

Appendix

City of Belmont
Memorandum of Understanding (MOU)



City of Belmont
TIA Update Memorandum of Understanding

Date: April 7, 2022

NOTE: This is an update to the approved Henry Chapel Residential Development TIA (February 2018) to reflect development build-out in phases and to account for changes within the study area since the original TIA.

Project Information

Project Name: Henry Chapel Residential
 Project Location: N of Henry Chapel Rd, E of NC 273
 Project Owner: Turnstone Group, LLC

Applicant Information

Applicant Name: Jacque Mancher
 Applicant Telephone: (404) 477-6805
 Applicant Email: jmancher@turnstonegroup.com

Application Request: Major development plan
 (eg. Rezoning, preliminary or final plat, special use permit, site plan, etc.)

Existing

Existing Zoning: GR, SR, SPP-O
 Existing Land Use: Undeveloped/Wooded
 Parcel Size: ± 247.88 acres

Proposed Development

Proposed Zoning: N/A
 Proposed Land Use: Residential
 Proposed Size/Density: 628 SF Homes
 Proposed Build-Out Year: 2023 (Ph 1A), 2024 (Ph 1B), 2025 (Ph 2), 2026 (Ph 3)

Trip Generation Table (ITE 11th Edition):

ITE LUC	Land Use	Intensity	Daily	AM Peak Hour			PM Peak Hour		
				Total	In	Out	Total	In	Out
Phase 1A (2023)									
210	Single-Family Detached Housing	126 DU	1,248	92	24	68	123	77	46
Phase 1B (2024)									
210	Single-Family Detached Housing	244 DU	2,292	168	44	124	230	145	85
Phase 2 (2025)									
210	Single-Family Detached Housing	452 DU	4,042	294	76	218	410	258	152
Full Build-out (2026)									
210	Single-Family Detached Housing	628 DU	5,471	397	103	294	559	352	207

Proposed Access:

Completed in Phase 1A

- Access 1 – Full-movement connection to Henry Chapel Rd approx. 1,500’ east of S Point Rd (NC 273)
- Access 2 – Full-movement connection to Henry Chapel Rd approx. 1,200’ east of Access 1

Completed in Phase 2

- Access 3 (Timber Ridge Rd) – Extension of Timber Ridge Rd east of its current terminus
 - Note that Timber Ridge Rd currently stubs for a potential future connection to the east and would provide access indirectly to S Point Rd (NC 273) via Colonial Dr and Forest Hill Rd within the South Hill Estates neighborhood.

Scenarios to be Analyzed:

- 2022 Existing Conditions
- 2023 Background Conditions
- 2023 Build **Phase 1A** Conditions
- 2024 Background Conditions
- 2024 Build **Phase 1B** Conditions
- 2025 Background Conditions
- 2025 Build **Phase 2** Conditions

- 2026 Background Conditions
- 2026 Build **Phase 3 (Full Build)** Conditions
- 2031 Build Conditions + 5 years
- Other: _____

Background Growth Rate: 2.5% (based on ADT data along S Point Rd btwn 2002-2018 w/ consideration of ADs)

Peak Hours: 6:30–8:30 AM, 4:30–7:00 PM Other: 6:30–8:30 AM, 2:30–7:00 PM

Intersections to be Studied:

Intersection		Type of Analysis	
		Signalized	Unsignalized
1.	S Point Road (NC 273) and Armstrong Road (NC 273)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2.	S Point Road (NC 273) and Henry Chapel Road	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3.	S Point Road (NC 273) and Forest Hill Road	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4.	Forest Hill Road and Colonial Drive	<input type="checkbox"/>	<input checked="" type="checkbox"/>
5.	Colonial Drive and Timber Ridge Road/Access 3	<input type="checkbox"/>	<input checked="" type="checkbox"/>
6.	S Point Road (NC 273) and Belmont Middle School/Belwood Drive ¹	<input checked="" type="checkbox"/>	<input type="checkbox"/>
7.	S Point Road (NC 273) and Stowe Road/McKee Farm Lane	<input type="checkbox"/>	<input checked="" type="checkbox"/>
8.	S Point Road (NC 273) and South Point HS/Red Raider Run	<input checked="" type="checkbox"/>	<input type="checkbox"/>
9.	S Point Road (NC 273) and R L Stowe Road/Nixon Road	<input checked="" type="checkbox"/>	<input type="checkbox"/>
10.	Henry Chapel Road and Access 1	<input type="checkbox"/>	<input checked="" type="checkbox"/>
11.	Henry Chapel Road and Access 2	<input type="checkbox"/>	<input checked="" type="checkbox"/>

¹ Belwood Dr assumed to be realigned in all future years to tie into signal at BMS as part of Smith Farm development.

Approved Developments:

Development	Land Use/Intensity	% Build-out	TIA Included?	Required Improvements
Amberlee (Nixon Rd)	188 Single-Family units	55%	Yes	<i>Required IMPs at study intersections have already been constructed</i>
Rivermist (N of Bowen Rd)	86 Single-Family units	0%	No	No required IMPs at study ints <i>(SBL on S Point Rd at site drive)</i>
McLean (Armstrong Rd/S New Hope Rd)	845 Single-Family units 100 Townhome units 125k SF Shopping Center 36k SF Marina/boat storage 2k SF Ship store 28k SF Restaurant	50% (of approved trip gen)	Yes	<i>No required IMPs at study ints</i>
Belmont Town Center (Btwn Stowe Rd & R L Stowe Rd)	16 Single-Family units 92 Townhome units 27,800 SF General Office 21,600 SF Specialty Retail 53,000 SF Supermarket 4,330 SF Fast-Food Restaurant 14 FP Gas Station	90% (of approved trip gen)	Yes	<i>Required IMPs at study intersections have already been constructed</i>
South Fork ¹ (S of Armstrong Ford Rd)	808 Age-Restricted SF units 50k SF Grocery 15k SF Pharmacy 10k SF Fast-Food Restaurant 30k SF General Retail 25k SF Medical Office	0%	Yes	<u>S Point Rd/R L Stowe Rd/Nixon Rd</u> - EBR w/100'
Smith Farm (NE of Belwood Dr/NC 273)	19 Single-Family units 57 Townhome units	0%	No	<u>S Point Rd/Belwood Dr/Belmont MS</u> -Realignment of Belwood Dr to tie into signal at BMS; -SBL w/ 100'

¹ Inclusion of South Fork development will be dependent on build-out years for each phase.

Funded TIP/CIP projects:

- **S Point Rd/Armstrong Rd (NC 273) Roundabout (U-6150)**
 - ROW & Utilities – FY 2028
 - Construction – Beyond 10-yr funded STIP window
 - Based on input at TIA Scoping Meeting and given the current schedule (March 2022 STIP) with CNST unfunded, U-6150 will not be included analyses.

Projects identified in adopted Transportation Plans:

Project	Description	Impact to Site	Planning Document
<i>Roadway Projects</i>			
S Point Road (NC 273) Widening	Widen to 4-LN boulevard between R L Stowe/Nixon Rd and Armstrong Rd (NC 273)	NA	-Belmont Comp LUP (2018) -2050 MTP (Unfunded) -GCLMPO CTP (2021)
Belmont-Mt. Holly Loop (South Fork Parkway)	Recommended 4-LN boulevard that ultimately connects South Point Rd (NC 273) in Belmont to N Main St (NC 273) in Mt Holly; Multi-use path planned as part of Belmont-Mt Holly Loop	NA	-Belmont Comp LUP (2018) -2050 MTP (Unfunded) -GCLMPO CTP (2021)
Catawba Crossings	Recommended 4-LN boulevard that connects I-485 in Mecklenburg County to S New Hope Rd (NC 279) in Gaston County Bike/Ped accommodations planned for new alignment	NA	-Belmont Comp LUP (2018) -2050 MTP (Unfunded) -GCLMPO CTP (2021)
E/W Boulevard Connector	Recommended 2-LN boulevard w/ median & turn pockets connecting the new signal at BMS to the west to connect to South Fork Pkwy Multi-use path along new alignment	NA	-Belmont Comp LUP (2018)
<i>Multimodal Projects</i>			
S Point Rd (NC 273) Streetscape	Bike lanes/multi-use path/sidewalk along S Point Rd	NA	-Belmont Bicycle Plan (2013) -Belmont Ped Plan (2009) -Belmont Comp LUP (2018) -GCLMPO CTP (2021)
Multi-use Path	Multi-use path shown to traverse proposed site connecting Timber Ridge Rd to the eastern property line; Note there is also an additional E/W multi-use path shown to traverse the southern portion of the site in the CTP and City Bike/Ped plans	Coordinate w/ City/ GCLMPO to determine if multi-use path should be provided on-site	-Belmont Bicycle Plan (2013) -Belmont Ped Plan (2009) -Belmont Comp LUP (2018) -GCLMPO CTP (2021)
Forest Hill Rd/Colonial Dr Bicycle Facilities	On-road bicycle facilities along Forest Hill Rd between NC 273 and Colonial Dr, and along Colonial Dr	Coordinate w/ City/ GCLMPO to determine if bicycle facilities should be provided	-GCLMPO CTP (2021)

Other Considerations (i.e. pedestrian, transit, other scenarios):

- Turn lanes and storage lengths for the major street (uncontrolled) approaches at unsignalized driveways will be identified using NCDOT's *Policy on Street and Driveway Access to North Carolina Highways*.

Traffic Signal Warrants:

- S Point Rd (NC 273) and Henry Chapel Rd
 - 13-hour warrant (6AM – 7PM) in each phase (or until warranted)
 - Proposed site traffic will be generated for non-peak hours utilizing residential daily distribution percentages provided by ITE.

Crash Analysis Required:

- At existing study intersections, based on most recent 3 years available

Additional Traffic Analysis (i.e. Synchro, VISSIM, SIDRA, etc.):

Agreement by all Parties

The undersigned agree to the contents and methodology described in this Memorandum of Understanding (MOU) for completing the required TIA supportive of the development application identified herein. Any changes to the above methodology contemplated by the applicant or transportation consultant must be submitted to the City in writing and a revised MOU executed before such changes will be accepted for the TIA report. The applicant must provide payment in full to the City for preparation of the TIA prior to commencement of the work. Any additional services incurred by the transportation consultant in addition to the MOU must be approved by the City, and agreed to and paid for by the applicant, prior to performance of the additional work.

(Applicant & Date)

Brady Finklea 4/22/22
(Transportation Consultant & Date)

Approved by: *[Signature]* 4/21/2022
(City Planning Director & Date)

NCDOT Involvement Needed? Yes No If Yes, contact NCDOT at (980) 552-4104 for requirements.

NCDOT Required Scoping

(NCDOT & Date, if Applicable)

Attachments:

- 1. Proposed Site Plan
- 2. Study Area/Site Trip Distribution

Attendees at 2/10/2022 TIA Scoping Meeting

Adrian Miller	City of Belmont	amiller@cityofbelmont.org
Shelley DeHart	City of Belmont	sdehart@cityofbelmont.org
Tiffany Faro	City of Belmont	tfaro@cityofbelmont.org
Blake Guffey	NCDOT	cbguffey@ncdot.gov
Randi Gates	GCLMPO	randlg@cityofgastonia.com
Arthur Cashwell IV	GCLMPO	arthure@cityofgastonia.com
Jacque Mancher	Turnstone	jmancher@turnstonegroup.com
Bridget Grant	Moore & Van Allen	bridgetgrant@mvalaw.com
Jacob Bachman	Bolton-Menk	jacob.bachman@bolton-menk.com
Aaron Cook	Bolton-Menk	aaron.cook@bolton-menk.com
Brady Finklea	Kimley Horn	brady.finklea@kimley-horn.com

Agreement by all Parties

The undersigned agree to the contents and methodology described in this Memorandum of Understanding (MOU) for completing the required TIA supportive of the development application identified herein. Any changes to the above methodology contemplated by the applicant or transportation consultant must be submitted to the City in writing and a revised MOU executed before such changes will be accepted for the TIA report. The applicant must provide payment in full to the City for preparation of the TIA prior to commencement of the work. Any additional services incurred by the transportation consultant in addition to the MOU must be approved by the City, and agreed to and paid for by the applicant, prior to performance of the additional work.

Jacquelin Mancher 4/11/22
(Applicant & Date)

Brady Finklea 4/22/22
(Transportation Consultant & Date)

Approved by: _____
(City Planning Director & Date)

NCDOT Involvement Needed? Yes No If Yes, contact NCDOT at (980) 552-4104 for requirements.

NCDOT Required Scoping

(NCDOT & Date, if Applicable)

Attachments:

- 1. Proposed Site Plan
- 2. Study Area/Site Trip Distribution

Attendees at 2/10/2022 TIA Scoping Meeting

Adrian Miller	City of Belmont	amiller@cityofbelmont.org
Shelley DeHart	City of Belmont	sdehart@cityofbelmont.org
Tiffany Faro	City of Belmont	tfaro@cityofbelmont.org
Blake Guffey	NCDOT	cbguffey@ncdot.gov
Randi Gates	GCLMPO	randig@cityofgastonia.com
Arthur Cashwell IV	GCLMPO	arthurc@cityofgastonia.com
Jacque Mancher	Turnstone	jmancher@turnstonegroup.com
Bridget Grant	Moore & Van Allen	bridgetgrant@mvalaw.com
Jacob Bachman	Bolton-Menk	jacob.bachman@bolton-menk.com
Aaron Cook	Bolton-Menk	aaron.cook@bolton-menk.com
Brady Finklea	Kimley-Horn	brady.finklea@kimley-horn.com

Finklea, Brady

From: Guffey, Christopher B <cbguffey@ncdot.gov>
Sent: Thursday, April 21, 2022 1:32 PM
To: Tiffany Faro
Cc: Finklea, Brady
Subject: RE: [External] FW: MOU for Review: Henry Chapel

Categories: External

Yes, the Department concurs with the Scope. Just a note for the development team, I will request horizontal sight distance for the second access, due to the horizontal curve.

C. Blake Guffey

District Supervisor
District 1, Division 12
North Carolina Department of Transportation

980 552 4100 Office
cbguffey@ncdot.gov

1702 East Marion Street
Shelby, NC 28150



Email correspondence to and from this address is subject to the North Carolina Public Records Law and may be disclosed to third parties.

From: Tiffany Faro <tfaro@cityofbelmont.org>
Sent: Wednesday, April 20, 2022 11:39 AM
To: Guffey, Christopher B <cbguffey@ncdot.gov>
Cc: Finklea, Brady (brady.finklea@kimley-horn.com) <Brady.Finklea@kimley-horn.com>
Subject: [External] FW: MOU for Review: Henry Chapel

CAUTION: External email. Do not click links or open attachments unless you verify. Send all suspicious email as an attachment to [Report Spam](#).

Good Morning Blake,

I have received payment for this one- before releasing KH to begin, are you satisfied with scope?






BELMONT
City of Belmont

TIFFANY FARO, CZO
Senior Planner, City of Belmont



1. S Point Rd (NC 273) and Armstrong Rd (NC 273)
2. S Point Rd (NC 273) and Henry Chapel Rd
3. S Point Rd (NC 273) and Forest Hill Rd
4. Forest Hill Rd and Colonial Dr
5. Colonial Drive and Timber Ridge Rd/Access 3
6. S Point Rd (NC 273) and Belmont MS/Belwood Dr
7. S Point Rd (NC 273) and Stowe Rd/McKee Farm Ln
8. S Point Rd (NC 273) and South Point HS/Red Raider Run
9. S Point Rd (NC 273) and R L Stowe Rd/Nixon Rd
10. Henry Chapel Rd and Access 1
11. Henry Chapel Rd and Access 2

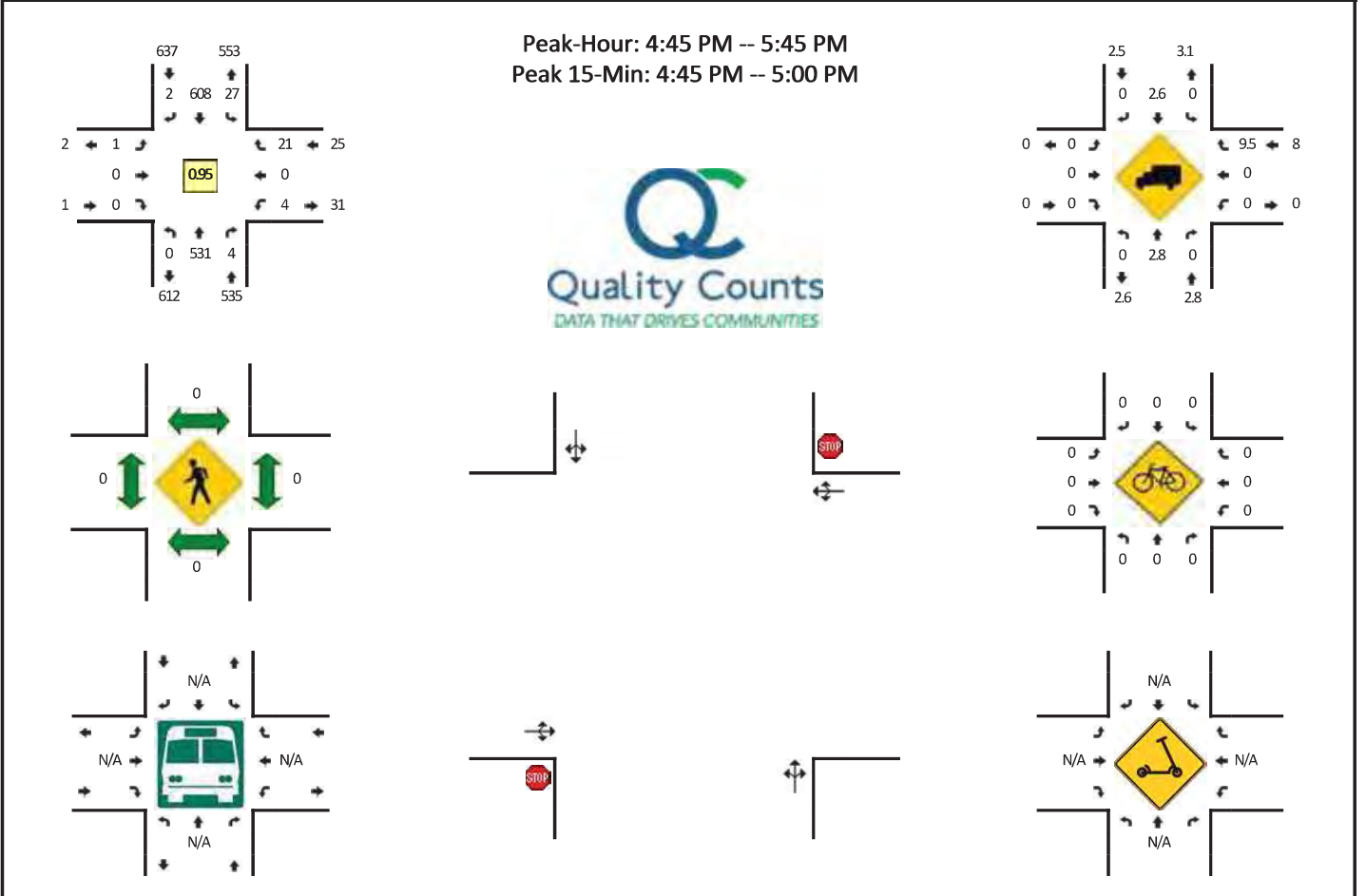
Legend

-  - Study Area Intersections
-  - Site
-  - Site Trip Distribution

Turning Movement Counts

LOCATION: S Point Road (NC 273) -- Henry Chapel Road
CITY/STATE: Gaston, NC

QC JOB #: 15795901
DATE: Thu, Apr 28 2022



15-Min Count Period Beginning At	S Point Road (NC 273) (Northbound)				S Point Road (NC 273) (Southbound)				Henry Chapel Road (Eastbound)				Henry Chapel Road (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
6:00 AM	0	71	0	0	0	35	0	0	0	0	0	0	0	0	3	0	109	
6:15 AM	0	79	0	0	0	50	1	0	0	1	0	0	0	0	6	0	137	
6:30 AM	1	131	0	0	2	65	1	0	0	1	0	1	0	1	0	2	205	
6:45 AM	0	137	0	0	0	62	0	0	0	0	0	0	0	1	0	8	208	659
7:00 AM	0	193	0	0	0	49	0	0	0	0	0	0	0	0	0	5	247	797
7:15 AM	0	192	0	0	2	75	0	0	0	0	0	0	0	0	0	3	272	932
7:30 AM	0	164	1	0	2	75	0	0	0	0	0	0	0	1	0	4	247	974
7:45 AM	0	139	0	0	3	75	5	0	0	0	0	1	0	0	0	8	231	997
8:00 AM	1	142	0	0	2	78	1	0	0	1	0	0	0	0	0	9	234	984
8:15 AM	2	98	0	0	2	80	6	0	0	0	0	1	0	0	0	7	196	908
8:30 AM	5	104	1	0	1	87	9	0	0	13	0	7	0	0	0	4	231	892
8:45 AM	0	106	1	0	3	78	0	0	0	2	0	0	0	0	0	3	193	854
9:00 AM	0	81	0	0	5	60	0	0	0	0	0	0	0	0	0	6	152	772
9:15 AM	0	84	2	0	1	61	0	0	0	0	0	0	0	0	0	5	153	729
9:30 AM	0	77	0	0	3	70	0	0	0	0	0	0	0	0	0	5	155	653
9:45 AM	0	97	1	0	5	58	0	0	0	0	0	0	0	1	0	10	172	632
10:00 AM	0	90	1	0	4	64	0	0	0	0	0	0	0	3	0	10	172	652
10:15 AM	0	77	0	0	1	57	0	0	0	0	0	0	0	0	0	1	136	635
10:30 AM	0	63	1	0	2	59	1	0	0	1	0	0	0	1	0	0	128	608
10:45 AM	0	78	1	0	2	51	1	0	0	0	1	0	0	0	1	4	139	575
11:00 AM	0	69	3	0	2	80	1	0	0	0	0	0	0	1	0	3	159	562
11:15 AM	3	78	0	0	5	66	12	0	0	0	0	0	0	1	0	5	170	596
11:30 AM	1	113	1	0	6	63	3	0	0	17	0	4	0	0	0	3	211	679
11:45 AM	0	81	0	0	6	73	2	0	0	7	0	0	0	1	0	1	171	711
12:00 PM	0	95	2	0	5	90	1	0	0	0	0	0	0	2	0	4	199	751
12:15 PM	0	73	1	0	5	90	0	0	0	0	0	1	0	1	0	7	178	759
12:30 PM	0	79	0	0	4	85	0	0	0	0	0	0	0	0	0	5	173	721
12:45 PM	0	89	1	0	5	81	0	0	0	0	0	0	0	0	0	3	179	729
1:00 PM	0	83	0	0	6	88	0	0	0	0	0	0	0	3	0	6	186	716
1:15 PM	1	64	1	0	3	80	0	0	0	1	0	0	0	1	0	3	154	692
1:30 PM	0	92	1	0	2	73	1	0	0	0	0	1	0	0	0	8	178	697
1:45 PM	0	88	0	0	6	76	0	0	0	1	0	0	0	0	0	3	174	692
2:00 PM	0	85	1	0	7	88	0	0	0	0	0	0	0	2	0	4	187	693
2:15 PM	0	81	0	0	5	92	0	0	0	0	0	0	0	0	0	3	181	720
2:30 PM	1	76	1	0	7	104	0	0	0	1	0	0	0	0	0	8	198	740
2:45 PM	0	80	2	0	3	102	0	0	0	0	0	0	0	0	0	3	190	756
3:00 PM	0	67	2	0	4	94	0	0	0	0	0	0	0	1	0	5	173	742
3:15 PM	0	86	2	0	3	108	0	0	0	0	0	0	0	3	0	1	203	764
3:30 PM	0	99	0	0	8	150	0	0	0	0	0	0	0	0	0	8	265	831

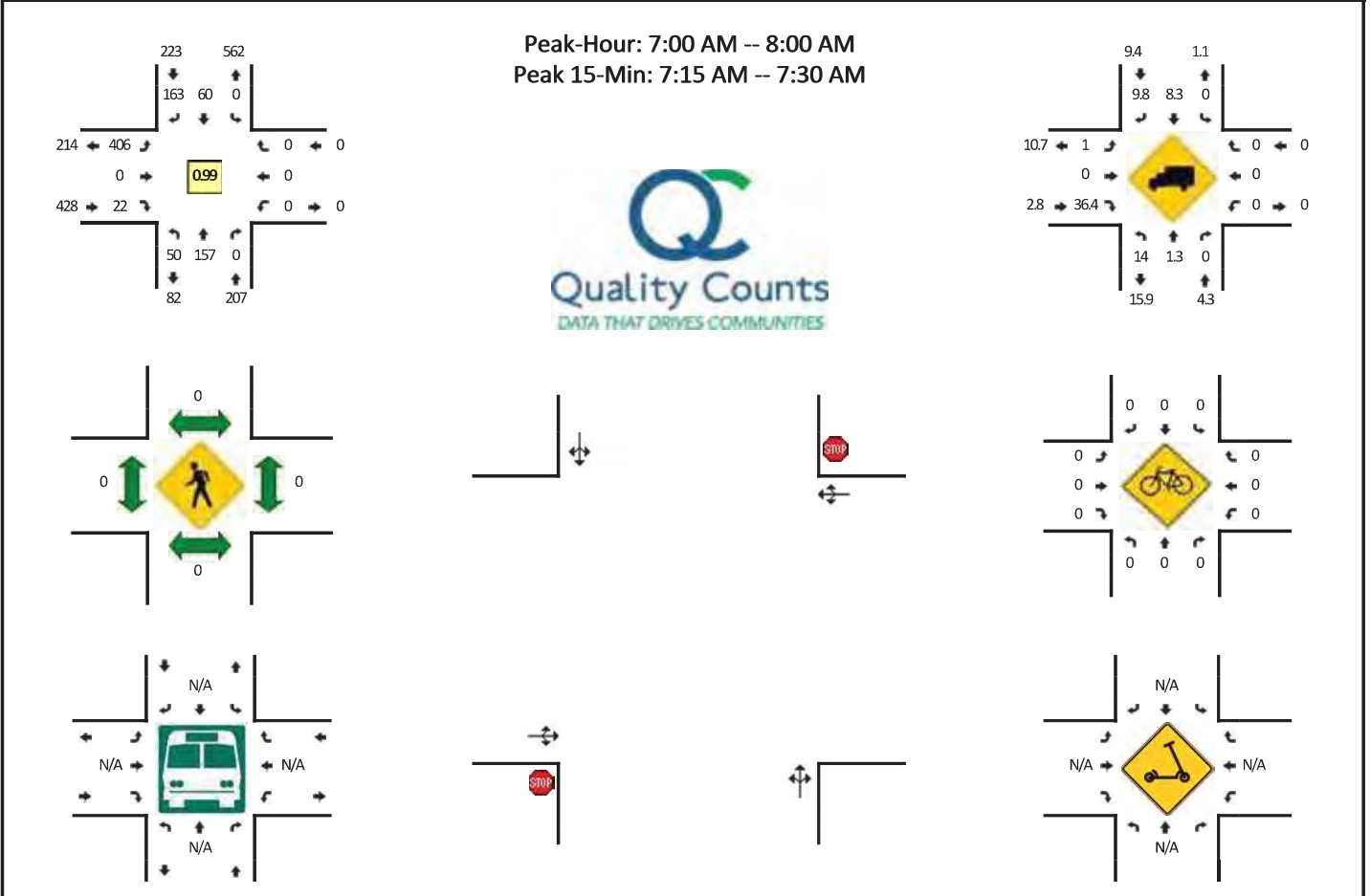
15-Min Count Period Beginning At	S Point Road (NC 273) (Northbound)				S Point Road (NC 273) (Southbound)				Henry Chapel Road (Eastbound)				Henry Chapel Road (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
3:45 PM	0	71	1	0	9	129	0	0	0	0	0	0	3	0	4	0	217	858
4:00 PM	1	94	2	0	7	144	1	0	1	0	0	0	2	0	3	0	255	940
4:15 PM	0	112	0	0	9	145	0	0	0	0	0	0	0	0	4	0	270	1007
4:30 PM	0	123	2	0	10	138	0	0	0	0	1	0	0	0	2	0	276	1018
4:45 PM	0	145	3	0	4	151	1	0	1	0	0	0	2	0	8	0	315	1116
5:00 PM	0	118	0	0	6	166	1	0	0	0	0	0	0	0	4	0	295	1156
5:15 PM	0	128	0	0	12	143	0	0	0	0	0	0	2	0	6	0	291	1177
5:30 PM	0	140	1	0	5	148	0	0	0	0	0	0	0	0	3	0	297	1198
5:45 PM	0	141	0	0	3	153	1	0	0	0	0	0	0	0	4	0	302	1185
6:00 PM	0	108	4	1	5	151	1	0	0	0	0	0	1	0	3	0	274	1164
6:15 PM	0	113	0	0	9	116	0	0	0	0	0	0	1	0	7	0	246	1119
6:30 PM	0	102	1	0	5	102	0	0	0	0	0	0	0	0	5	0	215	1037
6:45 PM	0	106	0	0	6	85	0	0	0	0	0	0	1	0	4	0	202	937
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	0	580	12	0	16	604	4	0	4	0	0	0	8	0	32	0	1260	
Heavy Trucks	0	16	0		0	20	0		0	0	0		0	0	4		40	
Buses																		
Pedestrians		0				0				0				0			0	
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0	
Scoters																		
<i>Comments:</i>																		

Report generated on 5/9/2022 10:46 AM

SOURCE: Quality Counts, LLC (<http://www.qualitycounts.net>) 1-877-580-2212

LOCATION: S Point Road (NC 273) -- Armstrong Road (NC 273)
CITY/STATE: Gaston, NC

QC JOB #: 15795902
DATE: Thu, Apr 28 2022

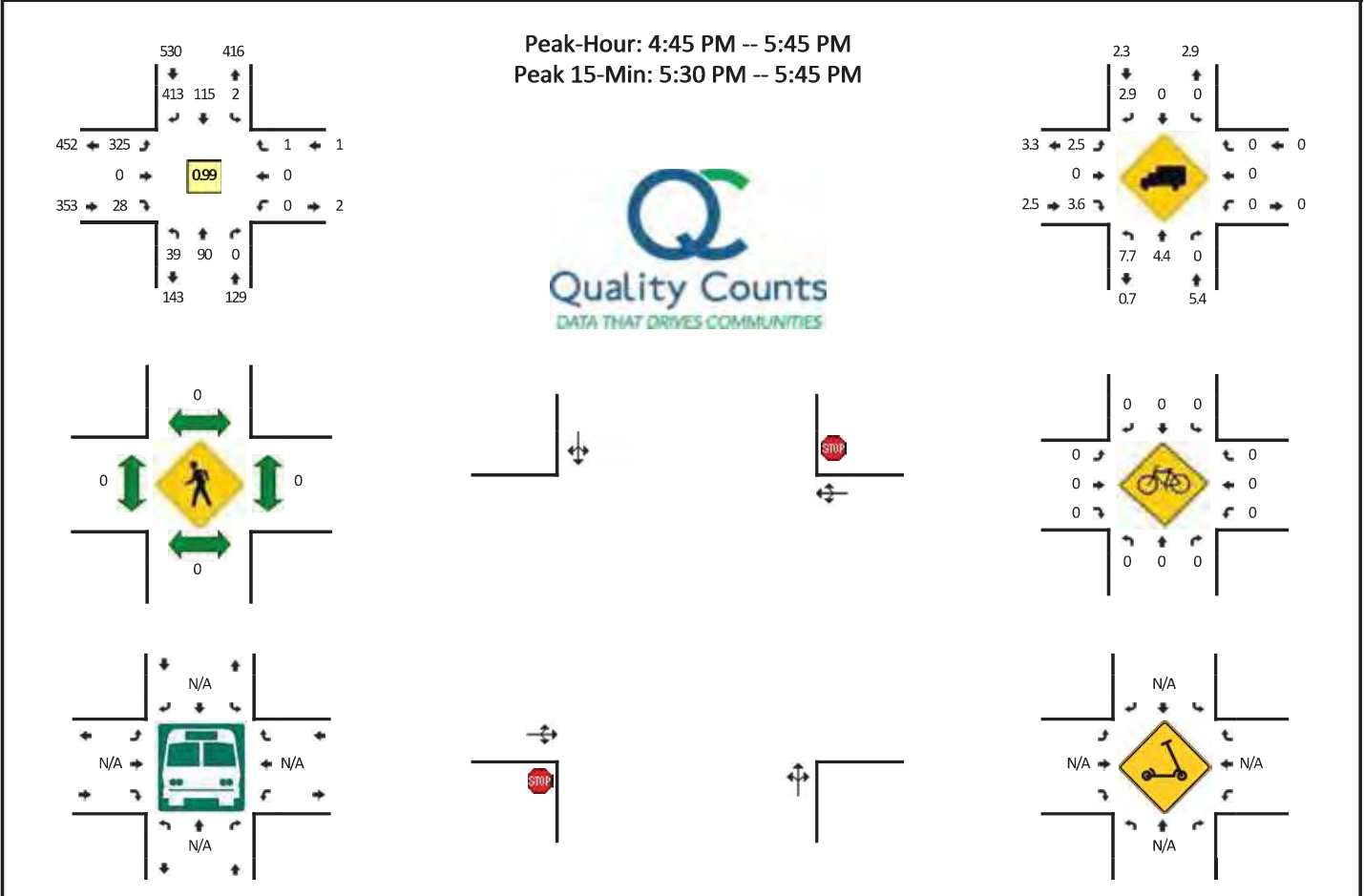


15-Min Count Period Beginning At	S Point Road (NC 273) (Northbound)				S Point Road (NC 273) (Southbound)				Armstrong Road (NC 273) (Eastbound)				Armstrong Road (NC 273) (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
6:30 AM	3	20	0	0	0	8	17	0	74	0	1	0	0	0	0	0	123	
6:45 AM	3	39	0	0	0	13	21	0	99	0	3	0	0	0	0	0	178	
7:00 AM	9	50	0	0	0	11	27	0	114	0	2	1	0	0	0	0	214	
7:15 AM	12	39	0	0	0	13	35	0	114	0	3	0	0	0	0	0	216	731
7:30 AM	15	32	0	0	0	18	46	0	95	0	9	0	0	0	0	0	215	823
7:45 AM	14	36	0	0	0	18	55	0	82	0	8	0	0	0	0	0	213	858
8:00 AM	8	38	0	0	0	16	46	0	80	0	11	0	0	0	1	0	200	844
8:15 AM	5	18	0	0	0	13	45	0	58	0	8	0	0	0	0	0	147	775
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	48	156	0	0	0	52	140	0	456	0	12	0	0	0	0	0	864	
Heavy Trucks	0	0	0	0	0	8	20	0	0	0	4	0	0	0	0	0	32	
Buses																		
Pedestrians		0				0				0				0			0	
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0	
Scoters																		

Comments:

LOCATION: S Point Road (NC 273) -- Armstrong Road (NC 273)
CITY/STATE: Gaston, NC

QC JOB #: 15795903
DATE: Thu, Apr 28 2022

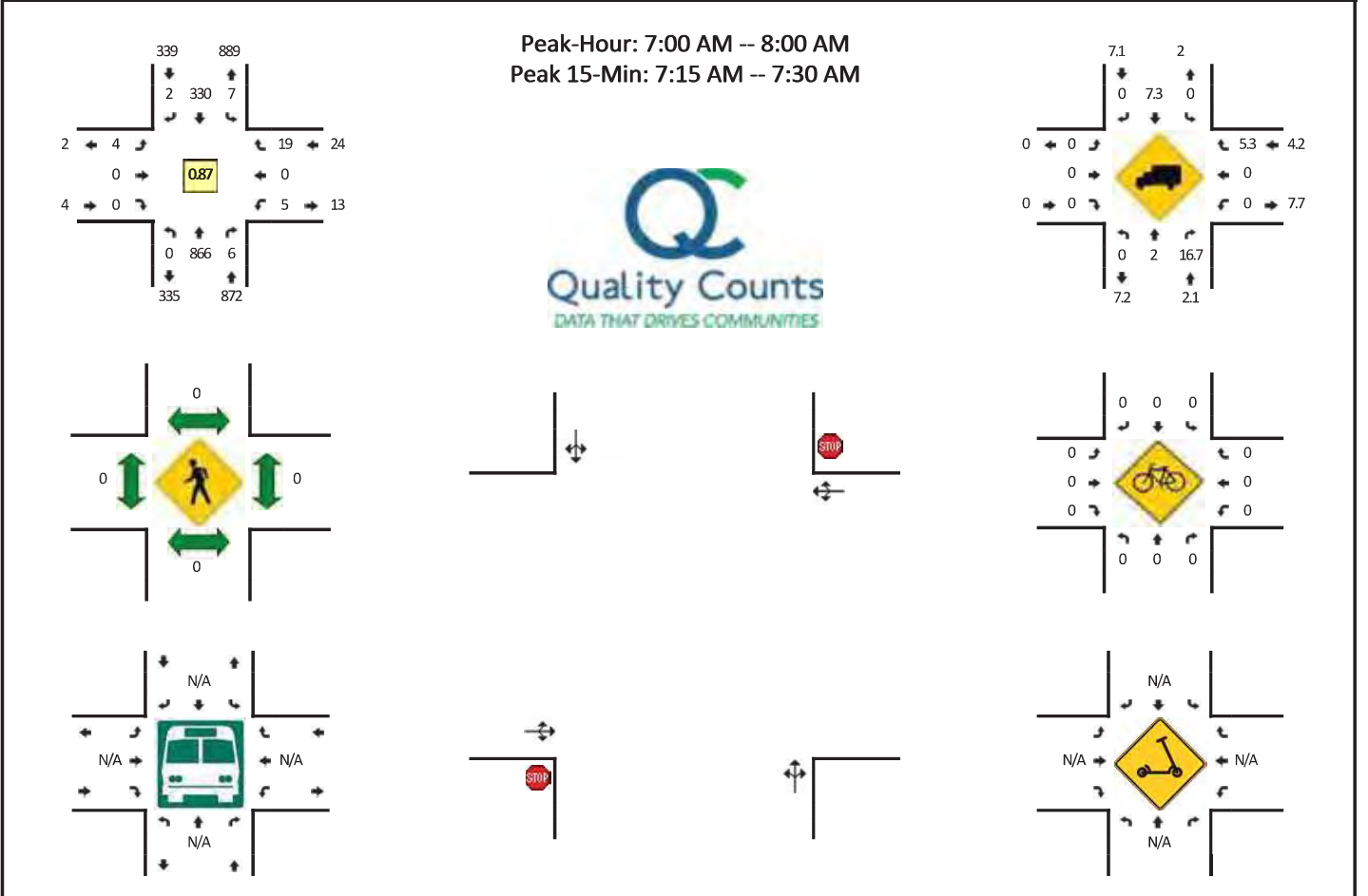


15-Min Count Period Beginning At	S Point Road (NC 273) (Northbound)				S Point Road (NC 273) (Southbound)				Armstrong Road (NC 273) (Eastbound)				Armstrong Road (NC 273) (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
2:30 PM	5	18	0	0	0	18	61	0	44	0	11	0	0	0	0	0	157	
2:45 PM	6	15	0	0	0	24	60	0	45	0	17	0	0	0	0	0	167	
3:00 PM	9	20	0	0	0	15	62	0	47	0	9	0	0	0	0	0	162	
3:15 PM	5	17	0	0	0	25	78	0	57	0	9	0	0	0	0	0	191	677
3:30 PM	8	20	0	0	0	31	84	0	61	0	7	0	0	0	0	0	211	731
3:45 PM	6	11	0	0	0	29	75	0	45	0	8	0	0	0	0	0	174	738
4:00 PM	6	24	0	0	1	28	89	0	51	0	4	0	0	0	0	0	203	779
4:15 PM	5	27	0	0	0	30	101	0	80	0	9	0	0	0	1	0	253	841
4:30 PM	9	18	1	0	0	28	98	0	78	0	3	0	0	0	0	0	235	865
4:45 PM	7	16	0	0	1	31	95	0	93	0	9	0	0	0	1	0	253	944
5:00 PM	11	25	0	0	1	25	119	0	69	0	5	0	0	0	0	0	255	996
5:15 PM	9	26	0	0	0	26	110	0	68	0	10	0	0	0	0	0	249	992
5:30 PM	12	23	0	0	0	33	89	0	95	0	4	0	0	0	0	0	256	1013
5:45 PM	6	29	0	0	0	21	97	0	91	0	5	0	0	0	0	0	249	1009
6:00 PM	4	15	0	0	0	38	112	0	75	0	7	0	0	0	0	0	251	1005
6:15 PM	4	30	0	0	0	32	71	0	71	0	5	0	0	0	0	0	213	969
6:30 PM	6	17	0	0	0	20	52	0	65	0	9	0	0	0	0	0	169	882
6:45 PM	6	19	0	0	0	28	43	0	64	0	5	0	0	0	0	0	165	798
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	48	92	0	0	0	132	356	0	380	0	16	0	0	0	0	0	1024	
Heavy Trucks	0	0	0	0	0	0	8	0	8	0	0	0	0	0	0	0	16	
Buses																	0	
Pedestrians		0				0				0				0			0	
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0	
Scoters																	0	

Comments:

LOCATION: S Point Road (NC 273) -- Forest Hill Road
CITY/STATE: Gaston, NC

QC JOB #: 15795904
DATE: Thu, Apr 28 2022

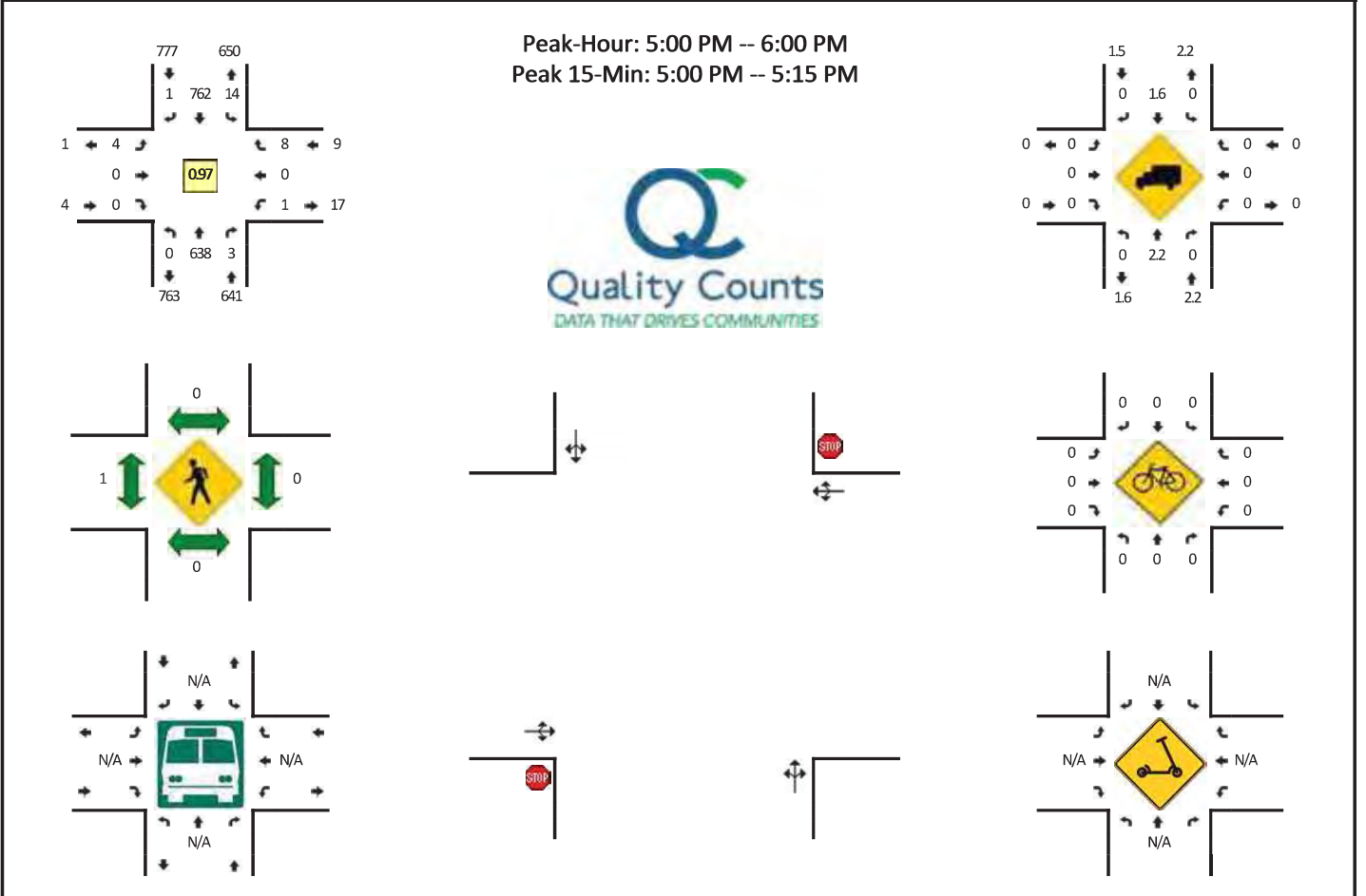


15-Min Count Period Beginning At	S Point Road (NC 273) (Northbound)				S Point Road (NC 273) (Southbound)				Forest Hill Road (Eastbound)				Forest Hill Road (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
6:30 AM	0	145	1	0	0	72	1	0	1	0	0	0	1	0	4	0	225	
6:45 AM	0	179	1	0	0	69	0	0	1	0	0	0	1	0	6	0	257	
7:00 AM	0	239	0	0	3	51	0	0	2	0	0	0	1	0	9	0	305	
7:15 AM	0	251	2	0	1	94	1	0	0	0	0	0	2	0	4	0	355	1142
7:30 AM	0	194	2	0	1	101	0	0	2	0	0	0	1	0	2	0	303	1220
7:45 AM	0	182	2	0	2	84	1	0	0	0	0	0	1	0	4	0	276	1239
8:00 AM	0	162	0	0	0	91	0	0	3	0	0	0	1	0	1	0	258	1192
8:15 AM	0	165	0	0	4	109	1	0	0	0	0	0	0	0	2	0	281	1118
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	0	1004	8	0	4	376	4	0	0	0	0	0	8	0	16	0	1420	
Heavy Trucks	0	8	0		0	28	0		0	0	0		0	0	0		36	
Buses																	0	
Pedestrians		0				0				0				0			0	
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0	
Scoters																	0	

Comments:

LOCATION: S Point Road (NC 273) -- Forest Hill Road
CITY/STATE: Gaston, NC

QC JOB #: 15795905
DATE: Thu, Apr 28 2022

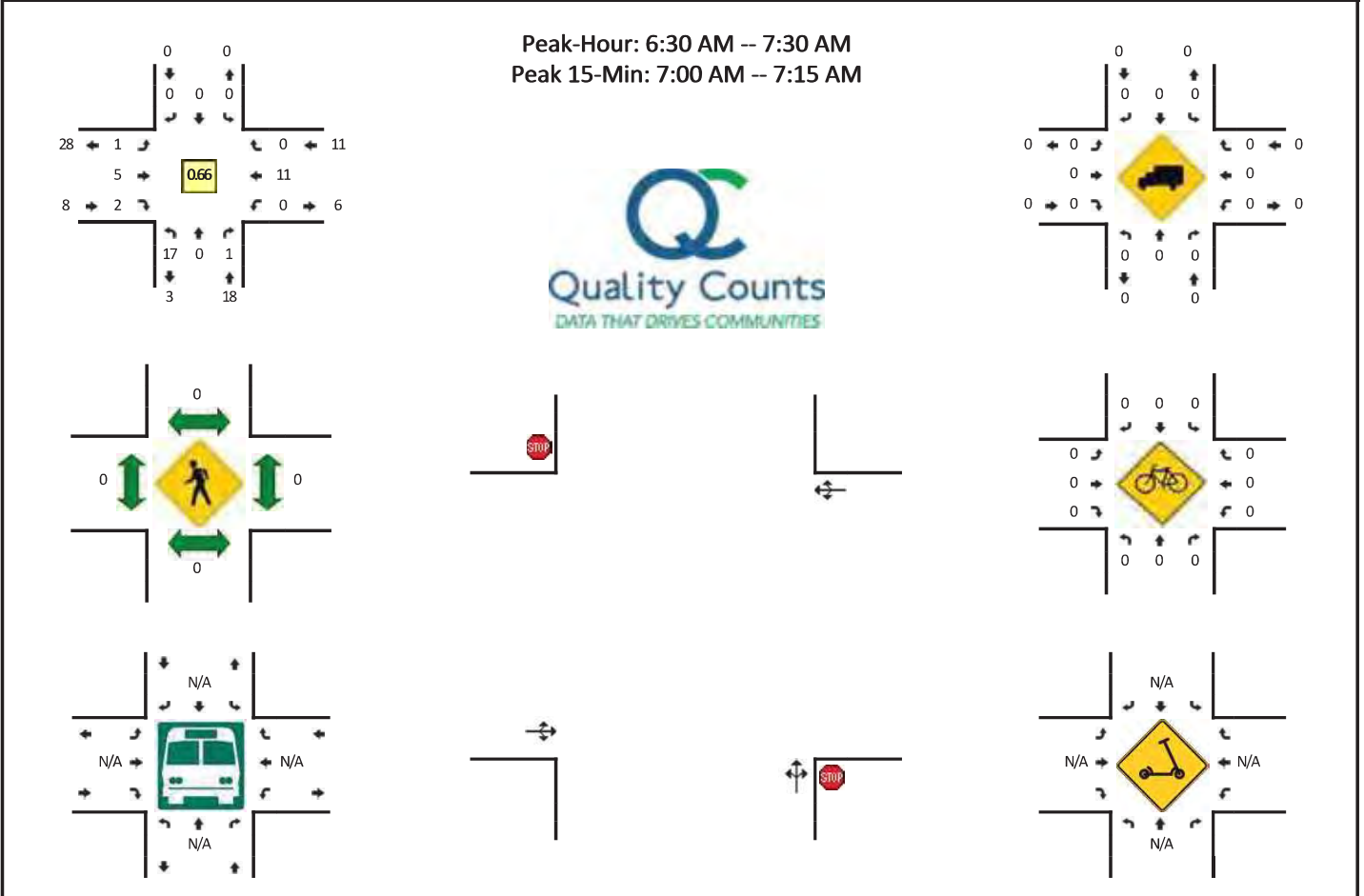


15-Min Count Period Beginning At	S Point Road (NC 273) (Northbound)				S Point Road (NC 273) (Southbound)				Forest Hill Road (Eastbound)				Forest Hill Road (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
2:30 PM	0	98	0	0	4	137	1	0	0	0	0	0	0	0	1	0	241	
2:45 PM	0	106	0	0	3	124	2	0	0	0	1	0	0	0	0	0	236	
3:00 PM	0	78	1	0	0	123	1	0	0	0	0	0	0	0	2	0	205	
3:15 PM	0	117	1	0	3	126	0	0	0	0	0	0	0	1	0	0	248	930
3:30 PM	0	117	0	0	4	195	0	0	0	0	0	0	0	0	3	0	319	1008
3:45 PM	0	86	1	0	3	161	1	0	0	0	1	0	1	0	3	0	257	1029
4:00 PM	1	110	0	0	2	177	1	0	0	0	0	0	1	0	5	0	297	1121
4:15 PM	0	135	2	0	4	186	0	0	0	0	0	0	1	0	1	0	329	1202
4:30 PM	1	155	0	0	0	171	2	0	0	0	0	0	0	0	3	0	332	1215
4:45 PM	0	150	1	0	3	192	0	0	0	0	0	0	0	0	0	0	346	1304
5:00 PM	0	147	1	0	5	214	0	0	0	0	0	0	1	0	1	0	369	1376
5:15 PM	0	155	1	0	5	187	1	0	1	0	0	0	0	0	1	0	351	1398
5:30 PM	0	166	0	0	1	185	0	0	2	0	0	0	0	0	2	0	356	1422
5:45 PM	0	170	1	0	3	176	0	0	1	0	0	0	0	0	4	0	355	1431
6:00 PM	0	141	0	0	3	192	1	0	0	0	0	0	0	0	0	0	337	1399
6:15 PM	0	135	1	0	4	144	0	0	0	0	0	0	0	0	1	0	285	1333
6:30 PM	0	118	1	0	3	136	0	0	0	0	0	0	2	0	0	0	260	1237
6:45 PM	0	134	1	0	5	129	1	0	0	0	0	0	2	0	0	0	272	1154
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	0	588	4	0	20	856	0	0	0	0	0	0	4	0	4	0	1476	
Heavy Trucks	0	16	0	0	0	12	0	0	0	0	0	0	0	0	0	0	28	
Buses																		
Pedestrians		0				0				0				0			0	
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0	
Scoters																		

Comments:

LOCATION: Colonial Drive -- Forest Hill Road
CITY/STATE: Gaston, NC

QC JOB #: 15795906
DATE: Thu, Apr 28 2022

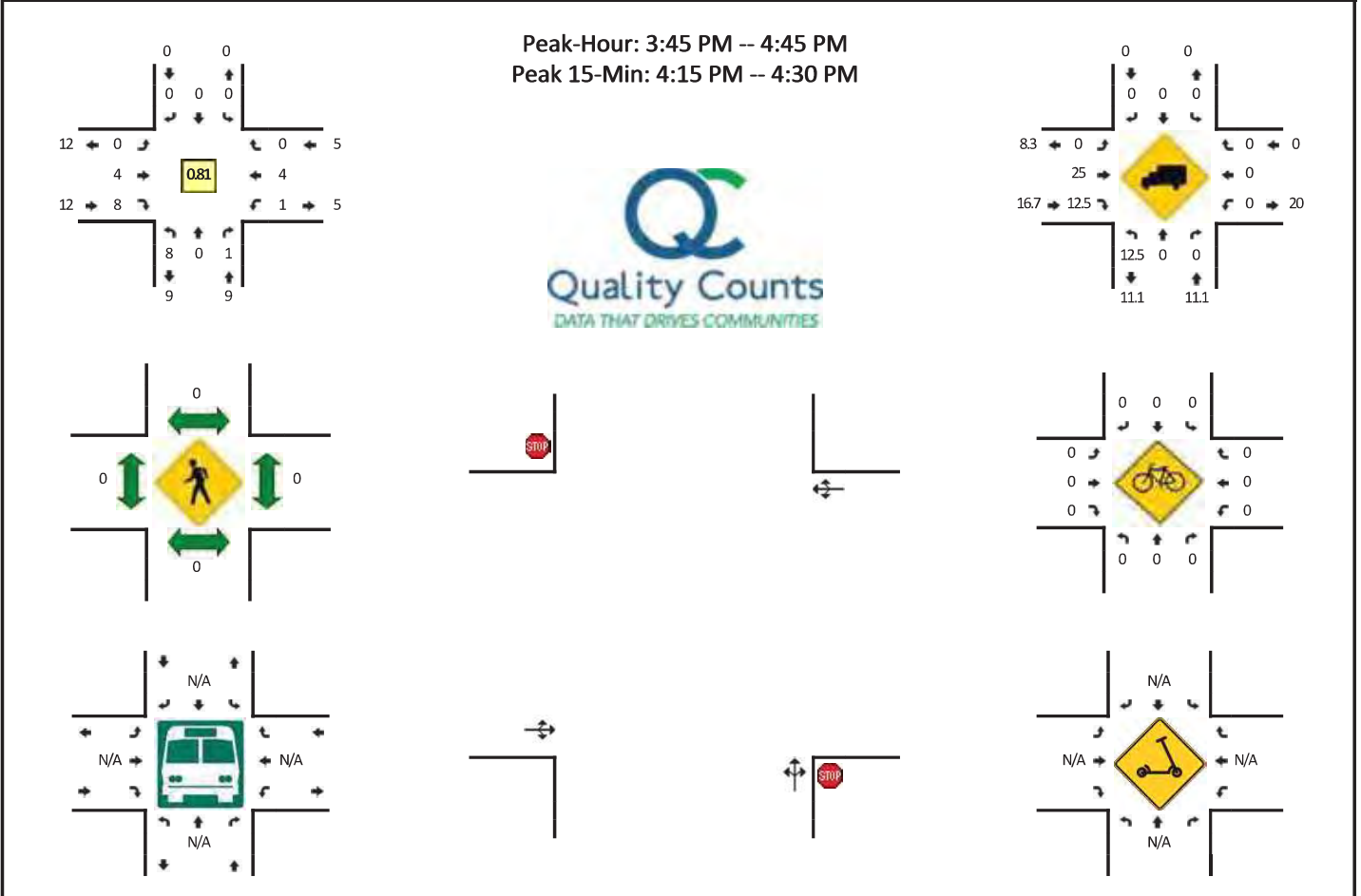


15-Min Count Period Beginning At	Colonial Drive (Northbound)				Colonial Drive (Southbound)				Forest Hill Road (Eastbound)				Forest Hill Road (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
6:30 AM	3	0	0	1	0	0	0	0	0	0	0	1	0	1	0	0	6	
6:45 AM	3	0	0	0	0	0	0	0	0	1	0	0	0	4	0	0	8	
7:00 AM	6	0	1	0	0	0	0	0	0	1	2	0	0	4	0	0	14	
7:15 AM	4	0	0	0	0	0	0	0	0	3	0	0	0	2	0	0	9	37
7:30 AM	0	0	0	0	0	0	0	0	0	1	1	0	0	2	0	0	4	35
7:45 AM	2	0	0	0	0	0	0	0	0	0	2	2	0	1	0	0	7	34
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	21
8:15 AM	2	0	0	0	0	0	0	0	0	1	2	0	0	0	0	0	5	17
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	24	0	4	0	0	0	0	0	0	4	8	0	0	16	0	0	56	
Heavy Trucks	0	0	0		0	0	0		0	0	0		0	0	0		0	
Buses																		
Pedestrians		0				0				0				0			0	
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0	
Scoters																		

Comments:

LOCATION: Colonial Drive -- Forest Hill Road
CITY/STATE: Gaston, NC

QC JOB #: 15795907
DATE: Thu, Apr 28 2022

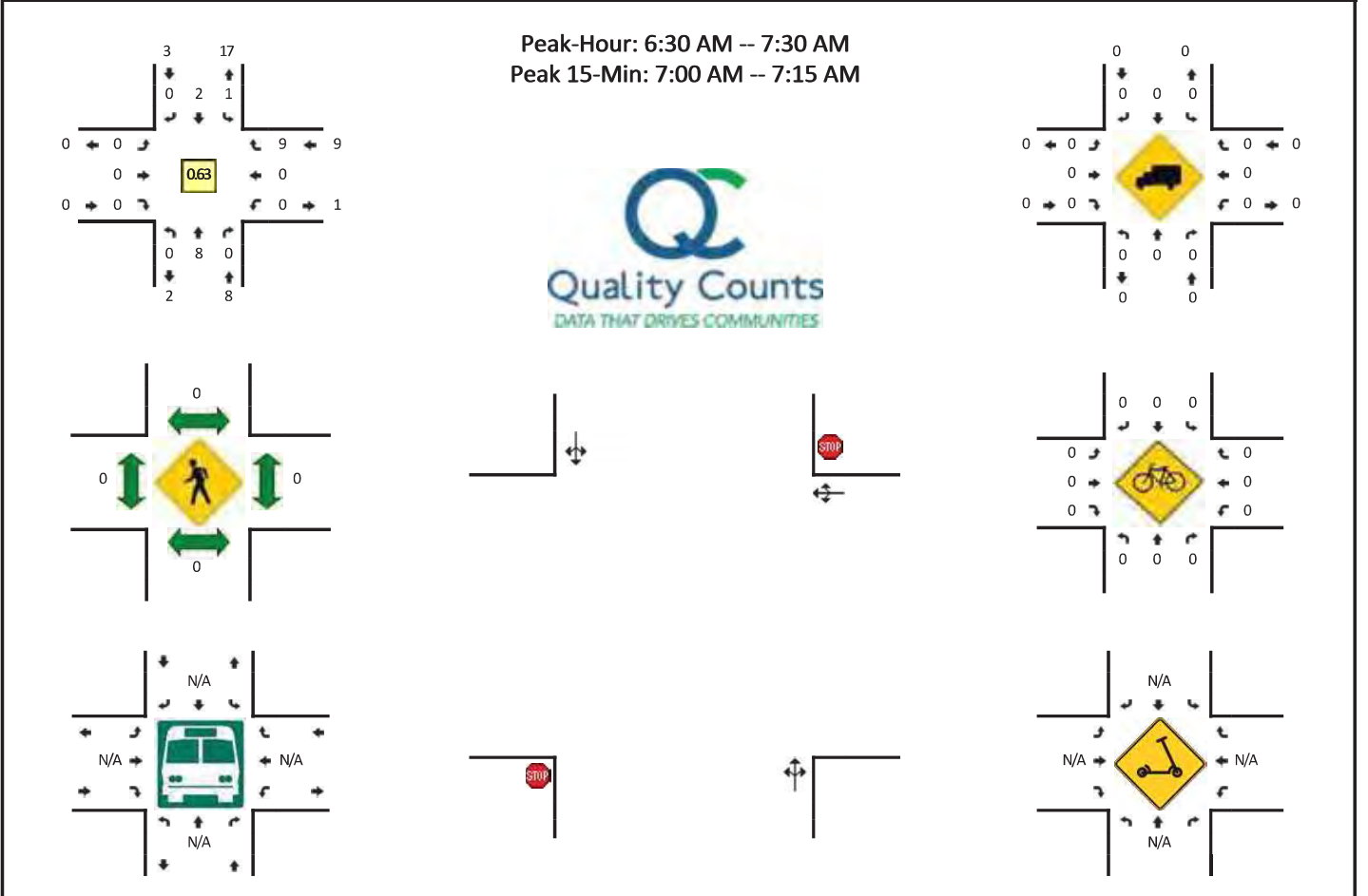


15-Min Count Period Beginning At	Colonial Drive (Northbound)				Colonial Drive (Southbound)				Forest Hill Road (Eastbound)				Forest Hill Road (Westbound)				Total	Hourly Totals	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U			
2:30 PM	1	0	0	0	0	0	0	0	0	0	1	3	0	0	0	0	0	5	
2:45 PM	0	0	0	0	0	0	0	0	0	0	2	1	0	0	0	1	0	4	
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	3	0	4	
3:15 PM	2	0	0	0	0	0	0	0	0	0	2	2	0	0	1	0	0	7	20
3:30 PM	1	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	4	19
3:45 PM	1	0	0	0	0	0	0	0	0	0	2	2	0	0	1	0	0	6	21
4:00 PM	3	0	0	0	0	0	0	0	0	0	1	1	0	0	2	0	0	7	24
4:15 PM	2	0	0	0	0	0	0	0	0	0	1	5	0	0	0	0	0	8	25
4:30 PM	2	0	1	0	0	0	0	0	0	0	0	0	0	1	1	0	0	5	26
4:45 PM	0	0	0	0	0	0	0	0	0	0	2	1	0	0	0	0	0	3	23
5:00 PM	1	0	0	0	0	0	0	0	0	0	3	3	0	0	1	0	0	8	24
5:15 PM	2	0	0	0	0	0	0	0	0	0	2	3	0	0	0	0	0	7	23
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	2	20
5:45 PM	2	0	0	0	0	0	0	0	0	0	2	2	0	0	2	0	0	8	25
6:00 PM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	2	19
6:15 PM	0	0	0	0	0	0	0	0	0	0	1	2	0	0	0	0	0	3	15
6:30 PM	1	0	0	0	0	0	0	0	0	0	0	4	0	0	1	0	0	6	19
6:45 PM	1	0	0	0	0	0	0	0	0	0	1	4	0	0	0	0	0	6	17
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total		
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U			
All Vehicles	8	0	0	0	0	0	0	0	0	4	20	0	0	0	0	0	32		
Heavy Trucks	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4		
Buses																			
Pedestrians		0				0				0				0			0		
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0		
Scoters																			

Comments:

LOCATION: Colonial Drive -- Timber Ridge Road
CITY/STATE: Gaston, NC

QC JOB #: 15795908
DATE: Thu, Apr 28 2022

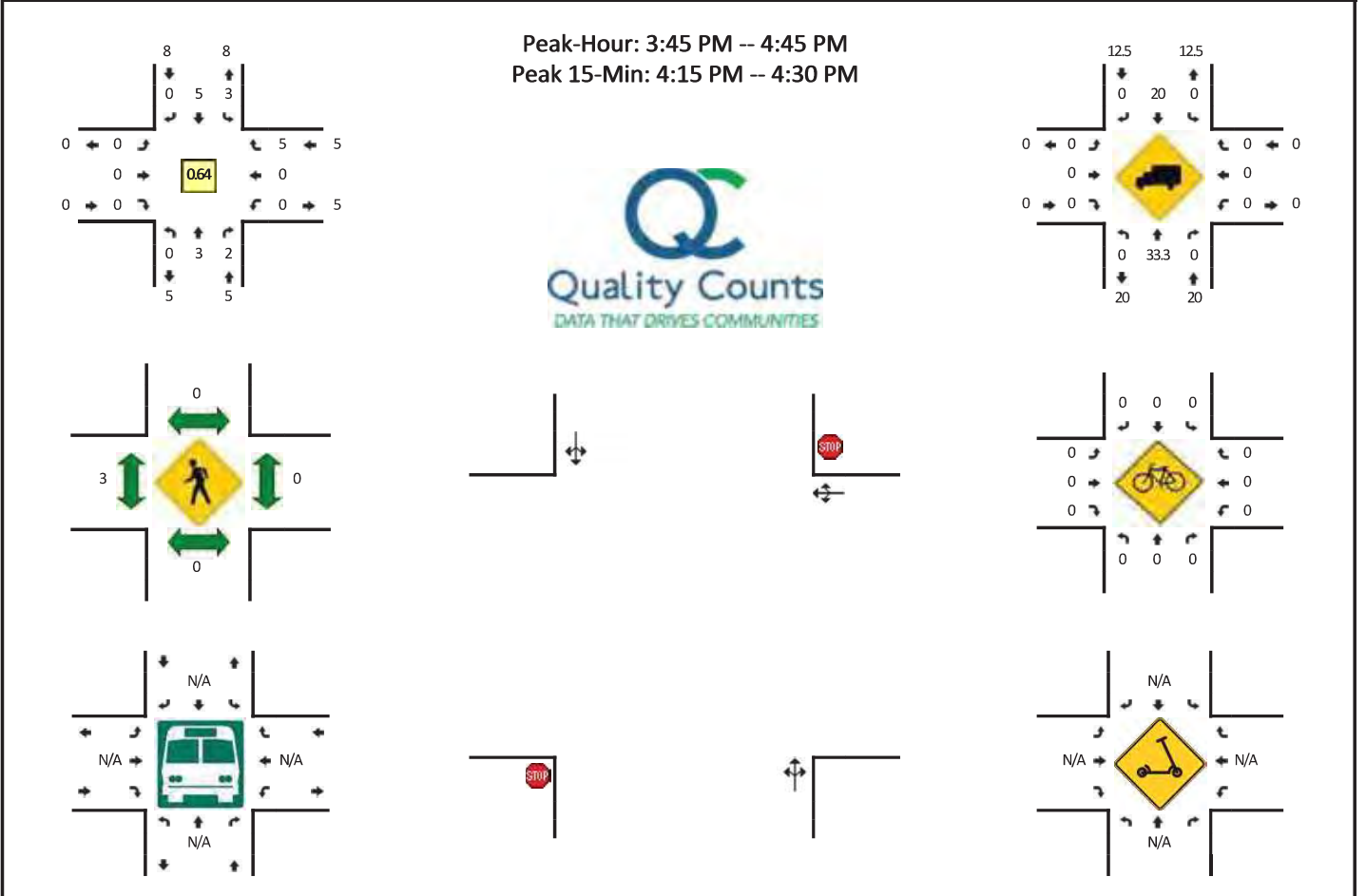


15-Min Count Period Beginning At	Colonial Drive (Northbound)				Colonial Drive (Southbound)				Timber Ridge Road (Eastbound)				Timber Ridge Road (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
6:30 AM	0	3	0	0	0	1	0	0	0	0	0	0	0	0	1	0	5	
6:45 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	0	1	0	3	
7:00 AM	0	2	0	0	1	1	0	0	0	0	0	0	0	0	4	0	8	
7:15 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	3	0	4	20
7:30 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	16
7:45 AM	0	0	0	0	1	1	0	0	0	0	0	0	0	0	2	0	4	17
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9
8:15 AM	0	0	0	0	2	0	0	0	0	0	0	0	0	0	1	0	3	8
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	0	8	0	0	4	4	0	0	0	0	0	0	0	0	16	0	32	
Heavy Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Buses																		
Pedestrians		0				0				0				0			0	
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0	
Scoters																		

Comments:

LOCATION: Colonial Drive -- Timber Ridge Road
CITY/STATE: Gaston, NC

QC JOB #: 15795909
DATE: Thu, Apr 28 2022

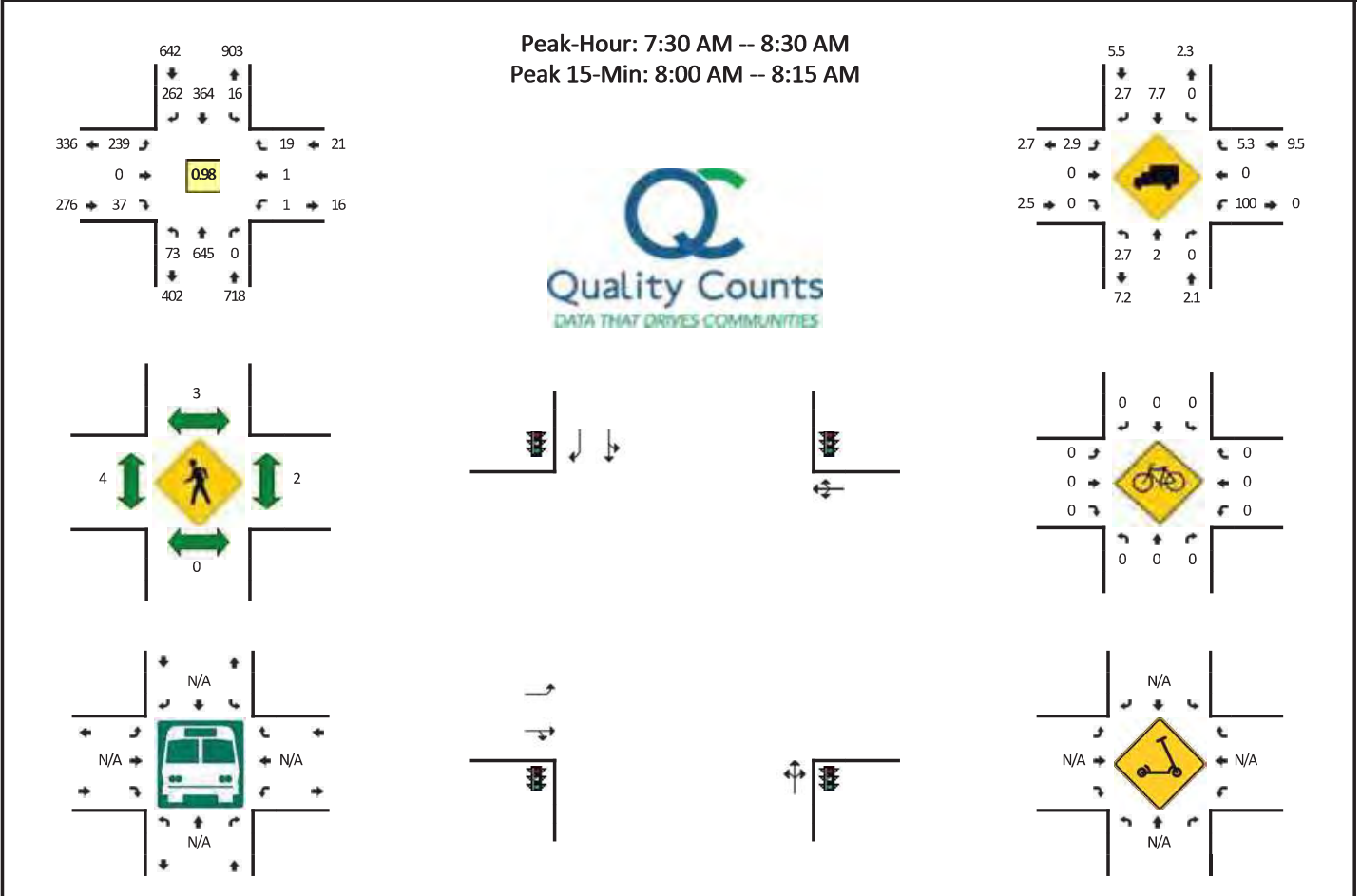


15-Min Count Period Beginning At	Colonial Drive (Northbound)				Colonial Drive (Southbound)				Timber Ridge Road (Eastbound)				Timber Ridge Road (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
2:30 PM	0	0	0	0	2	0	0	0	0	0	0	0	0	0	1	0	3	
2:45 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	
3:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	2	
3:15 PM	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	2	8
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	6
3:45 PM	0	1	0	0	0	2	0	0	0	0	0	0	0	0	0	0	3	8
4:00 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	2	0	0	4	10
4:15 PM	0	1	1	0	2	2	0	0	0	0	0	0	0	1	0	0	7	15
4:30 PM	0	0	1	0	0	1	0	0	0	0	0	0	0	2	0	0	4	18
4:45 PM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	16
5:00 PM	0	1	0	0	2	1	0	0	0	0	0	0	0	0	0	0	4	16
5:15 PM	0	0	0	0	2	1	0	0	0	0	0	0	0	1	0	0	4	13
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9
5:45 PM	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	2	10
6:00 PM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	7
6:15 PM	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	2	5
6:30 PM	0	1	0	0	3	1	0	0	0	0	0	0	0	0	0	0	5	10
6:45 PM	0	1	0	0	0	3	0	0	0	0	0	0	0	0	0	0	4	12
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
All Vehicles	0	4	4	0	8	8	0	0	0	0	0	0	0	0	4	0	28	
Heavy Trucks	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	
Buses																		
Pedestrians		0				0				0				0			0	
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0	
Scoters																		

