.2		19.7	
HCM LOS	C					
Minor Lane/Major Mvmt	NELn1	NWL	NWT	SET	SER	
Capacity (veh/h)	336	1066	-	-	-	
HCM Lane V/C Ratio	0.272	0.007	-	-	-	
HCM Control Delay (s)	19.7	8.4	0	-	-	
HCM Lane LOS	C	A	A	-	-	
HCM 95th %tile Q(veh)	1.1	0	-	-	-	

HCM 2010 TWSC
2: Morrison St & Greensboro Hwy

02/20/2024

Intersection						
Int Delay, s/veh	0.9					
Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	401	18	20	369	18	23
Future Vol, veh/h	401	18	20	369	18	23
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	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	436	20	22	401	20	25
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	456	0	891	446
Stage 1	-	-	-	-	446	-
Stage 2	-	-	-	-	445	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1105	-	313	612
Stage 1	-	-	-	-	645	-
Stage 2	-	-	-	-	646	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1105	-	305	612
Mov Cap-2 Maneuver	-	-	-	-	305	-
Stage 1	-	-	-	-	645	-
Stage 2	-	-	-	-	629	-
Approach	SE		NW		NE	
HCM Control Delay, s	0		0.4		14.5	
HCM LOS					B	
Minor Lane/Major Mvmt	NELn1	NWL	NWT	SET	SER	
Capacity (veh/h)	424	1105	-	-	-	
HCM Lane V/C Ratio	0.105	0.02	-	-	-	
HCM Control Delay (s)	14.5	8.3	0	-	-	
HCM Lane LOS	B	A	A	-	-	
HCM 95th %tile Q(veh)	0.3	0.1	-	-	-	

Intersection						
Int Delay, s/veh	1.7					
Movement	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Traffic Vol, veh/h	73	349	336	32	16	52
Future Vol, veh/h	73	349	336	32	16	52
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	85	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	79	379	365	35	17	57
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	400	0	-	0	902	365
Stage 1	-	-	-	-	365	-
Stage 2	-	-	-	-	537	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1159	-	-	-	308	680
Stage 1	-	-	-	-	702	-
Stage 2	-	-	-	-	586	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1159	-	-	-	282	680
Mov Cap-2 Maneuver	-	-	-	-	282	-
Stage 1	-	-	-	-	642	-
Stage 2	-	-	-	-	586	-
Approach	SE	NW		SW		
HCM Control Delay, s	1.4	0		13.3		
HCM LOS	B					
Minor Lane/Major Mvmt	NWT	NWR	SEL	SET	SWLn1	
Capacity (veh/h)	-	-	1159	-	510	
HCM Lane V/C Ratio	-	-	0.068	-	0.145	
HCM Control Delay (s)	-	-	8.3	0	13.3	
HCM Lane LOS	-	-	A	A	B	
HCM 95th %tile Q(veh)	-	-	0.2	-	0.5	

Intersection

Int Delay, s/veh 1.8

Movement EBL EBR NBL NBT SBT SBRLane Configurations 

Traffic Vol, veh/h 10 5 3 31 31 7

Future Vol, veh/h 10 5 3 31 31 7

Conflicting Peds, #/hr 0 0 0 0 0 0

Sign Control Stop Stop Free Free Free Free

RT Channelized - None - None - None

Storage Length - - - - - -

Veh in Median Storage, # 0 - - 0 0 -

Grade, % 0 - - 0 0 -

Peak Hour Factor 92 92 92 92 92 92

Heavy Vehicles, % 2 2 2 2 2 2

Mvmt Flow 11 5 3 34 34 8

Major/Minor Minor2 Major1 Major2

Conflicting Flow All 78 38 42 0 - 0

Stage 1 38 - - - - -

Stage 2 40 - - - - -

Critical Hdwy 6.42 6.22 4.12 - - -

Critical Hdwy Stg 1 5.42 - - - - -

Critical Hdwy Stg 2 5.42 - - - - -

Follow-up Hdwy 3.518 3.318 2.218 - - -

Pot Cap-1 Maneuver 925 1034 1567 - - -

Stage 1 984 - - - - -

Stage 2 982 - - - - -

Platoon blocked, % - - -

Mov Cap-1 Maneuver 923 1034 1567 - - -

Mov Cap-2 Maneuver 923 - - - - -

Stage 1 982 - - - - -

Stage 2 982 - - - - -

Approach EB NB SB

HCM Control Delay, s 8.8 0.6 0

HCM LOS A

Minor Lane/Major Mvmt NBL NBT EBLn1 SBT SBR

Capacity (veh/h) 1567 - 957 - -

HCM Lane V/C Ratio 0.002 - 0.017 - -

HCM Control Delay (s) 7.3 0 8.8 - -





HCM Lane LOS A A A - -

HCM 95th %tile Q(veh) 0 - 0.1 - -

HCM 2010 TWSC
5: Greensboro Hwy & Depot St

02/20/2024








Intersection												
Int Delay, s/veh	1.5											
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↔	↔		↔						↔	
Traffic Vol, veh/h	12	430	6	68	357	34	0	0	0	25	3	5
Future Vol, veh/h	12	430	6	68	357	34	0	0	0	25	3	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	80	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	-	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	13	467	7	74	388	37	0	0	0	27	3	5
Major/Minor	Major1			Major2			Minor2					
Conflicting Flow All	425	0	0	474	0	0	1052	1055	407			
Stage 1	-	-	-	-	-	-	555	555	-			
Stage 2	-	-	-	-	-	-	497	500	-			
Critical Hdwy	4.12	-	-	4.12	-	-	6.42	6.52	6.22			
Critical Hdwy Stg 1	-	-	-	-	-	-	5.42	5.52	-			
Critical Hdwy Stg 2	-	-	-	-	-	-	5.42	5.52	-			
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318			
Pot Cap-1 Maneuver	1134	-	-	1088	-	-	251	226	644			
Stage 1	-	-	-	-	-	-	575	513	-			
Stage 2	-	-	-	-	-	-	611	543	-			
Platoon blocked, %	-	-	-	-	-	-						
Mov Cap-1 Maneuver	1134	-	-	1088	-	-	225	0	644			
Mov Cap-2 Maneuver	-	-	-	-	-	-	225	0	-			
Stage 1	-	-	-	-	-	-	566	0	-			
Stage 2	-	-	-	-	-	-	556	0	-			
Approach	SE			NW			SW					
HCM Control Delay, s	0.2			1.3			21.6					
HCM LOS							C					
Minor Lane/Major Mvmt	NWL	NWT	NWR	SEL	SET	SERSWLn1						
Capacity (veh/h)	1088	-	-	1134	-	-	252					
HCM Lane V/C Ratio	0.068	-	-	0.012	-	-	0.142					
HCM Control Delay (s)	8.6	0	-	8.2	0	-	21.6					
HCM Lane LOS	A	A	-	A	A	-	C					
HCM 95th %tile Q(veh)	0.2	-	-	0	-	-	0.5					




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	6	205	1	6	247	10	5	33	5	6	24	12
Future Vol, veh/h	6	205	1	6	247	10	5	33	5	6	24	12
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	7	223	1	7	268	11	5	36	5	7	26	13
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	279	0	0	224	0	0	545	531	224	546	526	274
Stage 1	-	-	-	-	-	-	238	238	-	288	288	-
Stage 2	-	-	-	-	-	-	307	293	-	258	238	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
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	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1284	-	-	1345	-	-	449	454	815	448	457	765
Stage 1	-	-	-	-	-	-	765	708	-	720	674	-
Stage 2	-	-	-	-	-	-	703	670	-	747	708	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1284	-	-	1345	-	-	418	449	815	414	452	765
Mov Cap-2 Maneuver	-	-	-	-	-	-	418	449	-	414	452	-
Stage 1	-	-	-	-	-	-	760	704	-	716	670	-
Stage 2	-	-	-	-	-	-	660	666	-	700	704	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.2			0.2			13.5			12.9		
HCM LOS							B			B		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	469	1284	-	-	1345	-	-	504				
HCM Lane V/C Ratio	0.1	0.005	-	-	0.005	-	-	0.091				
HCM Control Delay (s)	13.5	7.8	0	-	7.7	0	-	12.9				
HCM Lane LOS	B	A	A	-	A	A	-	B				
HCM 95th %tile Q(veh)	0.3	0	-	-	0	-	-	0.3				

HCM Signalized Intersection Capacity Analysis

7: S Main St & Greensboro Hwy & S Barnett Shoals Rd

02/20/2024

												
Movement	WBL2	WBL	WBR	NBT	NBR	NBR2	SBL2	SBL	SBT	NWL	NWR	NWR2
Lane Configurations												
Traffic Volume (vph)	28	63	195	145	74	51	144	395	93	3	362	13
Future Volume (vph)	28	63	195	145	74	51	144	395	93	3	362	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.0	4.5			4.5		4.5	4.5		
Lane Util. Factor		1.00	1.00	1.00			1.00		1.00	1.00		
Frt		1.00	0.85	0.94			1.00		1.00	0.87		
Flt Protected		0.95	1.00	1.00			0.95		0.96	1.00		
Satd. Flow (prot)		1770	1583	1747			1770		1790	1613		
Flt Permitted		0.95	1.00	1.00			0.95		0.95	1.00		
Satd. Flow (perm)		1770	1583	1747			1770		1770	1612		
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	30	68	212	158	80	55	157	429	101	3	393	14
RTOR Reduction (vph)	0	0	0	10	0	0	0	0	0	93	0	0
Lane Group Flow (vph)	0	98	212	283	0	0	157	0	530	317	0	0
Turn Type	Perm	Prot	Free	NA			pm+pt	Perm	NA	Perm		
Protected Phases		4		3			1		6			
Permitted Phases	4		Free				6	6		2		
Actuated Green, G (s)		7.5	68.4	15.0			32.4		32.4	24.1		
Effective Green, g (s)		7.5	68.4	15.0			32.4		32.4	24.1		
Actuated g/C Ratio		0.11	1.00	0.22			0.47		0.47	0.35		
Clearance Time (s)		4.5		4.5			4.5		4.5	4.5		
Vehicle Extension (s)		3.0		3.0			3.0		3.0	3.0		
Lane Grp Cap (vph)		194	1583	383			838		838	567		
v/s Ratio Prot				c0.16			0.01					
v/s Ratio Perm		0.06	0.13				0.08		c0.30	0.20		
v/c Ratio		0.51	0.13	0.74			0.19		0.63	0.56		
Uniform Delay, d1		28.7	0.0	24.9			10.4		13.5	17.9		
Progression Factor		1.00	1.00	1.00			1.00		1.00	1.00		
Incremental Delay, d2		2.1	0.2	7.3			0.1		3.6	1.2		
Delay (s)		30.8	0.2	32.1			10.5		17.1	19.1		
Level of Service		C	A	C			B		B	B		
Approach Delay (s)		9.8		32.1					15.6	19.1		
Approach LOS		A		C					B	B		
Intersection Summary												
HCM 2000 Control Delay			18.3		HCM 2000 Level of Service					B		
HCM 2000 Volume to Capacity ratio			0.70									
Actuated Cycle Length (s)			68.4		Sum of lost time (s)					18.0		
Intersection Capacity Utilization			85.5%		ICU Level of Service					E		
Analysis Period (min)			15									
c Critical Lane Group												

Intersection						
Int Delay, s/veh	2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	75	5	235	0	0	169
Future Vol, veh/h	75	5	235	0	0	169
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	82	5	255	0	0	184
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	439	255	0	-	-	-
Stage 1	255	-	-	-	-	-
Stage 2	184	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	-	-
Pot Cap-1 Maneuver	575	784	-	0	0	-
Stage 1	788	-	-	0	0	-
Stage 2	848	-	-	0	0	-
Platoon blocked, %			-			-
Mov Cap-1 Maneuver	575	784	-	-	-	-
Mov Cap-2 Maneuver	575	-	-	-	-	-
Stage 1	788	-	-	-	-	-
Stage 2	848	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	12.2	0	0			
HCM LOS	B					
Minor Lane/Major Mvmt	NBTWBLn1		SBT			
Capacity (veh/h)	- 585		-			
HCM Lane V/C Ratio	- 0.149		-			
HCM Control Delay (s)	- 12.2		-			
HCM Lane LOS	- B		-			
HCM 95th %tile Q(veh)	- 0.5		-			

HCM Unsignalized Intersection Capacity Analysis

9: S Main St/SMain St & Jackson St

02/20/2024











Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations				↕	↕	
Traffic Volume (veh/h)	0	0	2	235	242	2
Future Volume (Veh/h)	0	0	2	235	242	2
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	2	255	263	2
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	523	264	265			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	523	264	265			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	100			
cM capacity (veh/h)	514	775	1299			
Direction, Lane #	NB 1	SB 1				
Volume Total	257	265				
Volume Left	2	0				
Volume Right	0	2				
cSH	1299	1700				
Volume to Capacity	0.00	0.16				
Queue Length 95th (ft)	0	0				
Control Delay (s)	0.1	0.0				
Lane LOS	A					
Approach Delay (s)	0.1	0.0				
Approach LOS						
Intersection Summary						
Average Delay			0.0			
Intersection Capacity Utilization			17.3%	ICU Level of Service		A
Analysis Period (min)			15			

Intersection						
Int Delay, s/veh	3.7					
Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations	↑	↑		↑	↑	
Traffic Vol, veh/h	470	133	18	440	114	15
Future Vol, veh/h	470	133	18	440	114	15
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	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	511	145	20	478	124	16
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	656	0	1029	511
Stage 1	-	-	-	-	511	-
Stage 2	-	-	-	-	518	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	931	-	259	563
Stage 1	-	-	-	-	602	-
Stage 2	-	-	-	-	598	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	931	-	251	563
Mov Cap-2 Maneuver	-	-	-	-	251	-
Stage 1	-	-	-	-	602	-
Stage 2	-	-	-	-	581	-
Approach	SE		NW		NE	
HCM Control Delay, s	0		0.4		32.3	
HCM LOS					D	
Minor Lane/Major Mvmt	NELn1	NWL	NWT	SET	SER	
Capacity (veh/h)	268	931	-	-	-	
HCM Lane V/C Ratio	0.523	0.021	-	-	-	
HCM Control Delay (s)	32.3	8.9	0	-	-	
HCM Lane LOS	D	A	A	-	-	
HCM 95th %tile Q(veh)	2.8	0.1	-	-	-	

HCM 2010 TWSC
2: Morrison St & Greensboro Hwy

02/20/2024

Intersection						
Int Delay, s/veh	1.1					
Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	471	14	28	435	23	29
Future Vol, veh/h	471	14	28	435	23	29
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	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	512	15	30	473	25	32
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	527	0	1053	520
Stage 1	-	-	-	-	520	-
Stage 2	-	-	-	-	533	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1040	-	251	556
Stage 1	-	-	-	-	597	-
Stage 2	-	-	-	-	588	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1040	-	241	556
Mov Cap-2 Maneuver	-	-	-	-	241	-
Stage 1	-	-	-	-	597	-
Stage 2	-	-	-	-	565	-
Approach	SE		NW		NE	
HCM Control Delay, s	0		0.5		17.2	
HCM LOS					C	
Minor Lane/Major Mvmt	NELn1	NWL	NWT	SET	SER	
Capacity (veh/h)	352	1040	-	-	-	
HCM Lane V/C Ratio	0.161	0.029	-	-	-	
HCM Control Delay (s)	17.2	8.6	0	-	-	
HCM Lane LOS	C	A	A	-	-	
HCM 95th %tile Q(veh)	0.6	0.1	-	-	-	

Intersection						
Int Delay, s/veh	2.3					
Movement	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Traffic Vol, veh/h	57	447	396	38	39	65
Future Vol, veh/h	57	447	396	38	39	65
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	85	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	62	486	430	41	42	71
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	471	0	-	0	1040	430
Stage 1	-	-	-	-	430	-
Stage 2	-	-	-	-	610	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1091	-	-	-	255	625
Stage 1	-	-	-	-	656	-
Stage 2	-	-	-	-	542	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1091	-	-	-	235	625
Mov Cap-2 Maneuver	-	-	-	-	235	-
Stage 1	-	-	-	-	605	-
Stage 2	-	-	-	-	542	-
Approach	SE	NW		SW		
HCM Control Delay, s	1	0		18.2		
HCM LOS				C		
Minor Lane/Major Mvmt	NWT	NWR	SEL	SET	SWLn1	
Capacity (veh/h)	-	-	1091	-	385	
HCM Lane V/C Ratio	-	-	0.057	-	0.294	
HCM Control Delay (s)	-	-	8.5	0	18.2	
HCM Lane LOS	-	-	A	A	C	
HCM 95th %tile Q(veh)	-	-	0.2	-	1.2	

Intersection

Int Delay, s/veh 2.4

Movement EBL EBR NBL NBT SBT SBRLane Configurations 

Traffic Vol, veh/h 15 8 9 39 24 18

Future Vol, veh/h 15 8 9 39 24 18

Conflicting Peds, #/hr 0 0 0 0 0 0

Sign Control Stop Stop Free Free Free Free

RT Channelized - None - None - None

Storage Length - - - - - -

Veh in Median Storage, # 0 - - 0 0 -

Grade, % 0 - - 0 0 -

Peak Hour Factor 92 92 92 92 92 92

Heavy Vehicles, % 2 2 2 2 2 2

Mvmt Flow 16 9 10 42 26 20

Major/Minor Minor2 Major1 Major2

Conflicting Flow All 98 36 46 0 - 0

Stage 1 36 - - - - -

Stage 2 62 - - - - -

Critical Hdwy 6.42 6.22 4.12 - - -

Critical Hdwy Stg 1 5.42 - - - - -

Critical Hdwy Stg 2 5.42 - - - - -

Follow-up Hdwy 3.518 3.318 2.218 - - -

Pot Cap-1 Maneuver 901 1037 1562 - - -

Stage 1 986 - - - - -

Stage 2 961 - - - - -

Platoon blocked, % - - -

Mov Cap-1 Maneuver 895 1037 1562 - - -

Mov Cap-2 Maneuver 895 - - - - -

Stage 1 979 - - - - -

Stage 2 961 - - - - -

Approach EB NB SB

HCM Control Delay, s 8.9 1.4 0

HCM LOS A

Minor Lane/Major Mvmt NBL NBT EBLn1 SBT SBR

Capacity (veh/h) 1562 - 940 - -

HCM Lane V/C Ratio 0.006 - 0.027 - -

HCM Control Delay (s) 7.3 0 8.9 - -





HCM Lane LOS A A A - -

HCM 95th %tile Q(veh) 0 - 0.1 - -

HCM 2010 TWSC
5: Greensboro Hwy & Depot St

02/20/2024



















Intersection												
Int Delay, s/veh	3.4											
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↔	↔		↔						↔	
Traffic Vol, veh/h	11	549	13	99	404	52	0	0	0	50	10	12
Future Vol, veh/h	11	549	13	99	404	52	0	0	0	50	10	12
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	80	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	-	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	12	597	14	108	439	57	0	0	0	54	11	13
Major/Minor	Major1			Major2			Minor2					
Conflicting Flow All	496	0	0	611	0	0	1312	1319	468			
Stage 1	-	-	-	-	-	-	684	684	-			
Stage 2	-	-	-	-	-	-	628	635	-			
Critical Hdwy	4.12	-	-	4.12	-	-	6.42	6.52	6.22			
Critical Hdwy Stg 1	-	-	-	-	-	-	5.42	5.52	-			
Critical Hdwy Stg 2	-	-	-	-	-	-	5.42	5.52	-			
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318			
Pot Cap-1 Maneuver	1068	-	-	968	-	-	175	157	595			
Stage 1	-	-	-	-	-	-	501	449	-			
Stage 2	-	-	-	-	-	-	532	472	-			
Platoon blocked, %	-	-	-	-	-	-						
Mov Cap-1 Maneuver	1068	-	-	968	-	-	145	0	595			
Mov Cap-2 Maneuver	-	-	-	-	-	-	145	0	-			
Stage 1	-	-	-	-	-	-	492	0	-			
Stage 2	-	-	-	-	-	-	450	0	-			
Approach	SE			NW			SW					
HCM Control Delay, s	0.2			1.6			43.1					
HCM LOS							E					
Minor Lane/Major Mvmt	NWL	NWT	NWR	SEL	SET	SERSWLn1						
Capacity (veh/h)	968	-	-	1068	-	-	170					
HCM Lane V/C Ratio	0.111	-	-	0.011	-	-	0.46					
HCM Control Delay (s)	9.2	0	-	8.4	0	-	43.1					
HCM Lane LOS	A	A	-	A	A	-	E					
HCM 95th %tile Q(veh)	0.4	-	-	0	-	-	2.2					




Intersection												
Int Delay, s/veh	3.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	11	323	9	3	266	18	11	54	9	10	52	13
Future Vol, veh/h	11	323	9	3	266	18	11	54	9	10	52	13
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	12	351	10	3	289	20	12	59	10	11	57	14
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	309	0	0	361	0	0	721	695	356	720	690	299
Stage 1	-	-	-	-	-	-	380	380	-	305	305	-
Stage 2	-	-	-	-	-	-	341	315	-	415	385	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
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	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1252	-	-	1198	-	-	343	366	688	343	368	741
Stage 1	-	-	-	-	-	-	642	614	-	705	662	-
Stage 2	-	-	-	-	-	-	674	656	-	615	611	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1252	-	-	1198	-	-	293	361	688	293	362	741
Mov Cap-2 Maneuver	-	-	-	-	-	-	293	361	-	293	362	-
Stage 1	-	-	-	-	-	-	634	607	-	697	660	-
Stage 2	-	-	-	-	-	-	603	654	-	541	604	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.3			0.1			17.4			16.9		
HCM LOS							C			C		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	370	1252	-	-	1198	-	-	384				
HCM Lane V/C Ratio	0.217	0.01	-	-	0.003	-	-	0.212				
HCM Control Delay (s)	17.4	7.9	0	-	8	0	-	16.9				
HCM Lane LOS	C	A	A	-	A	A	-	C				
HCM 95th %tile Q(veh)	0.8	0	-	-	0	-	-	0.8				

HCM Signalized Intersection Capacity Analysis

7: S Main St & Greensboro Hwy & S Barnett Shoals Rd

02/20/2024









												
Movement	WBL2	WBL	WBR	NBT	NBR	NBR2	SBL2	SBL	SBT	NWL	NWR	NWR2
Lane Configurations												
Traffic Volume (vph)	34	94	193	96	82	95	244	449	112	2	397	27
Future Volume (vph)	34	94	193	96	82	95	244	449	112	2	397	27
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.0	4.5			4.5		4.5	4.5		
Lane Util. Factor		1.00	1.00	1.00			1.00		1.00	1.00		
Frt		1.00	0.85	0.91			1.00		1.00	0.87		
Flt Protected		0.95	1.00	1.00			0.95		0.96	1.00		
Satd. Flow (prot)		1770	1583	1700			1770		1791	1612		
Flt Permitted		0.95	1.00	1.00			0.95		0.95	1.00		
Satd. Flow (perm)		1770	1583	1700			1770		1770	1612		
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	37	102	210	104	89	103	265	488	122	2	432	29
RTOR Reduction (vph)	0	0	0	24	0	0	0	0	0	98	0	0
Lane Group Flow (vph)	0	139	210	272	0	0	265	0	610	365	0	0
Turn Type	Perm	Prot	Free	NA			pm+pt	Perm	NA	Perm		
Protected Phases		4		3			1		6			
Permitted Phases	4		Free				6	6		2		
Actuated Green, G (s)		8.9	68.7	14.9			31.4		31.4	21.8		
Effective Green, g (s)		8.9	68.7	14.9			31.4		31.4	21.8		
Actuated g/C Ratio		0.13	1.00	0.22			0.46		0.46	0.32		
Clearance Time (s)		4.5		4.5			4.5		4.5	4.5		
Vehicle Extension (s)		3.0		3.0			3.0		3.0	3.0		
Lane Grp Cap (vph)		229	1583	368			808		808	511		
v/s Ratio Prot				c0.16			0.02					
v/s Ratio Perm		0.08	0.13				0.13		c0.34	0.23		
v/c Ratio		0.61	0.13	0.74			0.33		0.75	0.72		
Uniform Delay, d1		28.2	0.0	25.1			11.9		15.5	20.7		
Progression Factor		1.00	1.00	1.00			1.00		1.00	1.00		
Incremental Delay, d2		4.5	0.2	7.6			0.2		6.5	4.7		
Delay (s)		32.7	0.2	32.6			12.1		21.9	25.4		
Level of Service		C	A	C			B		C	C		
Approach Delay (s)		13.1		32.6					19.0	25.4		
Approach LOS		B		C					B	C		
Intersection Summary												
HCM 2000 Control Delay			21.5				HCM 2000 Level of Service			C		
HCM 2000 Volume to Capacity ratio			0.79									
Actuated Cycle Length (s)			68.7				Sum of lost time (s)			18.0		
Intersection Capacity Utilization			95.1%				ICU Level of Service			F		
Analysis Period (min)			15									
c Critical Lane Group												

Intersection						
Int Delay, s/veh	2.9					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	119	2	278	0	0	225
Future Vol, veh/h	119	2	278	0	0	225
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	129	2	302	0	0	245
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	547	302	0	-	-	-
Stage 1	302	-	-	-	-	-
Stage 2	245	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	-	-
Pot Cap-1 Maneuver	498	738	-	0	0	-
Stage 1	750	-	-	0	0	-
Stage 2	796	-	-	0	0	-
Platoon blocked, %			-			-
Mov Cap-1 Maneuver	498	738	-	-	-	-
Mov Cap-2 Maneuver	498	-	-	-	-	-
Stage 1	750	-	-	-	-	-
Stage 2	796	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	14.7	0	0			
HCM LOS	B					
Minor Lane/Major Mvmt	NBTWBLn1		SBT			
Capacity (veh/h)	- 501		-			
HCM Lane V/C Ratio	- 0.263		-			
HCM Control Delay (s)	- 14.7		-			
HCM Lane LOS	- B		-			
HCM 95th %tile Q(veh)	- 1		-			

HCM Unsignalized Intersection Capacity Analysis

9: S Main St/SMain St & Jackson St

02/20/2024

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	0	2	279	335	6
Future Volume (Veh/h)	0	0	2	279	335	6
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	2	303	364	7
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	674	368	371			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	674	368	371			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	100			
cM capacity (veh/h)	419	678	1188			
Direction, Lane #	NB 1	SB 1				
Volume Total	305	371				
Volume Left	2	0				
Volume Right	0	7				
cSH	1188	1700				
Volume to Capacity	0.00	0.22				
Queue Length 95th (ft)	0	0				
Control Delay (s)	0.1	0.0				
Lane LOS	A					
Approach Delay (s)	0.1	0.0				
Approach LOS						
Intersection Summary						
Average Delay			0.0			
Intersection Capacity Utilization			21.3%	ICU Level of Service		A
Analysis Period (min)			15			

Queues

7: S Main St & Greensboro Hwy & S Barnett Shoals Rd

02/20/2024



Lane Group	WBL	WBR	NBT	SBL2	SBT	NWL
Lane Group Flow (vph)	94	201	280	149	508	392
v/c Ratio	0.39	0.13	0.71	0.18	0.60	0.57
Control Delay	32.8	0.2	34.1	13.5	19.2	17.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	32.8	0.2	34.1	13.5	19.2	17.7
Queue Length 50th (ft)	37	0	103	37	160	88
Queue Length 95th (ft)	80	0	190	80	299	199
Internal Link Dist (ft)	325		1256		551	1542
Turn Bay Length (ft)	150	150		240		
Base Capacity (vph)	494	1583	497	842	842	682
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.19	0.13	0.56	0.18	0.60	0.57
Intersection Summary						

Queues

7: S Main St & Greensboro Hwy & S Barnett Shoals Rd

02/20/2024



Lane Group	WBL	WBR	NBT	SBL2	SBT	NWL
Lane Group Flow (vph)	133	199	287	252	581	442
v/c Ratio	0.48	0.13	0.73	0.31	0.70	0.72
Control Delay	34.0	0.2	34.9	15.4	23.8	24.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	34.0	0.2	34.9	15.4	23.8	24.3
Queue Length 50th (ft)	54	0	102	70	206	117
Queue Length 95th (ft)	106	0	#201	140	#425	#291
Internal Link Dist (ft)	325		1256		551	1542
Turn Bay Length (ft)	150	150		240		
Base Capacity (vph)	486	1583	490	825	825	614
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.27	0.13	0.59	0.31	0.70	0.72

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.



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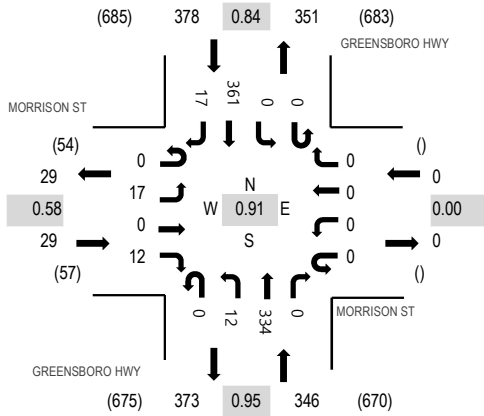
Location: 1 GREENSBORO HWY & MORRISON ST AM

Date: Tuesday, November 28, 2023

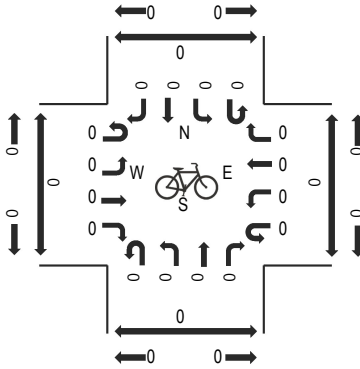
Peak Hour: 07:00 AM - 08:00 AM

Peak 15-Minutes: 07:00 AM - 07:15 AM

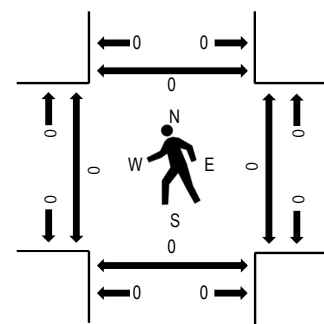
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	MORRISON ST Eastbound				MORRISON ST Westbound				GREENSBORO HWY Northbound				GREENSBORO HWY Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
7:00 AM	0	5	0	4	0	0	0	0	0	4	82	0	0	0	105	7	207	753	0	0	0	0
7:15 AM	0	3	0	1	0	0	0	0	0	2	77	0	0	0	96	6	185	698	0	0	0	0
7:30 AM	0	7	0	3	0	0	0	0	0	1	89	0	0	0	78	2	180	662	0	0	0	0
7:45 AM	0	2	0	4	0	0	0	0	0	5	86	0	0	0	82	2	181	648	0	0	0	0
8:00 AM	0	2	0	3	0	0	0	0	0	2	62	0	0	0	76	7	152	659	0	0	0	0
8:15 AM	0	4	0	2	0	0	0	0	0	1	68	0	0	0	68	6	149		0	0	0	0
8:30 AM	0	5	0	8	0	0	0	0	0	1	73	0	0	0	73	6	166		0	0	0	0
8:45 AM	0	1	0	3	0	0	0	0	0	0	117	0	0	0	69	2	192		0	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	22	0	0	0	19	0	41
Lights	0	15	0	10	0	0	0	0	0	11	292	0	0	0	314	15	657
Mediums	0	2	0	2	0	0	0	0	0	1	20	0	0	0	28	2	55
Total	0	17	0	12	0	0	0	0	0	12	334	0	0	0	361	17	753

Heavy Vehicle Percentage and Peak Hour Factor

	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Heavy Vehicle %		13.8%				0.0%				12.4%				13.0%			12.7%
Heavy Vehicle %	0.0%	11.8%	0.0%	16.7%	0.0%	0.0%	0.0%	0.0%	0.0%	8.3%	12.6%	0.0%	0.0%	0.0%	13.0%	11.8%	12.7%
Peak Hour Factor		0.58				0.00				0.95				0.84			0.91
Peak Hour Factor	0.00	0.61	0.00	0.53	0.00	0.00	0.00	0.00	0.00	0.60	0.94	0.00	0.00	0.00	0.86	0.75	0.91



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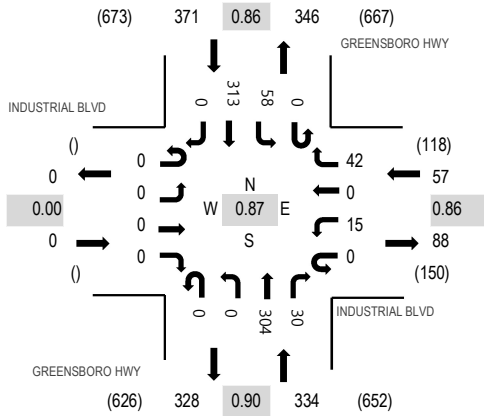
Location: 2 GREENSBORO HWY & INDUSTRIAL BLVD AM

Date: Tuesday, November 28, 2023

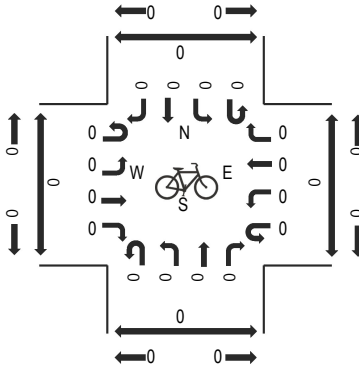
Peak Hour: 07:00 AM - 08:00 AM

Peak 15-Minutes: 07:00 AM - 07:15 AM

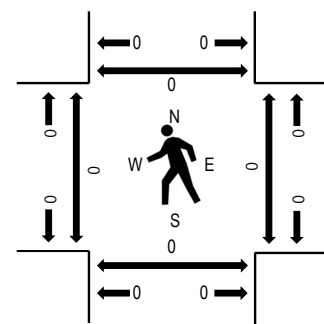
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	INDUSTRIAL BLVD Eastbound				INDUSTRIAL BLVD Westbound				GREENSBORO HWY Northbound				GREENSBORO HWY Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
7:00 AM	0	0	0	0	0	6	0	11	0	0	77	16	0	22	86	0	218	762	0	0	0	0
7:15 AM	0	0	0	0	0	3	0	9	0	0	69	6	0	16	82	0	185	702	0	0	0	0
7:30 AM	0	0	0	0	0	4	0	10	0	0	76	4	0	13	66	0	173	669	0	0	0	0
7:45 AM	0	0	0	0	0	2	0	12	0	0	82	4	0	7	79	0	186	668	0	0	0	0
8:00 AM	0	0	0	0	0	10	0	9	0	0	54	5	0	6	74	0	158	681	0	0	0	0
8:15 AM	0	0	0	0	0	6	0	10	0	0	59	5	0	6	66	0	152		0	0	0	0
8:30 AM	0	0	0	0	0	11	0	5	0	0	66	11	0	17	62	0	172		0	0	0	0
8:45 AM	0	0	0	0	0	5	0	5	0	0	113	5	0	7	64	0	199		0	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	1	0	1	0	0	21	0	0	0	19	0	42
Lights	0	0	0	0	0	14	0	37	0	0	266	26	0	53	270	0	666
Mediums	0	0	0	0	0	0	0	4	0	0	17	4	0	5	24	0	54
Total	0	0	0	0	0	15	0	42	0	0	304	30	0	58	313	0	762

Heavy Vehicle Percentage and Peak Hour Factor

	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Heavy Vehicle %	0.0%				10.5%				12.6%				12.9%				12.6%
Heavy Vehicle %	0.0%	0.0%	0.0%	0.0%	0.0%	6.7%	0.0%	11.9%	0.0%	0.0%	12.5%	13.3%	0.0%	8.6%	13.7%	0.0%	12.6%
Peak Hour Factor	0.00				0.86				0.90				0.86				0.87
Peak Hour Factor	0.00	0.00	0.00	0.00	0.00	0.73	0.00	0.88	0.00	0.00	0.93	0.47	0.00	0.66	0.91	0.00	0.87



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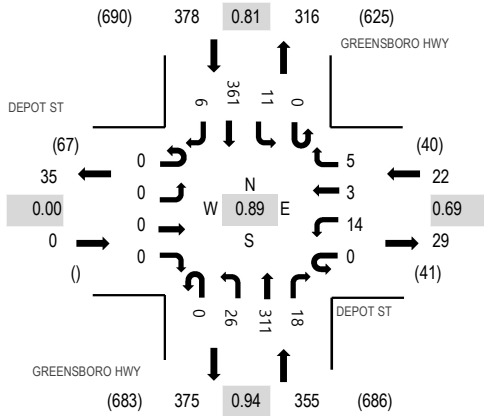
Location: 3 GREENSBORO HWY & DEPOT ST AM

Date: Tuesday, November 28, 2023

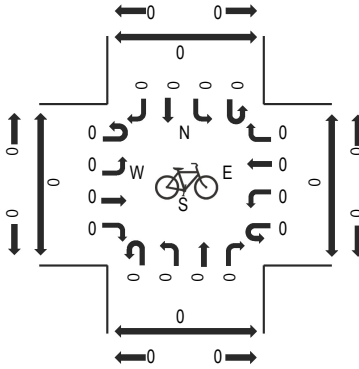
Peak Hour: 07:00 AM - 08:00 AM

Peak 15-Minutes: 07:00 AM - 07:15 AM

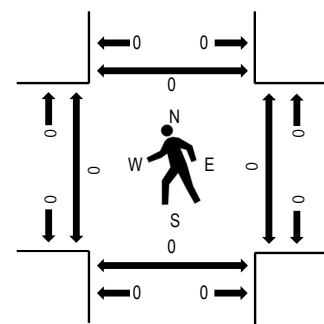
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	DEPOT ST Eastbound				DEPOT ST Westbound				GREENSBORO HWY Northbound				GREENSBORO HWY Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
7:00 AM	0	0	0	0	0	3	0	0	0	15	73	4	0	5	108	3	211	755	0	0	0	0
7:15 AM	0	0	0	0	0	5	1	3	0	3	67	7	0	3	96	1	186	699	0	0	0	0
7:30 AM	0	0	0	0	0	2	2	1	0	5	82	5	0	2	79	2	180	664	0	0	0	0
7:45 AM	0	0	0	0	0	4	0	1	0	3	89	2	0	1	78	0	178	647	0	0	0	0
8:00 AM	0	0	0	0	0	4	1	1	0	5	59	1	0	1	80	3	155	661	0	0	0	0
8:15 AM	0	0	0	0	0	4	0	1	0	5	61	4	0	2	71	3	151		0	0	0	0
8:30 AM	0	0	0	0	0	0	1	3	0	5	74	0	0	1	78	1	163		0	0	0	0
8:45 AM	0	0	0	0	0	1	0	2	0	7	108	2	0	1	70	1	192		0	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	22	0	0	0	19	0	41
Lights	0	0	0	0	0	14	3	5	0	26	264	18	0	9	313	6	658
Mediums	0	0	0	0	0	0	0	0	0	0	25	0	0	2	29	0	56
Total	0	0	0	0	0	14	3	5	0	26	311	18	0	11	361	6	755

Heavy Vehicle Percentage and Peak Hour Factor

	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Heavy Vehicle %	0.0%				0.0%				13.2%				13.2%				12.8%
Heavy Vehicle %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	15.1%	0.0%	0.0%	18.2%	13.3%	0.0%	12.8%
Peak Hour Factor	0.00				0.69				0.94				0.81				0.89
Peak Hour Factor	0.00	0.00	0.00	0.00	0.00	0.75	0.50	0.58	0.00	0.43	0.87	0.64	0.00	0.55	0.84	0.67	0.89



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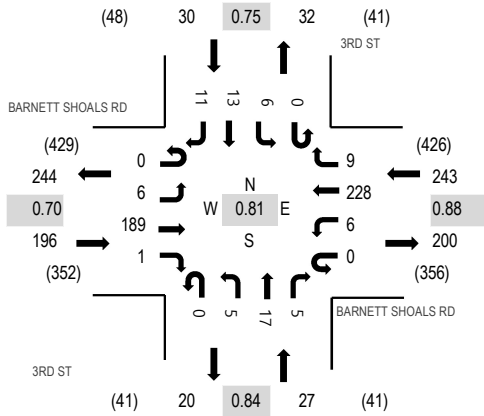
Location: 4 3RD ST & BARNETT SHOALS RD AM

Date: Tuesday, November 28, 2023

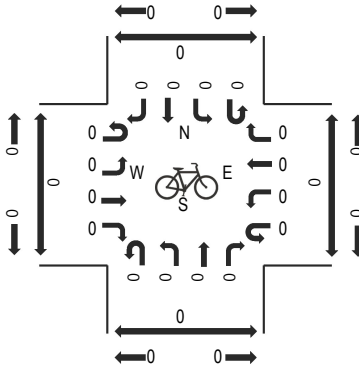
Peak Hour: 07:00 AM - 08:00 AM

Peak 15-Minutes: 07:15 AM - 07:30 AM

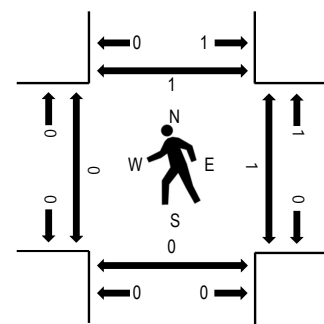
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	BARNETT SHOALS RD Eastbound				BARNETT SHOALS RD Westbound				3RD ST Northbound				3RD ST Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
7:00 AM	0	2	58	0	0	0	55	1	0	2	6	0	0	3	4	3	134	496	0	0	0	1
7:15 AM	0	0	69	1	0	4	64	1	0	2	4	2	0	2	3	1	153	467	0	0	0	0
7:30 AM	0	2	32	0	0	1	59	2	0	1	5	2	0	0	3	3	110	398	0	0	0	0
7:45 AM	0	2	30	0	0	1	50	5	0	0	2	1	0	1	3	4	99	374	0	1	0	0
8:00 AM	0	1	41	1	0	0	52	1	0	1	0	1	0	1	5	1	105	371	0	0	0	0
8:15 AM	0	0	33	3	0	0	36	0	0	2	3	2	0	1	4	0	84		0	0	0	2
8:30 AM	0	1	28	0	0	1	50	0	0	0	0	2	0	0	3	1	86		0	0	0	0
8:45 AM	0	0	47	1	0	1	41	1	0	1	2	0	0	0	2	0	96		0	0	0	2

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	5	0	0	0	1	0	0	0	0	0	0	0	0	0	6
Lights	0	6	170	1	0	6	215	9	0	4	16	5	0	6	13	11	462
Mediums	0	0	14	0	0	0	12	0	0	1	1	0	0	0	0	0	28
Total	0	6	189	1	0	6	228	9	0	5	17	5	0	6	13	11	496

Heavy Vehicle Percentage and Peak Hour Factor

	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Heavy Vehicle %		9.7%				5.3%				7.4%				0.0%			6.9%
Heavy Vehicle %	0.0%	0.0%	10.1%	0.0%	0.0%	0.0%	5.7%	0.0%	0.0%	20.0%	5.9%	0.0%	0.0%	0.0%	0.0%	0.0%	6.9%
Peak Hour Factor		0.70				0.88				0.84				0.75			0.81
Peak Hour Factor	0.00	0.75	0.68	0.42	0.00	0.38	0.89	0.45	0.00	0.63	0.71	0.75	0.00	0.50	0.75	0.69	0.81



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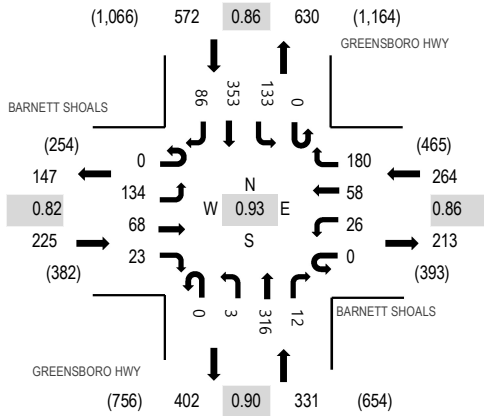
Location: 5 GREENSBORO HWY & BARNETT SHOALS AM

Date: Tuesday, November 28, 2023

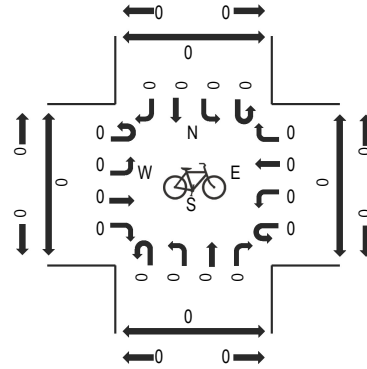
Peak Hour: 07:00 AM - 08:00 AM

Peak 15-Minutes: 07:15 AM - 07:30 AM

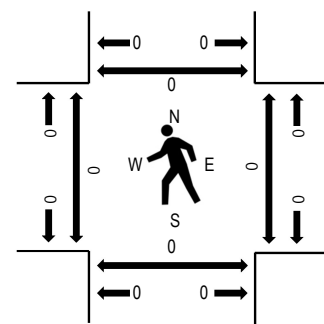
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	BARNETT SHOALS Eastbound				BARNETT SHOALS Westbound				GREENSBORO HWY Northbound				GREENSBORO HWY Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
7:00 AM	0	44	20	5	0	5	18	40	0	1	81	1	0	40	91	24	370	1,392	0	0	0	0
7:15 AM	0	32	25	7	0	11	11	55	0	0	62	4	0	48	103	16	374	1,331	0	0	0	0
7:30 AM	0	22	9	6	0	5	14	46	0	2	85	5	0	23	77	19	313	1,221	0	0	0	0
7:45 AM	0	36	14	5	0	5	15	39	0	0	88	2	0	22	82	27	335	1,191	0	0	0	0
8:00 AM	0	24	18	5	0	10	12	39	0	0	70	3	0	30	78	20	309	1,175	0	0	0	0
8:15 AM	0	30	5	3	0	7	10	27	0	0	58	2	0	30	77	15	264		0	0	0	0
8:30 AM	0	20	5	5	0	5	10	36	0	1	76	4	0	24	83	14	283		0	0	0	0
8:45 AM	0	19	17	6	0	4	7	34	0	4	101	4	0	38	71	14	319		0	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	1	0	0	0	0	1	0	0	22	0	0	4	20	2	50
Lights	0	127	63	19	0	26	55	169	0	3	271	12	0	122	308	74	1,249
Mediums	0	7	4	4	0	0	3	10	0	0	23	0	0	7	25	10	93
Total	0	134	68	23	0	26	58	180	0	3	316	12	0	133	353	86	1,392