Comments:

LOCATION: S Point Road (NC 273) -- Belmont Middle School/Belwood Drive
CITY/STATE: Gaston, NC

QC JOB #: 15795910
DATE: Thu, Apr 28 2022

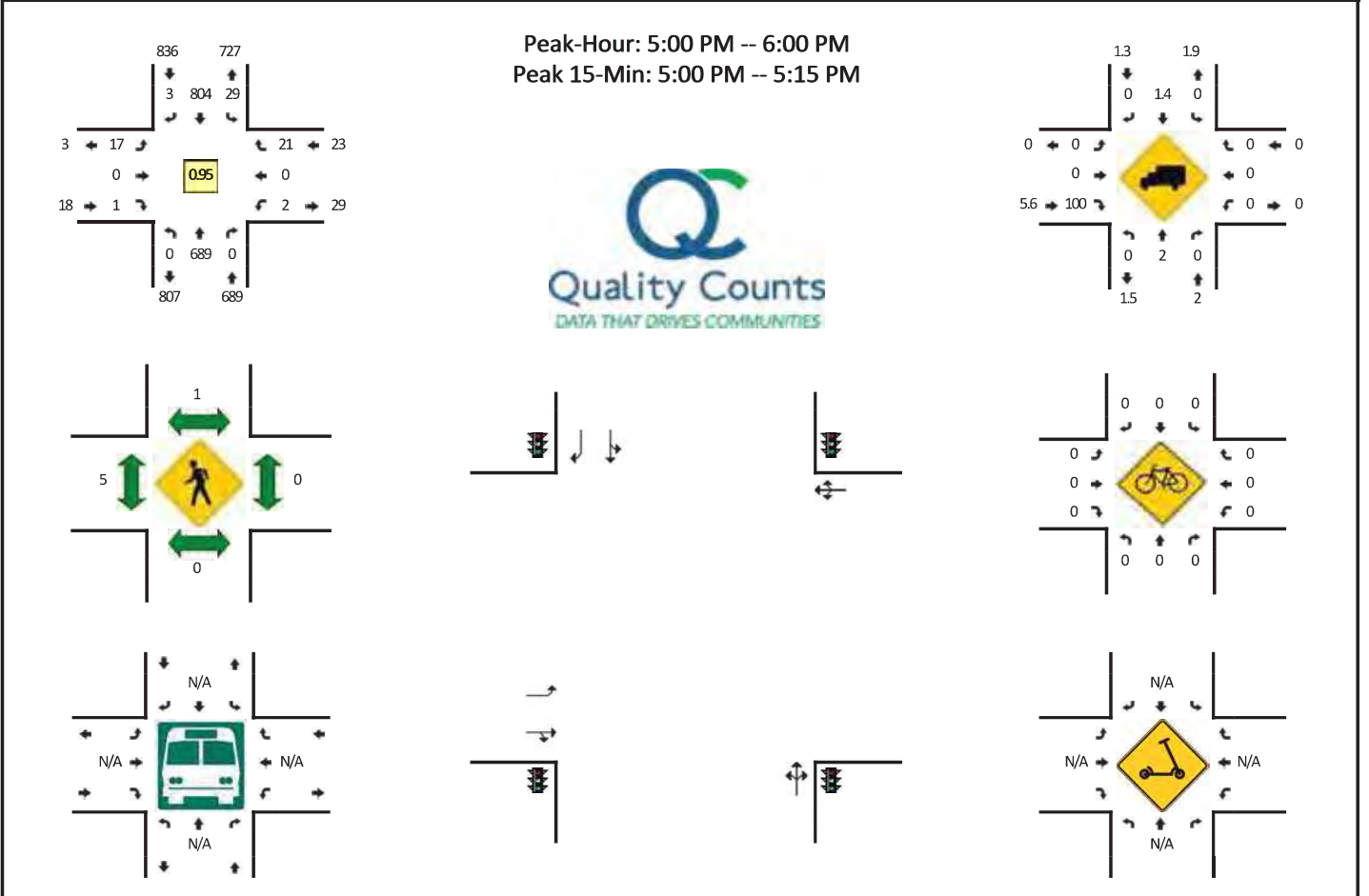


15-Min Count Period Beginning At	S Point Road (NC 273) (Northbound)				S Point Road (NC 273) (Southbound)				Belmont Middle School/Belwood Drive (Eastbound)				Belmont Middle School/Belwood Drive (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
6:30 AM	0	154	0	0	1	82	2	0	0	0	0	0	0	0	1	0	240	
6:45 AM	0	195	0	0	3	68	2	0	1	0	0	0	1	0	10	0	280	
7:00 AM	1	259	0	0	6	51	5	0	0	0	0	0	0	0	10	0	332	
7:15 AM	9	250	0	0	2	107	27	0	0	0	0	0	0	0	12	0	407	1259
7:30 AM	13	196	0	0	6	91	55	0	27	0	5	0	1	0	3	0	397	1416
7:45 AM	18	153	0	0	2	82	79	0	67	0	9	0	0	1	5	0	416	1552
8:00 AM	24	140	0	0	5	93	59	0	83	0	11	0	0	0	7	0	422	1642
8:15 AM	18	156	0	0	3	98	69	0	62	0	12	0	0	0	4	0	422	1657
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	96	560	0	0	20	372	236	0	332	0	44	0	0	0	28	0	1688	
Heavy Trucks	0	8	0	0	0	32	4	0	4	0	0	0	0	0	0	0	48	
Buses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Pedestrians	0	0	0	0	0	8	0	0	0	4	0	0	0	4	0	0	16	
Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Scoters	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

Comments:

LOCATION: S Point Road (NC 273) -- Belmont Middle School/Belwood Drive
CITY/STATE: Gaston, NC

QC JOB #: 15795911
DATE: Thu, Apr 28 2022

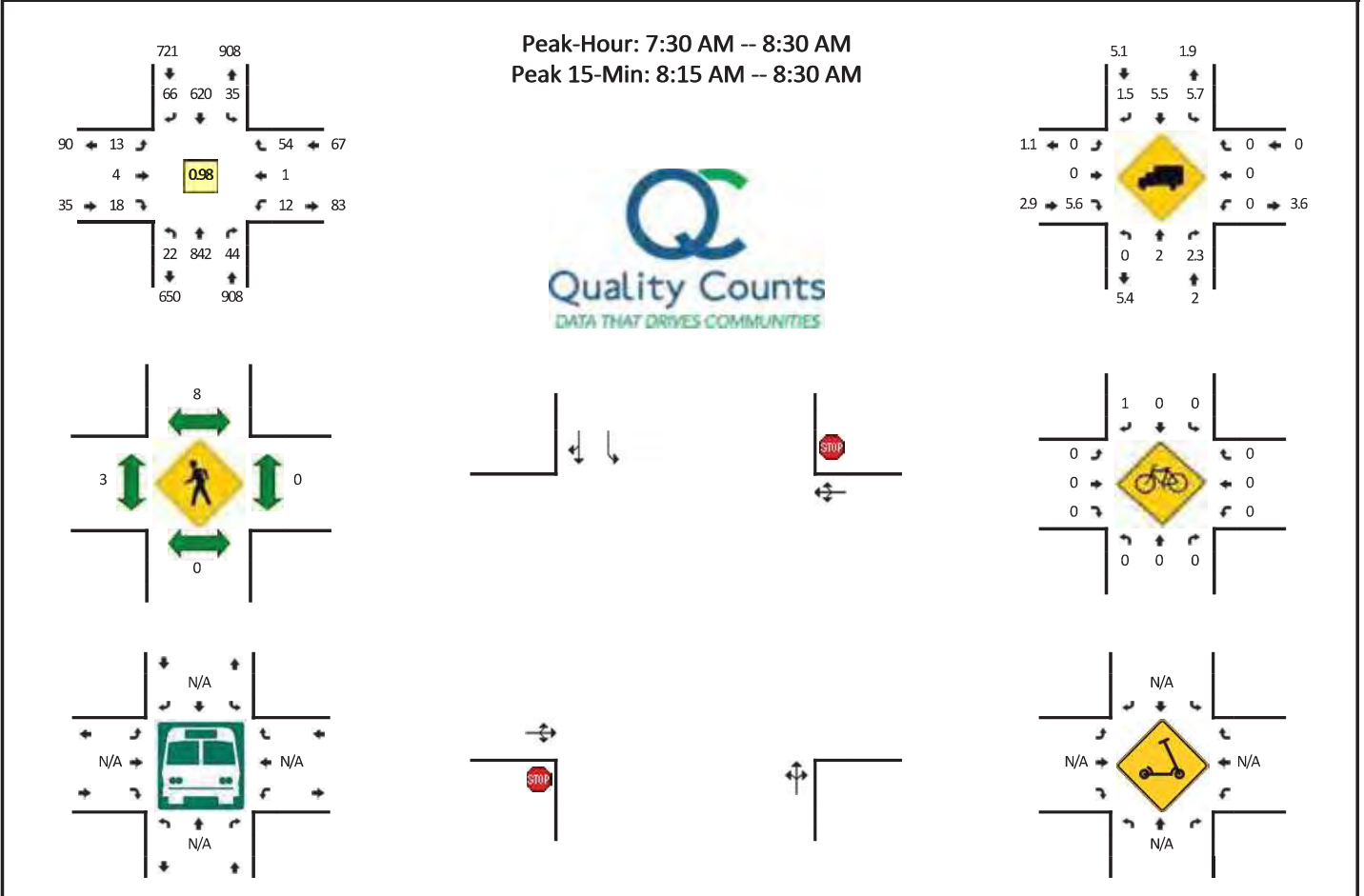


15-Min Count Period Beginning At	S Point Road (NC 273) (Northbound)				S Point Road (NC 273) (Southbound)				Belmont Middle School/Belwood Drive (Eastbound)				Belmont Middle School/Belwood Drive (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
2:30 PM	3	96	0	0	8	151	12	2	6	0	0	0	0	0	3	0	281	
2:45 PM	2	103	0	0	4	133	14	0	4	0	1	0	0	0	4	0	265	
3:00 PM	2	89	0	0	5	135	19	0	8	0	0	0	0	0	5	0	263	
3:15 PM	2	122	0	0	14	131	19	0	6	0	0	0	1	0	1	0	296	1105
3:30 PM	2	103	0	0	4	191	26	0	62	1	13	0	0	0	5	0	407	1231
3:45 PM	2	111	0	0	6	175	17	0	37	0	4	0	0	0	6	0	358	1324
4:00 PM	3	113	0	0	5	189	5	0	3	0	2	0	1	0	6	0	327	1388
4:15 PM	1	138	0	0	7	199	3	0	6	0	0	0	0	0	5	0	359	1451
4:30 PM	2	159	1	0	3	168	6	0	18	0	7	0	2	0	4	0	370	1414
4:45 PM	1	154	0	0	6	195	6	0	12	0	8	0	0	0	2	0	384	1440
5:00 PM	0	166	0	0	6	224	1	0	6	0	1	0	2	0	4	0	410	1523
5:15 PM	0	159	0	0	10	200	0	0	2	0	0	0	0	0	4	0	375	1539
5:30 PM	0	171	0	0	6	194	1	0	7	0	0	0	0	0	6	0	385	1554
5:45 PM	0	193	0	0	7	186	1	0	2	0	0	0	0	0	7	0	396	1566
6:00 PM	0	149	0	0	5	212	2	0	0	0	0	0	0	0	1	0	369	1525
6:15 PM	0	139	0	0	9	153	3	0	0	0	0	0	0	0	4	0	308	1458
6:30 PM	0	123	1	0	9	146	5	1	0	0	0	0	0	0	3	0	288	1361
6:45 PM	11	119	1	0	6	139	50	0	5	0	0	0	0	1	6	0	338	1303
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	0	664	0	0	24	896	4	0	24	0	4	0	8	0	16	0	1640	
Heavy Trucks	0	12	0	0	0	4	0	0	0	0	4	0	0	0	0	0	20	
Buses																	0	
Pedestrians		0				0				0				0			0	
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0	
Scoters																	0	

Comments:

LOCATION: S Point Road (NC 273) -- Stowe Road/McKee Farm Lane
CITY/STATE: Belmont, NC

QC JOB #: 15795912
DATE: Thu, Apr 28 2022

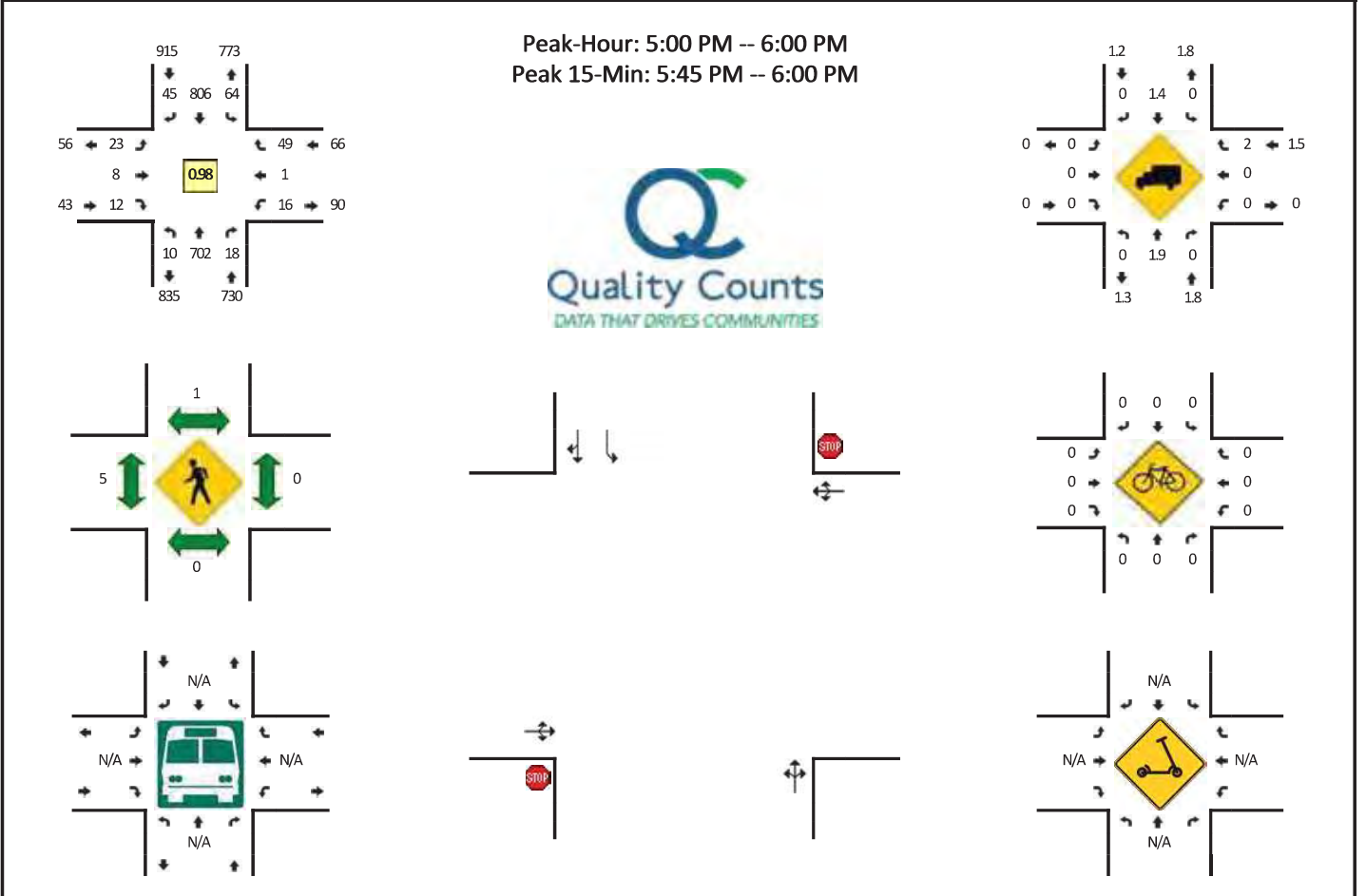


15-Min Count Period Beginning At	S Point Road (NC 273) (Northbound)				S Point Road (NC 273) (Southbound)				Stowe Road/McKee Farm Lane (Eastbound)				Stowe Road/McKee Farm Lane (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
6:30 AM	0	151	3	0	1	84	2	0	3	0	0	0	3	0	6	0	253	
6:45 AM	2	190	9	0	1	66	1	0	11	2	1	0	2	0	15	0	300	
7:00 AM	1	227	28	0	8	58	2	0	13	5	2	0	0	0	31	0	375	
7:15 AM	1	233	20	0	9	133	9	0	4	2	3	0	4	0	22	0	440	1368
7:30 AM	3	220	6	0	11	148	17	0	4	0	3	1	5	0	17	0	435	1550
7:45 AM	4	208	7	0	8	160	25	0	3	2	3	0	2	0	13	0	435	1685
8:00 AM	9	205	18	0	8	140	14	0	3	2	5	0	4	0	11	0	419	1729
8:15 AM	6	209	13	0	8	172	10	0	2	0	7	0	1	1	13	0	442	1731
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	24	836	52	0	32	688	40	0	8	0	28	0	4	4	52	0	1768	
Heavy Trucks	0	20	0		4	60	0		0	0	0		0	0	0		84	
Buses																		
Pedestrians		0				20				0				0			20	
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0	
Scoters																		

Comments:

LOCATION: S Point Road (NC 273) -- Stowe Road/McKee Farm Lane
CITY/STATE: Belmont, NC

QC JOB #: 15795913
DATE: Thu, Apr 28 2022

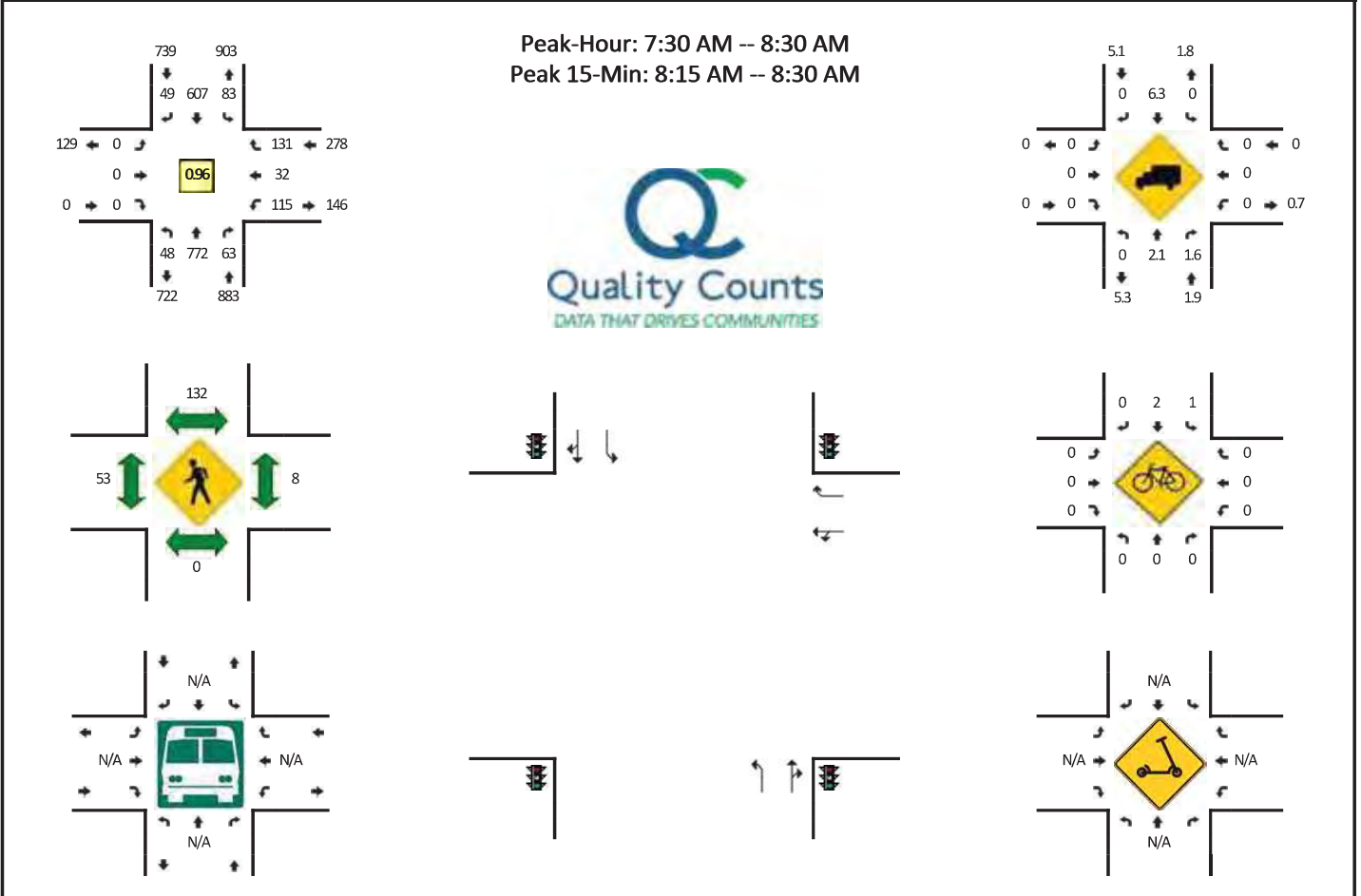


15-Min Count Period Beginning At	S Point Road (NC 273) (Northbound)				S Point Road (NC 273) (Southbound)				Stowe Road/McKee Farm Lane (Eastbound)				Stowe Road/McKee Farm Lane (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
2:30 PM	1	107	1	0	10	170	8	0	6	2	1	0	6	1	10	0	323	
2:45 PM	5	100	1	0	4	143	7	0	9	1	0	0	4	0	12	0	286	
3:00 PM	3	102	4	0	10	156	14	0	10	0	1	0	3	0	16	0	319	
3:15 PM	9	109	5	0	10	166	22	0	3	1	2	0	1	0	14	0	342	1270
3:30 PM	4	137	10	0	15	191	19	0	5	6	36	0	3	0	12	0	438	1385
3:45 PM	3	163	10	0	13	182	13	0	6	3	1	0	4	0	8	0	406	1505
4:00 PM	0	121	2	0	11	194	6	0	3	1	2	0	1	0	16	0	357	1543
4:15 PM	5	140	5	0	16	202	10	1	7	0	2	1	5	1	15	0	410	1611
4:30 PM	6	165	3	0	16	172	9	0	6	0	2	0	2	0	17	0	398	1571
4:45 PM	2	162	3	0	16	207	11	0	5	4	1	0	3	0	13	0	427	1592
5:00 PM	3	169	4	0	15	213	11	0	3	1	3	0	7	0	12	0	441	1676
5:15 PM	4	167	0	0	18	205	15	0	4	2	5	0	1	0	14	0	435	1701
5:30 PM	1	174	4	1	17	193	8	0	12	1	2	0	6	0	12	0	431	1734
5:45 PM	1	192	10	0	14	195	11	0	3	4	2	1	2	1	11	0	447	1754
6:00 PM	1	146	3	0	15	208	14	0	5	3	3	0	3	1	6	0	408	1721
6:15 PM	0	138	5	0	13	158	11	0	8	0	6	0	3	0	13	0	355	1641
6:30 PM	0	122	3	0	14	153	15	0	10	0	4	0	4	0	12	0	337	1547
6:45 PM	1	116	12	0	12	184	6	0	5	0	5	0	6	2	14	0	363	1463
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	4	768	40	0	56	780	44	0	12	16	8	4	8	4	44	0	1788	
Heavy Trucks	0	8	0		0	12	0		0	0	0		0	0	0		20	
Buses																	0	
Pedestrians		0				0				0				0			0	
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0	
Scoters																	0	

Comments:

LOCATION: S Point Road (NC 273) -- South Point High School driveway/Red Raider Run
CITY/STATE: Belmont, NC

QC JOB #: 15795914
DATE: Thu, Apr 28 2022

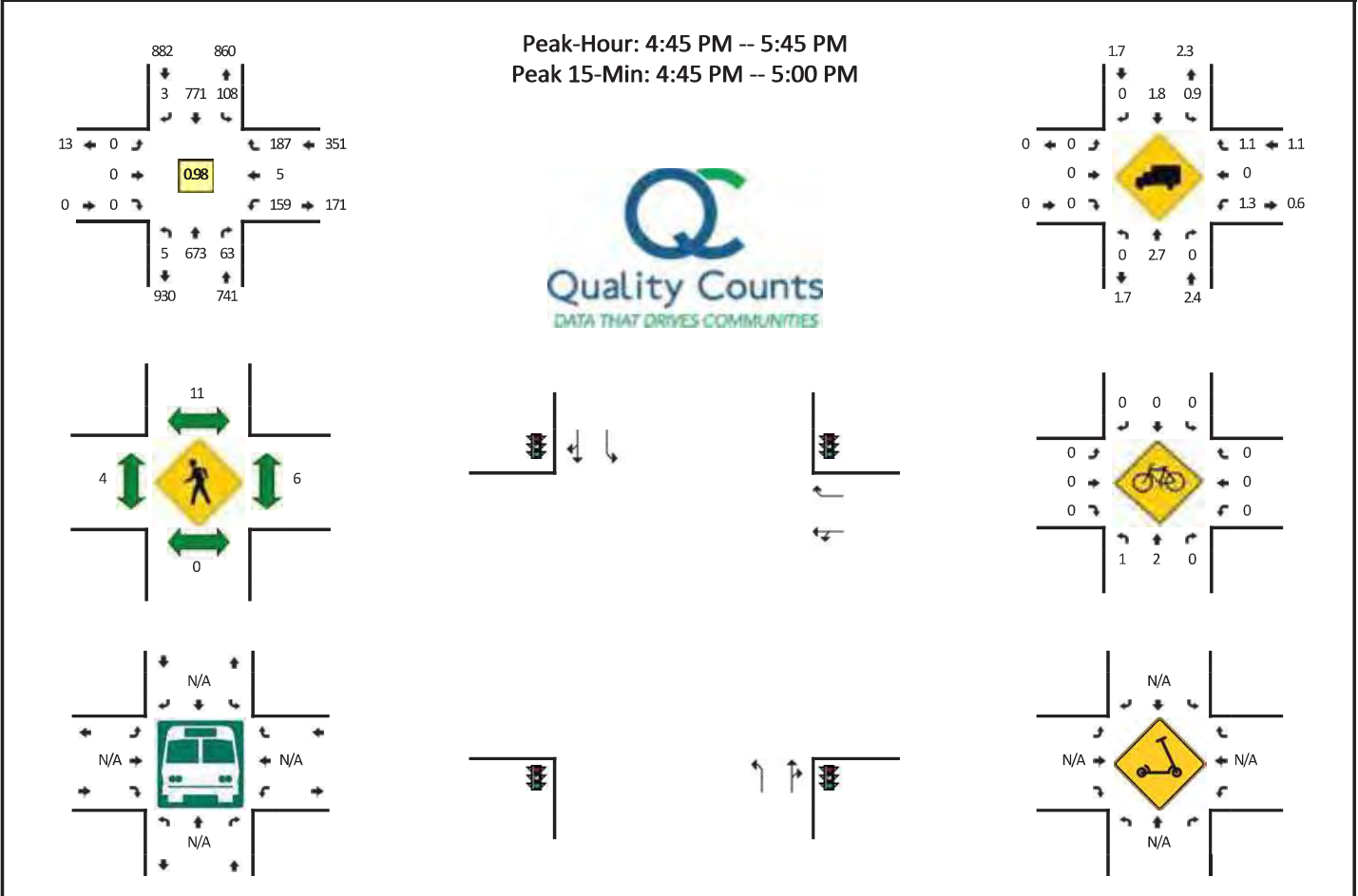


15-Min Count Period Beginning At	S Point Road (NC 273) (Northbound)				S Point Road (NC 273) (Southbound)				South Point High School driveway/Red Raider Run (Eastbound)				South Point High School driveway/Red Raider Run (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
6:30 AM	0	143	13	0	12	82	1	0	0	0	0	0	6	0	14	0	271	
6:45 AM	1	193	15	0	6	57	0	0	0	0	0	0	11	0	13	0	296	
7:00 AM	0	248	16	0	13	56	0	0	0	0	0	0	12	0	23	0	368	
7:15 AM	0	245	11	0	17	134	2	0	0	0	0	0	20	1	29	0	459	1394
7:30 AM	3	212	16	0	32	153	3	0	0	0	0	0	26	2	30	0	477	1600
7:45 AM	10	195	18	0	25	159	14	0	0	0	0	0	31	1	34	0	487	1791
8:00 AM	11	188	11	0	15	140	11	0	0	0	0	0	22	11	31	0	440	1863
8:15 AM	24	177	18	0	11	155	21	0	0	0	0	0	36	18	36	0	496	1900
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	96	708	72	0	44	620	84	0	0	0	0	0	144	72	144	0	1984	
Heavy Trucks	0	16	4	0	0	60	0	0	0	0	0	0	0	0	0	0	80	
Buses																		
Pedestrians		0				256				36				4			296	
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0	
Scooters																	0	

Comments:

LOCATION: S Point Road (NC 273) -- South Point High School driveway/Red Raider Run
CITY/STATE: Belmont, NC

QC JOB #: 15795915
DATE: Thu, Apr 28 2022

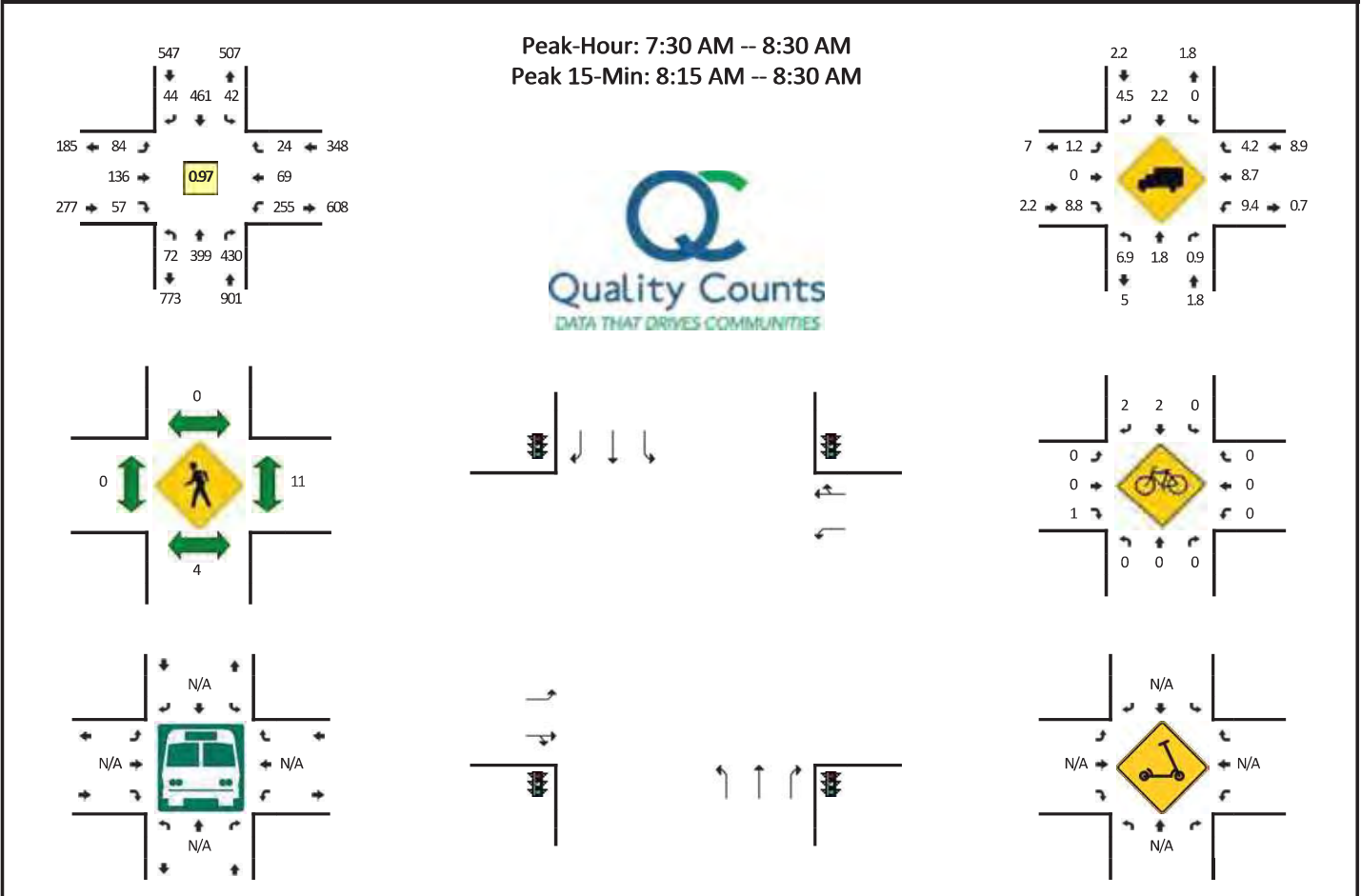


15-Min Count Period Beginning At	S Point Road (NC 273) (Northbound)				S Point Road (NC 273) (Southbound)				South Point High School driveway/Red Raider Run (Eastbound)				South Point High School driveway/Red Raider Run (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
2:30 PM	0	108	11	0	17	156	1	0	0	0	0	0	32	0	41	0	366	
2:45 PM	0	104	12	0	18	136	3	0	0	0	0	0	16	0	25	0	314	
3:00 PM	1	111	12	0	20	152	1	0	0	0	0	0	29	0	30	0	356	
3:15 PM	3	102	14	0	28	170	3	0	0	0	0	0	29	0	37	0	386	1422
3:30 PM	2	133	8	0	26	172	5	0	0	0	0	0	55	3	55	0	459	1515
3:45 PM	4	158	16	0	35	183	1	0	0	0	0	0	23	1	48	0	469	1670
4:00 PM	4	121	15	0	30	190	5	0	0	0	0	0	25	1	46	0	437	1751
4:15 PM	5	131	15	0	28	184	2	0	0	0	0	0	39	0	39	0	443	1808
4:30 PM	2	162	21	0	32	170	0	0	0	0	0	0	28	3	37	0	455	1804
4:45 PM	2	173	12	0	30	209	1	0	0	0	0	0	29	1	46	0	503	1838
5:00 PM	1	156	18	0	32	192	0	0	0	0	0	0	46	2	53	0	500	1901
5:15 PM	2	166	16	0	24	191	1	0	0	0	0	0	46	1	37	0	484	1942
5:30 PM	0	178	17	0	22	179	1	0	0	0	0	0	38	1	51	0	487	1974
5:45 PM	3	180	19	0	27	183	1	0	0	0	0	0	38	0	41	0	492	1963
6:00 PM	2	128	19	0	25	195	0	0	0	0	0	0	42	0	36	0	447	1910
6:15 PM	2	145	20	0	24	155	0	0	0	0	0	0	27	0	43	0	416	1842
6:30 PM	2	123	15	0	29	158	0	0	0	0	0	0	24	0	43	0	394	1749
6:45 PM	0	112	19	0	19	154	0	0	0	0	0	0	51	0	44	0	399	1656
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	8	692	48	0	120	836	4	0	0	0	0	0	116	4	184	0	2012	
Heavy Trucks	0	16	0		4	28	0		0	0	0		4	0	4		56	
Buses																	0	
Pedestrians		0				0				0				0			0	
Bicycles	4	0	0		0	0	0		0	0	0		0	0	0		4	
Scoters																		

Comments:

LOCATION: S Point Road (NC 273) -- R L Stowe Road/Nixon Road
CITY/STATE: Belmont, NC

QC JOB #: 15795916
DATE: Thu, Apr 28 2022

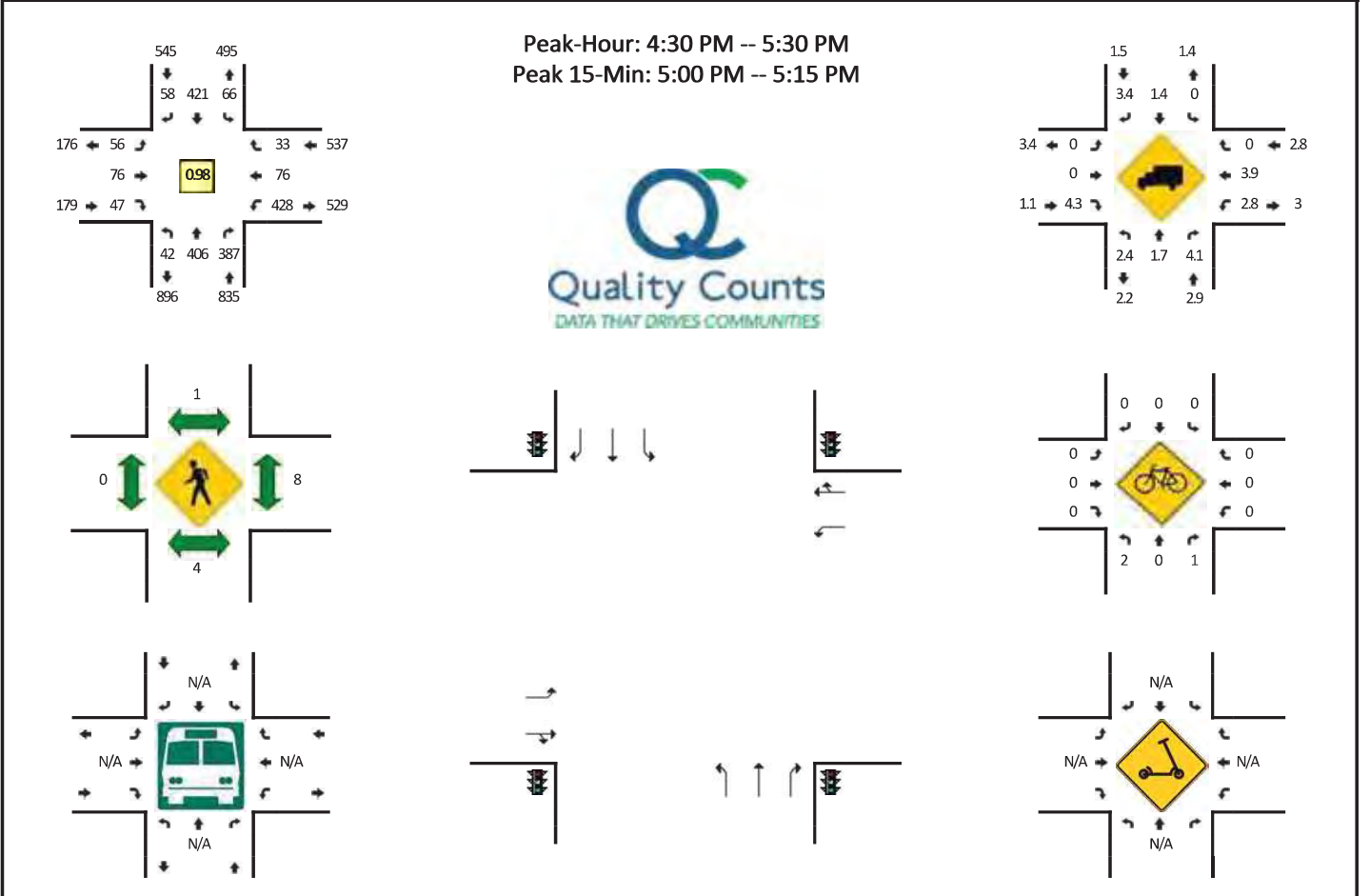


15-Min Count Period Beginning At	S Point Road (NC 273) (Northbound)				S Point Road (NC 273) (Southbound)				R L Stowe Road/Nixon Road (Eastbound)				R L Stowe Road/Nixon Road (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
6:30 AM	2	48	106	0	1	32	3	0	7	16	4	0	56	0	1	0	276	
6:45 AM	0	70	131	0	4	35	1	0	11	17	3	0	25	1	3	0	301	
7:00 AM	1	138	137	0	7	30	1	0	7	21	8	0	37	8	3	0	398	
7:15 AM	1	125	142	0	8	96	8	0	19	23	4	0	55	11	6	0	498	1473
7:30 AM	5	105	131	0	8	135	18	0	13	19	7	0	49	13	5	0	508	1705
7:45 AM	15	106	105	0	7	122	8	0	19	44	14	0	72	8	4	0	524	1928
8:00 AM	16	104	101	0	13	117	8	0	20	43	11	0	58	14	4	0	509	2039
8:15 AM	36	84	93	0	14	87	10	0	32	30	25	0	76	34	11	0	532	2073
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	144	336	372	0	56	348	40	0	128	120	100	0	304	136	44	0	2128	
Heavy Trucks	16	0	0		0	12	4		0	0	12		40	8	0		92	
Buses																		
Pedestrians		8				0				0				0			8	
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0	
Scooters																		

Comments:

LOCATION: S Point Road (NC 273) -- R L Stowe Road/Nixon Road
CITY/STATE: Belmont, NC

QC JOB #: 15795917
DATE: Thu, Apr 28 2022



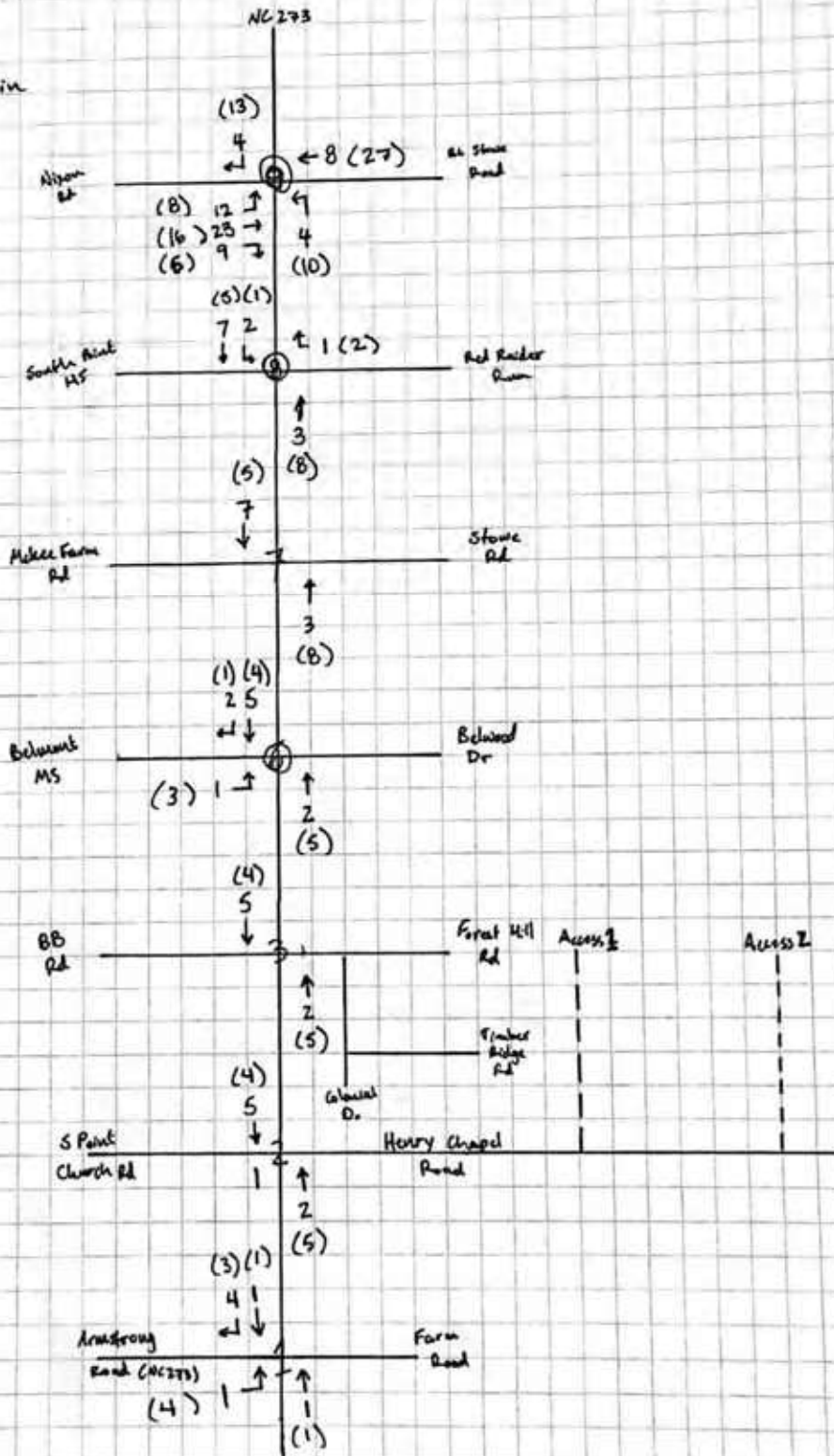
15-Min Count Period Beginning At	S Point Road (NC 273) (Northbound)				S Point Road (NC 273) (Southbound)				R L Stowe Road/Nixon Road (Eastbound)				R L Stowe Road/Nixon Road (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
2:30 PM	7	79	64	0	20	107	10	0	6	12	0	0	65	14	5	0	389	
2:45 PM	3	67	63	0	18	68	6	0	8	6	5	0	86	12	5	0	347	
3:00 PM	7	73	56	0	24	86	12	0	8	17	4	0	80	12	5	0	384	
3:15 PM	8	73	59	0	18	103	14	0	18	17	13	0	90	7	2	0	422	1542
3:30 PM	16	107	75	0	19	91	8	0	36	24	32	0	78	16	2	0	504	1657
3:45 PM	15	119	76	0	21	117	12	0	24	20	5	0	96	22	7	0	534	1844
4:00 PM	8	106	52	0	16	113	14	0	12	10	3	0	108	8	5	0	455	1915
4:15 PM	8	78	93	0	17	109	23	0	17	14	13	0	91	16	7	0	486	1979
4:30 PM	12	101	96	0	15	118	16	0	8	25	18	0	83	17	13	0	522	1997
4:45 PM	7	101	102	0	20	103	16	0	12	14	7	0	122	18	7	0	529	1992
5:00 PM	10	96	103	0	14	105	13	0	17	18	10	0	124	17	8	0	535	2072
5:15 PM	13	108	86	0	17	95	13	0	19	19	12	0	99	24	5	0	510	2096
5:30 PM	12	107	108	0	15	92	14	0	12	21	10	0	103	17	4	0	515	2089
5:45 PM	9	117	106	0	8	100	16	0	12	30	11	0	102	19	4	0	534	2094
6:00 PM	8	73	85	0	22	100	15	0	16	26	14	0	99	16	4	0	478	2037
6:15 PM	11	84	86	0	13	89	10	0	12	12	6	0	79	4	5	0	411	1938
6:30 PM	4	105	62	0	16	111	9	0	14	11	10	0	67	14	3	0	426	1849
6:45 PM	10	89	52	0	10	92	15	0	11	13	12	0	74	5	6	0	389	1704
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	40	384	412	0	56	420	52	0	68	72	40	0	496	68	32	0	2140	
Heavy Trucks	0	8	8		0	0	0		0	0	0		4	0	0		20	
Buses																		
Pedestrians		12				4				0				12			28	
Bicycles	4	0	0		0	0	0		0	0	0		0	0	0		4	
Scoters																		

Comments:

Approved Developments

55% built out in 2022
↳ factor = .45

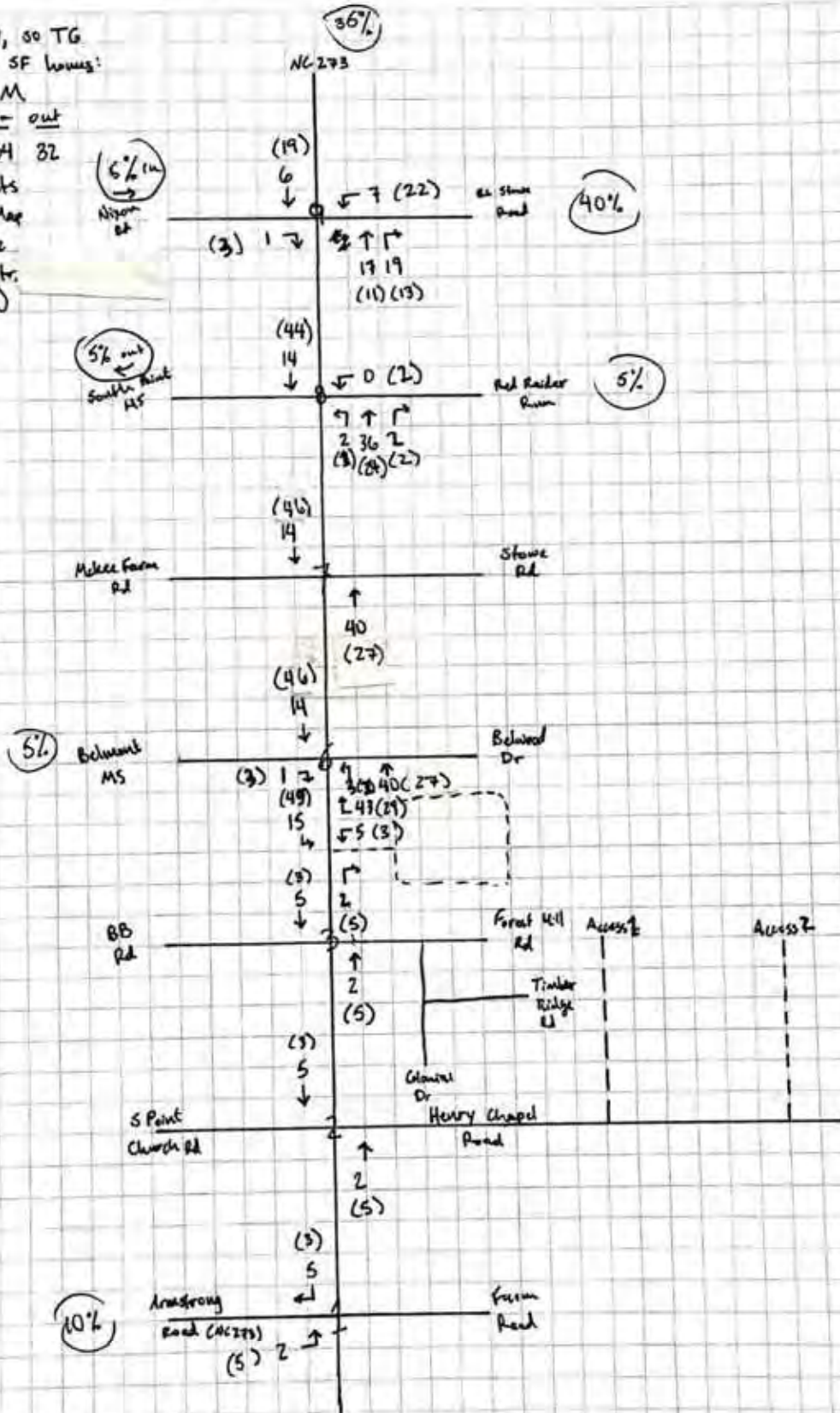
0 - int was included in
Amberley TIA



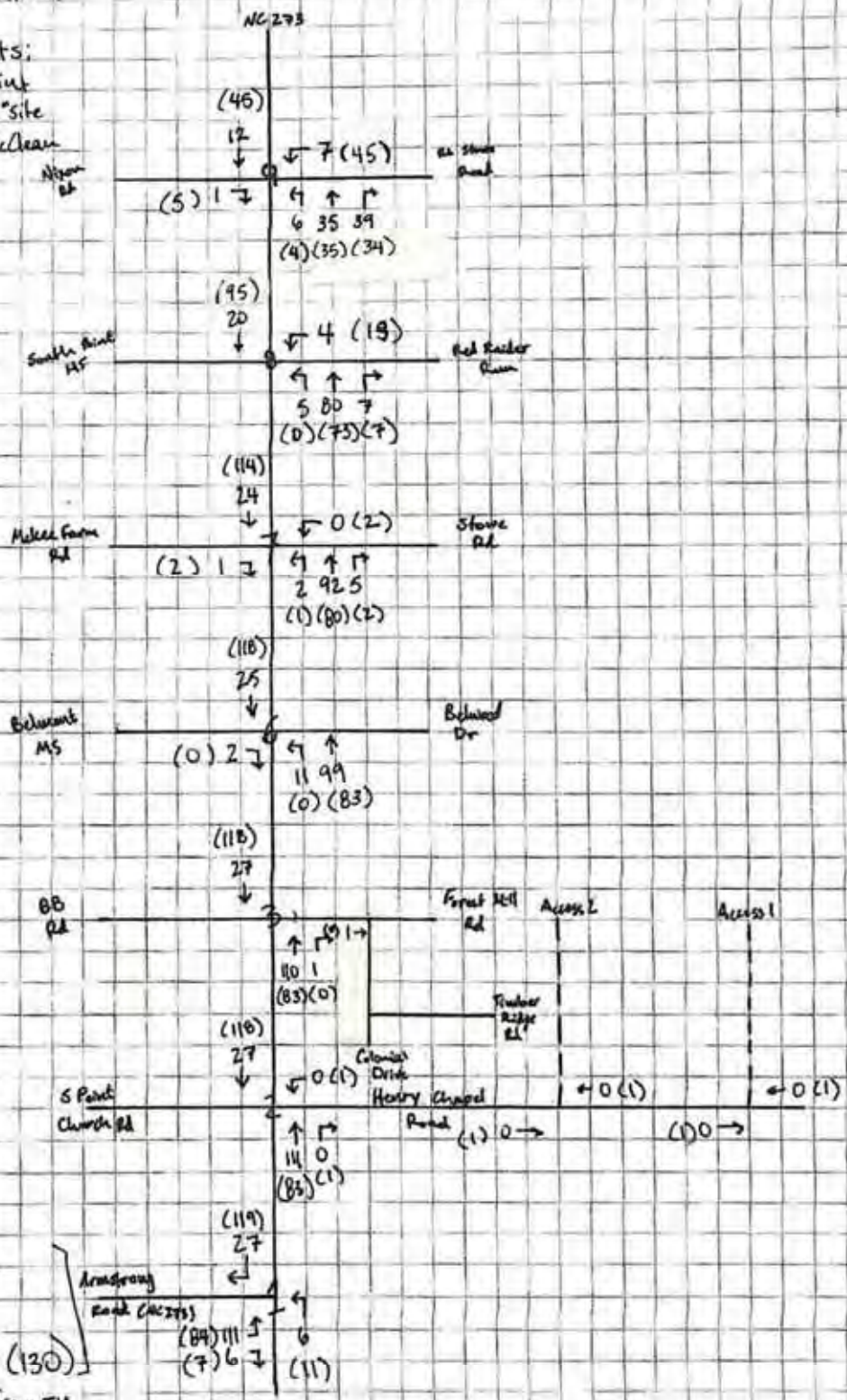
→ No TIA for dev, so TG
ITE II for 86 SF houses:

AM		PM	
in	out	in	out
17	48	54	82

- Assume access connects to NC 273 per NearMap aerial dated 2/9/2022
- Assume same distr. as HC (residential)



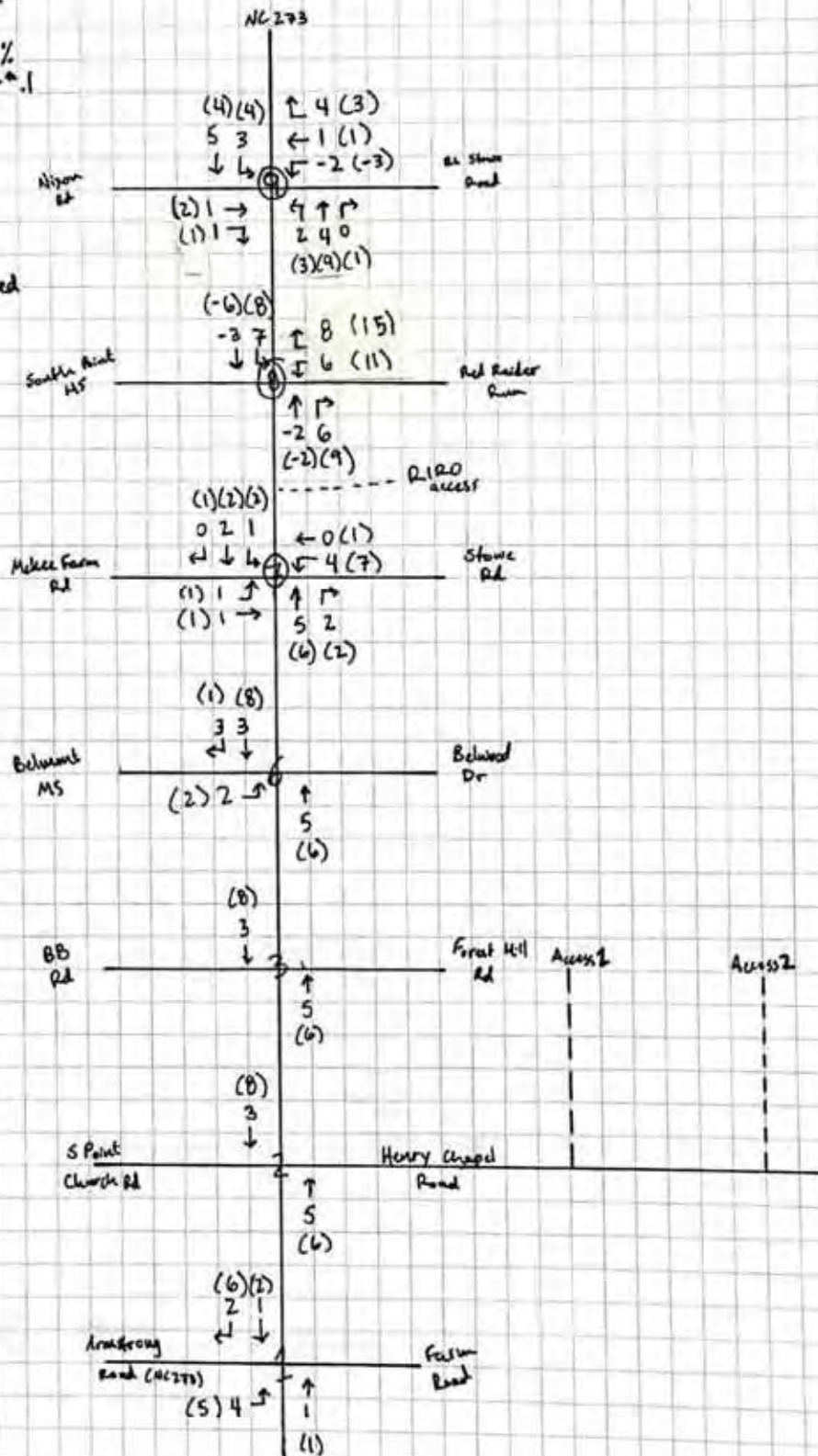
→ Assume 50% built out in 2022 → * .5
 → No overlapping ints; vols taken from int of NC 273 and site access #7 from McClean TIA.



(91) 117 →
 ← 33 (130)
 factored vols from TIA

- Factor total site trips per the MOV
- Assumed to be 90% built out in 2022 → .1
- Connection b/w site drives 6 and 1 is completed

○ - int was included in BTC TIA

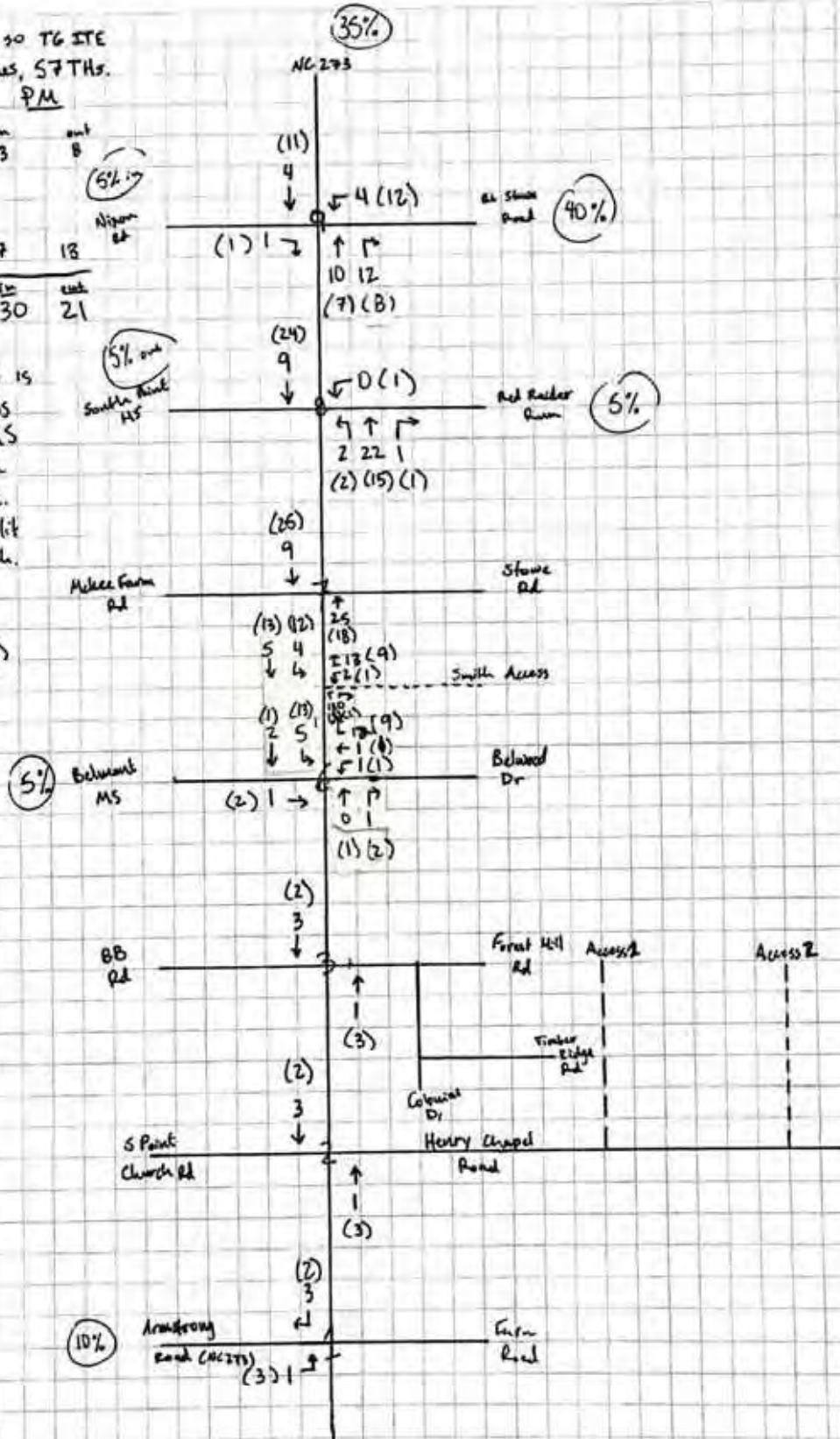


→ No TIA for dev, so TG ITE
 11 for 19 SF houses, 57 THs.

SF:	AM	PM
in	4	12
out	12	13
in	13	8
out	8	

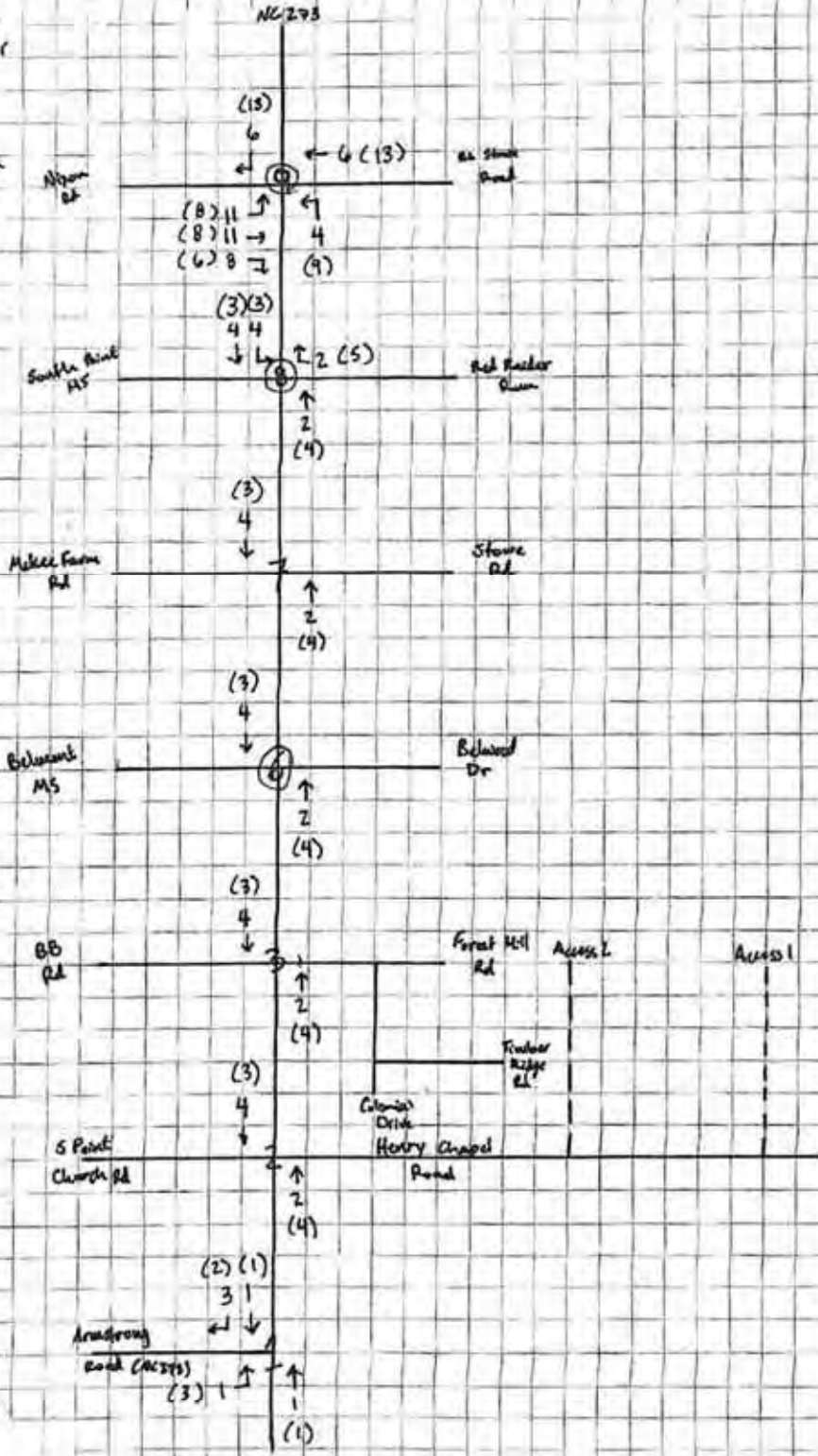
TH:	7	17	17	18
in	11	29	30	21
out				

- assume development is served by 1 access @ 273/Belmont MS and one between Belmont and Stowe.
- Assume equal split of trips at both.
- Assume same distr. as Henry Chapel (residential)



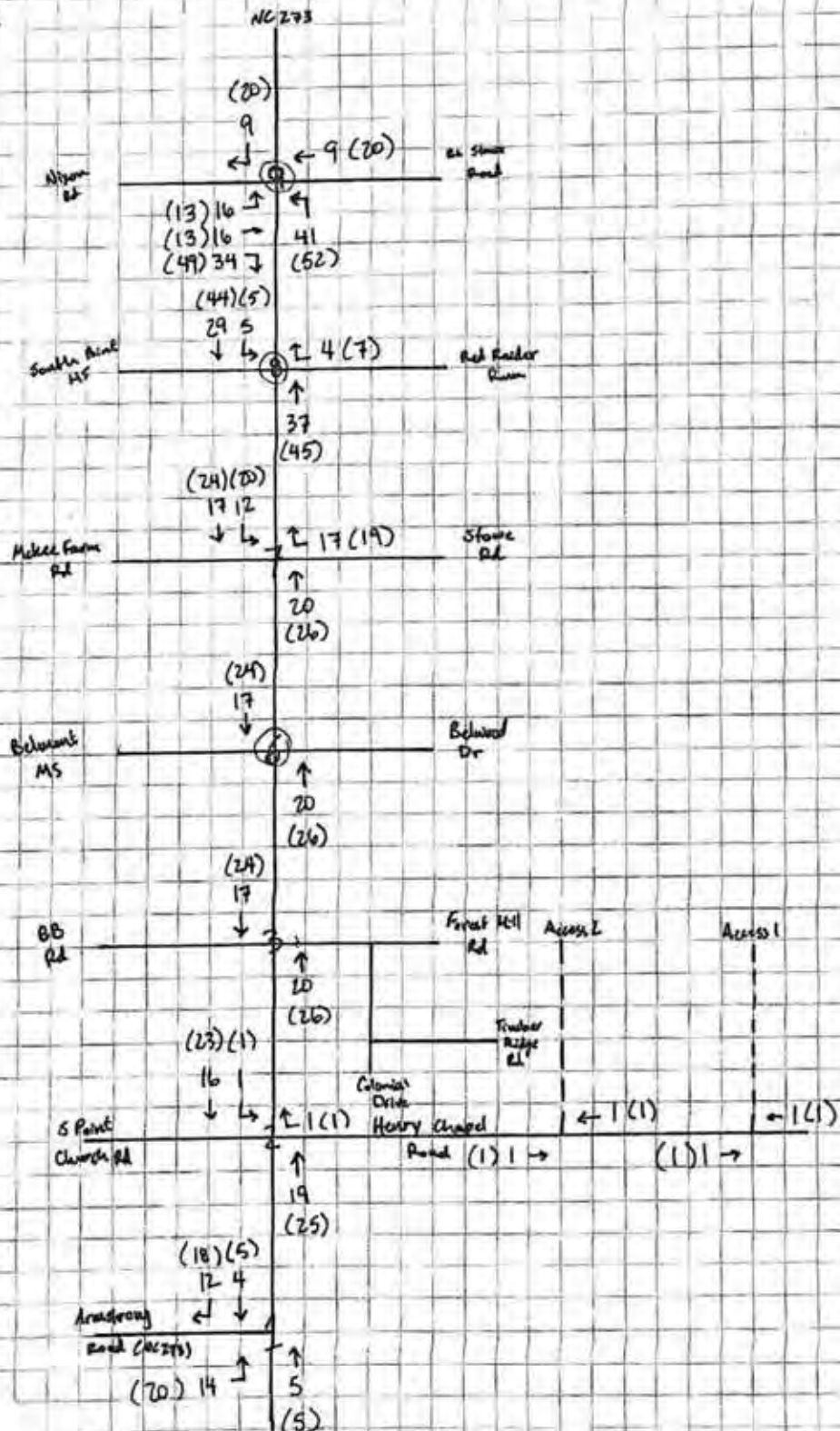
→ Assume Phase 1 is fully built out in 2025 (Phase 2 for Henry Chapel)

○ - int included in South Fork TIA



→ Assume SF phases 2+3 are completed by 2031.

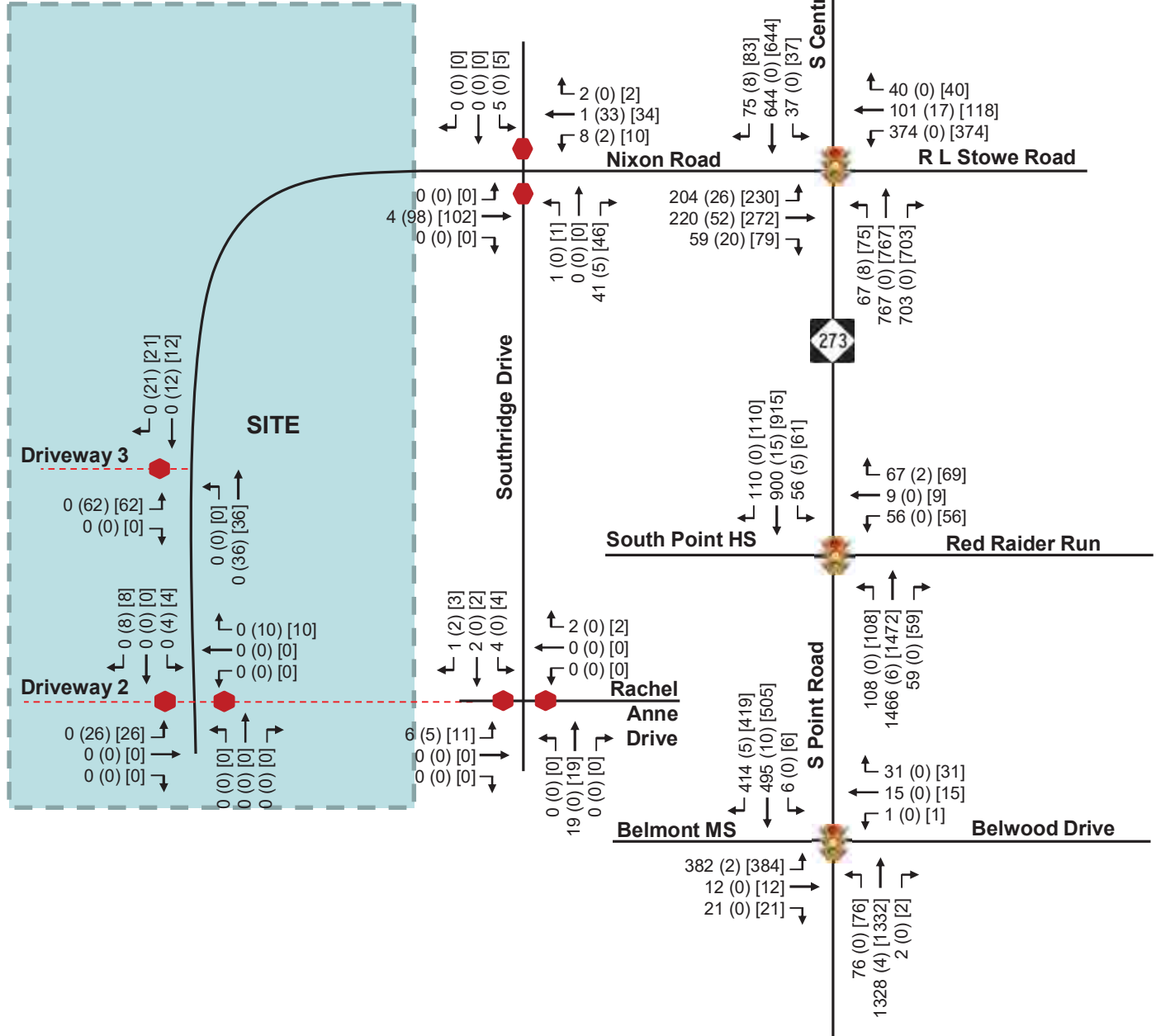
○ - Int was included in SF TIA



LEGEND

- XX Background Traffic Volumes
- (XX) Site Trips
- [XX] Build-out Traffic Volumes

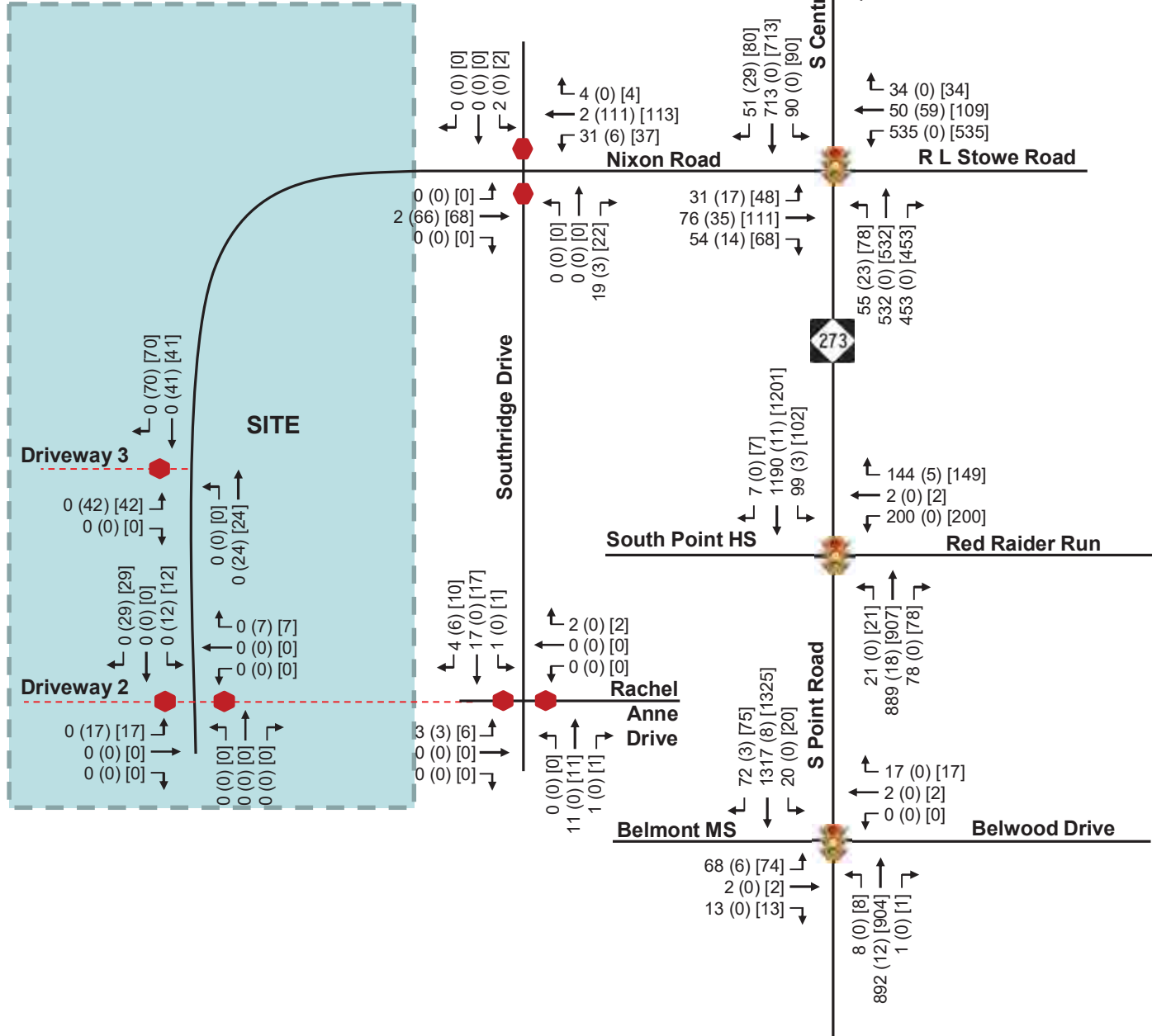
NOT TO SCALE



LEGEND

- XX Background Traffic Volumes
- (XX) Site Trips
- [XX] Build-out Traffic Volumes

NOT TO SCALE



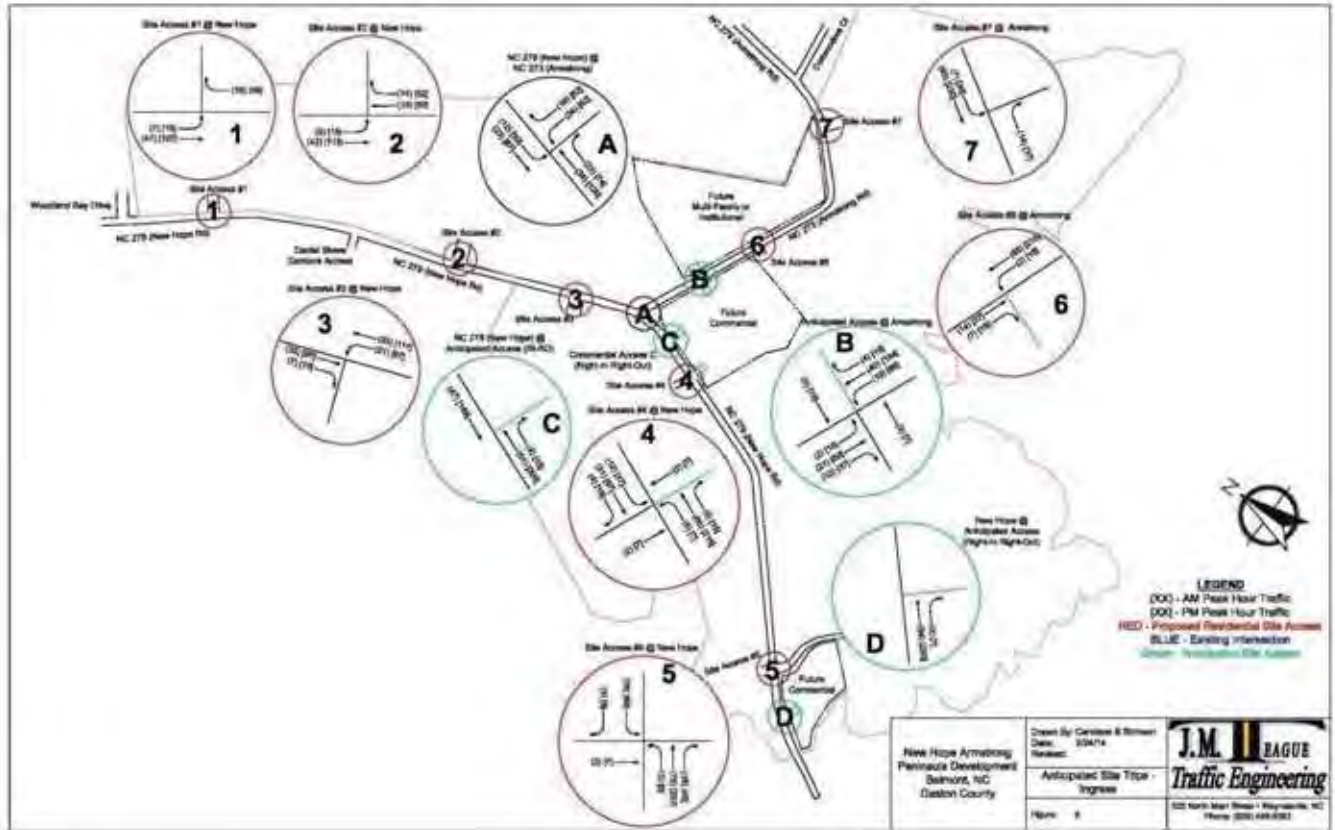


FIGURE 8 – ANTICIPATED AM AND PM PEAK HOUR INGRESS SITE GENERATED TRIPS

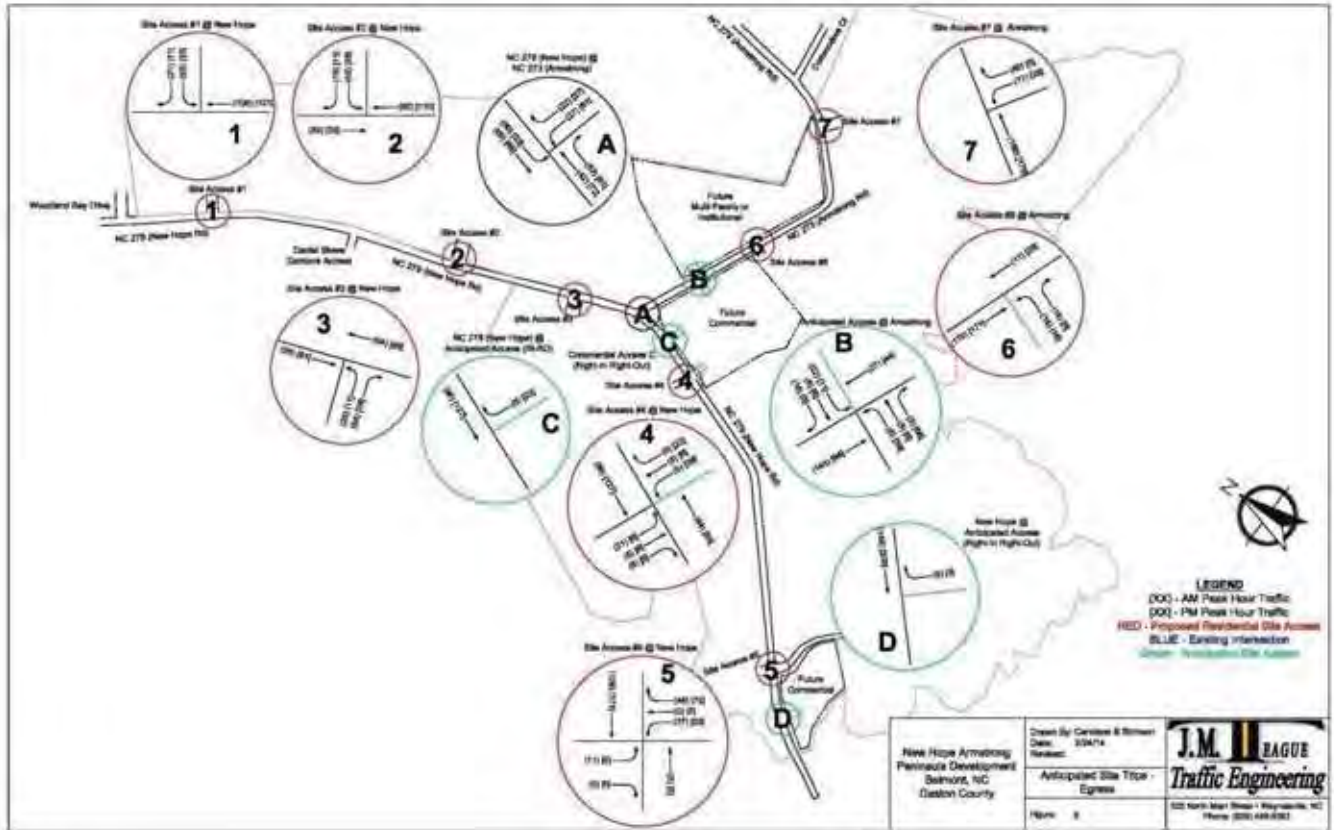
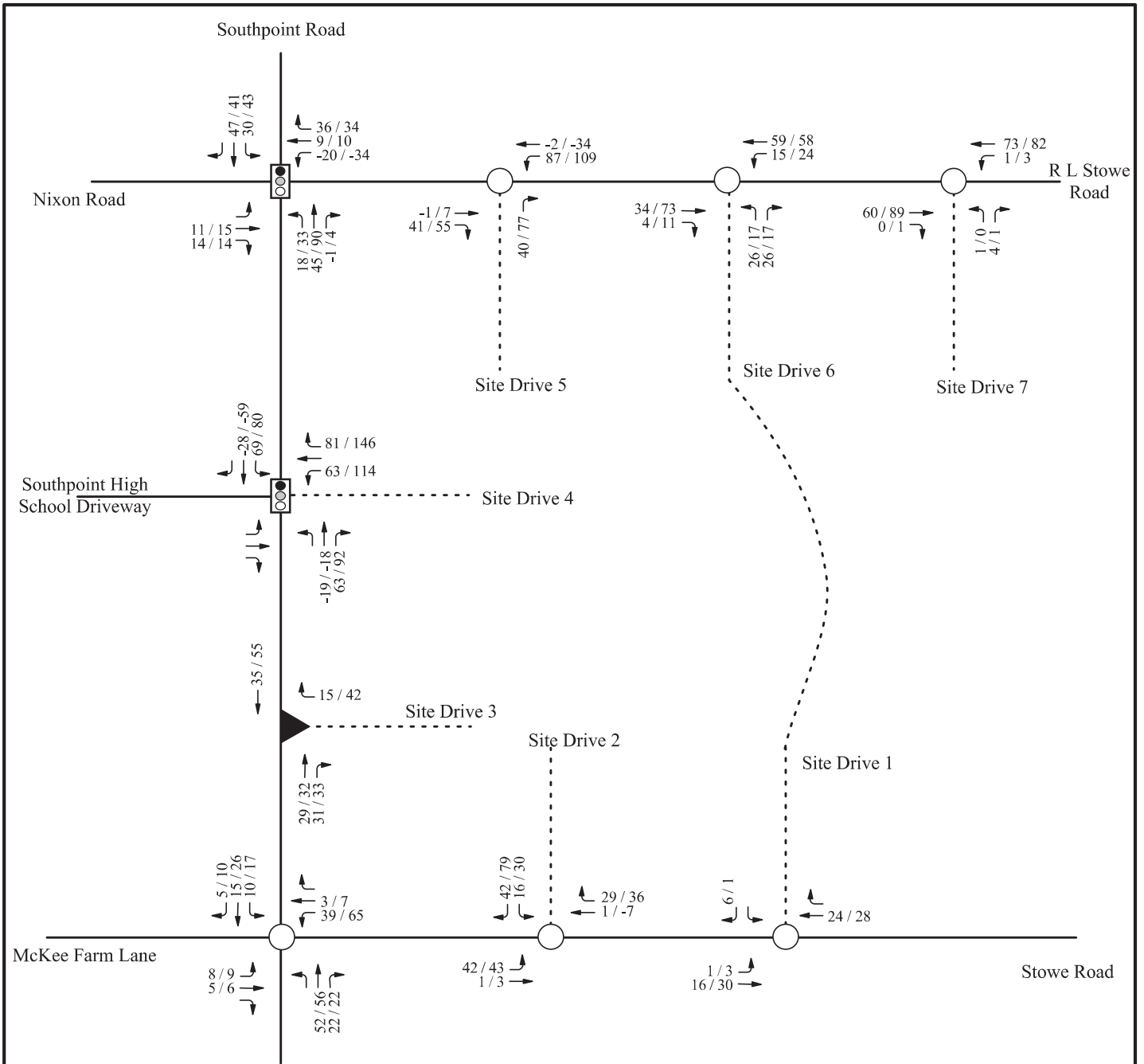


FIGURE 9 – ANTICIPATED AM AND PM PEAK HOUR EGRESS SITE GENERATED TRIPS



LEGEND



○ Unsignalized Intersection

◻ Signalized Intersection

X / Y → AM / PM Peak Hour Traffic



BELMONT TOWN CENTER
Belmont, NC

Total Peak Hour
Site Trip Assignment

Scale: Not to Scale

Figure 13

PLAN B

APPROVED

by City Council 4/5/2021

PRELIMINARY FOR REVIEW PURPOSES ONLY

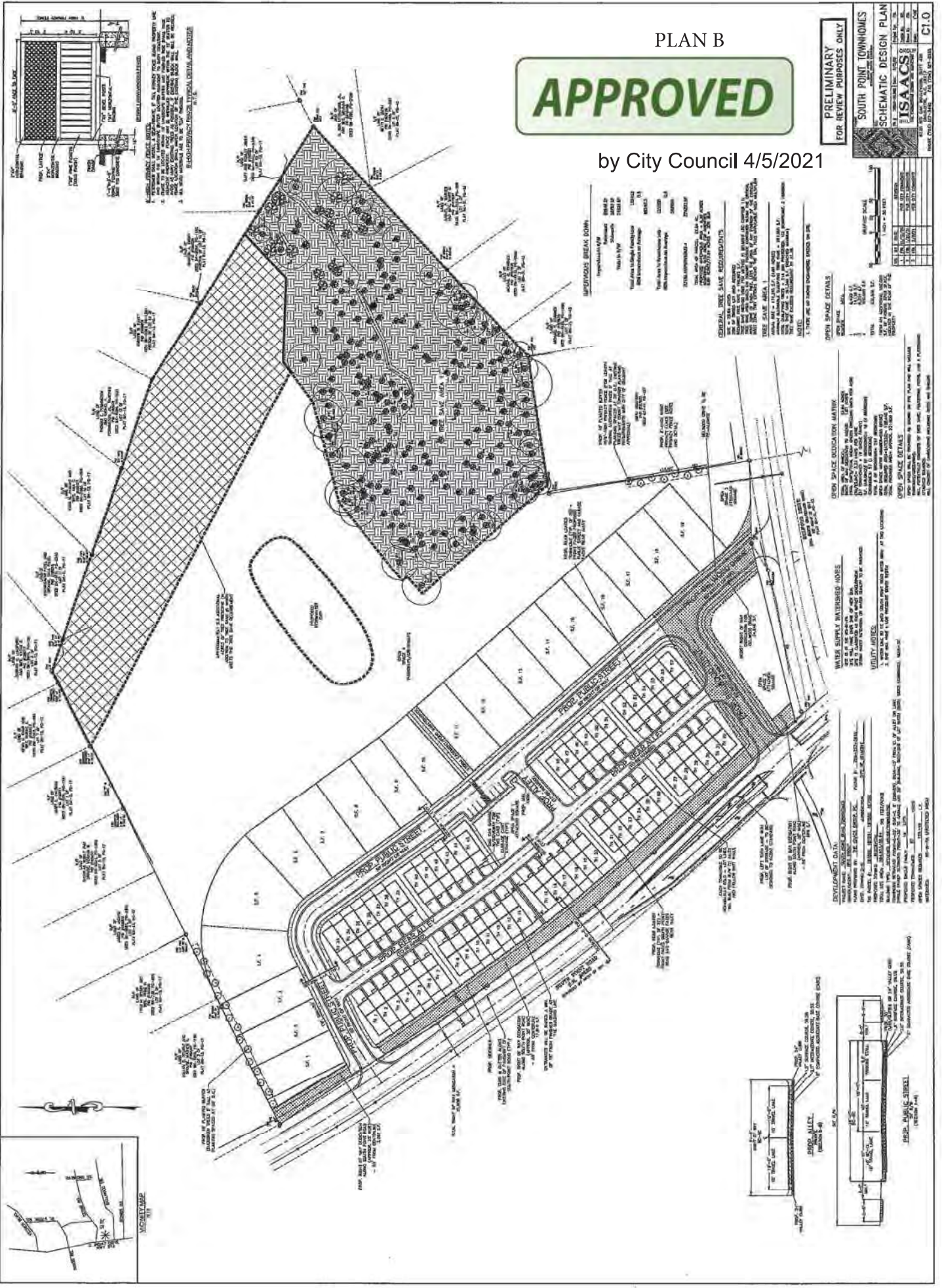
SOUTH POINT TOWNHOMES

SCHEMATIC DESIGN PLAN

ISAACS

4100 S. 10th St., Suite 100, Phoenix, AZ 85042
 Phone: 602.998.1100
 Fax: 602.998.1101
 Email: isaacs@isaacsaz.com

DATE: 02/24/21
 DRAWN BY: J. H. HARRIS
 CHECKED BY: J. H. HARRIS
 SCALE: AS SHOWN



IMPROVEMENTS BREAK DOWN:

Item	Quantity	Unit Price	Total
Site Preparation	10,000	1.00	10,000.00
Grading	50,000	0.50	25,000.00
Asphalt Paving	20,000	2.00	40,000.00
Concrete Paving	10,000	3.00	30,000.00
Landscaping	5,000	1.00	5,000.00
Utilities	1,000	1.00	1,000.00
Other	1,000	1.00	1,000.00
TOTAL			112,000.00

GENERAL TREE SAVE REQUIREMENTS:

1. ALL TREES WITH DBH 4" OR GREATER TO BE PRESERVED.

2. ALL TREES WITH DBH 4" OR GREATER TO BE PRESERVED UNLESS OTHERWISE NOTED.

3. ALL TREES WITH DBH 4" OR GREATER TO BE PRESERVED UNLESS OTHERWISE NOTED.

4. ALL TREES WITH DBH 4" OR GREATER TO BE PRESERVED UNLESS OTHERWISE NOTED.

OPEN SPACE DETAILS:

1. ALL OPEN SPACE TO BE MAINTAINED AS SUCH.

2. ALL OPEN SPACE TO BE MAINTAINED AS SUCH.

3. ALL OPEN SPACE TO BE MAINTAINED AS SUCH.

4. ALL OPEN SPACE TO BE MAINTAINED AS SUCH.

5. ALL OPEN SPACE TO BE MAINTAINED AS SUCH.

WATER SUPPLY WATERED NOTE:

1. ALL WATER SUPPLY TO BE PROVIDED BY THE CITY.

2. ALL WATER SUPPLY TO BE PROVIDED BY THE CITY.

3. ALL WATER SUPPLY TO BE PROVIDED BY THE CITY.

4. ALL WATER SUPPLY TO BE PROVIDED BY THE CITY.

5. ALL WATER SUPPLY TO BE PROVIDED BY THE CITY.

DEVELOPMENT DATA:

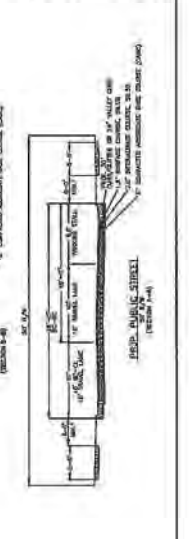
1. ALL DEVELOPMENT TO BE IN ACCORDANCE WITH THE CITY CODE.

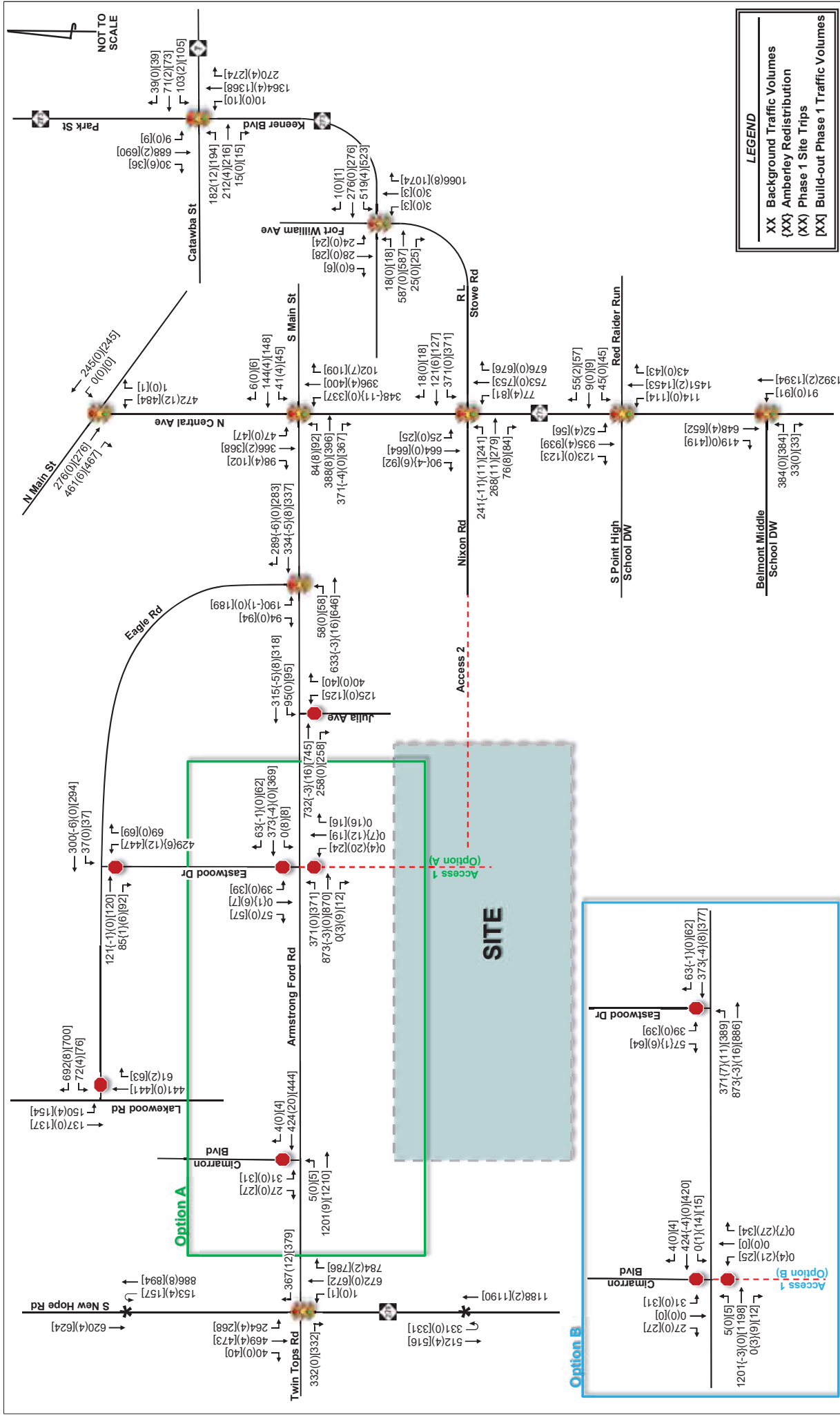
2. ALL DEVELOPMENT TO BE IN ACCORDANCE WITH THE CITY CODE.

3. ALL DEVELOPMENT TO BE IN ACCORDANCE WITH THE CITY CODE.

4. ALL DEVELOPMENT TO BE IN ACCORDANCE WITH THE CITY CODE.

5. ALL DEVELOPMENT TO BE IN ACCORDANCE WITH THE CITY CODE.

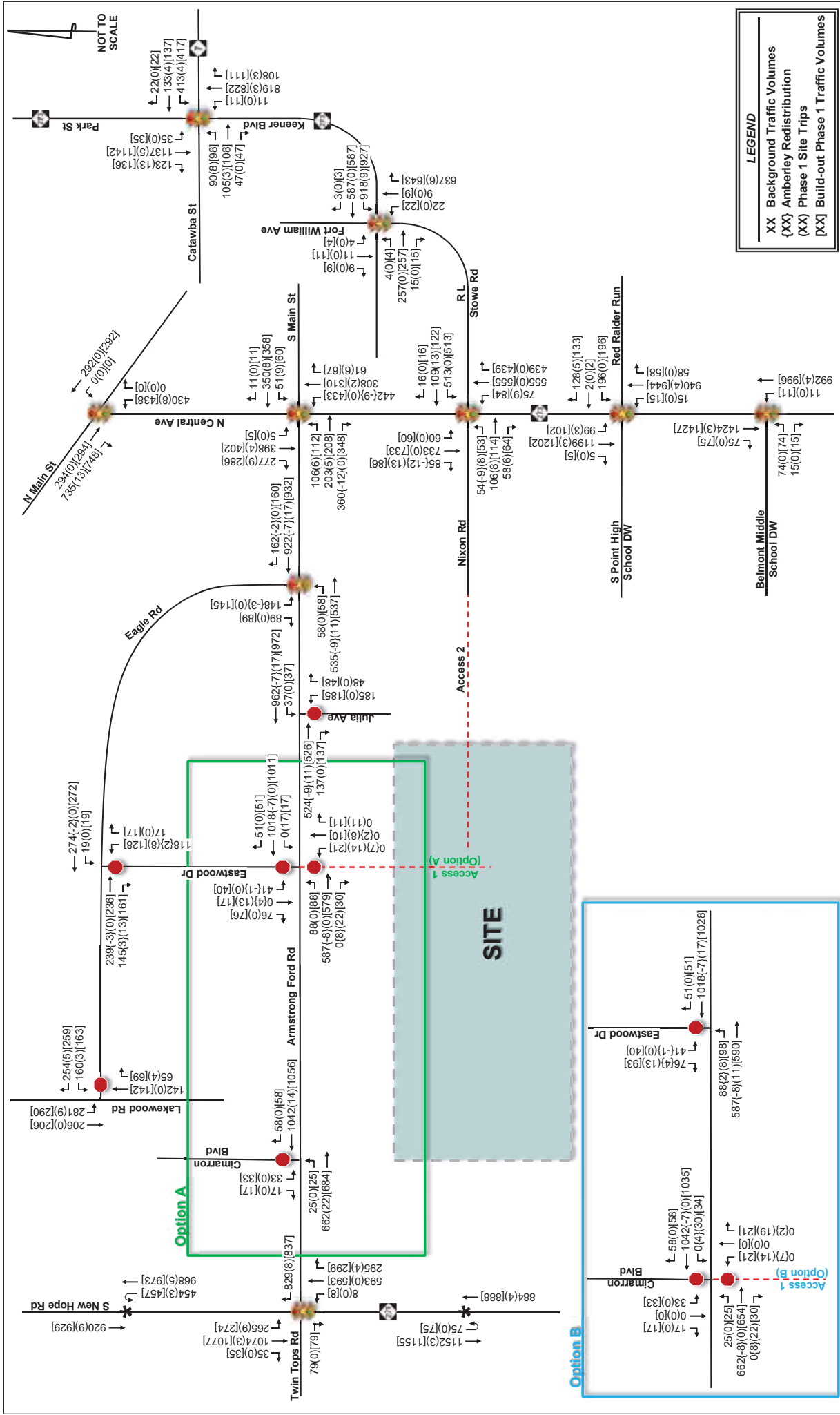




2025 Build-Out Phase 1 AM Peak-Hour Traffic Volumes

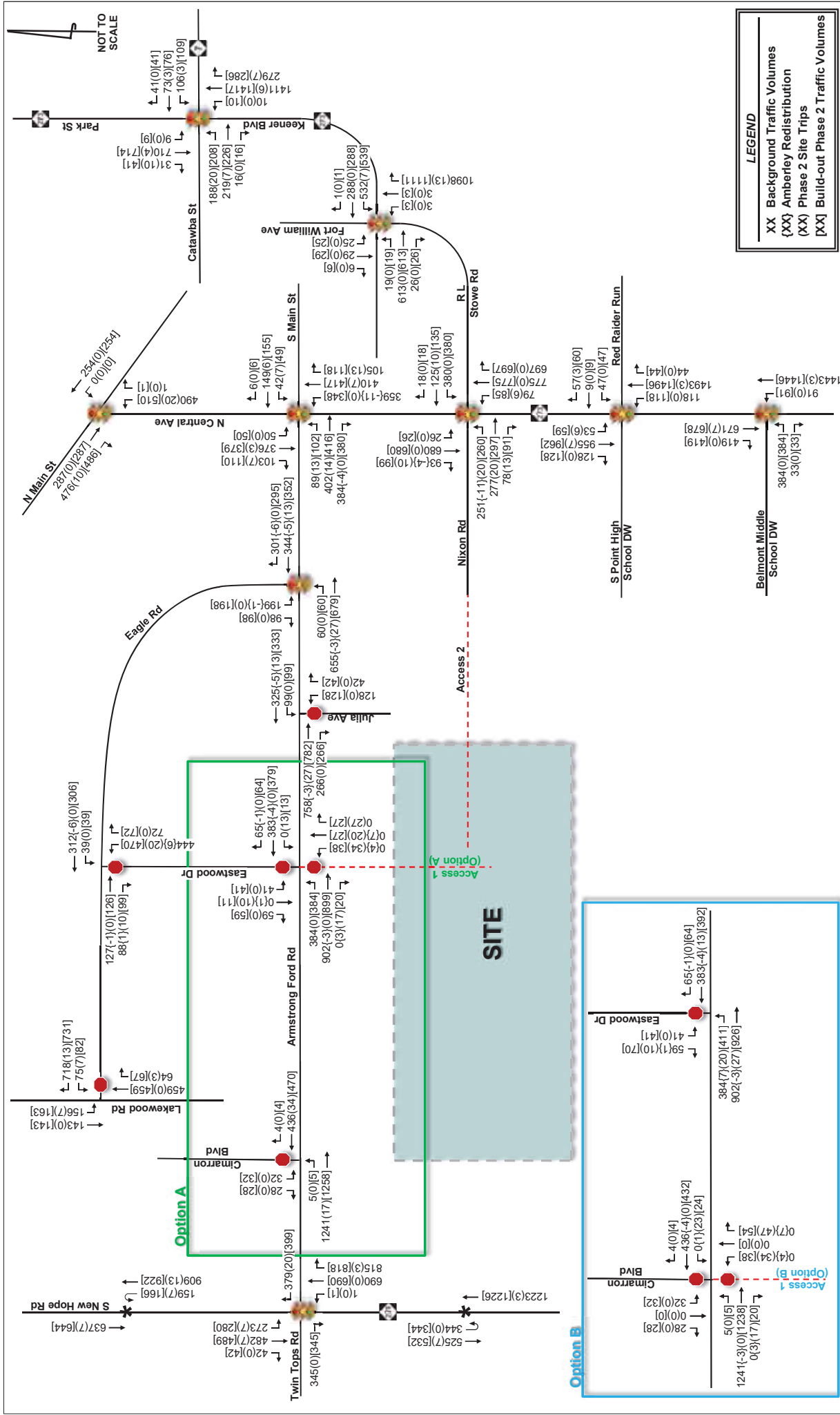
South Fork Development Traffic Impact Analysis

Figure 5.3



2025 Build-Out Phase 1
PM Peak-Hour
Traffic Volumes

South Fork Development
Traffic Impact Analysis

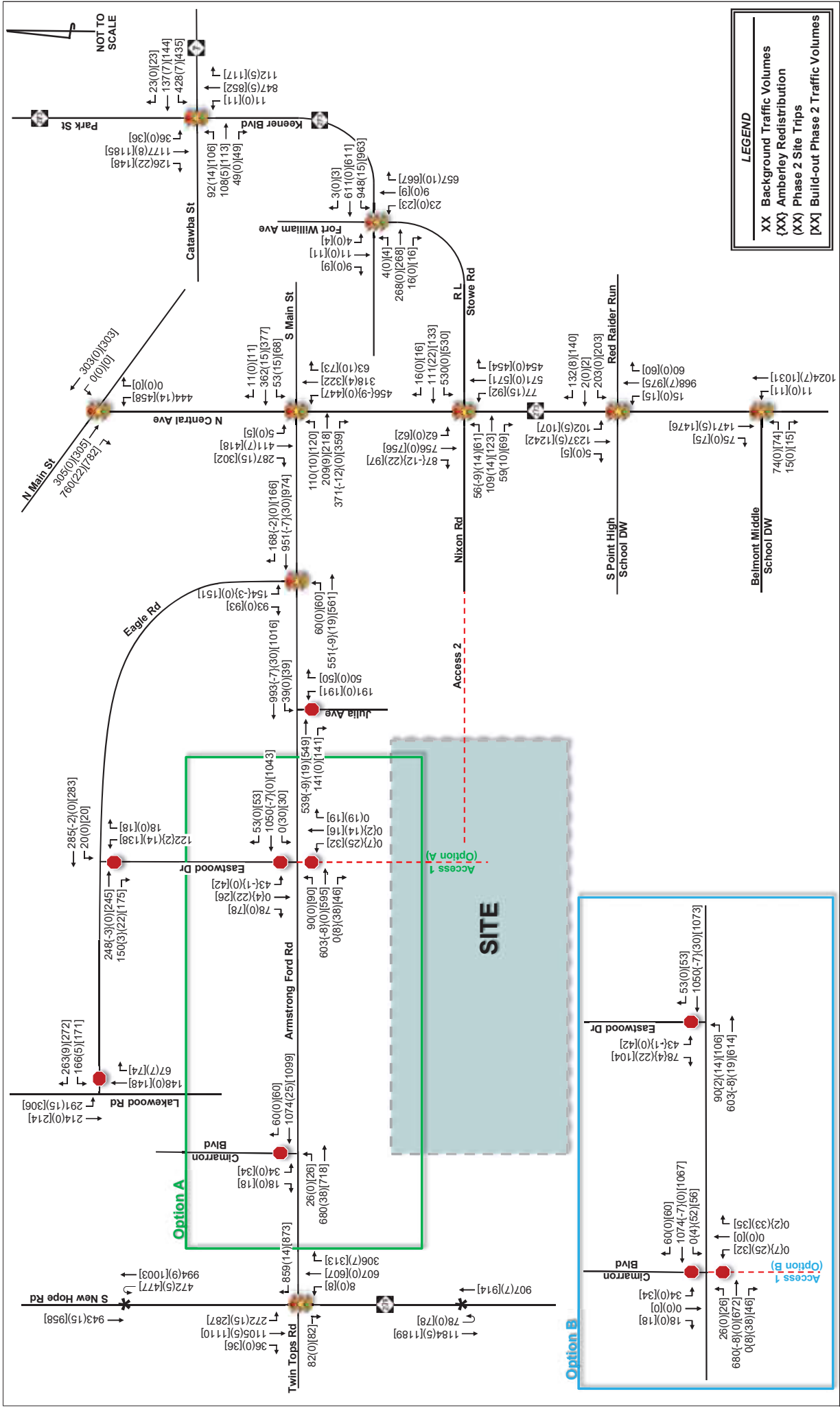


**2029 Build-Out Phase 2
AM Peak-Hour
Traffic Volumes**

**South Fork Development
Traffic Impact Analysis**

Figure 5.5





2029 Build-Out Phase 2
PM Peak-Hour
Traffic Volumes

South Fork Development
Traffic Impact Analysis

Figure 5.6

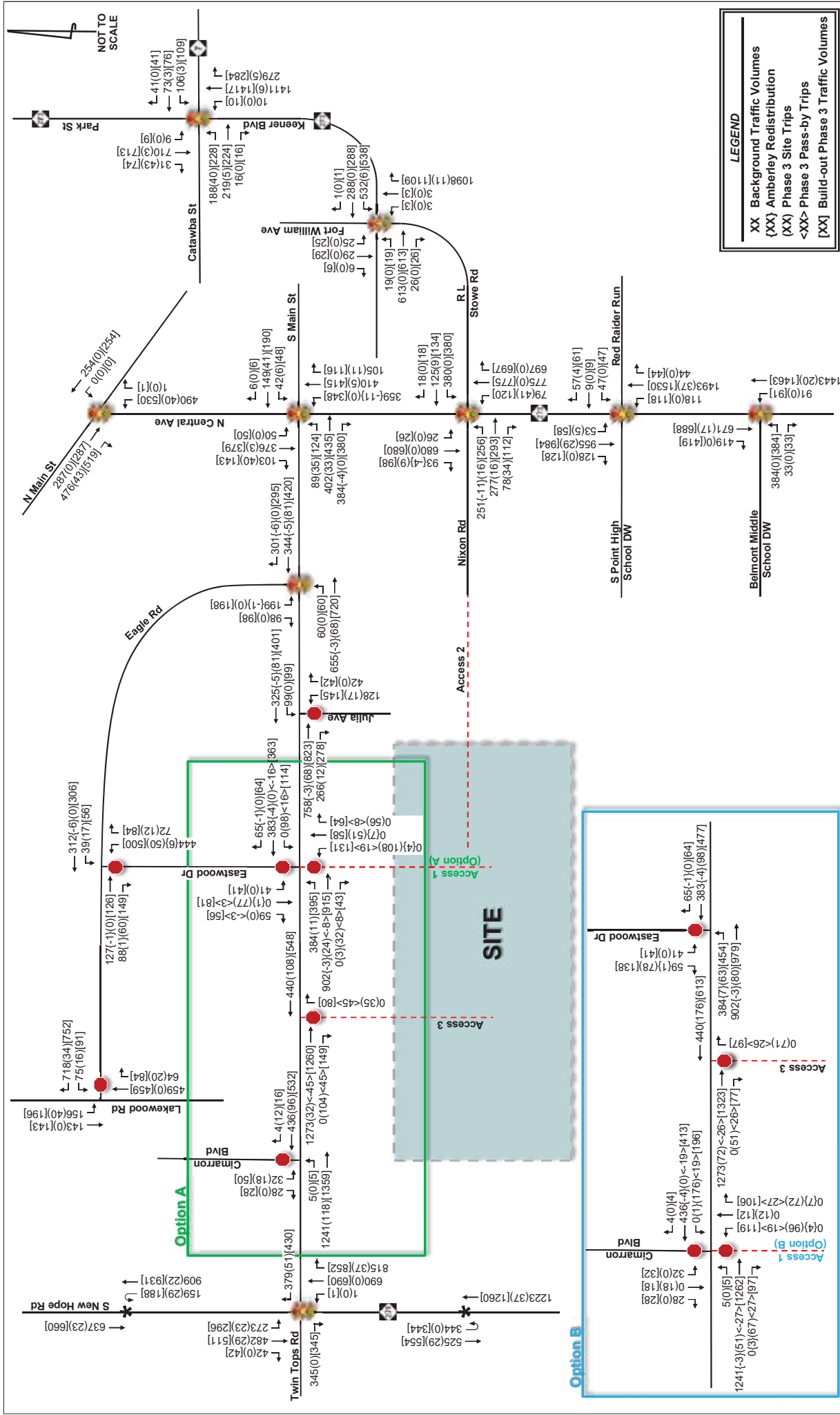


Figure 5.7

2029 Build-Out Phase 3 AM Peak-Hour Traffic Volumes

South Fork Development Traffic Impact Analysis



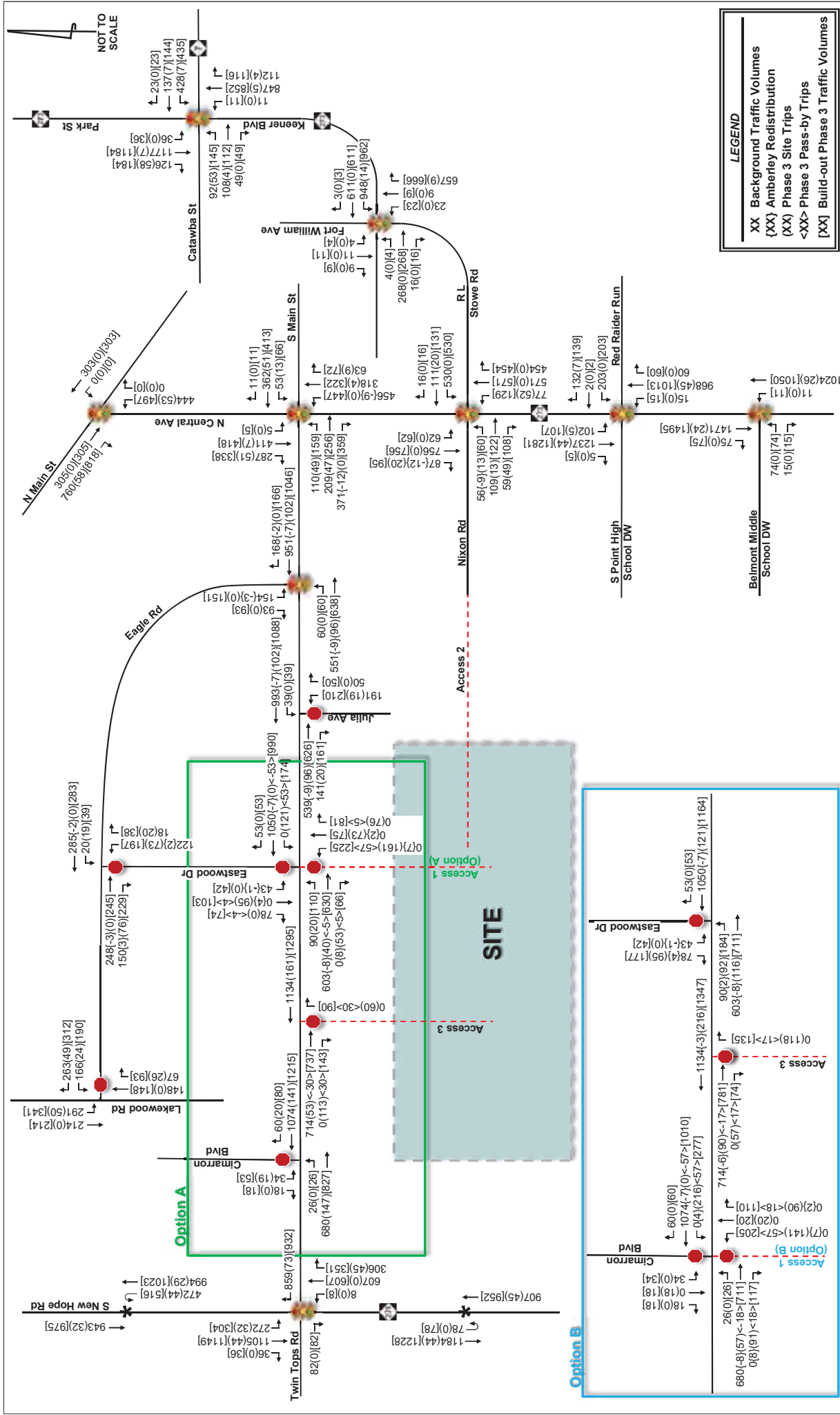


Figure 5.8

2029 Build-Out Phase 3 PM Peak-Hour Traffic Volumes

South Fork Development Traffic Impact Analysis

Intersection Volume Development

INTERSECTION VOLUME DEVELOPMENT

S Point Road/S Point Road (NC 273) and Armstrong Road (NC 273)/Farm Road
AM PEAK HOUR

Description	S Point Road Northbound				S Point Road (NC 273) Southbound				Armstrong Road (NC 273) Eastbound				Farm Road Westbound			
	Left	Through	Right	Uturn	Left	Through	Right	Uturn	Left	Through	Right	Uturn	Left	Through	Right	Uturn
Observed Volumes	50	157	0	0	0	60	163	0	406	0	22	0	0	0	0	0
Balanced Volumes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2022 Existing Traffic	50	157	0	0	0	60	163	0	406	0	22	0	0	0	0	0
Conflicting Peds	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Conflicting Bikes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2022 Existing PHF	0.83	0.79	0.90	0.90	0.90	0.83	0.74	0.90	0.88	0.90	0.61	0.90	0.90	0.90	0.90	0.90
Future PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicle %	14%	2%	2%	2%	2%	8%	10%	2%	2%	2%	36%	2%	2%	2%	2%	2%
Annual Growth Rate	2.5%	2.5%	2.5%	2.5%	2.5%	2.8%	3.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%
2023 Background Traffic (No AD) - Phase 1A	51	161	0	0	0	62	167	0	416	0	23	0	0	0	0	0
2024 Background Traffic (No AD) - Phase 1B	53	165	0	0	0	63	171	0	427	0	23	0	0	0	0	0
2025 Background Traffic (No AD) - Phase 2	54	169	0	0	0	65	176	0	437	0	24	0	0	0	0	0
2026 Background Traffic (No AD) - Phase 3	55	173	0	0	0	66	180	0	448	0	24	0	0	0	0	0
2031 Background Traffic (No AD) - Build-5	62	196	0	0	0	75	204	0	507	0	27	0	0	0	0	0
Amberlee	0	1	0	0	0	1	4	0	1	0	0	0	0	0	0	0
Rivemist	0	0	0	0	0	0	5	0	2	0	0	0	0	0	0	0
McClean	9	0	0	0	0	0	27	0	111	0	6	0	0	0	0	0
Behnest Towns Center	0	1	0	0	0	1	2	0	4	0	0	0	0	0	0	0
South Farm	0	0	0	0	0	0	3	0	1	0	0	0	0	0	0	0
Approved Development Trips (2023 & 2024)	9	2	0	0	0	2	41	0	119	0	6	0	0	0	0	0
South Fork (Phase 1)	0	1	0	0	0	1	3	0	1	0	0	0	0	0	0	0
Approved Development Trips (2025 & 2026)	9	3	0	0	0	3	44	0	120	0	6	0	0	0	0	0
South Fork (Phase 2 + 3)	0	5	0	0	0	4	12	0	14	0	0	0	0	0	0	0
Approved Development Trips (2031)	9	7	0	0	0	6	53	0	133	0	6	0	0	0	0	0
2023 Background Traffic - Phase 1A	60	163	0	0	0	64	208	0	535	0	29	0	0	0	0	0
2024 Background Traffic - Phase 1B	62	167	0	0	0	65	212	0	546	0	29	0	0	0	0	0
2025 Background Traffic - Phase 2	63	172	0	0	0	68	220	0	557	0	30	0	0	0	0	0
2026 Background Traffic - Phase 3	64	176	0	0	0	69	224	0	568	0	30	0	0	0	0	0
2031 Background Traffic - Build-5	71	203	0	0	0	81	257	0	640	0	33	0	0	0	0	0
Percent Inbound Assignment	0%	0%	0%	0%	0%	0%	0%	0%	10%	0%	0%	0%	0%	0%	0%	0%
Percent Outbound Assignment	0%	0%	0%	0%	0%	0%	10%	0%	0%	0%	0%	0%	0%	0%	0%	0%
2023 Project Trips - Phase 1A	0	0	0	0	0	0	7	0	7	0	0	0	0	0	0	0
Percent Inbound Assignment	0%	0%	0%	0%	0%	0%	0%	0%	10%	0%	0%	0%	0%	0%	0%	0%
Percent Outbound Assignment	0%	0%	0%	0%	0%	0%	10%	0%	0%	0%	0%	0%	0%	0%	0%	0%
2024 Project Trips - Phase 1B	0	0	0	0	0	0	12	0	4	0	0	0	0	0	0	0
Percent Inbound Assignment	0%	0%	0%	0%	0%	0%	0%	0%	10%	0%	0%	0%	0%	0%	0%	0%
Percent Outbound Assignment	0%	0%	0%	0%	0%	0%	10%	0%	0%	0%	0%	0%	0%	0%	0%	0%
2025 Project Trips - Phase 2	0	0	0	0	0	0	22	0	8	0	0	0	0	0	0	0
Percent Inbound Assignment	0%	0%	0%	0%	0%	0%	0%	0%	10%	0%	0%	0%	0%	0%	0%	0%
Percent Outbound Assignment	0%	0%	0%	0%	0%	0%	10%	0%	0%	0%	0%	0%	0%	0%	0%	0%
2026 Project Trips - Phase 3	0	0	0	0	0	0	20	0	0	0	0	0	0	0	0	0
Percent Inbound Assignment	0%	0%	0%	0%	0%	0%	0%	0%	10%	0%	0%	0%	0%	0%	0%	0%
Percent Outbound Assignment	0%	0%	0%	0%	0%	0%	10%	0%	0%	0%	0%	0%	0%	0%	0%	0%
2031 Project Trips - Phase 3	0	0	0	0	0	0	20	0	0	0	0	0	0	0	0	0
Percent Inbound Assignment	0%	0%	0%	0%	0%	0%	0%	0%	10%	0%	0%	0%	0%	0%	0%	0%
Percent Outbound Assignment	0%	0%	0%	0%	0%	0%	10%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Project Trips (Total)	0	0	0	0	0	0	20	0	10	0	0	0	0	0	0	0
2023 Buildout Total - Phase 1A	60	163	0	0	0	64	214	0	572	0	29	0	0	0	0	0
2024 Buildout Total - Phase 1B	62	167	0	0	0	65	218	0	586	0	29	0	0	0	0	0
2025 Buildout Total - Phase 2	63	172	0	0	0	68	224	0	598	0	30	0	0	0	0	0
2026 Buildout Total - Phase 3	64	176	0	0	0	69	228	0	610	0	30	0	0	0	0	0
2031 Buildout Total - Build-5	71	203	0	0	0	81	266	0	690	0	33	0	0	0	0	0

PM PEAK HOUR

Description	S Point Road Northbound				S Point Road (NC 273) Southbound				Armstrong Road (NC 273) Eastbound				Farm Road Westbound			
	Left	Through	Right	Uturn	Left	Through	Right	Uturn	Left	Through	Right	Uturn	Left	Through	Right	Uturn
Observed Volumes	39	90	0	0	2	115	413	0	325	0	28	0	0	0	1	0
Balanced Volumes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2022 Existing Traffic	39	90	0	0	2	115	413	0	325	0	28	0	0	0	1	0
Conflicting Peds	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Conflicting Bikes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2022 PHF	0.81	0.87	0.90	0.90	0.50	0.87	0.87	0.90	0.86	0.90	0.70	0.90	0.90	0.90	0.90	0.90
Future PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicle %	8%	4%	2%	2%	2%	2%	3%	2%	2%	2%	4%	2%	2%	2%	2%	2%
Annual Growth Rate	2.5%	2.5%	2.5%	2.5%	2.5%	2.8%	3.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%
2023 Background Traffic (No AD) - Phase 1A	40	92	0	0	2	118	423	0	333	0	29	0	0	0	1	0
2024 Background Traffic (No AD) - Phase 1B	41	95	0	0	2	121	434	0	341	0	29	0	0	0	1	0
2025 Background Traffic (No AD) - Phase 2	42	97	0	0	2	124	445	0	350	0	30	0	0	0	1	0
2026 Background Traffic (No AD) - Phase 3	43	99	0	0	2	127	456	0	359	0	31	0	0	0	1	0
2031 Background Traffic (No AD) - Build-5	49	112	0	0	2	144	516	0	406	0	35	0	0	0	1	0
Amberlee	0	1	0	0	0	1	3	0	4	0	0	0	0	0	0	0
Rivemist	0	0	0	0	0	0	3	0	5	0	0	0	0	0	0	0
McClean	11	0	0	0	0	0	119	0	84	0	7	0	0	0	0	0
Behnest Towns Center	0	1	0	0	0	2	6	0	5	0	0	0	0	0	0	0
South Farm	0	0	0	0	0	0	3	0	3	0	0	0	0	0	0	0
Approved Development Trips (2023 & 2024)	11	2	0	0	0	3	133	0	101	0	7	0	0	0	0	0
South Fork (Phase 1)	0	1	0	0	0	1	3	0	1	0	0	0	0	0	0	0
Approved Development Trips (2025 & 2026)	11	3	0	0	0	4	135	0	104	0	7	0	0	0	0	0
South Fork (Phase 2 + 3)	0	5	0	0	0	5	18	0	20	0	0	0	0	0	0	0
Approved Development Trips (2031)	11	7	0	0	0	8	151	0	121	0	7	0	0	0	0	0
2023 Background Traffic - Phase 1A	51	94	0	0	2	121	556	0	434	0	36	0	0	0	1	0
2024 Background Traffic - Phase 1B	52	97	0	0	2	124	567	0	442	0	36	0	0	0	1	0
2025 Background Traffic - Phase 2	53	100	0	0	2	128	580	0	454	0	37	0	0	0	1	0
2026 Background Traffic - Phase 3	54	102	0	0	2	131	591	0	463	0	38	0	0	0	1	0
2031 Background Traffic - Build-5	60	119	0	0	2	152	667	0	527	0	42	0	0	0	1	0
Percent Inbound Assignment	0%	0%	0%	0%	0%	0%	0%	0%	10%	0%	0%	0%	0%	0%	0%	0%
Percent Outbound Assignment	0%	0%	0%	0%	0%	0%	10%	0%	0%	0%	0%	0%	0%	0%	0%	0%
2023 Project Trips - Phase 1A	0	0	0	0	0	0	5	0	5	0	0	0	0	0	0	0
Percent Inbound Assignment	0%	0%	0%	0%	0%	0%	0%	0%	10%	0%	0%	0%	0%	0%	0%	0%
Percent Outbound Assignment	0%	0%	0%	0%	0%	0%	10%	0%	0%	0%	0%	0%	0%	0%	0%	0%
2024 Project Trips - Phase 1B	0	0	0	0	0	0	8	0	14	0	0	0	0	0	0	0
Percent Inbound Assignment	0%	0%	0%	0%	0%	0%	0%	0%	10%	0%	0%	0%	0%	0%	0%	0%
Percent Outbound Assignment	0%	0%	0%	0%	0%	0%	10%	0%	0%	0%	0%	0%	0%	0%	0%	0%
2025 Project Trips - Phase 2	0	0	0	0	0	0	14	0	26	0	0	0	0	0	0	0
Percent Inbound Assignment	0%	0%	0%	0%	0%	0%	0%	0%	10%	0%	0%	0%	0%	0%	0%	0%
Percent Outbound Assignment	0%	0%	0%	0%	0%	0%	10%	0%	0%	0%	0%	0%	0%	0%	0%	0%
2026																

INTERSECTION VOLUME DEVELOPMENT

**S Point Road (NC 273) and S Point Church Road/Henry Chapel Road
AM PEAK HOUR**

Description	S Point Road (NC 273)				S Point Road (NC 273)				S Point Church Road				Henry Chapel Road			
	Northbound		Southbound		Eastbound		Westbound		Eastbound		Westbound		Eastbound		Westbound	
	Left	Through	Right	Uturn	Left	Through	Right	Uturn	Left	Through	Right	Uturn	Left	Through	Right	Uturn
Observed Volumes	0	688	1	0	7	274	5	0	0	0	1	0	0	1	0	0
Balanced Volumes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2022 Existing Traffic	0	688	1	0	7	274	5	0	0	0	1	0	0	1	0	0
Conflicting Peds	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Conflicting Bikes	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0
2022 Existing PHF	0.90	0.89	0.25	0.90	0.58	0.91	0.25	0.90	0.90	0.90	0.25	0.90	0.25	0.90	0.63	0.90
Future PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicle %	2%	2%	10%	2%	2%	8%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Annual Growth Rate	2.5%	2.5%	2.5%	2.5%	2.5%	2.8%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%
2023 Background Traffic (No AD) - Phase 1A	0	705	1	0	7	281	5	0	0	0	1	0	1	0	0	21
2024 Background Traffic (No AD) - Phase 1B	0	723	1	0	7	288	5	0	0	0	1	0	1	0	0	21
2025 Background Traffic (No AD) - Phase 2	0	741	1	0	8	295	5	0	0	0	1	0	1	0	0	22
2026 Background Traffic (No AD) - Phase 3	0	759	1	0	8	302	6	0	0	0	1	0	1	0	0	22
2031 Background Traffic (No AD) - Build-5	0	859	1	0	9	342	6	0	0	0	1	0	1	0	0	25
Amberlee	0	2	0	0	0	5	0	0	0	0	0	0	0	0	0	0
Rivemist	0	2	0	0	0	5	0	0	0	0	0	0	0	0	0	0
McClean	0	111	0	0	0	27	0	0	0	0	0	0	0	0	0	0
Behnest Towns Center	0	5	0	0	0	3	0	0	0	0	0	0	0	0	0	0
South Farm	0	1	0	0	0	3	0	0	0	0	0	0	0	0	0	0
Approved Development Trips (2023 & 2024)	0	121	0	0	0	43	0	0	0	0	0	0	0	0	0	0
South Fork (Phase 1)	0	2	0	0	0	4	0	0	0	0	0	0	0	0	0	0
Approved Development Trips (2025 & 2026)	0	123	0	0	0	47	0	0	0	0	0	0	0	0	0	0
South Fork (Phase 2 + 3)	0	10	0	0	1	16	0	0	0	0	0	0	0	0	0	1
Approved Development Trips (2031)	0	140	0	0	1	59	0	0	0	0	0	0	0	0	0	1
2023 Background Traffic - Phase 1A	0	856	1	0	7	324	5	0	0	0	1	0	1	0	0	21
2024 Background Traffic - Phase 1B	0	844	1	0	7	331	5	0	0	0	1	0	1	0	0	21
2025 Background Traffic - Phase 2	0	864	1	0	8	342	5	0	0	0	1	0	1	0	0	22
2026 Background Traffic - Phase 3	0	882	1	0	8	349	6	0	0	0	1	0	1	0	0	22
2031 Background Traffic - Build-5	0	999	1	0	10	401	6	0	0	0	1	0	1	0	0	26
Percent Inbound Assignment	0%	0%	10%	0%	90%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Percent Outbound Assignment	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%	90%	0%
2023 Project Trips - Phase 1A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Percent Inbound Assignment	0%	0%	10%	0%	90%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Percent Outbound Assignment	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%	90%	0%
2024 Project Trips - Phase 1B	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Percent Inbound Assignment	0%	0%	10%	0%	70%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Percent Outbound Assignment	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%	90%	0%
2025 Project Trips - Phase 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Percent Inbound Assignment	0%	0%	10%	0%	60%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Percent Outbound Assignment	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%	90%	0%
2026 Project Trips - Phase 3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Percent Inbound Assignment	0%	0%	10%	0%	60%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Percent Outbound Assignment	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%	90%	0%
2031 Project Trips (Total)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2023 Buildout Total - Phase 1A	0	526	3	0	20	324	5	0	0	0	1	0	5	0	0	42
2024 Buildout Total - Phase 1B	0	544	3	0	21	331	5	0	0	0	1	0	5	0	0	42
2025 Buildout Total - Phase 2	0	564	3	0	22	342	5	0	0	0	1	0	5	0	0	42
2026 Buildout Total - Phase 3	0	582	3	0	22	349	6	0	0	0	1	0	5	0	0	42
2031 Buildout Total - Build-5	0	699	3	0	27	401	6	0	0	0	1	0	5	0	0	42

PM PEAK HOUR

Description	S Point Road (NC 273)				S Point Road (NC 273)				S Point Church Road				Henry Chapel Road			
	Northbound		Southbound		Eastbound		Westbound		Eastbound		Westbound		Eastbound		Westbound	
	Left	Through	Right	Uturn	Left	Through	Right	Uturn	Left	Through	Right	Uturn	Left	Through	Right	Uturn
Observed Volumes	0	531	4	0	27	608	2	0	1	0	0	0	4	0	0	21
Balanced Volumes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2022 Existing Traffic	0	531	4	0	27	608	2	0	1	0	0	0	4	0	0	21
Conflicting Peds	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Conflicting Bikes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2022 PHF	0.90	0.92	0.33	0.90	0.56	0.92	0.50	0.90	0.25	0.90	0.90	0.90	0.50	0.90	0.66	0.90
Future PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicle %	2%	3%	2%	2%	2%	3%	2%	2%	2%	2%	2%	2%	2%	2%	10%	2%
Annual Growth Rate	2.5%	2.5%	2.5%	2.5%	2.5%	2.8%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%
2023 Background Traffic (No AD) - Phase 1A	0	544	4	0	28	623	2	0	1	0	0	0	4	0	0	22
2024 Background Traffic (No AD) - Phase 1B	0	558	4	0	28	639	2	0	1	0	0	0	4	0	0	22
2025 Background Traffic (No AD) - Phase 2	0	572	4	0	29	655	2	0	1	0	0	0	4	0	0	23
2026 Background Traffic (No AD) - Phase 3	0	586	4	0	30	671	2	0	1	0	0	0	4	0	0	23
2031 Background Traffic (No AD) - Build-5	0	663	5	0	34	759	2	0	1	0	0	0	5	0	0	26
Amberlee	0	2	0	0	0	4	0	0	0	0	0	0	0	0	0	0
Rivemist	0	5	0	0	0	3	0	0	0	0	0	0	0	0	0	0
McClean	0	83	1	0	0	118	0	0	0	0	0	0	1	0	0	0
Behnest Towns Center	0	6	0	0	0	8	0	0	0	0	0	0	0	0	0	0
South Farm	0	3	0	0	0	2	0	0	0	0	0	0	0	0	0	0
Approved Development Trips (2023 & 2024)	0	102	1	0	0	135	0	0	0	0	0	0	1	0	0	0
South Fork (Phase 1)	0	2	0	0	0	3	0	0	0	0	0	0	0	0	0	0
Approved Development Trips (2025 & 2026)	0	106	1	0	0	138	0	0	0	0	0	0	1	0	0	0
South Fork (Phase 2 + 3)	0	25	0	0	1	23	0	0	0	0	0	0	0	0	0	1
Approved Development Trips (2031)	0	127	1	0	1	158	0	0	0	0	0	0	1	0	0	1
2023 Background Traffic - Phase 1A	0	646	5	0	28	758	2	0	1	0	0	0	5	0	0	23
2024 Background Traffic - Phase 1B	0	660	5	0	28	774	2	0	1	0	0	0	5	0	0	23
2025 Background Traffic - Phase 2	0	678	5	0	29	793	2	0	1	0	0	0	5	0	0	23
2026 Background Traffic - Phase 3	0	692	5	0	30	809	2	0	1	0	0	0	5	0	0	23
2031 Background Traffic - Build-5	0	790	6	0	35	917	2	0	1	0	0	0	6	0	0	27
Percent Inbound Assignment	0%	0%	10%	0%	90%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Percent Outbound Assignment	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%	90%	0%
2023 Project Trips - Phase 1A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Percent Inbound Assignment	0%	0%	10%	0%	90%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Percent Outbound Assignment	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%	90%	0%
2024 Project Trips - Phase 1B	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Percent Inbound Assignment	0%	0%	10%	0%	70%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Percent Outbound Assignment	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%	90%	0%
2025 Project Trips - Phase 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Percent Inbound Assignment	0%	0%	10%	0%	60%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Percent Outbound Assignment	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%	90%	0%
2026 Project Trips - Phase 3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Percent Inbound Assignment	0%	0%	10%	0%	60%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Percent Outbound Assignment	0%	0%	0%	0%												