Heavy Vehicle Percentage and Peak Hour Factor

	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Heavy Vehicle %		7.1%				5.3%				13.6%				11.9%			10.3%
Heavy Vehicle %	0.0%	5.2%	7.4%	17.4%	0.0%	0.0%	5.2%	6.1%	0.0%	0.0%	14.2%	0.0%	0.0%	8.3%	12.7%	14.0%	10.3%
Peak Hour Factor		0.82				0.86				0.90				0.86			0.93
Peak Hour Factor	0.00	0.76	0.68	0.82	0.00	0.70	0.81	0.82	0.00	0.31	0.90	0.70	0.00	0.69	0.86	0.80	0.93



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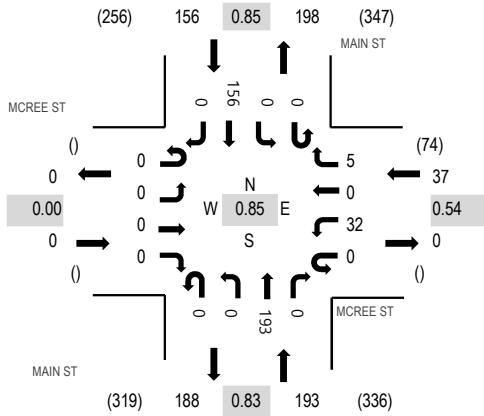
Location: 6 MAIN ST & MCREE ST AM

Date: Tuesday, November 28, 2023

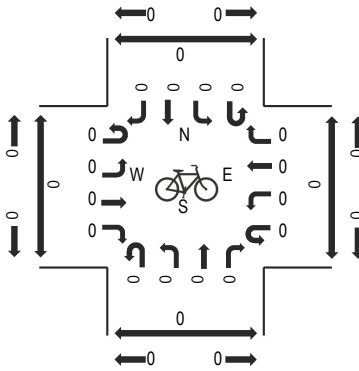
Peak Hour: 07:00 AM - 08:00 AM

Peak 15-Minutes: 07:00 AM - 07:15 AM

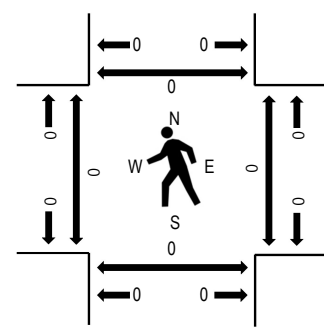
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	MCREE ST Eastbound				MCREE ST Westbound				MAIN ST Northbound				MAIN ST Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
7:00 AM	0	0	0	0	0	15	0	2	0	0	50	0	0	0	46	0	113	386	0	0	0	0
7:15 AM	0	0	0	0	0	6	0	0	0	0	58	0	0	0	25	0	89	355	0	0	0	0
7:30 AM	0	0	0	0	0	9	0	3	0	0	38	0	0	0	41	0	91	334	0	0	0	0
7:45 AM	0	0	0	0	0	2	0	0	0	0	47	0	0	0	44	0	93	307	0	0	0	0
8:00 AM	0	0	0	0	0	8	0	3	0	0	45	0	0	0	26	0	82	280	0	0	0	0
8:15 AM	0	0	0	0	0	7	0	0	0	0	33	0	0	0	28	0	68		0	0	0	0
8:30 AM	0	0	0	0	0	7	0	2	0	0	32	0	0	0	23	0	64		0	0	0	0
8:45 AM	0	0	0	0	0	9	0	1	0	0	33	0	0	0	23	0	66		0	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0	4
Lights	0	0	0	0	0	32	0	5	0	0	176	0	0	0	142	0	355
Mediums	0	0	0	0	0	0	0	0	0	0	15	0	0	0	12	0	27
Total	0	0	0	0	0	32	0	5	0	0	193	0	0	0	156	0	386

Heavy Vehicle Percentage and Peak Hour Factor

	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Heavy Vehicle %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	8.8%	0.0%	0.0%	0.0%	9.0%	0.0%	8.0%
Heavy Vehicle %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	8.8%	0.0%	0.0%	0.0%	9.0%	0.0%	8.0%
Peak Hour Factor	0.00	0.00	0.00	0.00	0.00	0.53	0.00	0.50	0.00	0.00	0.83	0.00	0.00	0.00	0.85	0.00	0.85
Peak Hour Factor	0.00	0.00	0.00	0.00	0.00	0.53	0.00	0.50	0.00	0.00	0.83	0.00	0.00	0.00	0.85	0.00	0.85



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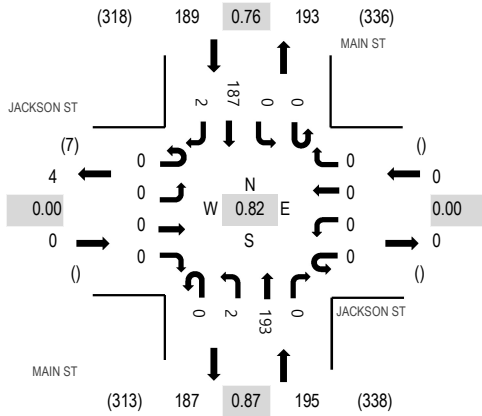
Location: 7 MAIN ST & JACKSON ST AM

Date: Tuesday, November 28, 2023

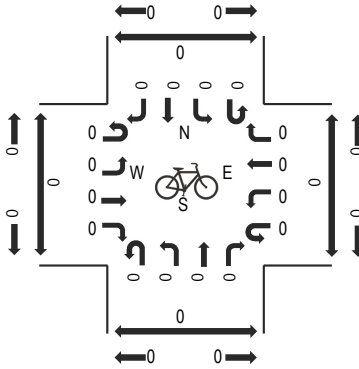
Peak Hour: 07:00 AM - 08:00 AM

Peak 15-Minutes: 07:00 AM - 07:15 AM

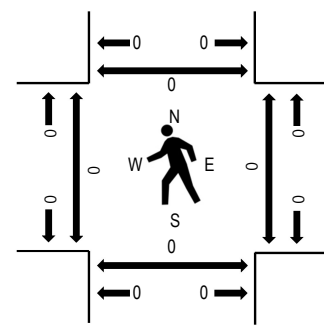
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	JACKSON ST Eastbound				JACKSON ST Westbound				MAIN ST Northbound				MAIN ST Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
7:00 AM	0	0	0	0	0	0	0	0	0	1	54	0	0	0	61	1	117	384	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	56	0	0	0	31	0	87	346	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	36	0	0	0	49	1	86	328	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	1	47	0	0	0	46	0	94	301	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	45	0	0	0	33	1	79	272	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	34	0	0	0	34	1	69		0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	30	0	0	0	29	0	59		0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	34	0	0	0	30	1	65		0	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0	4
Lights	0	0	0	0	0	0	0	0	0	1	176	0	0	0	173	2	352
Mediums	0	0	0	0	0	0	0	0	0	1	15	0	0	0	12	0	28
Total	0	0	0	0	0	0	0	0	0	2	193	0	0	0	187	2	384

Heavy Vehicle Percentage and Peak Hour Factor

	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Heavy Vehicle %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	50.0%	8.8%	0.0%	0.0%	0.0%	7.5%	0.0%	8.3%
Peak Hour Factor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.50	0.86	0.00	0.00	0.00	0.77	0.75	0.82



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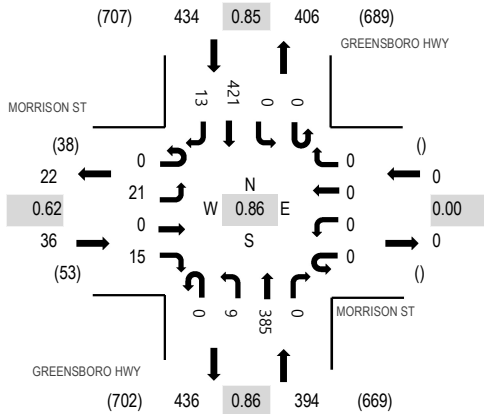
Location: 1 GREENSBORO HWY & MORRISON ST PM

Date: Tuesday, November 28, 2023

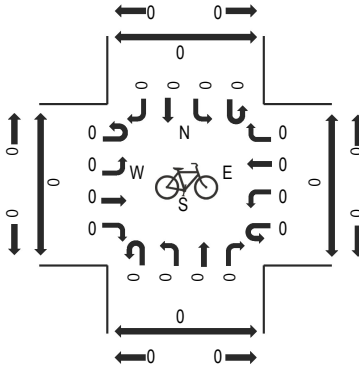
Peak Hour: 04:00 PM - 05:00 PM

Peak 15-Minutes: 04:00 PM - 04:15 PM

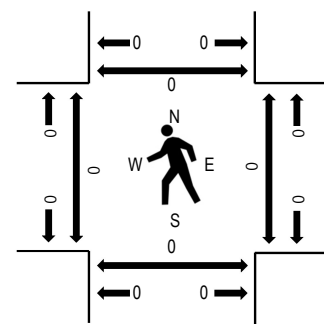
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	MORRISON ST Eastbound				MORRISON ST Westbound				GREENSBORO HWY Northbound				GREENSBORO HWY Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
4:00 PM	0	6	0	2	0	0	0	0	0	6	109	0	0	0	123	4	250	864	0	0	0	0
4:15 PM	0	9	0	6	0	0	0	0	0	0	89	0	0	0	102	3	209	803	0	0	0	0
4:30 PM	0	4	0	4	0	0	0	0	0	3	103	0	0	0	93	4	211	753	0	0	0	0
4:45 PM	0	2	0	3	0	0	0	0	0	0	84	0	0	0	103	2	194	691	0	0	0	0
5:00 PM	0	7	0	2	0	0	0	0	0	3	95	0	0	0	81	1	189	565	0	0	0	0
5:15 PM	0	2	0	1	0	0	0	0	0	2	75	0	0	0	76	3	159		0	0	0	0
5:30 PM	0	4	0	0	0	0	0	0	0	0	67	0	0	0	73	5	149		0	0	0	0
5:45 PM	0	1	0	0	0	0	0	0	0	1	32	0	0	0	33	1	68		0	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	11	0	0	0	8	0	19
Lights	0	20	0	15	0	0	0	0	0	8	356	0	0	0	397	11	807
Mediums	0	1	0	0	0	0	0	0	0	1	18	0	0	0	16	2	38
Total	0	21	0	15	0	0	0	0	0	9	385	0	0	0	421	13	864

Heavy Vehicle Percentage and Peak Hour Factor

	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Heavy Vehicle %		2.8%				0.0%				7.6%				6.0%			6.6%
Heavy Vehicle %	0.0%	4.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	11.1%	7.5%	0.0%	0.0%	0.0%	5.7%	15.4%	6.6%
Peak Hour Factor		0.62				0.00				0.86				0.85			0.86
Peak Hour Factor	0.00	0.61	0.00	0.63	0.00	0.00	0.00	0.00	0.00	0.38	0.88	0.00	0.00	0.00	0.86	0.81	0.86



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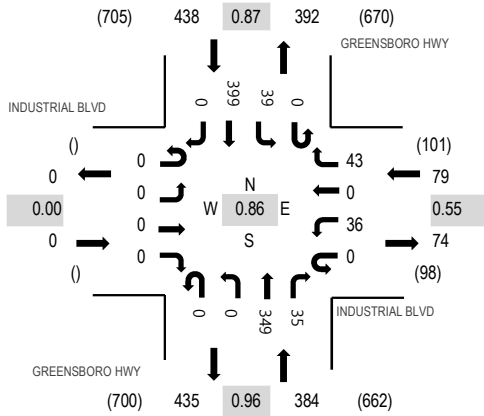
Location: 2 GREENSBORO HWY & INDUSTRIAL BLVD PM

Date: Tuesday, November 28, 2023

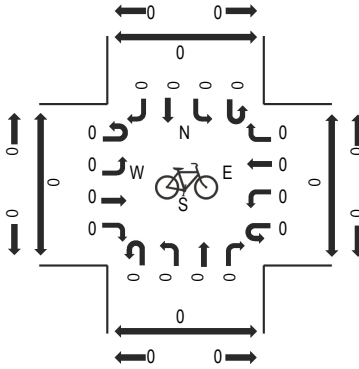
Peak Hour: 04:00 PM - 05:00 PM

Peak 15-Minutes: 04:00 PM - 04:15 PM

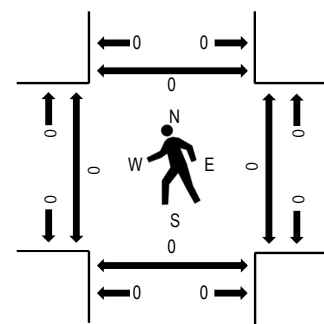
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	INDUSTRIAL BLVD Eastbound				INDUSTRIAL BLVD Westbound				GREENSBORO HWY Northbound				GREENSBORO HWY Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
4:00 PM	0	0	0	0	0	15	0	21	0	0	91	9	0	14	112	0	262	901	0	0	0	0
4:15 PM	0	0	0	0	0	5	0	6	0	0	83	11	0	7	102	0	214	831	0	0	0	0
4:30 PM	0	0	0	0	0	11	0	14	0	0	93	7	0	7	91	0	223	776	0	0	0	0
4:45 PM	0	0	0	0	0	5	0	2	0	0	82	8	0	11	94	0	202	699	0	0	0	0
5:00 PM	0	0	0	0	0	2	0	9	1	0	91	6	0	2	81	0	192	567	0	0	0	0
5:15 PM	0	0	0	0	0	2	0	3	0	0	74	5	0	2	73	0	159		0	0	0	0
5:30 PM	0	0	0	0	0	2	0	1	0	0	67	2	0	4	70	0	146		0	0	0	0
5:45 PM	0	0	0	0	0	2	0	1	0	0	32	0	0	3	32	0	70		0	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	1	0	0	10	0	0	1	7	0	19
Lights	0	0	0	0	0	35	0	40	0	0	322	34	0	37	376	0	844
Mediums	0	0	0	0	0	1	0	2	0	0	17	1	0	1	16	0	38
Total	0	0	0	0	0	36	0	43	0	0	349	35	0	39	399	0	901

Heavy Vehicle Percentage and Peak Hour Factor

	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Heavy Vehicle %	0.0%	0.0%	0.0%	0.0%	0.0%	2.8%	0.0%	7.0%	0.0%	0.0%	7.7%	2.9%	0.0%	5.1%	5.8%	0.0%	6.3%
Peak Hour Factor	0.00	0.00	0.00	0.00	0.00	0.60	0.00	0.51	0.25	0.00	0.94	0.80	0.00	0.70	0.89	0.00	0.86



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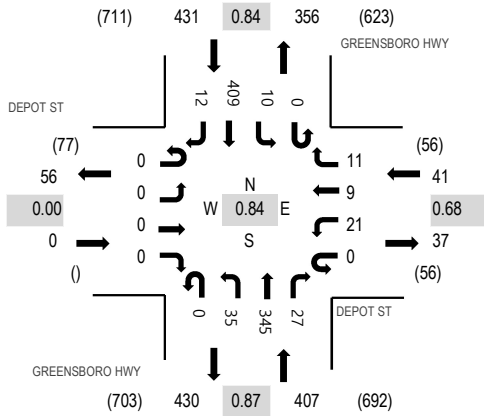
Location: 3 GREENSBORO HWY & DEPOT ST PM

Date: Tuesday, November 28, 2023

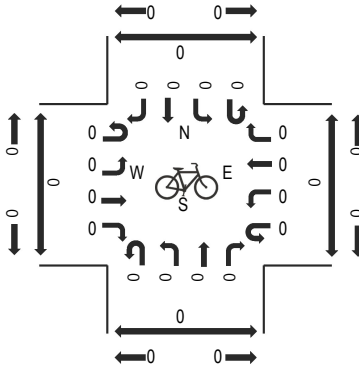
Peak Hour: 04:00 PM - 05:00 PM

Peak 15-Minutes: 04:00 PM - 04:15 PM

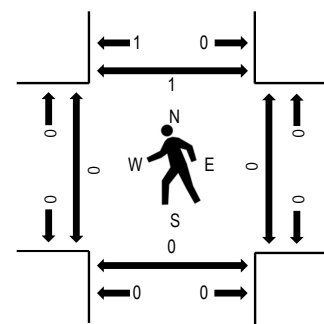
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	DEPOT ST Eastbound				DEPOT ST Westbound				GREENSBORO HWY Northbound				GREENSBORO HWY Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
4:00 PM	0	0	0	0	0	5	4	6	0	14	88	15	0	4	121	4	261	879	0	0	0	0
4:15 PM	0	0	0	0	0	7	4	1	0	6	84	4	0	4	96	1	207	807	0	0	0	1
4:30 PM	0	0	0	0	0	5	0	2	0	12	91	4	0	0	92	2	208	763	0	0	0	0
4:45 PM	0	0	0	0	0	4	1	2	0	3	82	4	0	2	100	5	203	708	0	0	0	0
5:00 PM	0	0	0	0	0	2	1	1	0	1	94	8	0	1	81	0	189	580	0	0	0	0
5:15 PM	0	0	0	0	0	5	0	3	0	9	65	1	0	6	72	2	163		0	0	0	0
5:30 PM	0	0	0	0	0	1	0	0	0	1	68	1	0	1	77	4	153		0	0	0	0
5:45 PM	0	0	0	0	0	0	2	0	0	1	36	0	0	1	35	0	75		0	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	1	0	0	0	0	10	1	0	0	7	0	19
Lights	0	0	0	0	0	20	9	10	0	35	318	25	0	10	385	12	824
Mediums	0	0	0	0	0	0	0	1	0	0	17	1	0	0	17	0	36
Total	0	0	0	0	0	21	9	11	0	35	345	27	0	10	409	12	879

Heavy Vehicle Percentage and Peak Hour Factor

	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Heavy Vehicle %	0.0%				4.9%				7.1%				5.6%				6.3%
Heavy Vehicle %	0.0%	0.0%	0.0%	0.0%	0.0%	4.8%	0.0%	9.1%	0.0%	0.0%	7.8%	7.4%	0.0%	0.0%	5.9%	0.0%	6.3%
Peak Hour Factor	0.00				0.68				0.87				0.84				0.84
Peak Hour Factor	0.00	0.00	0.00	0.00	0.00	0.75	0.56	0.46	0.00	0.63	0.93	0.45	0.00	0.42	0.85	0.60	0.84

	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Heavy Vehicle %		1.9%				2.6%				2.1%				2.3%			2.2%
Heavy Vehicle %	0.0%	0.0%	2.0%	0.0%	0.0%	0.0%	2.8%	0.0%	0.0%	10.0%	0.0%	0.0%	0.0%	0.0%	4.3%	0.0%	2.2%
Peak Hour Factor		0.85				0.79				0.56				0.73			0.85
Peak Hour Factor	0.00	0.81	0.82	0.67	0.00	0.38	0.83	0.47	0.00	0.42	0.60	0.67	0.00	0.56	0.58	0.60	0.85



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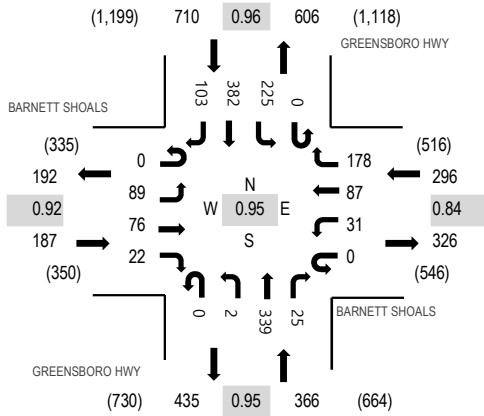
Location: 5 GREENSBORO HWY & BARNETT SHOALS PM

Date: Tuesday, November 28, 2023

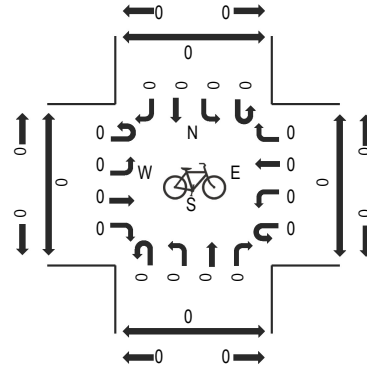
Peak Hour: 04:00 PM - 05:00 PM

Peak 15-Minutes: 04:00 PM - 04:15 PM

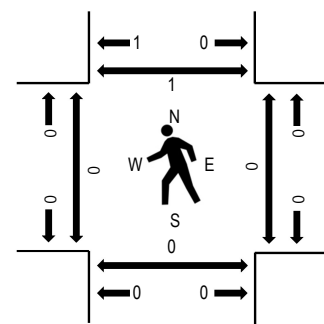
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	BARNETT SHOALS Eastbound				BARNETT SHOALS Westbound				GREENSBORO HWY Northbound				GREENSBORO HWY Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
4:00 PM	0	20	21	3	0	11	27	50	0	0	92	4	0	51	106	25	410	1,559	0	0	0	0
4:15 PM	0	23	19	4	0	6	25	39	0	1	77	9	0	70	93	21	387	1,500	0	0	0	1
4:30 PM	0	19	21	5	0	7	20	51	0	1	87	6	0	51	95	33	396	1,441	0	0	0	0
4:45 PM	0	27	15	10	0	7	15	38	0	0	83	6	0	53	88	24	366	1,338	0	0	0	0
5:00 PM	0	25	22	6	0	6	25	43	0	4	80	5	0	37	80	18	351	1,170	0	0	0	0
5:15 PM	0	35	19	2	0	2	13	34	0	0	83	4	0	45	73	18	328		0	0	0	0
5:30 PM	0	20	7	2	0	4	12	50	0	1	72	9	0	34	67	15	293		0	2	0	1
5:45 PM	0	15	8	2	0	3	11	17	0	0	38	2	0	28	48	26	198		0	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	10	0	0	0	7	0	17
Lights	0	83	73	20	0	31	85	174	0	2	311	25	0	223	361	102	1,490
Mediums	0	6	3	2	0	0	2	4	0	0	18	0	0	2	14	1	52
Total	0	89	76	22	0	31	87	178	0	2	339	25	0	225	382	103	1,559

Heavy Vehicle Percentage and Peak Hour Factor

	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Heavy Vehicle %		5.9%				2.0%				7.7%				3.4%			4.4%
Heavy Vehicle %	0.0%	6.7%	3.9%	9.1%	0.0%	0.0%	2.3%	2.2%	0.0%	0.0%	8.3%	0.0%	0.0%	0.9%	5.5%	1.0%	4.4%
Peak Hour Factor		0.92				0.84				0.95				0.96			0.95
Peak Hour Factor	0.00	0.76	0.88	0.63	0.00	0.70	0.81	0.87	0.00	0.38	0.92	0.72	0.00	0.80	0.90	0.78	0.95



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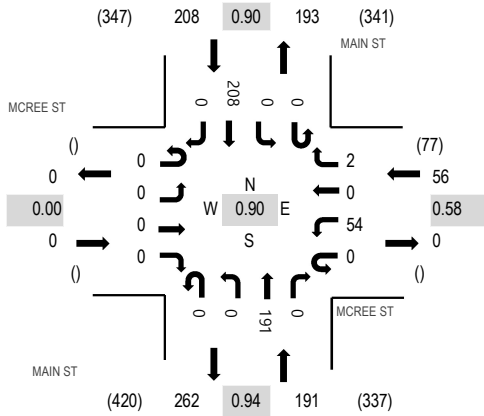
Location: 6 MAIN ST & MCREE ST PM

Date: Tuesday, November 28, 2023

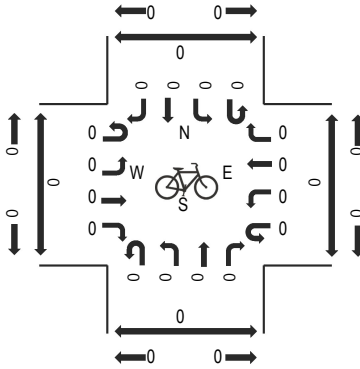
Peak Hour: 04:00 PM - 05:00 PM

Peak 15-Minutes: 04:00 PM - 04:15 PM

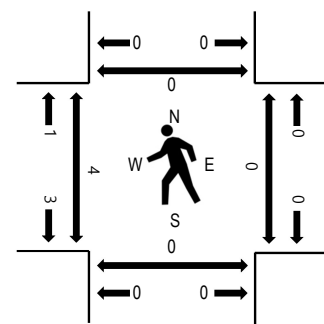
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

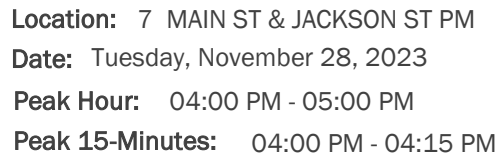
Interval Start Time	MCREE ST Eastbound				MCREE ST Westbound				MAIN ST Northbound				MAIN ST Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
4:00 PM	0	0	0	0	0	24	0	0	0	0	44	0	0	0	58	0	126	455	0	0	0	0
4:15 PM	0	0	0	0	0	9	0	1	0	0	51	0	0	0	47	0	108	428	2	0	0	0
4:30 PM	0	0	0	0	0	15	0	0	0	0	46	0	0	0	56	0	117	407	1	0	0	0
4:45 PM	0	0	0	0	0	6	0	1	0	0	50	0	0	0	47	0	104	349	1	0	0	0
5:00 PM	0	0	0	0	0	3	0	0	0	0	53	0	0	0	43	0	99	306	0	0	0	0
5:15 PM	0	0	0	0	0	9	0	0	0	0	46	0	0	0	32	0	87		0	0	0	0
5:30 PM	0	0	0	0	0	5	0	0	0	0	26	0	0	0	28	0	59		0	0	0	0
5:45 PM	0	0	0	0	0	2	0	2	0	0	21	0	0	0	36	0	61		0	0	0	0

Peak Rolling Hour Flow Rates

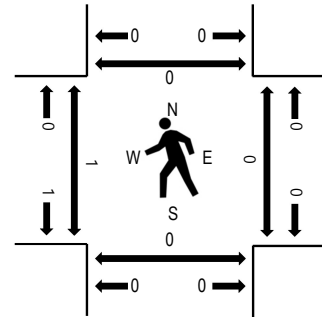
Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lights	0	0	0	0	0	54	0	2	0	0	180	0	0	0	205	0	441
Mediums	0	0	0	0	0	0	0	0	0	0	11	0	0	0	3	0	14
Total	0	0	0	0	0	54	0	2	0	0	191	0	0	0	208	0	455

Heavy Vehicle Percentage and Peak Hour Factor

	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Heavy Vehicle %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.8%	0.0%	0.0%	0.0%	1.4%	0.0%	3.1%
Heavy Vehicle %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.8%	0.0%	0.0%	0.0%	1.4%	0.0%	3.1%
Peak Hour Factor	0.00	0.00	0.00	0.00	0.00	0.58	0.00	0.25	0.00	0.00	0.94	0.00	0.00	0.00	0.90	0.00	0.90
Peak Hour Factor	0.00	0.00	0.00	0.00	0.00	0.56	0.00	0.25	0.00	0.00	0.94	0.00	0.00	0.00	0.90	0.00	0.90



Peak Hour - Pedestrians



Traffic Counts - Motorized Vehicles

Interval Start Time	JACKSON ST Eastbound				JACKSON ST Westbound				MAIN ST Northbound				MAIN ST Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
4:00 PM	0	1	0	0	0	0	0	0	0	0	43	0	0	0	80	1	125	454	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	53	0	0	0	55	0	108	428	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	1	46	0	0	0	67	4	118	403	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	1	50	0	0	0	51	1	103	343	1	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	51	0	0	0	47	1	99	299	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	44	0	0	0	39	0	83		0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	27	0	0	0	29	2	58		0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	20	0	0	0	38	1	59		0	0	0	0

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lights	0	1	0	0	0	0	0	0	0	2	182	0	0	0	250	6	441
Mediums	0	0	0	0	0	0	0	0	0	0	10	0	0	0	3	0	13
Total	0	1	0	0	0	0	0	0	0	2	192	0	0	0	253	6	454

	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Heavy Vehicle %		0.0%				0.0%				5.2%				1.2%			2.9%
Heavy Vehicle %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.2%	0.0%	0.0%	0.0%	1.2%	0.0%	2.9%
Peak Hour Factor		0.25				0.00				0.95				0.80			0.91
Peak Hour Factor	0.00	0.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.50	0.94	0.00	0.00	0.00	0.79	0.38	0.91



XX. APPENDIX B – SCENARIO 2




- K. CAPACITY ANALYSIS – EXISTING AM
- L. CAPACITY ANALYSIS – EXISTING PM
- M. CAPACITY ANALYSIS – EXISTING + BACKGROUND AM
- N. CAPACITY ANALYSIS – EXISTING + BACKGROUND PM
- O. CAPACITY ANALYSIS – EXISTING + BACKGROUND + PROJECT AM
- P. CAPACITY ANALYSIS – EXISTING + BACKGROUND + PROJECT PM
- Q. CAPACITY ANALYSIS – EXISTING + BACKGROUND (5 YEARS AFTER BUILDOUT) + PROJECT AM
- R. CAPACITY ANALYSIS – EXISTING + BACKGROUND (5 YEARS AFTER BUILDOUT) + PROJECT PM
- S. CAPACITY ANALYSIS – EXISTING + BACKGROUND + PROJECT SIGNALIZED INTERSECTION QUEUES
- T. TRAFFIC COUNTS

HCM 2010 TWSC
2: Morrison St & Greensboro Hwy

02/19/2024

Intersection

Int Delay, s/veh 1

Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	361	17	12	334	17	12
Future Vol, veh/h	361	17	12	334	17	12
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	-	-	0	0	-
Peak Hour Factor	84	84	95	95	58	58
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	430	20	13	352	29	21






Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	450
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	4.12
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	2.218
Pot Cap-1 Maneuver	-	-	1110
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	1110
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	SE	NW	NE
HCM Control Delay, s	0	0.3	14.8
HCM LOS			B

Minor Lane/Major Mvmt	NELn1	NWL	NWT	SET	SER
Capacity (veh/h)	418	1110	-	-	-
HCM Lane V/C Ratio	0.12	0.011	-	-	-
HCM Control Delay (s)	14.8	8.3	0	-	-
HCM Lane LOS	B	A	A	-	-
HCM 95th %tile Q(veh)	0.4	0	-	-	-

HCM 2010 TWSC
3: Greensboro Hwy & Industrial Blvd

02/19/2024

Intersection						
Int Delay, s/veh	1.6					
Movement	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Traffic Vol, veh/h	58	313	304	30	15	42
Future Vol, veh/h	58	313	304	30	15	42
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	85	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	86	86	90	90	86	86
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	67	364	338	33	17	49
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	371	0	-	0	836	338
Stage 1	-	-	-	-	338	-
Stage 2	-	-	-	-	498	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1188	-	-	-	337	704
Stage 1	-	-	-	-	722	-
Stage 2	-	-	-	-	611	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1188	-	-	-	313	704
Mov Cap-2 Maneuver	-	-	-	-	313	-
Stage 1	-	-	-	-	671	-
Stage 2	-	-	-	-	611	-
Approach	SE	NW		SW		
HCM Control Delay, s	1.3	0		12.8		
HCM LOS	B					
Minor Lane/Major Mvmt	NWT	NWR	SEL	SET	SWLn1	
Capacity (veh/h)	-	-	1188	-	530	
HCM Lane V/C Ratio	-	-	0.057	-	0.125	
HCM Control Delay (s)	-	-	8.2	0	12.8	
HCM Lane LOS	-	-	A	A	B	
HCM 95th %tile Q(veh)	-	-	0.2	-	0.4	



















Intersection												
Int Delay, s/veh	0.9											
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↔	↔		↔						↔	
Traffic Vol, veh/h	11	361	6	26	311	18	0	0	0	14	3	5
Future Vol, veh/h	11	361	6	26	311	18	0	0	0	14	3	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	80	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	-	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	81	81	81	94	94	94	92	92	92	69	69	69
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	14	446	7	28	331	19	0	0	0	20	4	7
Major/Minor	Major1			Major2			Minor2					
Conflicting Flow All	350	0	0	453	0	0				875	878	341
Stage 1	-	-	-	-	-	-				397	397	-
Stage 2	-	-	-	-	-	-				478	481	-
Critical Hdwy	4.12	-	-	4.12	-	-				6.42	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-				5.42	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-				5.42	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-				3.518	4.018	3.318
Pot Cap-1 Maneuver	1209	-	-	1108	-	-				320	287	701
Stage 1	-	-	-	-	-	-				679	603	-
Stage 2	-	-	-	-	-	-				624	554	-
Platoon blocked, %	-	-	-	-	-	-				-	-	-
Mov Cap-1 Maneuver	1209	-	-	1108	-	-				305	0	701
Mov Cap-2 Maneuver	-	-	-	-	-	-				305	0	-
Stage 1	-	-	-	-	-	-				669	0	-
Stage 2	-	-	-	-	-	-				605	0	-
Approach	SE			NW			SW					
HCM Control Delay, s	0.2			0.6			16					
HCM LOS							C					
Minor Lane/Major Mvmt	NWL	NWT	NWR	SEL	SET	SERSWLn1						
Capacity (veh/h)	1108	-	-	1209	-	-	358					
HCM Lane V/C Ratio	0.025	-	-	0.011	-	-	0.089					
HCM Control Delay (s)	8.3	0	-	8	0	-	16					
HCM Lane LOS	A	A	-	A	A	-	C					
HCM 95th %tile Q(veh)	0.1	-	-	0	-	-	0.3					

Intersection												
Int Delay, s/veh	1.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	6	189	1	6	228	9	5	17	5	6	13	11
Future Vol, veh/h	6	189	1	6	228	9	5	17	5	6	13	11
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	70	70	70	88	88	88	84	84	84	75	75	75
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	9	270	1	7	259	10	6	20	6	8	17	15
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	269	0	0	271	0	0	583	572	271	580	567	264
Stage 1	-	-	-	-	-	-	289	289	-	278	278	-
Stage 2	-	-	-	-	-	-	294	283	-	302	289	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
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	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1295	-	-	1292	-	-	424	430	768	426	433	775
Stage 1	-	-	-	-	-	-	719	673	-	728	680	-
Stage 2	-	-	-	-	-	-	714	677	-	707	673	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1295	-	-	1292	-	-	399	424	768	403	427	775
Mov Cap-2 Maneuver	-	-	-	-	-	-	399	424	-	403	427	-
Stage 1	-	-	-	-	-	-	713	668	-	722	676	-
Stage 2	-	-	-	-	-	-	678	673	-	675	668	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.2			0.2			13.5			12.8		
HCM LOS							B			B		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	457	1295	-	-	1292	-	-	504				
HCM Lane V/C Ratio	0.07	0.007	-	-	0.005	-	-	0.079				
HCM Control Delay (s)	13.5	7.8	0	-	7.8	0	-	12.8				
HCM Lane LOS	B	A	A	-	A	A	-	B				
HCM 95th %tile Q(veh)	0.2	0	-	-	0	-	-	0.3				

HCM Signalized Intersection Capacity Analysis

7: S Main St & Greensboro Hwy & S Barnett Shoals Rd

02/19/2024




												
Movement	WBL2	WBL	WBR	NBT	NBR	NBR2	SBL2	SBL	SBT	NWL	NWR	NWR2
Lane Configurations												
Traffic Volume (vph)	26	58	180	134	68	23	133	353	86	3	316	12
Future Volume (vph)	26	58	180	134	68	23	133	353	86	3	316	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.0	4.5			4.5		4.5	4.5		
Lane Util. Factor		1.00	1.00	1.00			1.00		1.00	1.00		
Frt		1.00	0.85	0.95			1.00		1.00	0.87		
Flt Protected		0.95	1.00	1.00			0.95		0.96	1.00		
Satd. Flow (prot)		1770	1583	1761			1770		1791	1613		
Flt Permitted		0.95	1.00	1.00			0.95		0.95	1.00		
Satd. Flow (perm)		1770	1583	1761			1770		1770	1612		
Peak-hour factor, PHF	0.86	0.86	0.86	0.82	0.82	0.82	0.86	0.86	0.86	0.90	0.90	0.92
Adj. Flow (vph)	30	67	209	163	83	28	155	410	100	3	351	13
RTOR Reduction (vph)	0	0	0	6	0	0	0	0	0	91	0	0
Lane Group Flow (vph)	0	97	209	268	0	0	155	0	510	276	0	0
Turn Type	Perm	Prot	Free	NA			pm+pt	Perm	NA	Perm		
Protected Phases		4		3			1		6			
Permitted Phases	4		Free				6	6		2		
Actuated Green, G (s)		8.5	80.0	15.9			42.1		42.1	28.9		
Effective Green, g (s)		8.5	80.0	15.9			42.1		42.1	28.9		
Actuated g/C Ratio		0.11	1.00	0.20			0.53		0.53	0.36		
Clearance Time (s)		4.5		4.5			4.5		4.5	4.5		
Vehicle Extension (s)		3.0		3.0			3.0		3.0	3.0		
Lane Grp Cap (vph)		188	1583	349			931		931	582		
v/s Ratio Prot				c0.15			0.02					
v/s Ratio Perm		0.05	0.13				0.07		c0.29	0.17		
v/c Ratio		0.52	0.13	0.77			0.17		0.55	0.47		
Uniform Delay, d1		33.8	0.0	30.3			9.8		12.6	19.7		
Progression Factor		1.00	1.00	1.00			1.00		1.00	1.00		
Incremental Delay, d2		2.4	0.2	9.8			0.1		2.3	0.6		
Delay (s)		36.2	0.2	40.1			9.9		14.9	20.3		
Level of Service		D	A	D			A		B	C		
Approach Delay (s)		11.6		40.1					13.8	20.3		
Approach LOS		B		D					B	C		
Intersection Summary												
HCM 2000 Control Delay			19.3		HCM 2000 Level of Service					B		
HCM 2000 Volume to Capacity ratio			0.64									
Actuated Cycle Length (s)			80.0		Sum of lost time (s)					18.0		
Intersection Capacity Utilization			76.8%		ICU Level of Service					D		
Analysis Period (min)			15									
c Critical Lane Group												

HCM 2010 TWSC
8: SMain St/S Main St & McKee St

02/19/2024

Intersection

Int Delay, s/veh 1.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	32	5	193	0	0	156
Future Vol, veh/h	32	5	193	0	0	156
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	54	54	83	83	85	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	59	9	233	0	0	184

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	417	233	0
Stage 1	233	-	-
Stage 2	184	-	-
Critical Hdwy	6.42	6.22	-
Critical Hdwy Stg 1	5.42	-	-
Critical Hdwy Stg 2	5.42	-	-
Follow-up Hdwy	3.518	3.318	-
Pot Cap-1 Maneuver	592	806	-
Stage 1	806	-	-
Stage 2	848	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	592	806	-
Mov Cap-2 Maneuver	592	-	-
Stage 1	806	-	-
Stage 2	848	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.6	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBTWBLn1	SBT
Capacity (veh/h)	- 614	-
HCM Lane V/C Ratio	- 0.112	-
HCM Control Delay (s)	- 11.6	-
HCM Lane LOS	- B	-
HCM 95th %tile Q(veh)	- 0.4	-

HCM Unsignalized Intersection Capacity Analysis

9: S Main St/SMain St & Jackson St




02/20/2024



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations				↕	↕	
Traffic Volume (veh/h)	0	0	2	193	187	2
Future Volume (Veh/h)	0	0	2	193	187	2
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.87	0.87	0.76	0.76
Hourly flow rate (vph)	0	0	2	222	246	3
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	474	248	249			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	474	248	249			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	100			
cM capacity (veh/h)	549	791	1317			
Direction, Lane #	NB 1	SB 1				
Volume Total	224	249				
Volume Left	2	0				
Volume Right	0	3				
cSH	1317	1700				
Volume to Capacity	0.00	0.15				
Queue Length 95th (ft)	0	0				
Control Delay (s)	0.1	0.0				
Lane LOS	A					
Approach Delay (s)	0.1	0.0				
Approach LOS						
Intersection Summary						
Average Delay			0.0			
Intersection Capacity Utilization			15.1%	ICU Level of Service		A
Analysis Period (min)			15			

HCM 2010 TWSC
2: Morrison St & Greensboro Hwy

02/19/2024

Intersection						
Int Delay, s/veh	1.1					
Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	421	13	9	385	21	15
Future Vol, veh/h	421	13	9	385	21	15
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	-	-	0	0	-
Peak Hour Factor	85	85	86	86	62	62
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	495	15	10	448	34	24
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	510	0	971	503
Stage 1	-	-	-	-	503	-
Stage 2	-	-	-	-	468	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1055	-	280	569
Stage 1	-	-	-	-	607	-
Stage 2	-	-	-	-	630	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1055	-	276	569
Mov Cap-2 Maneuver	-	-	-	-	276	-
Stage 1	-	-	-	-	607	-
Stage 2	-	-	-	-	622	-
Approach	SE		NW		NE	
HCM Control Delay, s	0		0.2		17.3	
HCM LOS					C	
Minor Lane/Major Mvmt	NELn1	NWL	NWT	SET	SER	
Capacity (veh/h)	351	1055	-	-	-	
HCM Lane V/C Ratio	0.165	0.01	-	-	-	
HCM Control Delay (s)	17.3	8.4	0	-	-	
HCM Lane LOS	C	A	A	-	-	
HCM 95th %tile Q(veh)	0.6	0	-	-	-	

HCM 2010 TWSC






3: Greensboro Hwy & Industrial Blvd

02/19/2024

Intersection

Int Delay, s/veh 2.8

Movement

	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Traffic Vol, veh/h	39	399	349	35	36	43
Future Vol, veh/h	39	399	349	35	36	43
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	85	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	87	87	96	96	55	55
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	45	459	364	36	65	78

Major/Minor

	Major1	Major2	Minor2		
Conflicting Flow All	400	0	0	913	364
Stage 1	-	-	-	364	-
Stage 2	-	-	-	549	-
Critical Hdwy	4.12	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	3.518	3.318
Pot Cap-1 Maneuver	1159	-	-	304	681
Stage 1	-	-	-	703	-
Stage 2	-	-	-	579	-
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	1159	-	-	288	681
Mov Cap-2 Maneuver	-	-	-	288	-
Stage 1	-	-	-	666	-
Stage 2	-	-	-	579	-





Approach

	SE	NW	SW
HCM Control Delay, s	0.7	0	18
HCM LOS			C

Minor Lane/Major Mvmt

	NWT	NWR	SEL	SETSWLn1
Capacity (veh/h)	-	-	1159	- 420
HCM Lane V/C Ratio	-	-	0.039	- 0.342
HCM Control Delay (s)	-	-	8.2	0 18
HCM Lane LOS	-	-	A	A C
HCM 95th %tile Q(veh)	-	-	0.1	- 1.5



















Intersection												
Int Delay, s/veh	1.5											
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↔	↔		↔						↔	
Traffic Vol, veh/h	10	409	12	35	345	27	0	0	0	21	9	11
Future Vol, veh/h	10	409	12	35	345	27	0	0	0	21	9	11
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	80	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	-	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	84	84	84	87	87	87	92	92	92	68	68	68
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	12	487	14	40	397	31	0	0	0	31	13	16
Major/Minor	Major1			Major2			Minor2					
Conflicting Flow All	428	0	0	501	0	0	1011	1018	413			
Stage 1	-	-	-	-	-	-	493	493	-			
Stage 2	-	-	-	-	-	-	518	525	-			
Critical Hdwy	4.12	-	-	4.12	-	-	6.42	6.52	6.22			
Critical Hdwy Stg 1	-	-	-	-	-	-	5.42	5.52	-			
Critical Hdwy Stg 2	-	-	-	-	-	-	5.42	5.52	-			
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318			
Pot Cap-1 Maneuver	1131	-	-	1063	-	-	265	237	639			
Stage 1	-	-	-	-	-	-	614	547	-			
Stage 2	-	-	-	-	-	-	598	529	-			
Platoon blocked, %	-	-	-	-	-	-						
Mov Cap-1 Maneuver	1131	-	-	1063	-	-	248	0	639			
Mov Cap-2 Maneuver	-	-	-	-	-	-	248	0	-			
Stage 1	-	-	-	-	-	-	605	0	-			
Stage 2	-	-	-	-	-	-	568	0	-			
Approach	SE			NW			SW					
HCM Control Delay, s	0.2			0.7			19.2					
HCM LOS							C					
Minor Lane/Major Mvmt	NWL	NWT	NWR	SEL	SET	SERSWLn1						
Capacity (veh/h)	1063	-	-	1131	-	-	314					
HCM Lane V/C Ratio	0.038	-	-	0.011	-	-	0.192					
HCM Control Delay (s)	8.5	0	-	8.2	0	-	19.2					
HCM Lane LOS	A	A	-	A	A	-	C					
HCM 95th %tile Q(veh)	0.1	-	-	0	-	-	0.7					

Intersection												
Int Delay, s/veh	3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	10	298	8	3	246	17	10	29	8	9	23	12
Future Vol, veh/h	10	298	8	3	246	17	10	29	8	9	23	12
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	85	85	85	79	79	79	56	56	56	73	73	73
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	12	351	9	4	311	22	18	52	14	12	32	16
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	333	0	0	360	0	0	734	721	356	743	714	322
Stage 1	-	-	-	-	-	-	380	380	-	330	330	-
Stage 2	-	-	-	-	-	-	354	341	-	413	384	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
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	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1226	-	-	1199	-	-	336	353	688	331	357	719
Stage 1	-	-	-	-	-	-	642	614	-	683	646	-
Stage 2	-	-	-	-	-	-	663	639	-	616	611	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1226	-	-	1199	-	-	302	347	688	284	351	719
Mov Cap-2 Maneuver	-	-	-	-	-	-	302	347	-	284	351	-
Stage 1	-	-	-	-	-	-	634	607	-	675	643	-
Stage 2	-	-	-	-	-	-	614	636	-	545	604	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.3			0.1			17.7			16		
HCM LOS							C			C		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	366	1226	-	-	1199	-	-	386				
HCM Lane V/C Ratio	0.229	0.01	-	-	0.003	-	-	0.156				
HCM Control Delay (s)	17.7	8	0	-	8	0	-	16				
HCM Lane LOS	C	A	A	-	A	A	-	C				
HCM 95th %tile Q(veh)	0.9	0	-	-	0	-	-	0.5				

HCM Signalized Intersection Capacity Analysis

7: S Main St & Greensboro Hwy & S Barnett Shoals Rd

02/19/2024




												
Movement	WBL2	WBL	WBR	NBT	NBR	NBR2	SBL2	SBL	SBT	NWL	NWR	NWR2
Lane Configurations												
Traffic Volume (vph)	31	87	178	89	76	22	225	382	103	2	339	25
Future Volume (vph)	31	87	178	89	76	22	225	382	103	2	339	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.0	4.5			4.5		4.5	4.5		
Lane Util. Factor		1.00	1.00	1.00			1.00		1.00	1.00		
Frt		1.00	0.85	0.93			1.00		1.00	0.87		
Flt Protected		0.95	1.00	1.00			0.95		0.96	1.00		
Satd. Flow (prot)		1770	1583	1731			1770		1792	1612		
Flt Permitted		0.95	1.00	1.00			0.95		0.95	1.00		
Satd. Flow (perm)		1770	1583	1731			1770		1770	1612		
Peak-hour factor, PHF	0.84	0.84	0.84	0.92	0.92	0.92	0.96	0.96	0.96	0.95	0.95	0.95
Adj. Flow (vph)	37	104	212	97	83	24	234	398	107	2	357	26
RTOR Reduction (vph)	0	0	0	6	0	0	0	0	0	96	0	0
Lane Group Flow (vph)	0	141	212	198	0	0	234	0	505	289	0	0
Turn Type	Perm	Prot	Free	NA			pm+pt	Perm	NA	Perm		
Protected Phases		4		3			1		6			
Permitted Phases	4		Free				6	6		2		
Actuated Green, G (s)		8.9	66.4	12.6			31.4		31.4	21.7		
Effective Green, g (s)		8.9	66.4	12.6			31.4		31.4	21.7		
Actuated g/C Ratio		0.13	1.00	0.19			0.47		0.47	0.33		
Clearance Time (s)		4.5		4.5			4.5		4.5	4.5		
Vehicle Extension (s)		3.0		3.0			3.0		3.0	3.0		
Lane Grp Cap (vph)		237	1583	328			837		837	526		
v/s Ratio Prot				c0.11			0.02					
v/s Ratio Perm		0.08	0.13				0.11		c0.29	0.18		
v/c Ratio		0.59	0.13	0.60			0.28		0.60	0.55		
Uniform Delay, d1		27.1	0.0	24.6			10.6		12.9	18.3		
Progression Factor		1.00	1.00	1.00			1.00		1.00	1.00		
Incremental Delay, d2		4.0	0.2	3.1			0.2		3.2	1.2		
Delay (s)		31.0	0.2	27.7			10.8		16.1	19.5		
Level of Service		C	A	C			B		B	B		
Approach Delay (s)		12.5		27.7					14.4	19.5		
Approach LOS		B		C					B	B		
Intersection Summary												
HCM 2000 Control Delay			16.8				HCM 2000 Level of Service		B			
HCM 2000 Volume to Capacity ratio			0.66									
Actuated Cycle Length (s)			66.4				Sum of lost time (s)		18.0			
Intersection Capacity Utilization			81.4%				ICU Level of Service		D			
Analysis Period (min)			15									
c Critical Lane Group												

HCM 2010 TWSC
8: SMain St/S Main St & McKee St

02/19/2024

Intersection

Int Delay, s/veh 2.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	54	2	191	0	0	208
Future Vol, veh/h	54	2	191	0	0	208
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	58	58	94	94	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	93	3	203	0	0	231

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	434	203	0
Stage 1	203	-	-
Stage 2	231	-	-
Critical Hdwy	6.42	6.22	-
Critical Hdwy Stg 1	5.42	-	-
Critical Hdwy Stg 2	5.42	-	-
Follow-up Hdwy	3.518	3.318	-
Pot Cap-1 Maneuver	579	838	-
Stage 1	831	-	-
Stage 2	807	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	579	838	-
Mov Cap-2 Maneuver	579	-	-
Stage 1	831	-	-
Stage 2	807	-	-

Approach	WB	NB	SB
HCM Control Delay, s	12.4	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBTWBLn1	SBT
Capacity (veh/h)	- 585	-
HCM Lane V/C Ratio	- 0.165	-
HCM Control Delay (s)	- 12.4	-
HCM Lane LOS	- B	-
HCM 95th %tile Q(veh)	- 0.6	-

HCM Unsignalized Intersection Capacity Analysis

9: S Main St/SMain St & Jackson St




02/20/2024



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations				↕	↕	
Traffic Volume (veh/h)	0	0	2	192	253	6
Future Volume (Veh/h)	0	0	2	192	253	6
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.95	0.95	0.80	0.80
Hourly flow rate (vph)	0	0	2	202	316	8
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	526	320	324			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	526	320	324			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	100			
cM capacity (veh/h)	511	721	1236			
Direction, Lane #	NB 1	SB 1				
Volume Total	204	324				
Volume Left	2	0				
Volume Right	0	8				
cSH	1236	1700				
Volume to Capacity	0.00	0.19				
Queue Length 95th (ft)	0	0				
Control Delay (s)	0.1	0.0				
Lane LOS	A					
Approach Delay (s)	0.1	0.0				
Approach LOS						
Intersection Summary						
Average Delay			0.0			
Intersection Capacity Utilization			17.0%	ICU Level of Service		A
Analysis Period (min)			15			






HCM 2010 TWSC
2: Morrison St & Greensboro Hwy

02/19/2024

Intersection						
Int Delay, s/veh	1					
Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	372	18	12	334	18	12
Future Vol, veh/h	372	18	12	334	18	12
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	-	-	0	0	-
Peak Hour Factor	84	84	95	95	58	58
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	443	21	13	352	31	21
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	464	0	832	454
Stage 1	-	-	-	-	454	-
Stage 2	-	-	-	-	378	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1097	-	339	606
Stage 1	-	-	-	-	640	-
Stage 2	-	-	-	-	693	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1097	-	334	606
Mov Cap-2 Maneuver	-	-	-	-	334	-
Stage 1	-	-	-	-	640	-
Stage 2	-	-	-	-	683	-
Approach	SE		NW		NE	
HCM Control Delay, s	0		0.3		15.1	
HCM LOS					C	
Minor Lane/Major Mvmt	NELn1	NWL	NWT	SET	SER	
Capacity (veh/h)	407	1097	-	-	-	
HCM Lane V/C Ratio	0.127	0.012	-	-	-	
HCM Control Delay (s)	15.1	8.3	0	-	-	
HCM Lane LOS	C	A	A	-	-	
HCM 95th %tile Q(veh)	0.4	0	-	-	-	

HCM 2010 TWSC
3: Greensboro Hwy & Industrial Blvd

02/19/2024

Intersection						
Int Delay, s/veh	1.6					
Movement	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Traffic Vol, veh/h	60	322	313	31	15	43
Future Vol, veh/h	60	322	313	31	15	43
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	85	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	86	86	90	90	86	86
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	70	374	348	34	17	50
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	382	0	-	0	862	348
Stage 1	-	-	-	-	348	-
Stage 2	-	-	-	-	514	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1176	-	-	-	325	695
Stage 1	-	-	-	-	715	-
Stage 2	-	-	-	-	600	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1176	-	-	-	301	695
Mov Cap-2 Maneuver	-	-	-	-	301	-
Stage 1	-	-	-	-	661	-
Stage 2	-	-	-	-	600	-
Approach	SE	NW		SW		
HCM Control Delay, s	1.3	0		13		
HCM LOS	B					
Minor Lane/Major Mvmt		NWT	NWR	SEL	SET	SWLn1
Capacity (veh/h)		-	-	1176	-	519
HCM Lane V/C Ratio		-	-	0.059	-	0.13
HCM Control Delay (s)		-	-	8.3	0	13
HCM Lane LOS		-	-	A	A	B
HCM 95th %tile Q(veh)		-	-	0.2	-	0.4

Intersection

Int Delay, s/veh 0.9

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↔	↔		↔						↔	
Traffic Vol, veh/h	11	372	6	27	320	19	0	0	0	14	3	5
Future Vol, veh/h	11	372	6	27	320	19	0	0	0	14	3	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	80	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	-	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	81	81	81	94	94	94	92	92	92	69	69	69
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	14	459	7	29	340	20	0	0	0	20	4	7

Major/Minor	Major1			Major2			Minor2		
Conflicting Flow All	360	0	0	466	0	0	899	902	350
Stage 1	-	-	-	-	-	-	408	408	-
Stage 2	-	-	-	-	-	-	491	494	-
Critical Hdwy	4.12	-	-	4.12	-	-	6.42	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	5.42	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	5.42	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318
Pot Cap-1 Maneuver	1199	-	-	1095	-	-	309	277	693
Stage 1	-	-	-	-	-	-	671	597	-
Stage 2	-	-	-	-	-	-	615	546	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1199	-	-	1095	-	-	294	0	693
Mov Cap-2 Maneuver	-	-	-	-	-	-	294	0	-
Stage 1	-	-	-	-	-	-	660	0	-
Stage 2	-	-	-	-	-	-	595	0	-

Approach	SE	NW	SW
HCM Control Delay, s	0.2	0.6	16.4
HCM LOS			C








Minor Lane/Major Mvmt	NWL	NWT	NWR	SEL	SET	SERSWLn1
Capacity (veh/h)	1095	-	-	1199	-	- 347
HCM Lane V/C Ratio	0.026	-	-	0.011	-	- 0.092
HCM Control Delay (s)	8.4	0	-	8	0	- 16.4
HCM Lane LOS	A	A	-	A	A	- C
HCM 95th %tile Q(veh)	0.1	-	-	0	-	- 0.3




Intersection												
Int Delay, s/veh	1.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	6	195	1	6	235	9	5	18	5	6	13	11
Future Vol, veh/h	6	195	1	6	235	9	5	18	5	6	13	11
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	70	70	70	88	88	88	84	84	84	75	75	75
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	9	279	1	7	267	10	6	21	6	8	17	15
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	277	0	0	280	0	0	600	589	280	597	584	272
Stage 1	-	-	-	-	-	-	298	298	-	286	286	-
Stage 2	-	-	-	-	-	-	302	291	-	311	298	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
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	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1286	-	-	1283	-	-	413	421	759	415	423	767
Stage 1	-	-	-	-	-	-	711	667	-	721	675	-
Stage 2	-	-	-	-	-	-	707	672	-	699	667	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1286	-	-	1283	-	-	388	415	759	391	417	767
Mov Cap-2 Maneuver	-	-	-	-	-	-	388	415	-	391	417	-
Stage 1	-	-	-	-	-	-	705	662	-	715	671	-
Stage 2	-	-	-	-	-	-	672	668	-	666	662	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.2			0.2			13.7			12.9		
HCM LOS							B			B		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	446	1286	-	-	1283	-	-	493				
HCM Lane V/C Ratio	0.075	0.007	-	-	0.005	-	-	0.081				
HCM Control Delay (s)	13.7	7.8	0	-	7.8	0	-	12.9				
HCM Lane LOS	B	A	A	-	A	A	-	B				
HCM 95th %tile Q(veh)	0.2	0	-	-	0	-	-	0.3				

HCM Signalized Intersection Capacity Analysis

7: S Main St & Greensboro Hwy & S Barnett Shoals Rd

02/19/2024

												
Movement	WBL2	WBL	WBR	NBT	NBR	NBR2	SBL2	SBL	SBT	NWL	NWR	NWR2
Lane Configurations												
Traffic Volume (vph)	27	60	185	138	70	24	137	364	89	3	326	12
Future Volume (vph)	27	60	185	138	70	24	137	364	89	3	326	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.0	4.5			4.5		4.5	4.5		
Lane Util. Factor		1.00	1.00	1.00			1.00		1.00	1.00		
Frt		1.00	0.85	0.95			1.00		1.00	0.87		
Flt Protected		0.95	1.00	1.00			0.95		0.96	1.00		
Satd. Flow (prot)		1770	1583	1761			1770		1791	1613		
Flt Permitted		0.95	1.00	1.00			0.95		0.95	1.00		
Satd. Flow (perm)		1770	1583	1761			1770		1770	1612		
Peak-hour factor, PHF	0.86	0.86	0.86	0.82	0.82	0.82	0.86	0.86	0.86	0.90	0.90	0.92
Adj. Flow (vph)	31	70	215	168	85	29	159	423	103	3	362	13
RTOR Reduction (vph)	0	0	0	6	0	0	0	0	0	92	0	0
Lane Group Flow (vph)	0	101	215	276	0	0	159	0	526	286	0	0
Turn Type	Perm	Prot	Free	NA			pm+pt	Perm	NA	Perm		
Protected Phases		4		3			1		6			
Permitted Phases	4		Free				6	6		2		
Actuated Green, G (s)		8.6	80.0	16.1			41.8		41.8	28.5		
Effective Green, g (s)		8.6	80.0	16.1			41.8		41.8	28.5		
Actuated g/C Ratio		0.11	1.00	0.20			0.52		0.52	0.36		
Clearance Time (s)		4.5		4.5			4.5		4.5	4.5		
Vehicle Extension (s)		3.0		3.0			3.0		3.0	3.0		
Lane Grp Cap (vph)		190	1583	354			924		924	574		
v/s Ratio Prot				c0.16			0.02					
v/s Ratio Perm		0.06	0.14				0.07		c0.30	0.18		
v/c Ratio		0.53	0.14	0.78			0.17		0.57	0.50		
Uniform Delay, d1		33.8	0.0	30.3			10.0		13.0	20.2		
Progression Factor		1.00	1.00	1.00			1.00		1.00	1.00		
Incremental Delay, d2		2.8	0.2	10.7			0.1		2.5	3.1		
Delay (s)		36.6	0.2	40.9			10.1		15.5	23.2		
Level of Service		D	A	D			B		B	C		
Approach Delay (s)		11.8		40.9					14.3	23.2		
Approach LOS		B		D					B	C		
Intersection Summary												
HCM 2000 Control Delay			20.4		HCM 2000 Level of Service					C		
HCM 2000 Volume to Capacity ratio			0.66									
Actuated Cycle Length (s)			80.0		Sum of lost time (s)					18.0		
Intersection Capacity Utilization			78.8%		ICU Level of Service					D		
Analysis Period (min)			15									
c Critical Lane Group												

Intersection						
Int Delay, s/veh	1.6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	33	5	199	0	0	161
Future Vol, veh/h	33	5	199	0	0	161
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	54	54	83	83	85	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	61	9	240	0	0	189

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	429	240	0
Stage 1	240	-	-
Stage 2	189	-	-
Critical Hdwy	6.42	6.22	-
Critical Hdwy Stg 1	5.42	-	-
Critical Hdwy Stg 2	5.42	-	-
Follow-up Hdwy	3.518	3.318	-
Pot Cap-1 Maneuver	583	799	-
Stage 1	800	-	-
Stage 2	843	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	583	799	-
Mov Cap-2 Maneuver	583	-	-
Stage 1	800	-	-
Stage 2	843	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.7	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBTWBLn1	SBT
Capacity (veh/h)	- 605	-
HCM Lane V/C Ratio	- 0.116	-
HCM Control Delay (s)	- 11.7	-
HCM Lane LOS	- B	-
HCM 95th %tile Q(veh)	- 0.4	-

HCM Unsignalized Intersection Capacity Analysis

9: S Main St/SMain St & Jackson St




02/20/2024



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations				↕	↕	
Traffic Volume (veh/h)	0	0	2	199	193	2
Future Volume (Veh/h)	0	0	2	199	193	2
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.87	0.87	0.76	0.76
Hourly flow rate (vph)	0	0	2	229	254	3
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	488	256	257			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	488	256	257			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	100			
cM capacity (veh/h)	538	783	1308			
Direction, Lane #	NB 1	SB 1				
Volume Total	231	257				
Volume Left	2	0				
Volume Right	0	3				
cSH	1308	1700				
Volume to Capacity	0.00	0.15				
Queue Length 95th (ft)	0	0				
Control Delay (s)	0.1	0.0				
Lane LOS	A					
Approach Delay (s)	0.1	0.0				
Approach LOS						
Intersection Summary						
Average Delay			0.0			
Intersection Capacity Utilization			15.4%	ICU Level of Service		A
Analysis Period (min)			15			

HCM 2010 TWSC
2: Morrison St & Greensboro Hwy

02/19/2024

Intersection						
Int Delay, s/veh	1.1					
Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	434	13	9	385	22	15
Future Vol, veh/h	434	13	9	385	22	15
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	-	-	0	0	-
Peak Hour Factor	85	85	86	86	62	62
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	511	15	10	448	35	24
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	526	0	987	519
Stage 1	-	-	-	-	519	-
Stage 2	-	-	-	-	468	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1041	-	274	557
Stage 1	-	-	-	-	597	-
Stage 2	-	-	-	-	630	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1041	-	270	557
Mov Cap-2 Maneuver	-	-	-	-	270	-
Stage 1	-	-	-	-	597	-
Stage 2	-	-	-	-	622	-
Approach	SE		NW		NE	
HCM Control Delay, s	0		0.2		17.8	
HCM LOS					C	
Minor Lane/Major Mvmt	NELn1	NWL	NWT	SET	SER	
Capacity (veh/h)	341	1041	-	-	-	
HCM Lane V/C Ratio	0.175	0.01	-	-	-	
HCM Control Delay (s)	17.8	8.5	0	-	-	
HCM Lane LOS	C	A	A	-	-	
HCM 95th %tile Q(veh)	0.6	0	-	-	-	





HCM 2010 TWSC
3: Greensboro Hwy & Industrial Blvd

02/19/2024

Intersection

Int Delay, s/veh 2.9

Movement SEL SET NWT NWR SWL SWR

Lane Configurations						
Traffic Vol, veh/h	40	411	360	36	37	44
Future Vol, veh/h	40	411	360	36	37	44
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	85	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	87	87	96	96	55	55
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	46	472	375	38	67	80

Major/Minor Major1 Major2 Minor2

Conflicting Flow All	413	0	-	0	939	375
Stage 1	-	-	-	-	375	-
Stage 2	-	-	-	-	564	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1146	-	-	-	293	671
Stage 1	-	-	-	-	695	-
Stage 2	-	-	-	-	569	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	1146	-	-	-	277	671
Mov Cap-2 Maneuver	-	-	-	-	277	-
Stage 1	-	-	-	-	657	-
Stage 2	-	-	-	-	569	-





Approach SE NW SW

HCM Control Delay, s	0.7	0	18.8
HCM LOS			C

Minor Lane/Major Mvmt NWT NWR SEL SETSWLn1

Capacity (veh/h)	-	-	1146	-	407
HCM Lane V/C Ratio	-	-	0.04	-	0.362
HCM Control Delay (s)	-	-	8.3	0	18.8
HCM Lane LOS	-	-	A	A	C
HCM 95th %tile Q(veh)	-	-	0.1	-	1.6




















Intersection												
Int Delay, s/veh	1.6											
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↔	↔		↔						↔	
Traffic Vol, veh/h	10	421	12	36	355	28	0	0	0	22	9	11
Future Vol, veh/h	10	421	12	36	355	28	0	0	0	22	9	11
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	80	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	-	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	84	84	84	87	87	87	92	92	92	68	68	68
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	12	501	14	41	408	32	0	0	0	32	13	16
Major/Minor	Major1			Major2			Minor2					
Conflicting Flow All	440	0	0	515	0	0				1038	1045	424
Stage 1	-	-	-	-	-	-				506	506	-
Stage 2	-	-	-	-	-	-				532	539	-
Critical Hdwy	4.12	-	-	4.12	-	-				6.42	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-				5.42	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-				5.42	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-				3.518	4.018	3.318
Pot Cap-1 Maneuver	1120	-	-	1051	-	-				256	229	630
Stage 1	-	-	-	-	-	-				606	540	-
Stage 2	-	-	-	-	-	-				589	522	-
Platoon blocked, %	-	-	-	-	-	-				-	-	-
Mov Cap-1 Maneuver	1120	-	-	1051	-	-				239	0	630
Mov Cap-2 Maneuver	-	-	-	-	-	-				239	0	-
Stage 1	-	-	-	-	-	-				597	0	-
Stage 2	-	-	-	-	-	-				558	0	-
Approach	SE			NW			SW					
HCM Control Delay, s	0.2			0.7			20					
HCM LOS							C					
Minor Lane/Major Mvmt	NWL	NWT	NWR	SEL	SET	SERSWLn1						
Capacity (veh/h)	1051	-	-	1120	-	-	301					
HCM Lane V/C Ratio	0.039	-	-	0.011	-	-	0.205					
HCM Control Delay (s)	8.6	0	-	8.2	0	-	20					
HCM Lane LOS	A	A	-	A	A	-	C					
HCM 95th %tile Q(veh)	0.1	-	-	0	-	-	0.8					

Intersection												
Int Delay, s/veh	3.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	10	307	8	3	253	18	10	30	8	9	24	12
Future Vol, veh/h	10	307	8	3	253	18	10	30	8	9	24	12
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	85	85	85	79	79	79	56	56	56	73	73	73
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	12	361	9	4	320	23	18	54	14	12	33	16
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	343	0	0	370	0	0	754	741	366	764	734	332
Stage 1	-	-	-	-	-	-	390	390	-	340	340	-
Stage 2	-	-	-	-	-	-	364	351	-	424	394	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
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	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1216	-	-	1189	-	-	326	344	679	321	347	710
Stage 1	-	-	-	-	-	-	634	608	-	675	639	-
Stage 2	-	-	-	-	-	-	655	632	-	608	605	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1216	-	-	1189	-	-	291	338	679	273	341	710
Mov Cap-2 Maneuver	-	-	-	-	-	-	291	338	-	273	341	-
Stage 1	-	-	-	-	-	-	626	601	-	667	636	-
Stage 2	-	-	-	-	-	-	604	629	-	536	598	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.2			0.1			18.3			16.5		
HCM LOS							C			C		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	356	1216	-	-	1189	-	-	374				
HCM Lane V/C Ratio	0.241	0.01	-	-	0.003	-	-	0.165				
HCM Control Delay (s)	18.3	8	0	-	8	0	-	16.5				
HCM Lane LOS	C	A	A	-	A	A	-	C				
HCM 95th %tile Q(veh)	0.9	0	-	-	0	-	-	0.6				

HCM Signalized Intersection Capacity Analysis




7: S Main St & Greensboro Hwy & S Barnett Shoals Rd

02/19/2024

													
Movement	WBL2	WBL	WBR	NBT	NBR	NBR2	SBL2	SBL	SBT	NWL	NWR	NWR2	
Lane Configurations													
Traffic Volume (vph)	32	90	183	92	78	23	232	394	106	2	349	26	
Future Volume (vph)	32	90	183	92	78	23	232	394	106	2	349	26	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)		4.5	4.0	4.5			4.5		4.5	4.5			
Lane Util. Factor		1.00	1.00	1.00			1.00		1.00	1.00			
Frt		1.00	0.85	0.93			1.00		1.00	0.87			
Flt Protected		0.95	1.00	1.00			0.95		0.96	1.00			
Satd. Flow (prot)		1770	1583	1731			1770		1792	1612			
Flt Permitted		0.95	1.00	1.00			0.95		0.95	1.00			
Satd. Flow (perm)		1770	1583	1731			1770		1770	1612			
Peak-hour factor, PHF	0.84	0.84	0.84	0.92	0.92	0.92	0.96	0.96	0.96	0.95	0.95	0.95	
Adj. Flow (vph)	38	107	218	100	85	25	242	410	110	2	367	27	
RTOR Reduction (vph)	0	0	0	6	0	0	0	0	0	96	0	0	
Lane Group Flow (vph)	0	145	218	204	0	0	242	0	520	300	0	0	
Turn Type	Perm	Prot	Free	NA			pm+pt	Perm	NA	Perm			
Protected Phases		4		3			1		6				
Permitted Phases	4		Free				6	6		2			
Actuated Green, G (s)		9.0	66.8	12.9			31.4		31.4	21.8			
Effective Green, g (s)		9.0	66.8	12.9			31.4		31.4	21.8			
Actuated g/C Ratio		0.13	1.00	0.19			0.47		0.47	0.33			
Clearance Time (s)		4.5		4.5			4.5		4.5	4.5			
Vehicle Extension (s)		3.0		3.0			3.0		3.0	3.0			
Lane Grp Cap (vph)		238	1583	334			832		832	526			
v/s Ratio Prot				c0.12			0.02						
v/s Ratio Perm		0.08	0.14				0.11		c0.29	0.19			
v/c Ratio		0.61	0.14	0.61			0.29		0.62	0.57			
Uniform Delay, d1		27.2	0.0	24.6			10.9		13.3	18.6			
Progression Factor		1.00	1.00	1.00			1.00		1.00	1.00			
Incremental Delay, d2		4.4	0.2	3.1			0.2		3.5	1.4			
Delay (s)		31.6	0.2	27.8			11.1		16.8	20.0			
Level of Service		C	A	C			B		B	C			
Approach Delay (s)		12.7		27.8					15.0	20.0			
Approach LOS		B		C					B	C			
Intersection Summary													
HCM 2000 Control Delay			17.2		HCM 2000 Level of Service					B			
HCM 2000 Volume to Capacity ratio			0.68										
Actuated Cycle Length (s)			66.8		Sum of lost time (s)					18.0			
Intersection Capacity Utilization			83.5%		ICU Level of Service					E			
Analysis Period (min)			15										
c Critical Lane Group													

HCM 2010 TWSC
8: SMain St/S Main St & McKee St

02/19/2024

Intersection						
Int Delay, s/veh	2.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	56	2	197	0	0	214
Future Vol, veh/h	56	2	197	0	0	214
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	58	58	94	94	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	97	3	210	0	0	238
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	448	210	0	-	-	-
Stage 1	210	-	-	-	-	-
Stage 2	238	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	-	-
Pot Cap-1 Maneuver	568	830	-	0	0	-
Stage 1	825	-	-	0	0	-
Stage 2	802	-	-	0	0	-
Platoon blocked, %			-			-
Mov Cap-1 Maneuver	568	830	-	-	-	-
Mov Cap-2 Maneuver	568	-	-	-	-	-
Stage 1	825	-	-	-	-	-
Stage 2	802	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	12.6	0	0			
HCM LOS	B					
Minor Lane/Major Mvmt	NBTWBLn1		SBT			
Capacity (veh/h)	-	574	-			
HCM Lane V/C Ratio	-	0.174	-			
HCM Control Delay (s)	-	12.6	-			
HCM Lane LOS	-	B	-			
HCM 95th %tile Q(veh)	-	0.6	-			

HCM Unsignalized Intersection Capacity Analysis

9: S Main St/SMain St & Jackson St

02/20/2024











Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations				↕	↕	
Traffic Volume (veh/h)	0	0	2	198	261	6
Future Volume (Veh/h)	0	0	2	198	261	6
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.95	0.95	0.80	0.80
Hourly flow rate (vph)	0	0	2	208	326	8
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	542	330	334			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	542	330	334			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	100			
cM capacity (veh/h)	501	712	1225			
Direction, Lane #	NB 1	SB 1				
Volume Total	210	334				
Volume Left	2	0				
Volume Right	0	8				
cSH	1225	1700				
Volume to Capacity	0.00	0.20				
Queue Length 95th (ft)	0	0				
Control Delay (s)	0.1	0.0				
Lane LOS	A					
Approach Delay (s)	0.1	0.0				
Approach LOS						
Intersection Summary						
Average Delay			0.0			
Intersection Capacity Utilization			17.4%	ICU Level of Service		A
Analysis Period (min)			15			




Intersection						
Int Delay, s/veh	0.8					
Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations	↑	↗		↖	↘	
Traffic Vol, veh/h	409	16	7	380	26	10
Future Vol, veh/h	409	16	7	380	26	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	150	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	445	17	8	413	28	11
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	462	0	874	445
Stage 1	-	-	-	-	445	-
Stage 2	-	-	-	-	429	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1099	-	320	613
Stage 1	-	-	-	-	646	-
Stage 2	-	-	-	-	657	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1099	-	317	613
Mov Cap-2 Maneuver	-	-	-	-	317	-
Stage 1	-	-	-	-	646	-
Stage 2	-	-	-	-	651	-
Approach	SE		NW		NE	
HCM Control Delay, s	0		0.2		16	
HCM LOS					C	
Minor Lane/Major Mvmt	NELn1	NWL	NWT	SET	SER	
Capacity (veh/h)	366	1099	-	-	-	
HCM Lane V/C Ratio	0.107	0.007	-	-	-	
HCM Control Delay (s)	16	8.3	0	-	-	
HCM Lane LOS	C	A	A	-	-	
HCM 95th %tile Q(veh)	0.4	0	-	-	-	

HCM 2010 TWSC
2: Morrison St & Greensboro Hwy

02/20/2024

Intersection						
Int Delay, s/veh	0.9					
Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	382	18	19	351	18	22
Future Vol, veh/h	382	18	19	351	18	22
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	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	415	20	21	382	20	24
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	435	0	849	425
Stage 1	-	-	-	-	425	-
Stage 2	-	-	-	-	424	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1125	-	331	629
Stage 1	-	-	-	-	659	-
Stage 2	-	-	-	-	660	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1125	-	323	629
Mov Cap-2 Maneuver	-	-	-	-	323	-
Stage 1	-	-	-	-	659	-
Stage 2	-	-	-	-	644	-
Approach	SE		NW		NE	
HCM Control Delay, s	0		0.4		14.1	
HCM LOS					B	
Minor Lane/Major Mvmt	NELn1	NWL	NWT	SET	SER	
Capacity (veh/h)	441	1125	-	-	-	
HCM Lane V/C Ratio	0.099	0.018	-	-	-	
HCM Control Delay (s)	14.1	8.3	0	-	-	
HCM Lane LOS	B	A	A	-	-	
HCM 95th %tile Q(veh)	0.3	0.1	-	-	-	





Intersection						
Int Delay, s/veh	1.7					
Movement	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Traffic Vol, veh/h	70	332	320	31	15	50
Future Vol, veh/h	70	332	320	31	15	50
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	85	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	76	361	348	34	16	54
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	382	0	-	0	861	348
Stage 1	-	-	-	-	348	-
Stage 2	-	-	-	-	513	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1176	-	-	-	326	695
Stage 1	-	-	-	-	715	-
Stage 2	-	-	-	-	601	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1176	-	-	-	300	695
Mov Cap-2 Maneuver	-	-	-	-	300	-
Stage 1	-	-	-	-	657	-
Stage 2	-	-	-	-	601	-
Approach	SE	NW		SW		
HCM Control Delay, s	1.4	0		12.8		
HCM LOS	B					
Minor Lane/Major Mvmt	NWT	NWR	SEL	SET	SWLn1	
Capacity (veh/h)	-	-	1176	-	533	
HCM Lane V/C Ratio	-	-	0.065	-	0.133	
HCM Control Delay (s)	-	-	8.3	0	12.8	
HCM Lane LOS	-	-	A	A	B	
HCM 95th %tile Q(veh)	-	-	0.2	-	0.5	

Intersection						
Int Delay, s/veh	1.8					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	10	5	3	30	30	7
Future Vol, veh/h	10	5	3	30	30	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	11	5	3	33	33	8
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	76	37	41	0	-	0
Stage 1	37	-	-	-	-	-
Stage 2	39	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	927	1035	1568	-	-	-
Stage 1	985	-	-	-	-	-
Stage 2	983	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	925	1035	1568	-	-	-
Mov Cap-2 Maneuver	925	-	-	-	-	-
Stage 1	983	-	-	-	-	-
Stage 2	983	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	8.8	0.7		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1568	-	959	-	-	
HCM Lane V/C Ratio	0.002	-	0.017	-	-	
HCM Control Delay (s)	7.3	0	8.8	-	-	
HCM Lane LOS	A	A	A	-	-	
HCM 95th %tile Q(veh)	0	-	0.1	-	-	

HCM 2010 TWSC
5: Greensboro Hwy & Depot St

02/20/2024



















Intersection												
Int Delay, s/veh	1											
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↔	↔		↔						↔	
Traffic Vol, veh/h	11	379	6	27	330	34	0	0	0	24	3	5
Future Vol, veh/h	11	379	6	27	330	34	0	0	0	24	3	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	80	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	-	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	12	412	7	29	359	37	0	0	0	26	3	5
Major/Minor	Major1			Major2			Minor2					
Conflicting Flow All	396	0	0	419	0	0				876	879	378
Stage 1	-	-	-	-	-	-				436	436	-
Stage 2	-	-	-	-	-	-				440	443	-
Critical Hdwy	4.12	-	-	4.12	-	-				6.42	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-				5.42	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-				5.42	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-				3.518	4.018	3.318
Pot Cap-1 Maneuver	1163	-	-	1140	-	-				319	286	669
Stage 1	-	-	-	-	-	-				652	580	-
Stage 2	-	-	-	-	-	-				649	576	-
Platoon blocked, %	-	-	-	-	-	-				-	-	-
Mov Cap-1 Maneuver	1163	-	-	1140	-	-				304	0	669
Mov Cap-2 Maneuver	-	-	-	-	-	-				304	0	-
Stage 1	-	-	-	-	-	-				644	0	-
Stage 2	-	-	-	-	-	-				628	0	-
Approach	SE			NW			SW					
HCM Control Delay, s	0.2			0.6			16.9					
HCM LOS							C					
Minor Lane/Major Mvmt	NWL	NWT	NWR	SEL	SET	SERSWLn1						
Capacity (veh/h)	1140	-	-	1163	-	-	336					
HCM Lane V/C Ratio	0.026	-	-	0.01	-	-	0.104					
HCM Control Delay (s)	8.2	0	-	8.1	0	-	16.9					
HCM Lane LOS	A	A	-	A	A	-	C					
HCM 95th %tile Q(veh)	0.1	-	-	0	-	-	0.3					

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	6	195	1	6	235	9	5	33	5	6	23	11
Future Vol, veh/h	6	195	1	6	235	9	5	33	5	6	23	11
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	7	212	1	7	255	10	5	36	5	7	25	12
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	265	0	0	213	0	0	520	506	213	521	501	260
Stage 1	-	-	-	-	-	-	227	227	-	274	274	-
Stage 2	-	-	-	-	-	-	293	279	-	247	227	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
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	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1299	-	-	1357	-	-	467	469	827	466	472	779
Stage 1	-	-	-	-	-	-	776	716	-	732	683	-
Stage 2	-	-	-	-	-	-	715	680	-	757	716	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1299	-	-	1357	-	-	437	463	827	432	466	779
Mov Cap-2 Maneuver	-	-	-	-	-	-	437	463	-	432	466	-
Stage 1	-	-	-	-	-	-	771	712	-	728	679	-
Stage 2	-	-	-	-	-	-	674	676	-	710	712	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.2			0.2			13.2			12.6		
HCM LOS							B			B		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	484	1299	-	-	1357	-	-	517				
HCM Lane V/C Ratio	0.097	0.005	-	-	0.005	-	-	0.084				
HCM Control Delay (s)	13.2	7.8	0	-	7.7	0	-	12.6				
HCM Lane LOS	B	A	A	-	A	A	-	B				
HCM 95th %tile Q(veh)	0.3	0	-	-	0	-	-	0.3				

HCM Signalized Intersection Capacity Analysis

7: S Main St & Greensboro Hwy & S Barnett Shoals Rd





02/20/2024

												
Movement	WBL2	WBL	WBR	NBT	NBR	NBR2	SBL2	SBL	SBT	NWL	NWR	NWR2
Lane Configurations												
Traffic Volume (vph)	27	60	185	148	70	24	137	371	96	3	336	12
Future Volume (vph)	27	60	185	148	70	24	137	371	96	3	336	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.0	4.5			4.5		4.5	4.5		
Lane Util. Factor		1.00	1.00	1.00			1.00		1.00	1.00		
Frt		1.00	0.85	0.95			1.00		1.00	0.87		
Flt Protected		0.95	1.00	1.00			0.95		0.96	1.00		
Satd. Flow (prot)		1770	1583	1765			1770		1792	1613		
Flt Permitted		0.95	1.00	1.00			0.95		0.95	1.00		
Satd. Flow (perm)		1770	1583	1765			1770		1770	1612		
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	29	65	201	161	76	26	149	403	104	3	365	13
RTOR Reduction (vph)	0	0	0	5	0	0	0	0	0	91	0	0
Lane Group Flow (vph)	0	94	201	258	0	0	149	0	507	290	0	0
Turn Type	Perm	Prot	Free	NA			pm+pt	Perm	NA	Perm		
Protected Phases		4		3			1		6			
Permitted Phases	4		Free				6	6		2		
Actuated Green, G (s)		7.4	67.7	14.1			32.7		32.7	24.4		
Effective Green, g (s)		7.4	67.7	14.1			32.7		32.7	24.4		
Actuated g/C Ratio		0.11	1.00	0.21			0.48		0.48	0.36		
Clearance Time (s)		4.5		4.5			4.5		4.5	4.5		
Vehicle Extension (s)		3.0		3.0			3.0		3.0	3.0		
Lane Grp Cap (vph)		193	1583	367			854		854	580		
v/s Ratio Prot				c0.15			0.01					
v/s Ratio Perm		0.05	0.13				0.07		c0.29	0.18		
v/c Ratio		0.49	0.13	0.70			0.17		0.59	0.50		
Uniform Delay, d1		28.4	0.0	24.9			9.9		12.7	16.9		
Progression Factor		1.00	1.00	1.00			1.00		1.00	1.00		
Incremental Delay, d2		1.9	0.2	6.0			0.1		3.0	0.7		
Delay (s)		30.3	0.2	30.9			10.0		15.7	17.6		
Level of Service		C	A	C			A		B	B		
Approach Delay (s)		9.8		30.9					14.4	17.6		
Approach LOS		A		C					B	B		
Intersection Summary												
HCM 2000 Control Delay			17.0		HCM 2000 Level of Service					B		
HCM 2000 Volume to Capacity ratio			0.66									
Actuated Cycle Length (s)			67.7		Sum of lost time (s)					18.0		
Intersection Capacity Utilization			80.7%		ICU Level of Service					D		
Analysis Period (min)			15									
c Critical Lane Group												

HCM 2010 TWSC
8: SMain St & McKee St

02/20/2024

Intersection						
Int Delay, s/veh	1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	W	N	N	S	S
Traffic Vol, veh/h	33	5	209	0	0	168
Future Vol, veh/h	33	5	209	0	0	168
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	36	5	227	0	0	183
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	410	227	0	-	-	-
Stage 1	227	-	-	-	-	-
Stage 2	183	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	-	-
Pot Cap-1 Maneuver	598	812	-	0	0	-
Stage 1	811	-	-	0	0	-
Stage 2	848	-	-	0	0	-
Platoon blocked, %			-			-
Mov Cap-1 Maneuver	598	812	-	-	-	-
Mov Cap-2 Maneuver	598	-	-	-	-	-
Stage 1	811	-	-	-	-	-
Stage 2	848	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	11.2	0	0			
HCM LOS	B					
Minor Lane/Major Mvmt	NBTWBLn1		SBT			
Capacity (veh/h)	- 619		-			
HCM Lane V/C Ratio	- 0.067		-			
HCM Control Delay (s)	- 11.2		-			
HCM Lane LOS	- B		-			
HCM 95th %tile Q(veh)	- 0.2		-			

Intersection												
Int Delay, s/veh	1.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	40	0	10	2	199	26	7	193	2
Future Vol, veh/h	0	0	0	40	0	10	2	199	26	7	193	2
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	-	-	-	-	-	-	-	-	150	-	-	-
Veh in Median Storage, #	458	752	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	43	0	11	2	216	28	8	210	2
Major/Minor												
Minor1				Major1				Major2				
Conflicting Flow All	447	448	216	212	0	0	244	0	0			
Stage 1	220	220	-	-	-	-	-	-	-	-	-	-
Stage 2	227	228	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	6.42	6.52	6.22	4.12	-	-	4.12	-	-	-	-	-
Critical Hdwy Stg 1	5.42	5.52	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.42	5.52	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	2.218	-	-	2.218	-	-	-	-	-
Pot Cap-1 Maneuver	569	506	824	1358	-	-	1322	-	-	-	-	-
Stage 1	817	721	-	-	-	-	-	-	-	-	-	-
Stage 2	811	715	-	-	-	-	-	-	-	-	-	-
Platoon blocked, %					-	-		-	-	-	-	-
Mov Cap-1 Maneuver	564	0	824	1358	-	-	1322	-	-	-	-	-
Mov Cap-2 Maneuver	564	0	-	-	-	-	-	-	-	-	-	-
Stage 1	815	0	-	-	-	-	-	-	-	-	-	-
Stage 2	805	0	-	-	-	-	-	-	-	-	-	-
Approach												
WB				NB				SB				
HCM Control Delay, s	11.6			0.1				0.3				
HCM LOS	B											
Minor Lane/Major Mvmt												
NBL				NBT				NBRWBLn1				
Capacity (veh/h)	1358	-	-	602	1322	-	-					
HCM Lane V/C Ratio	0.002	-	-	0.09	0.006	-	-					
HCM Control Delay (s)	7.7	0	-	11.6	7.7	-	-					
HCM Lane LOS	A	A	-	B	A	-	-					
HCM 95th %tile Q(veh)	0	-	-	0.3	0	-	-					




Intersection						
Int Delay, s/veh	1.2					
Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations	↑	↗		↖	↘	
Traffic Vol, veh/h	447	41	18	418	38	15
Future Vol, veh/h	447	41	18	418	38	15
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	150	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	486	45	20	454	41	16
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	531	0	980	486
Stage 1	-	-	-	-	486	-
Stage 2	-	-	-	-	494	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1036	-	277	581
Stage 1	-	-	-	-	618	-
Stage 2	-	-	-	-	613	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1036	-	270	581
Mov Cap-2 Maneuver	-	-	-	-	270	-
Stage 1	-	-	-	-	618	-
Stage 2	-	-	-	-	597	-
Approach	SE		NW		NE	
HCM Control Delay, s	0		0.4		18.8	
HCM LOS	C					
Minor Lane/Major Mvmt	NELn1	NWL	NWT	SET	SER	
Capacity (veh/h)	318	1036	-	-	-	
HCM Lane V/C Ratio	0.181	0.019	-	-	-	
HCM Control Delay (s)	18.8	8.5	0	-	-	
HCM Lane LOS	C	A	A	-	-	
HCM 95th %tile Q(veh)	0.7	0.1	-	-	-	

HCM 2010 TWSC
2: Morrison St & Greensboro Hwy

02/20/2024

Intersection






Int Delay, s/veh 1.1

Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	449	13	27	415	22	30
Future Vol, veh/h	449	13	27	415	22	30
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	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	488	14	29	451	24	33

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	502
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	4.12
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	2.218
Pot Cap-1 Maneuver	-	-	1062
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	1062
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	SE	NW	NE
HCM Control Delay, s	0	0.5	16.2
HCM LOS			C

Minor Lane/Major Mvmt	NELn1	NWL	NWT	SET	SER
Capacity (veh/h)	378	1062	-	-	-
HCM Lane V/C Ratio	0.15	0.028	-	-	-
HCM Control Delay (s)	16.2	8.5	0	-	-
HCM Lane LOS	C	A	A	-	-
HCM 95th %tile Q(veh)	0.5	0.1	-	-	-

Intersection						
Int Delay, s/veh	2.2					
Movement	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Traffic Vol, veh/h	55	426	378	36	37	62
Future Vol, veh/h	55	426	378	36	37	62
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	85	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	60	463	411	39	40	67
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	450	0	-	0	994	411
Stage 1	-	-	-	-	411	-
Stage 2	-	-	-	-	583	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1110	-	-	-	272	641
Stage 1	-	-	-	-	669	-
Stage 2	-	-	-	-	558	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1110	-	-	-	252	641
Mov Cap-2 Maneuver	-	-	-	-	252	-
Stage 1	-	-	-	-	620	-
Stage 2	-	-	-	-	558	-
Approach	SE	NW		SW		
HCM Control Delay, s	1	0		17		
HCM LOS				C		
Minor Lane/Major Mvmt	NWT	NWR	SEL	SETSWLn1		
Capacity (veh/h)	-	-	1110	-	-	406
HCM Lane V/C Ratio	-	-	0.054	-	-	0.265
HCM Control Delay (s)	-	-	8.4	0	17	
HCM Lane LOS	-	-	A	A	C	
HCM 95th %tile Q(veh)	-	-	0.2	-	1.1	

Intersection

Int Delay, s/veh 2.4

Movement EBL EBR NBL NBT SBT SBRLane Configurations 

Traffic Vol, veh/h 15 7 9 37 23 18

Future Vol, veh/h 15 7 9 37 23 18

Conflicting Peds, #/hr 0 0 0 0 0 0

Sign Control Stop Stop Free Free Free Free

RT Channelized - None - None - None

Storage Length - - - - - -

Veh in Median Storage, # 0 - - 0 0 -

Grade, % 0 - - 0 0 -

Peak Hour Factor 92 92 92 92 92 92

Heavy Vehicles, % 2 2 2 2 2 2

Mvmt Flow 16 8 10 40 25 20

Major/Minor Minor2 Major1 Major2

Conflicting Flow All 95 35 45 0 - 0

Stage 1 35 - - - - -

Stage 2 60 - - - - -

Critical Hdwy 6.42 6.22 4.12 - - -

Critical Hdwy Stg 1 5.42 - - - - -

Critical Hdwy Stg 2 5.42 - - - - -

Follow-up Hdwy 3.518 3.318 2.218 - - -

Pot Cap-1 Maneuver 905 1038 1563 - - -

Stage 1 987 - - - - -

Stage 2 963 - - - - -

Platoon blocked, % - - -

Mov Cap-1 Maneuver 899 1038 1563 - - -

Mov Cap-2 Maneuver 899 - - - - -

Stage 1 980 - - - - -

Stage 2 963 - - - - -

Approach EB NB SB

HCM Control Delay, s 8.9 1.4 0

HCM LOS A

Minor Lane/Major Mvmt NBL NBT EBLn1 SBT SBR

Capacity (veh/h) 1563 - 939 - -

HCM Lane V/C Ratio 0.006 - 0.025 - -

HCM Control Delay (s) 7.3 0 8.9 - -

HCM Lane LOS A A A - -

HCM 95th %tile Q(veh) 0 - 0.1 - -





HCM 2010 TWSC
5: Greensboro Hwy & Depot St

02/20/2024

Intersection												
Int Delay, s/veh	1.9											
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↔	↔		↔						↔	
Traffic Vol, veh/h	12	439	10	36	370	51	0	0	0	46	9	11
Future Vol, veh/h	12	439	10	36	370	51	0	0	0	46	9	11
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	80	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	-	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	13	477	11	39	402	55	0	0	0	50	10	12
Major/Minor	Major1			Major2			Minor2					
Conflicting Flow All	457	0	0	488	0	0				1017	1022	430
Stage 1	-	-	-	-	-	-				508	508	-
Stage 2	-	-	-	-	-	-				509	514	-
Critical Hdwy	4.12	-	-	4.12	-	-				6.42	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-				5.42	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-				5.42	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-				3.518	4.018	3.318
Pot Cap-1 Maneuver	1104	-	-	1075	-	-				263	236	625
Stage 1	-	-	-	-	-	-				604	539	-
Stage 2	-	-	-	-	-	-				604	535	-
Platoon blocked, %	-	-	-	-	-	-				-	-	-
Mov Cap-1 Maneuver	1104	-	-	1075	-	-				246	0	625
Mov Cap-2 Maneuver	-	-	-	-	-	-				246	0	-
Stage 1	-	-	-	-	-	-				594	0	-
Stage 2	-	-	-	-	-	-				574	0	-
Approach	SE			NW			SW					
HCM Control Delay, s	0.2			0.7			22.3					
HCM LOS							C					
Minor Lane/Major Mvmt	NWL	NWT	NWR	SEL	SET	SERSWLn1						
Capacity (veh/h)	1075	-	-	1104	-	-	279					
HCM Lane V/C Ratio	0.036	-	-	0.012	-	-	0.257					
HCM Control Delay (s)	8.5	0	-	8.3	0	-	22.3					
HCM Lane LOS	A	A	-	A	A	-	C					
HCM 95th %tile Q(veh)	0.1	-	-	0	-	-	1					