INTERSECTION VOLUME DEVELOPMENT

**S Point Road (NC 273) and BB Drive/Forest Hill Road
AM PEAK HOUR**

Description	S Point Road (NC 273)				S Point Road (NC 273)				BB Drive				Forest Hill Road			
	Northbound		Southbound		Eastbound		Westbound		Eastbound		Westbound		Eastbound		Westbound	
	Left	Through	Right	Uturn	Left	Through	Right	Uturn	Left	Through	Right	Uturn	Left	Through	Right	Uturn
Observed Volumes	0	866	6	0	7	330	2	0	4	0	0	0	5	0	19	0
Balanced Volumes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2022 Existing Traffic	0	866	6	0	7	330	2	0	4	0	0	0	5	0	19	0
Conflicting Peds	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Conflicting Bikes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2022 Existing PHF	0.90	0.86	0.75	0.90	0.58	0.82	0.50	0.90	0.50	0.90	0.90	0.90	0.63	0.90	0.53	0.90
Future PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicle %	2%	2%	17%	2%	2%	7%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Annual Growth Rate	2.5%	2.5%	2.5%	2.5%	2.5%	2.8%	3.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%
2023 Background Traffic (No AD) - Phase 1A	0	888	6	0	7	338	2	0	4	0	0	0	5	0	19	0
2024 Background Traffic (No AD) - Phase 1B	0	900	6	0	7	347	2	0	4	0	0	0	5	0	20	0
2025 Background Traffic (No AD) - Phase 2	0	933	6	0	8	355	2	0	4	0	0	0	5	0	20	0
2026 Background Traffic (No AD) - Phase 3	0	956	7	0	8	364	2	0	4	0	0	0	6	0	21	0
2031 Background Traffic (No AD) - Build-5	0	1,082	7	0	9	412	2	0	5	0	0	0	6	0	24	0
Amberlee	0	2	0	0	0	5	0	0	0	0	0	0	0	0	0	0
Rivemist	0	2	0	0	0	5	0	0	0	0	0	0	0	0	0	0
McClean	0	110	1	0	0	27	0	0	0	0	0	0	0	0	0	0
Behnost Towns Center	0	5	0	0	0	3	0	0	0	0	0	0	0	0	0	0
South Farm	0	1	0	0	0	3	0	0	0	0	0	0	0	0	0	0
Approved Development Trips (2023 & 2024)	0	120	1	0	0	43	0	0	0	0	0	0	0	0	0	0
South Fork (Phase 1)	0	7	0	0	0	4	0	0	0	0	0	0	0	0	0	0
Approved Development Trips (2025 & 2026)	0	122	1	0	0	47	0	0	0	0	0	0	0	0	0	0
South Fork (Phase 2 + 3)	0	20	0	0	0	17	0	0	0	0	0	0	0	0	0	0
Approved Development Trips (2031)	0	140	1	0	0	60	0	0	0	0	0	0	0	0	0	0
2023 Background Traffic - Phase 1A	0	1,008	7	0	7	381	2	0	4	0	0	0	5	0	19	0
2024 Background Traffic - Phase 1B	0	1,030	7	0	7	390	2	0	4	0	0	0	5	0	20	0
2025 Background Traffic - Phase 2	0	1,055	7	0	8	402	2	0	4	0	0	0	5	0	20	0
2026 Background Traffic - Phase 3	0	1,078	8	0	8	411	2	0	4	0	0	0	6	0	21	0
2031 Background Traffic - Build-5	0	1,222	8	0	9	472	2	0	5	0	0	0	6	0	24	0
Percent Inbound Assignment	0%	0%	0%	0%	0%	90%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Percent Outbound Assignment	0%	90%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
2023 Project Trips - Phase 1A	0	61	0	0	0	22	0	0	0	0	0	0	0	0	0	0
Percent Inbound Assignment	0%	0%	0%	0%	0%	90%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Percent Outbound Assignment	0%	90%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
2024 Project Trips - Phase 1B	0	115	0	0	0	40	0	0	0	0	0	0	0	0	0	0
Percent Inbound Assignment	0%	0%	0%	0%	20%	70%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Percent Outbound Assignment	0%	70%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	70%	0%
2025 Project Trips - Phase 2	0	155	0	0	14	53	0	0	0	0	0	0	0	0	34	0
Percent Inbound Assignment	0%	0%	0%	0%	30%	60%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Percent Outbound Assignment	0%	60%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	30%	0%
2026 Project Trips - Phase 3	0	175	0	0	31	62	0	0	0	0	0	0	0	0	38	0
Percent Inbound Assignment	0%	0%	0%	0%	30%	60%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Percent Outbound Assignment	0%	60%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	30%	0%
2026 Project Trips - Phase 3	0	175	0	0	31	62	0	0	0	0	0	0	0	0	38	0
Project Trips (Total)	0	177	0	0	31	62	0	0	0	0	0	0	0	0	38	0
2023 Buildout Total - Phase 1A	0	1,000	7	0	7	401	2	0	4	0	0	0	5	0	19	0
2024 Buildout Total - Phase 1B	0	1,022	7	0	7	410	2	0	4	0	0	0	5	0	20	0
2025 Buildout Total - Phase 2	0	1,047	7	0	8	422	2	0	4	0	0	0	5	0	20	0
2026 Buildout Total - Phase 3	0	1,070	8	0	8	431	2	0	4	0	0	0	6	0	21	0
2031 Buildout Total - Build-5	0	1,214	8	0	9	492	2	0	5	0	0	0	6	0	24	0

PM PEAK HOUR

Description	S Point Road (NC 273)				S Point Road (NC 273)				BB Drive				Forest Hill Road			
	Northbound		Southbound		Eastbound		Westbound		Eastbound		Westbound		Eastbound		Westbound	
	Left	Through	Right	Uturn	Left	Through	Right	Uturn	Left	Through	Right	Uturn	Left	Through	Right	Uturn
Observed Volumes	0	638	3	0	14	762	1	0	4	0	0	0	1	0	8	0
Balanced Volumes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2022 Existing Traffic	0	638	3	0	14	762	1	0	4	0	0	0	1	0	8	0
Conflicting Peds	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
Conflicting Bikes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2022 PHF	0.90	0.94	0.75	0.90	0.70	0.89	0.25	0.90	0.50	0.90	0.90	0.90	0.25	0.90	0.50	0.90
Future PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicle %	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Annual Growth Rate	2.5%	2.5%	2.5%	2.5%	2.5%	2.8%	3.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%
2023 Background Traffic (No AD) - Phase 1A	0	654	3	0	14	781	1	0	4	0	0	0	1	0	8	0
2024 Background Traffic (No AD) - Phase 1B	0	670	3	0	15	801	1	0	4	0	0	0	1	0	8	0
2025 Background Traffic (No AD) - Phase 2	0	687	3	0	15	821	1	0	4	0	0	0	1	0	9	0
2026 Background Traffic (No AD) - Phase 3	0	704	3	0	15	841	1	0	4	0	0	0	1	0	9	0
2031 Background Traffic (No AD) - Build-5	0	797	4	0	17	952	1	0	5	0	0	0	1	0	10	0
Amberlee	0	2	0	0	0	4	0	0	0	0	0	0	0	0	0	0
Rivemist	0	5	0	0	0	3	0	0	0	0	0	0	0	0	0	0
McClean	0	83	0	0	0	118	0	0	0	0	0	0	0	0	0	0
Behnost Towns Center	0	6	0	0	0	8	0	0	0	0	0	0	0	0	0	0
South Farm	0	3	0	0	0	2	0	0	0	0	0	0	0	0	0	0
Approved Development Trips (2023 & 2024)	0	102	0	0	0	135	0	0	0	0	0	0	0	0	0	0
South Fork (Phase 1)	0	4	0	0	0	1	0	0	0	0	0	0	0	0	0	0
Approved Development Trips (2025 & 2026)	0	106	0	0	0	138	0	0	0	0	0	0	0	0	0	0
South Fork (Phase 2 + 3)	0	20	0	0	0	24	0	0	0	0	0	0	0	0	0	0
Approved Development Trips (2031)	0	128	0	0	0	159	0	0	0	0	0	0	0	0	0	0
2023 Background Traffic - Phase 1A	0	756	3	0	14	916	1	0	4	0	0	0	1	0	8	0
2024 Background Traffic - Phase 1B	0	772	3	0	15	936	1	0	4	0	0	0	1	0	8	0
2025 Background Traffic - Phase 2	0	793	3	0	15	959	1	0	4	0	0	0	1	0	9	0
2026 Background Traffic - Phase 3	0	810	3	0	15	979	1	0	4	0	0	0	1	0	9	0
2031 Background Traffic - Build-5	0	925	4	0	17	1,111	1	0	5	0	0	0	1	0	10	0
Percent Inbound Assignment	0%	0%	0%	0%	0%	90%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Percent Outbound Assignment	0%	90%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
2023 Project Trips - Phase 1A	0	41	0	0	0	49	0	0	0	0	0	0	0	0	0	0
Percent Inbound Assignment	0%	0%	0%	0%	0%	90%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Percent Outbound Assignment	0%	90%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
2024 Project Trips - Phase 1B	0	76	0	0	0	78	0	0	0	0	0	0	0	0	0	0
Percent Inbound Assignment	0%	0%	0%	0%	20%	70%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Percent Outbound Assignment	0%	70%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	70%	0%
2025 Project Trips - Phase 2	0	105	0	0	42	130	0	0	0	0	0	0	0	0	30	0
Percent Inbound Assignment	0%	0%	0%	0%	30%	60%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Percent Outbound Assignment	0%	60%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	30%	0%
2026 Project Trips - Phase 3	0	124	0	0	106	211	0	0	0	0	0	0	0	0	62	0
Percent Inbound Assignment																

INTERSECTION VOLUME DEVELOPMENT

Colonial Drive and Forest Hill Road
AM PEAK HOUR

Description	Colonial Drive				Southbound				Forest Hill Road Eastbound				Forest Hill Road Westbound			
	Northbound		Uturn		Left		Right		Left		Right		Left		Right	
	Left	Through	Right	Uturn	Left	Through	Right	Uturn	Left	Through	Right	Uturn	Left	Through	Right	Uturn
Observed Volumes	17	0	1	0	0	0	0	0	0	6	2	0	0	11	0	0
Balanced Volumes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2022 Existing Traffic	17	0	1	0	0	0	0	0	0	6	2	0	0	11	0	0
Conflicting Peds	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Conflicting Bikes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2022 Existing PHF	0.71	0.90	0.25	0.90	0.90	0.90	0.90	0.50	0.90	0.50	0.25	0.90	0.90	0.69	0.90	0.90
Future PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicle %	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Annual Growth Rate	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%
2023 Background Traffic (No AD) - Phase 1A	17	0	1	0	0	0	0	0	0	6	2	0	0	11	0	0
2024 Background Traffic (No AD) - Phase 1B	18	0	1	0	0	0	0	0	0	6	2	0	0	12	0	0
2025 Background Traffic (No AD) - Phase 2	18	0	1	0	0	0	0	0	0	6	2	0	0	12	0	0
2026 Background Traffic (No AD) - Phase 3	19	0	1	0	0	0	0	0	0	7	2	0	0	12	0	0
2031 Background Traffic (No AD) - Build-5	21	0	1	0	0	0	0	0	0	7	2	0	0	14	0	0
Amberlee	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rivemist	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
McLean	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
Belmont Town Center	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
South Farm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approved Development Trips (2023 & 2024)	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
South Fork (Phase 1)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approved Development Trips (2025 & 2026)	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
South Fork (Phase 2 + 3)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approved Development Trips (2031)	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
2023 Background Traffic - Phase 1A	17	0	1	0	0	0	0	0	0	7	2	0	0	11	0	0
2024 Background Traffic - Phase 1B	18	0	1	0	0	0	0	0	0	7	2	0	0	12	0	0
2025 Background Traffic - Phase 2	18	0	1	0	0	0	0	0	0	7	2	0	0	12	0	0
2026 Background Traffic - Phase 3	19	0	1	0	0	0	0	0	0	8	2	0	0	12	0	0
2031 Background Traffic - Build-5	21	0	1	0	0	0	0	0	0	8	2	0	0	14	0	0
Percent Inbound Assignment	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Percent Outbound Assignment	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
2023 Project Trips - Phase 1A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Percent Inbound Assignment	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Percent Outbound Assignment	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
2024 Project Trips - Phase 1B	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Percent Inbound Assignment	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Percent Outbound Assignment	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
2025 Project Trips - Phase 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Percent Inbound Assignment	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Percent Outbound Assignment	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
2026 Project Trips - Phase 3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Percent Inbound Assignment	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Percent Outbound Assignment	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Project Trips (Total)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2023 Buildout Total - Phase 1A	17	0	1	0	0	0	0	0	0	7	2	0	0	11	0	0
2024 Buildout Total - Phase 1B	18	0	1	0	0	0	0	0	0	7	2	0	0	12	0	0
2025 Buildout Total - Phase 2	18	0	1	0	0	0	0	0	0	7	2	0	0	12	0	0
2026 Buildout Total - Phase 3	19	0	1	0	0	0	0	0	0	8	2	0	0	12	0	0
2031 Buildout Total - Build-5	21	0	1	0	0	0	0	0	0	8	2	0	0	14	0	0

PM PEAK HOUR

Description	Colonial Drive				Southbound				Forest Hill Road Eastbound				Forest Hill Road Westbound			
	Northbound		Uturn		Left		Right		Left		Right		Left		Right	
	Left	Through	Right	Uturn	Left	Through	Right	Uturn	Left	Through	Right	Uturn	Left	Through	Right	Uturn
Observed Volumes	8	0	1	0	0	0	0	0	0	4	8	0	0	1	4	0
Balanced Volumes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2022 Existing Traffic	8	0	1	0	0	0	0	0	0	4	8	0	0	1	4	0
Conflicting Peds	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Conflicting Bikes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2022 PHF	0.67	0.90	0.25	0.90	0.90	0.90	0.90	0.90	0.90	0.50	0.40	0.90	0.25	0.50	0.90	0.90
Future PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicle %	13%	2%	2%	2%	2%	2%	2%	2%	2%	25%	13%	2%	2%	2%	2%	2%
Annual Growth Rate	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%
2023 Background Traffic (No AD) - Phase 1A	8	0	1	0	0	0	0	0	0	4	8	0	0	1	4	0
2024 Background Traffic (No AD) - Phase 1B	8	0	1	0	0	0	0	0	0	4	8	0	0	1	4	0
2025 Background Traffic (No AD) - Phase 2	9	0	1	0	0	0	0	0	0	4	9	0	0	1	4	0
2026 Background Traffic (No AD) - Phase 3	9	0	1	0	0	0	0	0	0	4	9	0	0	1	4	0
2031 Background Traffic (No AD) - Build-5	10	0	1	0	0	0	0	0	0	5	10	0	0	1	5	0
Amberlee	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rivemist	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
McLean	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Belmont Town Center	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
South Farm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approved Development Trips (2023 & 2024)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
South Fork (Phase 1)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approved Development Trips (2025 & 2026)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
South Fork (Phase 2 + 3)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approved Development Trips (2031)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2023 Background Traffic - Phase 1A	8	0	1	0	0	0	0	0	0	4	8	0	0	1	4	0
2024 Background Traffic - Phase 1B	8	0	1	0	0	0	0	0	0	4	8	0	0	1	4	0
2025 Background Traffic - Phase 2	9	0	1	0	0	0	0	0	0	4	9	0	0	1	4	0
2026 Background Traffic - Phase 3	9	0	1	0	0	0	0	0	0	4	9	0	0	1	4	0
2031 Background Traffic - Build-5	10	0	1	0	0	0	0	0	0	5	10	0	0	1	5	0
Percent Inbound Assignment	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Percent Outbound Assignment	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
2023 Project Trips - Phase 1A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Percent Inbound Assignment	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Percent Outbound Assignment	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
2024 Project Trips - Phase 1B	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Percent Inbound Assignment	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Percent Outbound Assignment	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
2025 Project Trips - Phase 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Percent Inbound Assignment	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Percent Outbound Assignment	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
2026 Project Trips - Phase 3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Percent Inbound Assignment	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Percent Outbound Assignment	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Project Trips (Total)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2023 Buildout Total - Phase 1A	8	0	1	0	0	0	0	0	0	4	8	0	0	1	4	0
2024 Buildout Total - Phase 1B	8	0	1	0	0	0	0	0	0	4	8	0	0	1	4	0
2025 Buildout Total - Phase 2	9	0	1	0	0	0	0	0	0	4	9	0	0	1	4	

INTERSECTION VOLUME DEVELOPMENT

S Point Road (NC 273) and Belmont MS/Belwood Drive
AM PEAK HOUR

Description	S Point Road (NC 273) Northbound				S Point Road (NC 273) Southbound				Belmont MS Eastbound				Belwood Drive Westbound			
	Left	Through	Right	Uturn	Left	Through	Right	Uturn	Left	Through	Right	Uturn	Left	Through	Right	Uturn
	Observed Volumes	73	645	0	0	16	364	262	0	239	0	37	0	1	1	19
Balanced Volumes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2022 Existing Traffic	73	645	0	0	16	364	262	0	239	0	37	0	1	1	19	0
Conflicting Peds	4	2	0	0	2	4	0	0	3	0	0	0	0	0	3	0
Conflicting Bikes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2022 Existing PHF	0.76	0.82	0.90	0.90	0.67	0.93	0.83	0.90	0.72	0.90	0.77	0.90	0.25	0.25	0.68	0.90
Future PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicle %	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	100%	2%	2%	2%
Annual Growth Rate	2.5%	2.5%	2.5%	2.5%	2.5%	2.8%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%
2023 Background Traffic (No AD) - Phase 1A	75	661	0	0	16	373	269	0	245	0	38	0	1	1	19	0
2024 Background Traffic (No AD) - Phase 1B	77	678	0	0	17	382	275	0	251	0	39	0	1	1	20	0
2025 Background Traffic (No AD) - Phase 2	79	695	0	0	17	392	282	0	257	0	40	0	1	1	20	0
2026 Background Traffic (No AD) - Phase 3	81	712	0	0	18	402	289	0	264	0	41	0	1	1	21	0
2031 Background Traffic (No AD) - Build-5	91	806	0	0	20	455	327	0	298	0	46	0	1	1	24	0
Amberlee	0	2	0	0	0	5	2	0	1	0	0	0	0	0	0	0
Rivernist	3	40	0	0	0	14	0	0	0	0	1	0	0	0	0	0
McClean	11	90	0	0	0	25	0	0	0	0	2	0	0	0	0	0
Belmont Town Center	0	5	0	0	0	3	0	0	2	0	0	0	0	0	0	0
South Farm	0	0	1	0	5	2	0	0	0	1	0	0	1	1	12	0
Approved Development Trips (2023 & 2024)	14	146	1	0	5	49	5	0	3	1	3	0	1	1	12	0
South Fork (Phase 1)	0	2	0	0	0	4	0	0	0	0	0	0	0	0	0	0
Approved Development Trips (2025 & 2026)	14	148	1	0	5	53	5	0	3	1	3	0	1	1	12	0
South Fork (Phase 2 + 3)	0	20	0	0	0	17	0	0	0	0	0	0	0	0	0	0
Approved Development Trips (2031)	14	166	1	0	5	66	5	0	3	1	3	0	1	1	12	0
2023 Background Traffic - Phase 1A	89	897	1	0	21	422	274	0	248	1	41	0	2	2	31	0
2024 Background Traffic - Phase 1B	91	924	1	0	22	431	280	0	254	1	42	0	2	2	32	0
2025 Background Traffic - Phase 2	93	943	1	0	22	445	287	0	260	1	43	0	2	2	32	0
2026 Background Traffic - Phase 3	95	960	1	0	23	455	294	0	267	1	44	0	2	2	33	0
2031 Background Traffic - Build-5	105	972	1	0	25	521	332	0	301	1	49	0	2	2	36	0
Percent Inbound Assignment	0%	0%	0%	0%	0%	85%	0%	0%	0%	0%	5%	0%	0%	0%	0%	0%
Percent Outbound Assignment	5%	85%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
2023 Project Trips - Phase 1A	3	50	0	0	0	20	0	0	0	0	5	0	0	0	0	0
Percent Inbound Assignment	0%	0%	0%	0%	0%	85%	0%	0%	0%	0%	5%	0%	0%	0%	0%	0%
Percent Outbound Assignment	5%	85%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
2024 Project Trips - Phase 1B	6	56	0	0	0	23	0	0	0	0	5	0	0	0	0	0
Percent Inbound Assignment	0%	0%	0%	0%	0%	85%	0%	0%	0%	0%	5%	0%	0%	0%	0%	0%
Percent Outbound Assignment	5%	85%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
2025 Project Trips - Phase 2	11	145	0	0	0	45	0	0	0	0	5	0	0	0	0	0
Percent Inbound Assignment	0%	0%	0%	0%	0%	85%	0%	0%	0%	0%	5%	0%	0%	0%	0%	0%
Percent Outbound Assignment	5%	85%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
2026 Project Trips - Phase 3	15	250	0	0	0	88	0	0	0	0	5	0	0	0	0	0
Percent Inbound Assignment	0%	0%	0%	0%	0%	85%	0%	0%	0%	0%	5%	0%	0%	0%	0%	0%
Percent Outbound Assignment	5%	85%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
2031 Project Trips (Total)	15	250	0	0	0	88	0	0	0	0	5	0	0	0	0	0
2023 Buildout Total - Phase 1A	07	925	1	0	21	442	274	0	248	1	41	0	2	2	31	0
2024 Buildout Total - Phase 1B	07	930	1	0	22	448	280	0	254	1	42	0	2	2	32	0
2025 Buildout Total - Phase 2	08	1,028	1	0	22	510	287	0	260	1	43	0	2	2	32	0
2026 Buildout Total - Phase 3	110	1,110	1	0	23	543	294	0	267	1	44	0	2	2	33	0
2031 Buildout Total - Build-5	120	1,222	1	0	25	609	332	0	301	1	49	0	2	2	36	0

PM PEAK HOUR

Description	S Point Road (NC 273) Northbound				S Point Road (NC 273) Southbound				Belmont MS Eastbound				Belwood Drive Westbound			
	Left	Through	Right	Uturn	Left	Through	Right	Uturn	Left	Through	Right	Uturn	Left	Through	Right	Uturn
	Observed Volumes	0	689	0	0	29	804	3	0	17	0	1	0	2	0	21
Balanced Volumes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2022 Existing Traffic	0	689	0	0	29	804	3	0	17	0	1	0	2	0	21	0
Conflicting Peds	5	0	0	0	5	0	0	0	1	0	0	0	0	0	1	0
Conflicting Bikes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2022 PHF	0.90	0.89	0.90	0.90	0.73	0.90	0.75	0.90	0.63	0.90	0.25	0.90	0.25	0.90	0.75	0.90
Future PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicle %	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	100%	2%	2%	2%	2%	2%
Annual Growth Rate	2.5%	2.5%	2.5%	2.5%	2.5%	2.8%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%
2023 Background Traffic (No AD) - Phase 1A	0	706	0	0	30	824	3	0	17	0	1	0	2	0	22	0
2024 Background Traffic (No AD) - Phase 1B	0	724	0	0	30	845	3	0	18	0	1	0	2	0	22	0
2025 Background Traffic (No AD) - Phase 2	0	742	0	0	31	866	3	0	18	0	1	0	2	0	23	0
2026 Background Traffic (No AD) - Phase 3	0	761	0	0	32	887	3	0	19	0	1	0	2	0	23	0
2031 Background Traffic (No AD) - Build-5	0	860	0	0	36	1,004	4	0	21	0	1	0	2	0	26	0
Amberlee	0	2	0	0	0	4	1	0	3	0	0	0	0	0	0	0
Rivernist	2	27	0	0	0	46	0	0	0	0	3	0	0	0	0	0
McClean	0	83	0	0	0	118	0	0	0	0	0	0	0	0	0	0
Belmont Town Center	0	6	0	0	0	8	1	0	2	0	0	0	0	0	0	0
South Farm	0	0	1	0	13	1	0	0	0	2	0	0	1	1	9	0
Approved Development Trips (2023 & 2024)	2	122	2	0	13	177	2	0	5	2	3	0	1	1	9	0
South Fork (Phase 1)	0	4	0	0	0	1	0	0	0	0	0	0	0	0	0	0
Approved Development Trips (2025 & 2026)	2	126	2	0	13	180	2	0	5	2	3	0	1	1	9	0
South Fork (Phase 2 + 3)	0	20	0	0	0	24	0	0	0	0	0	0	0	0	0	0
Approved Development Trips (2031)	2	148	2	0	13	201	2	0	5	2	3	0	1	1	9	0
2023 Background Traffic - Phase 1A	2	828	2	0	43	1,001	5	0	22	2	4	0	3	1	31	0
2024 Background Traffic - Phase 1B	2	846	2	0	43	1,022	5	0	23	2	4	0	3	1	31	0
2025 Background Traffic - Phase 2	2	868	2	0	44	1,046	5	0	23	2	4	0	3	1	32	0
2026 Background Traffic - Phase 3	2	887	2	0	45	1,067	5	0	24	2	4	0	3	1	32	0
2031 Background Traffic - Build-5	2	1,008	2	0	49	1,205	6	0	26	2	4	0	3	1	35	0
Percent Inbound Assignment	0%	0%	0%	0%	0%	85%	0%	0%	0%	0%	5%	0%	0%	0%	0%	0%
Percent Outbound Assignment	5%	85%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
2023 Project Trips - Phase 1A	3	30	0	0	0	45	0	0	0	0	4	0	0	0	0	0
Percent Inbound Assignment	0%	0%	0%	0%	0%	85%	0%	0%	0%	0%	5%	0%	0%	0%	0%	0%
Percent Outbound Assignment	5%	85%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
2024 Project Trips - Phase 1B	4	32	0	0	0	43	0	0	0	0	4	0	0	0	0	0
Percent Inbound Assignment	0%	0%	0%	0%	0%	85%	0%	0%	0%	0%	5%	0%	0%	0%	0%	0%
Percent Outbound Assignment	5%	85%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
2025 Project Trips - Phase 2	8	129	0	0	0	219	0	0	0	0	5	0	0	0	0	0
Percent Inbound Assignment	0%	0%	0%	0%	0%	85%	0%	0%	0%	0%	5%	0%	0%	0%	0%	0%
Percent Outbound Assignment	5%	85%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
2026 Project Trips - Phase 3	10	136	0	0	0	239	0	0	0	0	5	0	0	0	0	0
Percent Inbound Assignment	0%	0%	0%	0%	0%	85%	0%	0%	0%	0%	5%	0%	0%	0%	0%	0%
Percent Outbound Assignment	5%	85%	0%	0%	0%	0%	0%	0%	0%	0%						

INTERSECTION VOLUME DEVELOPMENT

**S Point Road (NC 273) and Belmont MS
AM PEAK HOUR**

Description	S Point Road (NC 273) <u>Northbound</u>				S Point Road (NC 273) <u>Southbound</u>				Belmont MS <u>Eastbound</u>				- <u>Westbound</u>			
	Left	Through	Right	U-turn	Left	Through	Right	U-turn	Left	Through	Right	U-turn	Left	Through	Right	U-turn
	Observed Volumes	74	664	0	0	0	380	262	0	239	0	37	0	0	0	0
Balanced Volumes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2022 Existing Traffic	74	664	0	0	0	380	262	0	239	0	37	0	0	0	0	0
Conflicting Peds	4		2	0	2		4	0	3		0	0	0		3	0
Conflicting Bikes			0				0				0				0	
2022 Existing PHF	0.75	0.82	0.90	0.90	0.90	0.92	0.83	0.90	0.72	0.90	0.77	0.90	0.90	0.90	0.90	0.90
Future PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicle %	3%	2%	2%	2%	2%	8%	3%	2%	3%	2%	2%	2%	2%	2%	2%	2%

PM PEAK HOUR

Description	S Point Road (NC 273) <u>Northbound</u>				S Point Road (NC 273) <u>Southbound</u>				Belmont MS <u>Eastbound</u>				- <u>Westbound</u>			
	Left	Through	Right	U-turn	Left	Through	Right	U-turn	Left	Through	Right	U-turn	Left	Through	Right	U-turn
	Observed Volumes	0	710	0	0	0	833	3	0	17	0	1	0	0	0	0
Balanced Volumes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2022 Existing Traffic	0	710	0	0	0	833	3	0	17	0	1	0	0	0	0	0
Conflicting Peds	5		0	0	0		5	0	1		0	0	0		1	0
Conflicting Bikes			0				0				0				0	
2022 PHF	0.90	0.89	0.90	0.90	0.90	0.89	0.75	0.90	0.61	0.90	0.25	0.90	0.90	0.90	0.90	0.90
Future PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicle %	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	100%	2%	2%	2%	2%	2%

INTERSECTION VOLUME DEVELOPMENT

**S Point Road (NC 273) and McLee Farm Lane/Stone Road
AM PEAK HOUR**

Description	S Point Road (NC 273)				S Point Road (NC 273)				McLee Farm Lane				Stone Road			
	Northbound		Southbound		Eastbound		Westbound		Eastbound		Westbound		Eastbound		Westbound	
	Left	Through	Right	Uturn	Left	Through	Right	Uturn	Left	Through	Right	Uturn	Left	Through	Right	Uturn
Observed Volumes	22	842	44	0	35	620	66	0	13	4	18	0	12	1	54	0
Balanced Volumes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2022 Existing Traffic	22	842	44	0	35	620	66	0	13	4	18	0	12	1	54	0
Conflicting Peds	3	0	0	0	3	0	0	0	8	0	0	0	0	0	8	0
Conflicting Bikes	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
2022 Existing PHF	0.61	0.96	0.61	0.90	0.80	0.90	0.66	0.50	0.65	0.50	0.64	0.90	0.60	0.25	0.79	0.90
Future PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicle %	2%	2%	2%	2%	0%	2%	2%	2%	2%	2%	0%	2%	2%	2%	2%	2%
Annual Growth Rate	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%
2023 Background Traffic (No AD) - Phase 1A	23	863	45	0	36	636	68	0	13	4	18	0	12	1	55	0
2024 Background Traffic (No AD) - Phase 1B	23	885	46	0	37	651	69	0	14	4	19	0	13	1	57	0
2025 Background Traffic (No AD) - Phase 2	24	907	47	0	38	668	71	0	14	4	19	0	13	1	58	0
2026 Background Traffic (No AD) - Phase 3	24	929	49	0	39	684	73	0	14	4	20	0	13	1	60	0
2031 Background Traffic (No AD) - Build-5	27	1,082	55	0	44	774	82	0	16	5	22	0	15	1	67	0
Amberle	0	3	0	0	0	7	0	0	0	0	0	0	0	0	0	0
Rivemist	0	40	0	0	0	14	0	0	0	0	0	0	0	0	0	0
McLean	2	50	5	0	0	24	0	0	0	0	1	0	0	0	0	0
Belmont Town Center	0	5	2	0	1	2	0	0	1	1	0	0	2	0	0	0
South Farm	0	25	0	0	0	9	0	0	0	0	0	0	0	0	0	0
Approved Development Trips (2023 & 2024)	2	165	7	0	1	56	0	0	1	1	1	0	4	0	0	0
South Fork (Phase 1)	0	2	0	0	0	4	0	0	0	0	0	0	0	0	0	0
Approved Development Trips (2025 & 2026)	2	167	7	0	1	60	0	0	1	1	1	0	4	0	0	0
South Fork (Phase 2 + 3)	0	20	0	0	12	17	0	0	0	0	0	0	0	0	17	0
Approved Development Trips (2031)	2	183	7	0	13	73	0	0	1	1	1	0	4	0	17	0
2023 Background Traffic - Phase 1A	25	1,028	52	0	37	692	68	0	14	5	19	0	16	1	55	0
2024 Background Traffic - Phase 1B	25	1,050	53	0	38	707	69	0	15	5	20	0	17	1	57	0
2025 Background Traffic - Phase 2	26	1,074	54	0	39	728	71	0	15	5	20	0	17	1	58	0
2026 Background Traffic - Phase 3	26	1,096	56	0	40	744	73	0	15	5	21	0	17	1	60	0
2031 Background Traffic - Build-5	29	1,237	62	0	47	847	82	0	17	6	23	0	19	1	64	0
Percent Inbound Assignment	0%	0%	0%	0%	0%	85%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Percent Outbound Assignment	0%	85%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
2023 Project Trips - Phase 1A	0	50	0	0	0	20	0	0	0	0	0	0	0	0	0	0
Percent Inbound Assignment	0%	0%	0%	0%	0%	85%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Percent Outbound Assignment	0%	85%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
2024 Project Trips - Phase 1B	0	50	0	0	0	20	0	0	0	0	0	0	0	0	0	0
Percent Inbound Assignment	0%	0%	0%	0%	0%	85%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Percent Outbound Assignment	0%	85%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
2025 Project Trips - Phase 2	0	145	0	0	0	45	0	0	0	0	0	0	0	0	0	0
Percent Inbound Assignment	0%	0%	0%	0%	0%	85%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Percent Outbound Assignment	0%	85%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
2026 Project Trips - Phase 3	0	250	0	0	0	88	0	0	0	0	0	0	0	0	0	0
Percent Inbound Assignment	0%	0%	0%	0%	0%	85%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Percent Outbound Assignment	0%	85%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
2026 Project Trips - Phase 3	0	250	0	0	0	88	0	0	0	0	0	0	0	0	0	0
Project Trips (Total)	0	250	0	0	0	88	0	0	0	0	0	0	0	0	0	0
2023 Building Total - Phase 1A	25	1,028	52	0	37	712	68	0	14	5	19	0	16	1	55	0
2024 Building Total - Phase 1B	25	1,050	53	0	38	724	69	0	15	5	20	0	17	1	57	0
2025 Building Total - Phase 2	26	1,074	54	0	39	740	71	0	15	5	20	0	17	1	58	0
2026 Building Total - Phase 3	26	1,096	56	0	40	753	73	0	15	5	21	0	17	1	60	0
2031 Building Total - Build-5	29	1,237	62	0	47	855	82	0	17	6	23	0	19	1	64	0

PM PEAK HOUR

Description	S Point Road (NC 273)				S Point Road (NC 273)				McLee Farm Lane				Stone Road			
	Northbound		Southbound		Eastbound		Westbound		Eastbound		Westbound		Eastbound		Westbound	
	Left	Through	Right	Uturn	Left	Through	Right	Uturn	Left	Through	Right	Uturn	Left	Through	Right	Uturn
Observed Volumes	10	702	18	0	64	806	45	0	23	8	12	0	16	1	49	0
Balanced Volumes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2022 Existing Traffic	10	702	18	0	64	806	45	0	23	8	12	0	16	1	49	0
Conflicting Peds	5	0	0	0	5	0	0	0	1	0	0	0	0	0	1	0
Conflicting Bikes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2022 PHF	0.63	0.91	0.45	0.90	0.89	0.95	0.75	0.90	0.48	0.50	0.60	0.90	0.57	0.25	0.88	0.90
Future PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicle %	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Annual Growth Rate	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%
2023 Background Traffic (No AD) - Phase 1A	10	720	18	0	66	826	46	0	24	8	12	0	16	1	50	0
2024 Background Traffic (No AD) - Phase 1B	11	738	19	0	67	847	47	0	24	8	13	0	17	1	51	0
2025 Background Traffic (No AD) - Phase 2	11	756	19	0	69	868	48	0	25	9	13	0	17	1	53	0
2026 Background Traffic (No AD) - Phase 3	11	775	20	0	71	890	50	0	25	9	13	0	18	1	54	0
2031 Background Traffic (No AD) - Build-5	12	877	22	0	80	1,007	56	0	29	10	15	0	20	1	61	0
Amberle	0	8	0	0	0	5	0	0	0	0	0	0	0	0	0	0
Rivemist	0	27	0	0	0	46	0	0	0	0	0	0	0	0	0	0
McLean	1	80	2	0	0	114	0	0	0	0	2	0	2	0	0	0
Belmont Town Center	0	8	2	0	2	2	1	0	1	1	0	0	2	0	0	0
South Farm	0	18	0	0	0	24	0	0	0	0	0	0	0	0	0	0
Approved Development Trips (2023 & 2024)	1	139	4	0	2	192	1	0	1	1	2	0	9	1	0	0
South Fork (Phase 1)	0	4	0	0	0	1	0	0	0	0	0	0	0	0	0	0
Approved Development Trips (2025 & 2026)	1	141	4	0	2	195	1	0	1	1	2	0	9	1	0	0
South Fork (Phase 2 + 3)	0	20	0	0	20	24	0	0	0	0	0	0	0	0	19	0
Approved Development Trips (2031)	1	165	4	0	22	216	1	0	1	1	2	0	9	1	19	0
2023 Background Traffic - Phase 1A	11	859	22	0	68	1,018	47	0	25	9	14	0	25	2	50	0
2024 Background Traffic - Phase 1B	12	877	23	0	69	1,039	48	0	25	9	15	0	26	2	51	0
2025 Background Traffic - Phase 2	12	899	23	0	71	1,063	49	0	26	10	15	0	26	2	53	0
2026 Background Traffic - Phase 3	12	918	24	0	73	1,084	51	0	26	10	15	0	27	2	54	0
2031 Background Traffic - Build-5	13	1,042	26	0	82	1,223	57	0	30	11	17	0	29	2	60	0
Percent Inbound Assignment	0%	0%	0%	0%	0%	85%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Percent Outbound Assignment	0%	85%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
2023 Project Trips - Phase 1A	0	30	0	0	0											

INTERSECTION VOLUME DEVELOPMENT

**S Point Road (NC 273) and South Point HS/Red Raider Run
AM PEAK HOUR**

Description	S Point Road (NC 273)				S Point Road (NC 273)				South Point HS				Red Raider Run			
	Northbound		Southbound		Eastbound		Westbound		Eastbound		Westbound		Eastbound		Westbound	
	Left	Through	Right	Uturn	Left	Through	Right	Uturn	Left	Through	Right	Uturn	Left	Through	Right	Uturn
Observed Volumes	48	772	63	0	83	607	49	0	0	0	0	0	115	32	131	0
Balanced Volumes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2022 Existing Traffic	48	772	63	0	83	607	49	0	0	0	0	0	115	32	131	0
Conflicting Peds	53	8	0	0	8	53	0	0	132	0	0	0	0	132	0	0
Conflicting Bikes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2022 Existing PHF	0.50	0.91	0.88	0.90	0.65	0.95	0.88	0.90	0.90	0.90	0.90	0.90	0.80	0.44	0.91	0.90
Future PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicle %	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Annual Growth Rate	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%
2023 Background Traffic (No AD) - Phase 1A	49	791	65	0	85	622	50	0	0	0	0	0	118	33	134	0
2024 Background Traffic (No AD) - Phase 1B	50	811	66	0	87	638	51	0	0	0	0	0	121	34	138	0
2025 Background Traffic (No AD) - Phase 2	52	831	68	0	89	654	53	0	0	0	0	0	124	34	141	0
2026 Background Traffic (No AD) - Phase 3	53	852	70	0	92	670	54	0	0	0	0	0	127	35	145	0
2031 Background Traffic (No AD) - Build-5	60	964	79	0	104	798	61	0	0	0	0	0	144	40	164	0
Amberke	0	2	0	0	2	7	0	0	0	0	0	0	0	0	1	0
Rivemist	2	36	2	0	0	14	0	0	0	0	0	0	0	0	0	0
McClean	5	80	7	0	0	20	0	0	0	0	0	0	4	0	0	0
Belmont Town Center	0	28	8	0	7	3	0	0	0	0	0	0	6	0	8	0
South Farm	2	22	1	0	0	9	0	0	0	0	0	0	0	0	0	0
Approved Development Trips (2023 & 2024)	9	129	16	0	9	47	0	0	0	0	0	0	10	0	9	0
South Fork (Phase 1)	0	2	0	0	1	4	0	0	0	0	0	0	0	0	2	0
Approved Development Trips (2025 & 2026)	9	141	16	0	13	51	0	0	0	0	0	0	10	0	11	0
South Fork (Phase 2 + 3)	0	37	0	0	5	20	0	0	0	0	0	0	0	0	4	0
Approved Development Trips (2031)	9	176	16	0	14	76	0	0	0	0	0	0	10	0	13	0
2023 Background Traffic - Phase 1A	8	930	83	0	94	669	50	0	0	0	0	0	128	33	143	0
2024 Background Traffic - Phase 1B	9	950	85	0	96	685	51	0	0	0	0	0	131	34	147	0
2025 Background Traffic - Phase 2	61	972	84	0	102	705	53	0	0	0	0	0	134	34	152	0
2026 Background Traffic - Phase 3	62	993	86	0	105	721	54	0	0	0	0	0	137	35	156	0
2031 Background Traffic - Build-5	69	1,149	95	0	118	834	61	0	0	0	0	0	154	40	177	0
Percent Inbound Assignment	0%	0%	0%	0%	0%	80%	0%	0%	0%	0%	0%	0%	5%	0%	0%	0%
Percent Outbound Assignment	5%	75%	5%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
2023 Project Trips - Phase 1A	3	65	3	0	0	19	0	0	0	0	0	0	1	0	0	0
Percent Inbound Assignment	0%	0%	0%	0%	0%	80%	0%	0%	0%	0%	0%	0%	5%	0%	0%	0%
Percent Outbound Assignment	5%	75%	5%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
2024 Project Trips - Phase 1B	6	94	6	0	0	34	0	0	0	0	0	0	2	0	0	0
Percent Inbound Assignment	0%	0%	0%	0%	0%	80%	0%	0%	0%	0%	0%	0%	5%	0%	0%	0%
Percent Outbound Assignment	5%	75%	5%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
2025 Project Trips - Phase 2	11	163	11	0	0	41	0	0	0	0	0	0	4	0	0	0
Percent Inbound Assignment	0%	0%	0%	0%	0%	80%	0%	0%	0%	0%	0%	0%	5%	0%	0%	0%
Percent Outbound Assignment	5%	75%	5%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
2026 Project Trips - Phase 3	14	221	15	0	0	45	0	0	0	0	0	0	5	0	0	0
Percent Inbound Assignment	0%	0%	0%	0%	0%	80%	0%	0%	0%	0%	0%	0%	5%	0%	0%	0%
Percent Outbound Assignment	5%	75%	5%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
2031 Project Trips - Phase 3	14	221	15	0	0	45	0	0	0	0	0	0	5	0	0	0
Project Trips (Total)	14	221	15	0	0	45	0	0	0	0	0	0	5	0	0	0
2023 Buildout Total - Phase 1A	61	972	84	0	96	685	51	0	0	0	0	0	131	34	147	0
2024 Buildout Total - Phase 1B	62	1,014	86	0	96	720	51	0	0	0	0	0	133	34	147	0
2025 Buildout Total - Phase 2	72	1,134	84	0	102	766	53	0	0	0	0	0	134	34	152	0
2026 Buildout Total - Phase 3	76	1,214	101	0	105	804	54	0	0	0	0	0	137	35	156	0
2031 Buildout Total - Build-5	85	1,361	110	0	118	917	61	0	0	0	0	0	150	40	177	0

PM PEAK HOUR

Description	S Point Road (NC 273)				S Point Road (NC 273)				South Point HS				Red Raider Run			
	Northbound		Southbound		Eastbound		Westbound		Eastbound		Westbound		Eastbound		Westbound	
	Left	Through	Right	Uturn	Left	Through	Right	Uturn	Left	Through	Right	Uturn	Left	Through	Right	Uturn
Observed Volumes	5	673	63	0	108	771	3	0	0	0	0	0	159	5	187	0
Balanced Volumes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2022 Existing Traffic	5	673	63	0	108	771	3	0	0	0	0	0	159	5	187	0
Conflicting Peds	4	6	0	0	6	4	0	0	11	0	0	0	0	11	0	0
Conflicting Bikes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2022 PHF	0.63	0.95	0.88	0.90	0.84	0.92	0.75	0.90	0.90	0.90	0.90	0.90	0.86	0.63	0.88	0.90
Future PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicle %	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Annual Growth Rate	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%
2023 Background Traffic (No AD) - Phase 1A	5	690	65	0	111	790	3	0	0	0	0	0	163	5	192	0
2024 Background Traffic (No AD) - Phase 1B	5	707	66	0	113	810	3	0	0	0	0	0	167	5	196	0
2025 Background Traffic (No AD) - Phase 2	5	725	68	0	116	830	3	0	0	0	0	0	171	5	201	0
2026 Background Traffic (No AD) - Phase 3	6	743	70	0	119	851	3	0	0	0	0	0	176	6	206	0
2031 Background Traffic (No AD) - Build-5	6	840	79	0	135	963	4	0	0	0	0	0	199	6	234	0
Amberke	0	8	0	0	1	5	0	0	0	0	0	0	0	0	2	0
Rivemist	1	24	2	0	0	14	0	0	0	0	0	0	2	0	0	0
McClean	0	72	7	0	0	35	0	0	0	0	0	0	19	0	0	0
Belmont Town Center	0	28	8	0	8	3	0	0	0	0	0	0	11	0	15	0
South Farm	2	15	1	0	0	24	0	0	0	0	0	0	1	0	0	0
Approved Development Trips (2023 & 2024)	3	118	19	0	9	162	0	0	0	0	0	0	33	0	17	0
South Fork (Phase 1)	0	4	0	0	1	1	0	0	0	0	0	0	0	0	4	0
Approved Development Trips (2025 & 2026)	3	122	19	0	12	165	0	0	0	0	0	0	33	0	17	0
South Fork (Phase 2 + 3)	0	45	0	0	5	14	0	0	0	0	0	0	0	0	7	0
Approved Development Trips (2031)	3	163	19	0	14	206	0	0	0	0	0	0	33	0	24	0
2023 Background Traffic - Phase 1A	8	808	84	0	120	952	3	0	0	0	0	0	196	5	209	0
2024 Background Traffic - Phase 1B	8	825	85	0	122	972	3	0	0	0	0	0	200	5	213	0
2025 Background Traffic - Phase 2	8	847	87	0	128	995	3	0	0	0	0	0	204	5	223	0
2026 Background Traffic - Phase 3	9	865	89	0	131	1,016	3	0	0	0	0	0	209	6	228	0
2031 Background Traffic - Build-5	9	1,003	98	0	149	1,169	4	0	0	0	0	0	232	6	258	0
Percent Inbound Assignment	0%	0%	0%	0%	0%	80%	0%	0%	0%	0%	0%	0%	5%	0%	0%	0%
Percent Outbound Assignment	5%	75%	5%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
2023 Project Trips - Phase 1A	3															

INTERSECTION VOLUME DEVELOPMENT

**S Point Road (NC 273) and Nixon Road/R L Stowe Road
AM PEAK HOUR**

Description	S Point Road (NC 273)				S Point Road (NC 273)				Nixon Road				R L Stowe Road			
	Northbound		Southbound		Eastbound		Westbound		Eastbound		Westbound		Eastbound		Westbound	
	Left	Through	Right	Uturn	Left	Through	Right	Uturn	Left	Through	Right	Uturn	Left	Through	Right	Uturn
Observed Volumes	72	399	430	0	42	461	44	0	84	136	57	0	255	69	24	0
2022 Existing Traffic	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicle %	7%	2%	2%	2%	2%	2%	2%	2%	2%	2%	9%	2%	9%	9%	4%	2%
Annual Growth Rate	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%
2023 Background Traffic (No AD) - Phase 1A	74	409	441	0	43	473	45	0	86	139	58	0	261	71	25	0
2024 Background Traffic (No AD) - Phase 1B	76	419	452	0	44	484	46	0	88	143	60	0	268	72	25	0
2025 Background Traffic (No AD) - Phase 2	78	430	463	0	45	496	47	0	90	146	61	0	275	74	26	0
2026 Background Traffic (No AD) - Phase 3	79	440	475	0	46	509	49	0	93	150	63	0	281	76	26	0
2031 Background Traffic (No AD) - Build-5	90	498	537	0	52	576	55	0	105	170	71	0	318	86	30	0
Amberke	4	0	0	0	0	0	4	0	12	23	9	0	0	8	0	0
Rivemist	0	17	19	0	0	6	0	0	0	0	1	0	0	7	0	0
McClean	6	35	39	0	0	12	0	0	0	0	1	0	0	7	0	0
Belmont Town Center	2	8	0	0	3	5	0	0	0	1	1	0	0	1	0	0
South Farm	0	10	12	0	0	4	0	0	0	0	1	0	0	4	0	0
Approved Development Trips (2023 & 2024)	12	66	70	0	3	27	4	0	12	24	13	0	16	9	4	0
South Fork (Phase 1)	4	0	0	0	0	0	6	0	11	11	3	0	0	0	0	0
Approved Development Trips (2025 & 2026)	16	66	70	0	3	27	10	0	21	32	21	0	16	15	4	0
South Fork (Phase 2 + 3)	41	0	0	0	0	0	9	0	16	16	34	0	0	0	0	0
Approved Development Trips (2031)	53	66	70	0	3	27	13	0	28	40	47	0	16	18	4	0
2023 Background Traffic - Phase 1A	86	475	511	0	46	500	49	0	98	163	71	0	277	80	29	0
2024 Background Traffic - Phase 1B	88	485	522	0	47	511	50	0	100	167	73	0	284	81	29	0
2025 Background Traffic - Phase 2	94	496	533	0	48	523	57	0	113	181	82	0	291	89	30	0
2026 Background Traffic - Phase 3	95	506	545	0	49	536	59	0	116	185	84	0	297	91	30	0
2031 Background Traffic - Build-5	143	564	607	0	55	603	68	0	133	210	118	0	334	104	34	0
Percent Inbound Assignment	0%	0%	0%	0%	0%	35%	0%	0%	0%	0%	5%	0%	40%	0%	0%	0%
Percent Outbound Assignment	0%	35%	40%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
2023 Project Trips - Phase 1A	0	34	38	0	0	8	0	0	0	0	1	0	10	0	0	0
Percent Inbound Assignment	0%	0%	0%	0%	0%	35%	0%	0%	0%	0%	5%	0%	40%	0%	0%	0%
Percent Outbound Assignment	0%	35%	40%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
2024 Project Trips - Phase 1B	0	43	48	0	0	14	0	0	0	0	3	0	18	0	0	0
Percent Inbound Assignment	0%	0%	0%	0%	0%	35%	0%	0%	0%	0%	5%	0%	40%	0%	0%	0%
Percent Outbound Assignment	0%	35%	40%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
2025 Project Trips - Phase 2	0	76	87	0	0	27	0	0	0	0	4	0	30	0	0	0
Percent Inbound Assignment	0%	0%	0%	0%	0%	35%	0%	0%	0%	0%	5%	0%	40%	0%	0%	0%
Percent Outbound Assignment	0%	35%	40%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
2026 Project Trips - Phase 3	0	103	118	0	0	37	0	0	0	0	5	0	41	0	0	0
Percent Inbound Assignment	0%	0%	0%	0%	0%	35%	0%	0%	0%	0%	5%	0%	40%	0%	0%	0%
Percent Outbound Assignment	0%	35%	40%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
2031 Project Trips - Phase 3	0	103	118	0	0	37	0	0	0	0	5	0	41	0	0	0
Project Trips (Total)	0	103	118	0	0	37	0	0	0	0	5	0	41	0	0	0
2023 Buildout Total - Phase 1A	86	492	520	0	46	508	49	0	98	163	77	0	287	80	29	0
2024 Buildout Total - Phase 1B	88	502	532	0	47	520	50	0	100	167	75	0	292	81	29	0
2025 Buildout Total - Phase 2	94	512	540	0	48	530	57	0	113	181	86	0	299	89	30	0
2026 Buildout Total - Phase 3	95	522	550	0	49	540	59	0	116	185	88	0	304	91	30	0
2031 Buildout Total - Build-5	143	607	650	0	55	640	68	0	133	210	123	0	335	104	34	0

PM PEAK HOUR

Description	S Point Road (NC 273)				S Point Road (NC 273)				Nixon Road				R L Stowe Road			
	Northbound		Southbound		Eastbound		Westbound		Eastbound		Westbound		Eastbound		Westbound	
	Left	Through	Right	Uturn	Left	Through	Right	Uturn	Left	Through	Right	Uturn	Left	Through	Right	Uturn
Observed Volumes	42	406	387	0	66	421	58	0	56	76	47	0	428	76	33	0
2022 Existing Traffic	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future PHF	0.81	0.94	0.94	0.90	0.83	0.89	0.91	0.90	0.74	0.76	0.65	0.90	0.86	0.79	0.64	0.90
Heavy Vehicle %	2%	2%	4%	2%	2%	2%	3%	2%	2%	2%	4%	2%	3%	4%	2%	2%
Annual Growth Rate	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%
2023 Background Traffic (No AD) - Phase 1A	43	416	397	0	68	432	59	0	57	78	48	0	439	78	34	0
2024 Background Traffic (No AD) - Phase 1B	44	427	407	0	69	442	61	0	59	80	49	0	450	80	35	0
2025 Background Traffic (No AD) - Phase 2	45	437	417	0	71	453	62	0	60	82	51	0	461	82	36	0
2026 Background Traffic (No AD) - Phase 3	46	448	427	0	73	465	64	0	62	84	52	0	472	84	36	0
2031 Background Traffic (No AD) - Build-5	52	507	483	0	82	526	72	0	70	95	59	0	535	95	41	0
Amberke	10	0	0	0	0	13	0	0	8	16	6	0	0	27	0	0
Rivemist	0	11	13	0	0	19	0	0	0	0	3	0	0	22	0	0
McClean	4	35	34	0	0	45	0	0	0	0	5	0	0	45	0	0
Belmont Town Center	3	9	1	0	8	4	0	0	0	2	1	0	0	1	0	0
South Farm	0	7	8	0	0	11	0	0	0	0	1	0	0	12	0	0
Approved Development Trips (2023 & 2024)	17	62	56	0	4	29	13	0	8	18	16	0	76	28	3	0
South Fork (Phase 1)	9	0	0	0	0	0	13	0	8	8	6	0	0	13	0	0
Approved Development Trips (2025 & 2026)	26	62	56	0	4	29	26	0	16	26	22	0	76	41	3	0
South Fork (Phase 2 + 3)	52	0	0	0	0	0	20	0	13	13	49	0	0	20	0	0
Approved Development Trips (2031)	69	62	56	0	4	29	33	0	21	31	65	0	76	48	3	0
2023 Background Traffic - Phase 1A	60	478	453	0	72	511	72	0	65	96	64	0	515	100	37	0
2024 Background Traffic - Phase 1B	61	489	463	0	73	521	74	0	67	98	65	0	526	108	38	0
2025 Background Traffic - Phase 2	71	499	473	0	75	532	88	0	76	108	73	0	537	123	39	0
2026 Background Traffic - Phase 3	72	510	483	0	77	544	90	0	78	110	74	0	548	124	39	0
2031 Background Traffic - Build-5	121	569	539	0	86	605	105	0	91	126	124	0	611	143	44	0
Percent Inbound Assignment	0%	0%	0%	0%	0%	35%	0%	0%	0%	0%	5%	0%	40%	0%	0%	0%
Percent Outbound Assignment	0%	35%	40%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
2023 Project Trips - Phase 1A	0	36	38	0	0	7	0	0	0	0	4	0	31	0	0	0
Percent Inbound Assignment	0%	0%	0%	0%	0%	35%	0%	0%	0%	0%	5%	0%	40%	0%	0%	0%
Percent Outbound Assignment	0%	35%	40%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
2024 Project Trips - Phase 1B	0	30	34	0	0	11	0	0	0	0	7	0	48	0	0	0
Percent Inbound Assignment	0%	0%	0%	0%	0%	35%	0%	0%	0%	0%	5%	0%	40%	0%	0%	0%
Percent Outbound Assignment	0%	35%	40%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
2025 Project Trips - Phase 2	0	51	61	0	0	20	0	0	0	0	13	0	103	0	0	0
Percent Inbound Assignment	0%	0%	0%	0%	0%	35%	0%	0%								

INTERSECTION VOLUME DEVELOPMENT

**Henry Chapel Road and Access 1
AM PEAK HOUR**

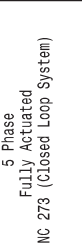
Description	Northbound				Access 1 Northbound				Henry Chapel Road Eastbound				Henry Chapel Road Westbound			
	Left	Through	Right	U-turn	Left	Through	Right	U-turn	Left	Through	Right	U-turn	Left	Through	Right	U-turn
2022 Existing Traffic	0	0	0	0	0	0	0	0	0	8	0	0	0	21	0	0
Conflicting Peds	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Conflicting Bikes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2022 Existing PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.54	0.90	0.90	0.90	0.61	0.90	0.90
Future PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicle %	2%	2%	2%	2%	2%	2%	2%	2%	2%	14%	2%	2%	2%	5%	2%	2%
Annual Growth Rate	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%
2023 Background Traffic (No AD) - Phase 1A	0	0	0	0	0	0	0	0	0	8	0	0	0	22	0	0
2024 Background Traffic (No AD) - Phase 1B	0	0	0	0	0	0	0	0	0	8	0	0	0	22	0	0
2025 Background Traffic (No AD) - Phase 2	0	0	0	0	0	0	0	0	0	9	0	0	0	23	0	0
2026 Background Traffic (No AD) - Phase 3	0	0	0	0	0	0	0	0	0	9	0	0	0	23	0	0
2031 Background Traffic (No AD) - Build-5	0	0	0	0	0	0	0	0	0	10	0	0	0	26	0	0
Amberlee	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rovermint	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
McClean	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Belmont Town Center	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Smith Farm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approved Development Trips (2023 & 2024)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
South Fork (Phase 1)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approved Development Trips (2025 & 2026)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
South Fork (Phase 2 + 3)	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0
Approved Development Trips (2031)	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0
2023 Background Traffic - Phase 1A	0	0	0	0	0	0	0	0	0	8	0	0	0	22	0	0
2024 Background Traffic - Phase 1B	0	0	0	0	0	0	0	0	0	8	0	0	0	22	0	0
2025 Background Traffic - Phase 2	0	0	0	0	0	0	0	0	0	9	0	0	0	23	0	0
2026 Background Traffic - Phase 3	0	0	0	0	0	0	0	0	0	9	0	0	0	23	0	0
2031 Background Traffic - Build-5	0	0	0	0	0	0	0	0	0	11	0	0	0	27	0	0
Percent Inbound Assignment	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%
Percent Outbound Assignment	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%
2023 Project Trips - Phase 1A	0	0	0	0	0	0	0	0	0	24	0	0	0	68	0	0
Percent Inbound Assignment	0%	0%	0%	0%	0%	0%	0%	0%	50%	50%	0%	0%	0%	0%	0%	0%
Percent Outbound Assignment	0%	0%	0%	0%	0%	0%	50%	0%	0%	0%	0%	0%	0%	50%	0%	0%
2024 Project Trips - Phase 1B	0	0	0	0	0	0	62	0	22	22	0	0	0	62	0	0
Percent Inbound Assignment	0%	0%	0%	0%	0%	0%	0%	0%	50%	30%	0%	0%	0%	0%	0%	0%
Percent Outbound Assignment	0%	0%	0%	0%	0%	0%	50%	0%	0%	0%	0%	0%	0%	30%	0%	0%
2025 Project Trips - Phase 2	0	0	0	0	0	0	109	0	38	23	0	0	0	65	0	0
Percent Inbound Assignment	0%	0%	0%	0%	0%	0%	0%	0%	50%	20%	0%	0%	0%	0%	0%	0%
Percent Outbound Assignment	0%	0%	0%	0%	0%	0%	50%	0%	0%	0%	0%	0%	0%	20%	0%	0%
2026 Project Trips - Phase 3	0	0	0	0	0	0	147	0	51	21	0	0	0	59	0	0
Project Trips (Total)	0	0	0	0	0	0	147	0	51	21	0	0	0	59	0	0
2023 Buildout Total - Phase 1A	0	0	0	0	0	0	0	0	0	32	0	0	0	90	0	0
2024 Buildout Total - Phase 1B	0	0	0	0	0	0	62	0	22	30	0	0	0	84	0	0
2025 Buildout Total - Phase 2	0	0	0	0	0	0	109	0	38	32	0	0	0	88	0	0
2026 Buildout Total - Phase 3	0	0	0	0	0	0	147	0	51	30	0	0	0	92	0	0
2031 Buildout Total - Build-5	0	0	0	0	0	0	147	0	51	32	0	0	0	92	0	0

PM PEAK HOUR

Description	Northbound				Access 1 Northbound				Henry Chapel Road Eastbound				Henry Chapel Road Westbound			
	Left	Through	Right	U-turn	Left	Through	Right	U-turn	Left	Through	Right	U-turn	Left	Through	Right	U-turn
Observed Volumes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Balance Volumes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2022 Existing Traffic	0	0	0	0	0	0	0	0	0	31	0	0	0	25	0	0
Conflicting Peds	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Conflicting Bikes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2022 PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.53	0.90	0.90	0.90	0.63	0.90	0.90
Future PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicle %	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	9%	2%	2%
Annual Growth Rate	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%
2023 Background Traffic (No AD) - Phase 1A	0	0	0	0	0	0	0	0	0	32	0	0	0	26	0	0
2024 Background Traffic (No AD) - Phase 1B	0	0	0	0	0	0	0	0	0	33	0	0	0	26	0	0
2025 Background Traffic (No AD) - Phase 2	0	0	0	0	0	0	0	0	0	33	0	0	0	27	0	0
2026 Background Traffic (No AD) - Phase 3	0	0	0	0	0	0	0	0	0	34	0	0	0	28	0	0
2031 Background Traffic (No AD) - Build-5	0	0	0	0	0	0	0	0	0	39	0	0	0	33	0	0
Amberlee	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rovermint	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
McClean	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0
Belmont Town Center	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Smith Farm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approved Development Trips (2023 & 2024)	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0
South Fork (Phase 1)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approved Development Trips (2025 & 2026)	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0
South Fork (Phase 2 + 3)	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0
Approved Development Trips (2031)	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0	0
2023 Background Traffic - Phase 1A	0	0	0	0	0	0	0	0	0	33	0	0	0	27	0	0
2024 Background Traffic - Phase 1B	0	0	0	0	0	0	0	0	0	34	0	0	0	27	0	0
2025 Background Traffic - Phase 2	0	0	0	0	0	0	0	0	0	34	0	0	0	28	0	0
2026 Background Traffic - Phase 3	0	0	0	0	0	0	0	0	0	35	0	0	0	29	0	0
2031 Background Traffic - Build-5	0	0	0	0	0	0	0	0	0	41	0	0	0	33	0	0
Percent Inbound Assignment	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%
Percent Outbound Assignment	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%
2023 Project Trips - Phase 1A	0	0	0	0	0	0	0	0	0	77	0	0	0	46	0	0
Percent Inbound Assignment	0%	0%	0%	0%	0%	0%	0%	0%	50%	50%	0%	0%	0%	0%	0%	0%
Percent Outbound Assignment	0%	0%	0%	0%	0%	0%	50%	0%	0%	0%	0%	0%	0%	50%	0%	0%
2024 Project Trips - Phase 1B	0	0	0	0	0	0	42	0	15	75	0	0	0	43	0	0
Percent Inbound Assignment	0%	0%	0%	0%	0%	0%	0%	0%	50%	30%	0%	0%	0%	0%	0%	0%
Percent Outbound Assignment	0%	0%	0%	0%	0%	0%	50%	0%	0%	0%	0%	0%	0%	30%	0%	0%
2025 Project Trips - Phase 2	0	0	0	0	0	0	76	0	129	77	0	0	0	46	0	0
Percent Inbound Assignment	0%	0%	0%	0%	0%	0%	0%	0%	50%	20%	0%	0%	0%	0%	0%	0%
Percent Outbound Assignment	0%	0%	0%	0%	0%	0%	50%	0%	0%	0%	0%	0%	0%	20%	0%	0%
2026 Project Trips - Phase 3	0	0	0	0	0	0	104	0	176	70	0	0	0	41	0	0
Project Trips (Total)	0	0	0	0	0	0	104	0	176	70	0	0	0	41	0	0
2023 Buildout Total - Phase 1A	0	0	0	0	0	0	0	0	0	100	0	0	0	73	0	0
2024 Buildout Total - Phase 1B	0	0	0	0	0	0	42	0	12	109	0	0	0	73	0	0
2025 Buildout Total - Phase 2	0	0	0	0	0	0	76	0	129	111	0	0	0	74	0	0
2026 Buildout Total - Phase 3	0	0	0	0	0	0	104	0	136	105	0	0	0	70	0	0
2031 Buildout Total - Build-5	0	0	0	0	0	0	104	0	136	111	0	0	0	74	0	0

Signal Plans

SIGNAL FACE I.D.
All Heads L.E.D.



PHASING DIAGRAM

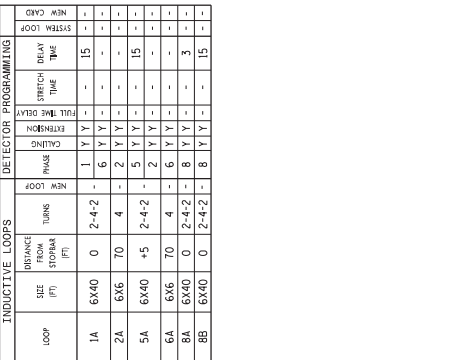


TABLE OF OPERATION

SIGNAL FACE	PHASE							
	0	1	2	3	4	5	6	7
11	0	1	2	3	4	5	6	7
21,22	R	R	G	R	Y	Y	G	R
51	R	G	R	Y	Y	G	R	Y
61,62	R	G	R	Y	Y	G	R	Y
81	R	G	R	Y	Y	G	R	Y
P21,P22	DW	DW	W	DW	DRK	DRK	DW	DRK
P81,P82	DW	DW	DW	DW	DW	DW	DW	DW

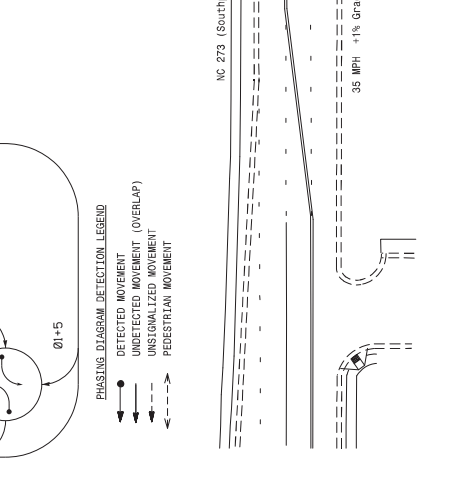
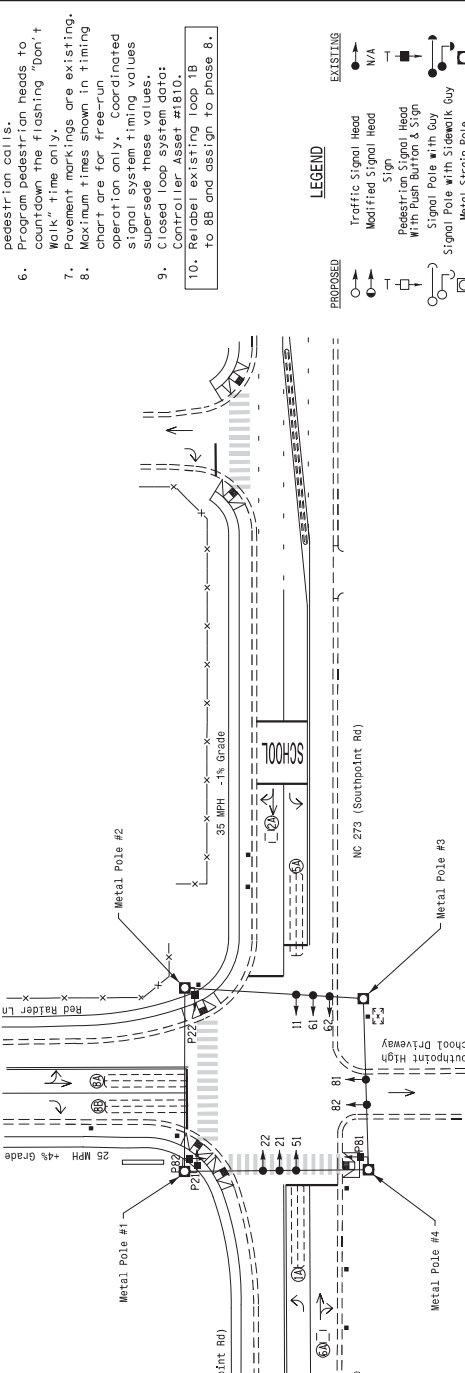
OASIS 2070 LOOP & DETECTOR INSTALLATION CHART

LOOP	INDUCTIVE LOOPS		DETECTOR PROGRAMMING			
	SIZE (FT)	DISTANCE FROM SIGNAL (FT)	PHASE	SWITCH	DELAY TIME (SEC)	SYSTEM LOOP
1A	6x40	0	2-4-2	1	Y	15
2A	6x6	70	4	2	Y	15
5A	6x40	+5	2-4-2	2	Y	15
6A	6x6	70	4	2	Y	15
8A	6x40	0	2-4-2	8	Y	3
8B	6x40	0	2-4-2	8	Y	15

5 Phase Fully Actuated NC 273 (Closed Loop System)

NOTES

1. Refer to "Roadway Standard Drawings NCDOT" dated January 2016 and "Standard Specifications for Roads and Structures" dated July 2018. Any flashing can operation unless otherwise directed by the Engineer.
2. Phase 1 and/or phase 5 may be logged.
3. Set all detector units to presence mode.
4. Omit "WALK" and flashing "DON'T WALK" with no pedestrian calls.
5. Program pedestrian heads to countdown the flashing "Don't Walk" time only.
6. Pavement markings are existing. Maximum times shown in timing chart are for free-run operation only. Coordinated signal system timing values supersede these values.
7. Closed loop system data: Controller Asset #1810.
8. Retain existing loop 1B to 8B and assign to phase 8.



LEGEND

EXISTING

- Traffic Signal Head
- Modified Signal Head
- Signal
- Pedestrian Signal Head With Push Button & Sign
- Signal Pole with Sidewalk Guy
- Metal Strain Pole
- Inductive Loop Detector Controller & Cabinet
- Junction Box
- 2-in Underground Conduit
- Right of Way
- Fence
- Curb Ramp

PROPOSED

- Traffic Signal Head
- Modified Signal Head
- Signal
- Pedestrian Signal Head With Push Button & Sign
- Signal Pole with Sidewalk Guy
- Metal Strain Pole
- Inductive Loop Detector Controller & Cabinet
- Junction Box
- 2-in Underground Conduit
- Right of Way
- Fence
- Curb Ramp

Scale: 1" = 50'

Signal Upgrade
Approved for the Office of Transportation Planning and Policy

NC 273 (Southpointe Road) at Southpointe HS Driveway / Red Raider Lane

Division 12 - Signal Systems
Plan Date: December 2019
Revised By: T. Williams
Checked By: E. W. W. W.

