Intersection

Int Delay, s/veh 3.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	10	307	8	3	253	18	10	53	8	9	51	12
Future Vol, veh/h	10	307	8	3	253	18	10	53	8	9	51	12
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	334	9	3	275	20	11	58	9	10	55	13

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	295	0	0	343	0	0	686	662	339	685	656	285
Stage 1	-	-	-	-	-	-	361	361	-	291	291	-
Stage 2	-	-	-	-	-	-	325	301	-	394	365	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
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	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1266	-	-	1216	-	-	362	382	703	362	385	754
Stage 1	-	-	-	-	-	-	657	626	-	717	672	-
Stage 2	-	-	-	-	-	-	687	665	-	631	623	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1266	-	-	1216	-	-	313	377	703	312	380	754
Mov Cap-2 Maneuver	-	-	-	-	-	-	313	377	-	312	380	-
Stage 1	-	-	-	-	-	-	650	619	-	709	670	-
Stage 2	-	-	-	-	-	-	617	663	-	559	616	-



















Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.2			0.1			16.6			16.1		
HCM LOS							C			C		




Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	386	1266	-	-	1216	-	-	402
HCM Lane V/C Ratio	0.2	0.009	-	-	0.003	-	-	0.195
HCM Control Delay (s)	16.6	7.9	0	-	8	0	-	16.1
HCM Lane LOS	C	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	0.7	0	-	-	0	-	-	0.7

HCM Signalized Intersection Capacity Analysis

7: S Main St & Greensboro Hwy & S Barnett Shoals Rd

02/20/2024

												
Movement	WBL2	WBL	WBR	NBT	NBR	NBR2	SBL2	SBL	SBT	NWL	NWR	NWR2
Lane Configurations												
Traffic Volume (vph)	32	90	183	107	78	23	232	412	124	2	364	26
Future Volume (vph)	32	90	183	107	78	23	232	412	124	2	364	26
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.0	4.5			4.5		4.5	4.5		
Lane Util. Factor		1.00	1.00	1.00			1.00		1.00	1.00		
Frt		1.00	0.85	0.93			1.00		1.00	0.87		
Flt Protected		0.95	1.00	1.00			0.95		0.96	1.00		
Satd. Flow (prot)		1770	1583	1740			1770		1794	1612		
Flt Permitted		0.95	1.00	1.00			0.95		0.95	1.00		
Satd. Flow (perm)		1770	1583	1740			1770		1770	1612		
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	35	98	199	116	85	25	252	448	135	2	396	28
RTOR Reduction (vph)	0	0	0	6	0	0	0	0	0	96	0	0
Lane Group Flow (vph)	0	133	199	220	0	0	252	0	583	330	0	0
Turn Type	Perm	Prot	Free	NA			pm+pt	Perm	NA	Perm		
Protected Phases		4		3			1		6			
Permitted Phases	4		Free				6	6		2		
Actuated Green, G (s)		8.6	66.7	13.2			31.4		31.4	21.8		
Effective Green, g (s)		8.6	66.7	13.2			31.4		31.4	21.8		
Actuated g/C Ratio		0.13	1.00	0.20			0.47		0.47	0.33		
Clearance Time (s)		4.5		4.5			4.5		4.5	4.5		
Vehicle Extension (s)		3.0		3.0			3.0		3.0	3.0		
Lane Grp Cap (vph)		228	1583	344			833		833	526		
v/s Ratio Prot				c0.13			0.02					
v/s Ratio Perm		0.08	0.13				0.12		c0.33	0.20		
v/c Ratio		0.58	0.13	0.64			0.30		0.70	0.63		
Uniform Delay, d1		27.4	0.0	24.6			10.9		13.9	19.0		
Progression Factor		1.00	1.00	1.00			1.00		1.00	1.00		
Incremental Delay, d2		3.8	0.2	4.0			0.2		4.9	2.3		
Delay (s)		31.1	0.2	28.6			11.1		18.8	21.3		
Level of Service		C	A	C			B		B	C		
Approach Delay (s)		12.6		28.6					16.5	21.3		
Approach LOS		B		C					B	C		
Intersection Summary												
HCM 2000 Control Delay			18.4				HCM 2000 Level of Service			B		
HCM 2000 Volume to Capacity ratio			0.73									
Actuated Cycle Length (s)			66.7				Sum of lost time (s)			18.0		
Intersection Capacity Utilization			87.2%				ICU Level of Service			E		
Analysis Period (min)			15									
c Critical Lane Group												

Intersection						
Int Delay, s/veh	1.4					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	56	2	212	0	0	232
Future Vol, veh/h	56	2	212	0	0	232
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	61	2	230	0	0	252
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	482	230	0	-	-	-
Stage 1	230	-	-	-	-	-
Stage 2	252	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	-	-
Pot Cap-1 Maneuver	543	809	-	0	0	-
Stage 1	808	-	-	0	0	-
Stage 2	790	-	-	0	0	-
Platoon blocked, %			-			-
Mov Cap-1 Maneuver	543	809	-	-	-	-
Mov Cap-2 Maneuver	543	-	-	-	-	-
Stage 1	808	-	-	-	-	-
Stage 2	790	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	12.4	0	0			
HCM LOS	B					
Minor Lane/Major Mvmt	NBTWBLn1		SBT			
Capacity (veh/h)	- 549		-			
HCM Lane V/C Ratio	- 0.115		-			
HCM Control Delay (s)	- 12.4		-			
HCM Lane LOS	- B		-			
HCM 95th %tile Q(veh)	- 0.4		-			

Intersection												
Int Delay, s/veh	1.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↔			↔	↔		↔	
Traffic Vol, veh/h	0	0	0	61	0	15	2	198	71	18	261	6
Future Vol, veh/h	0	0	0	61	0	15	2	198	71	18	261	6
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	-	-	-	-	-	-	-	-	150	-	-	-
Veh in Median Storage, #	-	-	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	66	0	16	2	215	77	20	284	7
Major/Minor												
Minor1				Major1				Major2				
Conflicting Flow All	547	550	215	291	0	0	292	0	0			
Stage 1	219	219	-	-	-	-	-	-	-	-	-	-
Stage 2	328	331	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	6.42	6.52	6.22	4.12	-	-	4.12	-	-	-	-	-
Critical Hdwy Stg 1	5.42	5.52	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.42	5.52	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	2.218	-	-	2.218	-	-	-	-	-
Pot Cap-1 Maneuver	498	443	825	1271	-	-	1270	-	-	-	-	-
Stage 1	817	722	-	-	-	-	-	-	-	-	-	-
Stage 2	730	645	-	-	-	-	-	-	-	-	-	-
Platoon blocked, %					-	-		-	-	-	-	-
Mov Cap-1 Maneuver	488	0	825	1271	-	-	1270	-	-	-	-	-
Mov Cap-2 Maneuver	488	0	-	-	-	-	-	-	-	-	-	-
Stage 1	815	0	-	-	-	-	-	-	-	-	-	-
Stage 2	716	0	-	-	-	-	-	-	-	-	-	-
Approach												
WB				NB				SB				
HCM Control Delay, s	13			0.1				0.5				
HCM LOS	B											
Minor Lane/Major Mvmt	NBL	NBT	NBRWBLn1	SBL	SBT	SBR						
Capacity (veh/h)	1271	-	-	531	1270	-	-					
HCM Lane V/C Ratio	0.002	-	-	0.156	0.015	-	-					
HCM Control Delay (s)	7.8	0	-	13	7.9	-	-					
HCM Lane LOS	A	A	-	B	A	-	-					
HCM 95th %tile Q(veh)	0	-	-	0.5	0	-	-					

Intersection						
Int Delay, s/veh	0					
Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations	↑	↑		↑	↑	
Traffic Vol, veh/h	409	16	7	380	26	10
Future Vol, veh/h	409	16	7	380	26	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	150	-	-	-	-
Veh in Median Storage, #	0	-	-	0	-	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	445	17	8	413	28	11




Major/Minor	Minor2	Major2	
Conflicting Flow All	429	413	0
Stage 1	429	-	-
Stage 2	0	-	-
Critical Hdwy	6.52	6.22	4.12
Critical Hdwy Stg 1	5.52	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	4.018	3.318	2.218
Pot Cap-1 Maneuver	518	639	-
Stage 1	584	-	-
Stage 2	-	-	-
Platoon blocked, %			-
Mov Cap-1 Maneuver	0	639	-
Mov Cap-2 Maneuver	0	-	-
Stage 1	0	-	-
Stage 2	0	-	-






Approach	SE	NW
HCM Control Delay, s		
HCM LOS	-	

Minor Lane/Major Mvmt	NWL	NWT	SELn1	SELn2
Capacity (veh/h)	-	-	-	639
HCM Lane V/C Ratio	-	-	-	0.027
HCM Control Delay (s)	-	-	-	10.8
HCM Lane LOS	-	-	-	B
HCM 95th %tile Q(veh)	-	-	-	0.1

HCM 2010 TWSC
2: Morrison St & Greensboro Hwy

02/20/2024

Intersection						
Int Delay, s/veh	0.9					
Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	401	18	20	369	18	23
Future Vol, veh/h	401	18	20	369	18	23
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	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	436	20	22	401	20	25
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	456	0	891	446
Stage 1	-	-	-	-	446	-
Stage 2	-	-	-	-	445	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1105	-	313	612
Stage 1	-	-	-	-	645	-
Stage 2	-	-	-	-	646	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1105	-	305	612
Mov Cap-2 Maneuver	-	-	-	-	305	-
Stage 1	-	-	-	-	645	-
Stage 2	-	-	-	-	629	-
Approach	SE		NW		NE	
HCM Control Delay, s	0		0.4		14.5	
HCM LOS					B	
Minor Lane/Major Mvmt	NELn1	NWL	NWT	SET	SER	
Capacity (veh/h)	424	1105	-	-	-	
HCM Lane V/C Ratio	0.105	0.02	-	-	-	
HCM Control Delay (s)	14.5	8.3	0	-	-	
HCM Lane LOS	B	A	A	-	-	
HCM 95th %tile Q(veh)	0.3	0.1	-	-	-	

Intersection						
Int Delay, s/veh	1.7					
Movement	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Traffic Vol, veh/h	73	349	336	32	16	52
Future Vol, veh/h	73	349	336	32	16	52
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	85	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	79	379	365	35	17	57
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	400	0	-	0	902	365
Stage 1	-	-	-	-	365	-
Stage 2	-	-	-	-	537	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1159	-	-	-	308	680
Stage 1	-	-	-	-	702	-
Stage 2	-	-	-	-	586	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1159	-	-	-	282	680
Mov Cap-2 Maneuver	-	-	-	-	282	-
Stage 1	-	-	-	-	642	-
Stage 2	-	-	-	-	586	-
Approach	SE	NW		SW		
HCM Control Delay, s	1.4	0		13.3		
HCM LOS				B		
Minor Lane/Major Mvmt	NWT	NWR	SEL	SETSWLn1		
Capacity (veh/h)	-	-	1159	-	-	510
HCM Lane V/C Ratio	-	-	0.068	-	-	0.145
HCM Control Delay (s)	-	-	8.3	0	-	13.3
HCM Lane LOS	-	-	A	A	-	B
HCM 95th %tile Q(veh)	-	-	0.2	-	-	0.5

Intersection

Int Delay, s/veh 1.8

Movement EBL EBR NBL NBT SBT SBRLane Configurations 

Traffic Vol, veh/h 10 5 3 31 31 7

Future Vol, veh/h 10 5 3 31 31 7

Conflicting Peds, #/hr 0 0 0 0 0 0

Sign Control Stop Stop Free Free Free Free

RT Channelized - None - None - None

Storage Length - - - - - -

Veh in Median Storage, # 0 - - 0 0 -

Grade, % 0 - - 0 0 -

Peak Hour Factor 92 92 92 92 92 92

Heavy Vehicles, % 2 2 2 2 2 2

Mvmt Flow 11 5 3 34 34 8

Major/Minor Minor2 Major1 Major2

Conflicting Flow All 78 38 42 0 - 0

Stage 1 38 - - - - -

Stage 2 40 - - - - -

Critical Hdwy 6.42 6.22 4.12 - - -

Critical Hdwy Stg 1 5.42 - - - - -

Critical Hdwy Stg 2 5.42 - - - - -

Follow-up Hdwy 3.518 3.318 2.218 - - -

Pot Cap-1 Maneuver 925 1034 1567 - - -

Stage 1 984 - - - - -

Stage 2 982 - - - - -

Platoon blocked, % - - -

Mov Cap-1 Maneuver 923 1034 1567 - - -

Mov Cap-2 Maneuver 923 - - - - -

Stage 1 982 - - - - -

Stage 2 982 - - - - -

Approach EB NB SB

HCM Control Delay, s 8.8 0.6 0

HCM LOS A

Minor Lane/Major Mvmt NBL NBT EBLn1 SBT SBR

Capacity (veh/h) 1567 - 957 - -

HCM Lane V/C Ratio 0.002 - 0.017 - -

HCM Control Delay (s) 7.3 0 8.8 - -





HCM Lane LOS A A A - -

HCM 95th %tile Q(veh) 0 - 0.1 - -

HCM 2010 TWSC
5: Greensboro Hwy & Depot St

02/20/2024



















Intersection												
Int Delay, s/veh	1.1											
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↔	↔		↔						↔	
Traffic Vol, veh/h	12	398	6	28	347	34	0	0	0	25	3	5
Future Vol, veh/h	12	398	6	28	347	34	0	0	0	25	3	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	80	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	-	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	13	433	7	30	377	37	0	0	0	27	3	5
Major/Minor	Major1			Major2			Minor2					
Conflicting Flow All	414	0	0	440	0	0				919	922	396
Stage 1	-	-	-	-	-	-				456	456	-
Stage 2	-	-	-	-	-	-				463	466	-
Critical Hdwy	4.12	-	-	4.12	-	-				6.42	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-				5.42	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-				5.42	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-				3.518	4.018	3.318
Pot Cap-1 Maneuver	1145	-	-	1120	-	-				301	270	653
Stage 1	-	-	-	-	-	-				638	568	-
Stage 2	-	-	-	-	-	-				634	562	-
Platoon blocked, %	-	-	-	-	-	-				-	-	-
Mov Cap-1 Maneuver	1145	-	-	1120	-	-				286	0	653
Mov Cap-2 Maneuver	-	-	-	-	-	-				286	0	-
Stage 1	-	-	-	-	-	-				628	0	-
Stage 2	-	-	-	-	-	-				612	0	-
Approach	SE			NW			SW					
HCM Control Delay, s	0.2			0.6			17.8					
HCM LOS							C					
Minor Lane/Major Mvmt	NWL	NWT	NWR	SEL	SET	SERSWLn1						
Capacity (veh/h)	1120	-	-	1145	-	-	316					
HCM Lane V/C Ratio	0.027	-	-	0.011	-	-	0.114					
HCM Control Delay (s)	8.3	0	-	8.2	0	-	17.8					
HCM Lane LOS	A	A	-	A	A	-	C					
HCM 95th %tile Q(veh)	0.1	-	-	0	-	-	0.4					

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	6	205	1	6	247	10	5	33	5	6	24	12
Future Vol, veh/h	6	205	1	6	247	10	5	33	5	6	24	12
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	7	223	1	7	268	11	5	36	5	7	26	13
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	279	0	0	224	0	0	545	531	224	546	526	274
Stage 1	-	-	-	-	-	-	238	238	-	288	288	-
Stage 2	-	-	-	-	-	-	307	293	-	258	238	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
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	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1284	-	-	1345	-	-	449	454	815	448	457	765
Stage 1	-	-	-	-	-	-	765	708	-	720	674	-
Stage 2	-	-	-	-	-	-	703	670	-	747	708	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1284	-	-	1345	-	-	418	449	815	414	452	765
Mov Cap-2 Maneuver	-	-	-	-	-	-	418	449	-	414	452	-
Stage 1	-	-	-	-	-	-	760	704	-	716	670	-
Stage 2	-	-	-	-	-	-	660	666	-	700	704	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.2			0.2			13.5			12.9		
HCM LOS							B			B		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	469	1284	-	-	1345	-	-	504				
HCM Lane V/C Ratio	0.1	0.005	-	-	0.005	-	-	0.091				
HCM Control Delay (s)	13.5	7.8	0	-	7.7	0	-	12.9				
HCM Lane LOS	B	A	A	-	A	A	-	B				
HCM 95th %tile Q(veh)	0.3	0	-	-	0	-	-	0.3				

HCM Signalized Intersection Capacity Analysis




7: S Main St & Greensboro Hwy & S Barnett Shoals Rd

02/20/2024

												
Movement	WBL2	WBL	WBR	NBT	NBR	NBR2	SBL2	SBL	SBT	NWL	NWR	NWR2
Lane Configurations												
Traffic Volume (vph)	28	63	195	155	74	25	144	389	100	3	352	13
Future Volume (vph)	28	63	195	155	74	25	144	389	100	3	352	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.0	4.5			4.5		4.5	4.5		
Lane Util. Factor		1.00	1.00	1.00			1.00		1.00	1.00		
Frt		1.00	0.85	0.95			1.00		1.00	0.87		
Flt Protected		0.95	1.00	1.00			0.95		0.96	1.00		
Satd. Flow (prot)		1770	1583	1765			1770		1792	1613		
Flt Permitted		0.95	1.00	1.00			0.95		0.95	1.00		
Satd. Flow (perm)		1770	1583	1765			1770		1770	1612		
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	30	68	212	168	80	27	157	423	109	3	383	14
RTOR Reduction (vph)	0	0	0	5	0	0	0	0	0	92	0	0
Lane Group Flow (vph)	0	98	212	270	0	0	157	0	532	308	0	0
Turn Type	Perm	Prot	Free	NA			pm+pt	Perm	NA	Perm		
Protected Phases		4		3			1		6			
Permitted Phases	4		Free				6	6		2		
Actuated Green, G (s)		7.6	68.1	14.5			32.5		32.5	24.2		
Effective Green, g (s)		7.6	68.1	14.5			32.5		32.5	24.2		
Actuated g/C Ratio		0.11	1.00	0.21			0.48		0.48	0.36		
Clearance Time (s)		4.5		4.5			4.5		4.5	4.5		
Vehicle Extension (s)		3.0		3.0			3.0		3.0	3.0		
Lane Grp Cap (vph)		197	1583	375			844		844	572		
v/s Ratio Prot				c0.15			0.01					
v/s Ratio Perm		0.06	0.13				0.08		c0.30	0.19		
v/c Ratio		0.50	0.13	0.72			0.19		0.63	0.54		
Uniform Delay, d1		28.5	0.0	24.9			10.2		13.3	17.5		
Progression Factor		1.00	1.00	1.00			1.00		1.00	1.00		
Incremental Delay, d2		2.0	0.2	6.7			0.1		3.6	1.0		
Delay (s)		30.4	0.2	31.6			10.3		16.9	18.5		
Level of Service		C	A	C			B		B	B		
Approach Delay (s)		9.7		31.6					15.4	18.5		
Approach LOS		A		C					B	B		
Intersection Summary												
HCM 2000 Control Delay			17.7		HCM 2000 Level of Service				B			
HCM 2000 Volume to Capacity ratio			0.69									
Actuated Cycle Length (s)			68.1		Sum of lost time (s)				18.0			
Intersection Capacity Utilization			83.8%		ICU Level of Service				E			
Analysis Period (min)			15									
c Critical Lane Group												





HCM 2010 TWSC
8: SMain St & McKee St

02/20/2024

Intersection						
Int Delay, s/veh	1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	35	5	219	0	0	176
Future Vol, veh/h	35	5	219	0	0	176
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	38	5	238	0	0	191
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	429	238	0	-	-	-
Stage 1	238	-	-	-	-	-
Stage 2	191	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	-	-
Pot Cap-1 Maneuver	583	801	-	0	0	-
Stage 1	802	-	-	0	0	-
Stage 2	841	-	-	0	0	-
Platoon blocked, %			-			-
Mov Cap-1 Maneuver	583	801	-	-	-	-
Mov Cap-2 Maneuver	583	-	-	-	-	-
Stage 1	802	-	-	-	-	-
Stage 2	841	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	11.4	0	0			
HCM LOS	B					
Minor Lane/Major Mvmt	NBTWBLn1		SBT			
Capacity (veh/h)	- 604		-			
HCM Lane V/C Ratio	- 0.072		-			
HCM Control Delay (s)	- 11.4		-			
HCM Lane LOS	- B		-			
HCM 95th %tile Q(veh)	- 0.2		-			

Intersection

Int Delay, s/veh 1.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	40	0	10	2	209	26	7	203	2
Future Vol, veh/h	0	0	0	40	0	10	2	209	26	7	203	2
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	-	-	-	-	-	-	-	-	150	-	-	-
Veh in Median Storage, #	458	752	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	43	0	11	2	227	28	8	221	2

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	469	470	227
Stage 1	231	231	-
Stage 2	238	239	-
Critical Hdwy	6.42	6.52	6.22
Critical Hdwy Stg 1	5.42	5.52	-
Critical Hdwy Stg 2	5.42	5.52	-
Follow-up Hdwy	3.518	4.018	3.318
Pot Cap-1 Maneuver	553	492	812
Stage 1	807	713	-
Stage 2	802	708	-
Platoon blocked, %			
Mov Cap-1 Maneuver	548	0	812
Mov Cap-2 Maneuver	548	0	-
Stage 1	805	0	-
Stage 2	796	0	-




Approach	WB	NB	SB
HCM Control Delay, s	11.8	0.1	0.3
HCM LOS	B		





Minor Lane/Major Mvmt	NBL	NBT	NBRWBLn1	SBL	SBT	SBR
Capacity (veh/h)	1346	-	-	586	1310	-
HCM Lane V/C Ratio	0.002	-	-	0.093	0.006	-
HCM Control Delay (s)	7.7	0	-	11.8	7.8	-
HCM Lane LOS	A	A	-	B	A	-
HCM 95th %tile Q(veh)	0	-	-	0.3	0	-

Intersection						
Int Delay, s/veh	1.2					
Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations	↑	↗		↖	↘	
Traffic Vol, veh/h	470	44	18	440	38	15
Future Vol, veh/h	470	44	18	440	38	15
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	150	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	511	48	20	478	41	16
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	559	0	1029	511
Stage 1	-	-	-	-	511	-
Stage 2	-	-	-	-	518	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1012	-	259	563
Stage 1	-	-	-	-	602	-
Stage 2	-	-	-	-	598	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1012	-	252	563
Mov Cap-2 Maneuver	-	-	-	-	252	-
Stage 1	-	-	-	-	602	-
Stage 2	-	-	-	-	582	-
Approach	SE		NW		NE	
HCM Control Delay, s	0		0.3		19.9	
HCM LOS	C					
Minor Lane/Major Mvmt	NELn1	NWL	NWT	SET	SER	
Capacity (veh/h)	299	1012	-	-	-	
HCM Lane V/C Ratio	0.193	0.019	-	-	-	
HCM Control Delay (s)	19.9	8.6	0	-	-	
HCM Lane LOS	C	A	A	-	-	
HCM 95th %tile Q(veh)	0.7	0.1	-	-	-	

HCM 2010 TWSC
2: Morrison St & Greensboro Hwy

02/20/2024

Intersection						
Int Delay, s/veh	1.2					
Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	471	14	28	435	23	31
Future Vol, veh/h	471	14	28	435	23	31
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	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	512	15	30	473	25	34
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	527	0	1053	520
Stage 1	-	-	-	-	520	-
Stage 2	-	-	-	-	533	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1040	-	251	556
Stage 1	-	-	-	-	597	-
Stage 2	-	-	-	-	588	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1040	-	241	556
Mov Cap-2 Maneuver	-	-	-	-	241	-
Stage 1	-	-	-	-	597	-
Stage 2	-	-	-	-	565	-
Approach	SE		NW		NE	
HCM Control Delay, s	0		0.5		17.1	
HCM LOS					C	
Minor Lane/Major Mvmt	NELn1	NWL	NWT	SET	SER	
Capacity (veh/h)	357	1040	-	-	-	
HCM Lane V/C Ratio	0.164	0.029	-	-	-	
HCM Control Delay (s)	17.1	8.6	0	-	-	
HCM Lane LOS	C	A	A	-	-	
HCM 95th %tile Q(veh)	0.6	0.1	-	-	-	

Intersection						
Int Delay, s/veh	2.3					
Movement	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Traffic Vol, veh/h	57	447	396	38	39	65
Future Vol, veh/h	57	447	396	38	39	65
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	85	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	62	486	430	41	42	71
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	471	0	-	0	1040	430
Stage 1	-	-	-	-	430	-
Stage 2	-	-	-	-	610	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1091	-	-	-	255	625
Stage 1	-	-	-	-	656	-
Stage 2	-	-	-	-	542	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1091	-	-	-	235	625
Mov Cap-2 Maneuver	-	-	-	-	235	-
Stage 1	-	-	-	-	605	-
Stage 2	-	-	-	-	542	-
Approach	SE	NW		SW		
HCM Control Delay, s	1	0		18.2		
HCM LOS	C					
Minor Lane/Major Mvmt	NWT	NWR	SEL	SET	SWLn1	
Capacity (veh/h)	-	-	1091	-	385	
HCM Lane V/C Ratio	-	-	0.057	-	0.294	
HCM Control Delay (s)	-	-	8.5	0	18.2	
HCM Lane LOS	-	-	A	A	C	
HCM 95th %tile Q(veh)	-	-	0.2	-	1.2	

Intersection

Int Delay, s/veh 2.4

Movement EBL EBR NBL NBT SBT SBRLane Configurations 

Traffic Vol, veh/h 15 8 9 39 24 18

Future Vol, veh/h 15 8 9 39 24 18

Conflicting Peds, #/hr 0 0 0 0 0 0

Sign Control Stop Stop Free Free Free Free

RT Channelized - None - None - None

Storage Length - - - - - -

Veh in Median Storage, # 0 - - 0 0 -

Grade, % 0 - - 0 0 -

Peak Hour Factor 92 92 92 92 92 92

Heavy Vehicles, % 2 2 2 2 2 2

Mvmt Flow 16 9 10 42 26 20

Major/Minor Minor2 Major1 Major2

Conflicting Flow All 98 36 46 0 - 0

Stage 1 36 - - - - -

Stage 2 62 - - - - -

Critical Hdwy 6.42 6.22 4.12 - - -

Critical Hdwy Stg 1 5.42 - - - - -

Critical Hdwy Stg 2 5.42 - - - - -

Follow-up Hdwy 3.518 3.318 2.218 - - -

Pot Cap-1 Maneuver 901 1037 1562 - - -

Stage 1 986 - - - - -

Stage 2 961 - - - - -

Platoon blocked, % - - -

Mov Cap-1 Maneuver 895 1037 1562 - - -

Mov Cap-2 Maneuver 895 - - - - -

Stage 1 979 - - - - -

Stage 2 961 - - - - -

Approach EB NB SB

HCM Control Delay, s 8.9 1.4 0

HCM LOS A

Minor Lane/Major Mvmt NBL NBT EBLn1 SBT SBR

Capacity (veh/h) 1562 - 940 - -

HCM Lane V/C Ratio 0.006 - 0.027 - -





HCM Control Delay (s) 7.3 0 8.9 - -





HCM Lane LOS A A A - -

HCM 95th %tile Q(veh) 0 - 0.1 - -

HCM 2010 TWSC
5: Greensboro Hwy & Depot St

02/20/2024



















Intersection												
Int Delay, s/veh	2.1											
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Vol, veh/h	11	461	13	38	389	52	0	0	0	50	10	12
Future Vol, veh/h	11	461	13	38	389	52	0	0	0	50	10	12
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	80	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	-	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	12	501	14	41	423	57	0	0	0	54	11	13
Major/Minor	Major1			Major2			Minor2					
Conflicting Flow All	480	0	0	515	0	0				1066	1073	452
Stage 1	-	-	-	-	-	-				534	534	-
Stage 2	-	-	-	-	-	-				532	539	-
Critical Hdwy	4.12	-	-	4.12	-	-				6.42	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-				5.42	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-				5.42	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-				3.518	4.018	3.318
Pot Cap-1 Maneuver	1082	-	-	1051	-	-				246	220	608
Stage 1	-	-	-	-	-	-				588	524	-
Stage 2	-	-	-	-	-	-				589	522	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1082	-	-	1051	-	-				229	0	608
Mov Cap-2 Maneuver	-	-	-	-	-	-				229	0	-
Stage 1	-	-	-	-	-	-				579	0	-
Stage 2	-	-	-	-	-	-				557	0	-
Approach	SE			NW			SW					
HCM Control Delay, s	0.2			0.7			24.7					
HCM LOS							C					
Minor Lane/Major Mvmt	NWL	NWT	NWR	SEL	SET	SERSWLn1						
Capacity (veh/h)	1051	-	-	1082	-	-	260					
HCM Lane V/C Ratio	0.039	-	-	0.011	-	-	0.301					
HCM Control Delay (s)	8.6	0	-	8.4	0	-	24.7					
HCM Lane LOS	A	A	-	A	A	-	C					
HCM 95th %tile Q(veh)	0.1	-	-	0	-	-	1.2					

Intersection												
Int Delay, s/veh	3.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	11	323	9	3	266	18	11	54	9	10	52	13
Future Vol, veh/h	11	323	9	3	266	18	11	54	9	10	52	13
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	12	351	10	3	289	20	12	59	10	11	57	14
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	309	0	0	361	0	0	721	695	356	720	690	299
Stage 1	-	-	-	-	-	-	380	380	-	305	305	-
Stage 2	-	-	-	-	-	-	341	315	-	415	385	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
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	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1252	-	-	1198	-	-	343	366	688	343	368	741
Stage 1	-	-	-	-	-	-	642	614	-	705	662	-
Stage 2	-	-	-	-	-	-	674	656	-	615	611	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1252	-	-	1198	-	-	293	361	688	293	362	741
Mov Cap-2 Maneuver	-	-	-	-	-	-	293	361	-	293	362	-
Stage 1	-	-	-	-	-	-	634	607	-	697	660	-
Stage 2	-	-	-	-	-	-	603	654	-	541	604	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.3			0.1			17.4			16.9		
HCM LOS							C			C		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	370	1252	-	-	1198	-	-	384				
HCM Lane V/C Ratio	0.217	0.01	-	-	0.003	-	-	0.212				
HCM Control Delay (s)	17.4	7.9	0	-	8	0	-	16.9				
HCM Lane LOS	C	A	A	-	A	A	-	C				
HCM 95th %tile Q(veh)	0.8	0	-	-	0	-	-	0.8				





HCM Signalized Intersection Capacity Analysis

7: S Main St & Greensboro Hwy & S Barnett Shoals Rd

02/20/2024

												
Movement	WBL2	WBL	WBR	NBT	NBR	NBR2	SBL2	SBL	SBT	NWL	NWR	NWR2
Lane Configurations												
Traffic Volume (vph)	34	94	193	111	82	24	244	432	130	2	382	27
Future Volume (vph)	34	94	193	111	82	24	244	432	130	2	382	27
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.0	4.5			4.5		4.5	4.5		
Lane Util. Factor		1.00	1.00	1.00			1.00		1.00	1.00		
Frt		1.00	0.85	0.93			1.00		1.00	0.87		
Flt Protected		0.95	1.00	1.00			0.95		0.96	1.00		
Satd. Flow (prot)		1770	1583	1740			1770		1794	1612		
Flt Permitted		0.95	1.00	1.00			0.95		0.95	1.00		
Satd. Flow (perm)		1770	1583	1740			1770		1770	1612		
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	37	102	210	121	89	26	265	470	141	2	415	29
RTOR Reduction (vph)	0	0	0	6	0	0	0	0	0	97	0	0
Lane Group Flow (vph)	0	139	210	230	0	0	265	0	611	349	0	0
Turn Type	Perm	Prot	Free	NA			pm+pt	Perm	NA	Perm		
Protected Phases		4		3			1		6			
Permitted Phases	4		Free				6	6		2		
Actuated Green, G (s)		8.9	67.3	13.5			31.4		31.4	21.7		
Effective Green, g (s)		8.9	67.3	13.5			31.4		31.4	21.7		
Actuated g/C Ratio		0.13	1.00	0.20			0.47		0.47	0.32		
Clearance Time (s)		4.5		4.5			4.5		4.5	4.5		
Vehicle Extension (s)		3.0		3.0			3.0		3.0	3.0		
Lane Grp Cap (vph)		234	1583	349			825		825	519		
v/s Ratio Prot				c0.13			0.02					
v/s Ratio Perm		0.08	0.13				0.12		c0.35	0.22		
v/c Ratio		0.59	0.13	0.66			0.32		0.74	0.67		
Uniform Delay, d1		27.5	0.0	24.8			11.3		14.6	19.7		
Progression Factor		1.00	1.00	1.00			1.00		1.00	1.00		
Incremental Delay, d2		4.0	0.2	4.6			0.2		5.9	3.4		
Delay (s)		31.5	0.2	29.4			11.5		20.6	23.2		
Level of Service		C	A	C			B		C	C		
Approach Delay (s)		12.7		29.4					17.8	23.2		
Approach LOS		B		C					B	C		
Intersection Summary												
HCM 2000 Control Delay			19.6		HCM 2000 Level of Service					B		
HCM 2000 Volume to Capacity ratio			0.76									
Actuated Cycle Length (s)			67.3		Sum of lost time (s)					18.0		
Intersection Capacity Utilization			90.6%		ICU Level of Service					E		
Analysis Period (min)			15									
c Critical Lane Group												

Intersection						
Int Delay, s/veh	1.5					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	W	W			W
Traffic Vol, veh/h	58	2	222	0	0	243
Future Vol, veh/h	58	2	222	0	0	243
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	63	2	241	0	0	264
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	505	241	0	-	-	-
Stage 1	241	-	-	-	-	-
Stage 2	264	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	-	-
Pot Cap-1 Maneuver	527	798	-	0	0	-
Stage 1	799	-	-	0	0	-
Stage 2	780	-	-	0	0	-
Platoon blocked, %			-			-
Mov Cap-1 Maneuver	527	798	-	-	-	-
Mov Cap-2 Maneuver	527	-	-	-	-	-
Stage 1	799	-	-	-	-	-
Stage 2	780	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	12.7	0	0			
HCM LOS	B					
Minor Lane/Major Mvmt	NBTWBLn1		SBT			
Capacity (veh/h)	- 533		-			
HCM Lane V/C Ratio	- 0.122		-			
HCM Control Delay (s)	- 12.7		-			
HCM Lane LOS	- B		-			
HCM 95th %tile Q(veh)	- 0.4		-			

Intersection												
Int Delay, s/veh	1.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	61	0	15	2	208	71	18	274	6
Future Vol, veh/h	0	0	0	61	0	15	2	208	71	18	274	6
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	-	-	-	-	-	-	-	-	150	-	-	-
Veh in Median Storage, #	-	-	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	66	0	16	2	226	77	20	298	7
Major/Minor												
	Minor1			Major1			Major2					
Conflicting Flow All				572	575	226	305	0	0	303	0	0
Stage 1				230	230	-	-	-	-	-	-	-
Stage 2				342	345	-	-	-	-	-	-	-
Critical Hdwy				6.42	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1				5.42	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2				5.42	5.52	-	-	-	-	-	-	-
Follow-up Hdwy				3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver				482	429	813	1256	-	-	1258	-	-
Stage 1				808	714	-	-	-	-	-	-	-
Stage 2				719	636	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver				472	0	813	1256	-	-	1258	-	-
Mov Cap-2 Maneuver				472	0	-	-	-	-	-	-	-
Stage 1				806	0	-	-	-	-	-	-	-
Stage 2				705	0	-	-	-	-	-	-	-
Approach												
	WB			NB			SB					
HCM Control Delay, s				13.3			0.1			0.5		
HCM LOS				B								
Minor Lane/Major Mvmt												
	NBL	NBT	NBR	WBLn1	SBL	SBT	SBR					
Capacity (veh/h)	1256	-	-	515	1258	-	-					
HCM Lane V/C Ratio	0.002	-	-	0.16	0.016	-	-					
HCM Control Delay (s)	7.9	0	-	13.3	7.9	-	-					
HCM Lane LOS	A	A	-	B	A	-	-					
HCM 95th %tile Q(veh)	0	-	-	0.6	0	-	-					

Queues

7: S Main St & Greensboro Hwy & S Barnett Shoals Rd

02/20/2024

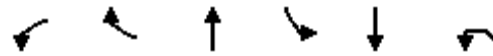


Lane Group	WBL	WBR	NBT	SBL2	SBT	NWL
Lane Group Flow (vph)	94	201	263	149	507	381
v/c Ratio	0.39	0.13	0.69	0.18	0.60	0.55
Control Delay	32.6	0.2	34.0	13.3	18.8	16.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	32.6	0.2	34.0	13.3	18.8	16.9
Queue Length 50th (ft)	37	0	98	36	155	81
Queue Length 95th (ft)	80	0	181	80	298	191
Internal Link Dist (ft)	325		1256		551	1542
Turn Bay Length (ft)	150	150		240		
Base Capacity (vph)	495	1583	498	850	850	688
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.19	0.13	0.53	0.18	0.60	0.55
Intersection Summary						

Queues

7: S Main St & Greensboro Hwy & S Barnett Shoals Rd

02/20/2024



Lane Group	WBL	WBR	NBT	SBL2	SBT	NWL
Lane Group Flow (vph)	133	199	226	252	583	426
v/c Ratio	0.48	0.13	0.64	0.30	0.69	0.68
Control Delay	33.1	0.2	33.6	14.8	22.6	22.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	33.1	0.2	33.6	14.8	22.6	22.0
Queue Length 50th (ft)	52	0	84	64	191	102
Queue Length 95th (ft)	106	0	162	140	#427	#272
Internal Link Dist (ft)	325		1256		551	1542
Turn Bay Length (ft)	150	150		240		
Base Capacity (vph)	497	1583	494	843	843	625
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.27	0.13	0.46	0.30	0.69	0.68

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



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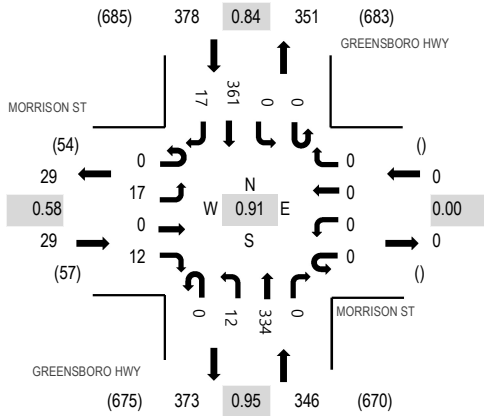
Location: 1 GREENSBORO HWY & MORRISON ST AM

Date: Tuesday, November 28, 2023

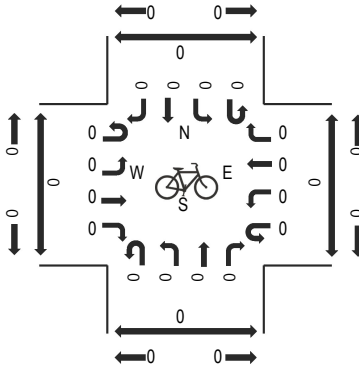
Peak Hour: 07:00 AM - 08:00 AM

Peak 15-Minutes: 07:00 AM - 07:15 AM

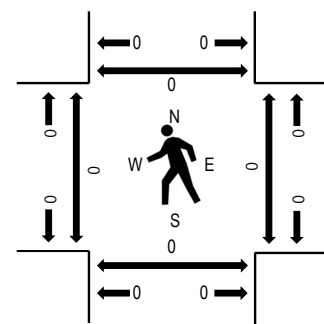
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	MORRISON ST Eastbound				MORRISON ST Westbound				GREENSBORO HWY Northbound				GREENSBORO HWY Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
7:00 AM	0	5	0	4	0	0	0	0	0	4	82	0	0	0	105	7	207	753	0	0	0	0
7:15 AM	0	3	0	1	0	0	0	0	0	2	77	0	0	0	96	6	185	698	0	0	0	0
7:30 AM	0	7	0	3	0	0	0	0	0	1	89	0	0	0	78	2	180	662	0	0	0	0
7:45 AM	0	2	0	4	0	0	0	0	0	5	86	0	0	0	82	2	181	648	0	0	0	0
8:00 AM	0	2	0	3	0	0	0	0	0	2	62	0	0	0	76	7	152	659	0	0	0	0
8:15 AM	0	4	0	2	0	0	0	0	0	1	68	0	0	0	68	6	149		0	0	0	0
8:30 AM	0	5	0	8	0	0	0	0	0	1	73	0	0	0	73	6	166		0	0	0	0
8:45 AM	0	1	0	3	0	0	0	0	0	0	117	0	0	0	69	2	192		0	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	22	0	0	0	19	0	41
Lights	0	15	0	10	0	0	0	0	0	11	292	0	0	0	314	15	657
Mediums	0	2	0	2	0	0	0	0	0	1	20	0	0	0	28	2	55
Total	0	17	0	12	0	0	0	0	0	12	334	0	0	0	361	17	753

Heavy Vehicle Percentage and Peak Hour Factor

	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Heavy Vehicle %		13.8%				0.0%				12.4%				13.0%			12.7%
Heavy Vehicle %	0.0%	11.8%	0.0%	16.7%	0.0%	0.0%	0.0%	0.0%	0.0%	8.3%	12.6%	0.0%	0.0%	0.0%	13.0%	11.8%	12.7%
Peak Hour Factor		0.58				0.00				0.95				0.84			0.91
Peak Hour Factor	0.00	0.61	0.00	0.53	0.00	0.00	0.00	0.00	0.00	0.60	0.94	0.00	0.00	0.00	0.86	0.75	0.91

	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Heavy Vehicle %		0.0%				10.5%				12.6%				12.9%			12.6%
Heavy Vehicle %	0.0%	0.0%	0.0%	0.0%	0.0%	6.7%	0.0%	11.9%	0.0%	0.0%	12.5%	13.3%	0.0%	8.6%	13.7%	0.0%	12.6%
Peak Hour Factor		0.00				0.86				0.90				0.86			0.87
Peak Hour Factor	0.00	0.00	0.00	0.00	0.00	0.73	0.00	0.88	0.00	0.00	0.93	0.47	0.00	0.66	0.91	0.00	0.87



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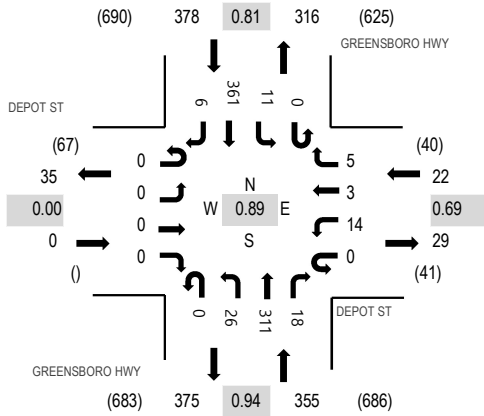
Location: 3 GREENSBORO HWY & DEPOT ST AM

Date: Tuesday, November 28, 2023

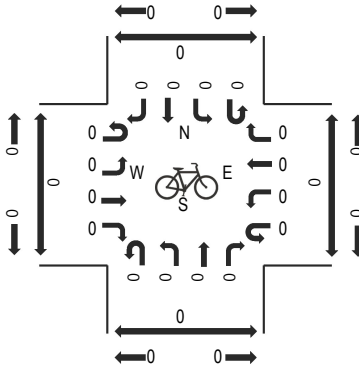
Peak Hour: 07:00 AM - 08:00 AM

Peak 15-Minutes: 07:00 AM - 07:15 AM

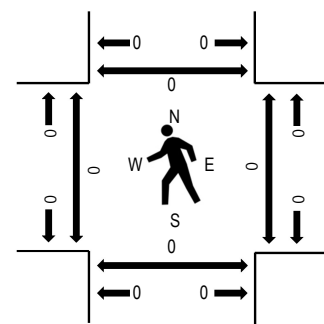
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	DEPOT ST Eastbound				DEPOT ST Westbound				GREENSBORO HWY Northbound				GREENSBORO HWY Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
7:00 AM	0	0	0	0	0	3	0	0	0	15	73	4	0	5	108	3	211	755	0	0	0	0
7:15 AM	0	0	0	0	0	5	1	3	0	3	67	7	0	3	96	1	186	699	0	0	0	0
7:30 AM	0	0	0	0	0	2	2	1	0	5	82	5	0	2	79	2	180	664	0	0	0	0
7:45 AM	0	0	0	0	0	4	0	1	0	3	89	2	0	1	78	0	178	647	0	0	0	0
8:00 AM	0	0	0	0	0	4	1	1	0	5	59	1	0	1	80	3	155	661	0	0	0	0
8:15 AM	0	0	0	0	0	4	0	1	0	5	61	4	0	2	71	3	151		0	0	0	0
8:30 AM	0	0	0	0	0	0	1	3	0	5	74	0	0	1	78	1	163		0	0	0	0
8:45 AM	0	0	0	0	0	1	0	2	0	7	108	2	0	1	70	1	192		0	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	22	0	0	0	19	0	41
Lights	0	0	0	0	0	14	3	5	0	26	264	18	0	9	313	6	658
Mediums	0	0	0	0	0	0	0	0	0	0	25	0	0	2	29	0	56
Total	0	0	0	0	0	14	3	5	0	26	311	18	0	11	361	6	755

Heavy Vehicle Percentage and Peak Hour Factor

	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Heavy Vehicle %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	15.1%	0.0%	0.0%	18.2%	13.3%	0.0%	12.8%
Peak Hour Factor	0.00	0.00	0.00	0.00	0.00	0.75	0.50	0.58	0.00	0.43	0.87	0.64	0.00	0.55	0.84	0.67	0.89



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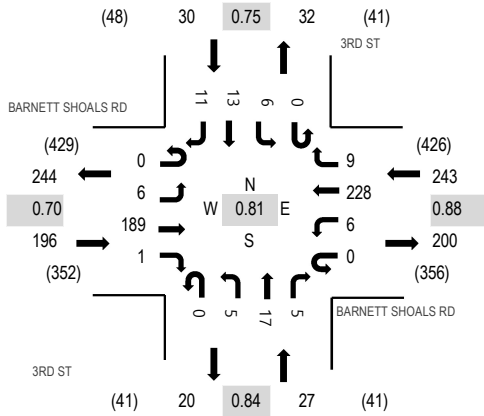
Location: 4 3RD ST & BARNETT SHOALS RD AM

Date: Tuesday, November 28, 2023

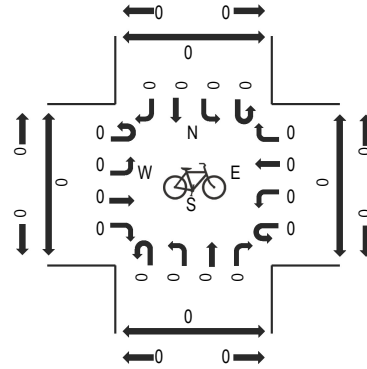
Peak Hour: 07:00 AM - 08:00 AM

Peak 15-Minutes: 07:15 AM - 07:30 AM

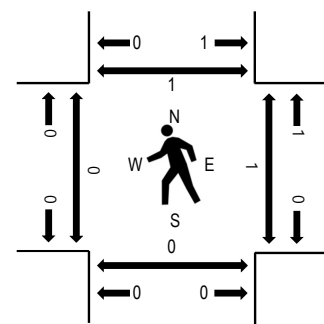
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	BARNETT SHOALS RD Eastbound				BARNETT SHOALS RD Westbound				3RD ST Northbound				3RD ST Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
7:00 AM	0	2	58	0	0	0	55	1	0	2	6	0	0	3	4	3	134	496	0	0	0	1
7:15 AM	0	0	69	1	0	4	64	1	0	2	4	2	0	2	3	1	153	467	0	0	0	0
7:30 AM	0	2	32	0	0	1	59	2	0	1	5	2	0	0	3	3	110	398	0	0	0	0
7:45 AM	0	2	30	0	0	1	50	5	0	0	2	1	0	1	3	4	99	374	0	1	0	0
8:00 AM	0	1	41	1	0	0	52	1	0	1	0	1	0	1	5	1	105	371	0	0	0	0
8:15 AM	0	0	33	3	0	0	36	0	0	2	3	2	0	1	4	0	84		0	0	0	2
8:30 AM	0	1	28	0	0	1	50	0	0	0	0	2	0	0	3	1	86		0	0	0	0
8:45 AM	0	0	47	1	0	1	41	1	0	1	2	0	0	0	2	0	96		0	0	0	2

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	5	0	0	0	1	0	0	0	0	0	0	0	0	0	6
Lights	0	6	170	1	0	6	215	9	0	4	16	5	0	6	13	11	462
Mediums	0	0	14	0	0	0	12	0	0	1	1	0	0	0	0	0	28
Total	0	6	189	1	0	6	228	9	0	5	17	5	0	6	13	11	496

Heavy Vehicle Percentage and Peak Hour Factor

	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Heavy Vehicle %		9.7%				5.3%				7.4%				0.0%			6.9%
Heavy Vehicle %	0.0%	0.0%	10.1%	0.0%	0.0%	0.0%	5.7%	0.0%	0.0%	20.0%	5.9%	0.0%	0.0%	0.0%	0.0%	0.0%	6.9%
Peak Hour Factor		0.70				0.88				0.84				0.75			0.81
Peak Hour Factor	0.00	0.75	0.68	0.42	0.00	0.38	0.89	0.45	0.00	0.63	0.71	0.75	0.00	0.50	0.75	0.69	0.81



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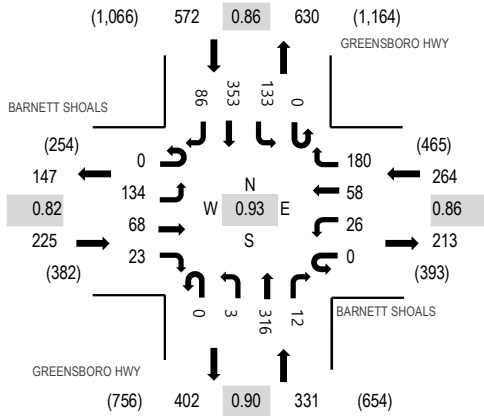
Location: 5 GREENSBORO HWY & BARNETT SHOALS AM

Date: Tuesday, November 28, 2023

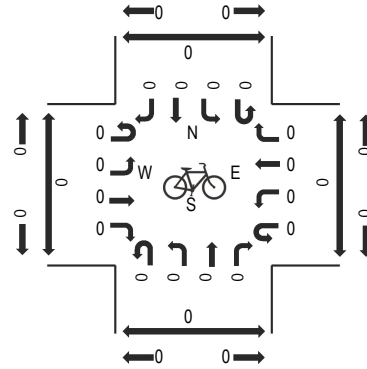
Peak Hour: 07:00 AM - 08:00 AM

Peak 15-Minutes: 07:15 AM - 07:30 AM

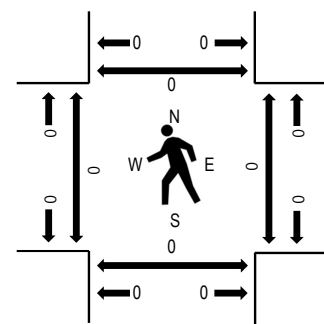
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	BARNETT SHOALS Eastbound				BARNETT SHOALS Westbound				GREENSBORO HWY Northbound				GREENSBORO HWY Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
7:00 AM	0	44	20	5	0	5	18	40	0	1	81	1	0	40	91	24	370	1,392	0	0	0	0
7:15 AM	0	32	25	7	0	11	11	55	0	0	62	4	0	48	103	16	374	1,331	0	0	0	0
7:30 AM	0	22	9	6	0	5	14	46	0	2	85	5	0	23	77	19	313	1,221	0	0	0	0
7:45 AM	0	36	14	5	0	5	15	39	0	0	88	2	0	22	82	27	335	1,191	0	0	0	0
8:00 AM	0	24	18	5	0	10	12	39	0	0	70	3	0	30	78	20	309	1,175	0	0	0	0
8:15 AM	0	30	5	3	0	7	10	27	0	0	58	2	0	30	77	15	264		0	0	0	0
8:30 AM	0	20	5	5	0	5	10	36	0	1	76	4	0	24	83	14	283		0	0	0	0
8:45 AM	0	19	17	6	0	4	7	34	0	4	101	4	0	38	71	14	319		0	0	0	0

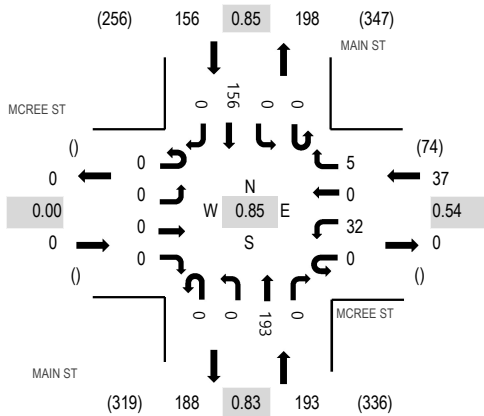
Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	1	0	0	0	0	1	0	0	22	0	0	4	20	2	50
Lights	0	127	63	19	0	26	55	169	0	3	271	12	0	122	308	74	1,249
Mediums	0	7	4	4	0	0	3	10	0	0	23	0	0	7	25	10	93
Total	0	134	68	23	0	26	58	180	0	3	316	12	0	133	353	86	1,392

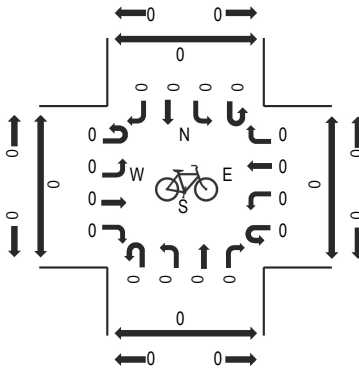
Heavy Vehicle Percentage and Peak Hour Factor

	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Heavy Vehicle %		7.1%				5.3%				13.6%				11.9%			10.3%
Heavy Vehicle %	0.0%	5.2%	7.4%	17.4%	0.0%	0.0%	5.2%	6.1%	0.0%	0.0%	14.2%	0.0%	0.0%	8.3%	12.7%	14.0%	10.3%
Peak Hour Factor		0.82				0.86				0.90				0.86			0.93
Peak Hour Factor	0.00	0.76	0.68	0.82	0.00	0.70	0.81	0.82	0.00	0.31	0.90	0.70	0.00	0.69	0.86	0.80	0.93

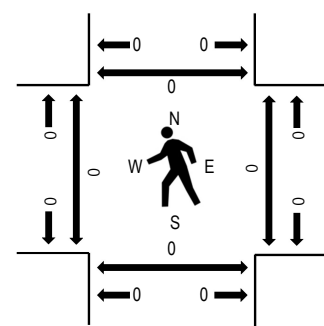
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	MCREE ST Eastbound				MCREE ST Westbound				MAIN ST Northbound				MAIN ST Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
7:00 AM	0	0	0	0	0	15	0	2	0	0	50	0	0	0	46	0	113	386	0	0	0	0
7:15 AM	0	0	0	0	0	6	0	0	0	0	58	0	0	0	25	0	89	355	0	0	0	0
7:30 AM	0	0	0	0	0	9	0	3	0	0	38	0	0	0	41	0	91	334	0	0	0	0
7:45 AM	0	0	0	0	0	2	0	0	0	0	47	0	0	0	44	0	93	307	0	0	0	0
8:00 AM	0	0	0	0	0	8	0	3	0	0	45	0	0	0	26	0	82	280	0	0	0	0
8:15 AM	0	0	0	0	0	7	0	0	0	0	33	0	0	0	28	0	68		0	0	0	0
8:30 AM	0	0	0	0	0	7	0	2	0	0	32	0	0	0	23	0	64		0	0	0	0
8:45 AM	0	0	0	0	0	9	0	1	0	0	33	0	0	0	23	0	66		0	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0	4
Lights	0	0	0	0	0	32	0	5	0	0	176	0	0	0	142	0	355
Mediums	0	0	0	0	0	0	0	0	0	0	15	0	0	0	12	0	27
Total	0	0	0	0	0	32	0	5	0	0	193	0	0	0	156	0	386

Heavy Vehicle Percentage and Peak Hour Factor

	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Heavy Vehicle %		0.0%				0.0%				8.8%				9.0%			8.0%
Heavy Vehicle %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	8.8%	0.0%	0.0%	0.0%	9.0%	0.0%	8.0%
Peak Hour Factor		0.00				0.54				0.83				0.85			0.85
Peak Hour Factor	0.00	0.00	0.00	0.00	0.00	0.53	0.00	0.50	0.00	0.00	0.83	0.00	0.00	0.00	0.85	0.00	0.85



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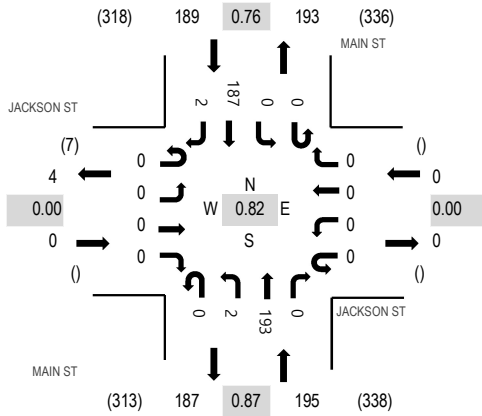
Location: 7 MAIN ST & JACKSON ST AM

Date: Tuesday, November 28, 2023

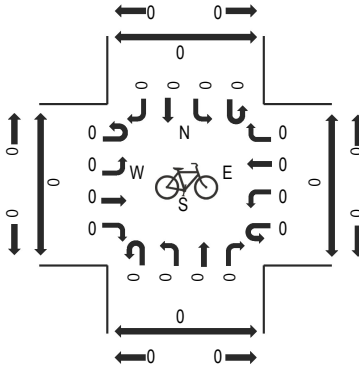
Peak Hour: 07:00 AM - 08:00 AM

Peak 15-Minutes: 07:00 AM - 07:15 AM

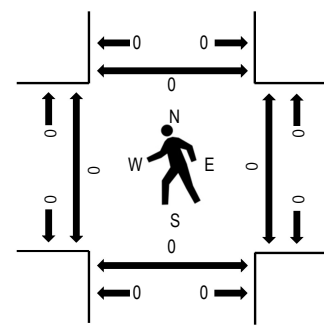
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	JACKSON ST Eastbound				JACKSON ST Westbound				MAIN ST Northbound				MAIN ST Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
7:00 AM	0	0	0	0	0	0	0	0	0	1	54	0	0	0	61	1	117	384	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	56	0	0	0	31	0	87	346	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	36	0	0	0	49	1	86	328	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	1	47	0	0	0	46	0	94	301	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	45	0	0	0	33	1	79	272	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	34	0	0	0	34	1	69		0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	30	0	0	0	29	0	59		0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	34	0	0	0	30	1	65		0	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0	4
Lights	0	0	0	0	0	0	0	0	0	1	176	0	0	0	173	2	352
Mediums	0	0	0	0	0	0	0	0	0	1	15	0	0	0	12	0	28
Total	0	0	0	0	0	0	0	0	0	2	193	0	0	0	187	2	384

Heavy Vehicle Percentage and Peak Hour Factor

	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Heavy Vehicle %	0.0%				0.0%				9.2%				7.4%				8.3%
Heavy Vehicle %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	50.0%	8.8%	0.0%	0.0%	0.0%	7.5%	0.0%	8.3%
Peak Hour Factor	0.00				0.00				0.87				0.76				0.82
Peak Hour Factor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.50	0.86	0.00	0.00	0.00	0.77	0.75	0.82



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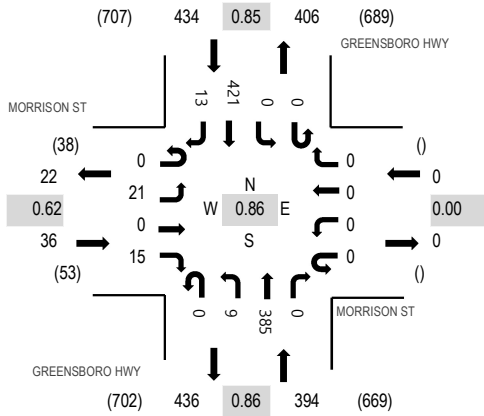
Location: 1 GREENSBORO HWY & MORRISON ST PM

Date: Tuesday, November 28, 2023

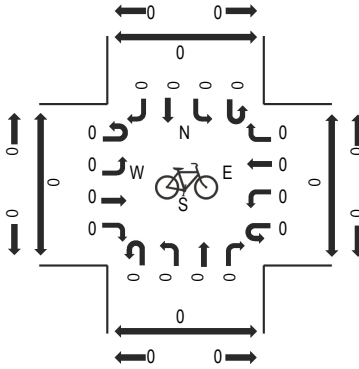
Peak Hour: 04:00 PM - 05:00 PM

Peak 15-Minutes: 04:00 PM - 04:15 PM

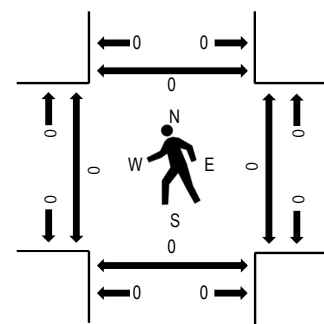
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	MORRISON ST Eastbound				MORRISON ST Westbound				GREENSBORO HWY Northbound				GREENSBORO HWY Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
4:00 PM	0	6	0	2	0	0	0	0	0	6	109	0	0	0	123	4	250	864	0	0	0	0
4:15 PM	0	9	0	6	0	0	0	0	0	0	89	0	0	0	102	3	209	803	0	0	0	0
4:30 PM	0	4	0	4	0	0	0	0	0	3	103	0	0	0	93	4	211	753	0	0	0	0
4:45 PM	0	2	0	3	0	0	0	0	0	0	84	0	0	0	103	2	194	691	0	0	0	0
5:00 PM	0	7	0	2	0	0	0	0	0	3	95	0	0	0	81	1	189	565	0	0	0	0
5:15 PM	0	2	0	1	0	0	0	0	0	2	75	0	0	0	76	3	159		0	0	0	0
5:30 PM	0	4	0	0	0	0	0	0	0	0	67	0	0	0	73	5	149		0	0	0	0
5:45 PM	0	1	0	0	0	0	0	0	0	1	32	0	0	0	33	1	68		0	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	11	0	0	0	8	0	19
Lights	0	20	0	15	0	0	0	0	0	8	356	0	0	0	397	11	807
Mediums	0	1	0	0	0	0	0	0	0	1	18	0	0	0	16	2	38
Total	0	21	0	15	0	0	0	0	0	9	385	0	0	0	421	13	864

Heavy Vehicle Percentage and Peak Hour Factor

	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Heavy Vehicle %		2.8%				0.0%				7.6%				6.0%			6.6%
Heavy Vehicle %	0.0%	4.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	11.1%	7.5%	0.0%	0.0%	0.0%	5.7%	15.4%	6.6%
Peak Hour Factor		0.62				0.00				0.86				0.85			0.86
Peak Hour Factor	0.00	0.61	0.00	0.63	0.00	0.00	0.00	0.00	0.00	0.38	0.88	0.00	0.00	0.00	0.86	0.81	0.86



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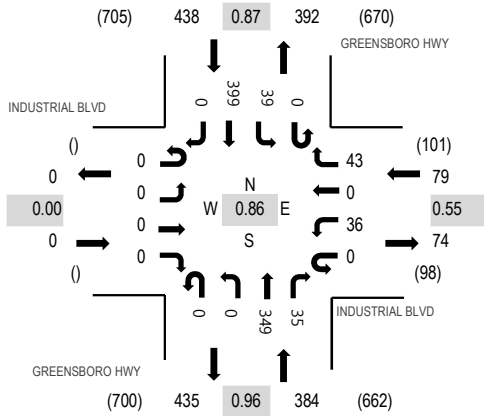
Location: 2 GREENSBORO HWY & INDUSTRIAL BLVD PM

Date: Tuesday, November 28, 2023

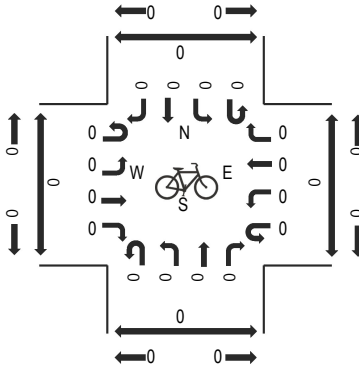
Peak Hour: 04:00 PM - 05:00 PM

Peak 15-Minutes: 04:00 PM - 04:15 PM

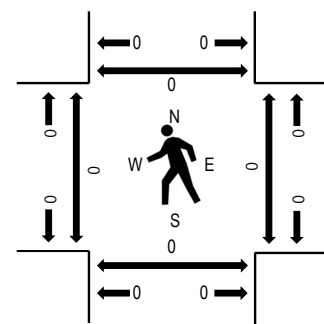
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	INDUSTRIAL BLVD Eastbound				INDUSTRIAL BLVD Westbound				GREENSBORO HWY Northbound				GREENSBORO HWY Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
4:00 PM	0	0	0	0	0	15	0	21	0	0	91	9	0	14	112	0	262	901	0	0	0	0
4:15 PM	0	0	0	0	0	5	0	6	0	0	83	11	0	7	102	0	214	831	0	0	0	0
4:30 PM	0	0	0	0	0	11	0	14	0	0	93	7	0	7	91	0	223	776	0	0	0	0
4:45 PM	0	0	0	0	0	5	0	2	0	0	82	8	0	11	94	0	202	699	0	0	0	0
5:00 PM	0	0	0	0	0	2	0	9	1	0	91	6	0	2	81	0	192	567	0	0	0	0
5:15 PM	0	0	0	0	0	2	0	3	0	0	74	5	0	2	73	0	159		0	0	0	0
5:30 PM	0	0	0	0	0	2	0	1	0	0	67	2	0	4	70	0	146		0	0	0	0
5:45 PM	0	0	0	0	0	2	0	1	0	0	32	0	0	3	32	0	70		0	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	1	0	0	10	0	0	1	7	0	19
Lights	0	0	0	0	0	35	0	40	0	0	322	34	0	37	376	0	844
Mediums	0	0	0	0	0	1	0	2	0	0	17	1	0	1	16	0	38
Total	0	0	0	0	0	36	0	43	0	0	349	35	0	39	399	0	901

Heavy Vehicle Percentage and Peak Hour Factor

	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Heavy Vehicle %	0.0%				5.1%				7.3%				5.7%				6.3%
Heavy Vehicle %	0.0%	0.0%	0.0%	0.0%	0.0%	2.8%	0.0%	7.0%	0.0%	0.0%	7.7%	2.9%	0.0%	5.1%	5.8%	0.0%	6.3%
Peak Hour Factor	0.00				0.55				0.96				0.87				0.86
Peak Hour Factor	0.00	0.00	0.00	0.00	0.00	0.60	0.00	0.51	0.25	0.00	0.94	0.80	0.00	0.70	0.89	0.00	0.86



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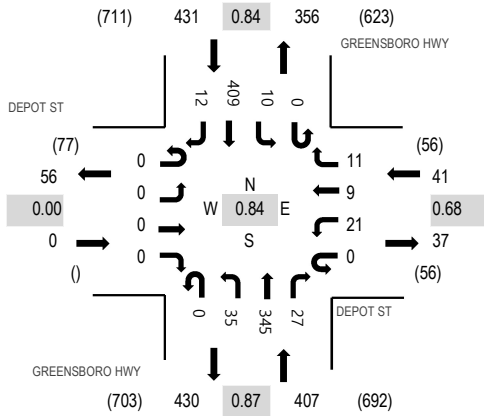
Location: 3 GREENSBORO HWY & DEPOT ST PM

Date: Tuesday, November 28, 2023

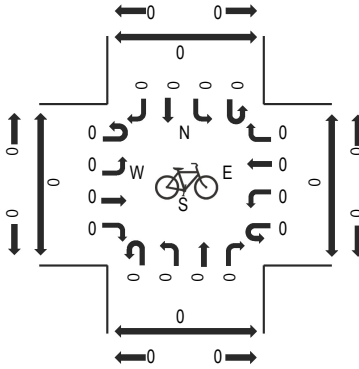
Peak Hour: 04:00 PM - 05:00 PM

Peak 15-Minutes: 04:00 PM - 04:15 PM

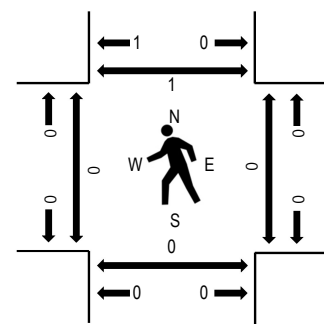
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	DEPOT ST Eastbound				DEPOT ST Westbound				GREENSBORO HWY Northbound				GREENSBORO HWY Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
4:00 PM	0	0	0	0	0	5	4	6	0	14	88	15	0	4	121	4	261	879	0	0	0	0
4:15 PM	0	0	0	0	0	7	4	1	0	6	84	4	0	4	96	1	207	807	0	0	0	1
4:30 PM	0	0	0	0	0	5	0	2	0	12	91	4	0	0	92	2	208	763	0	0	0	0
4:45 PM	0	0	0	0	0	4	1	2	0	3	82	4	0	2	100	5	203	708	0	0	0	0
5:00 PM	0	0	0	0	0	2	1	1	0	1	94	8	0	1	81	0	189	580	0	0	0	0
5:15 PM	0	0	0	0	0	5	0	3	0	9	65	1	0	6	72	2	163		0	0	0	0
5:30 PM	0	0	0	0	0	1	0	0	0	1	68	1	0	1	77	4	153		0	0	0	0
5:45 PM	0	0	0	0	0	0	2	0	0	1	36	0	0	1	35	0	75		0	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	1	0	0	0	0	10	1	0	0	7	0	19
Lights	0	0	0	0	0	20	9	10	0	35	318	25	0	10	385	12	824
Mediums	0	0	0	0	0	0	0	1	0	0	17	1	0	0	17	0	36
Total	0	0	0	0	0	21	9	11	0	35	345	27	0	10	409	12	879

Heavy Vehicle Percentage and Peak Hour Factor

	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Heavy Vehicle %	0.0%	0.0%	0.0%	0.0%	0.0%	4.9%	0.0%	9.1%	0.0%	0.0%	7.8%	7.4%	0.0%	0.0%	5.9%	0.0%	6.3%
Peak Hour Factor	0.00	0.00	0.00	0.00	0.00	0.68	0.56	0.46	0.00	0.63	0.93	0.45	0.00	0.42	0.85	0.60	0.84



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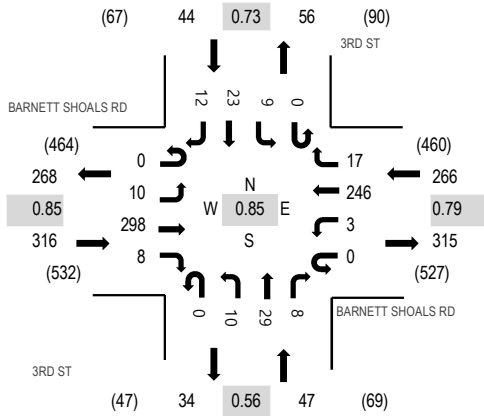
Location: 4 3RD ST & BARNETT SHOALS RD PM

Date: Tuesday, November 28, 2023

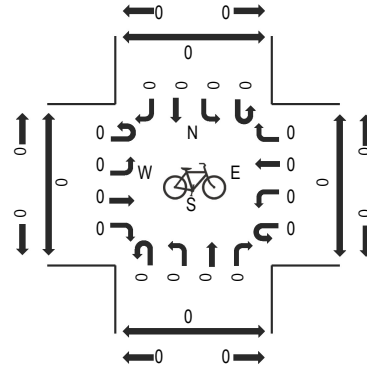
Peak Hour: 04:00 PM - 05:00 PM

Peak 15-Minutes: 04:00 PM - 04:15 PM

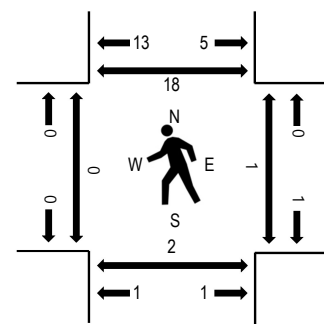
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	BARNETT SHOALS RD Eastbound				BARNETT SHOALS RD Westbound				3RD ST Northbound				3RD ST Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
4:00 PM	0	1	77	1	0	1	74	9	0	6	12	3	0	4	6	5	199	673	0	0	0	0
4:15 PM	0	1	91	1	0	0	54	4	0	3	8	3	0	2	10	2	179	602	0	1	0	0
4:30 PM	0	4	68	3	0	0	65	4	0	1	5	0	0	3	3	1	157	554	0	0	1	12
4:45 PM	0	4	62	3	0	2	53	0	0	0	4	2	0	0	4	4	138	520	0	0	1	6
5:00 PM	0	2	51	1	0	0	56	2	0	1	8	1	0	2	2	2	128	455	0	0	0	7
5:15 PM	0	3	64	0	0	0	43	5	0	1	6	0	0	1	8	0	131		0	0	0	0
5:30 PM	0	3	53	0	0	0	56	0	0	2	3	0	0	1	1	4	123		0	0	0	1
5:45 PM	0	2	37	0	0	1	31	0	0	0	0	0	0	2	0	0	73		0	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
Lights	0	10	292	8	0	3	239	17	0	9	29	8	0	9	22	12	658
Mediums	0	0	6	0	0	0	7	0	0	1	0	0	0	0	0	0	14
Total	0	10	298	8	0	3	246	17	0	10	29	8	0	9	23	12	673

Heavy Vehicle Percentage and Peak Hour Factor

	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Heavy Vehicle %		1.9%				2.6%				2.1%				2.3%			2.2%
Heavy Vehicle %	0.0%	0.0%	2.0%	0.0%	0.0%	0.0%	2.8%	0.0%	0.0%	10.0%	0.0%	0.0%	0.0%	0.0%	4.3%	0.0%	2.2%
Peak Hour Factor		0.85				0.79				0.56				0.73			0.85
Peak Hour Factor	0.00	0.81	0.82	0.67	0.00	0.38	0.83	0.47	0.00	0.42	0.60	0.67	0.00	0.56	0.58	0.60	0.85



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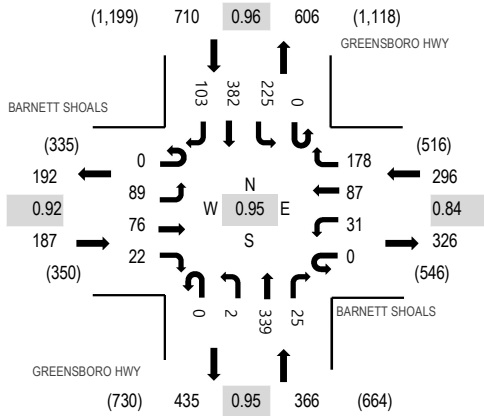
Location: 5 GREENSBORO HWY & BARNETT SHOALS PM

Date: Tuesday, November 28, 2023

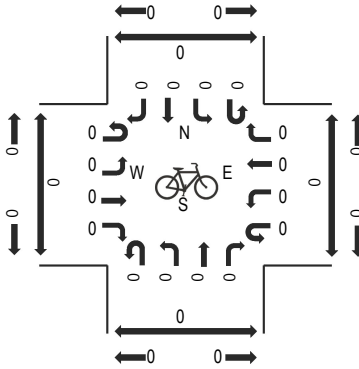
Peak Hour: 04:00 PM - 05:00 PM

Peak 15-Minutes: 04:00 PM - 04:15 PM

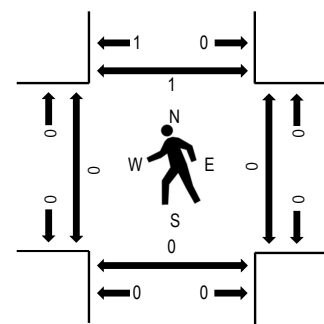
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

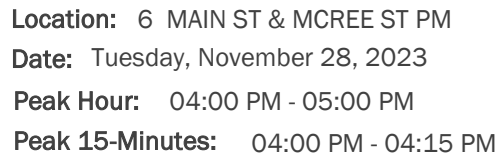
Interval Start Time	BARNETT SHOALS Eastbound				BARNETT SHOALS Westbound				GREENSBORO HWY Northbound				GREENSBORO HWY Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
4:00 PM	0	20	21	3	0	11	27	50	0	0	92	4	0	51	106	25	410	1,559	0	0	0	0
4:15 PM	0	23	19	4	0	6	25	39	0	1	77	9	0	70	93	21	387	1,500	0	0	0	1
4:30 PM	0	19	21	5	0	7	20	51	0	1	87	6	0	51	95	33	396	1,441	0	0	0	0
4:45 PM	0	27	15	10	0	7	15	38	0	0	83	6	0	53	88	24	366	1,338	0	0	0	0
5:00 PM	0	25	22	6	0	6	25	43	0	4	80	5	0	37	80	18	351	1,170	0	0	0	0
5:15 PM	0	35	19	2	0	2	13	34	0	0	83	4	0	45	73	18	328		0	0	0	0
5:30 PM	0	20	7	2	0	4	12	50	0	1	72	9	0	34	67	15	293		0	2	0	1
5:45 PM	0	15	8	2	0	3	11	17	0	0	38	2	0	28	48	26	198		0	0	0	0

Peak Rolling Hour Flow Rates

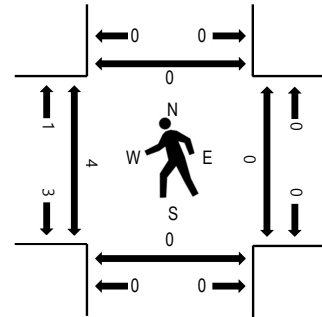
Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	10	0	0	0	7	0	17
Lights	0	83	73	20	0	31	85	174	0	2	311	25	0	223	361	102	1,490
Mediums	0	6	3	2	0	0	2	4	0	0	18	0	0	2	14	1	52
Total	0	89	76	22	0	31	87	178	0	2	339	25	0	225	382	103	1,559

Heavy Vehicle Percentage and Peak Hour Factor

	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Heavy Vehicle %		5.9%				2.0%				7.7%				3.4%			4.4%
Heavy Vehicle %	0.0%	6.7%	3.9%	9.1%	0.0%	0.0%	2.3%	2.2%	0.0%	0.0%	8.3%	0.0%	0.0%	0.9%	5.5%	1.0%	4.4%
Peak Hour Factor		0.92				0.84				0.95				0.96			0.95
Peak Hour Factor	0.00	0.76	0.88	0.63	0.00	0.70	0.81	0.87	0.00	0.38	0.92	0.72	0.00	0.80	0.90	0.78	0.95



Peak Hour - Pedestrians



	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Heavy Vehicle %	0.0%				0.0%				5.8%				1.4%				3.1%
Heavy Vehicle %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.8%	0.0%	0.0%	0.0%	1.4%	0.0%	3.1%
Peak Hour Factor	0.00				0.58				0.94				0.90				0.90
Peak Hour Factor	0.00	0.00	0.00	0.00	0.00	0.56	0.00	0.25	0.00	0.00	0.94	0.00	0.00	0.00	0.90	0.00	0.90



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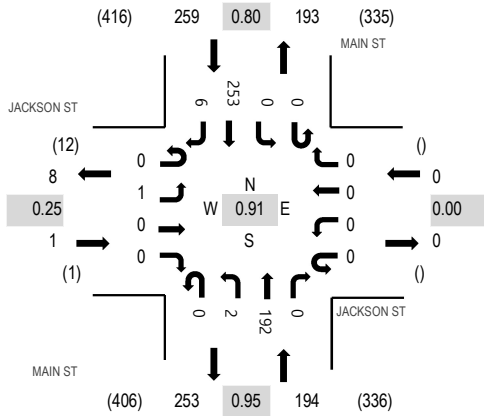
Location: 7 MAIN ST & JACKSON ST PM

Date: Tuesday, November 28, 2023

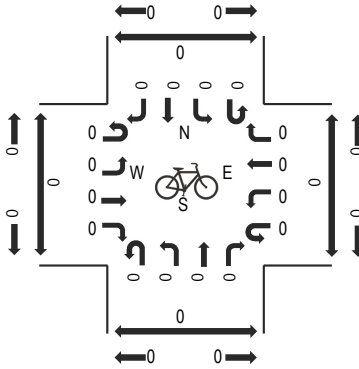
Peak Hour: 04:00 PM - 05:00 PM

Peak 15-Minutes: 04:00 PM - 04:15 PM

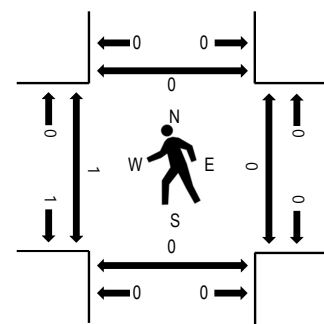
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	JACKSON ST Eastbound				JACKSON ST Westbound				MAIN ST Northbound				MAIN ST Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
4:00 PM	0	1	0	0	0	0	0	0	0	0	43	0	0	0	80	1	125	454	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	53	0	0	0	55	0	108	428	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	1	46	0	0	0	67	4	118	403	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	1	50	0	0	0	51	1	103	343	1	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	51	0	0	0	47	1	99	299	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	44	0	0	0	39	0	83		0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	27	0	0	0	29	2	58		0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	20	0	0	0	38	1	59		0	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lights	0	1	0	0	0	0	0	0	0	2	182	0	0	0	250	6	441
Mediums	0	0	0	0	0	0	0	0	0	0	10	0	0	0	3	0	13
Total	0	1	0	0	0	0	0	0	0	2	192	0	0	0	253	6	454

Heavy Vehicle Percentage and Peak Hour Factor

	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Heavy Vehicle %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.2%	0.0%	0.0%	0.0%	1.2%	0.0%	2.9%
Heavy Vehicle %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.2%	0.0%	0.0%	0.0%	1.2%	0.0%	2.9%
Peak Hour Factor	0.25				0.00				0.95				0.80				0.91
Peak Hour Factor	0.00	0.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.50	0.94	0.00	0.00	0.00	0.79	0.38	0.91

WATKINSVILLE, OCONEE COUNTY GEORGIA

DEVELOPMENT AGREEMENT BETWEEN WATKINSVILLE AND CK CAPITAL, LLC

This Development Agreement (Agreement) is made effective _____ 2024, between WATKINSVILLE (CITY) and CK Capital, LLC (Developer).

WHEREAS, Developer owns and desires to develop certain real property (Property) in CITY, such being more particularly described on the plat attached as Exhibit A, incorporated by reference; and

WHEREAS, Developer proposes a multi-use development with residential, commercial and office uses (Project) on the Property consistent with the theme in the Rezoning Report (Exhibit B-1) and per the Conceptual Master Plan attached, Exhibit B-2, with exterior design details generally consistent with the example renderings in the Conceptual Master Plan; and

WHEREAS, Developer has applied to rezone the Property to the Downtown DT zoning designation in the City Zoning Ordinance as more particularly described in the Petition for Amendment to Zoning, Rezoning Report, and Conceptual Master Planning & Design documents submitted to the City per its Zoning Ordinance and Subdivision Regulations; and

WHEREAS, on approval of Developer's zoning application, including a condition that incorporates this Agreement, and Site Construction Plans, and execution hereof by all parties, this Agreement shall be of full force and effect; and

WHEREAS, Developer contemplates establishing two homeowners associations to provide for long-term maintenance and repair of common areas in the Project after development is completed and for enforcement of protective covenants to be established by Developer for regulation of community standards, uses and activities in the Project, with such covenants to be approved by the CITY (such approval not to be unreasonably withheld, conditioned or delayed), prior to issuance of building permits for the Project; and

WHEREAS, CITY and Developer desire to establish the parameters under which the Project may proceed in a timely manner, in good faith and with the trust of both parties, via this Agreement to be filed in the minutes as part of the Plan; and

WHEREAS, CITY desires to serve the public good by requiring Developer to mitigate the Project's potentially adverse impacts on the community and the environment per this Agreement; and

WHEREAS, Developer, in consideration of the benefits and opportunities provided to Developer by the design flexibility hereinafter defined and the cooperation of CITY in connection therewith, assures CITY that the public infrastructure, amenities and design features of the Project will be implemented in a proper and timely manner per this Agreement.

NOW, THEREFORE, in consideration of the promises and mutual covenants herein and other valuable consideration, the receipt and sufficiency which are acknowledged, the Parties agree:

ARTICLE I - DEFINITIONS

'Construction Elements' means those designs for and improvements to land within the Project constructed by Developer or an Element Developer.

'Developer' means CK Capital, LLC, or such other entity as CK Capital, LLC may in the future assign part or all of its interests and obligations hereunder in connection with sale of a portion or all of the Property. Upon and after such assignment in connection with such sale and conveyance to another entity, CK Capital LLC shall no longer be deemed to be a Developer of that portion of the

Property so assigned and conveyed. If Development is assigned or sold to multiple parties, term Developer applies to all parties with ownership interest.

‘Element Developer’ means an owner of some portion of the Property that undertakes improvements or renovations with respect to a Construction Element of the Property per the Plan.

‘Inspections’ means field inspections and reviews by the City Engineer or other designee of the City during construction and the processing of certificates of occupancy.

‘Major Change’ means all modifications which do not meet the definition of Minor Changes.

‘Minor Change’ means realignment of roads, adjustments to individual lot boundaries that do not reduce lot sizes more than 10 percent, and location changes of other improvements that substantially conform to the Subdivision Regulations and the approved design standards of the Plan.

‘Mitigation Measures’ means those defined in Exhibit C, which include Construction Elements and Non-Construction Elements. Enforcement actions for violations of those Mitigation Measures that are Non-Construction Elements may be against owners, residents, or visitors or Owners Associations. Enforcement actions for violations of those Mitigation Measures that are Construction Elements may be against Developer, owners, residents, visitors or Owners Associations.

‘Non-Construction Elements’ means those activities that may occur on the Property following completion of construction of or renovations to improvements within the Project regulated by the Plan.

‘Owners Association’ means one or more associations of lot owners that assume and undertake responsibility for provision of long-term maintenance and repair of common areas in the Project after development is completed and for enforcement of protective covenants to be established by Developer for regulation of uses and activities in the Project;

‘Plan’ means the Plan attached as Exhibit B-2 and incorporated by reference, and includes such modifications to the Plan reasonably necessary to give effect to the terms of this Agreement, such modifications being limited to those reasonably necessary to effect compliance with the Plan and reasonably required by the City Engineer during the full plans review process.

‘Permitted Uses’ means those uses detailed in the Plan and which may be defined in the Zoning Ordinance and Subdivision Regulations (sometimes collectively "Ordinance"), this Agreement, and other State and Federal regulations.

‘Project’ means the development of the Project on the Property per this Agreement.

ARTICLE II - PROPERTY, PURPOSE AND INTENT

2.1 Property Description. The property that is the subject of this Agreement is described in Exhibit A.

2.2 Objectives. Said property shall be developed to provide: i) a mix of residential uses; ii) a proposed village green which will be open to the public and for private events held by people outside of the development, and iii) a sidewalk and greenspace available for use by neighbors and others who may not have places to enjoy these features. Property shall be developed to a mix of residential uses, including flats, townhomes and detached cottages, and common spaces shall all be well maintained per Exhibit D to create a positive long-term impact on Watkinsville.

2.3 Intent. The parties intend that the Project will be developed as described herein without arbitrary or capricious policies or delays. The site-specific conditions herein are imposed per the police power of City, as an exercise of legislative discretion, for protection or benefit of neighbors and City residents generally, and to ameliorate any potential effects of the Project on the community.

2.4 Representation of Fee or Equitable Ownership. Developer represents that it is under contract to acquire a 100% undivided fee simple interest in the Property. Upon acquisition of the Property by Developer the parties shall file this Development Agreement of record in the Oconee County Superior Court's real estate records and any lender holding a deed to secure debt on all or any portion of the Property at such time shall consent to this Agreement and be bound by the requirements of the Plan.

ARTICLE III- AGREEMENT AND ASSURANCES

3.1 Agreement and Assurances by Developer.

3.1.1 Construction. Upon acquisition of the Property, Developer agrees to construct the Project per this Agreement and the Plan, with uses described in the Rezoning Report, including all requirements herein and in the exhibits attached and incorporated by reference.

3.1.2 Design. The design of the Project will be in substantial compliance with the Plan, and will comply with the Ordinances, the Rezoning Report, and this Agreement, including all requirements herein and in the exhibits attached incorporated by reference.

3.1.3 Mitigation. To mitigate the impacts of the Project, Developer shall take the measures in this Agreement, including all requirements herein and in the exhibits attached incorporated by reference.

3.2 Agreement and Assurances by City.

3.2.1 Entitlement to Development. Developer shall be allowed to develop the Project per this Agreement, and approval of this Agreement and development of the Property per such approval and the Plan satisfy the requirement for a Rezoning Application per 14.03 of the City Zoning Ordinance.

3.2.2 Permitted Uses. Developer shall be allowed the Permitted Uses described in the Zoning Ordinance and shown on the Plan, except to the extent modifications to said Plan may be required to give effect to the terms of this Agreement, such being limited to those reasonably necessary to effect compliance with this Agreement. In the event this Agreement is in conflict with the Zoning Ordinance, this Agreement will control.

3.2.3 Submission and Approval Procedure. All individual approvals, including building permit approvals within the Project, shall be subject to administrative approvals per this Agreement by the City Engineer with the concurrence of Mayor, Manager and City Attorney, not to be unreasonably withheld. City Engineer shall be the contact for Developer in applying for and receiving all such approvals and permits. As needed, the Engineer will report to the Manager, Mayor and Council as to the status of the project and advise as to inspections performed, with emphasis on adherence to the Plan, including landscaping; architectural style; amenities; walking trails; tree plan; landscaping plan; soil erosion and sediment control; and utility placement.

City Engineer (and other inspectors, such as health department, and designees or independent contractors assigned by the City Engineer) will appropriately inspect the project at each stage, and ensure inspections are done timely and correctly, and that all requirements herein are met. Subject to 4.17 below, City Engineer can freely consult with the Mayor, Manager and City Attorney regarding legal interpretation of the Agreement and making sure that it is followed.

3.2.4 Underground Utilities. The Project shall have all underground utilities.

3.2.5 Public Services. City agrees to provide the Project with standard public services it customarily provides, currently available to all residents of the City, except City shall have no responsibility for additional services in excess of that available at the date of this Agreement. Notwithstanding the forgoing, City agrees that upon completion of sewer infrastructure upgrades to the Oconee County sewer system that increase sewer capacity thereby entitling the City to additional sewer capacity, the

City will allocate sufficient sewer capacity to service the Project and will cooperate with Developer's application for sewer service when submitted to Oconee County, if any.

3.2.6 Modification of Project. The exact locations of the improvements or lot boundaries may change slightly. Developer must obtain approval for any such Minor Changes from City Engineer, which shall not be unreasonably withheld, and a decision made within 10 days. All other changes (Major Changes) must be requested by Developer submitting a written proposal to City for a Conditional Use Permit, Variance, Development Review or amendment to the Ordinance, as applicable. City Engineer, in consultation with Mayor, Manager and City Attorney, shall consider Developer's submission for Major Changes and forward Engineer's recommendation to Council for a decision. In no event shall uses and densities of the Project vary from or exceed those in the Plan. Developer agrees to construct at its expense any deceleration lane or curb cuts required by City. Any utility relocation associated therewith shall be at the expense of Developer.

3.2.7 Applicable Rules. City shall not require Developer to obtain approvals or permits for the development of the Project other than those required hereunder and under state and federal laws. Provided, however, see the requirements of Exhibit C.

ARTICLE IV - GENERAL PROVISIONS

4.1 Term. This shall remain in effect not to exceed 50 years, per limitations of Georgia law.

4.2 Design and Use. Design of the Project shall be aesthetically harmonious with existing classic & historical Watkinsville architecture by utilizing similar building proportions, color palettes, and architectural elements such as porches, windows & doors. Yards and common areas shall be planted with sod or other suitable ground cover. No school bus, horse trailer, boats, boat trailers, recreational vehicles, campers or like equipment shall be permitted to park in the development. No noxious or offensive activity or nuisance shall be carried on within the Development.