DATE: 12/18/2019
SCALE: 1" = 50'

Intersection Capacity Analysis

2022 Existing Conditions

Lanes, Volumes, Timings
 1: S Point Road (NC 273) & Armstrong Road (NC 273)/Farm Road

Henry Chapel TIA
 2022 Existing AM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	406	0	22	0	0	0	50	157	0	0	60	163
Future Volume (vph)	406	0	22	0	0	0	50	157	0	0	60	163
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.990										0.898
Flt Protected		0.956						0.989				
Satd. Flow (prot)	0	1721	0	0	1863	0	0	1793	0	0	1558	0
Flt Permitted		0.956						0.989				
Satd. Flow (perm)	0	1721	0	0	1863	0	0	1793	0	0	1558	0
Link Speed (mph)		45			25			45			45	
Link Distance (ft)		1234			1013			1002			3097	
Travel Time (s)		18.7			27.6			15.2			46.9	
Peak Hour Factor	0.88	0.90	0.61	0.90	0.90	0.90	0.83	0.79	0.90	0.90	0.83	0.74
Heavy Vehicles (%)	2%	2%	36%	2%	2%	2%	14%	2%	2%	2%	8%	10%
Adj. Flow (vph)	461	0	36	0	0	0	60	199	0	0	72	220
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	497	0	0	0	0	0	259	0	0	292	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	58.0%
ICU Level of Service	B
Analysis Period (min)	15

HCM 6th TWSC
 1: S Point Road (NC 273) & Armstrong Road (NC 273)/Farm Road

Henry Chapel TIA
 2022 Existing AM

Intersection												
Int Delay, s/veh	41											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	406	0	22	0	0	0	50	157	0	0	60	163
Future Vol, veh/h	406	0	22	0	0	0	50	157	0	0	60	163
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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	90	61	90	90	90	83	79	90	90	83	74
Heavy Vehicles, %	2	2	36	2	2	2	14	2	2	2	8	10
Mvmt Flow	461	0	36	0	0	0	60	199	0	0	72	220

Major/Minor	Minor2		Minor1			Major1			Major2			
Conflicting Flow All	501	501	182	519	611	199	292	0	0	199	0	0
Stage 1	182	182	-	319	319	-	-	-	-	-	-	-
Stage 2	319	319	-	200	292	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.56	7.12	6.52	6.22	4.24	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.624	3.518	4.018	3.318	2.326	-	-	2.218	-	-
Pot Cap-1 Maneuver	480	472	780	467	409	842	1204	-	-	1373	-	-
Stage 1	820	749	-	693	653	-	-	-	-	-	-	-
Stage 2	693	653	-	802	671	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	~ 459	446	780	426	386	842	1204	-	-	1373	-	-
Mov Cap-2 Maneuver	~ 459	446	-	426	386	-	-	-	-	-	-	-
Stage 1	774	749	-	654	616	-	-	-	-	-	-	-
Stage 2	654	616	-	765	671	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	85.4	0	1.9	0
HCM LOS	F	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1204	-	-	473	1373	-	-
HCM Lane V/C Ratio	0.05	-	-	1.052	-	-	-
HCM Control Delay (s)	8.1	0	-	85.4	0	0	-
HCM Lane LOS	A	A	-	F	A	A	-
HCM 95th %tile Q(veh)	0.2	-	-	15.3	0	-	-

Notes
 ~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Lanes, Volumes, Timings

Henry Chapel TIA

2: S Point Road (NC 273) & S Point Church Road/Henry Chapel Road

2022 Existing AM



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	0	0	1	1	0	20	0	688	1	7	274	5
Future Volume (vph)	0	0	1	1	0	20	0	688	1	7	274	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.865			0.880			0.999			0.992	
Flt Protected					0.994						0.998	
Satd. Flow (prot)	0	1611	0	0	1588	0	0	1852	0	0	1751	0
Flt Permitted					0.994						0.998	
Satd. Flow (perm)	0	1611	0	0	1588	0	0	1852	0	0	1751	0
Link Speed (mph)		25			25			45			45	
Link Distance (ft)		1509			1293			1519			881	
Travel Time (s)		41.2			35.3			23.0			13.3	
Peak Hour Factor	0.90	0.90	0.25	0.25	0.90	0.63	0.90	0.89	0.25	0.58	0.91	0.25
Heavy Vehicles (%)	2%	2%	2%	2%	2%	5%	2%	2%	100%	2%	8%	2%
Adj. Flow (vph)	0	0	4	4	0	32	0	773	4	12	301	20
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	4	0	0	36	0	0	777	0	0	333	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	46.3%
ICU Level of Service	A
Analysis Period (min)	15

Intersection												
Int Delay, s/veh	0.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	1	1	0	20	0	688	1	7	274	5
Future Vol, veh/h	0	0	1	1	0	20	0	688	1	7	274	5
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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	25	25	90	63	90	89	25	58	91	25
Heavy Vehicles, %	2	2	2	2	2	5	2	2	100	2	8	2
Mvmt Flow	0	0	4	4	0	32	0	773	4	12	301	20

















Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	1126	1112	311	1112	1120	775	321	0	0	777	0	0
Stage 1	335	335	-	775	775	-	-	-	-	-	-	-
Stage 2	791	777	-	337	345	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.25	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.345	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	182	209	729	186	206	393	1239	-	-	839	-	-
Stage 1	679	643	-	391	408	-	-	-	-	-	-	-
Stage 2	383	407	-	677	636	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	165	205	729	183	202	393	1239	-	-	839	-	-
Mov Cap-2 Maneuver	165	205	-	183	202	-	-	-	-	-	-	-
Stage 1	679	632	-	391	408	-	-	-	-	-	-	-
Stage 2	352	407	-	662	625	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	10		16.5		0		0.3	
HCM LOS	B		C					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1239	-	-	729	348	839	-	-
HCM Lane V/C Ratio	-	-	-	0.005	0.103	0.014	-	-
HCM Control Delay (s)	0	-	-	10	16.5	9.4	0	-
HCM Lane LOS	A	-	-	B	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0.3	0	-	-

Lanes, Volumes, Timings
 3: S Point Road (NC 273) & BB Drive/Forest Hill Road

Henry Chapel TIA
 2022 Existing AM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	0	0	5	0	19	0	866	6	7	330	2
Future Volume (vph)	4	0	0	5	0	19	0	866	6	7	330	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.890			0.999				0.999
Flt Protected		0.950			0.991							0.999
Satd. Flow (prot)	0	1770	0	0	1604	0	0	1859	0	0	1775	0
Flt Permitted		0.950			0.991							0.999
Satd. Flow (perm)	0	1770	0	0	1604	0	0	1859	0	0	1775	0
Link Speed (mph)		25			25			45			45	
Link Distance (ft)		1341			477			2444			1894	
Travel Time (s)		36.6			13.0			37.0			28.7	
Peak Hour Factor	0.50	0.90	0.90	0.63	0.90	0.53	0.90	0.86	0.75	0.58	0.82	0.50
Heavy Vehicles (%)	2%	2%	2%	2%	2%	5%	2%	2%	17%	2%	7%	2%
Adj. Flow (vph)	8	0	0	8	0	36	0	1007	8	12	402	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	8	0	0	44	0	0	1015	0	0	418	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	55.9%
ICU Level of Service	B
Analysis Period (min)	15

Intersection												
Int Delay, s/veh	1.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	4	0	0	5	0	19	0	866	6	7	330	2
Future Vol, veh/h	4	0	0	5	0	19	0	866	6	7	330	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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	50	90	90	63	90	53	90	86	75	58	82	50
Heavy Vehicles, %	2	2	2	2	2	5	2	2	17	2	7	2
Mvmt Flow	8	0	0	8	0	36	0	1007	8	12	402	4

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	1457	1443	404	1439	1441	1011	406	0	0	1015	0	0
Stage 1	428	428	-	1011	1011	-	-	-	-	-	-	-
Stage 2	1029	1015	-	428	430	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.25	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.345	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	108	132	647	111	133	287	1153	-	-	683	-	-
Stage 1	605	585	-	289	317	-	-	-	-	-	-	-
Stage 2	282	316	-	605	583	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	93	129	647	109	130	287	1153	-	-	683	-	-
Mov Cap-2 Maneuver	93	129	-	109	130	-	-	-	-	-	-	-
Stage 1	605	572	-	289	317	-	-	-	-	-	-	-
Stage 2	247	316	-	591	570	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	47.3		25.3		0		0.3	
HCM LOS	E		D					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1153	-	-	93	221	683	-	-
HCM Lane V/C Ratio	-	-	-	0.086	0.198	0.018	-	-
HCM Control Delay (s)	0	-	-	47.3	25.3	10.4	0	-
HCM Lane LOS	A	-	-	E	D	B	A	-
HCM 95th %tile Q(veh)	0	-	-	0.3	0.7	0.1	-	-

Lanes, Volumes, Timings
 4: Colonial Drive & Forest Hill Road

Henry Chapel TIA
 2022 Existing AM



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	6	2	0	11	17	1
Future Volume (vph)	6	2	0	11	17	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.946			0.981		
Flt Protected				0.959		
Satd. Flow (prot)	1762	0	0	1863	1752	0
Flt Permitted				0.959		
Satd. Flow (perm)	1762	0	0	1863	1752	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	477			1074	636	
Travel Time (s)	13.0			29.3	17.3	
Peak Hour Factor	0.50	0.25	0.90	0.69	0.71	0.25
Adj. Flow (vph)	12	8	0	16	24	4
Shared Lane Traffic (%)						
Lane Group Flow (vph)	20	0	0	16	28	0
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 13.3% ICU Level of Service A

Analysis Period (min) 15

Intersection						
Int Delay, s/veh	3.8					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	6	2	0	11	17	1
Future Vol, veh/h	6	2	0	11	17	1
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	50	25	90	69	71	25
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	12	8	0	16	24	4

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	20	0	32
Stage 1	-	-	-	-	16
Stage 2	-	-	-	-	16
Critical Hdwy	-	-	4.12	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	-	-	2.218	-	3.518
Pot Cap-1 Maneuver	-	-	1596	-	982
Stage 1	-	-	-	-	1007
Stage 2	-	-	-	-	1007
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1596	-	982
Mov Cap-2 Maneuver	-	-	-	-	982
Stage 1	-	-	-	-	1007
Stage 2	-	-	-	-	1007

Approach	EB	WB	NB
HCM Control Delay, s	0	0	8.7
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	993	-	-	1596	-
HCM Lane V/C Ratio	0.028	-	-	-	-
HCM Control Delay (s)	8.7	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Lanes, Volumes, Timings
5: Colonial Drive & Timber Ridge Road

Henry Chapel TIA
2022 Existing AM



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	9	8	0	1	2
Future Volume (vph)	0	9	8	0	1	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.865					
Flt Protected						0.976
Satd. Flow (prot)	1611	0	1863	0	0	1818
Flt Permitted						0.976
Satd. Flow (perm)	1611	0	1863	0	0	1818
Link Speed (mph)	25		25		25	
Link Distance (ft)	1207		1055		636	
Travel Time (s)	32.9		28.8		17.3	
Peak Hour Factor	0.90	0.56	0.67	0.90	0.25	0.50
Adj. Flow (vph)	0	16	12	0	4	4
Shared Lane Traffic (%)						
Lane Group Flow (vph)	16	0	12	0	0	8
Sign Control	Stop		Free		Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	13.3%
Analysis Period (min)	15
	ICU Level of Service A

Intersection						
Int Delay, s/veh	4.5					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	9	8	0	1	2
Future Vol, veh/h	0	9	8	0	1	2
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	90	56	67	90	25	50
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	16	12	0	4	4


















Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	24	12	0	0	12	0
Stage 1	12	-	-	-	-	-
Stage 2	12	-	-	-	-	-
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	992	1069	-	-	1607	-
Stage 1	1011	-	-	-	-	-
Stage 2	1011	-	-	-	-	-
Platoon blocked, %			-	-	-	-
Mov Cap-1 Maneuver	990	1069	-	-	1607	-
Mov Cap-2 Maneuver	990	-	-	-	-	-
Stage 1	1011	-	-	-	-	-
Stage 2	1009	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.4	0	3.6
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	1069	1607
HCM Lane V/C Ratio	-	-	0.015	0.002
HCM Control Delay (s)	-	-	8.4	7.2
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0	0

Lanes, Volumes, Timings
 7: S Point Road (NC 273) & McKee Farm Road/Stowe Road

Henry Chapel TIA
 2022 Existing AM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	13	4	18	12	1	54	22	842	44	35	620	66
Future Volume (vph)	13	4	18	12	1	54	22	842	44	35	620	66
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		0	100		0
Storage Lanes	0		0	0		0	0		0	1		0
Taper Length (ft)	25			25			25			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.932			0.900			0.990			0.981	
Flt Protected		0.982			0.989			0.998		0.950		
Satd. Flow (prot)	0	1672	0	0	1658	0	0	1840	0	1703	1782	0
Flt Permitted		0.982			0.989			0.998		0.950		
Satd. Flow (perm)	0	1672	0	0	1658	0	0	1840	0	1703	1782	0
Link Speed (mph)		25			25			35			35	
Link Distance (ft)		1043			1485			1373			492	
Travel Time (s)		28.4			40.5			26.7			9.6	
Peak Hour Factor	0.65	0.50	0.64	0.60	0.25	0.79	0.61	0.96	0.61	0.80	0.90	0.66
Heavy Vehicles (%)	2%	2%	6%	2%	2%	2%	2%	2%	2%	6%	5%	2%
Adj. Flow (vph)	20	8	28	20	4	68	36	877	72	44	689	100
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	56	0	0	92	0	0	985	0	44	789	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary	
Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	75.9% ICU Level of Service D
Analysis Period (min)	15

HCM 6th TWSC
 7: S Point Road (NC 273) & McKee Farm Road/Stowe Road

Henry Chapel TIA
 2022 Existing AM

Intersection												
Int Delay, s/veh	8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕		↕	↕	↕
Traffic Vol, veh/h	13	4	18	12	1	54	22	842	44	35	620	66
Future Vol, veh/h	13	4	18	12	1	54	22	842	44	35	620	66
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	-	-	-	-	-	-	-	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	65	50	64	60	25	79	61	96	61	80	90	66
Heavy Vehicles, %	2	2	6	2	2	2	2	2	2	6	5	2
Mvmt Flow	20	8	28	20	4	68	36	877	72	44	689	100

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1848	1848	739	1830	1862	913	789	0	0	949	0	0
Stage 1	827	827	-	985	985	-	-	-	-	-	-	-
Stage 2	1021	1021	-	845	877	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.26	7.12	6.52	6.22	4.12	-	-	4.16	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.354	3.518	4.018	3.318	2.218	-	-	2.254	-	-
Pot Cap-1 Maneuver	57	75	411	59	73	331	831	-	-	708	-	-
Stage 1	366	386	-	299	326	-	-	-	-	-	-	-
Stage 2	285	314	-	357	366	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	38	64	411	44	62	331	831	-	-	708	-	-
Mov Cap-2 Maneuver	38	64	-	44	62	-	-	-	-	-	-	-
Stage 1	332	362	-	271	296	-	-	-	-	-	-	-
Stage 2	202	285	-	305	343	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	125.6		86.2		0.3		0.5	
HCM LOS	F		F					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	831	-	-	78	127	708	-	-
HCM Lane V/C Ratio	0.043	-	-	0.72	0.727	0.062	-	-
HCM Control Delay (s)	9.5	0	-	125.6	86.2	10.4	-	-
HCM Lane LOS	A	A	-	F	F	B	-	-
HCM 95th %tile Q(veh)	0.1	-	-	3.4	4.1	0.2	-	-

Lanes, Volumes, Timings
8: S Point Road (NC 273) & South Point HS/Red Raider Run

Henry Chapel TIA
2022 Existing AM



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↕	↕	↕	↕		↕	↕	
Traffic Volume (vph)	0	0	0	115	32	131	48	772	63	83	607	49
Future Volume (vph)	0	0	0	115	32	131	48	772	63	83	607	49
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			4%			-1%			1%	
Storage Length (ft)	0		0	0		100	175		0	100		0
Storage Lanes	0		0	0		1	1		0	1		0
Taper Length (ft)	25			25			100			75		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t						0.850		0.988			0.983	
Fl _t Protected					0.968		0.950			0.950		
Satd. Flow (prot)	0	0	0	0	1767	1552	1778	1850	0	1761	1761	0
Fl _t Permitted					0.968		0.279			0.167		
Satd. Flow (perm)	0	0	0	0	1767	1552	522	1850	0	310	1761	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		25			25			35			35	
Link Distance (ft)		1017			1038			492			625	
Travel Time (s)		27.7			28.3			9.6			12.2	
Peak Hour Factor	0.90	0.90	0.90	0.80	0.44	0.91	0.50	0.91	0.88	0.65	0.95	0.58
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	6%	2%
Adj. Flow (vph)	0	0	0	144	73	144	96	848	72	128	639	84
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	217	144	96	920	0	128	723	0
Turn Type				Perm	NA	pm+ov	D.P+P	NA		D.P+P	NA	
Protected Phases					8	1	5	2		1	6	
Permitted Phases				8		8	6			2		
Detector Phase				8	8	1	5	2		1	6	
Switch Phase												
Minimum Initial (s)				7.0	7.0	7.0	7.0	10.0		7.0	10.0	
Minimum Split (s)				25.4	25.4	12.6	12.1	27.7		12.6	23.7	
Total Split (s)				27.0	27.0	13.0	13.0	80.0		13.0	80.0	
Total Split (%)				22.5%	22.5%	10.8%	10.8%	66.7%		10.8%	66.7%	
Maximum Green (s)				21.6	21.6	7.4	7.9	74.3		7.4	74.3	
Yellow Time (s)				3.0	3.0	3.0	3.0	3.9		3.0	3.9	
All-Red Time (s)				2.4	2.4	2.6	2.1	1.8		2.6	1.8	
Lost Time Adjust (s)					-0.4	-0.6	-0.1	-0.7		-0.6	-0.7	
Total Lost Time (s)					5.0	5.0	5.0	5.0		5.0	5.0	
Lead/Lag						Lead	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)				2.0	2.0	2.0	2.0	3.0		2.0	3.0	
Recall Mode				None	None	None	None	C-Max		None	C-Max	
Walk Time (s)				7.0	7.0			7.0				
Flash Dont Walk (s)				13.0	13.0			15.0				
Pedestrian Calls (#/hr)				0	0			0				
Act Effct Green (s)					18.5	31.3	86.5	78.7		86.5	79.2	
Actuated g/C Ratio					0.15	0.26	0.72	0.66		0.72	0.66	
v/c Ratio					0.80	0.36	0.21	0.76		0.40	0.62	
Control Delay					69.8	38.0	5.3	20.2		6.7	10.8	

Lanes, Volumes, Timings
 8: S Point Road (NC 273) & South Point HS/Red Raider Run

Henry Chapel TIA
 2022 Existing AM



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay					0.0	0.0	0.0	0.0		0.0	0.5	
Total Delay					69.8	38.0	5.3	20.2		6.7	11.3	
LOS					E	D	A	C		A	B	
Approach Delay					57.1			18.8			10.6	
Approach LOS					E			B			B	
Queue Length 50th (ft)					163	90	17	458		10	123	
Queue Length 95th (ft)					108	146	18	694		m29	m421	
Internal Link Dist (ft)		937			958			412			545	
Turn Bay Length (ft)						100	175			100		
Base Capacity (vph)					323	407	463	1213		320	1162	
Starvation Cap Reductn					0	0	0	0		0	147	
Spillback Cap Reductn					0	0	0	0		0	0	
Storage Cap Reductn					0	0	0	0		0	0	
Reduced v/c Ratio					0.67	0.35	0.21	0.76		0.40	0.71	

Intersection Summary























Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 82 (68%), Referenced to phase 2:NBSB and 6:NBSB, Start of Green
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.80
 Intersection Signal Delay: 21.9
 Intersection Capacity Utilization 70.8%
 Analysis Period (min) 15
 Intersection LOS: C
 ICU Level of Service C
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 8: S Point Road (NC 273) & South Point HS/Red Raider Run



Lanes, Volumes, Timings
 9: S Point Road (NC 273) & Nixon Road/R L Stowe Road

Henry Chapel TIA
 2022 Existing AM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	84	136	57	255	69	24	72	399	430	42	461	44
Future Volume (vph)	84	136	57	255	69	24	72	399	430	42	461	44
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		1%			1%			1%			1%	
Storage Length (ft)	200		0	225		0	280		225	25		100
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (ft)	250			100			100			125		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.946			0.963				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1761	1711	0	1648	1689	0	1678	1853	1575	1761	1853	1530
Flt Permitted	0.950			0.950			0.182			0.408		
Satd. Flow (perm)	1761	1711	0	1648	1689	0	322	1853	1575	756	1853	1530
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		25			35			35			35	
Link Distance (ft)		1003			1016			625			1000	
Travel Time (s)		27.4			19.8			12.2			19.5	
Peak Hour Factor	0.66	0.77	0.57	0.84	0.51	0.55	0.50	0.94	0.82	0.75	0.85	0.61
Heavy Vehicles (%)	2%	2%	9%	9%	9%	4%	7%	2%	2%	2%	2%	5%
Adj. Flow (vph)	127	177	100	304	135	44	144	424	524	56	542	72
Shared Lane Traffic (%)												
Lane Group Flow (vph)	127	277	0	304	179	0	144	424	524	56	542	72
Turn Type	Split	NA		Split	NA		D.P+P	NA	pm+ov	D.Pm	NA	pm+ov
Protected Phases	3	3		4	4		5	2	4		6	3
Permitted Phases							6		2	2		6
Detector Phase	3	3		4	4		5	2	4	2	6	3
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		7.0	10.0	7.0	10.0	10.0	7.0
Minimum Split (s)	25.0	25.0		13.3	13.3		23.8	24.1	13.3	24.1	24.1	25.0
Total Split (s)	25.0	25.0		28.0	28.0		24.0	67.0	28.0	67.0	43.0	25.0
Total Split (%)	20.8%	20.8%		23.3%	23.3%		20.0%	55.8%	23.3%	55.8%	35.8%	20.8%
Maximum Green (s)	19.0	19.0		21.7	21.7		18.2	60.9	21.7	60.9	36.9	19.0
Yellow Time (s)	3.8	3.8		4.4	4.4		3.0	3.8	4.4	3.8	3.8	3.8
All-Red Time (s)	2.2	2.2		1.9	1.9		2.8	2.3	1.9	2.3	2.3	2.2
Lost Time Adjust (s)	-1.0	-1.0		-1.3	-1.3		-0.8	-1.1	-1.3	-1.1	-1.1	-1.0
Total Lost Time (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lead		Lag	Lag		Lead		Lag		Lag	Lead
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	3.0	2.0	3.0	3.0	2.0
Recall Mode	None	None		None	None		None	C-Max	None	C-Max	C-Max	None
Walk Time (s)	7.0	7.0						7.0		7.0		7.0
Flash Dont Walk (s)	12.0	12.0						11.0		11.0		12.0
Pedestrian Calls (#/hr)	0	0						0		0		0
Act Effct Green (s)	20.0	20.0		23.0	23.0		57.0	62.0	90.0	62.0	45.2	70.2
Actuated g/C Ratio	0.17	0.17		0.19	0.19		0.48	0.52	0.75	0.52	0.38	0.58
v/c Ratio	0.43	0.97		0.97	0.55		0.50	0.44	0.44	0.14	0.78	0.08
Control Delay	50.2	96.8		91.2	51.3		17.7	13.8	5.3	16.5	42.9	12.1

Lanes, Volumes, Timings
 9: S Point Road (NC 273) & Nixon Road/R L Stowe Road

Henry Chapel TIA
 2022 Existing AM

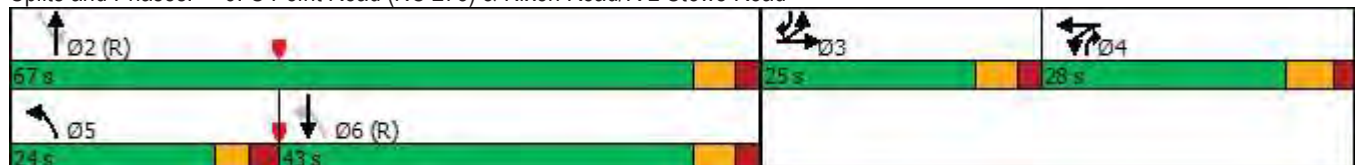


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.4	0.0	0.0	0.0
Total Delay	50.2	96.8		91.2	51.3		17.7	13.8	5.6	16.5	42.9	12.1
LOS	D	F		F	D		B	B	A	B	D	B
Approach Delay		82.2			76.4			10.4			37.4	
Approach LOS		F			E			B			D	
Queue Length 50th (ft)	89	216		236	126		32	130	93	22	363	23
Queue Length 95th (ft)	108	#300		#369	106		30	176	122	38	#533	33
Internal Link Dist (ft)		923			936			545			920	
Turn Bay Length (ft)	200			225			280		225	25		100
Base Capacity (vph)	293	285		315	323		379	957	1181	390	697	894
Starvation Cap Reductn	0	0		0	0		0	0	240	0	0	0
Spillback Cap Reductn	0	0		0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0		0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.43	0.97		0.97	0.55		0.38	0.44	0.56	0.14	0.78	0.08

Intersection Summary











Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 0 (0%), Referenced to phase 2:NBSB and 6:NBSB, Start of Green
 Natural Cycle: 110
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.97
 Intersection Signal Delay: 40.2
 Intersection LOS: D
 Intersection Capacity Utilization 71.5%
 ICU Level of Service C
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 9: S Point Road (NC 273) & Nixon Road/R L Stowe Road



Lanes, Volumes, Timings
 601: S Point Road (NC 273) & Belwood Drive

Henry Chapel TIA
 2022 Existing AM

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	1	20	718	0	16	401
Future Volume (vph)	1	20	718	0	16	401
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		0	0	
Storage Lanes	1	0		0	0	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00
Frt	0.881					
Flt Protected	0.994					0.997
Satd. Flow (prot)	1432	0	3539	0	0	1775
Flt Permitted	0.994					0.997
Satd. Flow (perm)	1432	0	3539	0	0	1775
Link Speed (mph)	25		35			35
Link Distance (ft)	1066		1894			89
Travel Time (s)	29.1		36.9			1.7
Peak Hour Factor	0.25	0.66	0.81	0.90	0.67	0.92
Heavy Vehicles (%)	100%	5%	2%	2%	2%	7%
Adj. Flow (vph)	4	30	886	0	24	436
Shared Lane Traffic (%)						
Lane Group Flow (vph)	34	0	886	0	0	460
Sign Control	Stop		Free			Free

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	44.1% ICU Level of Service A
Analysis Period (min)	15

Intersection						
Int Delay, s/veh	0.6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	1	20	718	0	16	401
Future Vol, veh/h	1	20	718	0	16	401
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	25	66	81	90	67	92
Heavy Vehicles, %	100	5	2	2	2	7
Mvmt Flow	4	30	886	0	24	436

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	1370	443	0	0	886
Stage 1	886	-	-	-	-
Stage 2	484	-	-	-	-
Critical Hdwy	8.1	6.975	-	-	4.13
Critical Hdwy Stg 1	7.3	-	-	-	-
Critical Hdwy Stg 2	6.9	-	-	-	-
Follow-up Hdwy	4.45	3.3475	-	-	2.219
Pot Cap-1 Maneuver	77	556	-	-	762
Stage 1	221	-	-	-	-
Stage 2	425	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	74	556	-	-	762
Mov Cap-2 Maneuver	74	-	-	-	-
Stage 1	221	-	-	-	-
Stage 2	407	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	17.8	0	0.5
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	316	762
HCM Lane V/C Ratio	-	-	0.109	0.031
HCM Control Delay (s)	-	-	17.8	9.9
HCM Lane LOS	-	-	C	A
HCM 95th %tile Q(veh)	-	-	0.4	0.1

Lanes, Volumes, Timings
602: S Point Road (NC 273) & Belmont MS

Henry Chapel TIA
2022 Existing AM



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	239	37	74	664	380	262
Future Volume (vph)	239	37	74	664	380	262
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	3%			1%	0%	
Storage Length (ft)	0	175	0			200
Storage Lanes	1	1	1			1
Taper Length (ft)	25		175			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t		0.850				0.850
Fl _t Protected	0.950		0.950			
Satd. Flow (prot)	1726	1560	1744	1853	1759	1568
Fl _t Permitted	0.950		0.311			
Satd. Flow (perm)	1726	1560	571	1853	1759	1568
Right Turn on Red		No				No
Satd. Flow (RTOR)						
Link Speed (mph)	35			35	35	
Link Distance (ft)	1017			89	1373	
Travel Time (s)	19.8			1.7	26.7	
Peak Hour Factor	0.72	0.77	0.75	0.82	0.92	0.83
Heavy Vehicles (%)	3%	2%	3%	2%	8%	3%
Adj. Flow (vph)	332	48	99	810	413	316
Shared Lane Traffic (%)						
Lane Group Flow (vph)	332	48	99	810	413	316
Turn Type	Prot	pm+ov	pm+pt	NA	NA	pm+ov
Protected Phases	4	5	5	2	6	4
Permitted Phases		4	2			6
Detector Phase	4	5	5	2	6	4
Switch Phase						
Minimum Initial (s)	7.0	7.0	7.0	12.0	12.0	7.0
Minimum Split (s)	11.9	12.1	12.1	17.6	32.6	11.9
Total Split (s)	31.0	13.0	13.0	59.0	46.0	31.0
Total Split (%)	34.4%	14.4%	14.4%	65.6%	51.1%	34.4%
Maximum Green (s)	26.1	7.9	7.9	53.4	40.4	26.1
Yellow Time (s)	3.0	3.0	3.0	4.5	4.5	3.0
All-Red Time (s)	1.9	2.1	2.1	1.1	1.1	1.9
Lost Time Adjust (s)	0.1	-0.1	-0.1	-0.6	-0.6	0.1
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag		Lead	Lead		Lag	
Lead-Lag Optimize?						
Vehicle Extension (s)	2.0	2.0	2.0	6.0	6.0	2.0
Minimum Gap (s)	2.0	2.0	2.0	3.0	3.0	2.0
Time Before Reduce (s)	0.0	0.0	0.0	15.0	15.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	45.0	45.0	0.0
Recall Mode	None	None	None	Min	Min	None
Walk Time (s)					7.0	
Flash Dont Walk (s)					20.0	
Pedestrian Calls (#/hr)					0	
Act Efect Green (s)	16.1	29.7	32.4	32.4	22.9	46.2

Lanes, Volumes, Timings
602: S Point Road (NC 273) & Belmont MS

Henry Chapel TIA
2022 Existing AM



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Actuated g/C Ratio	0.27	0.50	0.54	0.54	0.38	0.78
v/c Ratio	0.71	0.06	0.21	0.80	0.61	0.26
Control Delay	31.4	11.8	8.1	18.5	20.8	3.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	31.4	11.8	8.1	18.5	20.8	3.3
LOS	C	B	A	B	C	A
Approach Delay	28.9			17.4	13.2	
Approach LOS	C			B	B	
Queue Length 50th (ft)	97	8	14	196	119	31
Queue Length 95th (ft)	194	31	35	371	247	48
Internal Link Dist (ft)	937			9	1293	
Turn Bay Length (ft)	175			200		
Base Capacity (vph)	834	799	485	1611	1283	1394
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	0.40	0.06	0.20	0.50	0.32	0.23

Intersection Summary

















Area Type:	Other
Cycle Length:	90
Actuated Cycle Length:	59.5
Natural Cycle:	65
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.80
Intersection Signal Delay:	18.1
Intersection LOS:	B
Intersection Capacity Utilization:	56.5%
ICU Level of Service:	B
Analysis Period (min):	15

Splits and Phases: 602: S Point Road (NC 273) & Belmont MS



Lanes, Volumes, Timings
 1: S Point Road (NC 273) & Armstrong Road (NC 273)/Farm Road

Henry Chapel TIA
 2022 Existing PM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	325	0	28	0	0	1	39	90	0	2	115	413
Future Volume (vph)	325	0	28	0	0	1	39	90	0	2	115	413
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.987			0.865							0.895
Flt Protected		0.957						0.984				
Satd. Flow (prot)	0	1756	0	0	1611	0	0	1776	0	0	1655	0
Flt Permitted		0.957						0.984				
Satd. Flow (perm)	0	1756	0	0	1611	0	0	1776	0	0	1655	0
Link Speed (mph)		45			25			45			45	
Link Distance (ft)		1234			1013			1002			3097	
Travel Time (s)		18.7			27.6			15.2			46.9	
Peak Hour Factor	0.86	0.90	0.70	0.90	0.90	0.90	0.81	0.87	0.90	0.50	0.87	0.87
Heavy Vehicles (%)	2%	2%	4%	2%	2%	2%	8%	4%	2%	2%	2%	3%
Adj. Flow (vph)	378	0	40	0	0	1	48	103	0	4	132	475
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	418	0	0	1	0	0	151	0	0	611	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	69.4%
	ICU Level of Service C
Analysis Period (min)	15

HCM 6th TWSC
 1: S Point Road (NC 273) & Armstrong Road (NC 273)/Farm Road

Henry Chapel TIA
 2022 Existing PM

Intersection												
Int Delay, s/veh	25.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	325	0	28	0	0	1	39	90	0	2	115	413
Future Vol, veh/h	325	0	28	0	0	1	39	90	0	2	115	413
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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	86	90	70	90	90	90	81	87	90	50	87	87
Heavy Vehicles, %	2	2	4	2	2	2	8	4	2	2	2	3
Mvmt Flow	378	0	40	0	0	1	48	103	0	4	132	475

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	578	577	370	597	814	103	607	0	0	103	0	0
Stage 1	378	378	-	199	199	-	-	-	-	-	-	-
Stage 2	200	199	-	398	615	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.24	7.12	6.52	6.22	4.18	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.336	3.518	4.018	3.318	2.272	-	-	2.218	-	-
Pot Cap-1 Maneuver	427	427	671	415	312	952	943	-	-	1489	-	-
Stage 1	644	615	-	803	736	-	-	-	-	-	-	-
Stage 2	802	736	-	628	482	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	408	402	671	373	294	952	943	-	-	1489	-	-
Mov Cap-2 Maneuver	408	402	-	373	294	-	-	-	-	-	-	-
Stage 1	609	613	-	760	696	-	-	-	-	-	-	-
Stage 2	758	696	-	588	480	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	71.7	8.8	2.9	0
HCM LOS	F	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	943	-	-	424	952	1489	-	-
HCM Lane V/C Ratio	0.051	-	-	0.986	0.001	0.003	-	-
HCM Control Delay (s)	9	0	-	71.7	8.8	7.4	0	-
HCM Lane LOS	A	A	-	F	A	A	A	-
HCM 95th %tile Q(veh)	0.2	-	-	12.1	0	0	-	-

Lanes, Volumes, Timings

Henry Chapel TIA

2: S Point Road (NC 273) & S Point Church Road/Henry Chapel Road

2022 Existing PM



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	1	0	0	4	0	21	0	531	4	27	608	2
Future Volume (vph)	1	0	0	4	0	21	0	531	4	27	608	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.892			0.997			0.999	
Flt Protected		0.950			0.990						0.997	
Satd. Flow (prot)	0	1770	0	0	1548	0	0	1839	0	0	1839	0
Flt Permitted		0.950			0.990						0.997	
Satd. Flow (perm)	0	1770	0	0	1548	0	0	1839	0	0	1839	0
Link Speed (mph)		25			25			45			45	
Link Distance (ft)		1509			1293			1519			881	
Travel Time (s)		41.2			35.3			23.0			13.3	
Peak Hour Factor	0.25	0.90	0.90	0.50	0.90	0.66	0.90	0.92	0.33	0.56	0.92	0.50
Heavy Vehicles (%)	2%	2%	2%	2%	2%	10%	2%	3%	2%	2%	3%	2%
Adj. Flow (vph)	4	0	0	8	0	32	0	577	12	48	661	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	4	0	0	40	0	0	589	0	0	713	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 64.1%

ICU Level of Service C

Analysis Period (min) 15

Intersection												
Int Delay, s/veh	1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	1	0	0	4	0	21	0	531	4	27	608	2
Future Vol, veh/h	1	0	0	4	0	21	0	531	4	27	608	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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	25	90	90	50	90	66	90	92	33	56	92	50
Heavy Vehicles, %	2	2	2	2	2	10	2	3	2	2	3	2
Mvmt Flow	4	0	0	8	0	32	0	577	12	48	661	4

















Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1358	1348	663	1342	1344	583	665	0	0	589	0	0
Stage 1	759	759	-	583	583	-	-	-	-	-	-	-
Stage 2	599	589	-	759	761	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.3	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.39	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	126	151	461	129	152	497	924	-	-	986	-	-
Stage 1	399	415	-	498	499	-	-	-	-	-	-	-
Stage 2	488	495	-	399	414	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	111	139	461	121	140	497	924	-	-	986	-	-
Mov Cap-2 Maneuver	111	139	-	121	140	-	-	-	-	-	-	-
Stage 1	399	383	-	498	499	-	-	-	-	-	-	-
Stage 2	457	495	-	368	382	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	38.6	18.5	0	0.6
HCM LOS	E	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	924	-	-	111	306	986	-	-
HCM Lane V/C Ratio	-	-	-	0.036	0.13	0.049	-	-
HCM Control Delay (s)	0	-	-	38.6	18.5	8.8	0	-
HCM Lane LOS	A	-	-	E	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.4	0.2	-	-

Lanes, Volumes, Timings
 3: S Point Road (NC 273) & BB Drive/Forest Hill Road

Henry Chapel TIA
 2022 Existing PM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	0	0	1	0	8	0	638	3	14	762	1
Future Volume (vph)	4	0	0	1	0	8	0	638	3	14	762	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.892			0.999			0.999	
Flt Protected		0.950			0.990						0.999	
Satd. Flow (prot)	0	1770	0	0	1645	0	0	1861	0	0	1859	0
Flt Permitted		0.950			0.990						0.999	
Satd. Flow (perm)	0	1770	0	0	1645	0	0	1861	0	0	1859	0
Link Speed (mph)		25			25			45			45	
Link Distance (ft)		1341			477			2444			1894	
Travel Time (s)		36.6			13.0			37.0			28.7	
Peak Hour Factor	0.50	0.90	0.90	0.25	0.90	0.50	0.90	0.94	0.75	0.70	0.89	0.25
Adj. Flow (vph)	8	0	0	4	0	16	0	679	4	20	856	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	8	0	0	20	0	0	683	0	0	880	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 61.4% ICU Level of Service B

Analysis Period (min) 15

Intersection												
Int Delay, s/veh	0.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	4	0	0	1	0	8	0	638	3	14	762	1
Future Vol, veh/h	4	0	0	1	0	8	0	638	3	14	762	1
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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	50	90	90	25	90	50	90	94	75	70	89	25
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	8	0	0	4	0	16	0	679	4	20	856	4

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1587	1581	858	1579	1581	681	860	0	0	683	0	0
Stage 1	898	898	-	681	681	-	-	-	-	-	-	-
Stage 2	689	683	-	898	900	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	87	109	357	88	109	450	781	-	-	910	-	-
Stage 1	334	358	-	440	450	-	-	-	-	-	-	-
Stage 2	436	449	-	334	357	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	81	104	357	85	104	450	781	-	-	910	-	-
Mov Cap-2 Maneuver	81	104	-	85	104	-	-	-	-	-	-	-
Stage 1	334	343	-	440	450	-	-	-	-	-	-	-
Stage 2	420	449	-	320	342	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	54.3		21.2		0		0.2	
HCM LOS	F		C					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	781	-	-	81	242	910	-	-
HCM Lane V/C Ratio	-	-	-	0.099	0.083	0.022	-	-
HCM Control Delay (s)	0	-	-	54.3	21.2	9	0	-
HCM Lane LOS	A	-	-	F	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.3	0.3	0.1	-	-

Lanes, Volumes, Timings
4: Colonial Drive & Forest Hill Road

Henry Chapel TIA
2022 Existing PM



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	4	8	1	4	8	1
Future Volume (vph)	4	8	1	4	8	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.904			0.966		
Flt Protected				0.984	0.964	
Satd. Flow (prot)	1475	0	0	1833	1605	0
Flt Permitted				0.984	0.964	
Satd. Flow (perm)	1475	0	0	1833	1605	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	477			1074	636	
Travel Time (s)	13.0			29.3	17.3	
Peak Hour Factor	0.50	0.40	0.25	0.50	0.67	0.25
Heavy Vehicles (%)	25%	13%	2%	2%	13%	2%
Adj. Flow (vph)	8	20	4	8	12	4
Shared Lane Traffic (%)						
Lane Group Flow (vph)	28	0	0	12	16	0
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 13.3% ICU Level of Service A

Analysis Period (min) 15

Intersection						
Int Delay, s/veh	3					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	4	8	1	4	8	1
Future Vol, veh/h	4	8	1	4	8	1
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	50	40	25	50	67	25
Heavy Vehicles, %	25	13	2	2	13	2
Mvmt Flow	8	20	4	8	12	4

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	28	0	34
Stage 1	-	-	-	-	18
Stage 2	-	-	-	-	16
Critical Hdwy	-	-	4.12	-	6.53
Critical Hdwy Stg 1	-	-	-	-	5.53
Critical Hdwy Stg 2	-	-	-	-	5.53
Follow-up Hdwy	-	-	2.218	-	3.617
Pot Cap-1 Maneuver	-	-	1585	-	952
Stage 1	-	-	-	-	977
Stage 2	-	-	-	-	979
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1585	-	949
Mov Cap-2 Maneuver	-	-	-	-	949
Stage 1	-	-	-	-	977
Stage 2	-	-	-	-	976

Approach	EB	WB	NB
HCM Control Delay, s	0	2.4	8.8
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	975	-	-	1585	-
HCM Lane V/C Ratio	0.016	-	-	0.003	-
HCM Control Delay (s)	8.8	-	-	7.3	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Lanes, Volumes, Timings
5: Colonial Drive & Timber Ridge Road




Henry Chapel TIA
2022 Existing PM



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	5	3	2	3	5
Future Volume (vph)	0	5	3	2	3	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.865		0.932			
Flt Protected						0.976
Satd. Flow (prot)	1611	0	1507	0	0	1671
Flt Permitted						0.976
Satd. Flow (perm)	1611	0	1507	0	0	1671
Link Speed (mph)	25		25			25
Link Distance (ft)	1207		1055			636
Travel Time (s)	32.9		28.8			17.3
Peak Hour Factor	0.90	0.63	0.75	0.50	0.38	0.63
Heavy Vehicles (%)	2%	2%	33%	2%	2%	20%
Adj. Flow (vph)	0	8	4	4	8	8
Shared Lane Traffic (%)						
Lane Group Flow (vph)	8	0	8	0	0	16
Sign Control	Stop		Free			Free

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	13.3%
ICU Level of Service	A
Analysis Period (min)	15

Intersection						
Int Delay, s/veh	3.9					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	5	3	2	3	5
Future Vol, veh/h	0	5	3	2	3	5
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	90	63	75	50	38	63
Heavy Vehicles, %	2	2	33	2	2	20
Mvmt Flow	0	8	4	4	8	8


















Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	30	6	0	0	8
Stage 1	6	-	-	-	-
Stage 2	24	-	-	-	-
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	984	1077	-	-	1612
Stage 1	1017	-	-	-	-
Stage 2	999	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	979	1077	-	-	1612
Mov Cap-2 Maneuver	979	-	-	-	-
Stage 1	1017	-	-	-	-
Stage 2	994	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.4	0	3.6
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	1077	1612
HCM Lane V/C Ratio	-	-	0.007	0.005
HCM Control Delay (s)	-	-	8.4	7.2
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0	0

Lanes, Volumes, Timings
 7: S Point Road (NC 273) & McKee Farm Road/Stowe Road

Henry Chapel TIA
 2022 Existing PM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	23	8	12	16	1	49	10	702	18	64	806	45
Future Volume (vph)	23	8	12	16	1	49	10	702	18	64	806	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		0	100		0
Storage Lanes	0		0	0		0	0		0	1		0
Taper Length (ft)	25			25			25			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.968			0.914			0.993			0.990	
Flt Protected		0.972			0.984			0.999		0.950		
Satd. Flow (prot)	0	1753	0	0	1675	0	0	1848	0	1770	1844	0
Flt Permitted		0.972			0.984			0.999		0.950		
Satd. Flow (perm)	0	1753	0	0	1675	0	0	1848	0	1770	1844	0
Link Speed (mph)		25			25			35			35	
Link Distance (ft)		1043			1485			1373			492	
Travel Time (s)		28.4			40.5			26.7			9.6	
Peak Hour Factor	0.48	0.50	0.60	0.57	0.25	0.88	0.63	0.91	0.45	0.89	0.95	0.75
Adj. Flow (vph)	48	16	20	28	4	56	16	771	40	72	848	60
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	84	0	0	88	0	0	827	0	72	908	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	57.6%
	ICU Level of Service B
Analysis Period (min)	15

HCM 6th TWSC
7: S Point Road (NC 273) & McKee Farm Road/Stowe Road

Henry Chapel TIA
2022 Existing PM

Intersection												
Int Delay, s/veh	24.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕		↕	↕	↕
Traffic Vol, veh/h	23	8	12	16	1	49	10	702	18	64	806	45
Future Vol, veh/h	23	8	12	16	1	49	10	702	18	64	806	45
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	-	-	-	-	-	-	-	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	48	50	60	57	25	88	63	91	45	89	95	75
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	48	16	20	28	4	56	16	771	40	72	848	60

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1875	1865	878	1863	1875	791	908	0	0	811	0	0
Stage 1	1022	1022	-	823	823	-	-	-	-	-	-	-
Stage 2	853	843	-	1040	1052	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	55	73	347	56	72	390	750	-	-	815	-	-
Stage 1	285	313	-	368	388	-	-	-	-	-	-	-
Stage 2	354	380	-	278	303	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	~ 41	64	347	39	63	390	750	-	-	815	-	-
Mov Cap-2 Maneuver	~ 41	64	-	39	63	-	-	-	-	-	-	-
Stage 1	274	285	-	354	373	-	-	-	-	-	-	-
Stage 2	288	365	-	225	276	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	404.9		152.4		0.2		0.7	
HCM LOS	F		F					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	750	-	-	57	95	815	-	-
HCM Lane V/C Ratio	0.021	-	-	1.472	0.924	0.088	-	-
HCM Control Delay (s)	9.9	0		\$ 404.9	152.4	9.8	-	-
HCM Lane LOS	A	A	-	F	F	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	7.5	5.3	0.3	-	-

Notes
 ~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Lanes, Volumes, Timings
8: S Point Road (NC 273) & South Point HS/Red Raider Run

Henry Chapel TIA
2022 Existing PM



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↕	↕	↕	↕		↕	↕	
Traffic Volume (vph)	0	0	0	159	5	187	5	673	63	108	771	3
Future Volume (vph)	0	0	0	159	5	187	5	673	63	108	771	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			4%			-1%			1%	
Storage Length (ft)	0		0	0		100	175		0	100		0
Storage Lanes	0		0	0		1	1		0	1		0
Taper Length (ft)	25			25			100			75		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t						0.850		0.986			0.999	
Fl _t Protected					0.954		0.950			0.950		
Satd. Flow (prot)	0	0	0	0	1742	1552	1778	1830	0	1761	1852	0
Fl _t Permitted					0.954		0.253			0.257		
Satd. Flow (perm)	0	0	0	0	1742	1552	474	1830	0	476	1852	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		25			25			35			35	
Link Distance (ft)		1017			1038			492			625	
Travel Time (s)		27.7			28.3			9.6			12.2	
Peak Hour Factor	0.90	0.90	0.90	0.86	0.63	0.88	0.63	0.95	0.88	0.84	0.92	0.75
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	3%	2%	2%	2%	2%
Adj. Flow (vph)	0	0	0	185	8	213	8	708	72	129	838	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	193	213	8	780	0	129	842	0
Turn Type				Perm	NA	pm+ov	D.P+P	NA		D.P+P	NA	
Protected Phases					8	1	5	2		1	6	
Permitted Phases				8		8	6			2		
Detector Phase				8	8	1	5	2		1	6	
Switch Phase												
Minimum Initial (s)				7.0	7.0	7.0	7.0	10.0		7.0	10.0	
Minimum Split (s)				25.4	25.4	12.6	12.1	27.7		12.6	23.7	
Total Split (s)				29.0	29.0	18.0	13.0	83.0		18.0	88.0	
Total Split (%)				22.3%	22.3%	13.8%	10.0%	63.8%		13.8%	67.7%	
Maximum Green (s)				23.6	23.6	12.4	7.9	77.3		12.4	82.3	
Yellow Time (s)				3.0	3.0	3.0	3.0	3.9		3.0	3.9	
All-Red Time (s)				2.4	2.4	2.6	2.1	1.8		2.6	1.8	
Lost Time Adjust (s)					-0.4	-0.6	-0.1	-0.7		-0.6	-0.7	
Total Lost Time (s)					5.0	5.0	5.0	5.0		5.0	5.0	
Lead/Lag						Lead	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)				2.0	2.0	2.0	2.0	3.0		2.0	3.0	
Recall Mode				None	None	None	None	C-Max		None	C-Max	
Walk Time (s)				7.0	7.0			7.0				
Flash Dont Walk (s)				13.0	13.0			15.0				
Pedestrian Calls (#/hr)				0	0			0				
Act Effct Green (s)					18.7	31.8	100.3	88.2		96.3	98.9	
Actuated g/C Ratio					0.14	0.24	0.77	0.68		0.74	0.76	
v/c Ratio					0.77	0.56	0.02	0.63		0.30	0.60	
Control Delay					73.3	48.2	4.2	15.5		2.8	5.7	

Lanes, Volumes, Timings
 8: S Point Road (NC 273) & South Point HS/Red Raider Run

Henry Chapel TIA
 2022 Existing PM



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay					0.0	0.0	0.0	0.0		0.0	0.8	
Total Delay					73.3	48.2	4.2	15.5		2.8	6.5	
LOS					E	D	A	B		A	A	
Approach Delay					60.2			15.4			6.0	
Approach LOS					E			B			A	
Queue Length 50th (ft)					158	158	1	337		8	53	
Queue Length 95th (ft)					154	219	4	548		m10	m466	
Internal Link Dist (ft)		937			958			412			545	
Turn Bay Length (ft)						100	175			100		
Base Capacity (vph)					321	438	446	1241		498	1408	
Starvation Cap Reductn					0	0	0	0		0	275	
Spillback Cap Reductn					0	0	0	0		0	0	
Storage Cap Reductn					0	0	0	0		0	0	
Reduced v/c Ratio					0.60	0.49	0.02	0.63		0.26	0.74	

Intersection Summary























Area Type: Other
 Cycle Length: 130
 Actuated Cycle Length: 130
 Offset: 96 (74%), Referenced to phase 2:NBSB and 6:NBSB, Start of Green
 Natural Cycle: 80
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.77
 Intersection Signal Delay: 19.6
 Intersection LOS: B
 Intersection Capacity Utilization 68.2%
 ICU Level of Service C
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 8: S Point Road (NC 273) & South Point HS/Red Raider Run



Lanes, Volumes, Timings
 9: S Point Road (NC 273) & Nixon Road/R L Stowe Road

Henry Chapel TIA
 2022 Existing PM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	56	76	47	428	76	33	42	406	387	66	421	58
Future Volume (vph)	56	76	47	428	76	33	42	406	387	66	421	58
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		1%			1%			1%			1%	
Storage Length (ft)	200		0	225		0	280		225	25		100
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (ft)	250			100			100			125		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.937			0.947				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1761	1723	0	1744	1733	0	1761	1853	1545	1761	1853	1560
Flt Permitted	0.950			0.950			0.229			0.358		
Satd. Flow (perm)	1761	1723	0	1744	1733	0	424	1853	1545	664	1853	1560
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		25			35			35			35	
Link Distance (ft)		1003			1016			625			1000	
Travel Time (s)		27.4			19.8			12.2			19.5	
Peak Hour Factor	0.74	0.76	0.65	0.86	0.79	0.64	0.81	0.94	0.94	0.83	0.89	0.91
Heavy Vehicles (%)	2%	2%	4%	3%	4%	2%	2%	2%	4%	2%	2%	3%
Adj. Flow (vph)	76	100	72	498	96	52	52	432	412	80	473	64
Shared Lane Traffic (%)												
Lane Group Flow (vph)	76	172	0	498	148	0	52	432	412	80	473	64
Turn Type	Split	NA		Split	NA		D.P+P	NA	pm+ov	D.Pm	NA	pm+ov
Protected Phases	3	3		4	4		5	2	4		6	3
Permitted Phases							6		2	2		6
Detector Phase	3	3		4	4		5	2	4	2	6	3
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		7.0	10.0	7.0	10.0	10.0	7.0
Minimum Split (s)	25.0	25.0		13.3	13.3		23.8	24.1	13.3	24.1	24.1	25.0
Total Split (s)	25.0	25.0		42.0	42.0		24.0	63.0	42.0	63.0	39.0	25.0
Total Split (%)	19.2%	19.2%		32.3%	32.3%		18.5%	48.5%	32.3%	48.5%	30.0%	19.2%
Maximum Green (s)	19.0	19.0		35.7	35.7		18.2	56.9	35.7	56.9	32.9	19.0
Yellow Time (s)	3.8	3.8		4.4	4.4		3.0	3.8	4.4	3.8	3.8	3.8
All-Red Time (s)	2.2	2.2		1.9	1.9		2.8	2.3	1.9	2.3	2.3	2.2
Lost Time Adjust (s)	-1.0	-1.0		-1.3	-1.3		-0.8	-1.1	-1.3	-1.1	-1.1	-1.0
Total Lost Time (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lead		Lag	Lag		Lead		Lag		Lag	Lead
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	3.0	2.0	3.0	3.0	2.0
Recall Mode	None	None		None	None		None	C-Max	None	C-Max	C-Max	None
Walk Time (s)	7.0	7.0						7.0		7.0		7.0
Flash Dont Walk (s)	12.0	12.0						11.0		11.0		12.0
Pedestrian Calls (#/hr)	0	0						0		0		0
Act Effct Green (s)	17.1	17.1		39.4	39.4		54.5	58.5	102.9	58.5	47.8	69.9
Actuated g/C Ratio	0.13	0.13		0.30	0.30		0.42	0.45	0.79	0.45	0.37	0.54
v/c Ratio	0.33	0.76		0.94	0.28		0.20	0.52	0.34	0.27	0.69	0.08
Control Delay	54.2	75.2		72.3	37.1		18.1	23.3	3.5	25.7	42.7	15.5

Lanes, Volumes, Timings
 9: S Point Road (NC 273) & Nixon Road/R L Stowe Road

Henry Chapel TIA
 2022 Existing PM

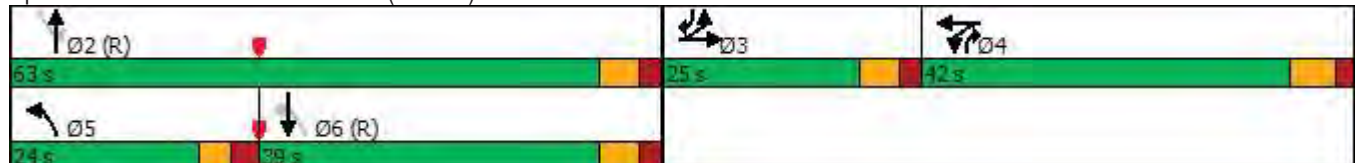


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.6	0.0	0.0	0.0	0.0
Total Delay	54.2	75.2		72.3	37.1		18.1	23.9	3.5	25.7	42.7	15.5
LOS	D	E		E	D		B	C	A	C	D	B
Approach Delay		68.7			64.3			14.1			37.7	
Approach LOS		E			E			B			D	
Queue Length 50th (ft)	58	140		413	96		19	255	53	42	348	26
Queue Length 95th (ft)	86	179		#605	137		m29	263	77	74	482	50
Internal Link Dist (ft)		923			936			545			920	
Turn Bay Length (ft)	200			225			280		225	25		100
Base Capacity (vph)	270	265		528	524		386	833	1222	299	681	873
Starvation Cap Reductn	0	0		0	0		0	139	0	0	0	0
Spillback Cap Reductn	0	0		0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0		0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.28	0.65		0.94	0.28		0.13	0.62	0.34	0.27	0.69	0.07

Intersection Summary

Area Type: Other
 Cycle Length: 130
 Actuated Cycle Length: 130
 Offset: 128 (98%), Referenced to phase 2:NBSB and 6:NBSB, Start of Green
 Natural Cycle: 130
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.94
 Intersection Signal Delay: 39.3
 Intersection LOS: D
 Intersection Capacity Utilization 76.9%
 ICU Level of Service D
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 9: S Point Road (NC 273) & Nixon Road/R L Stowe Road



Lanes, Volumes, Timings
 601: S Point Road (NC 273) & Belwood Drive

Henry Chapel TIA
 2022 Existing PM



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	2	21	689	0	29	805
Future Volume (vph)	2	21	689	0	29	805
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		0	0	
Storage Lanes	1	0		0	0	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00
Frt	0.895					
Flt Protected	0.989					0.998
Satd. Flow (prot)	1649	0	3539	0	0	1859
Flt Permitted	0.989					0.998
Satd. Flow (perm)	1649	0	3539	0	0	1859
Link Speed (mph)	25		35			35
Link Distance (ft)	1066		1894			89
Travel Time (s)	29.1		36.9			1.7
Peak Hour Factor	0.25	0.75	0.89	0.90	0.73	0.90
Adj. Flow (vph)	8	28	774	0	40	894
Shared Lane Traffic (%)						
Lane Group Flow (vph)	36	0	774	0	0	934
Sign Control	Stop		Free			Free

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	75.8%
	ICU Level of Service D
Analysis Period (min)	15

Intersection						
Int Delay, s/veh	0.7					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	2	21	689	0	29	805
Future Vol, veh/h	2	21	689	0	29	805
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	25	75	89	90	73	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	8	28	774	0	40	894

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	1748	387	0	0	774
Stage 1	774	-	-	-	-
Stage 2	974	-	-	-	-
Critical Hdwy	6.63	6.93	-	-	4.13
Critical Hdwy Stg 1	5.83	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-
Follow-up Hdwy	3.519	3.319	-	-	2.219
Pot Cap-1 Maneuver	85	612	-	-	839
Stage 1	416	-	-	-	-
Stage 2	365	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	77	612	-	-	839
Mov Cap-2 Maneuver	77	-	-	-	-
Stage 1	416	-	-	-	-
Stage 2	330	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	22.5	0	0.4
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	241	839
HCM Lane V/C Ratio	-	-	0.149	0.047
HCM Control Delay (s)	-	-	22.5	9.5
HCM Lane LOS	-	-	C	A
HCM 95th %tile Q(veh)	-	-	0.5	0.1

Lanes, Volumes, Timings
602: S Point Road (NC 273) & Belmont MS

Henry Chapel TIA
2022 Existing PM



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	17	1	0	710	833	3
Future Volume (vph)	17	1	0	710	833	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	3%			1%	0%	
Storage Length (ft)	0	175	0			200
Storage Lanes	1	1	1			1
Taper Length (ft)	25		175			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t		0.850				0.850
Fl _t Protected	0.950					
Satd. Flow (prot)	1743	795	1853	1853	1863	1583
Fl _t Permitted	0.950					
Satd. Flow (perm)	1743	795	1853	1853	1863	1583
Right Turn on Red		No				No
Satd. Flow (RTOR)						
Link Speed (mph)	35			35	35	
Link Distance (ft)	1017			89	1373	
Travel Time (s)	19.8			1.7	26.7	
Peak Hour Factor	0.61	0.25	0.90	0.89	0.89	0.75
Heavy Vehicles (%)	2%	100%	2%	2%	2%	2%
Adj. Flow (vph)	28	4	0	798	936	4
Shared Lane Traffic (%)						
Lane Group Flow (vph)	28	4	0	798	936	4
Turn Type	Prot	pm+ov	pm+pt	NA	NA	pm+ov
Protected Phases	4	5	5	2	6	4
Permitted Phases		4	2			6
Detector Phase	4	5	5	2	6	4
Switch Phase						
Minimum Initial (s)	7.0	7.0	7.0	12.0	12.0	7.0
Minimum Split (s)	11.9	12.1	12.1	17.6	32.6	11.9
Total Split (s)	12.0	13.0	13.0	78.0	65.0	12.0
Total Split (%)	13.3%	14.4%	14.4%	86.7%	72.2%	13.3%
Maximum Green (s)	7.1	7.9	7.9	72.4	59.4	7.1
Yellow Time (s)	3.0	3.0	3.0	4.5	4.5	3.0
All-Red Time (s)	1.9	2.1	2.1	1.1	1.1	1.9
Lost Time Adjust (s)	0.1	-0.1	-0.1	-0.6	-0.6	0.1
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag		Lead	Lead		Lag	
Lead-Lag Optimize?						
Vehicle Extension (s)	2.0	2.0	2.0	6.0	6.0	2.0
Minimum Gap (s)	2.0	2.0	2.0	3.0	3.0	2.0
Time Before Reduce (s)	0.0	0.0	0.0	15.0	15.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	45.0	45.0	0.0
Recall Mode	None	None	None	Min	Min	None
Walk Time (s)					7.0	
Flash Dont Walk (s)					20.0	
Pedestrian Calls (#/hr)					0	
Act Effct Green (s)	7.9	11.6		48.2	46.7	51.1

Lanes, Volumes, Timings
 602: S Point Road (NC 273) & Belmont MS

Henry Chapel TIA
 2022 Existing PM



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Actuated g/C Ratio	0.15	0.22		0.91	0.88	0.96
v/c Ratio	0.11	0.02		0.47	0.57	0.00
Control Delay	31.1	23.0		3.0	6.1	1.0
Queue Delay	0.0	0.0		0.0	0.0	0.0
Total Delay	31.1	23.0		3.0	6.1	1.0
LOS	C	C		A	A	A
Approach Delay	30.1			3.0	6.1	
Approach LOS	C			A	A	
Queue Length 50th (ft)	7	1		0	0	0
Queue Length 95th (ft)	28	3		156	449	2
Internal Link Dist (ft)	937			9	1293	
Turn Bay Length (ft)		175				200
Base Capacity (vph)	263	189		1786	1728	1497
Starvation Cap Reductn	0	0		0	0	0
Spillback Cap Reductn	0	0		0	0	0
Storage Cap Reductn	0	0		0	0	0
Reduced v/c Ratio	0.11	0.02		0.45	0.54	0.00

Intersection Summary

Area Type:	Other
Cycle Length:	90
Actuated Cycle Length:	53.1
Natural Cycle:	65
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.57
Intersection Signal Delay:	5.1
Intersection LOS:	A
Intersection Capacity Utilization	58.0%
ICU Level of Service	B
Analysis Period (min)	15

















Splits and Phases: 602: S Point Road (NC 273) & Belmont MS



2023 Background Conditions

Lanes, Volumes, Timings
 1: S Point Road (NC 273) & Armstrong Road (NC 273)/Farm Road

Henry Chapel TIA
 2023 Background AM - Ph 1A

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	535	0	29	0	0	0	60	163	0	0	64	208
Future Volume (vph)	535	0	29	0	0	0	60	163	0	0	64	208
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.993										0.897
Flt Protected		0.955						0.987				
Satd. Flow (prot)	0	1737	0	0	1863	0	0	1782	0	0	1556	0
Flt Permitted		0.955						0.987				
Satd. Flow (perm)	0	1737	0	0	1863	0	0	1782	0	0	1556	0
Link Speed (mph)		45			25			45			45	
Link Distance (ft)		1234			1013			1002			3097	
Travel Time (s)		18.7			27.6			15.2			46.9	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	36%	2%	2%	2%	14%	2%	2%	2%	8%	10%
Adj. Flow (vph)	594	0	32	0	0	0	67	181	0	0	71	231
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	626	0	0	0	0	0	248	0	0	302	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	69.5%
	ICU Level of Service C
Analysis Period (min)	15

Intersection												
Int Delay, s/veh	103											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	535	0	29	0	0	0	60	163	0	0	64	208
Future Vol, veh/h	535	0	29	0	0	0	60	163	0	0	64	208
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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	36	2	2	2	14	2	2	2	8	10
Mvmt Flow	594	0	32	0	0	0	67	181	0	0	71	231

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	502	502	187	518	617	181	302	0	0	181	0	0
Stage 1	187	187	-	315	315	-	-	-	-	-	-	-
Stage 2	315	315	-	203	302	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.56	7.12	6.52	6.22	4.24	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.624	3.518	4.018	3.318	2.326	-	-	2.218	-	-
Pot Cap-1 Maneuver	~ 480	471	775	468	405	862	1194	-	-	1394	-	-
Stage 1	815	745	-	696	656	-	-	-	-	-	-	-
Stage 2	696	656	-	799	664	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	~ 457	442	775	427	380	862	1194	-	-	1394	-	-
Mov Cap-2 Maneuver	~ 457	442	-	427	380	-	-	-	-	-	-	-
Stage 1	764	745	-	653	615	-	-	-	-	-	-	-
Stage 2	653	615	-	766	664	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	192.5	0	2.2	0
HCM LOS	F	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1194	-	-	467	1394	-	-
HCM Lane V/C Ratio	0.056	-	-	1.342	-	-	-
HCM Control Delay (s)	8.2	0	-	192.5	0	0	-
HCM Lane LOS	A	A	-	F	A	A	-
HCM 95th %tile Q(veh)	0.2	-	-	28.3	0	-	-

Notes
 ~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Lanes, Volumes, Timings

2: S Point Road (NC 273) & S Point Church Road/Henry Chapel Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	0	0	1	1	0	21	0	826	1	7	324	5
Future Volume (vph)	0	0	1	1	0	21	0	826	1	7	324	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.865			0.871						0.998	
Flt Protected					0.998						0.999	
Satd. Flow (prot)	0	1611	0	0	1575	0	0	1861	0	0	1758	0
Flt Permitted					0.998						0.999	
Satd. Flow (perm)	0	1611	0	0	1575	0	0	1861	0	0	1758	0
Link Speed (mph)		25			25			45			45	
Link Distance (ft)		1509			1293			1519			881	
Travel Time (s)		41.2			35.3			23.0			13.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	2%	2%	5%	2%	2%	100%	2%	8%	2%
Adj. Flow (vph)	0	0	1	1	0	23	0	918	1	8	360	6
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1	0	0	24	0	0	919	0	0	374	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	53.5%
ICU Level of Service	A
Analysis Period (min)	15

Intersection												
Int Delay, s/veh	0.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Vol, veh/h	0	0	1	1	0	21	0	826	1	7	324	5
Future Vol, veh/h	0	0	1	1	0	21	0	826	1	7	324	5
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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	5	2	2	100	2	8	2
Mvmt Flow	0	0	1	1	0	23	0	918	1	8	360	6

















Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	1309	1298	363	1299	1301	919	366	0	0	919	0	0
Stage 1	379	379	-	919	919	-	-	-	-	-	-	-
Stage 2	930	919	-	380	382	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.25	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.345	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	136	162	682	138	161	325	1193	-	-	743	-	-
Stage 1	643	615	-	325	350	-	-	-	-	-	-	-
Stage 2	321	350	-	642	613	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	125	160	682	136	159	325	1193	-	-	743	-	-
Mov Cap-2 Maneuver	125	160	-	136	159	-	-	-	-	-	-	-
Stage 1	643	606	-	325	350	-	-	-	-	-	-	-
Stage 2	298	350	-	632	604	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	10.3		17.8		0		0.2	
HCM LOS	B		C					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1193	-	-	682	306	743	-	-
HCM Lane V/C Ratio	-	-	-	0.002	0.08	0.01	-	-
HCM Control Delay (s)	0	-	-	10.3	17.8	9.9	0	-
HCM Lane LOS	A	-	-	B	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0.3	0	-	-

Lanes, Volumes, Timings
 3: S Point Road (NC 273) & BB Drive/Forest Hill Road

Henry Chapel TIA
 2023 Background AM - Ph 1A

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	0	0	5	0	19	0	1008	7	7	381	2
Future Volume (vph)	4	0	0	5	0	19	0	1008	7	7	381	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.895			0.999			0.999	
Flt Protected		0.950			0.989						0.999	
Satd. Flow (prot)	0	1770	0	0	1612	0	0	1859	0	0	1774	0
Flt Permitted		0.950			0.989						0.999	
Satd. Flow (perm)	0	1770	0	0	1612	0	0	1859	0	0	1774	0
Link Speed (mph)		25			25			45			45	
Link Distance (ft)		1341			477			2444			1975	
Travel Time (s)		36.6			13.0			37.0			29.9	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	2%	2%	5%	2%	2%	17%	2%	7%	2%
Adj. Flow (vph)	4	0	0	6	0	21	0	1120	8	8	423	2
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	4	0	0	27	0	0	1128	0	0	433	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	63.5%
	ICU Level of Service B
Analysis Period (min)	15

Intersection												
Int Delay, s/veh	0.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	4	0	0	5	0	19	0	1008	7	7	381	2
Future Vol, veh/h	4	0	0	5	0	19	0	1008	7	7	381	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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	5	2	2	17	2	7	2
Mvmt Flow	4	0	0	6	0	21	0	1120	8	8	423	2

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	1575	1568	424	1564	1565	1124	425	0	0	1128	0	0
Stage 1	440	440	-	1124	1124	-	-	-	-	-	-	-
Stage 2	1135	1128	-	440	441	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.25	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.345	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	89	111	630	91	111	246	1134	-	-	619	-	-
Stage 1	596	578	-	249	281	-	-	-	-	-	-	-
Stage 2	246	279	-	596	577	-	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	80	109	630	90	109	246	1134	-	-	619	-	-
Mov Cap-2 Maneuver	80	109	-	90	109	-	-	-	-	-	-	-
Stage 1	596	568	-	249	281	-	-	-	-	-	-	-
Stage 2	225	279	-	586	567	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	52.6		28.3		0		0.2	
HCM LOS	F		D					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1134	-	-	80	181	619	-	-
HCM Lane V/C Ratio	-	-	-	0.056	0.147	0.013	-	-
HCM Control Delay (s)	0	-	-	52.6	28.3	10.9	0	-
HCM Lane LOS	A	-	-	F	D	B	A	-
HCM 95th %tile Q(veh)	0	-	-	0.2	0.5	0	-	-

Lanes, Volumes, Timings
4: Colonial Drive & Forest Hill Road

Henry Chapel TIA
2023 Background AM - Ph 1A



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	7	2	0	11	17	1
Future Volume (vph)	7	2	0	11	17	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.973			0.993		
Flt Protected				0.955		
Satd. Flow (prot)	1812	0	0	1863	1766	0
Flt Permitted				0.955		
Satd. Flow (perm)	1812	0	0	1863	1766	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	477			1074	636	
Travel Time (s)	13.0			29.3	17.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	8	2	0	12	19	1
Shared Lane Traffic (%)						
Lane Group Flow (vph)	10	0	0	12	20	0
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 13.3% ICU Level of Service A

Analysis Period (min) 15

Intersection						
Int Delay, s/veh	4.1					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	7	2	0	11	17	1
Future Vol, veh/h	7	2	0	11	17	1
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	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	8	2	0	12	19	1
Major/Minor	Major1	Major2	Minor1			
Conflicting Flow All	0	0	10	0	21	9
Stage 1	-	-	-	-	9	-
Stage 2	-	-	-	-	12	-
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	-	-	1610	-	996	1073
Stage 1	-	-	-	-	1014	-
Stage 2	-	-	-	-	1011	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1610	-	996	1073
Mov Cap-2 Maneuver	-	-	-	-	996	-
Stage 1	-	-	-	-	1014	-
Stage 2	-	-	-	-	1011	-
Approach	EB	WB	NB			
HCM Control Delay, s	0	0	8.7			
HCM LOS						A
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	1000	-	-	1610	-	
HCM Lane V/C Ratio	0.02	-	-	-	-	
HCM Control Delay (s)	8.7	-	-	0	-	
HCM Lane LOS	A	-	-	A	-	
HCM 95th %tile Q(veh)	0.1	-	-	0	-	

Lanes, Volumes, Timings
 5: Colonial Drive & Timber Ridge Road

Henry Chapel TIA
 2023 Background AM - Ph 1A



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	9	8	0	1	2
Future Volume (vph)	0	9	8	0	1	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.865					
Flt Protected						0.984
Satd. Flow (prot)	1611	0	1863	0	0	1833
Flt Permitted						0.984
Satd. Flow (perm)	1611	0	1863	0	0	1833
Link Speed (mph)	25		25		25	
Link Distance (ft)	1207		1055		636	
Travel Time (s)	32.9		28.8		17.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	10	9	0	1	2
Shared Lane Traffic (%)						
Lane Group Flow (vph)	10	0	9	0	0	3
Sign Control	Stop		Free		Free	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 13.3% ICU Level of Service A

Analysis Period (min) 15

Intersection						
Int Delay, s/veh	4.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	9	8	0	1	2
Future Vol, veh/h	0	9	8	0	1	2
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	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	10	9	0	1	2





















Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	13	9	0	0	9
Stage 1	9	-	-	-	-
Stage 2	4	-	-	-	-
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	1006	1073	-	-	1611
Stage 1	1014	-	-	-	-
Stage 2	1019	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	1005	1073	-	-	1611
Mov Cap-2 Maneuver	1005	-	-	-	-
Stage 1	1014	-	-	-	-
Stage 2	1018	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.4	0	2.4
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	1073	1611
HCM Lane V/C Ratio	-	-	0.009	0.001
HCM Control Delay (s)	-	-	8.4	7.2
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0	0

Lanes, Volumes, Timings
6: S Point Road (NC 273) & Belmont MS/Belwood Drive

Henry Chapel TIA
2023 Background AM - Ph 1A

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	248	1	41	2	2	31	89	807	1	21	422	274
Future Volume (vph)	248	1	41	2	2	31	89	807	1	21	422	274
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		3%			0%			1%			0%	
Storage Length (ft)	0		175	0		0	200		0	100		200
Storage Lanes	0		1	0		0	1		0	1		1
Taper Length (ft)	25			25			100			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.879							0.850
Flt Protected		0.953			0.997		0.950			0.950		
Satd. Flow (prot)	0	1732	1560	0	1516	0	1744	1853	0	1770	1759	1568
Flt Permitted		0.953			0.997		0.950			0.131		
Satd. Flow (perm)	0	1732	1560	0	1516	0	1744	1853	0	244	1759	1568
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		35			25			35			35	
Link Distance (ft)		1017			1050			1975			1373	
Travel Time (s)		19.8			28.6			38.5			26.7	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	3%	2%	2%	100%	2%	5%	3%	2%	2%	2%	8%	3%
Adj. Flow (vph)	276	1	46	2	2	34	99	897	1	23	469	304
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	277	46	0	38	0	99	898	0	23	469	304
Turn Type	Split	NA	pm+ov	Split	NA		Prot	NA		Perm	NA	pm+ov
Protected Phases	4	4	5	8	8		5	2			6	4
Permitted Phases			4							6		6
Detector Phase	4	4	5	8	8		5	2		6	6	4
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0		7.0	12.0		12.0	12.0	7.0
Minimum Split (s)	11.9	11.9	12.1	14.0	14.0		12.1	17.6		32.6	32.6	11.9
Total Split (s)	31.0	31.0	18.0	14.0	14.0		18.0	75.0		57.0	57.0	31.0
Total Split (%)	25.8%	25.8%	15.0%	11.7%	11.7%		15.0%	62.5%		47.5%	47.5%	25.8%
Maximum Green (s)	26.1	26.1	12.9	7.0	7.0		12.9	69.4		51.4	51.4	26.1
Yellow Time (s)	3.0	3.0	3.0	5.0	5.0		3.0	4.5		4.5	4.5	3.0
All-Red Time (s)	1.9	1.9	2.1	2.0	2.0		2.1	1.1		1.1	1.1	1.9
Lost Time Adjust (s)		0.1	-0.1		-2.0		-0.1	-0.6		-0.6	-0.6	0.1
Total Lost Time (s)		5.0	5.0		5.0		5.0	5.0		5.0	5.0	5.0
Lead/Lag			Lead				Lead			Lag	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		2.0	6.0		6.0	6.0	2.0
Minimum Gap (s)	2.0	2.0	2.0	2.0	2.0		2.0	3.0		3.0	3.0	2.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0		0.0	15.0		15.0	15.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0		0.0	45.0		45.0	45.0	0.0
Recall Mode	None	None	None	None	None		None	Min		Min	Min	None
Walk Time (s)										7.0	7.0	
Flash Dont Walk (s)										20.0	20.0	
Pedestrian Calls (#/hr)										0	0	
Act Efect Green (s)		19.4	33.8		10.7		10.8	47.7		35.9	35.9	63.3