4.3 Reserved.

4.4 This Agreement is terminable only by mutual written agreement of the Parties. This agreement is not perpetual, per limitations imposed by Georgia law.

4.5 Amendment or Modification. Subject to express limitations in other sections, this Agreement may be amended or modified only by a written instrument signed by the Parties.

4.6 Mortgagee Rights. This Agreement shall not prevent Developer from encumbering the Property or improvements thereon with any security interest, mortgage or deed to secure debt. Developer has the express right to grant a security interest in this Agreement or any part hereof and to assign this Agreement as collateral security.

4.7 Binding. This Agreement shall bind all assignees, transferees and successors to the Parties. Developer shall notify City of any proposed assignment or transfer of rights under this Agreement to anyone other than an entity controlled by Developer.

4.8 Implementation. City and Developer shall diligently and in good faith take all required steps for implementation of this Agreement and development of the Project per this Agreement.

4.9 Relationship. Developer is an independent party, not an agent of City. City and Developer have no joint venture or partnership and nothing herein or in any document executed in connection herewith shall be construed as making City and Developer joint venturers or partners.

4.10 Notices. Except as otherwise expressly provided herein, all Notices shall be in writing sent certified mail, return receipt requested, courier, or overnight delivery service addressed to the parties at the address below or to such other address which any party shall have given on the Effective Date

of such Notice. Signatures shall be deemed sufficient if transmitted by facsimile or via electronic mail. Watkinsville City Hall, Mayor and City Manager, 191 VFW Drive, Watkinsville Georgia 30677. Developer: CK Capital LLC, 1 Commerce Court, Bogart, GA 30622. Supplemental notification may be provided by email.

4.11 Developer Hold Harmless. Developer agrees to indemnify, hold harmless and defend City, and its elected and appointed representatives, agents, and employees (collectively City in this Section), from any and all claims, costs, and liability of any kind which may arise, directly or indirectly, including court costs and reasonable attorney fees, from operations, acts or omissions in connection with Construction Elements of the Project by Developer or its contractors, subcontractors, agents, or employees. Nothing in this Section shall be construed to mean Developer shall hold City harmless and/or defend it to the extent that such claims, costs or liability arise from City's willful or reckless action or failure to act. City shall reasonably cooperate with Developer in the defense of any matter in which Developer is defending and/or holding City harmless. The obligations herein shall survive the Term, termination or earlier expiration of this Agreement.

4.12 Insurance. Without limiting its obligation to hold City harmless, Developer shall provide and maintain at its own expense, at all times until construction is completed, the following insurance concerning its operations hereunder. The insurance shall be with a Georgia licensed insurer on the US Circular 570, with a Best's rating of A VII or higher and shall specifically identify this Agreement and the policy must state City is to be given written notice at least thirty days prior to any modification or termination of coverage. Such insurance shall be primary to and not contributing with any insurance or self-insurance maintained by City, shall be written on a comprehensive or commercial general liability insurance form, and shall include coverage for, but not limited to, completed operations, premises/project site operations, products/completed operations, contractual, independent contractors broad form property damage, and personal injury, with a per occurrence limit of not less than one million dollars, written on an occurrence basis. Developer shall provide City with a copy of such policy.

4.13 Severability. If any part of this Agreement, or the application thereof to any circumstances of either Party, shall be held unenforceable, the remainder of this Agreement or the application of such provision to persons or circumstances other than those as to whom or which it is held unenforceable shall not be affected thereby, and shall be enforceable to the fullest extent permitted by law.

4.14 Time. Time is and shall be of the essence.

4.15 Waiver. No waiver of any provision of this Agreement shall be effective unless in writing and signed by the party against whom enforcement of a waiver is sought and such waiver refers expressly to the Section containing the waived provision. No waiver of any right or remedy in respect of any occurrence shall be deemed a waiver of any right or remedy in respect of any other occurrence. Failure of a Party to complain of any act or to declare any Party in default does not constitute a waiver by that party of its rights with respect to that default until the applicable statute of limitations has run.

4.16 No Third-Party Beneficiaries. There are no third-party beneficiaries to this Agreement and it shall only benefit and be enforceable by the Parties.

4.17 Expediting. Developer and City agree to cooperate in expedited processing of any legal action seeking mandamus, specific performance, declaratory relief or injunctive relief, to set court dates at the earliest practicable date(s) and not cause delay in the prosecution/defense of the action, provided such cooperation shall not require any Party to waive any rights.

4.18 Entire Agreement. This Agreement and the documents, agreements and exhibits referenced herein or attached contain the entire agreement of the Parties. There are no oral or written

representations, understandings, covenants, or agreements that are not contained or expressly referred to herein, and no testimony or evidence of such shall be admissible in any proceedings. All promises, inducements, offers, solicitations, agreements, representations and warranties heretofore made between the parties, if any, are superseded by this Agreement as to the matters set forth herein.

4.19 Conflicts. The obligations and conditions in the Mitigation Measures (Exhibit C) govern development of the Property. If Exhibit C conflicts with any of this Agreement, Exhibit C governs.

4.20 Legal Advice; Neutral Interpretation. Each Party has received independent legal advice from its attorneys with respect to this Agreement. This Agreement shall be construed as to its fair meaning, and not for or against any Party based upon any attribution to such Party of the language in question.

4.21 Miscellaneous. The parties have read this Agreement, had the opportunity to have terms used herein and the consequences thereof explained by an attorney, understand all terms, and each executes voluntarily and with full knowledge of its significance. This Agreement shall be construed per the laws of Georgia. This may be executed in duplicate originals. Each original shall have the same legal effect as the other and may be used for any purpose. Venue for any dispute shall be the Oconee County Superior Court. Prior to litigation, the parties agree to mediate in good faith for 30 days. The 30 days shall toll any statutes of limitation. This Agreement shall benefit and bind the parties and their successors and assigns. Developer hereby does release, remise, acquit, and discharge City and any of its officers and employees from any and all claims, causes of action, damages, costs, losses, expenses (including attorney's fees), actions, rights to, and demands, which exist or may exist as of the effective date of this Agreement, arising from City's interpretation of its ordinances as applied to the Property or from any contention by Developer that the City or any of its officers or employees unreasonably or unlawfully withheld approval of the Project by actions prior to the date hereof.

IN WITNESS WHEREOF, the Parties, by their authorized representatives, have set their hands and affixed their seals effective the date and year first above written.

CITY OF WATKINSVILLE, GEORGIA

Brian Brodrick, Mayor

ATTEST:

Julie Klein, City Clerk

(SEAL)

DEVELOPER: CK CAPITAL, LLC

By: _____

Chad Keller, Manager

Attest: _____

Print Name and Title

EXHIBIT A - DESCRIPTION OF PROPERTY

Legal Description of Property

Tract 1:

All that tract, or parcel of land, lying and being in Oconee County, Georgia, G.M.D. 239, containing 16.988 acres, more or less, and being more particularly described as:

Beginning at the centerline intersection of Georgia Highway 15 and Morrison Street; thence South 72 degrees 12 minutes 56 seconds West, 54.99 feet to a pin, being the TRUE POINT OF BEGINNING; thence continuing along the 50 foot right-of-way of Morrison Street South 45 degrees 11 minutes 07 seconds West, 92.51 feet to a point; thence continuing along an Arc with a radius of 211.15 feet, South 29 degrees 51 minutes 49 seconds West, with an arclength of 112.93 feet and a chord length of 111.59 feet to a point; thence along a line South 14 degrees 32 minutes 31 seconds West, 73.80 feet to a point; thence along an Arc with a radius of 684.25 feet, South 23 degrees 50 minutes 10 seconds West, with an arclength of 221.99 feet and a chord length of 221.02 feet to a point; thence South 33 degrees 07 minutes 50 seconds West, 85.57 feet to a point; thence along an Arc with a radius of 173.23 feet, South 22 degrees 58 minutes 18 seconds West, with an arclength of 61.43 feet and a chord length of 61.11 feet to a point; thence North 70 degrees 07 minutes 24 seconds West, 232.27 feet to a point; thence North 45 degrees 24 minutes 18 seconds West, 205.02 feet to a point; thence South 02 degrees 05 minutes 32 seconds West, 73.65 feet to a point; thence South 77 degrees 24 minutes 34 seconds West, 254.97 feet to a point; thence South 00 degrees 58 minutes 54 seconds East, 295.18 feet to a point; thence North 59 degrees 59 minutes 12 seconds West, 413.95 feet to a point; thence North 59 degrees 43 minutes 19 seconds West, 199.58 feet to a point; thence South 54 degrees 49 minutes 53.85 seconds West, 120.78 feet to a point; thence South 27 degrees 01 minutes 09 seconds West, 21.84 feet to a point; thence North 69 degrees 12 minutes 32 seconds West, 50.52 feet to a point; thence North 36 degrees 12 minutes 32 seconds West, 19.81 feet to a point; thence North 54 degrees 03 minutes 24 seconds East, 889.59 feet to a point; thence South 35 degrees 56 minutes 36 seconds East, 37.38 feet to a point; thence North 54 degrees 03 minutes 24 seconds East, 650.00 feet to a point; thence South 43 degrees 19 minutes 11 seconds East, 496.38 feet to a point, THAT BEING THE TRUE POINT OF BEGINNING.

Tract 2:

All that tract, or parcel of land, lying and being in Oconee County, Georgia, G.M.D. 239, containing 0.267 acres, more or less, and being more particularly described as:

Beginning at the mag nail at the centerline intersection of South Main Street and Jackson Street; thence North 68 degrees 13 minutes 19 seconds East, 41.62 feet to a point, being the TRUE POINT OF BEGINNING; thence South 35 degrees 56 minutes 32 seconds East, 94.56 feet to a point; thence South 54 degrees 02 minutes 26 seconds West, 230.02 feet to a point; thence North 26 degrees 09 minutes 26 seconds East, 91.12 feet to a point; thence along a curve with a radius of 980.40 feet, North 34 degrees 57 minutes 02 seconds East, with an arclength of 158.37 feet and a chord length of 158.20 feet to a point, THAT BEING THE TRUE POINT OF BEGINNING.

EXHIBIT B-1 –REZONING REPORT [ATTACH HERE]

1180 GREENSBORO HIGHWAY
REZONING REPORT (submitted 09/03/2024)

PROPERTY INFORMATION

Property Address: 1180 Greensboro Highway and 0 South Main Street

Parcel ID: W 08 011 & W 08 004A

Owner: Athens Construction Group Property Holdings, LLC c/o Mark Jennings and CK Capital, LLC c/o Chad Keller

Existing Zoning: Corridor Commercial (W 08 011) and South Main Street Scenic Corridor (W 08 004A)

Proposed Zoning: Downtown

Adjacent Zonings and Uses: North: Corridor Commercial (self storage)
 South: Corridor Commercial (light industrial and self storage)
 East: Employment Center (light industrial)
 West: Detached Residential & South Main Street Scenic Corridor (single family homes or lots)

Existing Use: undeveloped (former concrete pipe plant site)

Proposed Use: residential consisting of 126 flats, 43 townhomes, and 16 cottages

Property Area: 17.26 acres total (16.99 acres for W 08 011 and 0.27 acres for W 08 004A)

SITE DESCRIPTION

The site at 1180 Greensboro Highway is a 16.99 acre tract on the western side of Greensboro Highway just south of the Athens Line Railroad. It is the location of a former concrete pipe manufacturing facility that was in use from the 1960's through the 2010's. The facility closed in 2019 and the plant was demolished in 2021 with the property remaining vacant and undeveloped since that time.

The site is currently zoned Corridor Commercial. The site is in close proximity and walking distance to the core Watkinsville downtown district which consists of restaurants, retail, residential, and industrial uses.

Site accessibility is currently from Greensboro Highway and Morrison Streets. By including the small parcel on Main Street (W 08 004A) it will allow for access to Main Street when a railroad crossing permit is achievable.

The site is currently cleared and slopes east to west to low points at the western edge of the property. The property is bordered to the north by the railroad, the east by Greensboro Highway, the south by Morrison Street, and the west by single family homes or lots.

PROJECT DESCRIPTION

The proposed development will be a multi-faceted residential development consisting of flats, townhomes, and cottages. Access to the site will be from a main entrance along Greensboro Highway with a secondary entrance on Morrison Street. A third entrance from Main Street is planned and will be

constructed when a railroad crossing is allowed. The developer will put the funds in escrow for the construction of this entrance.

Residential uses will include up to 126 flats consisting of studios, one bedroom, two bedroom, and three bedroom units in 2 total buildings consisting of 3-stories. There will also be 43 attached townhomes with alley-loaded garages that will be made available for sale and 16 detached for-sale cottages. These for-sale units will also be catered towards young professionals, families, and empty nesters. Residential amenities will include a pool, fitness center, clubhouse, and outdoor greenspace. There will also be a 1.5 acre public park open to anyone, not just residents of the development.

ECONOMIC IMPACT OF PROPOSED DEVELOPMENT

After development of the property, it will have a significant effect on the economy of Watkinsville and Oconee County. In addition to the substantial increase in property taxes, the residents that will live here will not only spend money in the commercial businesses onsite but will be within walking distance of downtown and spend money in existing Watkinsville commercial establishments as well.

LOCAL BENEFITS

In addition the economic impact of the development, there will be other local benefits. There is a proposed 1.5 acre public park which will be open to the public and open for private events held by people outside of the development. There will be sidewalk and greenspace that will be available for use by neighbors and others who may not have places to enjoy these features. The project will provide more residents to enjoy the existing retail establishments in Watkinsville.

The project backs up to the railroad and the design is such that if/when the railroad becomes a greenway to be used by locals, the project could allow for parking for access to the greenway.

ZONING REQUEST

This zoning request is to change the existing Corridor Commercial Zoning of W 08 011 and South Main Street Scenic Corridor zoning of W 08 004A to Downtown zoning. This zoning class is required for the development of a residential project as proposed. The existing Corridor Commercial zoning is “intended primarily for large-scale retail development that is more auto-oriented in nature, targeting retail, services and office developments”. The proposed residential development will blend more with surrounding residential areas than a large-scale retail development. The proposed development will have larger scale buildings up near Greensboro Highway with townhomes and cottages in the areas adjacent to existing residences. This will make a nice transition from the single family homes to the south and west.

Due to the unique project and design challenges, a Development Agreement with the City of Watkinsville is being requested to address this type of project. The requested Development Agreement will be approved as a condition of zoning approval making the proposed project binding. As a condition to this, the development agreement will be executed before any permits, site or building, are to be issued.

LANDSCAPING AND BUFFERING

Landscaping will be abundant throughout the development to include street trees, parking lot trees, parking screening, lush greenery around buildings and immense areas of green open space to enjoy.

There will be natural buffering between the development and all residential properties and planted buffering along the railway.

TRAFFIC IMPACT

A traffic impact study was conducted for the project in a previous iteration and is included with the zoning request. The traffic impact study studied 9 intersections in the vicinity of the project with and without the Main Street entrance. Under both scenarios, all 9 intersections will continue to operate at acceptable levels of service. Because the proposed traffic generated by the development is significantly less than the generated traffic associated with the traffic study, the traffic study was not re-conducted.

The traffic study was conducted with a projected ADT of 4,236 daily trips, an AM Peak generator of 164, and a PM peak generator of 329. The revised development plan as submitted consists of 1,310 daily trips, an AM peak generator of 95, and a PM peak generator of 114. The revised proposal produces 31% of the daily traffic produced by the previous development proposal.

Trip Generation

Land Use (ITE Code)	Intensity	Independent Variable	ADT	AM Peak Hour			PM Peak Hour		
				Enter	Exit	Total	Enter	Exit	Total
Single Family Attached Residential (215)	43	Units	310	6	18	24	16	10	26
Multifamily Housing (Low-Rise) (220)	126	Units	849	14	45	59	45	27	72
Single Family Detached Housing (210)	16	Units	151	3	9	12	10	6	16
Total			1310			95			114

UTILITY SERVICE

Water and sanitary sewer will be provided by Oconee County Water Resources. Demands for water and sewer usage is anticipated to be 48,100 gpd. See submitted sewer capacity application.

A sanitary sewer main and water main exists in the right-of-way of Greensboro Highway. There is also a water main the right-of-way of Greensboro Highway.

GARBAGE COLLECTION

Garbage collection will be handled by private contractor. There will be multiple dumpster corrals and/or compactors onsite to provide trash and recycling.

PUBLIC SERVICES

It is not anticipated that the request will cause a strain on public services. Public services, which include physical facilities and staff capacity, exist sufficient to service the proposed rezoning and development.

STORMWATER MANAGEMENT AND ENVIRONMENTAL CONCERNS

As the project is developed, Stormwater Management will be per the City of Watkinsville Stormwater Code and the GA State Stormwater Manual. Erosion and Sedimentation Control Plans will be submitted and adhered to, to ensure no adverse environmental impacts on the property or adjacent properties. No adverse effects are anticipated in regard to noise or air pollution from the project. The proposed stormwater management facilities will be above ground facilities and could be earthen dams or concrete wall dams.

CITY OF WATKINSVILLE ZONING AMENDMENT CRITERIA

THE EXISTING LAND USE PATTERN.

The proposed Downtown zoning district is in keeping with the surrounding properties. This development is on the edge of downtown Watkinsville commercial businesses and adjacent to residential properties. The proposed residential component is adjacent to other residential development and will provide residents to utilize existing commercial establishments in Watkinsville.

THE POSSIBLE CREATION OF AN ISOLATED DISTRICT UNRELATED TO ADJACENT AND NEARBY DISTRICTS

The proposed Downtown zoning district is in keeping with the surrounding properties. This development is on the edge of downtown Watkinsville commercial businesses and adjacent to residential properties. The proposed residential component is adjacent to other residential development and will provide residents to utilize existing commercial establishments in Watkinsville.

THE POPULATION DENSITY PATTERN AND POSSIBLE INCREASE OR OVERTAXING OF THE LOAD ON PUBLIC FACILITIES INCLUDING, BUT NOT LIMITED TO, SCHOOL, UTILITIES, PUBLIC SAFETY, AND STREETS

A traffic impact study has been completed and shows that the intersections in the area of the project will continue to function as required. Oconee County schools are below capacity currently. Utilities will be available to the site before development commences and the revenue generated by the project will more than cover any additional public safety expenses related to the project.

THE COST TO THE CITY AND OTHER GOVERNMENTAL ENTITIES IN PROVIDING, IMPROVING, INCREASING OR MAINTAINING PUBLIC UTILITIES, SCHOOLS, STREETS AND OTHER PUBLIC SAFETY MEASURES

There will be no cost to the city for providing any services to the development. All utilities and roadways associated with the development will be paid for by the developer.

THE POSSIBLE IMPACT ON THE ENVIRONMENT, INCLUDING BUT NOT LIMITED TO, DRAINAGE, SOIL EROSION AND SEDIMENTATION, FLOODING, AIR QUALITY AND WATER QUALITY

As the project is developed, Stormwater Management will be per the City of Watkinsville Stormwater Code and the GA State Stormwater Manual. Erosion and Sedimentation Control Plans will be submitted and adhered to, to ensure no adverse environmental impacts on the property or adjacent properties. No adverse effects are anticipated in regard to noise or air pollution from the project.

WHETHER THE PROPOSED ZONING MAP AMENDMENT WILL BE A DETERRENT TO THE VALUE OR IMPROVEMENT OR DEVELOPMENT OF ADJACENT PROPERTY IN ACCORDANCE WITH EXISTING REGULATIONS

The adjacent properties are mostly older commercial properties. The redevelopment of this old abandoned property will be a boon on neighboring property values and redevelopment potential.

WHETHER THERE ARE SUBSTANTIAL REASONS WHY THE PROPERTY CANNOT BE USED IN ACCORDANCE WITH EXISTING REGULATIONS

The need for a large-scale commercial only development in this location is not sustainable. The market is not there for a project that would fall under the existing zoning class. The only viable commercial development for this location would likely be a self-storage facility which would not be a well-liked development as the entry point into Watkinsville.

THE AESTHETIC EFFECT OF EXISTING AND FUTURE USE OF THE PROPERTY AS IT RELATES TO THE SURROUNDING AREA

The existing aesthetics of the property is an eyesore with a demolished old concrete pipe plant site. The future aesthetics will be of a new, vibrant project that will be a welcoming addition to Watkinsville.

THE EXTENT TO WHICH THE PROPOSED ZONING MAP AMENDMENT IS CONSISTENT WITH THE COMPREHENSIVE PLAN

The Comprehensive Plan calls for this parcel to be Corridor Commercial but this is not an isolated district request as the property adjacent to this property is Downtown. This development would continue this Downtown district which would then stop at a natural stopping point being Morrison Street.

THE POSSIBLE EFFECT OF THE PROPOSED ZONING AMENDMENT ON THE CHARACTER OF A ZONING DISTRICT, A PARTICULAR PIECE OF THE PROPERTY, NEIGHBORHOOD, A PARTICULAR AREA, OR THE COMMUNITY

This rezoning would not effect the character of any surrounding zoning classes as it is adjacent to other Downtown zoned property and a residential project consisting of flats, townhomes, and cottages would be a logical transition between commercial only properties and residential properties.

THE RELATION THAT THE PROPOSED ZONING MAP AMENDMENT BEARS TO THE PURPOSE OF THE OVERALL ZONING SCHEME, WITH DUE CONSIDERATION GIVEN TO WHETHER OR NOT THE PROPOSED CHANGE WILL HELP CARRY OUT THE PURPOSES OF THESE ZONING REGULATIONS

The proposed zoning class would be in keeping with the adjacent Downtown zoning class and the use would be a logical transition between commercial heavy projects and residential only property.

EXHIBIT B-2 – PLAN [ATTACH HERE]

Conceptual Master Plan

1180 Greensboro Hwy | Watkinsville, GA

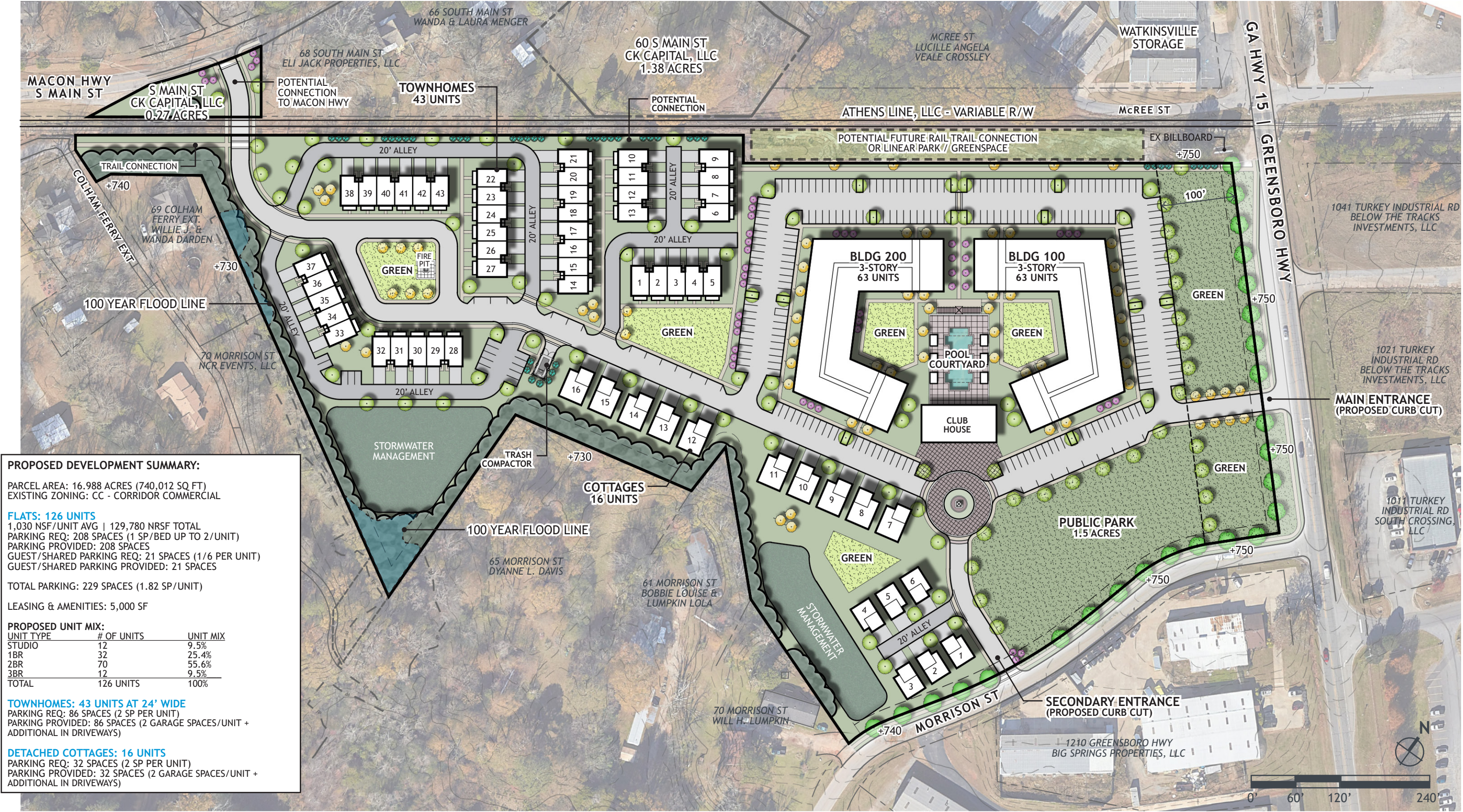


EXHIBIT B-3 - PERFORMANCE BOND

OCONEE COUNTY, GEORGIA

_____ (NAME OF PROJECT)

KNOW ALL MEN BY THESE PRESENTS: that CK Capital, LLC, Principal, and _____, Surety, are held and firmly bound unto Mayor and Council Of Watkinsville, GA, Obligee and all persons doing work or furnishing skill, tools, machinery, supplies or material for the purpose of the project hereinafter referred to, in the penal sum of \$_____ [Developer to provide amount breakdown], for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, assigns, employees, agents, administrators and successors, jointly and severally, firmly by these presents.

WHEREAS, Principal has developed a project in Watkinsville, identified above, and in connection therewith has constructed per preliminary requirements of Watkinsville, certain roadways, drainage ways, ditches, channels, easements and other appurtenant structures, and intends to dedicate those facilities to Watkinsville in the future, if Council votes to accept such, see Exhibit C of Development Agreement for further details.

NOW THEREFORE, the condition of this obligation is such that the Principal shall, in the future, give to Watkinsville fee simple title to said improvements and warrants that said improvements are in first-class condition, and shall remain in said condition, less normal wear, for a period of two years from the date of this Bond. Principal shall maintain compliance with all applicable regulations and the final plat. Should the Principal default in any of these requirements, or should said facilities or any portion thereof, require repair or replacement due to failure of workmanship or materials or due to damages resulting from construction equipment or installation of utilities, within two years from date of this Bond, the Principal and its Surety shall be jointly and severally liable to Watkinsville in the amount of the sum stated above for costs to replace said facilities to a first-class condition.

PROVIDED, FURTHER, that Surety, for value received, hereby stipulates and agrees that no change, extension of time, alterations, or additions to the Work to be performed by Principal shall in any way affect its obligation on this bond, and it does hereby waive notice of any such change, extension of time, alterations or additions to the work to be performed.

PROVIDED, FURTHER, Principal and Surety agree that this bond is executed in compliance with any applicable provisions of the Official Code of Georgia Annotated, including, but not limited to, O.C.G.A. 13-10-1, et seq. and 36-82-100, et seq., and is also executed pursuant to the Watkinsville Subdivision Regulations, and is intended to be and shall be construed as a bond compliant with applicable requirements thereof. The bond shall not be released until two years from this date.

Signed, sealed and dated this ____ day of _____, 2024.

PRINCIPAL:

By: _____ (SEAL)

Attest: _____ (SEAL)

Unofficial witness

SURETY:

By: _____ (SEAL)

(Attorney-in-Fact) and Resident Agent

Attest: _____ (SEAL)

(Attorney-in-Fact)

Unofficial witness

Accepted By:

CITY OF WATKINSVILLE, GEORGIA

By: _____ (SEAL)

Mayor

ATTEST: _____ Julie Klein, City Clerk

The power-of-attorney of the Attorney-in-Fact signing for the surety must be attached. Surety Companies executing Bonds must be on the Treasury Department's most current list (Circular 570 as amended) and be authorized to transact business in Georgia.

EXHIBIT C - MITIGATION MEASURES

1. Developer shall be allowed to develop the Project per this Agreement as described in the Rezoning Report, shown on the Plan. In no event shall (a) the number of residential flat exceed 126 units, (b) the number of townhomes exceed 43 units, or (c) the number of detached cottages exceed 16 units.
2. Paving in Project Interior. All paving located within the Project shall be constructed per the Plan with a six-inch base, plus a three-inch asphalt topping, and built per current applicable laws and regulations, including City standards, and maintained for 50 years to City standards, at the expense of the Developer or property owners' associations that may be conveyed by Developer following construction. During a two-year period from completion, Developer shall continually provide successive, renewing performance bonds in favor of City on the paving of internal streets (exclusive of service lanes and private drives, sidewalks and curb and gutter, storm water facilities and all support equipment thereof in each phase of the Project equal to 50% of the cost thereof, especially to ensure the paving holds up to all traffic and can safely accommodate emergency vehicles. The bond shall be in the form attached to the Agreement as Exhibit B-3. Any paving changes within or immediately adjacent to the Property determined to be beneficial for traffic control shall be at the sole expense of Developer. Examples of such paving changes are turning lanes, turnarounds, *cul-de-sacs* and deceleration lanes. All streets, parking and paved areas will remain privately owned.
3. Future Roundabout -- At the earliest possible date, Developer will diligently work with owner of property directly across Highway 15 to request from GDOT the installation of the traffic circle connecting the two parcels (C 041 001AC and C 041 001AB), and the Developer and property owners shall discuss the local portion of engineering and installation costs necessary for such a traffic circle from GDOT similar to that constructed in front of the Oconee County administrative building to allow safe traffic flow in and out of the project. Developer shall cooperate with the City and GDOT to improve, as necessary, traffic flow through downtown.
4. Curb and Sidewalk. Streets within the development will be equipped with curb and gutter in areas shown and detailed on the Plan. Service lane and private drives are exempt from this requirement. Sidewalks at least 5 feet wide shall be installed as shown and detailed on the Plan. Developer shall connect all inner sidewalks to the city's general sidewalk network, including connections to sidewalk on Hwy 15 north of railroad tracks and to the city owned sidewalk on Industrial Boulevard. Width of these sidewalks will be at least five feet for pedestrian safety, but Developer shall match the width of the existing sidewalks along Highway 15. However, the Parties acknowledge that Developer's obligation to connect sidewalks may be limited by what is permitted with respect to crossing the existing railroad tracks and any requirements or limitations controlled by the Georgia Department of Transportation.
5. Bike-Pedestrian Connection. Developer shall provide a 10-foot concrete bike-pedestrian connection between the project and Colham Ferry Extension with a bollard installed to prevent vehicular traffic.
6. Street Protection and Repair. Developer shall address wear and tear on City Streets and County Roads for construction access to and from the Project to give the City protection in the event construction traffic causes such streets to deteriorate. Developer will meet with City and County representatives at a mutually convenient time to review the current condition of City and County

Streets between the Project entrance and state highways, including the preparation of video recording thereof. The parties will then repeat this process after build out. Developer will fully repair any damages to City and County Streets caused by construction as follows:

Developer shall either cause the repairs to be performed to the applicable standard, or pay for the cost thereof. Developer further agrees that during construction it will maintain the construction route in the same or better condition than the present condition from the Project entrance to state highways. Developer also agrees that it will use all its power to discourage contractors and materials delivery from utilizing Morrison Street to reach the Project.

7. Utilities. All utilities must be per City standards and underground.
8. Parkland/Recreation Area/Greenspace. Prior to issuance of a certificate of occupancy (“CO”) for the residential phase of the Project, all open space areas in such Phase shall be clearly established and free of any construction materials with all trails as shown on plans completed.
9. Height: Building Height shall not exceed 36 feet from ground to soffit of cornice return on the front of the building.
10. Amenities. Prior to issuance of a CO for each residential phase, Developer shall install amenities within such phase as shown on the plan, including dog park, playground, and fire pit. Developer shall install appropriate and aesthetically harmonious lighting interior to the project and along new sidewalks outside the project that match the City’s lights along Main Street. Developer and/or the Association shall maintain all amenities.
11. Water Lines and Connections. Developer will supply materials and labor for water connections. Developer shall install water to County standards. In all instances, improvements to the water system, including full access for fire suppression, will meet the requirements of the fire marshal, County Water Resources and City Engineer. The meter location will be behind the sidewalk. Developer will provide the pipe, meter stop, and meter box to facilitate installation of water meters in accordance with County Code. The builder will purchase the meter at the time the building permit is issued. Water mains and laterals shall be installed prior to installation of curb, gutter, and paving of streets.
12. Stormwater Improvements. Developer shall improve drainage south of railroad tracks by installing a larger pipe or adjusting existing pipe to reduce ponding in city’s stormwater easement creating an opportunity for this property to be developed at a later date. t..
13. Sewer Lines and Capacity. Developer shall extend a sewer line to the boundary of the Property with Colham Ferry Extension to benefit the residential detached home lots located on said street. Developer shall install and provide manhole at said boundary to allow sewer connection for residents on Colham Ferry Extension.
14. Access to Main Street and Escrow. By including the small parcel on Main Street (W 08 004A), Developer intends to provide access to Main Street when a railroad crossing permit is achievable. This will provide a third entrance for the Project. Developer agrees to place \$200,000 in Escrow by agreement with City for up to five years, to be used for construction costs of the third entrance from Main Street as shown on the Plan, with the City being responsible for construction of such entrance. Should Developer not be able to secure rail crossing within five (5) years, the escrow agreement shall provide that the escrow funds may be used by the City for construction of sidewalk improvements within the City limits.

15. Inspections. City Engineer may inspect any time. City officials / employees may view the project at any reasonable time.

16. Detention Basin. Stormwater management facilities will be constructed by Developer to adequately contain runoff, water quality and release at an appropriate rate to avoid flooding; storm water management facilities will be constructed and maintained by Developer in compliance with all applicable regulations. Developer will innovate and improve the stormwater detention areas with enhanced landscaping and/or wetland features to beautify the area for residents to enjoy. A healthy environment including native plants, supplemental landscaping, and creation of a safe amenity rather than a simple detention pond should be the goal given the visual impact on residents and neighbors and purpose of common spaces. Developer is responsible for maintenance of all stormwater devices, including but not limited to sediment basin(s) and any fencing required by best practices, and Developer will execute a standard City stormwater facility maintenance agreement as part of the permitting process. The stormwater facilities will not be dedicated to the City; the facilities will remain under the ownership of Developer until such time as ownership and maintenance responsibilities are conveyed to the applicable homeowner's association and such responsibilities are formally accepted by the Association.

17. Street Lights and Signs. Developer will construct, install and maintain (eventually via Association) aesthetically harmonious streetlights, pedestrian streetlamps similar in style to ones used by City in the Downtown District, and cutoff, low-glare exterior lighting, and signs in the development. Signage will consist of a cohesive and appropriately designed signage system, including a way-finding system to direct both pedestrian and automobile traffic. Signs shall be per the MUTCD standards and City Sign Ordinance except as otherwise agreed upon in writing by City.

18. Design and Code Compliance. The design and all construction of the Project shall be in accordance with all applicable state and local codes including the Corridor Standards. The design shall be of quality appearance and materials, meeting all current Ordinance requirements, except as otherwise shown in the Rezoning Report and the Plans attached hereto or otherwise agreed upon in writing by the City. Design shall be aesthetically harmonious with existing Watkinsville architecture, and referencing classic architectural elements and fenestration of the historic Downtown and emphasize historical and /or upscale design details that help increase marketability while also helping blend better with existing historic and newer high-quality structures in the City.

19. Exterior Building Materials. Shall be as described in the Plan and Rezoning Report. Specifically, the exterior materials will be mixture of traditional brick, stone, and cementitious siding, trim, and all architectural accents and details. There shall be no exposed concrete blocks on any foundation or other walls of buildings. Concrete block surfaces shall be veneered with brick, natural stone, or other approved material where they are above finished grade.

20. All Residential Units: All cottages and townhomes shown on the Plan shall be used for single family residential only and no other purpose. All buildings with flats shall be used for residential use only. Outside material for pitched roofs shall be metal, asphalt, fiberglass, or wood shingle equivalent. Any variation from these materials must be approved by City. Plumbing and heating vents that protrude from the roof all shall be of the same color as the roof.

21. Unit Sizes shall be as per the Rezoning Report and the attached Plans. The 1 BR flats, including “Studio” units, shall have an average size of 700 square feet, 2 BR flats shall be a minimum size of 1050 square feet, and 3 BR flats shall be a minimum size of 1425 square feet. All Townhomes shall be a minimum size of 1600 square feet. All Detached Cottages shall be a minimum of 1000 square feet.

22. Vehicles. “Vehicles” include, without limitation, motorcycles, mini-bikes, motorized scooters, go-carts, ATVs, trucks, SUVs, vans and automobiles. All vehicles shall be parked in garages, driveways or other paved parking areas. Parking in yards or common open spaces within the Development is prohibited. No inoperable, wrecked, junk, abandoned or otherwise unusable vehicle or similar equipment may be in the Development. Restoration, oil changes, vehicle maintenance or repairs may not be done in the Development. Commercial vehicles with more than 4 wheels driven by a resident must be parked out of view of the public right of way and other residences.

23. Pets. No animals, livestock or poultry of any kind may be raised, bred, kept, or permitted within the Development, with the exception of keeping of small dogs or cats, or other usual and common household pets, totaling no more than two such animals per household. No animals shall be kept, bred or maintained for any commercial purpose in any unit. Dogs shall at all times, when outside, be restrained on a leash or within an allowable and effective fence. When outside, they shall not be allowed to repeatedly bark. No pets shall be allowed to make an unreasonable amount of noise or become a nuisance to the neighbors. Residents walking their pets shall remove any feces left by their pet. The Developer shall provide pet waste stations at convenient locations in the Development.

24. Fences. Fencing shall be wrought iron, aluminum, wood or similar materials approved by the Developer and/or homeowners association. All fences must be kept in a good state of repair.

25. Antennae. Exterior antennas or dish receivers shall be located out of view from public spaces to the greatest extent possible and shall not be allowed in the attached residential uses of the Development.

26. Garbage Cans, HVAC Units, Etc. All garbage containers, dumpsters, air conditioner and heat pump elements, and other similar items shall be located or screened to be concealed from view from the street and adjoining residences. Garbage and leaf & limb pickup will not be provided by City. Cottages and townhomes shall have collection from the curb with resident providing their own garbage can. Developer should address some uniformity of containers in HOA Covenants. Developer shall make arrangements with private service providers for collection and proper disposal of solid waste and recycling for all uses in the development.

27. Nuisance. Each occupant shall prevent any unclean, foul smelling, unhealthy, unsightly, or unkempt condition. No lot shall be used for storage of any property or thing that will cause such to be unclean or untidy or that will be obnoxious to the eye; nor shall any substance, thing, or material be kept that will emit foul or obnoxious odors or that will cause any noise or other condition that disturbs peace, quiet, safety, comfort, or serenity. No noxious or offensive activity shall be carried on within the Development, nor shall anything be done tending to cause embarrassment, discomfort, annoyance, or nuisance in the Development

28. Property Maintenance. The grounds shall be kept neat and attractive, to include without limitation: grass cut, walkways/driveways edged, flower beds weeded, and grass clippings and debris removed from street.

29. Completion. The Project shall be completed within a reasonable time from date construction begins as determined by the standards of the greater Athens area for mixed use developments.

30. Architectural Design and Landscaping. All plans, specifications and landscaping designs resulting in a change in grade, quality or overall appearance from that described in the Plan Narrative must be aesthetically harmonious, and approved in writing by City before construction commences, which approval shall not be unreasonably withheld, conditioned or delayed.

31. Binding Effect. Every mortgagee and lienholder holding an interest therein shall take title, or hold such security interest with respect thereto, with notice of and subject to these Mitigating Measures.

WATKINSVILLE, OCONEE COUNTY GEORGIA

DEVELOPMENT AGREEMENT BETWEEN WATKINSVILLE AND CK CAPITAL, LLC

This Development Agreement (Agreement) is made effective _____ 2024, between WATKINSVILLE (CITY) and CK Capital, LLC (Developer).

WHEREAS, Developer owns and desires to develop certain real property (Property) in CITY, such being more particularly described on the plat attached as Exhibit A, incorporated by reference; and

WHEREAS, Developer proposes a multi-use development with residential and commercial uses (Project) on the Property consistent with the theme in the Rezoning Report (Exhibit B-1) and per the Conceptual Master Plan attached, Exhibit B-2, with exterior design details generally consistent with the example renderings in the Conceptual Master Plan; and

WHEREAS, Developer has applied to rezone the Property to the Downtown DT zoning designation in the City Zoning Ordinance as more particularly described in the Petition for Amendment to Zoning, Rezoning Report, and Conceptual Master Planning & Design documents submitted to the City per its Zoning Ordinance and Subdivision Regulations; and

WHEREAS, on approval of Developer's zoning application, including a condition that incorporates this Agreement, and Site Construction Plans, and execution hereof by all parties, this Agreement shall be of full force and effect; and

WHEREAS, Developer contemplates establishing two homeowners associations to provide for long-term maintenance and repair of common areas in the Project after development is completed and for enforcement of protective covenants to be established by Developer for regulation of community standards, uses and activities in the Project, with such covenants to be approved by the CITY (such approval not to be unreasonably withheld, conditioned or delayed), prior to issuance of building permits for the Project; and

WHEREAS, CITY and Developer desire to establish the parameters under which the Project may proceed in a timely manner, in good faith and with the trust of both parties, via this Agreement to be filed in the minutes as part of the Plan; and

WHEREAS, CITY desires to serve the public good by requiring Developer to mitigate the Project's potentially adverse impacts on the community and the environment per this Agreement; and

WHEREAS, Developer, in consideration of the benefits and opportunities provided to Developer by the design flexibility hereinafter defined and the cooperation of CITY in connection therewith, assures CITY that the public infrastructure, amenities and design features of the Project will be implemented in a proper and timely manner per this Agreement.

NOW, THEREFORE, in consideration of the promises and mutual covenants herein and other valuable consideration, the receipt and sufficiency which are acknowledged, the Parties agree:

ARTICLE I - DEFINITIONS

'Construction Elements' means those designs for and improvements to land within the Project constructed by Developer or an Element Developer.

‘Developer’ means CK Capital, LLC, or such other entity as CK Capital, LLC may in the future assign part or all of its interests and obligations hereunder in connection with sale of a portion or all of the Property. Upon and after such assignment in connection with such sale and conveyance to another entity, CK Capital LLC shall no longer be deemed to be a Developer of that portion of the Property so assigned and conveyed. If Development is assigned or sold to multiple parties, term Developer applies to all parties with ownership interest. Any bank or lender that takes possession of all or part of the Property is then considered the Developer until such time as they sell, lease or convey the Property to a different party. Every mortgagee and lienholder holding an interest therein shall take title, or hold such security interest with respect thereto, with notice of and subject to this Agreement and the Mitigating Measures therein.

‘Element Developer’ means an owner of some portion of the Property that undertakes improvements or renovations with respect to a Construction Element of the Property per the Plan.

‘Inspections’ means field inspections and reviews by the City Engineer or other designee of the City during construction and the processing of certificates of occupancy.

‘Major Change’ means all modifications which do not meet the definition of Minor Changes.

‘Minor Change’ means realignment of roads, adjustments to individual lot boundaries that do not reduce lot sizes more than 10 percent, and location changes of other improvements that substantially conform to the Subdivision Regulations and the approved design standards of the Plan.

‘Mitigation Measures’ means those defined in Exhibit C, which include Construction Elements and Non-Construction Elements. Enforcement actions for violations of those Mitigation Measures that are Non-Construction Elements may be against owners, residents, visitors or Owners Associations. Enforcement actions for violations of those Mitigation Measures that are Construction Elements may be against Developer, owners, residents, visitors or Owners Associations.

‘Non-Construction Elements’ means those activities that may occur on the Property following completion of construction of or renovations to improvements within the Project regulated by the Plan.

‘Owners Association’ means one or more associations of lot owners that assume and undertake responsibility for provision of long-term maintenance and repair of common areas in the Project after development is completed and for enforcement of protective covenants to be established by Developer for regulation of uses and activities in the Project;

‘Plan’ means the Plan attached as Exhibit B-2 and incorporated by reference, and includes such modifications to the Plan reasonably necessary to give effect to the terms of this Agreement, such modifications being limited to those reasonably necessary to effect compliance with the Plan and reasonably required by the City Engineer during the full plans review process.

‘Permitted Uses’ means those uses detailed in the Plan and which may be defined in the Zoning Ordinance and Subdivision Regulations (sometimes collectively "Ordinance"), this Agreement, and other State and Federal regulations.

‘Project’ means the development of the Project on the Property per this Agreement.

ARTICLE II - PROPERTY, PURPOSE AND INTENT

2.1 Property Description. The property that is the subject of this Agreement is described in Exhibit A.

2.2 Objectives. Said property shall be developed to provide: i) a mixed-use development consisting of residential and commercial uses; ii) a proposed village green which will be open to the public and for private events held by people outside of the development, and iii) a sidewalk and greenspace available for use by neighbors and others who may not have places to enjoy these features. Property shall be developed to a mix of residential uses, including flats, townhomes and detached cottages, and commercial uses. Common spaces shall all be well maintained per Exhibit C to create a positive long-term impact on Watkinsville.

2.3 Intent. The parties intend that the Project will be developed as described herein without arbitrary or capricious policies or delays. The site-specific conditions herein are imposed per the police power of City, as an exercise of legislative discretion, for protection or benefit of neighbors and City residents generally, and to ameliorate any potential effects of the Project on the community.

2.4 Representation of Fee or Equitable Ownership. Developer represents that it is under contract to acquire a 100% undivided fee simple interest in the Property. Upon acquisition of the Property by Developer the parties shall file this Development Agreement of record in the Oconee County Superior Court's real estate records and any lender holding a deed to secure debt on all or any portion of the Property at such time shall consent to this Agreement and be bound by the requirements of the Plan.

ARTICLE III- AGREEMENT AND ASSURANCES

3.1 Agreement and Assurances by Developer.

3.1.1 Construction. Upon acquisition of the Property, Developer agrees to construct the Project per this Agreement and the Plan, with uses described in the Rezoning Report, including all requirements herein and in the exhibits attached and incorporated by reference.

3.1.2 Design. The design of the Project will be in substantial compliance with the Plan, and will comply with the Ordinances, the Rezoning Report, and this Agreement, including all requirements herein and in the exhibits attached incorporated by reference.

3.1.3 Mitigation. To mitigate the impacts of the Project, Developer shall take the measures in this Agreement, including all requirements herein and in the exhibits attached incorporated by reference.

3.2 Agreement and Assurances by City.

3.2.1 Entitlement to Development. Developer shall be allowed to develop the Project per this Agreement, and approval of this Agreement and development of the Property per such approval and the Plan satisfy the requirement for a Rezoning Application per 14.03 of the City Zoning Ordinance.

3.2.2 Permitted Uses. Developer shall be allowed the Permitted Uses described in the Zoning Ordinance and shown on the Plan, including the described residential uses and up to 10,000 square feet of commercial development in the area adjacent to Georgia Highway 15, except to the extent modifications to said Plan may be required to give effect to the terms of this

Agreement, such being limited to those reasonably necessary to effect compliance with this Agreement. In the event this Agreement is in conflict with the Zoning Ordinance, this Agreement will control.

3.2.3 Submission and Approval Procedure. All individual approvals, including building permit approvals within the Project, shall be subject to administrative approvals per this Agreement by the City Engineer with the concurrence of Mayor, Manager and City Attorney, not to be unreasonably withheld. City Engineer shall be the contact for Developer in applying for and receiving all such approvals and permits. As needed, the Engineer will report to the Manager, Mayor and Council as to the status of the project and advise as to inspections performed, with emphasis on adherence to the Plan, including landscaping; architectural style; amenities; walking trails; tree plan; landscaping plan; soil erosion and sediment control; and utility placement.

City Engineer (and other inspectors, such as health department, and designees or independent contractors assigned by the City Engineer) will appropriately inspect the project at each stage, and ensure inspections are done timely and correctly, and that all requirements herein are met. Subject to 4.17 below, City Engineer can freely consult with the Mayor, Manager and City Attorney regarding legal interpretation of the Agreement and making sure that it is followed.

3.2.4 Underground Utilities. The Project shall have all underground utilities.

3.2.5 Public Services. City agrees to provide the Project with standard public services it customarily provides, currently available to all residents of the City, except City shall have no responsibility for additional services in excess of that available at the date of this Agreement. Notwithstanding the forgoing, City agrees that upon completion of sewer infrastructure upgrades to the Oconee County sewer system that increase sewer capacity thereby entitling the City to additional sewer capacity, the City will allocate sufficient sewer capacity reasonably required to service the Project (using county projections as of 2024, estimated Project capacity need presently assessed at approximately ____ GPD) and will cooperate with Developer's application for sewer service when submitted to Oconee County, if any.

3.2.6 Modification of Project. The exact locations of the improvements or lot boundaries may change slightly. Developer must obtain approval for any such Minor Changes from City Engineer, which shall not be unreasonably withheld, and a decision made within 10 days. All other changes (Major Changes) must be requested by Developer submitting a written proposal to City for a Conditional Use Permit, Variance, Development Review or amendment to the Ordinance, as applicable. City Engineer, in consultation with Mayor, Manager and City Attorney, shall consider Developer's submission for Major Changes and forward Engineer's recommendation to Council for a decision. In no event shall uses and densities of the Project vary from or exceed those in the Plan. Developer agrees to construct at its expense any traffic improvements (including any traffic lights, circles, deceleration lanes or curb cuts) required by City, county or state. Any utility relocation associated therewith shall be at the expense of Developer.

3.2.7 Applicable Rules. City shall not require Developer to obtain approvals or permits for the development of the Project other than those required hereunder and under state and federal laws. Provided, however, see the requirements of Exhibit C.

ARTICLE IV - GENERAL PROVISIONS

4.1 Term. This shall remain in effect not to exceed 50 years, per limitations of Georgia law.

4.2 Design and Use. Design of the Project shall be aesthetically harmonious with existing classic & historical Watkinsville architecture by utilizing similar building proportions, color palettes, and architectural elements such as porches, windows & doors. Yards and common areas shall be professionally landscaped and planted with sod or other suitable ground cover. No school bus, horse trailer, boats, boat trailers, recreational vehicles, campers, ATVs, UTVs (side-by-sides), Dirt Bikes, mini-bikes, motorized scooters, Utility Trailers, Enclosed Trailers, or similar shall be permitted to park or be stored in the development (other than construction trailers during the construction phase). No noxious, unsightly, non-harmonious or offensive activity or nuisance shall be carried on within the Development. The aforementioned protective covenants shall comprehensively address foregoing.

4.3 Reserved.

4.4 This Agreement is terminable only by mutual written agreement of the Parties. This agreement is not perpetual, per limitations imposed by Georgia law.

4.5 Amendment or Modification. Subject to express limitations in other sections, this Agreement may be amended or modified only by a written instrument signed by the Parties.

4.6 Mortgagee Rights. This Agreement shall not prevent Developer from encumbering the Property or improvements thereon with any security interest, mortgage or deed to secure debt. Developer has the express right to grant a security interest in this Agreement or any part hereof and to assign this Agreement as collateral security.

4.7 Binding. This Agreement shall bind all assignees, transferees and successors to the Parties. Developer shall notify City of any proposed assignment or transfer of rights under this Agreement to anyone other than an entity controlled by Developer.

4.8 Implementation. City and Developer shall diligently and in good faith take all required steps for implementation of this Agreement and development of the Project per this Agreement.

4.9 Relationship. Developer is an independent party, not an agent of City. City and Developer have no joint venture or partnership and nothing herein or in any document executed in connection herewith shall be construed as making City and Developer joint venturers or partners.

4.10 Notices. Except as otherwise expressly provided herein, all Notices shall be in writing sent certified mail, return receipt requested, courier, or overnight delivery service addressed to the parties at the address below or to such other address which any party shall have given on the Effective Date of such Notice. Signatures shall be deemed sufficient if transmitted via electronic mail read and delivery receipt requested. Watkinsville City Hall, Mayor and City Manager, 191 VFW Drive, Watkinsville Georgia 30677.cc: JR@LRALaw.com. Developer: CK Capital LLC, 1 Commerce Court, Bogart, GA 30622. Cc: jeff@ehdhlaw.com. Supplemental notification may be provided by email.

4.11 Developer Hold Harmless. Developer agrees to indemnify, hold harmless and defend City, and its elected and appointed representatives, agents, and employees (collectively City in this Section), from any and all claims, costs, and liability of any kind which may arise, directly or indirectly, including court costs and reasonable attorney fees, from operations, acts or omissions in connection with Construction Elements of the Project by Developer or its contractors, subcontractors, agents, or employees. Nothing in this Section shall be construed to mean Developer shall hold City harmless and/or defend it to the extent that such claims, costs or

liability arise from City's willful or reckless action or failure to act. City shall reasonably cooperate with Developer in the defense of any matter in which Developer is defending and/or holding City harmless. The obligations herein shall survive the Term, termination or earlier expiration of this Agreement.

4.12 Insurance. Without limiting its obligation to hold City harmless, Developer shall provide and maintain at its own expense, at all times until construction is completed, the following insurance concerning its operations hereunder. The insurance shall be with a Georgia licensed insurer on the US Circular 570, with a Best's rating of A VII or higher and shall specifically identify this Agreement and the policy must state City is to be given written notice at least thirty days prior to any modification or termination of coverage. Such insurance shall be primary to and not contributing with any insurance or self-insurance maintained by City, shall be written on a comprehensive or commercial general liability insurance form, and shall include coverage for, but not limited to, completed operations, premises/project site operations, products/completed operations, contractual, independent contractors broad form property damage, and personal injury, with a per occurrence limit of not less than one million dollars, written on an occurrence basis. Developer shall provide City with a copy of such policy.

4.13 Severability. If any part of this Agreement, or the application thereof to any circumstances of either Party, shall be held unenforceable, the remainder of this Agreement or the application of such provision to persons or circumstances other than those as to whom or which it is held unenforceable shall not be affected thereby, and shall be enforceable to the fullest extent permitted by law.

4.14 Time. Time is and shall be of the essence.

4.15 Waiver. No waiver of any provision of this Agreement shall be effective unless in writing and signed by the party against whom enforcement of a waiver is sought and such waiver refers expressly to the Section containing the waived provision. No waiver of any right or remedy in respect of any occurrence shall be deemed a waiver of any right or remedy in respect of any other occurrence. Failure of a Party to complain of any act or to declare any Party in default does not constitute a waiver by that party of its rights with respect to that default until the applicable statute of limitations has run.

4.16 No Third-Party Beneficiaries. There are no third-party beneficiaries to this Agreement and it shall only benefit and be enforceable by the Parties.

4.17 Expediting. Developer and City agree to cooperate in expedited processing of any legal action seeking mandamus, specific performance, declaratory relief or injunctive relief, to set court dates at the earliest practicable date(s) and not cause delay in the prosecution/defense of the action, provided such cooperation shall not require any Party to waive any rights.

4.18 Entire Agreement. This Agreement and the documents, agreements and exhibits referenced herein or attached contain the entire agreement of the Parties. There are no oral or written representations, understandings, covenants, or agreements that are not contained or expressly referred to herein, and no testimony or evidence of such shall be admissible in any proceedings. All promises, inducements, offers, solicitations, agreements, representations and warranties heretofore made between the parties, if any, are superseded by this Agreement as to the matters set forth herein.

4.19 Conflicts. The obligations and conditions in the Mitigation Measures (Exhibit C) govern development of the Property. If Exhibit C conflicts with any of this Agreement, Exhibit C governs.

4.20 Legal Advice; Neutral Interpretation. Each Party has received independent legal advice from its attorneys with respect to this Agreement. This Agreement shall be construed as to its fair meaning, and not for or against any Party based upon any attribution to such Party of the language in question.

4.21 Miscellaneous. The parties have read this Agreement, had the opportunity to have terms used herein and the consequences thereof explained by an attorney, understand all terms, and each executes voluntarily and with full knowledge of its significance. This Agreement shall be construed per the laws of Georgia. This may be executed in duplicate originals. Each original shall have the same legal effect as the other and may be used for any purpose. Venue for any dispute shall be the Oconee County Superior Court. Prior to litigation, the parties agree to mediate in good faith for 30 days. The 30 days shall toll any statutes of limitation. This Agreement shall benefit and bind the parties and their successors and assigns. Developer hereby does release, remise, acquit, and discharge City and any of its officers and employees from any and all claims, causes of action, damages, costs, losses, expenses (including attorney's fees), actions, rights to, and demands, which exist or may exist as of the effective date of this Agreement, arising from City's interpretation of its ordinances as applied to the Property or from any contention by Developer that the City or any of its officers or employees unreasonably or unlawfully withheld approval of the Project by actions prior to the date hereof.

IN WITNESS WHEREOF, the Parties, by their authorized representatives, have set their hands and affixed their seals effective the date and year first above written.

CITY OF WATKINSVILLE, GEORGIA

Brian Brodrick, Mayor

ATTEST:

Julie Klein, City Clerk

DEVELOPER: CK CAPITAL, LLC

By: _____ (SEAL)

Chad Keller, Manager

Attest: _____

Print Name and Title

EXHIBIT A - DESCRIPTION OF PROPERTY

Legal Description of Property

Tract 1:

All that tract, or parcel of land, lying and being in Oconee County, Georgia, G.M.D. 239, containing 16.988 acres, more or less, and being more particularly described as:

Beginning at the centerline intersection of Georgia Highway 15 and Morrison Street; thence South 72 degrees 12 minutes 56 seconds West, 54.99 feet to a pin, being the TRUE POINT OF BEGINNING; thence continuing along the 50 foot right-of-way of Morrison Street South 45 degrees 11 minutes 07 seconds West, 92.51 feet to a point; thence continuing along an Arc with a radius of 211.15 feet, South 29 degrees 51 minutes 49 seconds West, with an arclength of 112.93 feet and a chord length of 111.59 feet to a point; thence along a line South 14 degrees 32 minutes 31 seconds West, 73.80 feet to a point; thence along an Arc with a radius of 684.25 feet, South 23 degrees 50 minutes 10 seconds West, with an arclength of 221.99 feet and a chord length of 221.02 feet to a point; thence South 33 degrees 07 minutes 50 seconds West, 85.57 feet to a point; thence along an Arc with a radius of 173.23 feet, South 22 degrees 58 minutes 18 seconds West, with an arclength of 61.43 feet and a chord length of 61.11 feet to a point; thence North 70 degrees 07 minutes 24 seconds West, 232.27 feet to a point; thence North 45 degrees 24 minutes 18 seconds West, 205.02 feet to a point; thence South 02 degrees 05 minutes 32 seconds West, 73.65 feet to a point; thence South 77 degrees 24 minutes 34 seconds West, 254.97 feet to a point; thence South 00 degrees 58 minutes 54 seconds East, 295.18 feet to a point; thence North 59 degrees 59 minutes 12 seconds West, 413.95 feet to a point; thence North 59 degrees 43 minutes 19 seconds West, 199.58 feet to a point; thence South 54 degrees 49 minutes 53.85 seconds West, 120.78 feet to a point; thence South 27 degrees 01 minutes 09 seconds West, 21.84 feet to a point; thence North 69 degrees 12 minutes 32 seconds West, 50.52 feet to a point; thence North 36 degrees 12 minutes 32 seconds West, 19.81 feet to a point; thence North 54 degrees 03 minutes 24 seconds East, 889.59 feet to a point; thence South 35 degrees 56 minutes 36 seconds East, 37.38 feet to a point; thence North 54 degrees 03 minutes 24 seconds East, 650.00 feet to a point; thence South 43 degrees 19 minutes 11 seconds East, 496.38 feet to a point, THAT BEING THE TRUE POINT OF BEGINNING.

Tract 2:

All that tract, or parcel of land, lying and being in Oconee County, Georgia, G.M.D. 239, containing 0.267 acres, more or less, and being more particularly described as:

Beginning at the mag nail at the centerline intersection of South Main Street and Jackson Street; thence North 68 degrees 13 minutes 19 seconds East, 41.62 feet to a point, being the TRUE POINT OF BEGINNING; thence South 35 degrees 56 minutes 32 seconds East, 94.56 feet to a point; thence South 54 degrees 02 minutes 26 seconds West, 230.02 feet to a point; thence North 26 degrees 09 minutes 26 seconds East, 91.12 feet to a point; thence along a curve with a radius of 980.40 feet, North 34 degrees 57 minutes 02 seconds East, with an arclength of 158.37 feet and a chord length of 158.20 feet to a point, THAT BEING THE TRUE POINT OF BEGINNING.

EXHIBIT B-1 –REZONING REPORT [ATTACH HERE]

1180 GREENSBORO HIGHWAY
REZONING REPORT (submitted 09/03/2024)

PROPERTY INFORMATION

Property Address: 1180 Greensboro Highway and 0 South Main Street

Parcel ID: W 08 011 & W 08 004A

Owner: Athens Construction Group Property Holdings, LLC c/o Mark Jennings and CK Capital, LLC c/o Chad Keller

Existing Zoning: Corridor Commercial (W 08 011) and South Main Street Scenic Corridor (W 08 004A)

Proposed Zoning: Downtown

Adjacent Zonings and Uses: North: Corridor Commercial (self storage)
 South: Corridor Commercial (light industrial and self storage)
 East: Employment Center (light industrial)
 West: Detached Residential & South Main Street Scenic Corridor (single family homes or lots)

Existing Use: undeveloped (former concrete pipe plant site)

Proposed Use: residential consisting of 126 flats, 43 townhomes, and 16 cottages

Property Area: 17.26 acres total (16.99 acres for W 08 011 and 0.27 acres for W 08 004A)

SITE DESCRIPTION

The site at 1180 Greensboro Highway is a 16.99 acre tract on the western side of Greensboro Highway just south of the Athens Line Railroad. It is the location of a former concrete pipe manufacturing facility that was in use from the 1960's through the 2010's. The facility closed in 2019 and the plant was demolished in 2021 with the property remaining vacant and undeveloped since that time.

The site is currently zoned Corridor Commercial. The site is in close proximity and walking distance to the core Watkinsville downtown district which consists of restaurants, retail, residential, and industrial uses.

Site accessibility is currently from Greensboro Highway and Morrison Streets. By including the small parcel on Main Street (W 08 004A) it will allow for access to Main Street when a railroad crossing permit is achievable.

The site is currently cleared and slopes east to west to low points at the western edge of the property. The property is bordered to the north by the railroad, the east by Greensboro Highway, the south by Morrison Street, and the west by single family homes or lots.

PROJECT DESCRIPTION

The proposed development will be a multi-faceted residential development consisting of flats, townhomes, and cottages. Access to the site will be from a main entrance along Greensboro Highway with a secondary entrance on Morrison Street. A third entrance from Main Street is planned and will be

constructed when a railroad crossing is allowed. The developer will put the funds in escrow for the construction of this entrance.

Residential uses will include up to 126 flats consisting of studios, one bedroom, two bedroom, and three bedroom units in 2 total buildings consisting of 3-stories. There will also be 43 attached townhomes with alley-loaded garages that will be made available for sale and 16 detached for-sale cottages. These for-sale units will also be catered towards young professionals, families, and empty nesters. Residential amenities will include a pool, fitness center, clubhouse, and outdoor greenspace. There will also be a 1.5 acre public park open to anyone, not just residents of the development.

ECONOMIC IMPACT OF PROPOSED DEVELOPMENT

After development of the property, it will have a significant effect on the economy of Watkinsville and Oconee County. In addition to the substantial increase in property taxes, the residents that will live here will not only spend money in the commercial businesses onsite but will be within walking distance of downtown and spend money in existing Watkinsville commercial establishments as well.

LOCAL BENEFITS

In addition the economic impact of the development, there will be other local benefits. There is a proposed 1.5 acre public park which will be open to the public and open for private events held by people outside of the development. There will be sidewalk and greenspace that will be available for use by neighbors and others who may not have places to enjoy these features. The project will provide more residents to enjoy the existing retail establishments in Watkinsville.

The project backs up to the railroad and the design is such that if/when the railroad becomes a greenway to be used by locals, the project could allow for parking for access to the greenway.

ZONING REQUEST

This zoning request is to change the existing Corridor Commercial Zoning of W 08 011 and South Main Street Scenic Corridor zoning of W 08 004A to Downtown zoning. This zoning class is required for the development of a residential project as proposed. The existing Corridor Commercial zoning is “intended primarily for large-scale retail development that is more auto-oriented in nature, targeting retail, services and office developments”. The proposed residential development will blend more with surrounding residential areas than a large-scale retail development. The proposed development will have larger scale buildings up near Greensboro Highway with townhomes and cottages in the areas adjacent to existing residences. This will make a nice transition from the single family homes to the south and west.

Due to the unique project and design challenges, a Development Agreement with the City of Watkinsville is being requested to address this type of project. The requested Development Agreement will be approved as a condition of zoning approval making the proposed project binding. As a condition to this, the development agreement will be executed before any permits, site or building, are to be issued.

LANDSCAPING AND BUFFERING

Landscaping will be abundant throughout the development to include street trees, parking lot trees, parking screening, lush greenery around buildings and immense areas of green open space to enjoy.

There will be natural buffering between the development and all residential properties and planted buffering along the railway.

TRAFFIC IMPACT

A traffic impact study was conducted for the project in a previous iteration and is included with the zoning request. The traffic impact study studied 9 intersections in the vicinity of the project with and without the Main Street entrance. Under both scenarios, all 9 intersections will continue to operate at acceptable levels of service. Because the proposed traffic generated by the development is significantly less than the generated traffic associated with the traffic study, the traffic study was not re-conducted.

The traffic study was conducted with a projected ADT of 4,236 daily trips, an AM Peak generator of 164, and a PM peak generator of 329. The revised development plan as submitted consists of 1,310 daily trips, an AM peak generator of 95, and a PM peak generator of 114. The revised proposal produces 31% of the daily traffic produced by the previous development proposal.

Trip Generation

Land Use (ITE Code)	Intensity	Independent Variable	ADT	AM Peak Hour			PM Peak Hour		
				Enter	Exit	Total	Enter	Exit	Total
Single Family Attached Residential (215)	43	Units	310	6	18	24	16	10	26
Multifamily Housing (Low-Rise) (220)	126	Units	849	14	45	59	45	27	72
Single Family Detached Housing (210)	16	Units	151	3	9	12	10	6	16
Total			1310			95			114

UTILITY SERVICE

Water and sanitary sewer will be provided by Oconee County Water Resources. Demands for water and sewer usage is anticipated to be 48,100 gpd. See submitted sewer capacity application.

A sanitary sewer main and water main exists in the right-of-way of Greensboro Highway. There is also a water main the right-of-way of Greensboro Highway.

GARBAGE COLLECTION

Garbage collection will be handled by private contractor. There will be multiple dumpster corrals and/or compactors onsite to provide trash and recycling.

PUBLIC SERVICES

It is not anticipated that the request will cause a strain on public services. Public services, which include physical facilities and staff capacity, exist sufficient to service the proposed rezoning and development.

STORMWATER MANAGEMENT AND ENVIRONMENTAL CONCERNS

As the project is developed, Stormwater Management will be per the City of Watkinsville Stormwater Code and the GA State Stormwater Manual. Erosion and Sedimentation Control Plans will be submitted and adhered to, to ensure no adverse environmental impacts on the property or adjacent properties. No adverse effects are anticipated in regard to noise or air pollution from the project. The proposed stormwater management facilities will be above ground facilities and could be earthen dams or concrete wall dams.

CITY OF WATKINSVILLE ZONING AMENDMENT CRITERIA

THE EXISTING LAND USE PATTERN.

The proposed Downtown zoning district is in keeping with the surrounding properties. This development is on the edge of downtown Watkinsville commercial businesses and adjacent to residential properties. The proposed residential component is adjacent to other residential development and will provide residents to utilize existing commercial establishments in Watkinsville.

THE POSSIBLE CREATION OF AN ISOLATED DISTRICT UNRELATED TO ADJACENT AND NEARBY DISTRICTS

The proposed Downtown zoning district is in keeping with the surrounding properties. This development is on the edge of downtown Watkinsville commercial businesses and adjacent to residential properties. The proposed residential component is adjacent to other residential development and will provide residents to utilize existing commercial establishments in Watkinsville.

THE POPULATION DENSITY PATTERN AND POSSIBLE INCREASE OR OVERTAXING OF THE LOAD ON PUBLIC FACILITIES INCLUDING, BUT NOT LIMITED TO, SCHOOL, UTILITIES, PUBLIC SAFETY, AND STREETS

A traffic impact study has been completed and shows that the intersections in the area of the project will continue to function as required. Oconee County schools are below capacity currently. Utilities will be available to the site before development commences and the revenue generated by the project will more than cover any additional public safety expenses related to the project.

THE COST TO THE CITY AND OTHER GOVERNMENTAL ENTITIES IN PROVIDING, IMPROVING, INCREASING OR MAINTAINING PUBLIC UTILITIES, SCHOOLS, STREETS AND OTHER PUBLIC SAFETY MEASURES

There will be no cost to the city for providing any services to the development. All utilities and roadways associated with the development will be paid for by the developer.

THE POSSIBLE IMPACT ON THE ENVIRONMENT, INCLUDING BUT NOT LIMITED TO, DRAINAGE, SOIL EROSION AND SEDIMENTATION, FLOODING, AIR QUALITY AND WATER QUALITY

As the project is developed, Stormwater Management will be per the City of Watkinsville Stormwater Code and the GA State Stormwater Manual. Erosion and Sedimentation Control Plans will be submitted and adhered to, to ensure no adverse environmental impacts on the property or adjacent properties. No adverse effects are anticipated in regard to noise or air pollution from the project.

WHETHER THE PROPOSED ZONING MAP AMENDMENT WILL BE A DETERRENT TO THE VALUE OR IMPROVEMENT OR DEVELOPMENT OF ADJACENT PROPERTY IN ACCORDANCE WITH EXISTING REGULATIONS

The adjacent properties are mostly older commercial properties. The redevelopment of this old abandoned property will be a boon on neighboring property values and redevelopment potential.

WHETHER THERE ARE SUBSTANTIAL REASONS WHY THE PROPERTY CANNOT BE USED IN ACCORDANCE WITH EXISTING REGULATIONS

The need for a large-scale commercial only development in this location is not sustainable. The market is not there for a project that would fall under the existing zoning class. The only viable commercial development for this location would likely be a self-storage facility which would not be a well-liked development as the entry point into Watkinsville.

THE AESTHETIC EFFECT OF EXISTING AND FUTURE USE OF THE PROPERTY AS IT RELATES TO THE SURROUNDING AREA

The existing aesthetics of the property is an eyesore with a demolished old concrete pipe plant site. The future aesthetics will be of a new, vibrant project that will be a welcoming addition to Watkinsville.

THE EXTENT TO WHICH THE PROPOSED ZONING MAP AMENDMENT IS CONSISTENT WITH THE COMPREHENSIVE PLAN

The Comprehensive Plan calls for this parcel to be Corridor Commercial but this is not an isolated district request as the property adjacent to this property is Downtown. This development would continue this Downtown district which would then stop at a natural stopping point being Morrison Street.

THE POSSIBLE EFFECT OF THE PROPOSED ZONING AMENDMENT ON THE CHARACTER OF A ZONING DISTRICT, A PARTICULAR PIECE OF THE PROPERTY, NEIGHBORHOOD, A PARTICULAR AREA, OR THE COMMUNITY

This rezoning would not effect the character of any surrounding zoning classes as it is adjacent to other Downtown zoned property and a residential project consisting of flats, townhomes, and cottages would be a logical transition between commercial only properties and residential properties.

THE RELATION THAT THE PROPOSED ZONING MAP AMENDMENT BEARS TO THE PURPOSE OF THE OVERALL ZONING SCHEME, WITH DUE CONSIDERATION GIVEN TO WHETHER OR NOT THE PROPOSED CHANGE WILL HELP CARRY OUT THE PURPOSES OF THESE ZONING REGULATIONS

The proposed zoning class would be in keeping with the adjacent Downtown zoning class and the use would be a logical transition between commercial heavy projects and residential only property.

EXHIBIT B-2 – PLAN [ATTACH HERE]

Conceptual Master Plan

1180 Greensboro Hwy | Watkinsville, GA

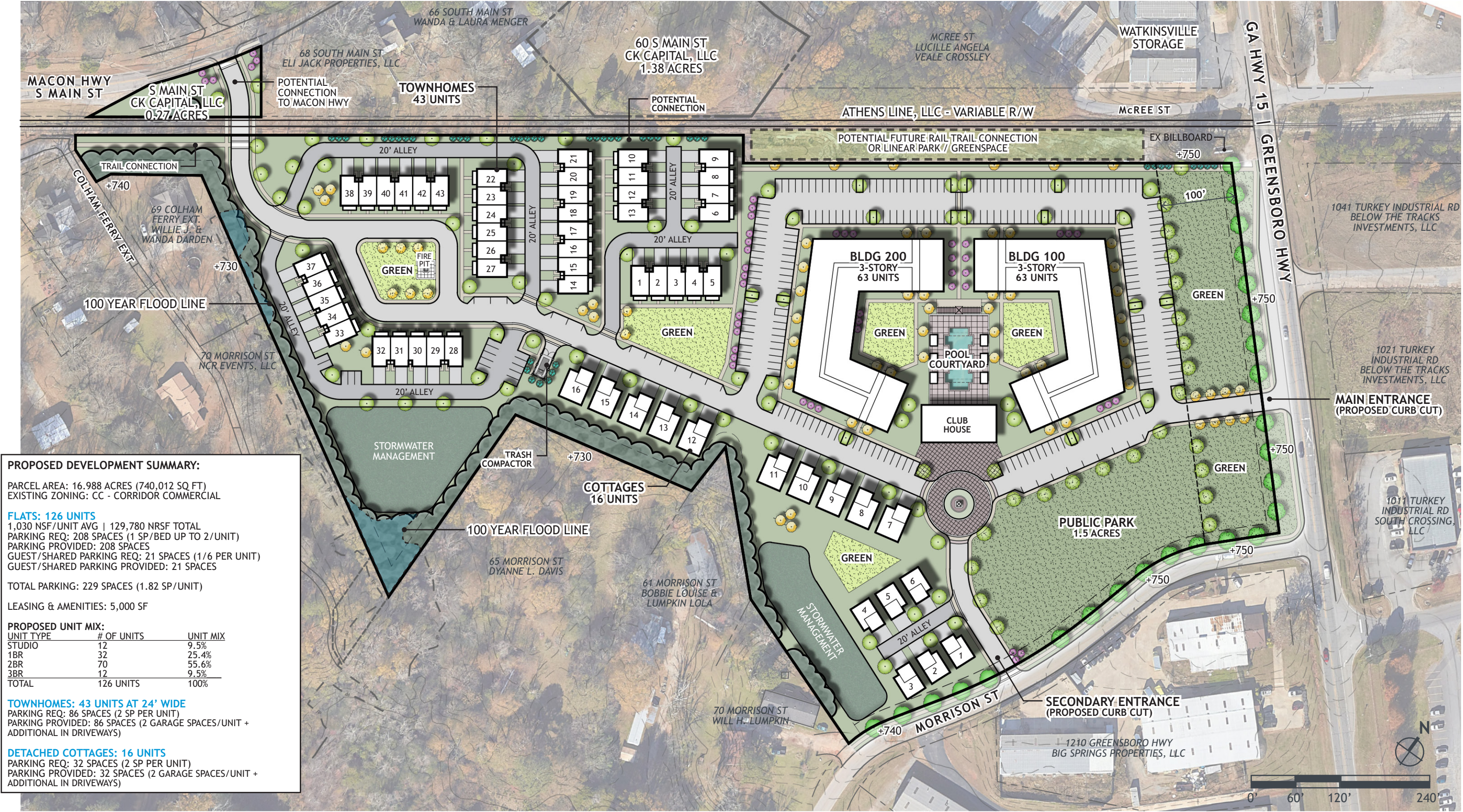


EXHIBIT B-3 - PERFORMANCE BOND

OCONEE COUNTY, GEORGIA

_____ (NAME OF PROJECT)

KNOW ALL MEN BY THESE PRESENTS: that CK Capital, LLC, Principal, and _____, Surety, are held and firmly bound unto Mayor and Council Of Watkinsville, GA, Obligee and all persons doing work or furnishing skill, tools, machinery, supplies or material for the purpose of the project hereinafter referred to, in the penal sum of \$ _____ [Developer to provide amount breakdown], for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, assigns, employees, agents, administrators and successors, jointly and severally, firmly by these presents.

WHEREAS, Principal has developed a project in Watkinsville, identified above, and in connection therewith has constructed per preliminary requirements of Watkinsville, certain roadways, drainage ways, ditches, channels, easements and other appurtenant structures, and intends to dedicate those facilities to Watkinsville in the future, if Council votes to accept such, see Exhibit C of Development Agreement for further details.

NOW THEREFORE, the condition of this obligation is such that the Principal shall, in the future, give to Watkinsville fee simple title to said improvements and warrants that said improvements are in first-class condition, and shall remain in said condition, less normal wear, for a period of two years from the date of this Bond. Principal shall maintain compliance with all applicable regulations and the final plat. Should the Principal default in any of these requirements, or should said facilities or any portion thereof, require repair or replacement due to failure of workmanship or materials or due to damages resulting from construction equipment or installation of utilities, within two years from date of this Bond, the Principal and its Surety shall be jointly and severally liable to Watkinsville in the amount of the sum stated above for costs to replace said facilities to a first-class condition.

PROVIDED, FURTHER, that Surety, for value received, hereby stipulates and agrees that no change, extension of time, alterations, or additions to the Work to be performed by Principal shall in any way affect its obligation on this bond, and it does hereby waive notice of any such change, extension of time, alterations or additions to the work to be performed.

PROVIDED, FURTHER, Principal and Surety agree that this bond is executed in compliance with any applicable provisions of the Official Code of Georgia Annotated, including, but not limited to, O.C.G.A. 13-10-1, et seq. and 36-82-100, et seq., and is also executed pursuant to the Watkinsville Subdivision Regulations, and is intended to be and shall be construed as a bond compliant with applicable requirements thereof. The bond shall not be released until two years from this date.

Signed, sealed and dated this ____ day of _____, 2024.

PRINCIPAL:

By: _____ (SEAL)

Attest: _____ (SEAL)

Unofficial witness

SURETY:

By: _____ (SEAL)

(Attorney-in-Fact) and Resident Agent

Attest: _____ (SEAL)

(Attorney-in-Fact)

Unofficial witness

Accepted By:

CITY OF WATKINSVILLE, GEORGIA

By: _____ (SEAL)

Mayor

ATTEST: _____ Julie Klein, City Clerk

The power-of-attorney of the Attorney-in-Fact signing for the surety must be attached. Surety Companies executing Bonds must be on the Treasury Department's most current list (Circular 570 as amended) and be authorized to transact business in Georgia.

EXHIBIT C - MITIGATION MEASURES

1. Developer shall be allowed to develop the Project per this Agreement as described in the Rezoning Report, shown on the Plan. In no event shall (a) the number of residential flats exceed 126 units, (b) the number of townhomes exceed 43 units, (c) the number of detached cottages exceed 16 units, or (d) the commercial units exceed a combined total of 10,000 square feet in size.
2. Paving in Project Interior. All paving located within the Project shall be constructed per the Plan with a six-inch base, plus a three-inch asphalt topping, and built per current applicable laws and regulations, including City standards, and maintained for 50 years to City standards, at the expense of the Developer or property owners' associations that may be conveyed by Developer following construction. During a two-year period from completion, Developer shall continually provide successive, renewing performance bonds in favor of City on the paving of internal streets (exclusive of service lanes and private drives, sidewalks and curb and gutter, storm water facilities and all support equipment thereof in each phase of the Project equal to 50% of the cost thereof, especially to ensure the paving holds up to all traffic and can safely accommodate emergency vehicles. The bond shall be in the form attached to the Agreement as Exhibit B-3. Any paving changes within or immediately adjacent to the Property determined to be beneficial for traffic control shall be at the sole expense of Developer. Examples of such paving changes are turning lanes, turnarounds, cul-de-sacs, traffic circles, traffic lights and deceleration lanes. All streets, parking and paved areas will remain privately owned, including beyond the aforementioned 50 years.
3. Future Roundabout -- At the earliest possible date, Developer will diligently work with owner of property directly across Highway 15 to request from GDOT the installation of the traffic circle connecting the two parcels (C 041 001AC and C 041 001AB), and the Developer and property owners shall discuss the local portion of engineering and installation costs necessary for such a traffic circle from GDOT similar to that constructed in front of the Oconee County administrative building to allow safe traffic flow in and out of the project. Developer shall cooperate with the City and GDOT to improve, as necessary, traffic flow through downtown.
4. Curb and Sidewalk. Streets within the development will be equipped with curb and gutter in areas shown and detailed on the Plan. Service lane and private drives are exempt from this requirement. Sidewalks at least 5 feet wide shall be installed as shown and detailed on the Plan. Developer shall connect all inner sidewalks to the city's general sidewalk network within existing right of way, including connections to sidewalk on Hwy 15 north of railroad tracks, to the city owned sidewalk on Industrial Boulevard, and to the city owned sidewalk network on Morrison Street at the Trove subdivision, enabling residents of and employees of businesses on Morrison Street to reach the Project safely on foot. Width of these sidewalks will be at least five feet for pedestrian safety, but Developer shall match the width of the existing sidewalks along Highway 15. However, the Parties acknowledge that Developer's obligation to connect sidewalks may be limited by what is permitted with respect to crossing the existing railroad tracks and any requirements or limitations controlled by the Georgia Department of Transportation. Developer shall build sidewalks to the extent GDOT will allow on any state-owned right of way corridors.

5. Bike-Pedestrian Connection. Developer shall provide a 10-foot concrete bike-pedestrian connection between the project and Colham Ferry Extension with a removable bollard installed to prevent vehicular traffic, except emergency services.

6. Street Protection and Repair. Developer shall address wear and tear on City Streets and County Roads for construction access to and from the Project to give the City protection in the event construction traffic causes such streets to deteriorate. Developer will meet with City and County representatives at a mutually convenient time to review the current condition of City and County Streets between the Project entrance and state highways and city and county roads, including the preparation of video recording thereof. The parties will then repeat this process after build out. Developer will fully repair any damages to City and County Streets caused by construction as follows:

Developer shall either cause the repairs to be performed to the applicable standard, or pay for the cost thereof. Developer further agrees that during construction it will maintain the construction route in the same or better condition than the present condition from the Project entrance to state highways. Developer also agrees that it will use all its power to discourage contractors and materials delivery from utilizing Morrison Street to reach the Project.

7. Utilities. All utilities must be per City standards and underground.

8. Parkland/Recreation Area/Greenspace. Prior to issuance of a certificate of occupancy (“CO”) for the residential phase of the Project, all open space areas in such Phase shall be clearly established and free of any construction materials with all trails as shown on plans completed. If Developer installs a community garden, it will be named after Henry “Bee” Elder.

9. Height: Building Height shall not exceed 36 feet from ground to soffit of cornice return on the front of the building.

10. Amenities. Prior to issuance of a CO for each residential phase, Developer shall install amenities within such phase as shown on the plan, including dog park, playground, swimming pools, and fire pit. Developer shall install appropriate and aesthetically harmonious lighting interior to the project and along new sidewalks outside the project that match the City’s lights along Main Street. Developer and/or the Association shall maintain all amenities.

11. Water Lines and Connections. Developer will supply materials and labor for water connections. Developer shall install water to County standards. In all instances, improvements to the water system, including full access for fire suppression, will meet the requirements of the fire marshal, County Water Resources and City Engineer. The meter location will be behind the sidewalk. Developer will provide the pipe, meter stop, and meter box to facilitate installation of water meters in accordance with County Code. The builder will purchase the meter at the time the building permit is issued. Water mains and laterals shall be installed prior to installation of curb, gutter, and paving of streets.

12. Stormwater Improvements. Developer shall improve drainage south of railroad tracks by installing a larger pipe or adjusting existing pipe to reduce ponding in city’s stormwater easement creating an opportunity for an historic home to be relocated to the adjacent lot (W 08 001). Developer will make commercially reasonable efforts to work with a historic preservation non-profit to return an historic home to 60 South Main Street lot (W 08 001).

13. Sewer Lines and Capacity. Developer shall extend a sewer line to the boundary of the Property with Colham Ferry Extension to benefit the residential detached home lots located on said street. Developer shall install and provide manhole at said boundary to allow sewer connection for residents on Colham Ferry Extension.

14. Access to Main Street and Escrow. By including the small parcel on Main Street (W 08 004A), Developer intends to provide access to Main Street when a railroad crossing permit is achievable. This will provide a third entrance for the Project. Developer agrees to place \$200,000 in Escrow by agreement with City for up to five years, to be used for construction costs of the third entrance from Main Street as shown on the Plan, with the City being responsible for construction of such entrance. Should Developer not be able to secure rail crossing within five (5) years, the escrow agreement shall provide that the escrow funds may be used by the City for construction of sidewalk improvements within the City limits.

15. Inspections. City Engineer may inspect any time. City officials / employees may view the project at any reasonable time.

16. Detention Basin. Stormwater management facilities will be constructed by Developer to adequately contain runoff, water quality and release at an appropriate rate to avoid flooding; storm water management facilities will be constructed and maintained by Developer in compliance with all applicable regulations. Developer will innovate and improve the stormwater detention areas with enhanced landscaping and/or wetland features to beautify the area for residents to enjoy. A healthy environment including native plants, supplemental landscaping, and creation of a safe amenity rather than a simple detention pond should be the goal given the visual impact on residents and neighbors and purpose of common spaces. Developer is responsible for maintenance of all stormwater devices, including but not limited to sediment basin(s) and any fencing required by best practices, and Developer will execute a standard City stormwater facility maintenance agreement as part of the permitting process. The stormwater facilities will not be dedicated to the City; the facilities will remain under the ownership of Developer until such time as ownership and maintenance responsibilities are conveyed to the applicable homeowner's association and such responsibilities are formally accepted by the Association.

17. Street Lights and Signs. Developer will construct, install and maintain (eventually via Property Owner's Association) aesthetically harmonious streetlights, pedestrian streetlamps similar in style to ones used by City in the Downtown District, and cutoff, low-glare exterior lighting, and signs in the development and along adjacent sidewalks. Signage will consist of a cohesive and appropriately designed signage system, including a way-finding system to direct both pedestrian and automobile traffic. Signs shall be per the MUTCD standards and City Sign Ordinance except as otherwise agreed upon in writing by City.

18. Design and Code Compliance. The design and all construction of the Project shall be in accordance with all applicable state and local codes including the Corridor Standards. The design shall be of quality appearance and materials, meeting all current Ordinance requirements, except as otherwise shown in the Rezoning Report and the Plans attached hereto or otherwise agreed upon in writing by the City. Design shall be aesthetically harmonious with existing Watkinsville

architecture, and referencing classic architectural elements and fenestration of the historic Downtown and emphasize historical and /or upscale design details that help increase marketability while also helping blend better with existing historic and newer high-quality structures in the City.

19. Exterior Building Materials. Shall be as described in the Plan and Rezoning Report. Specifically, the exterior materials will be mixture of traditional brick, stone, and cementitious siding, trim, and all architectural accents and details. A majority of each building shall be brick or stone, with facades facing interior drives and external roads receiving priority for such. There shall be no exposed concrete blocks on any foundation or other walls of buildings. Concrete block surfaces shall be veneered with brick, natural stone, or other approved material where they are above finished grade.

20. All Residential Units: All cottages and townhomes shown on the Plan shall be used for single family residential only and no other purpose. All buildings with flats shall be used for residential use only unless it is situated above the allowed commercial use. Outside material for pitched roofs shall be metal, asphalt, fiberglass, or wood shingle equivalent. Any variation from these materials must be approved by City. Plumbing and heating vents that protrude from the roof all shall be of the same color as the roof, and whenever possible shall face away from city or county streets if visible from said streets. No front facing garages (without formal approved variance per Zoning requirements), per City Code, Zoning and Subdivision Regulations.

21. Unit Sizes shall be as per the Rezoning Report and the attached Plans. The 1 BR flats, including “Studio” units, shall have an average size of 700 square feet, 2 BR flats shall be a minimum size of 1050 square feet, and 3 BR flats shall be a minimum size of 1425 square feet. All Townhomes shall be a minimum size of 1600 square feet. All Detached Cottages shall be a minimum of 1000 square feet.

22. Commercial Units. While not expressly shown on the attached Plans, Developer shall be permitted to construct commercial units for use as retail, restaurant and office space in the area of the Property fronting along Georgia Highway 15. The commercial units may not exceed ten thousand square feet (10,000 sq. ft) in total size. The design of said commercial units should be aesthetically harmonious with the residential portions of the Project and adhere to existing nearby development patterns for the purpose of retaining and enhancing the aesthetic qualities of the area. The commercial units shall harmoniously blend into the existing town pattern of traditional and historic development without compromising the unique character of Watkinsville. Developer shall seek approval for the design of the commercial units from the City in accordance with Section 3.6.2 of this Agreement. Residential units can be placed above the commercial units but must conform to other elements of this Agreement, including total number of units and overall building height.

23. Vehicles. “Vehicles” include, without limitation, motorcycles, mini-bikes, motorized scooters, go-carts, ATVs, UTVs, trucks, SUVs, vans, trailers and automobiles. All permitted vehicles (road legal licensed tagged and insured, passenger vehicles [including non-commercial

pickup trucks] and motorcycles) shall be parked in garages, driveways or other paved parking areas. Prohibited vehicles (see 4.2 above) are disallowed in the Development. Parking in yards or common open spaces within the Development is prohibited. No inoperable, wrecked, junk, abandoned or otherwise unusable vehicle or similar equipment may be in the Development. Restoration, oil changes, vehicle maintenance or repairs may not be done in the Development. Commercial vehicles with more than 4 wheels driven by a resident must be parked out of view of the public right of way and other residences. Commercial vehicles with more than six wheels shall not be parked overnight or for more than 8 consecutive hours on site after Project completion.

24. Pets. No animals, livestock or poultry of any kind may be raised, bred, kept, or permitted within the Development, with the exception of keeping of small dogs or cats, or other usual and common household pets, totaling no more than two such animals per household. No animals shall be kept, bred or maintained for any commercial purpose in any unit. Dogs shall at all times, when outside, be restrained on a leash or within an allowable and effective fence. When outside, they shall not be allowed to repeatedly bark. No pets shall be allowed to make an unreasonable amount of noise or become a nuisance to the neighbors. Residents walking their pets shall remove any feces left by their pet. The Developer shall provide pet waste stations at convenient locations in the Development.

25. Fences. Fencing shall be wrought iron, aluminum, wood or similar materials approved by the Developer and/or homeowners association. All fences must be kept in a good state of repair.

26. Antennae. Exterior antennas or dish receivers shall be located out of view from public spaces to the greatest extent possible and shall not be allowed in the attached residential uses of the Development.

27. Garbage Cans, HVAC Units, Etc. All garbage containers, dumpsters, air conditioner and heat pump elements, and other similar items shall be located or screened to be concealed from view from the street and adjoining residences. Garbage and leaf & limb pickup will not be provided by City. Cottages and townhomes shall have collection from the curb with resident providing their own garbage can. Developer should address some uniformity of containers in HOA Covenants. Developer shall make arrangements with private service providers for collection and proper disposal of solid waste and recycling for all uses in the development.

28. Nuisance. Each occupant shall prevent any unclean, foul smelling, unhealthy, unsightly, or unkempt condition. No lot shall be used for storage of any property or thing that will cause such to be unclean or untidy or that will be obnoxious to the eye; nor shall any substance, thing, or material be kept that will emit foul or obnoxious odors or that will cause any noise or other condition that disturbs peace, quiet, safety, comfort, or serenity. No noxious or offensive activity shall be carried on within the Development, nor shall anything be done tending to cause embarrassment, discomfort, annoyance, or nuisance in the Development

29. Property Maintenance. The grounds shall be kept neat and attractive, to include without limitation: grass cut, walkways/driveways edged, flower beds weeded, and grass clippings and debris removed from street.
30. Completion. The Project shall be completed within a reasonable time from date construction begins as determined by the standards of the greater Athens area for mixed use developments.
31. Architectural Design and Landscaping. All plans, specifications and landscaping designs resulting in a change in grade, quality or overall appearance from that described in the Plan Narrative must be professionally designed and implemented, aesthetically harmonious with the surrounding Development improvements and community, and approved in writing by City before construction commences, which approval shall not be unreasonably withheld, conditioned or delayed.
32. Potential Bike Pedestrian Facility. Should at some point the adjacent rail line be converted into a bike pedestrian facility (“rail trail”) or other shared community amenity, Developer will bear the expense of upgrading the existing adjacent rail to the standard established by the city, county or controlling entity of said amenity.
33. Binding Effect. Every mortgagee and lienholder holding an interest therein shall take title, or hold such security interest with respect thereto, with notice of and subject to these Mitigating Measures.