Lanes, Volumes, Timings
 6: S Point Road (NC 273) & Belmont MS/Belwood Drive

Henry Chapel TIA
 2023 Background AM - Ph 1A



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Actuated g/C Ratio		0.23	0.39		0.12		0.13	0.56		0.42	0.42	0.74
v/c Ratio		0.71	0.07		0.20		0.45	0.87		0.23	0.64	0.26
Control Delay		47.1	16.4		50.6		51.7	28.4		28.5	27.8	7.0
Queue Delay		0.0	0.0		0.0		0.0	0.0		0.0	0.0	0.0
Total Delay		47.1	16.4		50.6		51.7	28.4		28.5	27.8	7.0
LOS		D	B		D		D	C		C	C	A
Approach Delay		42.7			50.6			30.7			19.9	
Approach LOS		D			D			C			B	
Queue Length 50th (ft)		161	14		22		59	462		9	237	74
Queue Length 95th (ft)		#317	40		66		132	743		34	390	122
Internal Link Dist (ft)		937			970			1895			1293	
Turn Bay Length (ft)			175				200			100		200
Base Capacity (vph)		627	701		189		315	1451		164	1187	1249
Starvation Cap Reductn		0	0		0		0	0		0	0	0
Spillback Cap Reductn		0	0		0		0	0		0	0	0
Storage Cap Reductn		0	0		0		0	0		0	0	0
Reduced v/c Ratio		0.44	0.07		0.20		0.31	0.62		0.14	0.40	0.24

Intersection Summary


















Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 85.6
 Natural Cycle: 90
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.87
 Intersection Signal Delay: 28.9
 Intersection LOS: C
 Intersection Capacity Utilization 85.5%
 ICU Level of Service E
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 6: S Point Road (NC 273) & Belmont MS/Belwood Drive



Lanes, Volumes, Timings
 7: S Point Road (NC 273) & McKee Farm Road/Stowe Road

Henry Chapel TIA
 2023 Background AM - Ph 1A

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	14	5	19	16	1	55	25	1028	52	37	692	68
Future Volume (vph)	14	5	19	16	1	55	25	1028	52	37	692	68
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		0	100		0
Storage Lanes	0		0	0		0	0		0	1		0
Taper Length (ft)	25			25			25			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.934			0.897			0.994			0.987	
Flt Protected		0.982			0.989			0.999		0.950		
Satd. Flow (prot)	0	1676	0	0	1653	0	0	1850	0	1703	1791	0
Flt Permitted		0.982			0.989			0.999		0.950		
Satd. Flow (perm)	0	1676	0	0	1653	0	0	1850	0	1703	1791	0
Link Speed (mph)		25			25			35			35	
Link Distance (ft)		1043			1485			1373			492	
Travel Time (s)		28.4			40.5			26.7			9.6	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	6%	2%	2%	2%	2%	2%	2%	6%	5%	2%
Adj. Flow (vph)	16	6	21	18	1	61	28	1142	58	41	769	76
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	43	0	0	80	0	0	1228	0	41	845	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary	
Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	89.1% ICU Level of Service E
Analysis Period (min)	15

HCM 6th TWSC
 7: S Point Road (NC 273) & McKee Farm Road/Stowe Road

Henry Chapel TIA
 2023 Background AM - Ph 1A

Intersection												
Int Delay, s/veh	11.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕		↕	↕	↕
Traffic Vol, veh/h	14	5	19	16	1	55	25	1028	52	37	692	68
Future Vol, veh/h	14	5	19	16	1	55	25	1028	52	37	692	68
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	-	-	-	-	-	-	-	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	6	2	2	2	2	2	2	6	5	2
Mvmt Flow	16	6	21	18	1	61	28	1142	58	41	769	76

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	2147	2145	807	2130	2154	1171	845	0	0	1200	0	0
Stage 1	889	889	-	1227	1227	-	-	-	-	-	-	-
Stage 2	1258	1256	-	903	927	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.26	7.12	6.52	6.22	4.12	-	-	4.16	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.354	3.518	4.018	3.318	2.218	-	-	2.254	-	-
Pot Cap-1 Maneuver	35	49	375	36	48	235	792	-	-	568	-	-
Stage 1	338	361	-	218	251	-	-	-	-	-	-	-
Stage 2	209	243	-	332	347	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	22	41	375	26	40	235	792	-	-	568	-	-
Mov Cap-2 Maneuver	22	41	-	26	40	-	-	-	-	-	-	-
Stage 1	301	335	-	194	224	-	-	-	-	-	-	-
Stage 2	137	217	-	286	322	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	236.2		182.4		0.2		0.5	
HCM LOS	F		F					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	792	-	-	47	82	568	-	-
HCM Lane V/C Ratio	0.035	-	-	0.898	0.976	0.072	-	-
HCM Control Delay (s)	9.7	0	-	236.2	182.4	11.8	-	-
HCM Lane LOS	A	A	-	F	F	B	-	-
HCM 95th %tile Q(veh)	0.1	-	-	3.7	5.4	0.2	-	-

Lanes, Volumes, Timings
 8: S Point Road (NC 273) & South Point HS/Red Raider Run

Henry Chapel TIA
 2023 Background AM - Ph 1A



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↕	↕	↕	↕		↕	↕	
Traffic Volume (vph)	0	0	0	128	33	143	58	930	81	94	669	50
Future Volume (vph)	0	0	0	128	33	143	58	930	81	94	669	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			4%			-1%			1%	
Storage Length (ft)	0		0	0		100	175		0	100		0
Storage Lanes	0		0	0		1	1		0	1		0
Taper Length (ft)	25			25			100			75		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t						0.850		0.988			0.989	
Fl _t Protected					0.962		0.950			0.950		
Satd. Flow (prot)	0	0	0	0	1756	1552	1778	1850	0	1761	1769	0
Fl _t Permitted					0.962		0.950			0.950		
Satd. Flow (perm)	0	0	0	0	1756	1552	1778	1850	0	1761	1769	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		25			25			35			35	
Link Distance (ft)		1017			1038			492			625	
Travel Time (s)		27.7			28.3			9.6			12.2	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	6%	2%
Adj. Flow (vph)	0	0	0	142	37	159	64	1033	90	104	743	56
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	179	159	64	1123	0	104	799	0
Turn Type				Perm	NA	pm+ov	Prot	NA		Prot	NA	
Protected Phases					8	1	5	2		1	6	
Permitted Phases				8		8						
Detector Phase				8	8	1	5	2		1	6	
Switch Phase												
Minimum Initial (s)				7.0	7.0	7.0	7.0	10.0		7.0	10.0	
Minimum Split (s)				25.4	25.4	12.6	12.1	27.7		12.6	23.7	
Total Split (s)				26.0	26.0	13.0	15.0	81.0		13.0	79.0	
Total Split (%)				21.7%	21.7%	10.8%	12.5%	67.5%		10.8%	65.8%	
Maximum Green (s)				20.6	20.6	7.4	9.9	75.3		7.4	73.3	
Yellow Time (s)				3.0	3.0	3.0	3.0	3.9		3.0	3.9	
All-Red Time (s)				2.4	2.4	2.6	2.1	1.8		2.6	1.8	
Lost Time Adjust (s)					-0.4	-0.6	-0.1	-0.7		-0.6	-0.7	
Total Lost Time (s)					5.0	5.0	5.0	5.0		5.0	5.0	
Lead/Lag						Lead	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)				2.0	2.0	2.0	2.0	3.0		2.0	3.0	
Recall Mode				None	None	None	None	C-Max		None	C-Max	
Walk Time (s)				7.0	7.0			7.0				
Flash Dont Walk (s)				13.0	13.0			15.0				
Pedestrian Calls (#/hr)				0	0			0				
Act Effct Green (s)					16.5	31.7	8.8	78.3		10.2	82.2	
Actuated g/C Ratio					0.14	0.26	0.07	0.65		0.08	0.68	
v/c Ratio					0.74	0.39	0.50	0.93		0.69	0.66	
Control Delay					67.8	38.7	66.4	34.2		74.0	12.4	

Lanes, Volumes, Timings
 8: S Point Road (NC 273) & South Point HS/Red Raider Run

Henry Chapel TIA
 2023 Background AM - Ph 1A

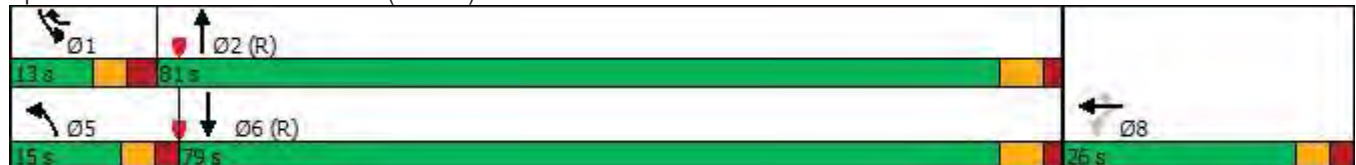


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay					0.0	0.0	0.0	0.0		0.0	0.7	
Total Delay					67.8	38.7	66.4	34.2		74.0	13.1	
LOS					E	D	E	C		E	B	
Approach Delay					54.1			35.9			20.1	
Approach LOS					D			D			C	
Queue Length 50th (ft)					134	98	48	755		86	257	
Queue Length 95th (ft)					206	162	95	#1124		m#132	491	
Internal Link Dist (ft)		937			958			412			545	
Turn Bay Length (ft)						100	175			100		
Base Capacity (vph)					307	409	149	1206		150	1211	
Starvation Cap Reductn					0	0	0	0		0	160	
Spillback Cap Reductn					0	0	0	0		0	0	
Storage Cap Reductn					0	0	0	0		0	0	
Reduced v/c Ratio					0.58	0.39	0.43	0.93		0.69	0.76	

Intersection Summary
























Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 86 (72%), Referenced to phase 2:NBT and 6:SBT, Start of Green
 Natural Cycle: 110
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.93
 Intersection Signal Delay: 32.6
 Intersection LOS: C
 Intersection Capacity Utilization 81.0%
 ICU Level of Service D
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 8: S Point Road (NC 273) & South Point HS/Red Raider Run



Lanes, Volumes, Timings
 9: S Point Road (NC 273) & Nixon Road/R L Stowe Road

Henry Chapel TIA
 2023 Background AM - Ph 1A

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	98	163	71	277	80	29	86	475	511	46	500	49
Future Volume (vph)	98	163	71	277	80	29	86	475	511	46	500	49
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		1%			1%			1%			1%	
Storage Length (ft)	200		100	225		0	280		225	25		100
Storage Lanes	1		1	1		0	1		1	1		1
Taper Length (ft)	250			100			100			125		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.960				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1761	1853	1474	1648	1685	0	1678	1853	1575	1761	1853	1530
Flt Permitted	0.950			0.950			0.950			0.327		
Satd. Flow (perm)	1761	1853	1474	1648	1685	0	1678	1853	1575	606	1853	1530
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		25			35			35			35	
Link Distance (ft)		1003			1016			625			1000	
Travel Time (s)		27.4			19.8			12.2			19.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	9%	9%	9%	4%	7%	2%	2%	2%	2%	5%
Adj. Flow (vph)	109	181	79	308	89	32	96	528	568	51	556	54
Shared Lane Traffic (%)												
Lane Group Flow (vph)	109	181	79	308	121	0	96	528	568	51	556	54
Turn Type	Split	NA	pm+ov	Split	NA		Prot	NA	pm+ov	D.Pm	NA	pm+ov
Protected Phases	3	3	5	4	4		5	2	4		6	3
Permitted Phases			3						2	2		6
Detector Phase	3	3	5	4	4		5	2	4	2	6	3
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0		7.0	10.0	7.0	10.0	10.0	7.0
Minimum Split (s)	25.0	25.0	12.8	13.3	13.3		12.8	24.1	13.3	24.1	24.1	25.0
Total Split (s)	25.0	25.0	15.0	32.0	32.0		15.0	63.0	32.0	63.0	48.0	25.0
Total Split (%)	20.8%	20.8%	12.5%	26.7%	26.7%		12.5%	52.5%	26.7%	52.5%	40.0%	20.8%
Maximum Green (s)	19.0	19.0	9.2	25.7	25.7		9.2	56.9	25.7	56.9	41.9	19.0
Yellow Time (s)	3.8	3.8	3.0	4.4	4.4		3.0	3.8	4.4	3.8	3.8	3.8
All-Red Time (s)	2.2	2.2	2.8	1.9	1.9		2.8	2.3	1.9	2.3	2.3	2.2
Lost Time Adjust (s)	-1.0	-1.0	-0.8	-1.3	-1.3		-0.8	-1.1	-1.3	-1.1	-1.1	-1.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lead	Lead	Lag	Lag		Lead		Lag		Lag	Lead
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		2.0	3.0	2.0	3.0	3.0	2.0
Recall Mode	None	None	None	None	None		None	C-Max	None	C-Max	C-Max	None
Walk Time (s)	7.0	7.0						7.0		7.0		7.0
Flash Dont Walk (s)	12.0	12.0						11.0		11.0		12.0
Pedestrian Calls (#/hr)	0	0						0		0		0
Act Effct Green (s)	16.4	16.4	26.1	26.0	26.0		9.7	62.6	93.6	62.6	47.9	69.3
Actuated g/C Ratio	0.14	0.14	0.22	0.22	0.22		0.08	0.52	0.78	0.52	0.40	0.58
v/c Ratio	0.45	0.72	0.25	0.87	0.33		0.71	0.55	0.46	0.16	0.75	0.06
Control Delay	53.0	65.1	21.4	68.7	41.9		75.8	13.7	4.1	18.9	40.4	12.2

Lanes, Volumes, Timings
 9: S Point Road (NC 273) & Nixon Road/R L Stowe Road

Henry Chapel TIA
 2023 Background AM - Ph 1A

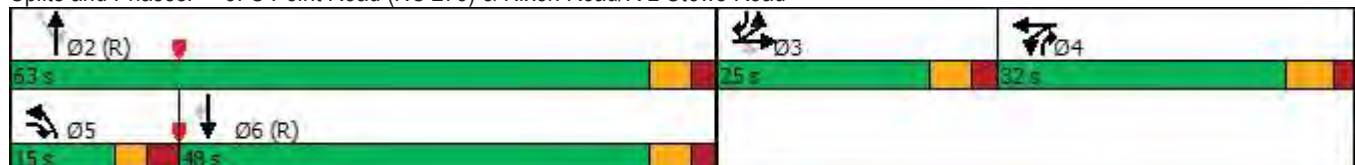


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay	0.0	0.0	0.1	0.0	0.0		0.0	0.6	0.5	0.0	0.0	0.0
Total Delay	53.0	65.1	21.6	68.7	41.9		75.8	14.2	4.5	18.9	40.4	12.2
LOS	D	E	C	E	D		E	B	A	B	D	B
Approach Delay		52.2			61.2			14.6			36.4	
Approach LOS		D			E			B			D	
Queue Length 50th (ft)	78	135	27	222	76		70	178	79	22	392	19
Queue Length 95th (ft)	133	208	52	#377	136		m83	m229	m105	49	#579	37
Internal Link Dist (ft)		923			936			545			920	
Turn Bay Length (ft)	200		100	225			280		225	25		100
Base Capacity (vph)	293	308	326	379	388		141	966	1219	316	739	929
Starvation Cap Reductn	0	0	0	0	0		0	157	273	0	0	0
Spillback Cap Reductn	0	0	29	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.37	0.59	0.27	0.81	0.31		0.68	0.65	0.60	0.16	0.75	0.06

Intersection Summary

















Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 2 (2%), Referenced to phase 2:NBSB and 6:SBT, Start of Green
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.87
 Intersection Signal Delay: 32.8
 Intersection LOS: C
 Intersection Capacity Utilization 73.9%
 ICU Level of Service D
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 9: S Point Road (NC 273) & Nixon Road/R L Stowe Road



Lanes, Volumes, Timings
 1: S Point Road (NC 273) & Armstrong Road (NC 273)/Farm Road

Henry Chapel TIA
 2023 Background PM - Ph 1A

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	434	0	36	0	0	1	51	94	0	2	121	556
Future Volume (vph)	434	0	36	0	0	1	51	94	0	2	121	556
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.990			0.865							0.889
Flt Protected		0.956						0.983				
Satd. Flow (prot)	0	1760	0	0	1611	0	0	1772	0	0	1643	0
Flt Permitted		0.956						0.983				
Satd. Flow (perm)	0	1760	0	0	1611	0	0	1772	0	0	1643	0
Link Speed (mph)		45			25			45			45	
Link Distance (ft)		1234			1013			1002			3097	
Travel Time (s)		18.7			27.6			15.2			46.9	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	4%	2%	2%	2%	8%	4%	2%	2%	2%	3%
Adj. Flow (vph)	482	0	40	0	0	1	57	104	0	2	134	618
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	522	0	0	1	0	0	161	0	0	754	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 87.0% ICU Level of Service E

Analysis Period (min) 15

Intersection												
Int Delay, s/veh	87.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Vol, veh/h	434	0	36	0	0	1	51	94	0	2	121	556
Future Vol, veh/h	434	0	36	0	0	1	51	94	0	2	121	556
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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	4	2	2	2	8	4	2	2	2	3
Mvmt Flow	482	0	40	0	0	1	57	104	0	2	134	618

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	666	665	443	685	974	104	752	0	0	104	0	0
Stage 1	447	447	-	218	218	-	-	-	-	-	-	-
Stage 2	219	218	-	467	756	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.24	7.12	6.52	6.22	4.18	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.336	3.518	4.018	3.318	2.272	-	-	2.218	-	-
Pot Cap-1 Maneuver	~ 373	381	611	362	252	951	831	-	-	1488	-	-
Stage 1	591	573	-	784	723	-	-	-	-	-	-	-
Stage 2	783	723	-	576	416	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	~ 351	352	611	319	233	951	831	-	-	1488	-	-
Mov Cap-2 Maneuver	~ 351	352	-	319	233	-	-	-	-	-	-	-
Stage 1	548	571	-	727	670	-	-	-	-	-	-	-
Stage 2	725	670	-	537	415	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	240.7	8.8	3.4	0
HCM LOS	F	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	831	-	-	363	951	1488	-
HCM Lane V/C Ratio	0.068	-	-	1.439	0.001	0.001	-
HCM Control Delay (s)	9.6	0	-	240.7	8.8	7.4	0
HCM Lane LOS	A	A	-	F	A	A	A
HCM 95th %tile Q(veh)	0.2	-	-	27.1	0	0	-

Notes
 ~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Lanes, Volumes, Timings

2: S Point Road (NC 273) & S Point Church Road/Henry Chapel Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	1	0	0	5	0	22	0	646	5	28	758	2
Future Volume (vph)	1	0	0	5	0	22	0	646	5	28	758	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.892			0.999				
Flt Protected		0.950			0.990						0.998	
Satd. Flow (prot)	0	1770	0	0	1548	0	0	1843	0	0	1842	0
Flt Permitted		0.950			0.990						0.998	
Satd. Flow (perm)	0	1770	0	0	1548	0	0	1843	0	0	1842	0
Link Speed (mph)		25			25			45			45	
Link Distance (ft)		1509			1293			1519			881	
Travel Time (s)		41.2			35.3			23.0			13.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	2%	2%	10%	2%	3%	2%	2%	3%	2%
Adj. Flow (vph)	1	0	0	6	0	24	0	718	6	31	842	2
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1	0	0	30	0	0	724	0	0	875	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 72.7%

ICU Level of Service C

Analysis Period (min) 15

Intersection												
Int Delay, s/veh	0.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	1	0	0	5	0	22	0	646	5	28	758	2
Future Vol, veh/h	1	0	0	5	0	22	0	646	5	28	758	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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	10	2	3	2	2	3	2
Mvmt Flow	1	0	0	6	0	24	0	718	6	31	842	2

















Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1638	1629	843	1626	1627	721	844	0	0	724	0	0
Stage 1	905	905	-	721	721	-	-	-	-	-	-	-
Stage 2	733	724	-	905	906	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.3	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.39	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	80	102	364	82	102	414	792	-	-	879	-	-
Stage 1	331	355	-	419	432	-	-	-	-	-	-	-
Stage 2	412	430	-	331	355	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	71	95	364	78	95	414	792	-	-	879	-	-
Mov Cap-2 Maneuver	71	95	-	78	95	-	-	-	-	-	-	-
Stage 1	331	332	-	419	432	-	-	-	-	-	-	-
Stage 2	388	430	-	309	332	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	56.5		23		0		0.3	
HCM LOS	F		C					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	792	-	-	71	230	879	-	-
HCM Lane V/C Ratio	-	-	-	0.016	0.13	0.035	-	-
HCM Control Delay (s)	0	-	-	56.5	23	9.2	0	-
HCM Lane LOS	A	-	-	F	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0.4	0.1	-	-

Lanes, Volumes, Timings
 3: S Point Road (NC 273) & BB Drive/Forest Hill Road

Henry Chapel TIA
 2023 Background PM - Ph 1A

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	0	0	1	0	8	0	756	3	14	916	1
Future Volume (vph)	4	0	0	1	0	8	0	756	3	14	916	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.878							
Flt Protected		0.950			0.995						0.999	
Satd. Flow (prot)	0	1770	0	0	1627	0	0	1863	0	0	1861	0
Flt Permitted		0.950			0.995						0.999	
Satd. Flow (perm)	0	1770	0	0	1627	0	0	1863	0	0	1861	0
Link Speed (mph)		25			25			45			45	
Link Distance (ft)		1341			477			2444			1975	
Travel Time (s)		36.6			13.0			37.0			29.9	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	4	0	0	1	0	9	0	840	3	16	1018	1
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	4	0	0	10	0	0	843	0	0	1035	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 69.5% ICU Level of Service C

Analysis Period (min) 15

Intersection												
Int Delay, s/veh	0.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Vol, veh/h	4	0	0	1	0	8	0	756	3	14	916	1
Future Vol, veh/h	4	0	0	1	0	8	0	756	3	14	916	1
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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	0	0	1	0	9	0	840	3	16	1018	1

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1897	1894	1019	1893	1893	842	1019	0	0	843	0	0
Stage 1	1051	1051	-	842	842	-	-	-	-	-	-	-
Stage 2	846	843	-	1051	1051	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	53	70	288	53	70	364	681	-	-	793	-	-
Stage 1	274	304	-	359	380	-	-	-	-	-	-	-
Stage 2	357	380	-	274	304	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	50	67	288	51	67	364	681	-	-	793	-	-
Mov Cap-2 Maneuver	50	67	-	51	67	-	-	-	-	-	-	-
Stage 1	274	290	-	359	380	-	-	-	-	-	-	-
Stage 2	348	380	-	261	290	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB		
HCM Control Delay, s	83.9		22.5		0		0.1		
HCM LOS	F		C						

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	681	-	-	50	216	793	-	-
HCM Lane V/C Ratio	-	-	-	0.089	0.046	0.02	-	-
HCM Control Delay (s)	0	-	-	83.9	22.5	9.6	0	-
HCM Lane LOS	A	-	-	F	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.3	0.1	0.1	-	-

Lanes, Volumes, Timings
4: Colonial Drive & Forest Hill Road

Henry Chapel TIA
2023 Background PM - Ph 1A



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	4	8	1	4	8	1
Future Volume (vph)	4	8	1	4	8	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.907			0.986		
Flt Protected				0.990	0.957	
Satd. Flow (prot)	1477	0	0	1844	1602	0
Flt Permitted				0.990	0.957	
Satd. Flow (perm)	1477	0	0	1844	1602	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	477			1074	636	
Travel Time (s)	13.0			29.3	17.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	25%	13%	2%	2%	13%	2%
Adj. Flow (vph)	4	9	1	4	9	1
Shared Lane Traffic (%)						
Lane Group Flow (vph)	13	0	0	5	10	0
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	13.3%
Analysis Period (min)	15
	ICU Level of Service A

Intersection						
Int Delay, s/veh	3.3					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	4	8	1	4	8	1
Future Vol, veh/h	4	8	1	4	8	1
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	90	90	90	90	90	90
Heavy Vehicles, %	25	13	2	2	13	2
Mvmt Flow	4	9	1	4	9	1

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	13	0	15
Stage 1	-	-	-	-	9
Stage 2	-	-	-	-	6
Critical Hdwy	-	-	4.12	-	6.53
Critical Hdwy Stg 1	-	-	-	-	5.53
Critical Hdwy Stg 2	-	-	-	-	5.53
Follow-up Hdwy	-	-	2.218	-	3.617
Pot Cap-1 Maneuver	-	-	1606	-	976
Stage 1	-	-	-	-	986
Stage 2	-	-	-	-	989
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1606	-	975
Mov Cap-2 Maneuver	-	-	-	-	975
Stage 1	-	-	-	-	986
Stage 2	-	-	-	-	988

Approach	EB	WB	NB
HCM Control Delay, s	0	1.4	8.7
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	985	-	-	1606	-
HCM Lane V/C Ratio	0.01	-	-	0.001	-
HCM Control Delay (s)	8.7	-	-	7.2	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

Lanes, Volumes, Timings
 5: Colonial Drive & Timber Ridge Road

Henry Chapel TIA
 2023 Background PM - Ph 1A



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	5	3	2	3	5
Future Volume (vph)	0	5	3	2	3	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.865		0.946			
Flt Protected						0.984
Satd. Flow (prot)	1611	0	1490	0	0	1640
Flt Permitted						0.984
Satd. Flow (perm)	1611	0	1490	0	0	1640
Link Speed (mph)	25		25			25
Link Distance (ft)	1207		1055			636
Travel Time (s)	32.9		28.8			17.3
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	33%	2%	2%	20%
Adj. Flow (vph)	0	6	3	2	3	6
Shared Lane Traffic (%)						
Lane Group Flow (vph)	6	0	5	0	0	9
Sign Control	Stop		Free			Free

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	13.3%
Analysis Period (min)	15
	ICU Level of Service A

Intersection						
Int Delay, s/veh	3.5					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W		T			T
Traffic Vol, veh/h	0	5	3	2	3	5
Future Vol, veh/h	0	5	3	2	3	5
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	90	90	90	90	90	90
Heavy Vehicles, %	2	2	33	2	2	20
Mvmt Flow	0	6	3	2	3	6





















Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	16	4	0	0	5
Stage 1	4	-	-	-	-
Stage 2	12	-	-	-	-
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	1002	1080	-	-	1616
Stage 1	1019	-	-	-	-
Stage 2	1011	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	1000	1080	-	-	1616
Mov Cap-2 Maneuver	1000	-	-	-	-
Stage 1	1019	-	-	-	-
Stage 2	1009	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.4	0	2.7
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	1080	1616
HCM Lane V/C Ratio	-	-	0.005	0.002
HCM Control Delay (s)	-	-	8.4	7.2
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0	0

Lanes, Volumes, Timings
6: S Point Road (NC 273) & Belmont MS/Belwood Drive

Henry Chapel TIA
2023 Background PM - Ph 1A

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	22	2	4	3	1	31	2	828	2	43	1001	5
Future Volume (vph)	22	2	4	3	1	31	2	828	2	43	1001	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		3%			0%			1%			0%	
Storage Length (ft)	0		175	0		0	200		0	100		200
Storage Lanes	0		1	0		0	1		0	1		1
Taper Length (ft)	25			25			100			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.879							0.850
Flt Protected		0.956			0.996		0.950			0.950		
Satd. Flow (prot)	0	1754	795	0	1631	0	1761	1853	0	1770	1863	1583
Flt Permitted		0.956			0.996		0.950			0.257		
Satd. Flow (perm)	0	1754	795	0	1631	0	1761	1853	0	479	1863	1583
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		35			25			35			35	
Link Distance (ft)		1017			1050			1975			1373	
Travel Time (s)		19.8			28.6			38.5			26.7	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	100%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Adj. Flow (vph)	24	2	4	3	1	34	2	920	2	48	1112	6
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	26	4	0	38	0	2	922	0	48	1112	6
Turn Type	Split	NA	pm+ov	Split	NA		Prot	NA		Perm	NA	pm+ov
Protected Phases	4	4	5	8	8		5	2			6	4
Permitted Phases			4							6		6
Detector Phase	4	4	5	8	8		5	2		6	6	4
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0		7.0	12.0		12.0	12.0	7.0
Minimum Split (s)	11.9	11.9	12.1	14.0	14.0		12.1	17.6		32.6	32.6	11.9
Total Split (s)	12.0	12.0	13.0	14.0	14.0		13.0	94.0		81.0	81.0	12.0
Total Split (%)	10.0%	10.0%	10.8%	11.7%	11.7%		10.8%	78.3%		67.5%	67.5%	10.0%
Maximum Green (s)	7.1	7.1	7.9	7.0	7.0		7.9	88.4		75.4	75.4	7.1
Yellow Time (s)	3.0	3.0	3.0	5.0	5.0		3.0	4.5		4.5	4.5	3.0
All-Red Time (s)	1.9	1.9	2.1	2.0	2.0		2.1	1.1		1.1	1.1	1.9
Lost Time Adjust (s)		0.1	-0.1		-2.0		-0.1	-0.6		-0.6	-0.6	0.1
Total Lost Time (s)		5.0	5.0		5.0		5.0	5.0		5.0	5.0	5.0
Lead/Lag			Lead				Lead			Lag	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		2.0	6.0		6.0	6.0	2.0
Minimum Gap (s)	2.0	2.0	2.0	2.0	2.0		2.0	3.0		3.0	3.0	2.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0		0.0	15.0		15.0	15.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0		0.0	45.0		45.0	45.0	0.0
Recall Mode	None	None	None	None	None		None	Min		Min	Min	None
Walk Time (s)										7.0	7.0	
Flash Dont Walk (s)										20.0	20.0	
Pedestrian Calls (#/hr)										0	0	
Act Efect Green (s)		8.2	11.7		10.7		8.5	70.4		68.6	68.6	74.2

Lanes, Volumes, Timings
 6: S Point Road (NC 273) & Belmont MS/Belwood Drive

Henry Chapel TIA
 2023 Background PM - Ph 1A

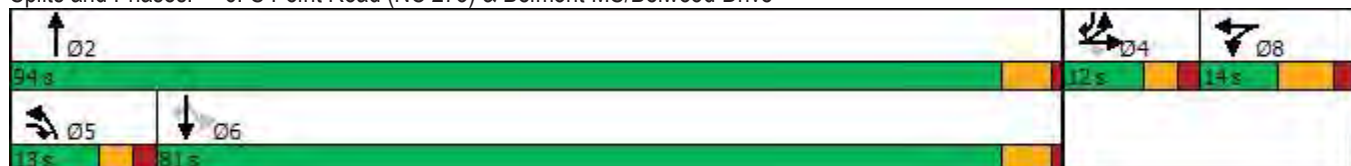


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Actuated g/C Ratio		0.10	0.14		0.13		0.10	0.83		0.81	0.81	0.88
v/c Ratio		0.15	0.04		0.18		0.01	0.60		0.12	0.74	0.00
Control Delay		51.9	31.2		49.5		50.5	8.6		7.4	15.1	3.0
Queue Delay		0.0	0.0		0.0		0.0	0.0		0.0	0.0	0.0
Total Delay		51.9	31.2		49.5		50.5	8.6		7.4	15.1	3.0
LOS		D	C		D		D	A		A	B	A
Approach Delay		49.2			49.5			8.7			14.7	
Approach LOS		D			D			A			B	
Queue Length 50th (ft)		17	2		24		1	318		9	478	1
Queue Length 95th (ft)		50	11		65		10	448		33	#1085	4
Internal Link Dist (ft)		937			970			1895			1293	
Turn Bay Length (ft)			175				200			100		200
Base Capacity (vph)		172	119		206		198	1643		390	1519	1387
Starvation Cap Reductn		0	0		0		0	0		0	0	0
Spillback Cap Reductn		0	0		0		0	0		0	0	0
Storage Cap Reductn		0	0		0		0	0		0	0	0
Reduced v/c Ratio		0.15	0.03		0.18		0.01	0.56		0.12	0.73	0.00

Intersection Summary


















Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 84.7
 Natural Cycle: 100
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.74
 Intersection Signal Delay: 13.2
 Intersection LOS: B
 Intersection Capacity Utilization 76.9%
 ICU Level of Service D
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 6: S Point Road (NC 273) & Belmont MS/Belwood Drive



Lanes, Volumes, Timings
 7: S Point Road (NC 273) & McKee Farm Road/Stowe Road

Henry Chapel TIA
 2023 Background PM - Ph 1A

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	25	9	14	25	2	50	11	859	22	68	1018	47
Future Volume (vph)	25	9	14	25	2	50	11	859	22	68	1018	47
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		0	100		0
Storage Lanes	0		0	0		0	0		0	1		0
Taper Length (ft)	25			25			25			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.960			0.912			0.997			0.993	
Flt Protected		0.975			0.984			0.999		0.950		
Satd. Flow (prot)	0	1744	0	0	1672	0	0	1855	0	1770	1850	0
Flt Permitted		0.975			0.984			0.999		0.950		
Satd. Flow (perm)	0	1744	0	0	1672	0	0	1855	0	1770	1850	0
Link Speed (mph)		25			25			35			35	
Link Distance (ft)		1043			1485			1373			492	
Travel Time (s)		28.4			40.5			26.7			9.6	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	28	10	16	28	2	56	12	954	24	76	1131	52
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	54	0	0	86	0	0	990	0	76	1183	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	68.1%
	ICU Level of Service C
Analysis Period (min)	15

HCM 6th TWSC
 7: S Point Road (NC 273) & McKee Farm Road/Stowe Road

Henry Chapel TIA
 2023 Background PM - Ph 1A

Intersection												
Int Delay, s/veh	38.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕		↕	↕	
Traffic Vol, veh/h	25	9	14	25	2	50	11	859	22	68	1018	47
Future Vol, veh/h	25	9	14	25	2	50	11	859	22	68	1018	47
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	-	-	-	-	-	-	-	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	28	10	16	28	2	56	12	954	24	76	1131	52

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	2328	2311	1157	2312	2325	966	1183	0	0	978	0	0
Stage 1	1309	1309	-	990	990	-	-	-	-	-	-	-
Stage 2	1019	1002	-	1322	1335	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	~ 26	38	239	~ 27	37	309	590	-	-	706	-	-
Stage 1	196	229	-	297	324	-	-	-	-	-	-	-
Stage 2	286	320	-	193	223	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	~ 18	32	239	~ 17	32	309	590	-	-	706	-	-
Mov Cap-2 Maneuver	~ 18	32	-	~ 17	32	-	-	-	-	-	-	-
Stage 1	187	204	-	284	309	-	-	-	-	-	-	-
Stage 2	222	306	-	153	199	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	726.6		618.8		0.1		0.6	
HCM LOS	F		F					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	590	-	-	28	45	706	-	-
HCM Lane V/C Ratio	0.021	-	-	1.905	1.901	0.107	-	-
HCM Control Delay (s)	11.2	0		726.6	618.8	10.7	-	-
HCM Lane LOS	B	A	-	F	F	B	-	-
HCM 95th %tile Q(veh)	0.1	-	-	6.3	8.7	0.4	-	-

Notes
 ~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Lanes, Volumes, Timings
 8: S Point Road (NC 273) & South Point HS/Red Raider Run

Henry Chapel TIA
 2023 Background PM - Ph 1A



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↕	↗	↖	↕		↖	↗	
Traffic Volume (vph)	0	0	0	196	5	209	8	808	84	120	952	3
Future Volume (vph)	0	0	0	196	5	209	8	808	84	120	952	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			4%			-1%			1%	
Storage Length (ft)	0		0	0		100	175		0	100		0
Storage Lanes	0		0	0		1	1		0	1		0
Taper Length (ft)	25			25			100			75		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t						0.850		0.986				
Fl _t Protected					0.954		0.950			0.950		
Satd. Flow (prot)	0	0	0	0	1742	1552	1778	1830	0	1761	1853	0
Fl _t Permitted					0.954		0.950			0.950		
Satd. Flow (perm)	0	0	0	0	1742	1552	1778	1830	0	1761	1853	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		25			25			35			35	
Link Distance (ft)		1017			1038			492			625	
Travel Time (s)		27.7			28.3			9.6			12.2	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	3%	2%	2%	2%	2%
Adj. Flow (vph)	0	0	0	218	6	232	9	898	93	133	1058	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	224	232	9	991	0	133	1061	0
Turn Type				Perm	NA	pm+ov	Prot	NA		Prot	NA	
Protected Phases					8	1	5	2		1	6	
Permitted Phases				8		8						
Detector Phase				8	8	1	5	2		1	6	
Switch Phase												
Minimum Initial (s)				7.0	7.0	7.0	7.0	10.0		7.0	10.0	
Minimum Split (s)				25.4	25.4	12.6	12.1	27.7		12.6	23.7	
Total Split (s)				26.0	26.0	18.0	13.0	86.0		18.0	91.0	
Total Split (%)				20.0%	20.0%	13.8%	10.0%	66.2%		13.8%	70.0%	
Maximum Green (s)				20.6	20.6	12.4	7.9	80.3		12.4	85.3	
Yellow Time (s)				3.0	3.0	3.0	3.0	3.9		3.0	3.9	
All-Red Time (s)				2.4	2.4	2.6	2.1	1.8		2.6	1.8	
Lost Time Adjust (s)					-0.4	-0.6	-0.1	-0.7		-0.6	-0.7	
Total Lost Time (s)					5.0	5.0	5.0	5.0		5.0	5.0	
Lead/Lag						Lead	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)				2.0	2.0	2.0	2.0	3.0		2.0	3.0	
Recall Mode				None	None	None	None	C-Max		None	C-Max	
Walk Time (s)				7.0	7.0			7.0				
Flash Dont Walk (s)				13.0	13.0			15.0				
Pedestrian Calls (#/hr)				0	0			0				
Act Effct Green (s)					19.4	36.7	7.1	83.3		12.3	98.2	
Actuated g/C Ratio					0.15	0.28	0.05	0.64		0.09	0.76	
v/c Ratio					0.86	0.53	0.09	0.85		0.80	0.76	
Control Delay					83.6	43.8	60.6	27.6		68.4	11.5	

Lanes, Volumes, Timings
 8: S Point Road (NC 273) & South Point HS/Red Raider Run

Henry Chapel TIA
 2023 Background PM - Ph 1A



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay					0.0	0.5	0.0	0.0		0.0	2.3	
Total Delay					83.6	44.3	60.6	27.6		68.4	13.8	
LOS					F	D	E	C		E	B	
Approach Delay					63.6			27.9			19.9	
Approach LOS					E			C			B	
Queue Length 50th (ft)					184	161	7	646		106	479	
Queue Length 95th (ft)					#312	245	26	899		m118	m548	
Internal Link Dist (ft)		937			958			412			545	
Turn Bay Length (ft)						100	175			100		
Base Capacity (vph)					281	446	109	1172		176	1399	
Starvation Cap Reductn					0	0	0	0		0	211	
Spillback Cap Reductn					0	43	0	0		0	0	
Storage Cap Reductn					0	0	0	0		0	0	
Reduced v/c Ratio					0.80	0.58	0.08	0.85		0.76	0.89	

Intersection Summary
























Area Type: Other
 Cycle Length: 130
 Actuated Cycle Length: 130
 Offset: 44 (34%), Referenced to phase 2:NBT and 6:SBT, Start of Green
 Natural Cycle: 100
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.86
 Intersection Signal Delay: 30.4
 Intersection LOS: C
 Intersection Capacity Utilization 79.7%
 ICU Level of Service D
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 8: S Point Road (NC 273) & South Point HS/Red Raider Run



Lanes, Volumes, Timings
 9: S Point Road (NC 273) & Nixon Road/R L Stowe Road

Henry Chapel TIA
 2023 Background PM - Ph 1A

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	65	96	64	515	106	37	60	478	453	72	511	72
Future Volume (vph)	65	96	64	515	106	37	60	478	453	72	511	72
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		1%			1%			1%			1%	
Storage Length (ft)	200		100	225		0	280		225	25		100
Storage Lanes	1		1	1		0	1		1	1		1
Taper Length (ft)	250			100			100			125		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.961				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1761	1853	1545	1744	1756	0	1761	1853	1545	1761	1853	1560
Flt Permitted	0.950			0.950			0.950			0.233		
Satd. Flow (perm)	1761	1853	1545	1744	1756	0	1761	1853	1545	432	1853	1560
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		25			35			35			35	
Link Distance (ft)		1003			1016			625			1000	
Travel Time (s)		27.4			19.8			12.2			19.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	4%	3%	4%	2%	2%	2%	4%	2%	2%	3%
Adj. Flow (vph)	72	107	71	572	118	41	67	531	503	80	568	80
Shared Lane Traffic (%)												
Lane Group Flow (vph)	72	107	71	572	159	0	67	531	503	80	568	80
Turn Type	Split	NA	pm+ov	Split	NA		Prot	NA	pm+ov	D.Pm	NA	pm+ov
Protected Phases	3	3	5	4	4		5	2	4		6	3
Permitted Phases			3						2	2		6
Detector Phase	3	3	5	4	4		5	2	4	2	6	3
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0		7.0	10.0	7.0	10.0	10.0	7.0
Minimum Split (s)	25.0	25.0	12.8	13.3	13.3		12.8	24.1	13.3	24.1	24.1	25.0
Total Split (s)	25.0	25.0	13.0	47.0	47.0		13.0	58.0	47.0	58.0	45.0	25.0
Total Split (%)	19.2%	19.2%	10.0%	36.2%	36.2%		10.0%	44.6%	36.2%	44.6%	34.6%	19.2%
Maximum Green (s)	19.0	19.0	7.2	40.7	40.7		7.2	51.9	40.7	51.9	38.9	19.0
Yellow Time (s)	3.8	3.8	3.0	4.4	4.4		3.0	3.8	4.4	3.8	3.8	3.8
All-Red Time (s)	2.2	2.2	2.8	1.9	1.9		2.8	2.3	1.9	2.3	2.3	2.2
Lost Time Adjust (s)	-1.0	-1.0	-0.8	-1.3	-1.3		-0.8	-1.1	-1.3	-1.1	-1.1	-1.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lead	Lead	Lag	Lag		Lead		Lag		Lag	Lead
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		2.0	3.0	2.0	3.0	3.0	2.0
Recall Mode	None	None	None	None	None		None	C-Max	None	C-Max	C-Max	None
Walk Time (s)	7.0	7.0						7.0		7.0		7.0
Flash Dont Walk (s)	12.0	12.0						11.0		11.0		12.0
Pedestrian Calls (#/hr)	0	0						0		0		0
Act Effct Green (s)	12.9	12.9	20.8	48.3	48.3		8.0	53.8	107.1	53.8	40.9	58.8
Actuated g/C Ratio	0.10	0.10	0.16	0.37	0.37		0.06	0.41	0.82	0.41	0.31	0.45
v/c Ratio	0.41	0.58	0.29	0.88	0.24		0.63	0.69	0.40	0.45	0.98	0.11
Control Delay	61.1	68.1	26.6	55.3	30.1		68.3	36.8	1.9	37.9	76.1	20.6

Lanes, Volumes, Timings
 9: S Point Road (NC 273) & Nixon Road/R L Stowe Road

Henry Chapel TIA
 2023 Background PM - Ph 1A

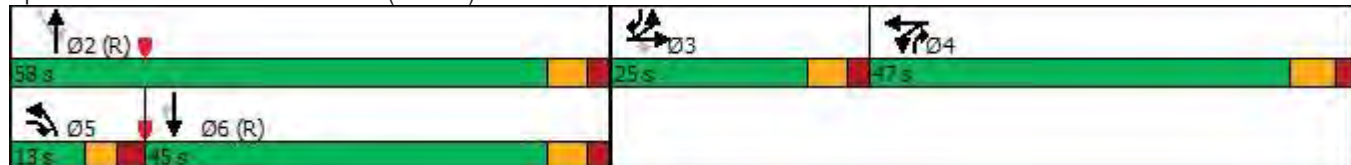


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay	0.0	0.0	1.1	0.0	0.0		0.0	1.7	0.5	0.0	7.0	0.0
Total Delay	61.1	68.1	27.7	55.3	30.1		68.3	38.4	2.5	37.9	83.1	20.6
LOS	E	E	C	E	C		E	D	A	D	F	C
Approach Delay		54.6			49.9			23.8			71.3	
Approach LOS		D			D			C			E	
Queue Length 50th (ft)	58	88	27	443	91		57	390	23	48	478	39
Queue Length 95th (ft)	105	145	48	#707	155		m73	m497	m78	103	#721	66
Internal Link Dist (ft)		923			936			545			920	
Turn Bay Length (ft)	200		100	225			280		225	25		100
Base Capacity (vph)	270	285	248	647	652		108	767	1273	179	582	790
Starvation Cap Reductn	0	0	0	0	0		0	107	392	0	0	0
Spillback Cap Reductn	0	0	70	0	0		0	0	0	0	18	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.27	0.38	0.40	0.88	0.24		0.62	0.80	0.57	0.45	1.01	0.10

Intersection Summary

Area Type: Other
 Cycle Length: 130
 Actuated Cycle Length: 130
 Offset: 0 (0%), Referenced to phase 2:NBSB and 6:SBT, Start of Green
 Natural Cycle: 130
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.98
 Intersection Signal Delay: 45.6
 Intersection LOS: D
 Intersection Capacity Utilization 84.5%
 ICU Level of Service E
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 m Volume for 95th percentile queue is metered by upstream signal.

















Splits and Phases: 9: S Point Road (NC 273) & Nixon Road/R L Stowe Road



2023 Build-out Conditions

Lanes, Volumes, Timings
 1: S Point Road (NC 273) & Armstrong Road (NC 273)/Farm Road

Henry Chapel TIA
 2023 Build AM - Ph 1A

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	537	0	29	0	0	0	60	163	0	0	64	215
Future Volume (vph)	537	0	29	0	0	0	60	163	0	0	64	215
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.993										0.896
Flt Protected		0.955						0.987				
Satd. Flow (prot)	0	1737	0	0	1863	0	0	1782	0	0	1554	0
Flt Permitted		0.955						0.987				
Satd. Flow (perm)	0	1737	0	0	1863	0	0	1782	0	0	1554	0
Link Speed (mph)		45			25			45			45	
Link Distance (ft)		1234			1013			1002			3097	
Travel Time (s)		18.7			27.6			15.2			46.9	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	36%	2%	2%	2%	14%	2%	2%	2%	8%	10%
Adj. Flow (vph)	597	0	32	0	0	0	67	181	0	0	71	239
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	629	0	0	0	0	0	248	0	0	310	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	70.0%
	ICU Level of Service C
Analysis Period (min)	15

HCM 6th TWSC
 1: S Point Road (NC 273) & Armstrong Road (NC 273)/Farm Road

Henry Chapel TIA
 2023 Build AM - Ph 1A

Intersection												
Int Delay, s/veh	105.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	537	0	29	0	0	0	60	163	0	0	64	215
Future Vol, veh/h	537	0	29	0	0	0	60	163	0	0	64	215
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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	36	2	2	2	14	2	2	2	8	10
Mvmt Flow	597	0	32	0	0	0	67	181	0	0	71	239

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	506	506	191	522	625	181	310	0	0	181	0	0
Stage 1	191	191	-	315	315	-	-	-	-	-	-	-
Stage 2	315	315	-	207	310	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.56	7.12	6.52	6.22	4.24	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.624	3.518	4.018	3.318	2.326	-	-	2.218	-	-
Pot Cap-1 Maneuver	~ 477	469	771	465	401	862	1185	-	-	1394	-	-
Stage 1	811	742	-	696	656	-	-	-	-	-	-	-
Stage 2	696	656	-	795	659	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	~ 454	439	771	424	376	862	1185	-	-	1394	-	-
Mov Cap-2 Maneuver	~ 454	439	-	424	376	-	-	-	-	-	-	-
Stage 1	760	742	-	652	615	-	-	-	-	-	-	-
Stage 2	652	615	-	762	659	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	198.2	0	2.2	0
HCM LOS	F	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1185	-	-	464	1394	-	-
HCM Lane V/C Ratio	0.056	-	-	1.355	-	-	-
HCM Control Delay (s)	8.2	0	-	198.2	0	0	-
HCM Lane LOS	A	A	-	F	A	A	-
HCM 95th %tile Q(veh)	0.2	-	-	28.8	0	-	-

Notes
 ~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Lanes, Volumes, Timings

2: S Point Road (NC 273) & S Point Church Road/Henry Chapel Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	0	0	1	8	0	82	0	826	3	29	324	5
Future Volume (vph)	0	0	1	8	0	82	0	826	3	29	324	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.865			0.877						0.998	
Flt Protected					0.996						0.996	
Satd. Flow (prot)	0	1611	0	0	1585	0	0	1857	0	0	1758	0
Flt Permitted					0.996						0.996	
Satd. Flow (perm)	0	1611	0	0	1585	0	0	1857	0	0	1758	0
Link Speed (mph)		25			25			45			45	
Link Distance (ft)		1509			1293			1519			881	
Travel Time (s)		41.2			35.3			23.0			13.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	2%	2%	5%	2%	2%	100%	2%	8%	2%
Adj. Flow (vph)	0	0	1	9	0	91	0	918	3	32	360	6
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1	0	0	100	0	0	921	0	0	398	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	62.5%
ICU Level of Service	B
Analysis Period (min)	15

Intersection												
Int Delay, s/veh	2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	1	8	0	82	0	826	3	29	324	5
Future Vol, veh/h	0	0	1	8	0	82	0	826	3	29	324	5
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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	5	2	2	100	2	8	2
Mvmt Flow	0	0	1	9	0	91	0	918	3	32	360	6

















Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	1392	1348	363	1348	1350	920	366	0	0	921	0	0
Stage 1	427	427	-	920	920	-	-	-	-	-	-	-
Stage 2	965	921	-	428	430	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.25	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.345	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	119	151	682	128	150	324	1193	-	-	741	-	-
Stage 1	606	585	-	325	350	-	-	-	-	-	-	-
Stage 2	306	349	-	605	583	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	82	143	682	122	142	324	1193	-	-	741	-	-
Mov Cap-2 Maneuver	82	143	-	122	142	-	-	-	-	-	-	-
Stage 1	606	553	-	325	350	-	-	-	-	-	-	-
Stage 2	220	349	-	571	552	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10.3	24.6	0	0.8
HCM LOS	B	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1193	-	-	682	282	741	-	-
HCM Lane V/C Ratio	-	-	-	0.002	0.355	0.043	-	-
HCM Control Delay (s)	0	-	-	10.3	24.6	10.1	0	-
HCM Lane LOS	A	-	-	B	C	B	A	-
HCM 95th %tile Q(veh)	0	-	-	0	1.5	0.1	-	-

Lanes, Volumes, Timings
 3: S Point Road (NC 273) & BB Drive/Forest Hill Road

Henry Chapel TIA
 2023 Build AM - Ph 1A

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	0	0	5	0	19	0	1069	7	7	403	2
Future Volume (vph)	4	0	0	5	0	19	0	1069	7	7	403	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.895			0.999			0.999	
Flt Protected		0.950			0.989						0.999	
Satd. Flow (prot)	0	1770	0	0	1612	0	0	1859	0	0	1774	0
Flt Permitted		0.950			0.989						0.999	
Satd. Flow (perm)	0	1770	0	0	1612	0	0	1859	0	0	1774	0
Link Speed (mph)		25			25			45			45	
Link Distance (ft)		1341			477			2444			1975	
Travel Time (s)		36.6			13.0			37.0			29.9	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	2%	2%	5%	2%	2%	17%	2%	7%	2%
Adj. Flow (vph)	4	0	0	6	0	21	0	1188	8	8	448	2
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	4	0	0	27	0	0	1196	0	0	458	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 66.7% ICU Level of Service C

Analysis Period (min) 15

Intersection												
Int Delay, s/veh	0.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	4	0	0	5	0	19	0	1069	7	7	403	2
Future Vol, veh/h	4	0	0	5	0	19	0	1069	7	7	403	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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	5	2	2	17	2	7	2
Mvmt Flow	4	0	0	6	0	21	0	1188	8	8	448	2

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1668	1661	449	1657	1658	1192	450	0	0	1196	0	0
Stage 1	465	465	-	1192	1192	-	-	-	-	-	-	-
Stage 2	1203	1196	-	465	466	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.25	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.345	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	77	97	610	78	98	225	1110	-	-	584	-	-
Stage 1	578	563	-	228	261	-	-	-	-	-	-	-
Stage 2	225	259	-	578	562	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	69	95	610	77	96	225	1110	-	-	584	-	-
Mov Cap-2 Maneuver	69	95	-	77	96	-	-	-	-	-	-	-
Stage 1	578	553	-	228	261	-	-	-	-	-	-	-
Stage 2	204	259	-	568	552	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	60.7		31.7		0		0.2	
HCM LOS	F		D					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1110	-	-	69	161	584	-	-
HCM Lane V/C Ratio	-	-	-	0.064	0.166	0.013	-	-
HCM Control Delay (s)	0	-	-	60.7	31.7	11.2	0	-
HCM Lane LOS	A	-	-	F	D	B	A	-
HCM 95th %tile Q(veh)	0	-	-	0.2	0.6	0	-	-

Lanes, Volumes, Timings
 4: Colonial Drive & Forest Hill Road

Henry Chapel TIA
 2023 Build AM - Ph 1A



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	7	2	0	11	17	1
Future Volume (vph)	7	2	0	11	17	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.973			0.993		
Flt Protected				0.955		
Satd. Flow (prot)	1812	0	0	1863	1766	0
Flt Permitted				0.955		
Satd. Flow (perm)	1812	0	0	1863	1766	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	477			1074	636	
Travel Time (s)	13.0			29.3	17.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	8	2	0	12	19	1
Shared Lane Traffic (%)						
Lane Group Flow (vph)	10	0	0	12	20	0
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	13.3%
Analysis Period (min)	15
	ICU Level of Service A

Intersection						
Int Delay, s/veh	4.1					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	7	2	0	11	17	1
Future Vol, veh/h	7	2	0	11	17	1
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	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	8	2	0	12	19	1

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	10	0	21
Stage 1	-	-	-	-	9
Stage 2	-	-	-	-	12
Critical Hdwy	-	-	4.12	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	-	-	2.218	-	3.518
Pot Cap-1 Maneuver	-	-	1610	-	996
Stage 1	-	-	-	-	1014
Stage 2	-	-	-	-	1011
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1610	-	996
Mov Cap-2 Maneuver	-	-	-	-	996
Stage 1	-	-	-	-	1014
Stage 2	-	-	-	-	1011

Approach	EB	WB	NB
HCM Control Delay, s	0	0	8.7
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1000	-	-	1610	-
HCM Lane V/C Ratio	0.02	-	-	-	-
HCM Control Delay (s)	8.7	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Lanes, Volumes, Timings
 5: Colonial Drive & Timber Ridge Road/Access 3

Henry Chapel TIA
 2023 Build AM - Ph 1A



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	9	8	0	1	2
Future Volume (vph)	0	9	8	0	1	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.865					
Flt Protected						0.984
Satd. Flow (prot)	1611	0	1863	0	0	1833
Flt Permitted						0.984
Satd. Flow (perm)	1611	0	1863	0	0	1833
Link Speed (mph)	25		25		25	
Link Distance (ft)	2169		1055		636	
Travel Time (s)	59.2		28.8		17.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	10	9	0	1	2
Shared Lane Traffic (%)						
Lane Group Flow (vph)	10	0	9	0	0	3
Sign Control	Stop		Free		Free	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 13.3% ICU Level of Service A

Analysis Period (min) 15

Intersection						
Int Delay, s/veh	4.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	9	8	0	1	2
Future Vol, veh/h	0	9	8	0	1	2
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	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	10	9	0	1	2

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	13	9	0	0	9
Stage 1	9	-	-	-	-
Stage 2	4	-	-	-	-
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	1006	1073	-	-	1611
Stage 1	1014	-	-	-	-
Stage 2	1019	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	1005	1073	-	-	1611
Mov Cap-2 Maneuver	1005	-	-	-	-
Stage 1	1014	-	-	-	-
Stage 2	1018	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.4	0	2.4
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	1073	1611
HCM Lane V/C Ratio	-	-	0.009	0.001
HCM Control Delay (s)	-	-	8.4	7.2
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0	0

Lanes, Volumes, Timings
6: S Point Road (NC 273) & Belmont MS/Belwood Drive

Henry Chapel TIA
2023 Build AM - Ph 1A

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	248	1	43	2	2	31	92	865	1	21	442	274
Future Volume (vph)	248	1	43	2	2	31	92	865	1	21	442	274
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		3%			0%			1%			0%	
Storage Length (ft)	0		175	0		0	200		0	100		200
Storage Lanes	0		1	0		0	1		0	1		1
Taper Length (ft)	25			25			100			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.879							0.850
Flt Protected		0.953			0.997		0.950			0.950		
Satd. Flow (prot)	0	1732	1560	0	1516	0	1744	1853	0	1770	1759	1568
Flt Permitted		0.953			0.997		0.950			0.098		
Satd. Flow (perm)	0	1732	1560	0	1516	0	1744	1853	0	183	1759	1568
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		35			25			35			35	
Link Distance (ft)		1017			1050			1975			1373	
Travel Time (s)		19.8			28.6			38.5			26.7	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	3%	2%	2%	100%	2%	5%	3%	2%	2%	2%	8%	3%
Adj. Flow (vph)	276	1	48	2	2	34	102	961	1	23	491	304
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	277	48	0	38	0	102	962	0	23	491	304
Turn Type	Split	NA	pm+ov	Split	NA		Prot	NA		Perm	NA	pm+ov
Protected Phases	4	4	5	8	8		5	2			6	4
Permitted Phases			4							6		6
Detector Phase	4	4	5	8	8		5	2		6	6	4
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0		7.0	12.0		12.0	12.0	7.0
Minimum Split (s)	11.9	11.9	12.1	14.0	14.0		12.1	17.6		32.6	32.6	11.9
Total Split (s)	31.0	31.0	18.0	14.0	14.0		18.0	75.0		57.0	57.0	31.0
Total Split (%)	25.8%	25.8%	15.0%	11.7%	11.7%		15.0%	62.5%		47.5%	47.5%	25.8%
Maximum Green (s)	26.1	26.1	12.9	7.0	7.0		12.9	69.4		51.4	51.4	26.1
Yellow Time (s)	3.0	3.0	3.0	5.0	5.0		3.0	4.5		4.5	4.5	3.0
All-Red Time (s)	1.9	1.9	2.1	2.0	2.0		2.1	1.1		1.1	1.1	1.9
Lost Time Adjust (s)		0.1	-0.1		-2.0		-0.1	-0.6		-0.6	-0.6	0.1
Total Lost Time (s)		5.0	5.0		5.0		5.0	5.0		5.0	5.0	5.0
Lead/Lag			Lead				Lead			Lag	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		2.0	6.0		6.0	6.0	2.0
Minimum Gap (s)	2.0	2.0	2.0	2.0	2.0		2.0	3.0		3.0	3.0	2.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0		0.0	15.0		15.0	15.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0		0.0	45.0		45.0	45.0	0.0
Recall Mode	None	None	None	None	None		None	Min		Min	Min	None
Walk Time (s)										7.0	7.0	
Flash Dont Walk (s)										20.0	20.0	
Pedestrian Calls (#/hr)										0	0	
Act Efect Green (s)		20.1	34.4		10.5		10.9	52.8		40.8	40.8	68.6

Lanes, Volumes, Timings
 6: S Point Road (NC 273) & Belmont MS/Belwood Drive

Henry Chapel TIA
 2023 Build AM - Ph 1A



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Actuated g/C Ratio		0.22	0.38		0.12		0.12	0.58		0.45	0.45	0.75
v/c Ratio		0.73	0.08		0.22		0.49	0.90		0.28	0.62	0.26
Control Delay		50.3	17.6		53.1		55.3	30.9		33.3	27.2	6.7
Queue Delay		0.0	0.0		0.0		0.0	0.0		0.0	0.0	0.0
Total Delay		50.3	17.6		53.1		55.3	30.9		33.3	27.2	6.7
LOS		D	B		D		E	C		C	C	A
Approach Delay		45.4			53.1			33.3			19.7	
Approach LOS		D			D			C			B	
Queue Length 50th (ft)		183	17		25		68	557		10	265	76
Queue Length 95th (ft)		#317	41		66		136	#929		38	414	122
Internal Link Dist (ft)		937			970			1895			1293	
Turn Bay Length (ft)			175				200			100		200
Base Capacity (vph)		574	661		173		289	1414		117	1126	1249
Starvation Cap Reductn		0	0		0		0	0		0	0	0
Spillback Cap Reductn		0	0		0		0	0		0	0	0
Storage Cap Reductn		0	0		0		0	0		0	0	0
Reduced v/c Ratio		0.48	0.07		0.22		0.35	0.68		0.20	0.44	0.24

Intersection Summary


















Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 91.1
 Natural Cycle: 90
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.90
 Intersection Signal Delay: 30.4
 Intersection LOS: C
 Intersection Capacity Utilization 88.5%
 ICU Level of Service E
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 6: S Point Road (NC 273) & Belmont MS/Belwood Drive



Lanes, Volumes, Timings
 7: S Point Road (NC 273) & McKee Farm Road/Stowe Road

Henry Chapel TIA
 2023 Build AM - Ph 1A

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	14	5	19	16	1	55	25	1086	52	37	712	68
Future Volume (vph)	14	5	19	16	1	55	25	1086	52	37	712	68
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		0	100		0
Storage Lanes	0		0	0		0	0		0	1		0
Taper Length (ft)	25			25			25			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.934			0.897			0.994			0.987	
Flt Protected		0.982			0.989			0.999		0.950		
Satd. Flow (prot)	0	1676	0	0	1653	0	0	1850	0	1703	1790	0
Flt Permitted		0.982			0.989			0.999		0.950		
Satd. Flow (perm)	0	1676	0	0	1653	0	0	1850	0	1703	1790	0
Link Speed (mph)		25			25			35			35	
Link Distance (ft)		1043			1485			1373			492	
Travel Time (s)		28.4			40.5			26.7			9.6	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	6%	2%	2%	2%	2%	2%	2%	6%	5%	2%
Adj. Flow (vph)	16	6	21	18	1	61	28	1207	58	41	791	76
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	43	0	0	80	0	0	1293	0	41	867	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary	
Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	92.1% ICU Level of Service F
Analysis Period (min)	15

HCM 6th TWSC
 7: S Point Road (NC 273) & McKee Farm Road/Stowe Road

Henry Chapel TIA
 2023 Build AM - Ph 1A

Intersection												
Int Delay, s/veh	14.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕		↕	↕	↕
Traffic Vol, veh/h	14	5	19	16	1	55	25	1086	52	37	712	68
Future Vol, veh/h	14	5	19	16	1	55	25	1086	52	37	712	68
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	-	-	-	-	-	-	-	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	6	2	2	2	2	2	2	6	5	2
Mvmt Flow	16	6	21	18	1	61	28	1207	58	41	791	76

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	2234	2232	829	2217	2241	1236	867	0	0	1265	0	0
Stage 1	911	911	-	1292	1292	-	-	-	-	-	-	-
Stage 2	1323	1321	-	925	949	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.26	7.12	6.52	6.22	4.12	-	-	4.16	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.354	3.518	4.018	3.318	2.218	-	-	2.254	-	-
Pot Cap-1 Maneuver	30	43	364	31	42	215	777	-	-	536	-	-
Stage 1	328	353	-	200	233	-	-	-	-	-	-	-
Stage 2	192	226	-	323	339	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	18	35	364	22	34	215	777	-	-	536	-	-
Mov Cap-2 Maneuver	18	35	-	22	34	-	-	-	-	-	-	-
Stage 1	287	326	-	175	204	-	-	-	-	-	-	-
Stage 2	120	198	-	276	313	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	328.8	247.1	0.2	0.6
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	777	-	-	39	71	536	-	-
HCM Lane V/C Ratio	0.036	-	-	1.083	1.127	0.077	-	-
HCM Control Delay (s)	9.8	0		\$ 328.8	247.1	12.3	-	-
HCM Lane LOS	A	A	-	F	F	B	-	-
HCM 95th %tile Q(veh)	0.1	-	-	4.2	6.1	0.2	-	-

Notes
 ~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Lanes, Volumes, Timings

Henry Chapel TIA

8: S Point Road (NC 273) & South Point HS/Red Raider Run

2023 Build AM - Ph 1A



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↶	↶	↶	↶		↷	↷	
Traffic Volume (vph)	0	0	0	129	33	143	61	982	84	94	688	50
Future Volume (vph)	0	0	0	129	33	143	61	982	84	94	688	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			4%			-1%			1%	
Storage Length (ft)	0		0	0		100	175		0	100		0
Storage Lanes	0		0	0		1	1		0	1		0
Taper Length (ft)	25			25			100			75		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t						0.850		0.988			0.990	
Fl _t Protected					0.962		0.950			0.950		
Satd. Flow (prot)	0	0	0	0	1756	1552	1778	1850	0	1761	1770	0
Fl _t Permitted					0.962		0.950			0.950		
Satd. Flow (perm)	0	0	0	0	1756	1552	1778	1850	0	1761	1770	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		25			25			35			35	
Link Distance (ft)		1017			1038			492			625	
Travel Time (s)		27.7			28.3			9.6			12.2	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	6%	2%
Adj. Flow (vph)	0	0	0	143	37	159	68	1091	93	104	764	56
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	180	159	68	1184	0	104	820	0
Turn Type				Perm	NA	pm+ov	Prot	NA		Prot	NA	
Protected Phases					8	1	5	2		1	6	
Permitted Phases				8		8						
Detector Phase				8	8	1	5	2		1	6	
Switch Phase												
Minimum Initial (s)				7.0	7.0	7.0	7.0	10.0		7.0	10.0	
Minimum Split (s)				25.4	25.4	12.6	12.1	27.7		12.6	23.7	
Total Split (s)				26.0	26.0	13.0	15.0	81.0		13.0	79.0	
Total Split (%)				21.7%	21.7%	10.8%	12.5%	67.5%		10.8%	65.8%	
Maximum Green (s)				20.6	20.6	7.4	9.9	75.3		7.4	73.3	
Yellow Time (s)				3.0	3.0	3.0	3.0	3.9		3.0	3.9	
All-Red Time (s)				2.4	2.4	2.6	2.1	1.8		2.6	1.8	
Lost Time Adjust (s)					-0.4	-0.6	-0.1	-0.7		-0.6	-0.7	
Total Lost Time (s)					5.0	5.0	5.0	5.0		5.0	5.0	
Lead/Lag						Lead	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)				2.0	2.0	2.0	2.0	3.0		2.0	3.0	
Recall Mode				None	None	None	None	C-Max		None	C-Max	
Walk Time (s)				7.0	7.0			7.0				
Flash Dont Walk (s)				13.0	13.0			15.0				
Pedestrian Calls (#/hr)				0	0			0				
Act Effct Green (s)					16.5	31.7	8.9	78.3		10.2	81.9	
Actuated g/C Ratio					0.14	0.26	0.07	0.65		0.08	0.68	
v/c Ratio					0.75	0.39	0.52	0.98		0.70	0.68	
Control Delay					67.9	38.6	67.0	43.6		73.7	12.8	

Lanes, Volumes, Timings
 8: S Point Road (NC 273) & South Point HS/Red Raider Run

Henry Chapel TIA
 2023 Build AM - Ph 1A

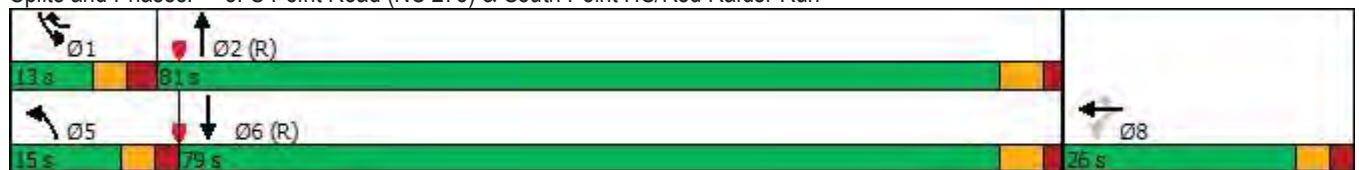


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay					0.0	0.0	0.0	0.0		0.0	0.8	
Total Delay					67.9	38.6	67.0	43.6		73.7	13.7	
LOS					E	D	E	D		E	B	
Approach Delay					54.2			44.9			20.4	
Approach LOS					D			D			C	
Queue Length 50th (ft)					135	98	52	~895		86	309	
Queue Length 95th (ft)					207	162	100	#1224		m#127	515	
Internal Link Dist (ft)		937			958			412			545	
Turn Bay Length (ft)						100	175			100		
Base Capacity (vph)					307	410	150	1206		149	1208	
Starvation Cap Reductn					0	0	0	0		0	155	
Spillback Cap Reductn					0	0	0	0		0	0	
Storage Cap Reductn					0	0	0	0		0	0	
Reduced v/c Ratio					0.59	0.39	0.45	0.98		0.70	0.78	

Intersection Summary
























Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 86 (72%), Referenced to phase 2:NBT and 6:SBT, Start of Green
 Natural Cycle: 120
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.98
 Intersection Signal Delay: 37.1
 Intersection LOS: D
 Intersection Capacity Utilization 84.0%
 ICU Level of Service E
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 8: S Point Road (NC 273) & South Point HS/Red Raider Run



Lanes, Volumes, Timings
 9: S Point Road (NC 273) & Nixon Road/R L Stowe Road

Henry Chapel TIA
 2023 Build AM - Ph 1A

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	98	163	72	287	80	29	86	499	539	46	508	49
Future Volume (vph)	98	163	72	287	80	29	86	499	539	46	508	49
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		1%			1%			1%			1%	
Storage Length (ft)	200		100	225		0	280		225	25		100
Storage Lanes	1		1	1		0	1		1	1		1
Taper Length (ft)	250			100			100			125		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.960				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1761	1853	1474	1648	1685	0	1678	1853	1575	1761	1853	1530
Flt Permitted	0.950			0.950			0.950			0.304		
Satd. Flow (perm)	1761	1853	1474	1648	1685	0	1678	1853	1575	563	1853	1530
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		25			35			35			35	
Link Distance (ft)		1003			1016			625			1000	
Travel Time (s)		27.4			19.8			12.2			19.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	9%	9%	9%	4%	7%	2%	2%	2%	2%	5%
Adj. Flow (vph)	109	181	80	319	89	32	96	554	599	51	564	54
Shared Lane Traffic (%)												
Lane Group Flow (vph)	109	181	80	319	121	0	96	554	599	51	564	54
Turn Type	Split	NA	pm+ov	Split	NA		Prot	NA	pm+ov	D.Pm	NA	pm+ov
Protected Phases	3	3	5	4	4		5	2	4		6	3
Permitted Phases			3						2	2		6
Detector Phase	3	3	5	4	4		5	2	4	2	6	3
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0		7.0	10.0	7.0	10.0	10.0	7.0
Minimum Split (s)	25.0	25.0	12.8	13.3	13.3		12.8	24.1	13.3	24.1	24.1	25.0
Total Split (s)	25.0	25.0	15.0	32.0	32.0		15.0	63.0	32.0	63.0	48.0	25.0
Total Split (%)	20.8%	20.8%	12.5%	26.7%	26.7%		12.5%	52.5%	26.7%	52.5%	40.0%	20.8%
Maximum Green (s)	19.0	19.0	9.2	25.7	25.7		9.2	56.9	25.7	56.9	41.9	19.0
Yellow Time (s)	3.8	3.8	3.0	4.4	4.4		3.0	3.8	4.4	3.8	3.8	3.8
All-Red Time (s)	2.2	2.2	2.8	1.9	1.9		2.8	2.3	1.9	2.3	2.3	2.2
Lost Time Adjust (s)	-1.0	-1.0	-0.8	-1.3	-1.3		-0.8	-1.1	-1.3	-1.1	-1.1	-1.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lead	Lead	Lag	Lag		Lead		Lag		Lag	Lead
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		2.0	3.0	2.0	3.0	3.0	2.0
Recall Mode	None	None	None	None	None		None	C-Max	None	C-Max	C-Max	None
Walk Time (s)	7.0	7.0						7.0		7.0		7.0
Flash Dont Walk (s)	12.0	12.0						11.0		11.0		12.0
Pedestrian Calls (#/hr)	0	0						0		0		0
Act Effct Green (s)	16.4	16.4	26.1	26.6	26.6		9.7	62.0	93.6	62.0	47.4	68.8
Actuated g/C Ratio	0.14	0.14	0.22	0.22	0.22		0.08	0.52	0.78	0.52	0.40	0.57
v/c Ratio	0.45	0.72	0.25	0.88	0.32		0.72	0.58	0.49	0.18	0.77	0.06
Control Delay	53.0	65.1	21.5	69.6	41.5		74.2	14.2	4.2	19.4	41.6	12.3