4/2023

WATKINSVILLE WASTEWATER CAPACITY REQUEST APPLICATION**Section I (Completed by Applicant. Also, complete notarized certification on last page.)****General Information**Applicant Name: Chad Keller Phone: _____

(Entities attach certificate of organization, articles of incorporation, IRS Form SS-4, or similar).

Full Mailing Address: 1041 Commerce Court, Bogart GA 30622Emails of Principals: ckeller@precisionlandscapega.comProperty Address: 1180 Greensboro Highway Tax Parcel # W08 011Proposed Use: ☒ New or ☐ Addition to existingResidential: Acres: 13 ☒ Detached ☒ Attached # of Bedrooms: _____ # Structures/Units: 185Estimate Average Daily Sewer Flow: 48,100 gpd ☐ Septic System Failure (Attach certification)

Commercial/Office: Acres: _____ Estimate Average Daily Sewer Flow: _____ gpd (Attach calculation)

Industrial: Acres: _____ Estimate Average Daily Sewer Flow: _____ gpd (Attach calculation)

Description of Request: 48,100 gpd of sanitary sewer for residential development on site of former concrete pipe plant**Certifications:**

Attach additional sheet(s) if needed.

1. Does request meet Ordinance requirements? *See checklist included. Initial each and attach.*2. What date will Applicant commit to use the capacity requested on a continual basis? 20273. Will project be phased in? ☒ Yes ☐ No If yes, explain capacity in phases over time.Project could be built in phases with partial needs in 2027 and partial needs in 2028

Attach additional sheet(s) if needed.

I understand there are no guarantees of capacity, and a violation of any law, ordinance, regulation or statute of Georgia or the City or County may result in suspension or revocation of any approval.Authorized Applicant Signature: _____ Date: 9-3-24**Section II (Completed by Staff)**Application Complete, and Fee Received: ☒ Check # _____ ☒ Credit Card Authorization (Attach receipt)Is Property inside the approved Overlay District? ☒ Yes _____ NoEntity documentation in order, including proof Applicant authorized to represent Entity? ☒ Yes _____ NoApplicant's history of violations of ordinance, laws, rules and regulations. None

Other Comments: _____

Estimated Average Daily Flow: 48,100 gpd Deane Carley confirmedRecommendation: ☒ Approval ☐ Disapproval (If disapproved, explain why below)Comments: *H. Carley approves no zone requestReviewed By: _____ Date: 10/10/24**Section III – Action Taken**

Request is: _____ Approved _____ Disapproved

Conditions: _____

Approved by: _____ Date: _____

WATKINSVILLE WASTEWATER CAPACITY REQUEST APPLICATION

Authorized Applicant Certification

I certify that the information in the foregoing Application is true and correct to the best of my knowledge and belief, that I have read, understand and agree to abide by the rules and regulations and the Code of Ordinances of Watkinsville and Oconee County, and I understand that this Application is made subject to the rules and regulations established by the City and County. Applicant agrees to comply with all other requirements of the City, County, State, Federal Government and any other applicable entity, and further agrees to abide by the rules, and further certify that I, on behalf of the Applicant, am also authorized to commit that Applicant, and therefore agree to be responsible for any costs and fees that may be reasonably incurred by the City due to this Application.

Applicant, and any and all members, officers, directors, employees and/or partners thereof, agree to defend, indemnify and hold harmless Watkinsville and its agencies and instrumentalities and all their respective officers, members, employees and directors (collectively referred to as "Watkinsville"), from and against any and all claims, demands, liabilities, losses, costs or expenses, (including attorneys' fees), and from the payment of any sums of money to any persons (including third persons; or subcontractors, employees or agents of the undersigned or of Watkinsville), for any loss due to: personal injury, bodily injury, death, or damage arising out of, attributable to or resulting from Applicant's receipt or use of sewer service, as said service is from the County, not Watkinsville; or due to any violation by the Applicant of Watkinsville or Oconee County regulations; or due to violation of the Application or any Federal, State or local law, rule or regulation in connection with the sewer use. If such damage or loss covered by this indemnification is paid by any Watkinsville insurance, Applicant agree(s) to reimburse the payor for such monies paid out. Applicant represents that it has liability insurance of no less than \$100,000 coverage with an insurer listed on the US Treasury Circular 570.

Applicant acknowledges that Watkinsville makes no warranty, express or implied, concerning the adequacy of sewer or other considerations involved in approving the application. Applicant acknowledges that Watkinsville has relied on representations made by Applicant in requesting approval of the Application, including Applicant's representations that Applicant shall meet all Watkinsville requirements, as well as all relevant Federal, State and local laws, rules or regulations in the use of sewer.

APPLICANT SIGNATURE: _____

The foregoing was sworn to and subscribed before me Sept 15, 2022.



My commission expires _____

WARNING: False statements shall be grounds for immediate revocation of this permit or denial of the application or denial of future applications.

WASTEWATER CAPACITY REQUEST

PROCEDURE

1. Authorized Applicant completes Section I of the Watkinsville Wastewater Capacity Application, signs all other required representations and/or certifications required by the City as part of the application process, and submits all paperwork and pays all associated application fees to the City Clerk, or Designee.
2. City Staff screens the application, in accordance with Section 40-3 Wastewater Capacity Allocation Regulations, and recommends approval/disapproval in Section II of the Wastewater Service Application.
3. City Manager (or City Council when requests exceed a daily flow of 500 gallons per day) approves or disapproves the application, in Section III, and notifies the Applicant of the action taken and any conditions, fees, and/or anything else that may be required.
4. Applicant complies with the approval conditions. Connection fees will be paid to Oconee County, as they own and operate the wastewater system.
5. City authorizes Wastewater service to the property and notifies Oconee County of such.

WATKINSVILLE WASTEWATER CAPACITY REQUEST CHECKLIST

INSIDE OVERLAY DISTRICT (See attached map)

Residential Checklist (*Note: Initial each "□" and submit with application*)

Applicants may be allocated wastewater capacity or be allowed to secure a position on the wastewater waiting list for any new residential development or redevelopment within the overlay district (see IV below) if all of the following criteria are met, unless variances are granted by the City as set forth hereinbelow:

- ☒ New residential development or redevelopment within the overlay district. See attached Map.
- ☒ Subject property is zoned for single-family, multi-family or mixed-use.
- ☒ Applicant has an ownership interest in the subject property.
- ☒ Subject property is now, or will be in the future, a public water customer.
- ☒ Construction has design standards that reflect the aesthetics and character of Watkinsville, including without limitation in design and fenestration, and meet all Watkinsville requirements.
- ☒ Development plan for a given lot cannot accommodate a septic system per health department standards.
- ☒ Installation of sidewalk along entire length of property's frontage according to standards established by GDOT's Pedestrian and Streetscape Guide and no less than 5 feet wide. *Note: If an existing sidewalk is in place, it shall be brought up to standards of the DOT Pedestrian and Streetscape Guide, if not already compliant.*
- ☒ Preservation of paths, routes, right of way, intersections, and crossings outlined in any Watkinsville future land use or transportation planning maps and, if plans are finalized, installation of any transportation facilities (vehicular, pedestrian, or other paths).
- ☒ Extension of waste waterline to and through property is required and sole responsibility of applicant. Applicants are subject to County requirements for connection and easements.
- ☒ Conceptual Development plan and/or building permit as defined in the City Code.

Commercial Checklist (*Note: Initial each "□" and submit with application*)

Applicants may be allocated wastewater capacity or be allowed to secure a position on the wastewater waiting list for any new commercial development or redevelopment within the **City limits** if all of the following criteria are met, unless variances are granted by the City as set forth hereinbelow:

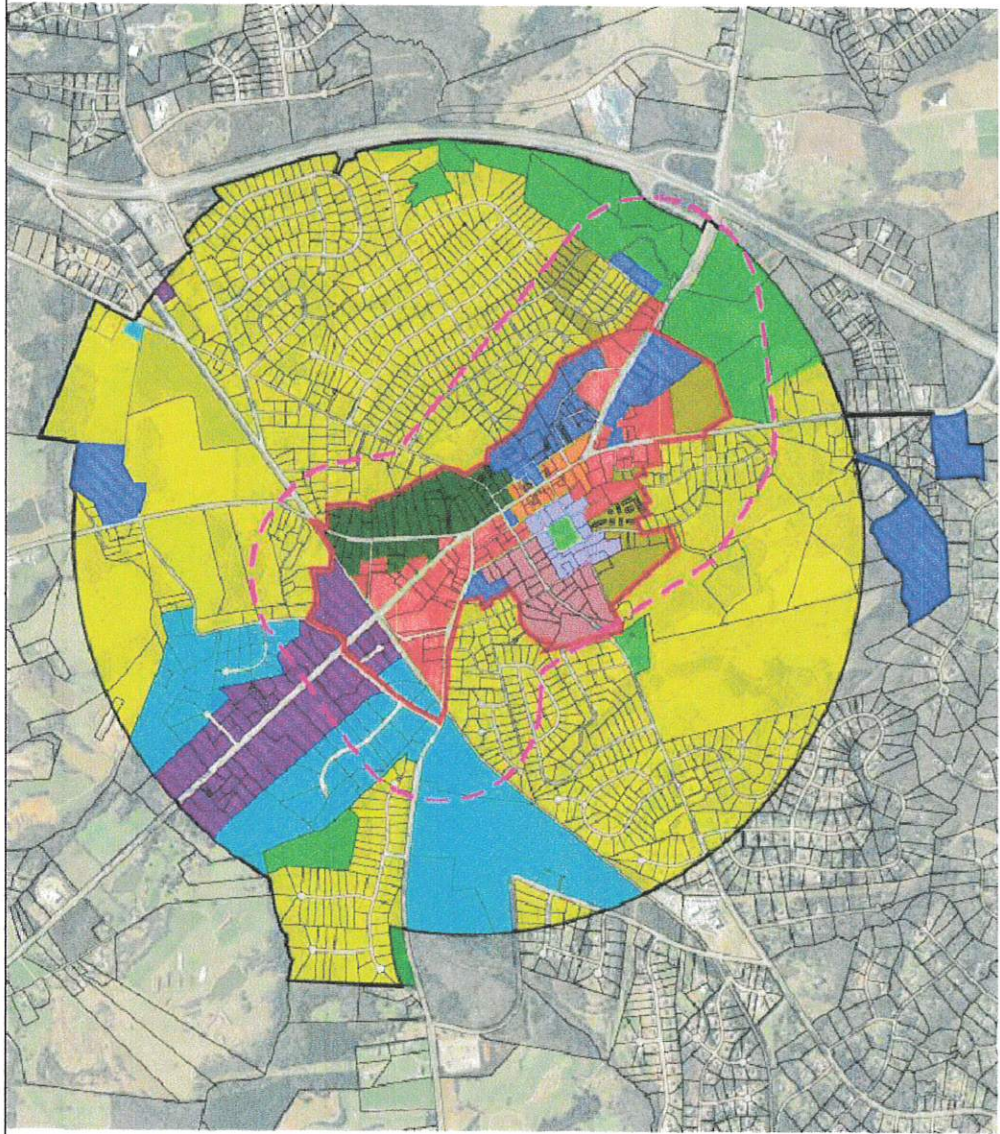
- ☒ Subject property is appropriately zoned for proposed use.
- ☒ Applicant has an ownership interest in the subject property.
- ☒ Subject property is now, or will be in the future, a public water customer.
- ☒ Construction has design standards that reflect the aesthetics and character of Watkinsville, including without limitation in design and fenestration, and meet all Watkinsville requirements unless appropriate variances have been granted by council.
- ☒ If not already required by the Zoning Ordinance, installation of sidewalk along entire length of property's primary frontage according to standards established by GDOT's Pedestrian and Streetscape Guide and no less than 5 feet wide.
- ☒ If an existing sidewalk is in place, it shall be brought up to standards of the GDOT Pedestrian and Streetscape Guide, if not already compliant.
- ☒ Preservation of paths, routes, right of way, intersections, and crossings outlined in any Watkinsville future land use or transportation planning maps and, if plans are finalized, installation of any transportation facilities (vehicular, pedestrian, or other paths).
- ☒ Extension of waste waterline to and through property is required and sole responsibility of applicant. Applicants are subject to County requirements for connection and easements.
- ☒ Approval of a concept plan and/or building permit as defined in the City Code.













OUTSIDE OVERLAY DISTRICT (See attached map)***(Note: Initial each "□" and submit with application)***

Per Section 40-3:Wastewater Capacity Allocation Regulations, "the City reserves the right to consider extending wastewater service outside the overlay district for the express purpose of allowing innovative, generally mixed-use, projects that offer an exceptional or unusual mix of amenities and connectivity, that honor the goals of the City's land use plan, zoning codes, and overall goals of better connecting its citizens. The City expressly wishes to avoid densification of existing neighborhoods or to offer wastewater service to new neighborhoods close to the edges of the city limits or more than ¼ mile from the Downtown (DT) and Historic Main (HM) zoning districts Provided, however, if at least 50% of the development is within the ¼ mile requirement, it may be eligible.

Specific project attributes that allow a project outside the overlay district to merit consideration for residential wastewater service shall include all of the following, unless a variance is granted by the City Council as set forth hereinbelow:

- ☒ Pedestrian and generally non-vehicular orientation, requiring installation of significant sidewalks, paths, and alternative transportation amenities that allow the new development to connect to downtown Watkinsville.
- ☒ Projects must connect to downtown Watkinsville (either the HM or DT zone) via a direct greenway, side path, or a 5 foot or wider sidewalk and generally be compatible with the approved Transportation Study.
- ☐ If existing non-vehicular infrastructure exists, it all must be brought up to current standards to ensure easy non-vehicular connection to downtown, and connect such development to Watkinsville's existing pedestrian network.
- ☒ Pedestrian and non-vehicular connectivity to any churches, schools with more than 100 students, community facilities (libraries, post offices, government offices, etc.) or parks within ¼ mile of the project.
- ☒ Extensive greenspace preservation, including additional parks, recreational amenities, or other assets that improve the environment but may require smaller lot footprints to do so.
- ☒ Extensive installation of environmentally friendly amenities, such as LEED certified structures and buildings.
- ☒ Protection of trees with an emphasis on preservation of large hardwoods (e.g., oaks, hickories, yellow poplars of 12" diameter at breast height (dbh) or greater), large softwoods (e.g., pines, deodar cedars of 12" dbh or greater), and small specimen trees (e.g., dogwoods, redbuds, and sourwoods of 6" dbh or greater), or establishment of a robust tree plan.
- ☒ Green infrastructure and Low Impact Development (LID) practices EPA uses to reduce stormwater runoff and pollution, such as green roofs, rain barrels and cisterns, permeable pavements, bioretention areas, vegetated swales/dry swales, curb and gutter elimination, vegetated filter strips, and sand and organic filters.
- ☒ Extensive mixed-use amenities, including on-site retail, convenience, shopping, medical, recreational, or business amenities that will be utilized by residents of the new development, limiting vehicular trips.
- ☒ Preservation of paths, routes, right of way, intersections, and crossings outlined in any Watkinsville future land use or transportation planning maps and, if plans are finalized, installation of any transportation facilities (vehicular, pedestrian, or other).
- ☒ The project design shall be of quality appearance and materials, meeting all current Ordinance requirements, and be aesthetically harmonious with existing Watkinsville architecture and with classic architectural elements and fenestration of certain historic and historic reproduction buildings in the downtown area, and emphasize historical and /or upscale design details that help increase salability while also helping blend better with existing historic and newer quality homes and/or developments in the City.



	DETACHED RESIDENTIAL
	ATTACHED RESIDENTIAL
	PUBLIC INSTITUTIONAL
	PARKS RECREATION AND CONSERVATION
	EMPLOYMENT CENTER
	DOWNTOWN
	CORRIDOR COMMERCIAL
	CULTURAL ARTS CONSERVATION DISTRICT
	SOUTH MAIN STREET SCENIC CORRIDOR
	MIXED USE OFFICE
	HISTORIC MAIN STREET
	QUARTER MILE OFFSET

CITY OF
WATKINSVILLE
SEWER EXHIBIT
NOVEMBER 21, 2019

SCALE: 1" = 650'

Project Sanitary Sewer & Water Demands
1180 Greensboro Highway
Watkinsville GA

Use	Usage Rate	Qty	Total Demand
Flats	260 gpd/unit	126	32760
Townhomes	260 gpd/unit	43	11180
cottages	260 gpd/unit	16	4160

Total Demand	=	48100 gpd
	=	33.40 gpm

Watkinsville Wastewater Capacity Allocation Summary - Master			City of Watkinsville												
10.10.2024			Wastewater Capacity Allocation - Master Tracking Worksheet												
Request Date	Developer	Project Name	Project Location	Tax Parcel No.	Use	Allocation Requested (gpd)	Allocation Approved (gpd)	Allocation Encumbered (gpd)	Allocation Approval Date	Date of Allocation Application to Watkinsville	Allocation Obligation (in Use) (gpd)	Allocation Approved/ Not in Use (gpd)	Project Status	Requested on Waiting List (gpd)	Comments
3/4/2020	Chad Keller	Wisteria Ridge	75 North Main Street	W 03A 001	Residential	15,166	15,166	15,166	4/22/2020	3/4/2020	21,580	0	Completed		Council approved on April 22, 2020 subject to the development agreement. Note that original request was for 17,246 gpd but the applicant had an outstanding commitment from Oconee County for 2,080 gpd, so the city's allocation was lowered to account for capacity they already had. Accounting for the revised gpd from the County, the city would need to <u>increase</u> its capacity approval by 6,414 gpd to 21,580 (23,660 capacity needed - 2,080 previous County commitment - 15,166 current city allocation).
3/31/2020	Oconee State Bank	Corporate Headquarters	41 North Main Street	W 05 030	Commercial	866	866	866	4/22/2020	3/31/2020	866	0	Completed		Council approved on April 22, 2020.
4/14/2020	Duke Gibbs	Wire Park, LLC	111 Barnett Shoals Rd (1725 Electric Avenue)	C 04 005	Residential	36,000	36,000	36,000	4/22/2020	4/14/2020	0	36,000	In Process		Council approved on April 22, 2020 subject to the development agreement. Council approved Site Development Plans for Phase 1 on 8.19.20 and Phases 2 and 3 on 9.15.20. City has not yet approved building plans for Phase 2 and 3. We will provide to you when available. However, please note the Development Agreement is for 130 residential units. At 260 gpd, the capacity would be 33,800 gpd.
10/21/2020	Edward McDuffie	Construx, LLC (aka: Trove)	130 & 140 Colham Ferry Road	C 04 001, C 04 022	Residential	15,000	15,000	15,000	10/21/2020	10/21/2020	0	15,000	In Process		Council approved encumbering allocation for six (6) months (April 2021) to allow time for applicant to submit site improvement plan to Council for approval. Council approved allocation at February 17, 2021 meeting subject to the development agreement after approving Site Development Plans for Trove subdivision. Council approved Site Improvement Plans on April 21, 2021.
1/5/2021	Classic City Ventures, LLC	Classic City Eats	1290 Greensboro Highway	C 04 002JB	Commercial (Restaurant)	2,250	2,250	2,250	1/5/2021	1/5/2021	2,250	0	Completed		Total capacity need is 2,250 gpd. However, this location has existing/base sewer capacity with the County. Per the Amendment to 1991 Water and Sewer Agreement between the city and county, the city is only responsible for the difference between the baseline sewer capacity and the additional capacity needed.
1/6/2021	Capital R Enterprises, Inc.	Certified Clean Care	1041 Business Boulevard	C 04J 012	Commercial (Cleaning Business)	428	428	428	1/5/2021	1/6/2021	428	0	Completed		Applicant has a failing septic field with no available land upon which to construct another field. Applicant has provided a letter verifying this.
3/8/2021	Third Thrasher Properties, LLC		64 White Street	W 05 079	Residential	260	260	260	3/17/2021	3/8/2021	260	0	Completed		Council approved on March 17, 2021. House is being renovated. Oconee County Environmental Health has provided a letter noting septic system failure with insufficient room to replace.
4/7/2021	Robert H. Smith		105 McRee Street	W 07 010	Residential	260	260	260	5/19/2021	4/7/2021	0	0	EXPIRED		Council approved on May 19, 2021 conditional upon the applicant meeting the wastewater capacity criteria. In an October 29, 2021 letter to city, applicant stated he would "not be seeking a building permit for the house." On November 20, 2021, allocation EXPIRED for failure to obtain building permit.
4/14/2021, 5/19/2021	Christopher, Greenway, Booth, and Beverly Searles Foundation	Waters Walk	Durham & Water Streets	W 05 038, W 05 039, W 05 040, W 05 055, W 05 056	Commercial (55+ age-restricted apartment complex)	15,600	15,600	15,600	5/19/2021	4/14/2021, 5/19/2021	0	15,600	In Process		Applicant is pursuing development of a 60 unit attached residential development. Council approved allocation at May 19, 2021 meeting subject to the development agreement. Applicant has applied for Low Income Housing Tax Credits (LIHTC) from the Georgia Department of Community Affairs. Applicant should know in November 2021 if LIHTC have been awarded. Applicant will be scheduled for Council's November 2021 meeting to provide a progress update. Update was provided to Council at November 17, 2021 meeting that LIHTC were received. Council approved site improvement plans at April 20, 2022 meeting. On February 7, 2023, applicant submitted a building permit for construction of project. On July 28, 2023, demolition permits were issued. NOTE: Applicant has until January 28, 2024 to begin project in earnest or risk losing capacity granted.
6/2/2021	William T. Bishop	Roads End	1092 Business Boulevard (Jerry Smith Drive)	C 04K 010A	Commercial	400	400	400	6/16/2021	5/21/2021	400	0	Completed		Per Oconee Water Resources, 400 gpd is the correct calculation for the 8,000 square foot building. Once the capacity fees have been paid to the County, this portion of the project can move forward. OWR is not able to confirm the capacity request for the second building (estimated at 9,000 square feet. Since it is proposed for 2022 and no calculations were provided for the 9,000 square foot building, OWR suggests holding off on approving sewer capacity until closer to time for construction. Council approved site improvement plans for the first building (8,000 square feet) on June 16, 2021.
4/27/2022	Edward Van Giesen		84 Thrasher Drive	W 05 086	Residential	260	260	260		5/3/2022	0	0	EXPIRED		Applicant is looking to develop the lot. Waiting on letter from County Environmental Health Department. On 5/18/22 Council approved capacity conditional upon letter from Environmental Health and progress within 6 months. On November 18, 2022, allocation EXPIRED for failure to obtain a building permit.

Request Date	Developer	Project Name	Project Location	Tax Parcel No.	Use	Allocation Requested (gpd)	Allocation Approved (gpd)	Allocation Encumbered (gpd)	Allocation Approval Date	Date of Allocation Application to Watkinsville	Allocation Obligation (in Use) (gpd)	Allocation Approved/ Not in Use (gpd)	Project Status	Requested on Waiting List (gpd)	Comments
1/4/2023	Oconee Schools	Instructional Support Center	N. Main Street	W 03006	Institutional	2,063	938	938	1/18/2023	1/4/2023	0	567.50	In Process		Applicant submitted paperwork indicating a wastewater capacity request of 24,225 gpd based on 884 employees. OCS Ricketson stated the correct number of employees is closer to 75. The applicant's engineer referenced sewer demand calculation (gpd) from the Georgia Department of Human Resources On Site Waste Management Manual. Using this calculation and the revised number of employees, the estimated wastewater capacity needed is 2,063 gpd. On 1/18/23, Council approved capacity requested. City defers to the capacity calculation provided by Oconee County of 937.50 gpd (rounded to 938 gpd). UPDATE: City acknowledges revision of March 29, 2024 and has adjusted the city's allocation to 567.50.
1/19/2023	Ben McElhannon		84 Thrasher Drive	W 05 086	Residential	260	260	260	1/20/2023	1/19/2023	260	0	Completed		Applicant is looking to develop the lot and provided a letter from Oconee County Environmental Health Department noting lot was not conducive to a septic system. On 1/20/23 Manager Dickerson approved administratively, per City Code 38-2(c)(1) d.
2/1/2023	Rhett Hall		76 Colham Ferry Extension	W 08 006	Residential	260	260	260	2/17/2023	2/1/2023	0	0	EXPIRED		Applicant provided letter from Oconee County Environmental Health indicating a septic system failure. On 2/17/23, Manager Dickerson approved administratively, per City Code 38-2(c)(1) d. NOTE: Oconee County Water Resources has stated that there is no current connection to the sewer line available. Any connection issues would need to be addressed by the property owner. On August 17, 2023, allocation EXPIRED for failure to make a connection, as Oconee County does not have a line close by, and resident has not paid for construction of a sewer line.
4/3/2023	Saint Joseph Enterprises, LLC	Valero gas station	1461 Greensboro Highway	C 04I 008AB	Commercial	260	260	260	4/19/2023	4/3/2023	0	0	EXPIRED		Property owner has continued to have issues with an oversaturated drain field which is causing septic system failure. Owner provided documentation from septic service on dates when tank had to be pumped as a result. NOTE: Oconee County Water Resources has stated that connection is not available. On November 19, 2023, allocation EXPIRED for failure to obtain a building permit.
2/1/2023	Nathan Mende	Boxerworks	1461 1/2 Greensboro Highway, Suite A	C 04I 008AG 02	Commercial	260	260	260	4/19/2023	2/1/2023	0	0	EXPIRED		Property owner has continued to have issues with an oversaturated drain field which is causing septic system failure. Owner provided documentation from septic service on dates when tank had to be pumped as a result. NOTE: Oconee County Water Resources has stated that connection is not available. On November 19, 2023, allocation EXPIRED for failure to obtain a building permit.
3/29/2023	Jake Rowe	JR Taxidermy	1461 1/2 Greensboro Highway, Suite B	C 04I 008AG 01	Commercial	260	260	260	4/19/2023	3/29/2023	0	0	EXPIRED		Property owner has continued to have issues with an oversaturated drain field which is causing septic system failure. Owner provided documentation from septic service on dates when tank had to be pumped as a result. NOTE: Oconee County Water Resources has stated that connection is not available. On November 19, 2023, allocation EXPIRED for failure to obtain a building permit.
3/29/2023	Len Hoffman	Hoffman Automotive Machine	1461 1/2 Greensboro Highway, Suite C	C 04I 008AGA 03	Commercial	260	260	260	4/19/2023	3/29/2023	0	0	EXPIRED		Property owner has continued to have issues with an oversaturated drain field which is causing septic system failure. Owner provided documentation from septic service on dates when tank had to be pumped as a result. NOTE: Oconee County Water Resources has stated that connection is not available. On November 19, 2023, allocation EXPIRED for failure to obtain a building permit.
5/3/2023	Big Springs Properties, LLC		1240 (1210) Greensboro Highway	C 04 002F	Commercial	780	780	780	5/17/2023	5/3/2023	0	780	In Process		Property owner is replacing one of the structures which was damaged by fire last year and is requesting sewer service for all three buildings. NOTE: Oconee County Water Resources has confirmed that 780 gpd of capacity is needed. NOTE: Pulled building permit around 11/23. Construction began ~ 2/22/24.
4/14/2023	Bill Bishop	Hillside Business Park	Jerry Smith Drive/Morrison Street	Parcel C 04K 010	Commercial	3,120	3,120	3,120	6/21/2023	4/14/2023	0	3,120	In Process		Property owner is building 12, 1600 ft ² warehouse buildings with one restroom per building. NOTE: Oconee County Water Resources has calculated that 3,120 gpd of capacity is needed.
12/6/2023	Andy Barrs	PharmD On Demand	1080 Experiment Stn Rd	Parcel W 03 001D	Commercial	2,080	2,080		12/20/2023	12/6/2023	0	0	In Process		NOTE: Oconee County Water Resources has provided a capacity credit of 260 gpd for the use (i.e.: Oconee Library) that previously existed in this location. It has been figured into amount requested of 2,080 gpd.
2/21/2024	Brett Atchley	Accessory Dwelling Unit	33 S. Main Street	Parcel W 13 053	Residential	260	260		3/13/2024	2/21/2024			In Process		Applicant is looking to add a dwelling unit. Oconee Water Resources provided an email stating sewer is available at the address. Owner has letter that existing lot cannot accommodate a septic system. On 3/13/24, Manager Dickerson approved administratively, per City Code 38-2(c)(1) d.

[illegible]

Julie Klein

From: M. Sapp <margaret.sapp@gmail.com>
Sent: Tuesday, October 8, 2024 11:06 AM
To: Chuck Garrett; Brian Brodrick; Connie Massey; Brett Thomas; Christine Tucker; Jeff Campbell; Julie Klein
Subject: Greensboro Hwy development

Follow Up Flag: FollowUp
Flag Status: Flagged

Dear Mayor Brodrick, City Council members, and Ms. Klein,

I live with my husband and two kids in the Calls Creek subdivision. We've been here eleven years. We love living in Watkinsville, and it's come to feel like home.

In recent years, we've been concerned with the rapid development and increasing traffic in Watkinsville. For example, we feel the Wire Park development has added too many residential units in a crowded space. There is inadequate parking for the library, which we used to visit weekly. It's such a hassle now, we rarely go.

Our kids ride the bus to school, mainly so we can avoid driving in Butler's Crossing. (We've been hit there twice during the construction, and my car was totaled.) On the few mornings we need to drive the kids to school, we can sit in line at the intersection of Main Street and Simonton Bridge Rd for up to 10 minutes, waiting to turn right. In the afternoons and early evenings, traffic has backed up past the old library building with cars waiting to turn right onto Main Street. It is a crowded bottleneck.

We believe that it would be a huge mistake to approve yet another residential development -- even the "scaled back" plan -- off Greensboro Highway. At minimum, this will add at least 200 more cars to the traffic flowing in/out of downtown Watkinsville on a daily basis. There is already a significant traffic problem in downtown, and there is simply not enough room for the increased traffic this will bring.

We are disappointed not to have a vote in this matter, but I hope you might still consider our input. We are optimistic that the quality of life that makes Watkinsville so special can be maintained.

Respectfully,
Margaret Sapp
1190 Calls Creek Drive

Julie Klein

From: Barry Cook <bcook@uga.edu>
Sent: Tuesday, October 8, 2024 10:26 AM
To: Julie Klein
Subject: 15 South

Follow Up Flag: FollowUp
Flag Status: Flagged

I read about the proposal for the 15 South Development this week, and I have some concerns. One of my concerns is related to traffic. Traffic is already a nightmare in Watkinsville, especially in the mornings and evenings. Traffic is often already backed up through town, past Jittery Joe's, and to the railroad tracks. With the additional 1, 2, and 3 bedroom apartments would bring an average of 300 extra vehicles. Watkinsville simply cannot tolerate this extra traffic.

In addition, the infrastructure within Watkinsville and Oconee County cannot support the additional households. In addition to traffic and obvious road concerns, I have other concerns related to the businesses needed to support an additional households.

With added families moving onto the south end of the county, more students will be attending schools in the OCHS cluster. The schools within the OCHS cluster already have very little room for growth. With the existing buildings, supporting additional students would put a strain on the school system. For example, OCMS is already twice as large as DCMS and MBMS with little room for growth. An additional concern for added families is the already stretched Parks and Recreation department. Field space is already limited, and I have concerns about how the Parks and Rec Department can support additional children.

With the additional housing at Wire Park about to open, it would be irresponsible to add additional housing without waiting to see how these already established condos are going to affect the community.

I appreciate your consideration in this matter and understand that I think this is very short sighted and would be a very bad use of this location and bad for all residents of Watkinsville and Oconee County.

Thank you,
Barry Cook
101 Flat Rock Road Watkinsville, GA 30677

Julie Klein

From: sledgemon <sledgemon@gmail.com>
Sent: Wednesday, October 9, 2024 6:10 AM
To: Julie Klein
Subject: 15 South Development

I would like to voice my disapproval of this development for all the reasons many people disapprove; traffic through Watkinsville, and water resources not being adequate for current residents. Traffic through Watkinsville is horrific and just keeps getting worse. There is only one close grocery store which is always overcrowded. Why do you keep adding more development without infrastructure to support this? Please do not let this be approved. The small town feel that people want here has all but disappeared. Please do not continue to keep adding to the demise.

Sincerely,
Sandra

Sent via the Samsung Galaxy S21 FE 5G, an AT&T 5G smartphone

Julie Klein

From: Cindy Roach <croach0101@gmail.com>
Sent: Friday, October 11, 2024 12:38 AM
To: Julie Klein
Subject: Development - 15 South

I was out of town and unable to attend the meeting to discuss 15 South.

As a lifelong resident of Oconee, I've watched the growth. I understand that growth is inevitable. Please reconsider the size and impact of this development. The thought of at minimum an extra 180+ cars entering hwy 15 or 441/Macon Hwy seems like a major traffic issue. Just today, I sat on Macon Hwy through 3 light changes while the traffic was so backed up.

Can you publish the data on traffic studies that the city has done to understand the impact?

Can you discuss and publish the coordination the city has had with the school system about the potential for growth?

I would ask that you reconsider the size of development that you approve.

Thank you .

Cindy Roach
51 Water St
Watkinsville 30677

Julie Klein

From: dana blair <danajoblair@yahoo.com>
Sent: Friday, October 11, 2024 9:13 PM
To: Julie Klein
Cc: Chuck Garrett; Connie Massey; Brett Thomas; Christine Tucker; Jeff Campbell
Subject: Pipe plant

Follow Up Flag: Flag for follow up
Flag Status: Flagged

City council - I want to express my concerns about the revised plan for the former pipe plant property. The new plan is STILL high density housing. The impact it would have on schools, traffic and infrastructure would create lasting negative consequences.

Watkinsville's appeal to most, is its small town feel. This plan is a sure way to end that. I understand the developer does not live in the city, and would not suffer the effects this development would cause. Those of us who do live in town, are concerned about how wire park and the apartments behind OSB will impact the town, once they are fully occupied.

Please no more high density developments inside the city limits. What we have now is enough.

Dana Blair

Sent from my iPhone

Julie Klein

From: Carina Martin <carinatmartin@gmail.com>
Sent: Tuesday, October 15, 2024 1:10 PM
To: Julie Klein
Subject: Opposition to the 15 South Community

My name is Carina Martin, my husband, daughter and I live in Pebble Creek subdivision off Hwy 15. We have lived in Oconee since 2019. We are opposed to the rezoning of the pipe plant property on Hwy 15.

I considered speaking at the City Council meeting but after reading a commenter on FB suggesting "non residents of the city of Watkinsville sucking all the oxygen out of the room" I decided an email would be sufficient.

I am opposed to the rezoning for the following reasons

- The Wire Park community is still in the building process. Until the community is complete and fully housed, the city and county has no idea the full impact it will have on the schools, utilities, government services, traffic, etc.
- Another community that is still in the building phase is the Trove community, although homes are occupied, full impact on the city is unknown.
- Many houses sprinkled throughout the city (New High Shoals Rd and Simonton Bridge Rd) are in the building process that will most likely impact the schools, traffic, utilities and government services as well.
- There is another community, a senior living complex, currently in the building process that will house 99 rooms, this will affect traffic, utilities and government services.

I have heard the mayor mention a bypass being planned but I would imagine that it is months, if not years, before it begins and is completed. In the meantime both county and city residents continue to fight the commute through downtown and continue to contend with the daily construction on Experiment Station (I'm guessing several more months of that construction). I do not understand why the city continues the residential growth without allowing the infrastructure time to catch up. Adding another large multi community mix to the city will only add more traffic, more construction, strain on the school system, strain on government services. It will impact our natural resources as well as create more pollution. The businesses that have been added to Hwy 15 in the last 5 years have built aesthetic pleasing sites. The golf club business, although a Butler building, did add wood and brick, Classic City Eats is a nice brick building, the newly renovated building that had fire damage also looks good. My point is... an industrial business more than likely would look fine on that property and the argument that only a residential community would work there is not necessarily true. It is a gamble as to what type of business will end up on the property but another residential community adds more people to an already crowded city.

I am asking that the council vote against rezoning of this property and give the city and county time to build infrastructures to accommodate the fast growing area.

Thank you,

Julie Klein

From: Elianna Bisogno <enbisogno@gmail.com>
Sent: Tuesday, October 15, 2024 2:42 PM
To: Julie Klein
Subject: Regarding 15 SOUTH

As Watkinsville residents who travel through where 15 south is proposed to be located our household is vehemently opposed to the proposed rezone of 15 SOUTH. This will create an unnecessary burden to our schools and our roadways. Wire park isn't even finished with its build out yet so why are we planning more apartment housing? We adore the charm that Watkinsville has and wholeheartedly believe that this proposal for 15 south destroys that charm and image that Watkinsville strives to uphold.

As concerned citizens we do hope that our voice is heard as we won't be able to attend the meeting tomorrow.

Thank you,
Marco and Elianna Bisogno

Sent from my iPhone

Julie Klein

From: Martin Bruno <madisonmartin@gmail.com>
Sent: Tuesday, October 15, 2024 2:47 PM
To: Julie Klein
Subject: Concerns about the 15 South project

Please allow me to voice my disapproval of the 15 South project. I am 100% against it.

Thank you,
Martin A. Bruno
1950 Stonewood Field Rd.
Watkinsville, GA 30677-6165
561-459-7138

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From: [Danielle Hannah](#)
To: [Julie Klein](#)
Subject: VOTE NO 1180 Greensboro Hwy Development
Date: Wednesday, October 16, 2024 4:31:24 PM

To our Mayor and City Council Members,

I am writing to you today as a resident of Oconee County. As a parent of an OCHS student, an OCMS student, and a 3-year-old who will be headed to CFES sooner than later. As a family that has owned and operated a business in downtown Watkinsville. As a family that has been in Oconee County since 2012. And I am asking you to VOTE NO against the proposed development on 1180 Greensboro Hwy. development.

We have been witnessed to what was the slow development in Watkinsville (and county as a whole) to the jump in mass expansion over the last several years, and it is slowly deteriorating the small-town charm we love. Traffic alone from our residence on Antioch Church Road through Watkinsville is severely congested. Morning commute for school drop-off is an immense snail's pace. From OPA on Highway 15 to OCMS alone is a minimum of a 40-minute venture. Traffic is backed up from Main Street down Highway 15 every single morning, and every single afternoon. And is, ironically, always past the location for this proposed development. With the incorporation of the new neighborhood Trove on Colham Ferry Road, Wire Park, as well as the apartment complex Wisteria Ridge, the population within the immediate area alone has already risen dramatically. And both the Trove and Wire Park developments are not even fully completed yet---we still do not know the long-term ramifications those developments will have on the community once they are done. Adding this into the community without even knowing the effects of the other developments seems exceedingly irresponsible and a dereliction of duty.

Our roadways and city infrastructures cannot handle this immense, additional development. Our schools on the southside cannot handle this continual, detrimental increase. Our recreation fields and sports programs are overloaded currently as well and can barely accommodate the amount of student athletes that sign up to play. Oconee County prides itself on having the best public school system in the state, but I fear that will be a thing of the past if we allow this dramatic GROWTH and GREED to overtake our values and degrade our community until it is unrecognizable.

So, with that said, I implore you to vote against this development. I implore you to do right by this city, this county, and all of the residents who are vehemently opposed to the further overload and burdens this inflict. I beg you to put our community first.

An Overly Concerned Citizen,

Danielle Hannah

OCONEE COUNTY, GEORGIA

PARKING AGREEMENT

This Parking Agreement is made October 16, 2024, between First Christian Church of Watkinsville (Church) and CITY OF WATKINSVILLE (City).

1. PREMISES: Church owns the parking facility on Main Street, WATKINSVILLE, ("Parking Facility"). The premises to be used by City are the spaces of the Parking Facility, constituting approximately .25 acres, shown on Exhibit A (Premises).

2. TERM: The initial term is for 8&1/2 months, commencing October 17, 2024, through June 30, 2025. This may be extended for two successive 1-year increments at any time, if mutually agreed in writing. Both parties have the capacity to bind themselves to the terms of this contract, subject to law, including not binding a successive City council. With 90 days' notice, either party may terminate for convenience.

3. USE OF PREMISES: City shall use Premises for public parking Monday through Saturday during the hours downtown merchants are open for business, provided however, Church will have use of Premises during those hours for other Church activities such as weddings and funerals. Church will have first claim for such, as Church use needs remain the first priority. At such time as the Premises is needed for Church events, the Premises will be closed to the public, and this will be enforced by the Police Department. City will be notified at least 48 hours in advance of such activities and will close the Premises for public use.

City will work with local business owners and Church to prohibit non-shopper parking and car-pooling and enforce the prohibition. The Police Department will consistently monitor the Premises for non-shopper parking and for car-pooling and Mayor and/or DDA director will speak to adjacent property and business owners.

Mayor, Manager, and/or DDA director will meet with the Church pastor or board designee in the first quarter of each year to discuss the upcoming year's special events and ensure all parties are aligned for use of Premises for special events, including Church's annual Chicken Mull sale, Fall Festival, downtown trick or treating, and the Christmas Parade. City understands Church may choose not to allow Premises to be used for public use during special events.

If Church desires, a portion of the Premises will be designated "for Church use only" at all times, and the prohibition against non-Church parking in that specified area will be strictly enforced; rent may be reduced pro rata amount if portions of Premises are designated Church use only. Notice of closure shall be sent to Manager Dickerson sdickerson@cityofwatkinsville.com and Mayor Brodrick bbrodrick@cityofwatkinsville.com.

4. RENT: City shall pay Landlord \$20/space/month for 19 spaces as Annual Rent, prorated for the initial 8&1/2-month term and paid on or before November 1. Should lease be extended, City shall pay Landlord in one annual installment, in advance, without deduction or offset, on or before September 1. City shall pay the annual *ad valorem* taxes on Premises, if such exists. If Church does not want rent, City will consider a similar contribution to an appropriate local organization if it provides services that advance the public health, safety and welfare and does not violate the gratuities clause of the state constitution. City will compensate Church for use of the Premises by paving and striping the Premises as needed if Church requests such, and by general upkeep and maintenance.

5. INSURANCE: City agrees to maintain General Liability Insurance and furnish a Certificate of Insurance to Church. The Certificate of Insurance is attached.
6. NON-LIABILITIES OF CHURCH: Church shall not be liable to City for damage in or about the Premises, unless directly resulting from Church's negligent act, nor shall Church be liable for other damages, except those from its own gross negligence or wrongful act. Church shall not be liable to City or its employees, invitees, guests or customers for personal injury or property damage, unless from Church's own gross negligence or wrongful act. City waives such claims and agrees to indemnify, defend and hold harmless Church against same.
7. REPAIRS: Notwithstanding Georgia Law, Church shall have no duty to make any repairs or improvements. City accepts the Premises "as is." City shall, through the term of this Agreement and any agreed on renewals, at its expense, maintain in good order and repair the Premises, and take all steps needed for protection of the Premises necessary to comply fully with applicable laws, codes and regulations. City agrees to return said Premises to Church at the expiration, or prior termination, of this Agreement, in good condition and repair, less and except normal wear and tear. Specifically, City agrees to i) pave, repaint and/or stripe the Premises as needed, ii) remove all trash and debris from the Premises on a regular schedule and iii) maintain landscaping as necessary to maintain the Premises clean and free from debris as needed.
8. INDEMNIFICATION OF CHURCH: City shall indemnify and hold harmless Church against losses, damages and expenses incurred or sustained, including attorneys' fees, from destruction of, and/or injury or damage to life, person or property in or upon the Premises, or any portion thereof, or growing out of City's negligent use or occupancy or misconduct, unless caused by negligent, reckless or intentional conduct of Church.
9. NO NUISANCE: City shall not create nor permit to be created or to exist on the Premises any nuisance, public or private, nor violate any applicable law, ordinance or governmental regulation. If any action is brought against Church by reason of any such claim, City, on notice from Church, shall defend such at City's cost, and pay all costs and attorneys' fees and any judgment or decree and interest thereon which may be entered against Church, unless caused by the negligent, reckless or intentional conduct of Church. The obligations imposed on City by this paragraph accruing prior to any termination of this Agreement shall survive such termination.
10. PARKING USE: Church warrants that if City shall perform the obligations herein, City shall have, during the term hereof, the agreed-upon parking use of the Premises during the times allowed above, except as otherwise agreed.
11. SUCCESSORS ASSIGNS, ENTIRE AGREEMENT, SEVERABILITY: This Agreement and all covenants, conditions and agreements herein shall be binding on and inure to the benefit of the parties and their heirs, executors, successors and assigns. This Agreement sets forth all promises, agreements, and understandings between the parties concerning the Premises. No alteration, amendment, modification, change or addition shall be binding on Church and City unless agreed to in writing by both. If any provision of this Agreement shall be held unenforceable, the validity and enforceability of the remainder Agreement shall not be affected.
12. NOTICES: All communications to be given hereunder shall be in writing (unless otherwise expressly provided herein) and shall be addressed and delivered to each party at the addresses below. Any such communication shall be considered given or delivered, as the case may be, on

date of receipt. Rejection or refusal to accept or inability to deliver because of changed address of which proper notice was not given shall be deemed to be receipt. By giving prior written notice thereof, any party may from time to time and at any time change its address for notices hereunder: First Christian Church of Watkinsville, Building Committee, 2 Main St. Watkinsville, GA 30677; City of Watkinsville, Attn: Mayor, P.O. Box 27, Watkinsville, GA 30677.

13. AUTHORITY: The parties signing have authority to bind the entity on whose behalf they sign.

14. IMPROVEMENTS: Church grants City the right, having received Church's prior written approval, to improve the Premises for parking. Any permanent additions become the property of Church. City shall not add landscaping or other non-parking improvements without express approval from Church. Any work shall be accomplished in a good workmanlike manner in compliance with all laws, ordinances, regulations, and statutes. City shall not permit to be created nor to remain undischarged any lien, encumbrance or charge arising out of any work or work claim of any contractor, mechanic, laborer or materialman which might be, or become, a lien or encumbrance or charge on the Premises, nor shall City permit any pledge, mortgage, financing statement or other lien or financing instrument against the Premises. If such is created or filed against the Premises, City shall, within 10 days after notice of the filing, or such longer period approved by Church, or any shorter period as may be required by the terms of any Mortgage, cause the same to be discharged of record by payment, deposit, bond or other security given.

IN WITNESS WHEREOF, the parties execute this under their hands and seal the date above.

CITY OF WATKINSVILLE

By: _____ (SEAL)
Mayor

Attest: _____ (SEAL)
City Clerk

FIRST CHRISTIAN CHURCH OF WATKINSVILLE

_____ (SEAL)