Lanes, Volumes, Timings
 9: S Point Road (NC 273) & Nixon Road/R L Stowe Road

Henry Chapel TIA
 2023 Build AM - Ph 1A

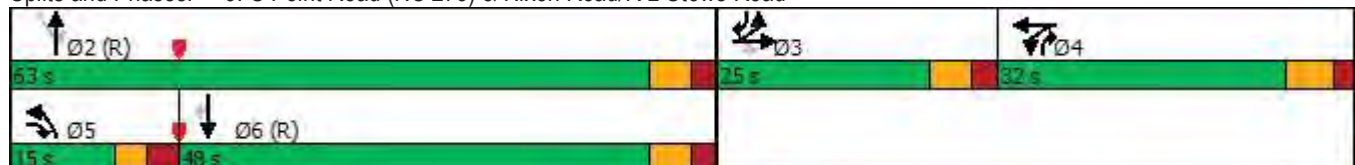


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay	0.0	0.0	0.2	0.0	0.0		0.0	0.7	0.6	0.0	0.0	0.0
Total Delay	53.0	65.1	21.6	69.6	41.5		74.2	14.9	4.7	19.4	41.6	12.3
LOS	D	E	C	E	D		E	B	A	B	D	B
Approach Delay		52.2			61.9			14.6			37.5	
Approach LOS		D			E			B			D	
Queue Length 50th (ft)	78	135	28	231	76		71	209	96	22	400	19
Queue Length 95th (ft)	133	208	53	#398	136		m79	m227	m103	50	#593	37
Internal Link Dist (ft)		923			936			545			920	
Turn Bay Length (ft)	200		100	225			280		225	25		100
Base Capacity (vph)	293	308	325	380	389		140	957	1215	291	731	923
Starvation Cap Reductn	0	0	0	0	0		0	154	271	0	0	0
Spillback Cap Reductn	0	0	38	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.37	0.59	0.28	0.84	0.31		0.69	0.69	0.63	0.18	0.77	0.06

Intersection Summary

Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 2 (2%), Referenced to phase 2:NBSB and 6:SBT, Start of Green
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.88
 Intersection Signal Delay: 32.9
 Intersection LOS: C
 Intersection Capacity Utilization 75.7%
 ICU Level of Service D
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 9: S Point Road (NC 273) & Nixon Road/R L Stowe Road



Lanes, Volumes, Timings
 10: Henry Chapel Road & Access 1

Henry Chapel TIA
 2023 Build AM - Ph 1A



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	32	90	0	0	0
Future Volume (vph)	0	32	90	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fr						
Flt Protected						
Satd. Flow (prot)	0	1667	1810	0	1863	0
Flt Permitted						
Satd. Flow (perm)	0	1667	1810	0	1863	0
Link Speed (mph)		25	25		25	
Link Distance (ft)		1293	1432		1041	
Travel Time (s)		35.3	39.1		28.4	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	14%	5%	2%	2%	2%
Adj. Flow (vph)	0	36	100	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	36	100	0	0	0
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	8.1%
	ICU Level of Service A
Analysis Period (min)	15

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	0	32	90	0	0	0
Future Vol, veh/h	0	32	90	0	0	0
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	90	90	90	90	90	90
Heavy Vehicles, %	2	14	5	2	2	2
Mvmt Flow	0	36	100	0	0	0

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	100	0	-	0	136
Stage 1	-	-	-	-	100
Stage 2	-	-	-	-	36
Critical Hdwy	4.12	-	-	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	2.218	-	-	-	3.518
Pot Cap-1 Maneuver	1493	-	-	-	857
Stage 1	-	-	-	-	924
Stage 2	-	-	-	-	986
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1493	-	-	-	857
Mov Cap-2 Maneuver	-	-	-	-	857
Stage 1	-	-	-	-	924
Stage 2	-	-	-	-	986

Approach	EB	WB	SB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1493	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	-	0
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	-

Lanes, Volumes, Timings
 11: Henry Chapel Road & Access 2



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↔	↔		↔	
Traffic Volume (vph)	24	8	22	0	0	68
Future Volume (vph)	24	8	22	0	0	68
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t					0.865	
Fl _t Protected		0.964				
Satd. Flow (prot)	0	1744	1810	0	1611	0
Fl _t Permitted		0.964				
Satd. Flow (perm)	0	1744	1810	0	1611	0
Link Speed (mph)		25	25		25	
Link Distance (ft)		1432	1164		1055	
Travel Time (s)		39.1	31.7		28.8	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	14%	5%	2%	2%	2%
Adj. Flow (vph)	27	9	24	0	0	76
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	36	24	0	76	0
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	19.3%
Analysis Period (min)	15
	ICU Level of Service A

Intersection						
Int Delay, s/veh	6.3					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	24	8	22	0	0	68
Future Vol, veh/h	24	8	22	0	0	68
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	90	90	90	90	90	90
Heavy Vehicles, %	2	14	5	2	2	2
Mvmt Flow	27	9	24	0	0	76

















Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	24	0	-	0	87 24
Stage 1	-	-	-	-	24 -
Stage 2	-	-	-	-	63 -
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	1591	-	-	-	914 1052
Stage 1	-	-	-	-	999 -
Stage 2	-	-	-	-	960 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1591	-	-	-	898 1052
Mov Cap-2 Maneuver	-	-	-	-	898 -
Stage 1	-	-	-	-	982 -
Stage 2	-	-	-	-	960 -

Approach	EB	WB	SB
HCM Control Delay, s	5.5	0	8.7
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1591	-	-	-	1052
HCM Lane V/C Ratio	0.017	-	-	-	0.072
HCM Control Delay (s)	7.3	0	-	-	8.7
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0.1	-	-	-	0.2

Lanes, Volumes, Timings
 1: S Point Road (NC 273) & Armstrong Road (NC 273)/Farm Road

Henry Chapel TIA
 2023 Build PM - Ph 1A

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	442	0	36	0	0	1	51	94	0	2	121	561
Future Volume (vph)	442	0	36	0	0	1	51	94	0	2	121	561
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.990			0.865							0.889
Flt Protected		0.956						0.983				
Satd. Flow (prot)	0	1760	0	0	1611	0	0	1772	0	0	1643	0
Flt Permitted		0.956						0.983				
Satd. Flow (perm)	0	1760	0	0	1611	0	0	1772	0	0	1643	0
Link Speed (mph)		45			25			45			45	
Link Distance (ft)		1234			1013			1002			3097	
Travel Time (s)		18.7			27.6			15.2			46.9	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	4%	2%	2%	2%	8%	4%	2%	2%	2%	3%
Adj. Flow (vph)	491	0	40	0	0	1	57	104	0	2	134	623
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	531	0	0	1	0	0	161	0	0	759	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	87.4%
ICU Level of Service	E
Analysis Period (min)	15

HCM 6th TWSC
 1: S Point Road (NC 273) & Armstrong Road (NC 273)/Farm Road

Henry Chapel TIA
 2023 Build PM - Ph 1A

Intersection												
Int Delay, s/veh	93.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	442	0	36	0	0	1	51	94	0	2	121	561
Future Vol, veh/h	442	0	36	0	0	1	51	94	0	2	121	561
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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	4	2	2	2	8	4	2	2	2	3
Mvmt Flow	491	0	40	0	0	1	57	104	0	2	134	623

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	669	668	446	688	979	104	757	0	0	104	0	0
Stage 1	450	450	-	218	218	-	-	-	-	-	-	-
Stage 2	219	218	-	470	761	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.24	7.12	6.52	6.22	4.18	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.336	3.518	4.018	3.318	2.272	-	-	2.218	-	-
Pot Cap-1 Maneuver	~ 371	379	608	360	250	951	828	-	-	1488	-	-
Stage 1	589	572	-	784	723	-	-	-	-	-	-	-
Stage 2	783	723	-	574	414	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	~ 349	350	608	317	231	951	828	-	-	1488	-	-
Mov Cap-2 Maneuver	~ 349	350	-	317	231	-	-	-	-	-	-	-
Stage 1	546	570	-	727	670	-	-	-	-	-	-	-
Stage 2	725	670	-	535	413	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	254.6	8.8	3.4	0
HCM LOS	F	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	828	-	-	361	951	1488	-
HCM Lane V/C Ratio	0.068	-	-	1.471	0.001	0.001	-
HCM Control Delay (s)	9.7	0	-	254.6	8.8	7.4	0
HCM Lane LOS	A	A	-	F	A	A	A
HCM 95th %tile Q(veh)	0.2	-	-	28.3	0	0	-

Notes
 ~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Lanes, Volumes, Timings

2: S Point Road (NC 273) & S Point Church Road/Henry Chapel Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	1	0	0	10	0	63	0	646	13	97	758	2
Future Volume (vph)	1	0	0	10	0	63	0	646	13	97	758	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.883			0.997				
Flt Protected		0.950			0.993						0.994	
Satd. Flow (prot)	0	1770	0	0	1530	0	0	1839	0	0	1836	0
Flt Permitted		0.950			0.993						0.994	
Satd. Flow (perm)	0	1770	0	0	1530	0	0	1839	0	0	1836	0
Link Speed (mph)		25			25			45			45	
Link Distance (ft)		1509			1293			1519			881	
Travel Time (s)		41.2			35.3			23.0			13.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	2%	2%	10%	2%	3%	2%	2%	3%	2%
Adj. Flow (vph)	1	0	0	11	0	70	0	718	14	108	842	2
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1	0	0	81	0	0	732	0	0	952	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	94.4%
ICU Level of Service	F
Analysis Period (min)	15

Intersection												
Int Delay, s/veh	2.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	1	0	0	10	0	63	0	646	13	97	758	2
Future Vol, veh/h	1	0	0	10	0	63	0	646	13	97	758	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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	10	2	3	2	2	3	2
Mvmt Flow	1	0	0	11	0	70	0	718	14	108	842	2

















Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1819	1791	843	1784	1785	725	844	0	0	732	0	0
Stage 1	1059	1059	-	725	725	-	-	-	-	-	-	-
Stage 2	760	732	-	1059	1060	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.3	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.39	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	60	81	364	63	82	412	792	-	-	873	-	-
Stage 1	271	301	-	416	430	-	-	-	-	-	-	-
Stage 2	398	427	-	271	301	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	41	62	364	52	63	412	792	-	-	873	-	-
Mov Cap-2 Maneuver	41	62	-	52	63	-	-	-	-	-	-	-
Stage 1	271	231	-	416	430	-	-	-	-	-	-	-
Stage 2	330	427	-	208	231	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	95.2		32.3		0		1.1	
HCM LOS	F		D					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	792	-	-	41	211	873	-	-
HCM Lane V/C Ratio	-	-	-	0.027	0.384	0.123	-	-
HCM Control Delay (s)	0	-	-	95.2	32.3	9.7	0	-
HCM Lane LOS	A	-	-	F	D	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	1.7	0.4	-	-

Lanes, Volumes, Timings
 3: S Point Road (NC 273) & BB Drive/Forest Hill Road

Henry Chapel TIA
 2023 Build PM - Ph 1A

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	0	0	1	0	8	0	797	3	14	985	1
Future Volume (vph)	4	0	0	1	0	8	0	797	3	14	985	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.878							
Flt Protected		0.950			0.995						0.999	
Satd. Flow (prot)	0	1770	0	0	1627	0	0	1863	0	0	1861	0
Flt Permitted		0.950			0.995						0.999	
Satd. Flow (perm)	0	1770	0	0	1627	0	0	1863	0	0	1861	0
Link Speed (mph)		25			25			45			45	
Link Distance (ft)		1341			477			2444			1975	
Travel Time (s)		36.6			13.0			37.0			29.9	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	4	0	0	1	0	9	0	886	3	16	1094	1
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	4	0	0	10	0	0	889	0	0	1111	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	73.1%
Analysis Period (min)	15
	ICU Level of Service D

HCM 6th TWSC
 3: S Point Road (NC 273) & BB Drive/Forest Hill Road

Henry Chapel TIA
 2023 Build PM - Ph 1A

Intersection												
Int Delay, s/veh	0.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	4	0	0	1	0	8	0	797	3	14	985	1
Future Vol, veh/h	4	0	0	1	0	8	0	797	3	14	985	1
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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	0	0	1	0	9	0	886	3	16	1094	1

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	2019	2016	1095	2015	2015	888	1095	0	0	889	0	0
Stage 1	1127	1127	-	888	888	-	-	-	-	-	-	-
Stage 2	892	889	-	1127	1127	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	43	59	260	44	59	343	637	-	-	762	-	-
Stage 1	249	280	-	338	362	-	-	-	-	-	-	-
Stage 2	337	361	-	249	280	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	40	56	260	42	56	343	637	-	-	762	-	-
Mov Cap-2 Maneuver	40	56	-	42	56	-	-	-	-	-	-	-
Stage 1	249	265	-	338	362	-	-	-	-	-	-	-
Stage 2	328	361	-	236	265	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	106		24.9		0		0.1	
HCM LOS	F		C					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	637	-	-	40	191	762	-	-
HCM Lane V/C Ratio	-	-	-	0.111	0.052	0.02	-	-
HCM Control Delay (s)	0	-	-	106	24.9	9.8	0	-
HCM Lane LOS	A	-	-	F	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.3	0.2	0.1	-	-

Lanes, Volumes, Timings
 4: Colonial Drive & Forest Hill Road



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	4	8	1	4	8	1
Future Volume (vph)	4	8	1	4	8	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.907			0.986		
Flt Protected				0.990	0.957	
Satd. Flow (prot)	1477	0	0	1844	1602	0
Flt Permitted				0.990	0.957	
Satd. Flow (perm)	1477	0	0	1844	1602	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	477			1074	636	
Travel Time (s)	13.0			29.3	17.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	25%	13%	2%	2%	13%	2%
Adj. Flow (vph)	4	9	1	4	9	1
Shared Lane Traffic (%)						
Lane Group Flow (vph)	13	0	0	5	10	0
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	13.3%
Analysis Period (min)	15
	ICU Level of Service A

Intersection						
Int Delay, s/veh	3.3					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	4	8	1	4	8	1
Future Vol, veh/h	4	8	1	4	8	1
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	90	90	90	90	90	90
Heavy Vehicles, %	25	13	2	2	13	2
Mvmt Flow	4	9	1	4	9	1

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	13	0	15
Stage 1	-	-	-	-	9
Stage 2	-	-	-	-	6
Critical Hdwy	-	-	4.12	-	6.53
Critical Hdwy Stg 1	-	-	-	-	5.53
Critical Hdwy Stg 2	-	-	-	-	5.53
Follow-up Hdwy	-	-	2.218	-	3.617
Pot Cap-1 Maneuver	-	-	1606	-	976
Stage 1	-	-	-	-	986
Stage 2	-	-	-	-	989
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1606	-	975
Mov Cap-2 Maneuver	-	-	-	-	975
Stage 1	-	-	-	-	986
Stage 2	-	-	-	-	988

Approach	EB	WB	NB
HCM Control Delay, s	0	1.4	8.7
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	985	-	-	1606	-
HCM Lane V/C Ratio	0.01	-	-	0.001	-
HCM Control Delay (s)	8.7	-	-	7.2	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

Lanes, Volumes, Timings
 5: Colonial Drive & Timber Ridge Road/Access 3

Henry Chapel TIA
 2023 Build PM - Ph 1A



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	5	3	2	3	5
Future Volume (vph)	0	5	3	2	3	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.865		0.946			
Flt Protected						0.984
Satd. Flow (prot)	1611	0	1490	0	0	1640
Flt Permitted						0.984
Satd. Flow (perm)	1611	0	1490	0	0	1640
Link Speed (mph)	25		25			25
Link Distance (ft)	2169		1055			636
Travel Time (s)	59.2		28.8			17.3
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	33%	2%	2%	20%
Adj. Flow (vph)	0	6	3	2	3	6
Shared Lane Traffic (%)						
Lane Group Flow (vph)	6	0	5	0	0	9
Sign Control	Stop		Free			Free

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	13.3%
ICU Level of Service	A
Analysis Period (min)	15

HCM 6th TWSC
 5: Colonial Drive & Timber Ridge Road/Access 3

Henry Chapel TIA
 2023 Build PM - Ph 1A

Intersection						
Int Delay, s/veh	3.5					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	5	3	2	3	5
Future Vol, veh/h	0	5	3	2	3	5
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	90	90	90	90	90	90
Heavy Vehicles, %	2	2	33	2	2	20
Mvmt Flow	0	6	3	2	3	6





















Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	16	4	0	0	5
Stage 1	4	-	-	-	-
Stage 2	12	-	-	-	-
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	1002	1080	-	-	1616
Stage 1	1019	-	-	-	-
Stage 2	1011	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	1000	1080	-	-	1616
Mov Cap-2 Maneuver	1000	-	-	-	-
Stage 1	1019	-	-	-	-
Stage 2	1009	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.4	0	2.7
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	1080	1616
HCM Lane V/C Ratio	-	-	0.005	0.002
HCM Control Delay (s)	-	-	8.4	7.2
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0	0

Lanes, Volumes, Timings
6: S Point Road (NC 273) & Belmont MS/Belwood Drive

Henry Chapel TIA
2023 Build PM - Ph 1A

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	22	2	8	3	1	31	4	867	2	43	1066	5
Future Volume (vph)	22	2	8	3	1	31	4	867	2	43	1066	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		3%			0%			1%			0%	
Storage Length (ft)	0		175	0		0	200		0	100		200
Storage Lanes	0		1	0		0	1		0	1		1
Taper Length (ft)	25			25			100			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.879							0.850
Flt Protected		0.956			0.996		0.950			0.950		
Satd. Flow (prot)	0	1754	795	0	1631	0	1761	1853	0	1770	1863	1583
Flt Permitted		0.956			0.996		0.950			0.248		
Satd. Flow (perm)	0	1754	795	0	1631	0	1761	1853	0	462	1863	1583
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		35			25			35			35	
Link Distance (ft)		1017			1050			1975			1373	
Travel Time (s)		19.8			28.6			38.5			26.7	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	100%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Adj. Flow (vph)	24	2	9	3	1	34	4	963	2	48	1184	6
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	26	9	0	38	0	4	965	0	48	1184	6
Turn Type	Split	NA	pm+ov	Split	NA		Prot	NA		Perm	NA	pm+ov
Protected Phases	4	4	5	8	8		5	2			6	4
Permitted Phases			4							6		6
Detector Phase	4	4	5	8	8		5	2		6	6	4
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0		7.0	12.0		12.0	12.0	7.0
Minimum Split (s)	11.9	11.9	12.1	14.0	14.0		12.1	17.6		32.6	32.6	11.9
Total Split (s)	12.0	12.0	13.0	14.0	14.0		13.0	94.0		81.0	81.0	12.0
Total Split (%)	10.0%	10.0%	10.8%	11.7%	11.7%		10.8%	78.3%		67.5%	67.5%	10.0%
Maximum Green (s)	7.1	7.1	7.9	7.0	7.0		7.9	88.4		75.4	75.4	7.1
Yellow Time (s)	3.0	3.0	3.0	5.0	5.0		3.0	4.5		4.5	4.5	3.0
All-Red Time (s)	1.9	1.9	2.1	2.0	2.0		2.1	1.1		1.1	1.1	1.9
Lost Time Adjust (s)		0.1	-0.1		-2.0		-0.1	-0.6		-0.6	-0.6	0.1
Total Lost Time (s)		5.0	5.0		5.0		5.0	5.0		5.0	5.0	5.0
Lead/Lag			Lead				Lead			Lag	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		2.0	6.0		6.0	6.0	2.0
Minimum Gap (s)	2.0	2.0	2.0	2.0	2.0		2.0	3.0		3.0	3.0	2.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0		0.0	15.0		15.0	15.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0		0.0	45.0		45.0	45.0	0.0
Recall Mode	None	None	None	None	None		None	Min		Min	Min	None
Walk Time (s)										7.0	7.0	
Flash Dont Walk (s)										20.0	20.0	
Pedestrian Calls (#/hr)										0	0	
Act Efect Green (s)		7.5	11.1		9.7		7.7	81.4		77.5	77.5	83.4

Lanes, Volumes, Timings
 6: S Point Road (NC 273) & Belmont MS/Belwood Drive

Henry Chapel TIA
 2023 Build PM - Ph 1A

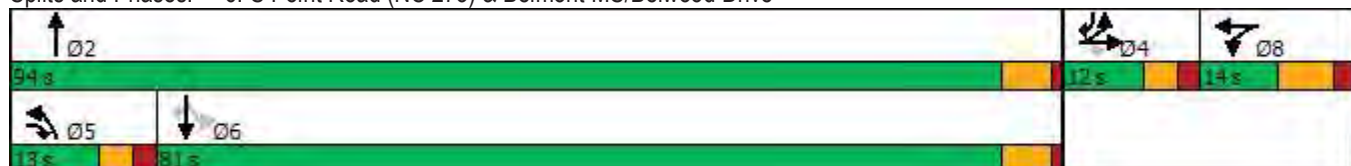


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Actuated g/C Ratio		0.08	0.11		0.10		0.08	0.84		0.80	0.80	0.86
v/c Ratio		0.19	0.10		0.23		0.03	0.62		0.13	0.79	0.00
Control Delay		55.5	35.1		53.5		53.0	8.6		8.4	19.1	3.8
Queue Delay		0.0	0.0		0.0		0.0	0.0		0.0	0.0	0.0
Total Delay		55.5	35.1		53.5		53.0	8.6		8.4	19.1	3.8
LOS		E	D		D		D	A		A	B	A
Approach Delay		50.2			53.5			8.7			18.6	
Approach LOS		D			D			A			B	
Queue Length 50th (ft)		18	5		26		3	348		9	563	1
Queue Length 95th (ft)		50	19		65		15	493		33	#1202	4
Internal Link Dist (ft)		937			970			1895			1293	
Turn Bay Length (ft)			175				200			100		200
Base Capacity (vph)		136	99		163		156	1588		369	1490	1364
Starvation Cap Reductn		0	0		0		0	0		0	0	0
Spillback Cap Reductn		0	0		0		0	0		0	0	0
Storage Cap Reductn		0	0		0		0	0		0	0	0
Reduced v/c Ratio		0.19	0.09		0.23		0.03	0.61		0.13	0.79	0.00

Intersection Summary


















Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 96.8
 Natural Cycle: 120
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.79
 Intersection Signal Delay: 15.5
 Intersection LOS: B
 Intersection Capacity Utilization 80.3%
 ICU Level of Service D
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 6: S Point Road (NC 273) & Belmont MS/Belwood Drive



Lanes, Volumes, Timings
 7: S Point Road (NC 273) & McKee Farm Road/Stowe Road

Henry Chapel TIA
 2023 Build PM - Ph 1A

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	25	9	14	25	2	50	11	898	22	68	1083	47
Future Volume (vph)	25	9	14	25	2	50	11	898	22	68	1083	47
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		0	100		0
Storage Lanes	0		0	0		0	0		0	1		0
Taper Length (ft)	25			25			25			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.960			0.912			0.997			0.994	
Flt Protected		0.975			0.984			0.999		0.950		
Satd. Flow (prot)	0	1744	0	0	1672	0	0	1855	0	1770	1852	0
Flt Permitted		0.975			0.984			0.999		0.950		
Satd. Flow (perm)	0	1744	0	0	1672	0	0	1855	0	1770	1852	0
Link Speed (mph)		25			25			35			35	
Link Distance (ft)		1043			1485			1373			492	
Travel Time (s)		28.4			40.5			26.7			9.6	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	28	10	16	28	2	56	12	998	24	76	1203	52
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	54	0	0	86	0	0	1034	0	76	1255	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	71.5%
	ICU Level of Service C
Analysis Period (min)	15

HCM 6th TWSC
 7: S Point Road (NC 273) & McKee Farm Road/Stowe Road

Henry Chapel TIA
 2023 Build PM - Ph 1A

Intersection												
Int Delay, s/veh	52.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔		↖	↗	
Traffic Vol, veh/h	25	9	14	25	2	50	11	898	22	68	1083	47
Future Vol, veh/h	25	9	14	25	2	50	11	898	22	68	1083	47
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	-	-	-	-	-	-	-	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	28	10	16	28	2	56	12	998	24	76	1203	52

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	2444	2427	1229	2428	2441	1010	1255	0	0	1022	0	0
Stage 1	1381	1381	-	1034	1034	-	-	-	-	-	-	-
Stage 2	1063	1046	-	1394	1407	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	~ 21	32	217	~ 22	31	291	554	-	-	679	-	-
Stage 1	178	211	-	280	309	-	-	-	-	-	-	-
Stage 2	270	305	-	175	205	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	~ 14	27	217	~ 13	26	291	554	-	-	679	-	-
Mov Cap-2 Maneuver	~ 14	27	-	~ 13	26	-	-	-	-	-	-	-
Stage 1	169	187	-	266	294	-	-	-	-	-	-	-
Stage 2	206	290	-	137	182	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, \$	1019.4		900.6		0.1		0.6	
HCM LOS	F		F					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	554	-	-	22	35	679	-	-
HCM Lane V/C Ratio	0.022	-	-	2.424	2.444	0.111	-	-
HCM Control Delay (s)	11.6	0		\$ 1019.4	\$ 900.6	11	-	-
HCM Lane LOS	B	A	-	F	F	B	-	-
HCM 95th %tile Q(veh)	0.1	-	-	6.8	9.6	0.4	-	-

Notes
 ~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Lanes, Volumes, Timings
 8: S Point Road (NC 273) & South Point HS/Red Raider Run

Henry Chapel TIA
 2023 Build PM - Ph 1A



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↕	↗	↖	↕		↖	↗	
Traffic Volume (vph)	0	0	0	200	5	209	10	843	86	120	1013	3
Future Volume (vph)	0	0	0	200	5	209	10	843	86	120	1013	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			4%			-1%			1%	
Storage Length (ft)	0		0	0		100	175		0	100		0
Storage Lanes	0		0	0		1	1		0	1		0
Taper Length (ft)	25			25			100			75		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t						0.850		0.986				
Fl _t Protected					0.954		0.950			0.950		
Satd. Flow (prot)	0	0	0	0	1742	1552	1778	1830	0	1761	1853	0
Fl _t Permitted					0.954		0.950			0.950		
Satd. Flow (perm)	0	0	0	0	1742	1552	1778	1830	0	1761	1853	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		25			25			35			35	
Link Distance (ft)		1017			1038			492			625	
Travel Time (s)		27.7			28.3			9.6			12.2	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	3%	2%	2%	2%	2%
Adj. Flow (vph)	0	0	0	222	6	232	11	937	96	133	1126	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	228	232	11	1033	0	133	1129	0
Turn Type				Perm	NA	pm+ov	Prot	NA		Prot	NA	
Protected Phases					8	1	5	2		1	6	
Permitted Phases				8		8						
Detector Phase				8	8	1	5	2		1	6	
Switch Phase												
Minimum Initial (s)				7.0	7.0	7.0	7.0	10.0		7.0	10.0	
Minimum Split (s)				25.4	25.4	12.6	12.1	27.7		12.6	23.7	
Total Split (s)				26.0	26.0	18.0	13.0	86.0		18.0	91.0	
Total Split (%)				20.0%	20.0%	13.8%	10.0%	66.2%		13.8%	70.0%	
Maximum Green (s)				20.6	20.6	12.4	7.9	80.3		12.4	85.3	
Yellow Time (s)				3.0	3.0	3.0	3.0	3.9		3.0	3.9	
All-Red Time (s)				2.4	2.4	2.6	2.1	1.8		2.6	1.8	
Lost Time Adjust (s)					-0.4	-0.6	-0.1	-0.7		-0.6	-0.7	
Total Lost Time (s)					5.0	5.0	5.0	5.0		5.0	5.0	
Lead/Lag						Lead	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)				2.0	2.0	2.0	2.0	3.0		2.0	3.0	
Recall Mode				None	None	None	None	C-Max		None	C-Max	
Walk Time (s)				7.0	7.0			7.0				
Flash Dont Walk (s)				13.0	13.0			15.0				
Pedestrian Calls (#/hr)				0	0			0				
Act Effct Green (s)					19.5	36.9	7.1	83.1		12.3	98.1	
Actuated g/C Ratio					0.15	0.28	0.05	0.64		0.09	0.75	
v/c Ratio					0.87	0.53	0.11	0.88		0.80	0.81	
Control Delay					84.7	43.7	61.2	30.9		66.2	12.2	

Lanes, Volumes, Timings
 8: S Point Road (NC 273) & South Point HS/Red Raider Run

Henry Chapel TIA
 2023 Build PM - Ph 1A

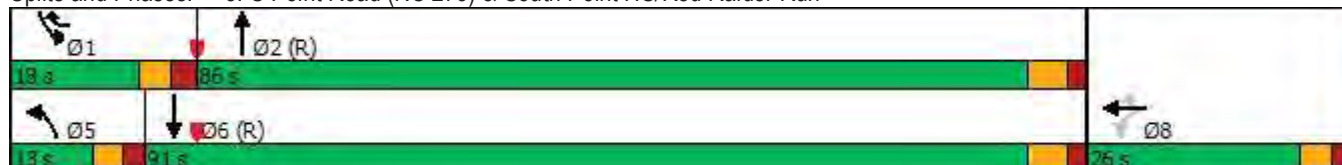


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay					0.0	0.8	0.0	0.0		0.0	4.8	
Total Delay					84.7	44.4	61.2	30.9		66.2	17.0	
LOS					F	D	E	C		E	B	
Approach Delay					64.4			31.2			22.1	
Approach LOS					E			C			C	
Queue Length 50th (ft)					188	161	9	710		106	532	
Queue Length 95th (ft)					#319	245	30	#1068		m112	m551	
Internal Link Dist (ft)		937			958			412			545	
Turn Bay Length (ft)						100	175			100		
Base Capacity (vph)					281	447	109	1170		176	1397	
Starvation Cap Reductn					0	0	0	0		0	205	
Spillback Cap Reductn					0	60	0	0		0	0	
Storage Cap Reductn					0	0	0	0		0	0	
Reduced v/c Ratio					0.81	0.60	0.10	0.88		0.76	0.95	

Intersection Summary
























Area Type: Other
 Cycle Length: 130
 Actuated Cycle Length: 130
 Offset: 44 (34%), Referenced to phase 2:NBT and 6:SBT, Start of Green
 Natural Cycle: 110
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.88
 Intersection Signal Delay: 32.6
 Intersection LOS: C
 Intersection Capacity Utilization 83.2%
 ICU Level of Service E
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 8: S Point Road (NC 273) & South Point HS/Red Raider Run



Lanes, Volumes, Timings
 9: S Point Road (NC 273) & Nixon Road/R L Stowe Road

Henry Chapel TIA
 2023 Build PM - Ph 1A

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	65	96	68	546	106	37	60	494	472	72	537	72
Future Volume (vph)	65	96	68	546	106	37	60	494	472	72	537	72
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		1%			1%			1%			1%	
Storage Length (ft)	200		100	225		0	280		225	25		100
Storage Lanes	1		1	1		0	1		1	1		1
Taper Length (ft)	250			100			100			125		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.961				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1761	1853	1545	1744	1756	0	1761	1853	1545	1761	1853	1560
Flt Permitted	0.950			0.950			0.950			0.210		
Satd. Flow (perm)	1761	1853	1545	1744	1756	0	1761	1853	1545	389	1853	1560
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		25			35			35			35	
Link Distance (ft)		1003			1016			625			1000	
Travel Time (s)		27.4			19.8			12.2			19.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	4%	3%	4%	2%	2%	2%	4%	2%	2%	3%
Adj. Flow (vph)	72	107	76	607	118	41	67	549	524	80	597	80
Shared Lane Traffic (%)												
Lane Group Flow (vph)	72	107	76	607	159	0	67	549	524	80	597	80
Turn Type	Split	NA	pm+ov	Split	NA		Prot	NA	pm+ov	D.Pm	NA	pm+ov
Protected Phases	3	3	5	4	4		5	2	4		6	3
Permitted Phases			3						2	2		6
Detector Phase	3	3	5	4	4		5	2	4	2	6	3
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0		7.0	10.0	7.0	10.0	10.0	7.0
Minimum Split (s)	25.0	25.0	12.8	13.3	13.3		12.8	24.1	13.3	24.1	24.1	25.0
Total Split (s)	25.0	25.0	13.0	47.0	47.0		13.0	58.0	47.0	58.0	45.0	25.0
Total Split (%)	19.2%	19.2%	10.0%	36.2%	36.2%		10.0%	44.6%	36.2%	44.6%	34.6%	19.2%
Maximum Green (s)	19.0	19.0	7.2	40.7	40.7		7.2	51.9	40.7	51.9	38.9	19.0
Yellow Time (s)	3.8	3.8	3.0	4.4	4.4		3.0	3.8	4.4	3.8	3.8	3.8
All-Red Time (s)	2.2	2.2	2.8	1.9	1.9		2.8	2.3	1.9	2.3	2.3	2.2
Lost Time Adjust (s)	-1.0	-1.0	-0.8	-1.3	-1.3		-0.8	-1.1	-1.3	-1.1	-1.1	-1.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lead	Lead	Lag	Lag		Lead		Lag		Lag	Lead
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		2.0	3.0	2.0	3.0	3.0	2.0
Recall Mode	None	None	None	None	None		None	C-Max	None	C-Max	C-Max	None
Walk Time (s)	7.0	7.0						7.0		7.0		7.0
Flash Dont Walk (s)	12.0	12.0						11.0		11.0		12.0
Pedestrian Calls (#/hr)	0	0						0		0		0
Act Effct Green (s)	12.9	12.9	20.8	49.1	49.1		8.0	53.0	107.1	53.0	40.0	57.9
Actuated g/C Ratio	0.10	0.10	0.16	0.38	0.38		0.06	0.41	0.82	0.41	0.31	0.45
v/c Ratio	0.41	0.58	0.31	0.92	0.24		0.63	0.73	0.41	0.51	1.05	0.12
Control Delay	61.1	68.1	27.0	60.0	29.9		67.5	37.8	1.9	42.4	94.0	20.7

Lanes, Volumes, Timings
 9: S Point Road (NC 273) & Nixon Road/R L Stowe Road

Henry Chapel TIA
 2023 Build PM - Ph 1A



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay	0.0	0.0	6.9	0.0	0.0		0.0	2.5	0.6	0.0	19.4	0.0
Total Delay	61.1	68.1	33.9	60.0	29.9		67.5	40.3	2.5	42.4	113.3	20.7
LOS	E	E	C	E	C		E	D	A	D	F	C
Approach Delay		55.9			53.7			24.5			96.1	
Approach LOS		E			D			C			F	
Queue Length 50th (ft)	58	88	30	485	91		56	409	23	50	~546	39
Queue Length 95th (ft)	105	145	50	#772	155		m72	m498	m79	109	#775	66
Internal Link Dist (ft)		923			936			545			920	
Turn Bay Length (ft)	200		100	225			280		225	25		100
Base Capacity (vph)	270	285	248	658	663		108	755	1273	158	571	780
Starvation Cap Reductn	0	0	0	0	0		0	107	390	0	0	0
Spillback Cap Reductn	0	0	130	0	0		0	0	0	0	27	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.27	0.38	0.64	0.92	0.24		0.62	0.85	0.59	0.51	1.10	0.10

Intersection Summary

Area Type: Other
 Cycle Length: 130
 Actuated Cycle Length: 130
 Offset: 0 (0%), Referenced to phase 2:NBSB and 6:SBT, Start of Green
 Natural Cycle: 150
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.05
 Intersection Signal Delay: 53.5
 Intersection LOS: D
 Intersection Capacity Utilization 87.1%
 ICU Level of Service E
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 9: S Point Road (NC 273) & Nixon Road/R L Stowe Road



Lanes, Volumes, Timings
 10: Henry Chapel Road & Access 1

Henry Chapel TIA
 2023 Build PM - Ph 1A



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↔	↔		↔	
Traffic Volume (vph)	0	110	73	0	0	0
Future Volume (vph)	0	110	73	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fr						
Flt Protected						
Satd. Flow (prot)	0	1863	1743	0	1863	0
Flt Permitted						
Satd. Flow (perm)	0	1863	1743	0	1863	0
Link Speed (mph)		25	25		25	
Link Distance (ft)		1293	1432		1041	
Travel Time (s)		35.3	39.1		28.4	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	9%	2%	2%	2%
Adj. Flow (vph)	0	122	81	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	122	81	0	0	0
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	9.1%
ICU Level of Service	A
Analysis Period (min)	15

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	0	110	73	0	0	0
Future Vol, veh/h	0	110	73	0	0	0
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	90	90	90	90	90	90
Heavy Vehicles, %	2	2	9	2	2	2
Mvmt Flow	0	122	81	0	0	0

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	81	0	-	0	203 81
Stage 1	-	-	-	-	81 -
Stage 2	-	-	-	-	122 -
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	1517	-	-	-	786 979
Stage 1	-	-	-	-	942 -
Stage 2	-	-	-	-	903 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1517	-	-	-	786 979
Mov Cap-2 Maneuver	-	-	-	-	786 -
Stage 1	-	-	-	-	942 -
Stage 2	-	-	-	-	903 -

Approach	EB	WB	SB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1517	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	-	0
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	-

Lanes, Volumes, Timings
 11: Henry Chapel Road & Access 2



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↔	↔		↔	
Traffic Volume (vph)	77	33	27	0	0	46
Future Volume (vph)	77	33	27	0	0	46
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t					0.865	
Fl _t Protected		0.966				
Satd. Flow (prot)	0	1799	1743	0	1611	0
Fl _t Permitted		0.966				
Satd. Flow (perm)	0	1799	1743	0	1611	0
Link Speed (mph)		25	25		25	
Link Distance (ft)		1432	1164		1055	
Travel Time (s)		39.1	31.7		28.8	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	9%	2%	2%	2%
Adj. Flow (vph)	86	37	30	0	0	51
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	123	30	0	51	0
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	22.7%
ICU Level of Service	A
Analysis Period (min)	15

Intersection						
Int Delay, s/veh	5.3					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	77	33	27	0	0	46
Future Vol, veh/h	77	33	27	0	0	46
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	90	90	90	90	90	90
Heavy Vehicles, %	2	2	9	2	2	2
Mvmt Flow	86	37	30	0	0	51

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	30	0	-	0	239 30
Stage 1	-	-	-	-	30 -
Stage 2	-	-	-	-	209 -
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	1583	-	-	-	749 1044
Stage 1	-	-	-	-	993 -
Stage 2	-	-	-	-	826 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1583	-	-	-	708 1044
Mov Cap-2 Maneuver	-	-	-	-	708 -
Stage 1	-	-	-	-	938 -
Stage 2	-	-	-	-	826 -

Approach	EB	WB	SB
HCM Control Delay, s	5.2	0	8.6
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1583	-	-	-	1044
HCM Lane V/C Ratio	0.054	-	-	-	0.049
HCM Control Delay (s)	7.4	0	-	-	8.6
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0.2	-	-	-	0.2


















2023 Build-out Conditions
Improved

Lanes, Volumes, Timings

2: S Point Road (NC 273) & S Point Church Road/Henry Chapel Road

Henry Chapel TIA

2023 Build IMP AM - Ph 1A

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	1	8	0	82	0	826	3	29	324	5
Future Volume (vph)	0	0	1	8	0	82	0	826	3	29	324	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		100	0		0	0		0
Storage Lanes	0		0	0		1	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.865				0.850						0.998
Flt Protected					0.950							0.996
Satd. Flow (prot)	0	1611	0	0	1770	1538	0	1857	0	0	1758	0
Flt Permitted					0.950							0.996
Satd. Flow (perm)	0	1611	0	0	1770	1538	0	1857	0	0	1758	0
Link Speed (mph)		25			25			45			45	
Link Distance (ft)		1509			1293			1519			881	
Travel Time (s)		41.2			35.3			23.0			13.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	2%	2%	5%	2%	2%	100%	2%	8%	2%
Adj. Flow (vph)	0	0	1	9	0	91	0	918	3	32	360	6
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1	0	0	9	91	0	921	0	0	398	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	62.1%
Analysis Period (min)	15
	ICU Level of Service B

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	1	8	0	82	0	826	3	29	324	5
Future Vol, veh/h	0	0	1	8	0	82	0	826	3	29	324	5
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	-	-	-	-	-	100	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	5	2	2	100	2	8	2
Mvmt Flow	0	0	1	9	0	91	0	918	3	32	360	6



















Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	1392	1348	363	1348	1350	920	366	0	0	921	0	0
Stage 1	427	427	-	920	920	-	-	-	-	-	-	-
Stage 2	965	921	-	428	430	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.25	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.345	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	119	151	682	128	150	324	1193	-	-	741	-	-
Stage 1	606	585	-	325	350	-	-	-	-	-	-	-
Stage 2	306	349	-	605	583	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	82	143	682	122	142	324	1193	-	-	741	-	-
Mov Cap-2 Maneuver	82	143	-	122	142	-	-	-	-	-	-	-
Stage 1	606	553	-	325	350	-	-	-	-	-	-	-
Stage 2	220	349	-	571	552	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10.3	21.9	0	0.8
HCM LOS	B	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1193	-	-	682	122	324	741	-	-
HCM Lane V/C Ratio	-	-	-	0.002	0.073	0.281	0.043	-	-
HCM Control Delay (s)	0	-	-	10.3	36.8	20.4	10.1	0	-
HCM Lane LOS	A	-	-	B	E	C	B	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0.2	1.1	0.1	-	-

Lanes, Volumes, Timings
 7: S Point Road (NC 273) & McKee Farm Road/Stowe Road

Henry Chapel TIA
 2023 Build IMP AM - Ph 1A

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	14	5	19	16	1	55	25	1086	52	37	712	68
Future Volume (vph)	14	5	19	16	1	55	25	1086	52	37	712	68
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		200	0		0	0		0	100		0
Storage Lanes	0		1	0		0	0		0	1		0
Taper Length (ft)	25			25			25			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.897			0.994			0.987	
Flt Protected		0.965			0.989			0.999		0.950		
Satd. Flow (prot)	0	1798	1524	0	1653	0	0	1850	0	1703	1790	0
Flt Permitted		0.965			0.989			0.999		0.950		
Satd. Flow (perm)	0	1798	1524	0	1653	0	0	1850	0	1703	1790	0
Link Speed (mph)		25			25			35			35	
Link Distance (ft)		1043			1485			1373			492	
Travel Time (s)		28.4			40.5			26.7			9.6	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	6%	2%	2%	2%	2%	2%	2%	6%	5%	2%
Adj. Flow (vph)	16	6	21	18	1	61	28	1207	58	41	791	76
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	22	21	0	80	0	0	1293	0	41	867	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary	
Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	98.2% ICU Level of Service F
Analysis Period (min)	15

HCM 6th TWSC
 7: S Point Road (NC 273) & McKee Farm Road/Stowe Road

Henry Chapel TIA
 2023 Build IMP AM - Ph 1A

Intersection												
Int Delay, s/veh	13.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗		↕			↕		↗	↘	
Traffic Vol, veh/h	14	5	19	16	1	55	25	1086	52	37	712	68
Future Vol, veh/h	14	5	19	16	1	55	25	1086	52	37	712	68
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	-	-	200	-	-	-	-	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	6	2	2	2	2	2	2	6	5	2
Mvmt Flow	16	6	21	18	1	61	28	1207	58	41	791	76

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	2234	2232	829	2217	2241	1236	867	0	0	1265	0	0
Stage 1	911	911	-	1292	1292	-	-	-	-	-	-	-
Stage 2	1323	1321	-	925	949	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.26	7.12	6.52	6.22	4.12	-	-	4.16	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.354	3.518	4.018	3.318	2.218	-	-	2.254	-	-
Pot Cap-1 Maneuver	30	43	364	31	42	215	777	-	-	536	-	-
Stage 1	328	353	-	200	233	-	-	-	-	-	-	-
Stage 2	192	226	-	323	339	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	18	35	364	22	34	215	777	-	-	536	-	-
Mov Cap-2 Maneuver	18	35	-	22	34	-	-	-	-	-	-	-
Stage 1	287	326	-	175	204	-	-	-	-	-	-	-
Stage 2	120	198	-	276	313	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	235.8		247.1		0.2		0.6	
HCM LOS	F		F					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	777	-	-	21	364	71	536	-	-
HCM Lane V/C Ratio	0.036	-	-	1.005	0.058	1.127	0.077	-	-
HCM Control Delay (s)	9.8	0	-	\$ 456.1	15.5	247.1	12.3	-	-
HCM Lane LOS	A	A	-	F	C	F	B	-	-
HCM 95th %tile Q(veh)	0.1	-	-	2.8	0.2	6.1	0.2	-	-

Lanes, Volumes, Timings

2: S Point Road (NC 273) & S Point Church Road/Henry Chapel Road

Henry Chapel TIA

2023 Build IMP PM - Ph 1A



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕	↕		↕			↕	
Traffic Volume (vph)	1	0	0	10	0	63	0	646	13	97	758	2
Future Volume (vph)	1	0	0	10	0	63	0	646	13	97	758	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		100	0		0	0		0
Storage Lanes	0		0	0		1	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt						0.850		0.997				
Flt Protected		0.950			0.950						0.994	
Satd. Flow (prot)	0	1770	0	0	1770	1468	0	1839	0	0	1836	0
Flt Permitted		0.950			0.950						0.994	
Satd. Flow (perm)	0	1770	0	0	1770	1468	0	1839	0	0	1836	0
Link Speed (mph)		25			25			45			45	
Link Distance (ft)		1509			1293			1519			881	
Travel Time (s)		41.2			35.3			23.0			13.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	2%	2%	10%	2%	3%	2%	2%	3%	2%
Adj. Flow (vph)	1	0	0	11	0	70	0	718	14	108	842	2
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1	0	0	11	70	0	732	0	0	952	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	93.5%
Analysis Period (min)	15
	ICU Level of Service F

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	1	0	0	10	0	63	0	646	13	97	758	2
Future Vol, veh/h	1	0	0	10	0	63	0	646	13	97	758	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	-	-	-	-	-	100	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	10	2	3	2	2	3	2
Mvmt Flow	1	0	0	11	0	70	0	718	14	108	842	2



















Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1819	1791	843	1784	1785	725	844	0	0	732	0	0
Stage 1	1059	1059	-	725	725	-	-	-	-	-	-	-
Stage 2	760	732	-	1059	1060	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.3	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.39	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	60	81	364	63	82	412	792	-	-	873	-	-
Stage 1	271	301	-	416	430	-	-	-	-	-	-	-
Stage 2	398	427	-	271	301	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	41	62	364	52	63	412	792	-	-	873	-	-
Mov Cap-2 Maneuver	41	62	-	52	63	-	-	-	-	-	-	-
Stage 1	271	231	-	416	430	-	-	-	-	-	-	-
Stage 2	330	427	-	208	231	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	95.2	26	0	1.1
HCM LOS	F	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	792	-	-	41	52	412	873	-	-
HCM Lane V/C Ratio	-	-	-	0.027	0.214	0.17	0.123	-	-
HCM Control Delay (s)	0	-	-	95.2	92.1	15.5	9.7	0	-
HCM Lane LOS	A	-	-	F	F	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.7	0.6	0.4	-	-

Lanes, Volumes, Timings
 7: S Point Road (NC 273) & McKee Farm Road/Stowe Road

Henry Chapel TIA
 2023 Build IMP PM - Ph 1A

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	25	9	14	25	2	50	11	898	22	68	1083	47
Future Volume (vph)	25	9	14	25	2	50	11	898	22	68	1083	47
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		200	0		0	0		0	100		0
Storage Lanes	0		1	0		0	0		0	1		0
Taper Length (ft)	25			25			25			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.912			0.997			0.994	
Flt Protected		0.964			0.984			0.999		0.950		
Satd. Flow (prot)	0	1796	1583	0	1672	0	0	1855	0	1770	1852	0
Flt Permitted		0.964			0.984			0.999		0.950		
Satd. Flow (perm)	0	1796	1583	0	1672	0	0	1855	0	1770	1852	0
Link Speed (mph)		25			25			35			35	
Link Distance (ft)		1043			1485			1373			492	
Travel Time (s)		28.4			40.5			26.7			9.6	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	28	10	16	28	2	56	12	998	24	76	1203	52
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	38	16	0	86	0	0	1034	0	76	1255	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	77.7%
ICU Level of Service	D
Analysis Period (min)	15

HCM 6th TWSC
 7: S Point Road (NC 273) & McKee Farm Road/Stowe Road

Henry Chapel TIA
 2023 Build IMP PM - Ph 1A

Intersection												
Int Delay, s/veh	48.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗		↕			↕		↗	↘	
Traffic Vol, veh/h	25	9	14	25	2	50	11	898	22	68	1083	47
Future Vol, veh/h	25	9	14	25	2	50	11	898	22	68	1083	47
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	-	-	200	-	-	-	-	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	28	10	16	28	2	56	12	998	24	76	1203	52

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	2444	2427	1229	2428	2441	1010	1255	0	0	1022	0	0
Stage 1	1381	1381	-	1034	1034	-	-	-	-	-	-	-
Stage 2	1063	1046	-	1394	1407	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	~ 21	32	217	~ 22	31	291	554	-	-	679	-	-
Stage 1	178	211	-	280	309	-	-	-	-	-	-	-
Stage 2	270	305	-	175	205	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	~ 14	27	217	~ 13	26	291	554	-	-	679	-	-
Mov Cap-2 Maneuver	~ 14	27	-	~ 13	26	-	-	-	-	-	-	-
Stage 1	169	187	-	266	294	-	-	-	-	-	-	-
Stage 2	206	290	-	137	182	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	795.2		\$ 900.6		0.1		0.6	
HCM LOS	F		F					

















Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	554	-	-	16	217	35	679	-	-
HCM Lane V/C Ratio	0.022	-	-	2.361	0.072	2.444	0.111	-	-
HCM Control Delay (s)	11.6	0	\$ 1113.2	22.9	\$ 900.6	11	-	-	-
HCM Lane LOS	B	A	-	F	C	F	B	-	-
HCM 95th %tile Q(veh)	0.1	-	-	5.4	0.2	9.6	0.4	-	-

Notes
 ~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

2024 Background Conditions

Lanes, Volumes, Timings
 1: S Point Road (NC 273) & Armstrong Road (NC 273)/Farm Road

Henry Chapel TIA
 2024 Background AM - Ph 1B

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	546	0	29	0	0	0	62	167	0	0	65	212
Future Volume (vph)	546	0	29	0	0	0	62	167	0	0	65	212
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.993										0.897
Flt Protected		0.955						0.987				
Satd. Flow (prot)	0	1737	0	0	1863	0	0	1782	0	0	1556	0
Flt Permitted		0.955						0.987				
Satd. Flow (perm)	0	1737	0	0	1863	0	0	1782	0	0	1556	0
Link Speed (mph)		45			25			45			45	
Link Distance (ft)		1234			1013			1002			3097	
Travel Time (s)		18.7			27.6			15.2			46.9	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	36%	2%	2%	2%	14%	2%	2%	2%	8%	10%
Adj. Flow (vph)	607	0	32	0	0	0	69	186	0	0	72	236
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	639	0	0	0	0	0	255	0	0	308	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	70.7%
ICU Level of Service	C
Analysis Period (min)	15

HCM 6th TWSC
 1: S Point Road (NC 273) & Armstrong Road (NC 273)/Farm Road

Henry Chapel TIA
 2024 Background AM - Ph 1B

Intersection												
Int Delay, s/veh	115.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	546	0	29	0	0	0	62	167	0	0	65	212
Future Vol, veh/h	546	0	29	0	0	0	62	167	0	0	65	212
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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	36	2	2	2	14	2	2	2	8	10
Mvmt Flow	607	0	32	0	0	0	69	186	0	0	72	236

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	514	514	190	530	632	186	308	0	0	186	0	0
Stage 1	190	190	-	324	324	-	-	-	-	-	-	-
Stage 2	324	324	-	206	308	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.56	7.12	6.52	6.22	4.24	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.624	3.518	4.018	3.318	2.326	-	-	2.218	-	-
Pot Cap-1 Maneuver	~ 471	464	772	460	398	856	1188	-	-	1388	-	-
Stage 1	812	743	-	688	650	-	-	-	-	-	-	-
Stage 2	688	650	-	796	660	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	~ 447	434	772	419	372	856	1188	-	-	1388	-	-
Mov Cap-2 Maneuver	~ 447	434	-	419	372	-	-	-	-	-	-	-
Stage 1	759	743	-	643	608	-	-	-	-	-	-	-
Stage 2	643	608	-	763	660	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	216.3	0	2.2	0
HCM LOS	F	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1188	-	-	457	1388	-	-
HCM Lane V/C Ratio	0.058	-	-	1.398	-	-	-
HCM Control Delay (s)	8.2	0	-	216.3	0	0	-
HCM Lane LOS	A	A	-	F	A	A	-
HCM 95th %tile Q(veh)	0.2	-	-	30.6	-	0	-

Notes
 ~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Lanes, Volumes, Timings

2: S Point Road (NC 273) & S Point Church Road/Henry Chapel Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	0	0	1	1	0	21	0	844	1	7	331	5
Future Volume (vph)	0	0	1	1	0	21	0	844	1	7	331	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.865			0.871						0.998	
Flt Protected					0.998						0.999	
Satd. Flow (prot)	0	1611	0	0	1575	0	0	1861	0	0	1758	0
Flt Permitted					0.998						0.999	
Satd. Flow (perm)	0	1611	0	0	1575	0	0	1861	0	0	1758	0
Link Speed (mph)		25			25			45			45	
Link Distance (ft)		1509			1293			1519			881	
Travel Time (s)		41.2			35.3			23.0			13.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	2%	2%	5%	2%	2%	100%	2%	8%	2%
Adj. Flow (vph)	0	0	1	1	0	23	0	938	1	8	368	6
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1	0	0	24	0	0	939	0	0	382	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 54.5%

ICU Level of Service A

Analysis Period (min) 15

Intersection												
Int Delay, s/veh	0.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Vol, veh/h	0	0	1	1	0	21	0	844	1	7	331	5
Future Vol, veh/h	0	0	1	1	0	21	0	844	1	7	331	5
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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	5	2	2	100	2	8	2
Mvmt Flow	0	0	1	1	0	23	0	938	1	8	368	6

















Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1337	1326	371	1327	1329	939	374	0	0	939	0	0
Stage 1	387	387	-	939	939	-	-	-	-	-	-	-
Stage 2	950	939	-	388	390	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.25	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.345	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	130	156	675	132	155	316	1184	-	-	730	-	-
Stage 1	637	610	-	317	343	-	-	-	-	-	-	-
Stage 2	312	343	-	636	608	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	119	154	675	130	153	316	1184	-	-	730	-	-
Mov Cap-2 Maneuver	119	154	-	130	153	-	-	-	-	-	-	-
Stage 1	637	601	-	317	343	-	-	-	-	-	-	-
Stage 2	289	343	-	626	599	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10.3	18.2	0	0.2
HCM LOS	B	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1184	-	-	675	297	730	-	-
HCM Lane V/C Ratio	-	-	-	0.002	0.082	0.011	-	-
HCM Control Delay (s)	0	-	-	10.3	18.2	10	0	-
HCM Lane LOS	A	-	-	B	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0.3	0	-	-

Lanes, Volumes, Timings
 3: S Point Road (NC 273) & BB Drive/Forest Hill Road

Henry Chapel TIA
 2024 Background AM - Ph 1B

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	0	0	5	0	20	0	1030	7	7	390	2
Future Volume (vph)	4	0	0	5	0	20	0	1030	7	7	390	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.894			0.999				0.999
Flt Protected		0.950			0.989							0.999
Satd. Flow (prot)	0	1770	0	0	1610	0	0	1859	0	0	1774	0
Flt Permitted		0.950			0.989							0.999
Satd. Flow (perm)	0	1770	0	0	1610	0	0	1859	0	0	1774	0
Link Speed (mph)		25			25			45			45	
Link Distance (ft)		1341			477			2444			1975	
Travel Time (s)		36.6			13.0			37.0			29.9	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	2%	2%	5%	2%	2%	17%	2%	7%	2%
Adj. Flow (vph)	4	0	0	6	0	22	0	1144	8	8	433	2
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	4	0	0	28	0	0	1152	0	0	443	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	64.6%
	ICU Level of Service C
Analysis Period (min)	15

Intersection												
Int Delay, s/veh	0.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	4	0	0	5	0	20	0	1030	7	7	390	2
Future Vol, veh/h	4	0	0	5	0	20	0	1030	7	7	390	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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	5	2	2	17	2	7	2
Mvmt Flow	4	0	0	6	0	22	0	1144	8	8	433	2

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1609	1602	434	1598	1599	1148	435	0	0	1152	0	0
Stage 1	450	450	-	1148	1148	-	-	-	-	-	-	-
Stage 2	1159	1152	-	450	451	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.25	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.345	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	84	106	622	86	106	239	1125	-	-	606	-	-
Stage 1	589	572	-	242	273	-	-	-	-	-	-	-
Stage 2	238	272	-	589	571	-	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	75	104	622	85	104	239	1125	-	-	606	-	-
Mov Cap-2 Maneuver	75	104	-	85	104	-	-	-	-	-	-	-
Stage 1	589	562	-	242	273	-	-	-	-	-	-	-
Stage 2	216	272	-	579	561	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	56		29.4		0		0.2	
HCM LOS	F		D					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1125	-	-	75	175	606	-	-
HCM Lane V/C Ratio	-	-	-	0.059	0.159	0.013	-	-
HCM Control Delay (s)	0	-	-	56	29.4	11	0	-
HCM Lane LOS	A	-	-	F	D	B	A	-
HCM 95th %tile Q(veh)	0	-	-	0.2	0.6	0	-	-

Lanes, Volumes, Timings
4: Colonial Drive & Forest Hill Road

Henry Chapel TIA
2024 Background AM - Ph 1B



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	7	2	0	12	18	1
Future Volume (vph)	7	2	0	12	18	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.973			0.994		
Flt Protected				0.955		
Satd. Flow (prot)	1812	0	0	1863	1768	0
Flt Permitted				0.955		
Satd. Flow (perm)	1812	0	0	1863	1768	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	477			1074	636	
Travel Time (s)	13.0			29.3	17.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	8	2	0	13	20	1
Shared Lane Traffic (%)						
Lane Group Flow (vph)	10	0	0	13	21	0
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	13.3% ICU Level of Service A
Analysis Period (min)	15

Intersection						
Int Delay, s/veh	4.1					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	7	2	0	12	18	1
Future Vol, veh/h	7	2	0	12	18	1
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	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	8	2	0	13	20	1

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	10	0	22
Stage 1	-	-	-	-	9
Stage 2	-	-	-	-	13
Critical Hdwy	-	-	4.12	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	-	-	2.218	-	3.518
Pot Cap-1 Maneuver	-	-	1610	-	995
Stage 1	-	-	-	-	1014
Stage 2	-	-	-	-	1010
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1610	-	995
Mov Cap-2 Maneuver	-	-	-	-	995
Stage 1	-	-	-	-	1014
Stage 2	-	-	-	-	1010

Approach	EB	WB	NB
HCM Control Delay, s	0	0	8.7
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	999	-	-	1610	-
HCM Lane V/C Ratio	0.021	-	-	-	-
HCM Control Delay (s)	8.7	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Lanes, Volumes, Timings
5: Colonial Drive & Timber Ridge Road

Henry Chapel TIA
2024 Background AM - Ph 1B



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	9	8	0	1	2
Future Volume (vph)	0	9	8	0	1	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.865					
Flt Protected						0.984
Satd. Flow (prot)	1611	0	1863	0	0	1833
Flt Permitted						0.984
Satd. Flow (perm)	1611	0	1863	0	0	1833
Link Speed (mph)	25		25		25	
Link Distance (ft)	1207		1055		636	
Travel Time (s)	32.9		28.8		17.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	10	9	0	1	2
Shared Lane Traffic (%)						
Lane Group Flow (vph)	10	0	9	0	0	3
Sign Control	Stop		Free		Free	

Intersection Summary	
Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	13.3% ICU Level of Service A
Analysis Period (min)	15

Intersection						
Int Delay, s/veh	4.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	9	8	0	1	2
Future Vol, veh/h	0	9	8	0	1	2
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	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	10	9	0	1	2





















Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	13	9	0	0	9
Stage 1	9	-	-	-	-
Stage 2	4	-	-	-	-
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	1006	1073	-	-	1611
Stage 1	1014	-	-	-	-
Stage 2	1019	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	1005	1073	-	-	1611
Mov Cap-2 Maneuver	1005	-	-	-	-
Stage 1	1014	-	-	-	-
Stage 2	1018	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.4	0	2.4
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	1073	1611
HCM Lane V/C Ratio	-	-	0.009	0.001
HCM Control Delay (s)	-	-	8.4	7.2
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0	0

Lanes, Volumes, Timings
6: S Point Road (NC 273) & Belmont MS/Belwood Drive

Henry Chapel TIA
2024 Background AM - Ph 1B

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	254	1	42	2	2	32	91	824	1	22	431	280
Future Volume (vph)	254	1	42	2	2	32	91	824	1	22	431	280
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		3%			0%			1%			0%	
Storage Length (ft)	0		175	0		0	200		0	100		200
Storage Lanes	0		1	0		0	1		0	1		1
Taper Length (ft)	25			25			100			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.878							0.850
Flt Protected		0.953			0.998		0.950			0.950		
Satd. Flow (prot)	0	1732	1560	0	1519	0	1744	1853	0	1770	1759	1568
Flt Permitted		0.953			0.998		0.950			0.132		
Satd. Flow (perm)	0	1732	1560	0	1519	0	1744	1853	0	246	1759	1568
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		35			25			35			35	
Link Distance (ft)		1017			1050			1975			1373	
Travel Time (s)		19.8			28.6			38.5			26.7	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	3%	2%	2%	100%	2%	5%	3%	2%	2%	2%	8%	3%
Adj. Flow (vph)	282	1	47	2	2	36	101	916	1	24	479	311
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	283	47	0	40	0	101	917	0	24	479	311
Turn Type	Split	NA	pm+ov	Split	NA		Prot	NA		Perm	NA	pm+ov
Protected Phases	4	4	5	8	8		5	2			6	4
Permitted Phases			4							6		6
Detector Phase	4	4	5	8	8		5	2		6	6	4
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0		7.0	12.0		12.0	12.0	7.0
Minimum Split (s)	11.9	11.9	12.1	14.0	14.0		12.1	17.6		32.6	32.6	11.9
Total Split (s)	31.0	31.0	19.0	14.0	14.0		19.0	75.0		56.0	56.0	31.0
Total Split (%)	25.8%	25.8%	15.8%	11.7%	11.7%		15.8%	62.5%		46.7%	46.7%	25.8%
Maximum Green (s)	26.1	26.1	13.9	7.0	7.0		13.9	69.4		50.4	50.4	26.1
Yellow Time (s)	3.0	3.0	3.0	5.0	5.0		3.0	4.5		4.5	4.5	3.0
All-Red Time (s)	1.9	1.9	2.1	2.0	2.0		2.1	1.1		1.1	1.1	1.9
Lost Time Adjust (s)		0.1	-0.1		-2.0		-0.1	-0.6		-0.6	-0.6	0.1
Total Lost Time (s)		5.0	5.0		5.0		5.0	5.0		5.0	5.0	5.0
Lead/Lag			Lead				Lead			Lag	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		2.0	6.0		6.0	6.0	2.0
Minimum Gap (s)	2.0	2.0	2.0	2.0	2.0		2.0	3.0		3.0	3.0	2.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0		0.0	15.0		15.0	15.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0		0.0	45.0		45.0	45.0	0.0
Recall Mode	None	None	None	None	None		None	Min		Min	Min	None
Walk Time (s)										7.0	7.0	
Flash Dont Walk (s)										20.0	20.0	
Pedestrian Calls (#/hr)										0	0	
Act Efect Green (s)		20.2	34.7		10.4		11.1	52.2		40.3	40.3	68.4

Lanes, Volumes, Timings
 6: S Point Road (NC 273) & Belmont MS/Belwood Drive

Henry Chapel TIA
 2024 Background AM - Ph 1B



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Actuated g/C Ratio		0.22	0.38		0.11		0.12	0.58		0.44	0.44	0.75
v/c Ratio		0.74	0.08		0.23		0.47	0.86		0.22	0.61	0.26
Control Delay		50.3	17.0		52.4		53.8	27.8		28.0	27.3	6.9
Queue Delay		0.0	0.0		0.0		0.0	0.0		0.0	0.0	0.0
Total Delay		50.3	17.0		52.4		53.8	27.8		28.0	27.3	6.9
LOS		D	B		D		D	C		C	C	A
Approach Delay		45.6			52.4			30.3			19.5	
Approach LOS		D			D			C			B	
Queue Length 50th (ft)		173	15		24		63	496		10	251	77
Queue Length 95th (ft)		#329	40		67		133	776		36	406	129
Internal Link Dist (ft)		937			970			1895			1293	
Turn Bay Length (ft)			175				200			100		200
Base Capacity (vph)		574	683		174		311	1430		151	1084	1237
Starvation Cap Reductn		0	0		0		0	0		0	0	0
Spillback Cap Reductn		0	0		0		0	0		0	0	0
Storage Cap Reductn		0	0		0		0	0		0	0	0
Reduced v/c Ratio		0.49	0.07		0.23		0.32	0.64		0.16	0.44	0.25

Intersection Summary


















Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 90.7
 Natural Cycle: 90
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.86
 Intersection Signal Delay: 29.0
 Intersection LOS: C
 Intersection Capacity Utilization 86.7%
 ICU Level of Service E
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 6: S Point Road (NC 273) & Belmont MS/Belwood Drive



Lanes, Volumes, Timings
 7: S Point Road (NC 273) & McKee Farm Road/Stowe Road

Henry Chapel TIA
 2024 Background AM - Ph 1B

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	15	5	20	17	1	57	25	1050	53	38	707	69
Future Volume (vph)	15	5	20	17	1	57	25	1050	53	38	707	69
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		0	100		0
Storage Lanes	0		0	0		0	0		0	1		0
Taper Length (ft)	25			25			25			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.934			0.898			0.994			0.987	
Flt Protected		0.981			0.989			0.999		0.950		
Satd. Flow (prot)	0	1675	0	0	1654	0	0	1850	0	1703	1791	0
Flt Permitted		0.981			0.989			0.999		0.950		
Satd. Flow (perm)	0	1675	0	0	1654	0	0	1850	0	1703	1791	0
Link Speed (mph)		25			25			35			35	
Link Distance (ft)		1043			1485			1373			492	
Travel Time (s)		28.4			40.5			26.7			9.6	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	6%	2%	2%	2%	2%	2%	2%	6%	5%	2%
Adj. Flow (vph)	17	6	22	19	1	63	28	1167	59	42	786	77
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	45	0	0	83	0	0	1254	0	42	863	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary	
Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	90.5% ICU Level of Service E
Analysis Period (min)	15

HCM 6th TWSC
 7: S Point Road (NC 273) & McKee Farm Road/Stowe Road

Henry Chapel TIA
 2024 Background AM - Ph 1B

Intersection												
Int Delay, s/veh	14.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕		↕	↕	↕
Traffic Vol, veh/h	15	5	20	17	1	57	25	1050	53	38	707	69
Future Vol, veh/h	15	5	20	17	1	57	25	1050	53	38	707	69
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	-	-	-	-	-	-	-	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	6	2	2	2	2	2	2	6	5	2
Mvmt Flow	17	6	22	19	1	63	28	1167	59	42	786	77

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	2194	2191	825	2176	2200	1197	863	0	0	1226	0	0
Stage 1	909	909	-	1253	1253	-	-	-	-	-	-	-
Stage 2	1285	1282	-	923	947	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.26	7.12	6.52	6.22	4.12	-	-	4.16	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.354	3.518	4.018	3.318	2.218	-	-	2.254	-	-
Pot Cap-1 Maneuver	32	45	366	33	45	226	779	-	-	555	-	-
Stage 1	329	354	-	211	244	-	-	-	-	-	-	-
Stage 2	202	236	-	323	340	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	19	37	366	24	37	226	779	-	-	555	-	-
Mov Cap-2 Maneuver	19	37	-	24	37	-	-	-	-	-	-	-
Stage 1	291	327	-	187	216	-	-	-	-	-	-	-
Stage 2	128	209	-	276	314	-	-	-	-	-	-	-



















Approach	EB	WB	NB	SB
HCM Control Delay, s	319.5	228.5	0.2	0.6
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	779	-	-	41	76	555	-	-
HCM Lane V/C Ratio	0.036	-	-	1.084	1.096	0.076	-	-
HCM Control Delay (s)	9.8	0		\$ 319.5	228.5	12	-	-
HCM Lane LOS	A	A	-	F	F	B	-	-
HCM 95th %tile Q(veh)	0.1	-	-	4.3	6.1	0.2	-	-

Notes
 ~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Lanes, Volumes, Timings
8: S Point Road (NC 273) & South Point HS/Red Raider Run

Henry Chapel TIA
2024 Background AM - Ph 1B

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	131	34	147	59	950	82	96	685	51
Future Volume (vph)	0	0	0	131	34	147	59	950	82	96	685	51
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			4%			-1%			1%	
Storage Length (ft)	0		0	0		100	175		0	100		0
Storage Lanes	0		0	0		1	1		0	1		0
Taper Length (ft)	25			25			100			75		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t						0.850		0.988			0.990	
Fl _t Protected					0.962		0.950			0.950		
Satd. Flow (prot)	0	0	0	0	1756	1552	1778	1850	0	1761	1770	0
Fl _t Permitted					0.962		0.950			0.950		
Satd. Flow (perm)	0	0	0	0	1756	1552	1778	1850	0	1761	1770	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		25			25			35			35	
Link Distance (ft)		1017			1038			492			625	
Travel Time (s)		27.7			28.3			9.6			12.2	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	6%	2%
Adj. Flow (vph)	0	0	0	146	38	163	66	1056	91	107	761	57
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	184	163	66	1147	0	107	818	0
Turn Type				Perm	NA	pm+ov	Prot	NA		Prot	NA	
Protected Phases					8	1	5	2		1	6	
Permitted Phases				8		8						
Detector Phase				8	8	1	5	2		1	6	
Switch Phase												
Minimum Initial (s)				7.0	7.0	7.0	7.0	10.0		7.0	10.0	
Minimum Split (s)				25.4	25.4	12.6	12.1	27.7		12.6	23.7	
Total Split (s)				26.0	26.0	13.0	15.0	81.0		13.0	79.0	
Total Split (%)				21.7%	21.7%	10.8%	12.5%	67.5%		10.8%	65.8%	
Maximum Green (s)				20.6	20.6	7.4	9.9	75.3		7.4	73.3	
Yellow Time (s)				3.0	3.0	3.0	3.0	3.9		3.0	3.9	
All-Red Time (s)				2.4	2.4	2.6	2.1	1.8		2.6	1.8	
Lost Time Adjust (s)					-0.4	-0.6	-0.1	-0.7		-0.6	-0.7	
Total Lost Time (s)					5.0	5.0	5.0	5.0		5.0	5.0	
Lead/Lag						Lead	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)				2.0	2.0	2.0	2.0	3.0		2.0	3.0	
Recall Mode				None	None	None	None	C-Max		None	C-Max	
Walk Time (s)				7.0	7.0			7.0				
Flash Dont Walk (s)				13.0	13.0			15.0				
Pedestrian Calls (#/hr)				0	0			0				
Act Effct Green (s)					16.8	32.0	8.8	78.0		10.3	81.8	
Actuated g/C Ratio					0.14	0.27	0.07	0.65		0.09	0.68	
v/c Ratio					0.75	0.39	0.50	0.95		0.71	0.68	
Control Delay					68.1	38.6	66.7	38.2		79.1	10.6	

Lanes, Volumes, Timings
 8: S Point Road (NC 273) & South Point HS/Red Raider Run

Henry Chapel TIA
 2024 Background AM - Ph 1B



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay					0.0	0.0	0.0	0.0		0.0	0.4	
Total Delay					68.1	38.6	66.7	38.2		79.1	11.0	
LOS					E	D	E	D		E	B	
Approach Delay					54.2			39.7			18.9	
Approach LOS					D			D			B	
Queue Length 50th (ft)					138	101	50	798		89	230	
Queue Length 95th (ft)					211	166	97	#1162		m#134	454	
Internal Link Dist (ft)		937			958			412			545	
Turn Bay Length (ft)						100	175			100		
Base Capacity (vph)					307	414	150	1202		150	1206	
Starvation Cap Reductn					0	0	0	0		0	99	
Spillback Cap Reductn					0	0	0	0		0	0	
Storage Cap Reductn					0	0	0	0		0	0	
Reduced v/c Ratio					0.60	0.39	0.44	0.95		0.71	0.74	

Intersection Summary
























Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 98 (82%), Referenced to phase 2:NBT and 6:SBT, Start of Green
 Natural Cycle: 110
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.95
 Intersection Signal Delay: 34.0
 Intersection LOS: C
 Intersection Capacity Utilization 82.3%
 ICU Level of Service E
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 8: S Point Road (NC 273) & South Point HS/Red Raider Run



Lanes, Volumes, Timings
 9: S Point Road (NC 273) & Nixon Road/R L Stowe Road

Henry Chapel TIA
 2024 Background AM - Ph 1B

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	100	167	73	284	81	29	88	485	522	47	511	50
Future Volume (vph)	100	167	73	284	81	29	88	485	522	47	511	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		1%			1%			1%			1%	
Storage Length (ft)	200		100	225		0	280		225	25		100
Storage Lanes	1		1	1		0	1		1	1		1
Taper Length (ft)	250			100			100			125		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.961				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1761	1853	1474	1648	1687	0	1678	1853	1575	1761	1853	1530
Flt Permitted	0.950			0.950			0.950			0.316		
Satd. Flow (perm)	1761	1853	1474	1648	1687	0	1678	1853	1575	586	1853	1530
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		25			35			35			35	
Link Distance (ft)		1003			1016			625			1000	
Travel Time (s)		27.4			19.8			12.2			19.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	9%	9%	9%	4%	7%	2%	2%	2%	2%	5%
Adj. Flow (vph)	111	186	81	316	90	32	98	539	580	52	568	56
Shared Lane Traffic (%)												
Lane Group Flow (vph)	111	186	81	316	122	0	98	539	580	52	568	56
Turn Type	Split	NA	pm+ov	Split	NA		Prot	NA	pm+ov	D.Pm	NA	pm+ov
Protected Phases	3	3	5	4	4		5	2	4		6	3
Permitted Phases			3						2	2		6
Detector Phase	3	3	5	4	4		5	2	4	2	6	3
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0		7.0	10.0	7.0	10.0	10.0	7.0
Minimum Split (s)	25.0	25.0	12.8	13.3	13.3		12.8	24.1	13.3	24.1	24.1	25.0
Total Split (s)	25.0	25.0	14.0	32.0	32.0		14.0	63.0	32.0	63.0	49.0	25.0
Total Split (%)	20.8%	20.8%	11.7%	26.7%	26.7%		11.7%	52.5%	26.7%	52.5%	40.8%	20.8%
Maximum Green (s)	19.0	19.0	8.2	25.7	25.7		8.2	56.9	25.7	56.9	42.9	19.0
Yellow Time (s)	3.8	3.8	3.0	4.4	4.4		3.0	3.8	4.4	3.8	3.8	3.8
All-Red Time (s)	2.2	2.2	2.8	1.9	1.9		2.8	2.3	1.9	2.3	2.3	2.2
Lost Time Adjust (s)	-1.0	-1.0	-0.8	-1.3	-1.3		-0.8	-1.1	-1.3	-1.1	-1.1	-1.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lead	Lead	Lag	Lag		Lead		Lag		Lag	Lead
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		2.0	3.0	2.0	3.0	3.0	2.0
Recall Mode	None	None	None	None	None		None	C-Max	None	C-Max	C-Max	None
Walk Time (s)	7.0	7.0						7.0		7.0		7.0
Flash Dont Walk (s)	12.0	12.0						11.0		11.0		12.0
Pedestrian Calls (#/hr)	0	0						0		0		0
Act Effct Green (s)	16.6	16.6	25.9	26.3	26.3		9.3	62.1	93.4	62.1	47.8	69.4
Actuated g/C Ratio	0.14	0.14	0.22	0.22	0.22		0.08	0.52	0.78	0.52	0.40	0.58
v/c Ratio	0.45	0.73	0.25	0.88	0.33		0.76	0.56	0.47	0.17	0.77	0.06
Control Delay	52.9	65.5	21.8	70.1	41.8		81.1	15.5	5.0	19.3	41.1	11.9

Lanes, Volumes, Timings
 9: S Point Road (NC 273) & Nixon Road/R L Stowe Road

Henry Chapel TIA
 2024 Background AM - Ph 1B



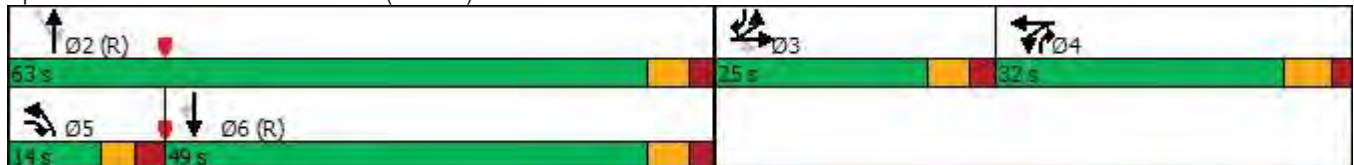
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.6	0.5	0.0	0.0	0.0
Total Delay	52.9	65.5	21.8	70.1	41.8		81.1	16.1	5.5	19.3	41.1	11.9
LOS	D	E	C	E	D		F	B	A	B	D	B
Approach Delay		52.4			62.2			16.3			37.0	
Approach LOS		D			E			B			D	
Queue Length 50th (ft)	80	139	29	229	77		73	194	114	22	398	19
Queue Length 95th (ft)	135	214	54	#391	137		m84	m229	m133	50	#589	37
Internal Link Dist (ft)		923			936			545			920	
Turn Bay Length (ft)	200		100	225			280		225	25		100
Base Capacity (vph)	293	308	320	378	387		131	958	1213	303	737	927
Starvation Cap Reductn	0	0	0	0	0		0	155	272	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.38	0.60	0.25	0.84	0.32		0.75	0.67	0.62	0.17	0.77	0.06

Intersection Summary

Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 8 (7%), Referenced to phase 2:NBSB and 6:SBT, Start of Green
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.88
 Intersection Signal Delay: 33.9
 Intersection Capacity Utilization 75.0%
 Analysis Period (min) 15
 Intersection LOS: C
 ICU Level of Service D

















95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 9: S Point Road (NC 273) & Nixon Road/R L Stowe Road



Lanes, Volumes, Timings
 1: S Point Road (NC 273) & Armstrong Road (NC 273)/Farm Road

Henry Chapel TIA
 2024 Background PM - Ph 1B

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	442	0	36	0	0	1	52	97	0	2	124	567
Future Volume (vph)	442	0	36	0	0	1	52	97	0	2	124	567
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.990			0.865							0.890
Flt Protected		0.956						0.983				
Satd. Flow (prot)	0	1760	0	0	1611	0	0	1772	0	0	1645	0
Flt Permitted		0.956						0.983				
Satd. Flow (perm)	0	1760	0	0	1611	0	0	1772	0	0	1645	0
Link Speed (mph)		45			25			45			45	
Link Distance (ft)		1234			1013			1002			3097	
Travel Time (s)		18.7			27.6			15.2			46.9	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	4%	2%	2%	2%	8%	4%	2%	2%	2%	3%
Adj. Flow (vph)	491	0	40	0	0	1	58	108	0	2	138	630
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	531	0	0	1	0	0	166	0	0	770	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 88.4% ICU Level of Service E

Analysis Period (min) 15

Intersection												
Int Delay, s/veh	97.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	442	0	36	0	0	1	52	97	0	2	124	567
Future Vol, veh/h	442	0	36	0	0	1	52	97	0	2	124	567
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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	4	2	2	2	8	4	2	2	2	3
Mvmt Flow	491	0	40	0	0	1	58	108	0	2	138	630

Major/Minor	Minor2		Minor1			Major1		Major2				
Conflicting Flow All	682	681	453	701	996	108	768	0	0	108	0	0
Stage 1	457	457	-	224	224	-	-	-	-	-	-	-
Stage 2	225	224	-	477	772	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.24	7.12	6.52	6.22	4.18	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.336	3.518	4.018	3.318	2.272	-	-	2.218	-	-
Pot Cap-1 Maneuver	~ 364	373	603	353	244	946	820	-	-	1483	-	-
Stage 1	583	568	-	779	718	-	-	-	-	-	-	-
Stage 2	778	718	-	569	409	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	~ 342	344	603	310	225	946	820	-	-	1483	-	-
Mov Cap-2 Maneuver	~ 342	344	-	310	225	-	-	-	-	-	-	-
Stage 1	539	566	-	721	664	-	-	-	-	-	-	-
Stage 2	719	664	-	530	408	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	267.5	8.8	3.4	0
HCM LOS	F	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	820	-	-	354	946	1483	-	-
HCM Lane V/C Ratio	0.07	-	-	1.5	0.001	0.001	-	-
HCM Control Delay (s)	9.7	0	-	267.5	8.8	7.4	0	-
HCM Lane LOS	A	A	-	F	A	A	A	-
HCM 95th %tile Q(veh)	0.2	-	-	29	0	0	-	-

Notes
 ~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Lanes, Volumes, Timings

2: S Point Road (NC 273) & S Point Church Road/Henry Chapel Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	1	0	0	5	0	22	0	660	5	28	774	2
Future Volume (vph)	1	0	0	5	0	22	0	660	5	28	774	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.892			0.999				
Flt Protected		0.950			0.990						0.998	
Satd. Flow (prot)	0	1770	0	0	1548	0	0	1843	0	0	1842	0
Flt Permitted		0.950			0.990						0.998	
Satd. Flow (perm)	0	1770	0	0	1548	0	0	1843	0	0	1842	0
Link Speed (mph)		25			25			45			45	
Link Distance (ft)		1509			1293			1519			881	
Travel Time (s)		41.2			35.3			23.0			13.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	2%	2%	10%	2%	3%	2%	2%	3%	2%
Adj. Flow (vph)	1	0	0	6	0	24	0	733	6	31	860	2
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1	0	0	30	0	0	739	0	0	893	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 73.5%

ICU Level of Service D

Analysis Period (min) 15

Intersection												
Int Delay, s/veh	0.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	1	0	0	5	0	22	0	660	5	28	774	2
Future Vol, veh/h	1	0	0	5	0	22	0	660	5	28	774	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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	10	2	3	2	2	3	2
Mvmt Flow	1	0	0	6	0	24	0	733	6	31	860	2

















Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1671	1662	861	1659	1660	736	862	0	0	739	0	0
Stage 1	923	923	-	736	736	-	-	-	-	-	-	-
Stage 2	748	739	-	923	924	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.3	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.39	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	76	97	355	78	97	406	780	-	-	867	-	-
Stage 1	323	349	-	411	425	-	-	-	-	-	-	-
Stage 2	404	424	-	323	348	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	68	90	355	74	90	406	780	-	-	867	-	-
Mov Cap-2 Maneuver	68	90	-	74	90	-	-	-	-	-	-	-
Stage 1	323	325	-	411	425	-	-	-	-	-	-	-
Stage 2	380	424	-	301	324	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	58.8		23.7		0		0.3	
HCM LOS	F		C					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	780	-	-	68	222	867	-	-
HCM Lane V/C Ratio	-	-	-	0.016	0.135	0.036	-	-
HCM Control Delay (s)	0	-	-	58.8	23.7	9.3	0	-
HCM Lane LOS	A	-	-	F	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.5	0.1	-	-

Lanes, Volumes, Timings
 3: S Point Road (NC 273) & BB Drive/Forest Hill Road

Henry Chapel TIA
 2024 Background PM - Ph 1B

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	0	0	1	0	8	0	772	3	15	936	1
Future Volume (vph)	4	0	0	1	0	8	0	772	3	15	936	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.878							
Flt Protected		0.950			0.995						0.999	
Satd. Flow (prot)	0	1770	0	0	1627	0	0	1863	0	0	1861	0
Flt Permitted		0.950			0.995						0.999	
Satd. Flow (perm)	0	1770	0	0	1627	0	0	1863	0	0	1861	0
Link Speed (mph)		25			25			45			45	
Link Distance (ft)		1341			477			2444			1975	
Travel Time (s)		36.6			13.0			37.0			29.9	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	4	0	0	1	0	9	0	858	3	17	1040	1
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	4	0	0	10	0	0	861	0	0	1058	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	71.3%
Analysis Period (min)	15
	ICU Level of Service C

Intersection												
Int Delay, s/veh	0.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	4	0	0	1	0	8	0	772	3	15	936	1
Future Vol, veh/h	4	0	0	1	0	8	0	772	3	15	936	1
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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	0	0	1	0	9	0	858	3	17	1040	1

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1939	1936	1041	1935	1935	860	1041	0	0	861	0	0
Stage 1	1075	1075	-	860	860	-	-	-	-	-	-	-
Stage 2	864	861	-	1075	1075	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	49	66	279	50	66	356	668	-	-	781	-	-
Stage 1	266	296	-	351	373	-	-	-	-	-	-	-
Stage 2	349	372	-	266	296	-	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	46	63	279	48	63	356	668	-	-	781	-	-
Mov Cap-2 Maneuver	46	63	-	48	63	-	-	-	-	-	-	-
Stage 1	266	281	-	351	373	-	-	-	-	-	-	-
Stage 2	340	372	-	252	281	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	91.5		23.2		0		0.2	
HCM LOS	F		C					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	668	-	-	46	208	781	-	-
HCM Lane V/C Ratio	-	-	-	0.097	0.048	0.021	-	-
HCM Control Delay (s)	0	-	-	91.5	23.2	9.7	0	-
HCM Lane LOS	A	-	-	F	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.3	0.2	0.1	-	-

Lanes, Volumes, Timings
4: Colonial Drive & Forest Hill Road

Henry Chapel TIA
2024 Background PM - Ph 1B



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	4	8	1	4	8	1
Future Volume (vph)	4	8	1	4	8	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.907			0.986		
Flt Protected				0.990	0.957	
Satd. Flow (prot)	1477	0	0	1844	1602	0
Flt Permitted				0.990	0.957	
Satd. Flow (perm)	1477	0	0	1844	1602	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	477			1074	636	
Travel Time (s)	13.0			29.3	17.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	25%	13%	2%	2%	13%	2%
Adj. Flow (vph)	4	9	1	4	9	1
Shared Lane Traffic (%)						
Lane Group Flow (vph)	13	0	0	5	10	0
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	13.3%
Analysis Period (min)	15
	ICU Level of Service A

Intersection						
Int Delay, s/veh	3.3					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	4	8	1	4	8	1
Future Vol, veh/h	4	8	1	4	8	1
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	90	90	90	90	90	90
Heavy Vehicles, %	25	13	2	2	13	2
Mvmt Flow	4	9	1	4	9	1

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	13	0	15
Stage 1	-	-	-	-	9
Stage 2	-	-	-	-	6
Critical Hdwy	-	-	4.12	-	6.53
Critical Hdwy Stg 1	-	-	-	-	5.53
Critical Hdwy Stg 2	-	-	-	-	5.53
Follow-up Hdwy	-	-	2.218	-	3.617
Pot Cap-1 Maneuver	-	-	1606	-	976
Stage 1	-	-	-	-	986
Stage 2	-	-	-	-	989
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1606	-	975
Mov Cap-2 Maneuver	-	-	-	-	975
Stage 1	-	-	-	-	986
Stage 2	-	-	-	-	988

Approach	EB	WB	NB
HCM Control Delay, s	0	1.4	8.7
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	985	-	-	1606	-
HCM Lane V/C Ratio	0.01	-	-	0.001	-
HCM Control Delay (s)	8.7	-	-	7.2	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

Lanes, Volumes, Timings
5: Colonial Drive & Timber Ridge Road

Henry Chapel TIA
2024 Background PM - Ph 1B



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	5	3	2	3	5
Future Volume (vph)	0	5	3	2	3	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.865		0.946			
Flt Protected						0.984
Satd. Flow (prot)	1611	0	1490	0	0	1640
Flt Permitted						0.984
Satd. Flow (perm)	1611	0	1490	0	0	1640
Link Speed (mph)	25		25			25
Link Distance (ft)	1207		1055			636
Travel Time (s)	32.9		28.8			17.3
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	33%	2%	2%	20%
Adj. Flow (vph)	0	6	3	2	3	6
Shared Lane Traffic (%)						
Lane Group Flow (vph)	6	0	5	0	0	9
Sign Control	Stop		Free			Free

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	13.3%
Analysis Period (min)	15
	ICU Level of Service A

Intersection						
Int Delay, s/veh	3.5					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	TT		TT			TT
Traffic Vol, veh/h	0	5	3	2	3	5
Future Vol, veh/h	0	5	3	2	3	5
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	90	90	90	90	90	90
Heavy Vehicles, %	2	2	33	2	2	20
Mvmt Flow	0	6	3	2	3	6





















Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	16	4	0	0	5
Stage 1	4	-	-	-	-
Stage 2	12	-	-	-	-
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	1002	1080	-	-	1616
Stage 1	1019	-	-	-	-
Stage 2	1011	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	1000	1080	-	-	1616
Mov Cap-2 Maneuver	1000	-	-	-	-
Stage 1	1019	-	-	-	-
Stage 2	1009	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.4	0	2.7
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	1080	1616
HCM Lane V/C Ratio	-	-	0.005	0.002
HCM Control Delay (s)	-	-	8.4	7.2
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0	0

Lanes, Volumes, Timings
6: S Point Road (NC 273) & Belmont MS/Belwood Drive

Henry Chapel TIA
2024 Background PM - Ph 1B

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	23	2	4	3	1	31	2	846	2	43	1022	5
Future Volume (vph)	23	2	4	3	1	31	2	846	2	43	1022	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		3%			0%			1%			0%	
Storage Length (ft)	0		175	0		0	200		0	100		200
Storage Lanes	0		1	0		0	1		0	1		1
Taper Length (ft)	25			25			100			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.879							0.850
Flt Protected		0.956			0.996		0.950			0.950		
Satd. Flow (prot)	0	1754	795	0	1631	0	1761	1853	0	1770	1863	1583
Flt Permitted		0.956			0.996		0.950			0.248		
Satd. Flow (perm)	0	1754	795	0	1631	0	1761	1853	0	462	1863	1583
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		35			25			35			35	
Link Distance (ft)		1017			1050			1975			1373	
Travel Time (s)		19.8			28.6			38.5			26.7	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	100%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Adj. Flow (vph)	26	2	4	3	1	34	2	940	2	48	1136	6
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	28	4	0	38	0	2	942	0	48	1136	6
Turn Type	Split	NA	pm+ov	Split	NA		Prot	NA		Perm	NA	pm+ov
Protected Phases	4	4	5	8	8		5	2			6	4
Permitted Phases			4							6		6
Detector Phase	4	4	5	8	8		5	2		6	6	4
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0		7.0	12.0		12.0	12.0	7.0
Minimum Split (s)	11.9	11.9	12.1	14.0	14.0		12.1	17.6		32.6	32.6	11.9
Total Split (s)	12.0	12.0	13.0	14.0	14.0		13.0	94.0		81.0	81.0	12.0
Total Split (%)	10.0%	10.0%	10.8%	11.7%	11.7%		10.8%	78.3%		67.5%	67.5%	10.0%
Maximum Green (s)	7.1	7.1	7.9	7.0	7.0		7.9	88.4		75.4	75.4	7.1
Yellow Time (s)	3.0	3.0	3.0	5.0	5.0		3.0	4.5		4.5	4.5	3.0
All-Red Time (s)	1.9	1.9	2.1	2.0	2.0		2.1	1.1		1.1	1.1	1.9
Lost Time Adjust (s)		0.1	-0.1		-2.0		-0.1	-0.6		-0.6	-0.6	0.1
Total Lost Time (s)		5.0	5.0		5.0		5.0	5.0		5.0	5.0	5.0
Lead/Lag			Lead				Lead			Lag	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		2.0	6.0		6.0	6.0	2.0
Minimum Gap (s)	2.0	2.0	2.0	2.0	2.0		2.0	3.0		3.0	3.0	2.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0		0.0	15.0		15.0	15.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0		0.0	45.0		45.0	45.0	0.0
Recall Mode	None	None	None	None	None		None	Min		Min	Min	None
Walk Time (s)										7.0	7.0	
Flash Dont Walk (s)										20.0	20.0	
Pedestrian Calls (#/hr)										0	0	
Act Efect Green (s)		8.1	11.5		10.5		8.3	72.5		70.8	70.8	76.3

Lanes, Volumes, Timings
 6: S Point Road (NC 273) & Belmont MS/Belwood Drive

Henry Chapel TIA
 2024 Background PM - Ph 1B



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Actuated g/C Ratio		0.09	0.13		0.12		0.10	0.83		0.81	0.81	0.88
v/c Ratio		0.17	0.04		0.19		0.01	0.61		0.13	0.75	0.00
Control Delay		52.5	31.5		50.1		50.5	8.7		7.4	15.5	3.0
Queue Delay		0.0	0.0		0.0		0.0	0.0		0.0	0.0	0.0
Total Delay		52.5	31.5		50.1		50.5	8.7		7.4	15.5	3.0
LOS		D	C		D		D	A		A	B	A
Approach Delay		49.9			50.1			8.8			15.1	
Approach LOS		D			D			A			B	
Queue Length 50th (ft)		19	2		26		1	332		9	504	1
Queue Length 95th (ft)		52	11		65		10	469		33	#1124	4
Internal Link Dist (ft)		937			970			1895			1293	
Turn Bay Length (ft)			175				200			100		200
Base Capacity (vph)		164	115		197		189	1628		375	1515	1389
Starvation Cap Reductn		0	0		0		0	0		0	0	0
Spillback Cap Reductn		0	0		0		0	0		0	0	0
Storage Cap Reductn		0	0		0		0	0		0	0	0
Reduced v/c Ratio		0.17	0.03		0.19		0.01	0.58		0.13	0.75	0.00

Intersection Summary

Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 87
 Natural Cycle: 110
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.75
 Intersection Signal Delay: 13.5
 Intersection LOS: B
 Intersection Capacity Utilization 78.0%
 ICU Level of Service D
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 6: S Point Road (NC 273) & Belmont MS/Belwood Drive



Lanes, Volumes, Timings
 7: S Point Road (NC 273) & McKee Farm Road/Stowe Road

Henry Chapel TIA
 2024 Background PM - Ph 1B

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	25	9	15	26	2	51	12	877	23	69	1039	48
Future Volume (vph)	25	9	15	26	2	51	12	877	23	69	1039	48
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		0	100		0
Storage Lanes	0		0	0		0	0		0	1		0
Taper Length (ft)	25			25			25			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.958			0.913			0.997			0.993	
Flt Protected		0.975			0.984			0.999		0.950		
Satd. Flow (prot)	0	1740	0	0	1673	0	0	1855	0	1770	1850	0
Flt Permitted		0.975			0.984			0.999		0.950		
Satd. Flow (perm)	0	1740	0	0	1673	0	0	1855	0	1770	1850	0
Link Speed (mph)		25			25			35			35	
Link Distance (ft)		1043			1485			1373			492	
Travel Time (s)		28.4			40.5			26.7			9.6	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	28	10	17	29	2	57	13	974	26	77	1154	53
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	55	0	0	88	0	0	1013	0	77	1207	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary	
Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	69.4% ICU Level of Service C
Analysis Period (min)	15

HCM 6th TWSC
 7: S Point Road (NC 273) & McKee Farm Road/Stowe Road

Henry Chapel TIA
 2024 Background PM - Ph 1B

Intersection												
Int Delay, s/veh	47.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕		↕	↕	
Traffic Vol, veh/h	25	9	15	26	2	51	12	877	23	69	1039	48
Future Vol, veh/h	25	9	15	26	2	51	12	877	23	69	1039	48
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	-	-	-	-	-	-	-	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	28	10	17	29	2	57	13	974	26	77	1154	53

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	2378	2361	1181	2361	2374	987	1207	0	0	1000	0	0
Stage 1	1335	1335	-	1013	1013	-	-	-	-	-	-	-
Stage 2	1043	1026	-	1348	1361	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	~ 24	35	231	~ 25	35	300	578	-	-	692	-	-
Stage 1	189	223	-	288	316	-	-	-	-	-	-	-
Stage 2	277	312	-	186	216	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	~ 16	30	231	~ 15	30	300	578	-	-	692	-	-
Mov Cap-2 Maneuver	~ 16	30	-	~ 15	30	-	-	-	-	-	-	-
Stage 1	179	198	-	273	300	-	-	-	-	-	-	-
Stage 2	212	296	-	146	192	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	873.7		765.1		0.1		0.6	
HCM LOS	F		F					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	578	-	-	25	40	692	-	-
HCM Lane V/C Ratio	0.023	-	-	2.178	2.194	0.111	-	-
HCM Control Delay (s)	11.4	0		873.7	765.1	10.8	-	-
HCM Lane LOS	B	A	-	F	F	B	-	-
HCM 95th %tile Q(veh)	0.1	-	-	6.7	9.5	0.4	-	-

Notes
 ~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Lanes, Volumes, Timings
 8: S Point Road (NC 273) & South Point HS/Red Raider Run

Henry Chapel TIA
 2024 Background PM - Ph 1B



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↕	↗	↖	↕		↖	↗	
Traffic Volume (vph)	0	0	0	200	5	213	8	825	85	122	972	3
Future Volume (vph)	0	0	0	200	5	213	8	825	85	122	972	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			4%			-1%			1%	
Storage Length (ft)	0		0	0		100	175		0	100		0
Storage Lanes	0		0	0		1	1		0	1		0
Taper Length (ft)	25			25			100			75		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt						0.850		0.986				
Flt Protected					0.954		0.950			0.950		
Satd. Flow (prot)	0	0	0	0	1742	1552	1778	1830	0	1761	1853	0
Flt Permitted					0.954		0.950			0.950		
Satd. Flow (perm)	0	0	0	0	1742	1552	1778	1830	0	1761	1853	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		25			25			35			35	
Link Distance (ft)		1017			1038			492			625	
Travel Time (s)		27.7			28.3			9.6			12.2	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	3%	2%	2%	2%	2%
Adj. Flow (vph)	0	0	0	222	6	237	9	917	94	136	1080	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	228	237	9	1011	0	136	1083	0
Turn Type				Perm	NA	pm+ov	Prot	NA		Prot	NA	
Protected Phases					8	1	5	2		1	6	
Permitted Phases				8		8						
Detector Phase				8	8	1	5	2		1	6	
Switch Phase												
Minimum Initial (s)				7.0	7.0	7.0	7.0	10.0		7.0	10.0	
Minimum Split (s)				25.4	25.4	12.6	12.1	27.7		12.6	23.7	
Total Split (s)				26.0	26.0	18.0	13.0	86.0		18.0	91.0	
Total Split (%)				20.0%	20.0%	13.8%	10.0%	66.2%		13.8%	70.0%	
Maximum Green (s)				20.6	20.6	12.4	7.9	80.3		12.4	85.3	
Yellow Time (s)				3.0	3.0	3.0	3.0	3.9		3.0	3.9	
All-Red Time (s)				2.4	2.4	2.6	2.1	1.8		2.6	1.8	
Lost Time Adjust (s)					-0.4	-0.6	-0.1	-0.7		-0.6	-0.7	
Total Lost Time (s)					5.0	5.0	5.0	5.0		5.0	5.0	
Lead/Lag						Lead	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)				2.0	2.0	2.0	2.0	3.0		2.0	3.0	
Recall Mode				None	None	None	None	C-Max		None	C-Max	
Walk Time (s)				7.0	7.0			7.0				
Flash Dont Walk (s)				13.0	13.0			15.0				
Pedestrian Calls (#/hr)				0	0			0				
Act Effct Green (s)					19.5	37.0	7.1	83.0		12.5	98.1	
Actuated g/C Ratio					0.15	0.28	0.05	0.64		0.10	0.75	
v/c Ratio					0.87	0.54	0.09	0.87		0.80	0.78	
Control Delay					84.7	43.9	60.6	29.3		67.4	12.0	

Lanes, Volumes, Timings
 8: S Point Road (NC 273) & South Point HS/Red Raider Run

Henry Chapel TIA
 2024 Background PM - Ph 1B



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay					0.0	0.7	0.0	0.0		0.0	2.7	
Total Delay					84.7	44.6	60.6	29.3		67.4	14.7	
LOS					F	D	E	C		E	B	
Approach Delay					64.2			29.6			20.6	
Approach LOS					E			C			C	
Queue Length 50th (ft)					188	165	7	675		108	512	
Queue Length 95th (ft)					#319	250	26	#979		m119	m548	
Internal Link Dist (ft)		937			958			412			545	
Turn Bay Length (ft)						100	175			100		
Base Capacity (vph)					281	448	109	1168		177	1397	
Starvation Cap Reductn					0	0	0	0		0	203	
Spillback Cap Reductn					0	53	0	0		0	0	
Storage Cap Reductn					0	0	0	0		0	0	
Reduced v/c Ratio					0.81	0.60	0.08	0.87		0.77	0.91	

Intersection Summary
























Area Type: Other
 Cycle Length: 130
 Actuated Cycle Length: 130
 Offset: 44 (34%), Referenced to phase 2:NBT and 6:SBT, Start of Green
 Natural Cycle: 100
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.87
 Intersection Signal Delay: 31.5
 Intersection LOS: C
 Intersection Capacity Utilization 81.0%
 ICU Level of Service D
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 8: S Point Road (NC 273) & South Point HS/Red Raider Run



Lanes, Volumes, Timings
 9: S Point Road (NC 273) & Nixon Road/R L Stowe Road

Henry Chapel TIA
 2024 Background PM - Ph 1B

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	67	98	65	526	108	38	61	489	463	73	521	74
Future Volume (vph)	67	98	65	526	108	38	61	489	463	73	521	74
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		1%			1%			1%			1%	
Storage Length (ft)	200		100	225		0	280		225	25		100
Storage Lanes	1		1	1		0	1		1	1		1
Taper Length (ft)	250			100			100			125		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.961				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1761	1853	1545	1744	1756	0	1761	1853	1545	1761	1853	1560
Flt Permitted	0.950			0.950			0.950			0.215		
Satd. Flow (perm)	1761	1853	1545	1744	1756	0	1761	1853	1545	398	1853	1560
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		25			35			35			35	
Link Distance (ft)		1003			1016			625			1000	
Travel Time (s)		27.4			19.8			12.2			19.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	4%	3%	4%	2%	2%	2%	4%	2%	2%	3%
Adj. Flow (vph)	74	109	72	584	120	42	68	543	514	81	579	82
Shared Lane Traffic (%)												
Lane Group Flow (vph)	74	109	72	584	162	0	68	543	514	81	579	82
Turn Type	Split	NA	pm+ov	Split	NA		Prot	NA	pm+ov	D.Pm	NA	pm+ov
Protected Phases	3	3	5	4	4		5	2	4		6	3
Permitted Phases			3						2	2		6
Detector Phase	3	3	5	4	4		5	2	4	2	6	3
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0		7.0	10.0	7.0	10.0	10.0	7.0
Minimum Split (s)	25.0	25.0	12.8	13.3	13.3		12.8	24.1	13.3	24.1	24.1	25.0
Total Split (s)	25.0	25.0	13.0	48.0	48.0		13.0	57.0	48.0	57.0	44.0	25.0
Total Split (%)	19.2%	19.2%	10.0%	36.9%	36.9%		10.0%	43.8%	36.9%	43.8%	33.8%	19.2%
Maximum Green (s)	19.0	19.0	7.2	41.7	41.7		7.2	50.9	41.7	50.9	37.9	19.0
Yellow Time (s)	3.8	3.8	3.0	4.4	4.4		3.0	3.8	4.4	3.8	3.8	3.8
All-Red Time (s)	2.2	2.2	2.8	1.9	1.9		2.8	2.3	1.9	2.3	2.3	2.2
Lost Time Adjust (s)	-1.0	-1.0	-0.8	-1.3	-1.3		-0.8	-1.1	-1.3	-1.1	-1.1	-1.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lead	Lead	Lag	Lag		Lead		Lag		Lag	Lead
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		2.0	3.0	2.0	3.0	3.0	2.0
Recall Mode	None	None	None	None	None		None	C-Max	None	C-Max	C-Max	None
Walk Time (s)	7.0	7.0						7.0		7.0		7.0
Flash Dont Walk (s)	12.0	12.0						11.0		11.0		12.0
Pedestrian Calls (#/hr)	0	0						0		0		0
Act Effct Green (s)	13.0	13.0	20.9	49.1	49.1		8.0	52.9	107.0	52.9	39.9	57.9
Actuated g/C Ratio	0.10	0.10	0.16	0.38	0.38		0.06	0.41	0.82	0.41	0.31	0.45
v/c Ratio	0.42	0.59	0.29	0.89	0.24		0.64	0.72	0.40	0.50	1.02	0.12
Control Delay	61.2	68.4	26.6	55.0	29.6		68.4	37.3	1.8	42.5	87.2	21.1

Lanes, Volumes, Timings
 9: S Point Road (NC 273) & Nixon Road/R L Stowe Road

Henry Chapel TIA
 2024 Background PM - Ph 1B



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay	0.0	0.0	1.1	0.0	0.0		0.0	2.0	0.6	0.0	12.1	0.0
Total Delay	61.2	68.4	27.8	55.0	29.6		68.4	39.3	2.3	42.5	99.3	21.1
LOS	E	E	C	E	C		E	D	A	D	F	C
Approach Delay		54.8			49.5			24.1			84.5	
Approach LOS		D			D			C			F	
Queue Length 50th (ft)	60	89	28	451	92		58	399	16	51	~527	40
Queue Length 95th (ft)	106	146	49	#719	156		m73	m500	m71	112	#753	69
Internal Link Dist (ft)		923			936			545			920	
Turn Bay Length (ft)	200		100	225			280		225	25		100
Base Capacity (vph)	270	285	249	658	663		108	754	1271	162	568	779
Starvation Cap Reductn	0	0	0	0	0		0	99	390	0	0	0
Spillback Cap Reductn	0	0	70	0	0		0	0	0	0	20	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.27	0.38	0.40	0.89	0.24		0.63	0.83	0.58	0.50	1.06	0.11

Intersection Summary

Area Type: Other
 Cycle Length: 130
 Actuated Cycle Length: 130
 Offset: 0 (0%), Referenced to phase 2:NBSB and 6:SBT, Start of Green
 Natural Cycle: 140
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.02
 Intersection Signal Delay: 49.1
 Intersection LOS: D
 Intersection Capacity Utilization 85.7%
 ICU Level of Service E
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 m Volume for 95th percentile queue is metered by upstream signal.

















Splits and Phases: 9: S Point Road (NC 273) & Nixon Road/R L Stowe Road



2024 Build-out Conditions

Lanes, Volumes, Timings
 1: S Point Road (NC 273) & Armstrong Road (NC 273)/Farm Road

Henry Chapel TIA
 2024 Build AM - Ph 1B

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	550	0	29	0	0	0	62	167	0	0	65	224
Future Volume (vph)	550	0	29	0	0	0	62	167	0	0	65	224
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.993										0.895
Flt Protected		0.955						0.987				
Satd. Flow (prot)	0	1738	0	0	1863	0	0	1782	0	0	1552	0
Flt Permitted		0.955						0.987				
Satd. Flow (perm)	0	1738	0	0	1863	0	0	1782	0	0	1552	0
Link Speed (mph)		45			25			45			45	
Link Distance (ft)		1234			1013			1002			3097	
Travel Time (s)		18.7			27.6			15.2			46.9	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	36%	2%	2%	2%	14%	2%	2%	2%	8%	10%
Adj. Flow (vph)	611	0	32	0	0	0	69	186	0	0	72	249
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	643	0	0	0	0	0	255	0	0	321	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	71.7%
Analysis Period (min)	15
	ICU Level of Service C

HCM 6th TWSC
 1: S Point Road (NC 273) & Armstrong Road (NC 273)/Farm Road

Henry Chapel TIA
 2024 Build AM - Ph 1B

Intersection

Int Delay, s/veh 119.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	550	0	29	0	0	0	62	167	0	0	65	224
Future Vol, veh/h	550	0	29	0	0	0	62	167	0	0	65	224
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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	36	2	2	2	14	2	2	2	8	10
Mvmt Flow	611	0	32	0	0	0	69	186	0	0	72	249

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	521	521	197	537	645	186	321	0	0	186	0	0
Stage 1	197	197	-	324	324	-	-	-	-	-	-	-
Stage 2	324	324	-	213	321	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.56	7.12	6.52	6.22	4.24	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.624	3.518	4.018	3.318	2.326	-	-	2.218	-	-
Pot Cap-1 Maneuver	~ 466	460	765	455	391	856	1174	-	-	1388	-	-
Stage 1	805	738	-	688	650	-	-	-	-	-	-	-
Stage 2	688	650	-	789	652	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	~ 443	430	765	414	365	856	1174	-	-	1388	-	-
Mov Cap-2 Maneuver	~ 443	430	-	414	365	-	-	-	-	-	-	-
Stage 1	752	738	-	643	607	-	-	-	-	-	-	-
Stage 2	643	607	-	756	652	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	225.9	0	2.2	0
HCM LOS	F	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1174	-	-	453	-	1388	-
HCM Lane V/C Ratio	0.059	-	-	1.42	-	-	-
HCM Control Delay (s)	8.3	0	-	225.9	0	0	-
HCM Lane LOS	A	A	-	F	A	A	-
HCM 95th %tile Q(veh)	0.2	-	-	31.5	-	0	-

Notes

~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Lanes, Volumes, Timings

2: S Point Road (NC 273) & S Point Church Road/Henry Chapel Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕	↗		↕			↕	
Traffic Volume (vph)	0	0	1	13	0	133	0	844	5	47	331	5
Future Volume (vph)	0	0	1	13	0	133	0	844	5	47	331	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		100	0		0	0		0
Storage Lanes	0		0	0		1	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.865				0.850		0.999				0.998
Flt Protected					0.950							0.994
Satd. Flow (prot)	0	1611	0	0	1770	1538	0	1850	0	0	1759	0
Flt Permitted					0.950							0.994
Satd. Flow (perm)	0	1611	0	0	1770	1538	0	1850	0	0	1759	0
Link Speed (mph)		25			25			45				45
Link Distance (ft)		1509			1293			1519				881
Travel Time (s)		41.2			35.3			23.0				13.3
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	2%	2%	5%	2%	2%	100%	2%	8%	2%
Adj. Flow (vph)	0	0	1	14	0	148	0	938	6	52	368	6
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1	0	0	14	148	0	944	0	0	426	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	71.4%
ICU Level of Service	C
Analysis Period (min)	15

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	0	0	1	13	0	133	0	844	5	47	331	5
Future Vol, veh/h	0	0	1	13	0	133	0	844	5	47	331	5
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	-	-	-	-	-	100	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	5	2	2	100	2	8	2
Mvmt Flow	0	0	1	14	0	148	0	938	6	52	368	6

















Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	1490	1419	371	1417	1419	941	374	0	0	944	0	0
Stage 1	475	475	-	941	941	-	-	-	-	-	-	-
Stage 2	1015	944	-	476	478	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.25	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.345	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	102	137	675	115	137	315	1184	-	-	727	-	-
Stage 1	570	557	-	316	342	-	-	-	-	-	-	-
Stage 2	287	341	-	570	556	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	50	125	675	107	125	315	1184	-	-	727	-	-
Mov Cap-2 Maneuver	50	125	-	107	125	-	-	-	-	-	-	-
Stage 1	570	507	-	316	342	-	-	-	-	-	-	-
Stage 2	152	341	-	518	506	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	10.3		27.7		0		1.3	
HCM LOS	B		D					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1184	-	-	675	107	315	727	-	-
HCM Lane V/C Ratio	-	-	-	0.002	0.135	0.469	0.072	-	-
HCM Control Delay (s)	0	-	-	10.3	43.8	26.1	10.3	0	-
HCM Lane LOS	A	-	-	B	E	D	B	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0.5	2.4	0.2	-	-

Lanes, Volumes, Timings
 3: S Point Road (NC 273) & BB Drive/Forest Hill Road

Henry Chapel TIA
 2024 Build AM - Ph 1B

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	0	0	5	0	20	0	1142	7	7	430	2
Future Volume (vph)	4	0	0	5	0	20	0	1142	7	7	430	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.894			0.999				0.999
Flt Protected		0.950			0.989							0.999
Satd. Flow (prot)	0	1770	0	0	1610	0	0	1859	0	0	1774	0
Flt Permitted		0.950			0.989							0.999
Satd. Flow (perm)	0	1770	0	0	1610	0	0	1859	0	0	1774	0
Link Speed (mph)		25			25			45			45	
Link Distance (ft)		1341			477			2444			1975	
Travel Time (s)		36.6			13.0			37.0			29.9	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	2%	2%	5%	2%	2%	17%	2%	7%	2%
Adj. Flow (vph)	4	0	0	6	0	22	0	1269	8	8	478	2
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	4	0	0	28	0	0	1277	0	0	488	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 70.5% ICU Level of Service C

Analysis Period (min) 15

Intersection												
Int Delay, s/veh	0.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	4	0	0	5	0	20	0	1142	7	7	430	2
Future Vol, veh/h	4	0	0	5	0	20	0	1142	7	7	430	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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	5	2	2	17	2	7	2
Mvmt Flow	4	0	0	6	0	22	0	1269	8	8	478	2

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1779	1772	479	1768	1769	1273	480	0	0	1277	0	0
Stage 1	495	495	-	1273	1273	-	-	-	-	-	-	-
Stage 2	1284	1277	-	495	496	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.25	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.345	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	64	83	587	65	83	201	1082	-	-	544	-	-
Stage 1	556	546	-	205	238	-	-	-	-	-	-	-
Stage 2	202	237	-	556	545	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	56	81	587	64	81	201	1082	-	-	544	-	-
Mov Cap-2 Maneuver	56	81	-	64	81	-	-	-	-	-	-	-
Stage 1	556	535	-	205	238	-	-	-	-	-	-	-
Stage 2	180	237	-	545	534	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB			
HCM Control Delay, s	74.8		36.7		0		0.2			
HCM LOS	F		E							

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1082	-	-	56	141	544	-	-
HCM Lane V/C Ratio	-	-	-	0.079	0.197	0.014	-	-
HCM Control Delay (s)	0	-	-	74.8	36.7	11.7	0	-
HCM Lane LOS	A	-	-	F	E	B	A	-
HCM 95th %tile Q(veh)	0	-	-	0.2	0.7	0	-	-

Lanes, Volumes, Timings
4: Colonial Drive & Forest Hill Road



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	7	2	0	12	18	1
Future Volume (vph)	7	2	0	12	18	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.973			0.994		
Flt Protected				0.955		
Satd. Flow (prot)	1812	0	0	1863	1768	0
Flt Permitted				0.955		
Satd. Flow (perm)	1812	0	0	1863	1768	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	477			1074	636	
Travel Time (s)	13.0			29.3	17.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	8	2	0	13	20	1
Shared Lane Traffic (%)						
Lane Group Flow (vph)	10	0	0	13	21	0
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 13.3% ICU Level of Service A

Analysis Period (min) 15

Intersection						
Int Delay, s/veh	4.1					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	7	2	0	12	18	1
Future Vol, veh/h	7	2	0	12	18	1
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	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	8	2	0	13	20	1

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	10	0	22
Stage 1	-	-	-	-	9
Stage 2	-	-	-	-	13
Critical Hdwy	-	-	4.12	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	-	-	2.218	-	3.518
Pot Cap-1 Maneuver	-	-	1610	-	995
Stage 1	-	-	-	-	1014
Stage 2	-	-	-	-	1010
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1610	-	995
Mov Cap-2 Maneuver	-	-	-	-	995
Stage 1	-	-	-	-	1014
Stage 2	-	-	-	-	1010

Approach	EB	WB	NB
HCM Control Delay, s	0	0	8.7
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	999	-	-	1610	-
HCM Lane V/C Ratio	0.021	-	-	-	-
HCM Control Delay (s)	8.7	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Lanes, Volumes, Timings
 5: Colonial Drive & Timber Ridge Road

Henry Chapel TIA
 2024 Build AM - Ph 1B



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	9	8	0	1	2
Future Volume (vph)	0	9	8	0	1	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.865					
Flt Protected						0.984
Satd. Flow (prot)	1611	0	1863	0	0	1833
Flt Permitted						0.984
Satd. Flow (perm)	1611	0	1863	0	0	1833
Link Speed (mph)	25		25		25	
Link Distance (ft)	2169		1055		636	
Travel Time (s)	59.2		28.8		17.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	10	9	0	1	2
Shared Lane Traffic (%)						
Lane Group Flow (vph)	10	0	9	0	0	3
Sign Control	Stop		Free		Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	13.3%
Analysis Period (min)	15
	ICU Level of Service A

Intersection						
Int Delay, s/veh	4.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	9	8	0	1	2
Future Vol, veh/h	0	9	8	0	1	2
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	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	10	9	0	1	2





















Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	13	9	0
Stage 1	9	-	-
Stage 2	4	-	-
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	1006	1073	-
Stage 1	1014	-	-
Stage 2	1019	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	1005	1073	-
Mov Cap-2 Maneuver	1005	-	-
Stage 1	1014	-	-
Stage 2	1018	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.4	0	2.4
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	1073	1611
HCM Lane V/C Ratio	-	-	0.009	0.001
HCM Control Delay (s)	-	-	8.4	7.2
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0	0

Lanes, Volumes, Timings
6: S Point Road (NC 273) & Belmont MS/Belwood Drive

Henry Chapel TIA
2024 Build AM - Ph 1B

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	254	1	45	2	2	32	97	930	1	22	468	280
Future Volume (vph)	254	1	45	2	2	32	97	930	1	22	468	280
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		3%			0%			1%			0%	
Storage Length (ft)	0		175	0		0	200		0	100		200
Storage Lanes	0		1	0		0	1		0	1		1
Taper Length (ft)	25			25			100			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.878							0.850
Flt Protected		0.953			0.998		0.950			0.950		
Satd. Flow (prot)	0	1732	1560	0	1519	0	1744	1853	0	1770	1759	1568
Flt Permitted		0.953			0.998		0.950			0.086		
Satd. Flow (perm)	0	1732	1560	0	1519	0	1744	1853	0	160	1759	1568
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		35			25			35			35	
Link Distance (ft)		1017			1050			1975			1373	
Travel Time (s)		19.8			28.6			38.5			26.7	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	3%	2%	2%	100%	2%	5%	3%	2%	2%	2%	8%	3%
Adj. Flow (vph)	282	1	50	2	2	36	108	1033	1	24	520	311
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	283	50	0	40	0	108	1034	0	24	520	311
Turn Type	Split	NA	pm+ov	Split	NA		Prot	NA		Perm	NA	pm+ov
Protected Phases	4	4	5	8	8		5	2			6	4
Permitted Phases			4							6		6
Detector Phase	4	4	5	8	8		5	2		6	6	4
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0		7.0	12.0		12.0	12.0	7.0
Minimum Split (s)	11.9	11.9	12.1	14.0	14.0		12.1	17.6		32.6	32.6	11.9
Total Split (s)	31.0	31.0	19.0	14.0	14.0		19.0	75.0		56.0	56.0	31.0
Total Split (%)	25.8%	25.8%	15.8%	11.7%	11.7%		15.8%	62.5%		46.7%	46.7%	25.8%
Maximum Green (s)	26.1	26.1	13.9	7.0	7.0		13.9	69.4		50.4	50.4	26.1
Yellow Time (s)	3.0	3.0	3.0	5.0	5.0		3.0	4.5		4.5	4.5	3.0
All-Red Time (s)	1.9	1.9	2.1	2.0	2.0		2.1	1.1		1.1	1.1	1.9
Lost Time Adjust (s)		0.1	-0.1		-2.0		-0.1	-0.6		-0.6	-0.6	0.1
Total Lost Time (s)		5.0	5.0		5.0		5.0	5.0		5.0	5.0	5.0
Lead/Lag			Lead				Lead			Lag	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		2.0	6.0		6.0	6.0	2.0
Minimum Gap (s)	2.0	2.0	2.0	2.0	2.0		2.0	3.0		3.0	3.0	2.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0		0.0	15.0		15.0	15.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0		0.0	45.0		45.0	45.0	0.0
Recall Mode	None	None	None	None	None		None	Min		Min	Min	None
Walk Time (s)										7.0	7.0	
Flash Dont Walk (s)										20.0	20.0	
Pedestrian Calls (#/hr)										0	0	
Act Efect Green (s)		21.5	35.7		9.7		11.3	62.6		45.9	45.9	72.8

Lanes, Volumes, Timings
 6: S Point Road (NC 273) & Belmont MS/Belwood Drive

Henry Chapel TIA
 2024 Build AM - Ph 1B



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Actuated g/C Ratio		0.21	0.35		0.10		0.11	0.61		0.45	0.45	0.71
v/c Ratio		0.78	0.09		0.28		0.56	0.91		0.33	0.66	0.28
Control Delay		57.0	18.7		56.8		60.8	32.8		38.5	28.9	7.0
Queue Delay		0.0	0.0		0.0		0.0	0.0		0.0	0.0	0.0
Total Delay		57.0	18.7		56.8		60.8	32.8		38.5	28.9	7.0
LOS		E	B		E		E	C		D	C	A
Approach Delay		51.2			56.8			35.5			21.2	
Approach LOS		D			E			D			C	
Queue Length 50th (ft)		207	21		29		80	677		12	300	80
Queue Length 95th (ft)		#329	42		67		141	#1050		43	455	129
Internal Link Dist (ft)		937			970			1895			1293	
Turn Bay Length (ft)			175				200			100		200
Base Capacity (vph)		476	602		144		258	1297		87	956	1218
Starvation Cap Reductn		0	0		0		0	0		0	0	0
Spillback Cap Reductn		0	0		0		0	0		0	0	0
Storage Cap Reductn		0	0		0		0	0		0	0	0
Reduced v/c Ratio		0.59	0.08		0.28		0.42	0.80		0.28	0.54	0.26

Intersection Summary



















Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 102.1
 Natural Cycle: 90
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.91
 Intersection Signal Delay: 32.9
 Intersection LOS: C
 Intersection Capacity Utilization 92.3%
 ICU Level of Service F
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 6: S Point Road (NC 273) & Belmont MS/Belwood Drive



Lanes, Volumes, Timings
 7: S Point Road (NC 273) & McKee Farm Road/Stowe Road

Henry Chapel TIA
 2024 Build AM - Ph 1B

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	15	5	20	17	1	57	25	1156	53	38	744	69
Future Volume (vph)	15	5	20	17	1	57	25	1156	53	38	744	69
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		200	0		0	0		0	100		0
Storage Lanes	0		1	0		0	0		0	1		0
Taper Length (ft)	25			25			25			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.898			0.994			0.987	
Flt Protected		0.964			0.989			0.999		0.950		
Satd. Flow (prot)	0	1796	1524	0	1654	0	0	1850	0	1703	1790	0
Flt Permitted		0.964			0.989			0.999		0.950		
Satd. Flow (perm)	0	1796	1524	0	1654	0	0	1850	0	1703	1790	0
Link Speed (mph)		25			25			35			35	
Link Distance (ft)		1043			1485			1373			492	
Travel Time (s)		28.4			40.5			26.7			9.6	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	6%	2%	2%	2%	2%	2%	2%	6%	5%	2%
Adj. Flow (vph)	17	6	22	19	1	63	28	1284	59	42	827	77
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	23	22	0	83	0	0	1371	0	42	904	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary	
Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	102.1% ICU Level of Service G
Analysis Period (min)	15

HCM 6th TWSC
 7: S Point Road (NC 273) & McKee Farm Road/Stowe Road

Henry Chapel TIA
 2024 Build AM - Ph 1B

Intersection												
Int Delay, s/veh	21											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗		↕			↕		↗	↘	
Traffic Vol, veh/h	15	5	20	17	1	57	25	1156	53	38	744	69
Future Vol, veh/h	15	5	20	17	1	57	25	1156	53	38	744	69
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	-	-	200	-	-	-	-	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	6	2	2	2	2	2	2	6	5	2
Mvmt Flow	17	6	22	19	1	63	28	1284	59	42	827	77

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	2352	2349	866	2334	2358	1314	904	0	0	1343	0	0
Stage 1	950	950	-	1370	1370	-	-	-	-	-	-	-
Stage 2	1402	1399	-	964	988	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.26	7.12	6.52	6.22	4.12	-	-	4.16	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.354	3.518	4.018	3.318	2.218	-	-	2.254	-	-
Pot Cap-1 Maneuver	25	36	347	26	36	193	752	-	-	500	-	-
Stage 1	312	339	-	181	214	-	-	-	-	-	-	-
Stage 2	173	207	-	307	325	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	~ 14	28	347	~ 17	28	193	752	-	-	500	-	-
Mov Cap-2 Maneuver	~ 14	28	-	~ 17	28	-	-	-	-	-	-	-
Stage 1	265	311	-	154	182	-	-	-	-	-	-	-
Stage 2	98	176	-	259	298	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	359.4		413.9		0.2		0.6	
HCM LOS	F		F					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	752	-	-	16	347	56	500	-	-
HCM Lane V/C Ratio	0.037	-	-	1.389	0.064	1.488	0.084	-	-
HCM Control Delay (s)	10	0		\$ 702.6	16.1	\$ 413.9	12.9	-	-
HCM Lane LOS	A	A	-	F	C	F	B	-	-
HCM 95th %tile Q(veh)	0.1	-	-	3.3	0.2	7.6	0.3	-	-

Notes
 ~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Lanes, Volumes, Timings

Henry Chapel TIA

8: S Point Road (NC 273) & South Point HS/Red Raider Run

2024 Build AM - Ph 1B



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↕	↗	↖	↕		↖	↗	
Traffic Volume (vph)	0	0	0	133	34	147	65	1044	88	96	720	51
Future Volume (vph)	0	0	0	133	34	147	65	1044	88	96	720	51
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			4%			-1%			1%	
Storage Length (ft)	0		0	0		100	175		0	100		0
Storage Lanes	0		0	0		1	1		0	1		0
Taper Length (ft)	25			25			100			75		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t						0.850		0.988			0.990	
Fl _t Protected					0.962		0.950			0.950		
Satd. Flow (prot)	0	0	0	0	1756	1552	1778	1850	0	1761	1770	0
Fl _t Permitted					0.962		0.950			0.950		
Satd. Flow (perm)	0	0	0	0	1756	1552	1778	1850	0	1761	1770	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		25			25			35			35	
Link Distance (ft)		1017			1038			492			625	
Travel Time (s)		27.7			28.3			9.6			12.2	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	6%	2%
Adj. Flow (vph)	0	0	0	148	38	163	72	1160	98	107	800	57
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	186	163	72	1258	0	107	857	0
Turn Type				Perm	NA	pm+ov	Prot	NA		Prot	NA	
Protected Phases					8	1	5	2		1	6	
Permitted Phases				8		8						
Detector Phase				8	8	1	5	2		1	6	
Switch Phase												
Minimum Initial (s)				7.0	7.0	7.0	7.0	10.0		7.0	10.0	
Minimum Split (s)				25.4	25.4	12.6	12.1	27.7		12.6	23.7	
Total Split (s)				26.0	26.0	13.0	15.0	81.0		13.0	79.0	
Total Split (%)				21.7%	21.7%	10.8%	12.5%	67.5%		10.8%	65.8%	
Maximum Green (s)				20.6	20.6	7.4	9.9	75.3		7.4	73.3	
Yellow Time (s)				3.0	3.0	3.0	3.0	3.9		3.0	3.9	
All-Red Time (s)				2.4	2.4	2.6	2.1	1.8		2.6	1.8	
Lost Time Adjust (s)					-0.4	-0.6	-0.1	-0.7		-0.6	-0.7	
Total Lost Time (s)					5.0	5.0	5.0	5.0		5.0	5.0	
Lead/Lag						Lead	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)				2.0	2.0	2.0	2.0	3.0		2.0	3.0	
Recall Mode				None	None	None	None	C-Max		None	C-Max	
Walk Time (s)				7.0	7.0			7.0				
Flash Dont Walk (s)				13.0	13.0			15.0				
Pedestrian Calls (#/hr)				0	0			0				
Act Effct Green (s)					16.8	32.0	9.1	78.0		10.2	81.5	
Actuated g/C Ratio					0.14	0.27	0.08	0.65		0.08	0.68	
v/c Ratio					0.76	0.39	0.54	1.05		0.71	0.71	
Control Delay					68.5	38.6	68.1	61.9		77.9	11.4	

Lanes, Volumes, Timings
 8: S Point Road (NC 273) & South Point HS/Red Raider Run

Henry Chapel TIA
 2024 Build AM - Ph 1B



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay					0.0	0.0	0.0	0.0		0.0	0.5	
Total Delay					68.5	38.6	68.1	61.9		77.9	12.0	
LOS					E	D	E	E		E	B	
Approach Delay					54.6			62.2			19.3	
Approach LOS					D			E			B	
Queue Length 50th (ft)					140	101	55	~1083		89	322	
Queue Length 95th (ft)					213	166	104	#1345		m#124	m481	
Internal Link Dist (ft)		937			958			412			545	
Turn Bay Length (ft)						100	175			100		
Base Capacity (vph)					307	414	151	1201		150	1202	
Starvation Cap Reductn					0	0	0	0		0	91	
Spillback Cap Reductn					0	0	0	0		0	0	
Storage Cap Reductn					0	0	0	0		0	0	
Reduced v/c Ratio					0.61	0.39	0.48	1.05		0.71	0.77	

Intersection Summary

Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 98 (82%), Referenced to phase 2:NBT and 6:SBT, Start of Green
 Natural Cycle: 140
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.05
 Intersection Signal Delay: 45.5
 Intersection Capacity Utilization 87.8%
 Analysis Period (min) 15

Intersection LOS: D
 ICU Level of Service E
























- ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
- m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 8: S Point Road (NC 273) & South Point HS/Red Raider Run



Lanes, Volumes, Timings
 9: S Point Road (NC 273) & Nixon Road/R L Stowe Road

Henry Chapel TIA
 2024 Build AM - Ph 1B

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	100	167	75	302	81	29	88	528	573	47	526	50
Future Volume (vph)	100	167	75	302	81	29	88	528	573	47	526	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		1%			1%			1%			1%	
Storage Length (ft)	200		100	225		0	280		225	25		100
Storage Lanes	1		1	1		0	1		1	1		1
Taper Length (ft)	250			100			100			125		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.961				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1761	1853	1474	1648	1687	0	1678	1853	1575	1761	1853	1530
Flt Permitted	0.950			0.950			0.950			0.272		
Satd. Flow (perm)	1761	1853	1474	1648	1687	0	1678	1853	1575	504	1853	1530
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		25			35			35			35	
Link Distance (ft)		1003			1016			625			1000	
Travel Time (s)		27.4			19.8			12.2			19.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	9%	9%	9%	4%	7%	2%	2%	2%	2%	5%
Adj. Flow (vph)	111	186	83	336	90	32	98	587	637	52	584	56
Shared Lane Traffic (%)												
Lane Group Flow (vph)	111	186	83	336	122	0	98	587	637	52	584	56
Turn Type	Split	NA	pm+ov	Split	NA		Prot	NA	pm+ov	D.Pm	NA	pm+ov
Protected Phases	3	3	5	4	4		5	2	4		6	3
Permitted Phases			3						2	2		6
Detector Phase	3	3	5	4	4		5	2	4	2	6	3
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0		7.0	10.0	7.0	10.0	10.0	7.0
Minimum Split (s)	25.0	25.0	12.8	13.3	13.3		12.8	24.1	13.3	24.1	24.1	25.0
Total Split (s)	25.0	25.0	14.0	32.0	32.0		14.0	63.0	32.0	63.0	49.0	25.0
Total Split (%)	20.8%	20.8%	11.7%	26.7%	26.7%		11.7%	52.5%	26.7%	52.5%	40.8%	20.8%
Maximum Green (s)	19.0	19.0	8.2	25.7	25.7		8.2	56.9	25.7	56.9	42.9	19.0
Yellow Time (s)	3.8	3.8	3.0	4.4	4.4		3.0	3.8	4.4	3.8	3.8	3.8
All-Red Time (s)	2.2	2.2	2.8	1.9	1.9		2.8	2.3	1.9	2.3	2.3	2.2
Lost Time Adjust (s)	-1.0	-1.0	-0.8	-1.3	-1.3		-0.8	-1.1	-1.3	-1.1	-1.1	-1.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lead	Lead	Lag	Lag		Lead		Lag		Lag	Lead
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		2.0	3.0	2.0	3.0	3.0	2.0
Recall Mode	None	None	None	None	None		None	C-Max	None	C-Max	C-Max	None
Walk Time (s)	7.0	7.0						7.0		7.0		7.0
Flash Dont Walk (s)	12.0	12.0						11.0		11.0		12.0
Pedestrian Calls (#/hr)	0	0						0		0		0
Act Effct Green (s)	16.6	16.6	25.9	27.4	27.4		9.3	60.9	93.4	60.9	46.6	68.3
Actuated g/C Ratio	0.14	0.14	0.22	0.23	0.23		0.08	0.51	0.78	0.51	0.39	0.57
v/c Ratio	0.45	0.73	0.26	0.89	0.32		0.76	0.62	0.52	0.20	0.81	0.06
Control Delay	52.9	65.5	21.8	71.4	41.0		75.6	16.3	5.1	20.5	44.3	12.1

Lanes, Volumes, Timings
 9: S Point Road (NC 273) & Nixon Road/R L Stowe Road

Henry Chapel TIA
 2024 Build AM - Ph 1B

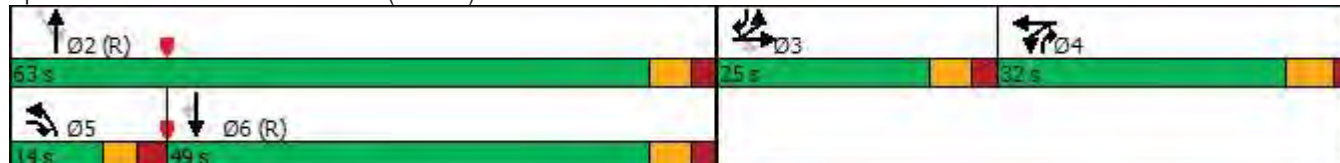


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	1.0	0.7	0.0	0.0	0.0
Total Delay	52.9	65.5	21.8	71.4	41.0		75.6	17.3	5.8	20.5	44.3	12.1
LOS	D	E	C	E	D		E	B	A	C	D	B
Approach Delay		52.3			63.3			16.1			39.9	
Approach LOS		D			E			B			D	
Queue Length 50th (ft)	80	139	29	247	77		74	229	131	23	415	19
Queue Length 95th (ft)	135	214	55	#428	137		m78	m224	m131	52	#616	37
Internal Link Dist (ft)		923			936			545			920	
Turn Bay Length (ft)	200		100	225			280		225	25		100
Base Capacity (vph)	293	308	320	385	395		131	940	1221	255	719	913
Starvation Cap Reductn	0	0	0	0	0		0	154	269	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.38	0.60	0.26	0.87	0.31		0.75	0.75	0.67	0.20	0.81	0.06

Intersection Summary

Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 8 (7%), Referenced to phase 2:NBSB and 6:SBT, Start of Green
 Natural Cycle: 100
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.89
 Intersection Signal Delay: 34.2
 Intersection LOS: C
 Intersection Capacity Utilization 78.3%
 ICU Level of Service D
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 9: S Point Road (NC 273) & Nixon Road/R L Stowe Road



Lanes, Volumes, Timings
 10: Henry Chapel Road & Access 1



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	22	30	84	0	0	62
Future Volume (vph)	22	30	84	0	0	62
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t					0.865	
Fl _t Protected		0.979				
Satd. Flow (prot)	0	1707	1810	0	1611	0
Fl _t Permitted		0.979				
Satd. Flow (perm)	0	1707	1810	0	1611	0
Link Speed (mph)		25	25		25	
Link Distance (ft)		1293	1432		1041	
Travel Time (s)		35.3	39.1		28.4	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	14%	5%	2%	2%	2%
Adj. Flow (vph)	24	33	93	0	0	69
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	57	93	0	69	0
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	20.0%
ICU Level of Service	A
Analysis Period (min)	15

Intersection						
Int Delay, s/veh	3.6					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	22	30	84	0	0	62
Future Vol, veh/h	22	30	84	0	0	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	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	14	5	2	2	2
Mvmt Flow	24	33	93	0	0	69

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	93	0	-	0	174 93
Stage 1	-	-	-	-	93 -
Stage 2	-	-	-	-	81 -
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	1501	-	-	-	816 964
Stage 1	-	-	-	-	931 -
Stage 2	-	-	-	-	942 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1501	-	-	-	803 964
Mov Cap-2 Maneuver	-	-	-	-	803 -
Stage 1	-	-	-	-	916 -
Stage 2	-	-	-	-	942 -

Approach	EB	WB	SB
HCM Control Delay, s	3.1	0	9
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1501	-	-	-	964
HCM Lane V/C Ratio	0.016	-	-	-	0.071
HCM Control Delay (s)	7.4	0	-	-	9
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0.1	-	-	-	0.2

Lanes, Volumes, Timings
 11: Henry Chapel Road & Access 2



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↔	↔		↔	
Traffic Volume (vph)	22	8	22	0	0	62
Future Volume (vph)	22	8	22	0	0	62
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t					0.865	
Fl _t Protected		0.965				
Satd. Flow (prot)	0	1742	1810	0	1611	0
Fl _t Permitted		0.965				
Satd. Flow (perm)	0	1742	1810	0	1611	0
Link Speed (mph)		25	25		25	
Link Distance (ft)		1432	1164		1055	
Travel Time (s)		39.1	31.7		28.8	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	14%	5%	2%	2%	2%
Adj. Flow (vph)	24	9	24	0	0	69
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	33	24	0	69	0
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	18.8%
Analysis Period (min)	15
	ICU Level of Service A

Intersection						
Int Delay, s/veh	6.2					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	22	8	22	0	0	62
Future Vol, veh/h	22	8	22	0	0	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	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	14	5	2	2	2
Mvmt Flow	24	9	24	0	0	69

















Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	24	0	-	0	81 24
Stage 1	-	-	-	-	24 -
Stage 2	-	-	-	-	57 -
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	1591	-	-	-	921 1052
Stage 1	-	-	-	-	999 -
Stage 2	-	-	-	-	966 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1591	-	-	-	907 1052
Mov Cap-2 Maneuver	-	-	-	-	907 -
Stage 1	-	-	-	-	984 -
Stage 2	-	-	-	-	966 -

Approach	EB	WB	SB
HCM Control Delay, s	5.4	0	8.7
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1591	-	-	-	1052
HCM Lane V/C Ratio	0.015	-	-	-	0.065
HCM Control Delay (s)	7.3	0	-	-	8.7
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.2

Lanes, Volumes, Timings
 1: S Point Road (NC 273) & Armstrong Road (NC 273)/Farm Road

Henry Chapel TIA
 2024 Build PM - Ph 1B

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	457	0	36	0	0	1	52	97	0	2	124	576
Future Volume (vph)	457	0	36	0	0	1	52	97	0	2	124	576
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.990			0.865							0.889
Flt Protected		0.956						0.983				
Satd. Flow (prot)	0	1760	0	0	1611	0	0	1772	0	0	1643	0
Flt Permitted		0.956						0.983				
Satd. Flow (perm)	0	1760	0	0	1611	0	0	1772	0	0	1643	0
Link Speed (mph)		45			25			45			45	
Link Distance (ft)		1234			1013			1002			3097	
Travel Time (s)		18.7			27.6			15.2			46.9	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	4%	2%	2%	2%	8%	4%	2%	2%	2%	3%
Adj. Flow (vph)	508	0	40	0	0	1	58	108	0	2	138	640
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	548	0	0	1	0	0	166	0	0	780	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 89.3% ICU Level of Service E

Analysis Period (min) 15

HCM 6th TWSC
 1: S Point Road (NC 273) & Armstrong Road (NC 273)/Farm Road

Henry Chapel TIA
 2024 Build PM - Ph 1B

Intersection

Int Delay, s/veh 108.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	457	0	36	0	0	1	52	97	0	2	124	576
Future Vol, veh/h	457	0	36	0	0	1	52	97	0	2	124	576
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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	4	2	2	2	8	4	2	2	2	3
Mvmt Flow	508	0	40	0	0	1	58	108	0	2	138	640

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	687	686	458	706	1006	108	778	0	0	108	0	0
Stage 1	462	462	-	224	224	-	-	-	-	-	-	-
Stage 2	225	224	-	482	782	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.24	7.12	6.52	6.22	4.18	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.336	3.518	4.018	3.318	2.272	-	-	2.218	-	-
Pot Cap-1 Maneuver	~361	370	599	351	241	946	813	-	-	1483	-	-
Stage 1	580	565	-	779	718	-	-	-	-	-	-	-
Stage 2	778	718	-	565	405	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	~339	341	599	308	222	946	813	-	-	1483	-	-
Mov Cap-2 Maneuver	~339	341	-	308	222	-	-	-	-	-	-	-
Stage 1	536	563	-	720	663	-	-	-	-	-	-	-
Stage 2	718	663	-	526	404	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	295.4	8.8	3.4	0
HCM LOS	F	A		


















Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	813	-	-	350	946	1483	-
HCM Lane V/C Ratio	0.071	-	-	1.565	0.001	0.001	-
HCM Control Delay (s)	9.8	0	-	295.4	8.8	7.4	0
HCM Lane LOS	A	A	-	F	A	A	A
HCM 95th %tile Q(veh)	0.2	-	-	31.3	0	0	-

Notes

~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Lanes, Volumes, Timings

2: S Point Road (NC 273) & S Point Church Road/Henry Chapel Road

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	0	0	14	0	98	0	660	20	158	774	2
Future Volume (vph)	1	0	0	14	0	98	0	660	20	158	774	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		100	0		0	0		0
Storage Lanes	0		0	0		1	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt						0.850		0.996				
Flt Protected		0.950			0.950						0.992	
Satd. Flow (prot)	0	1770	0	0	1770	1468	0	1838	0	0	1833	0
Flt Permitted		0.950			0.950						0.992	
Satd. Flow (perm)	0	1770	0	0	1770	1468	0	1838	0	0	1833	0
Link Speed (mph)		25			25			45			45	
Link Distance (ft)		1509			1293			1519			881	
Travel Time (s)		41.2			35.3			23.0			13.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	2%	2%	10%	2%	3%	2%	2%	3%	2%
Adj. Flow (vph)	1	0	0	16	0	109	0	733	22	176	860	2
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1	0	0	16	109	0	755	0	0	1038	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	98.9%
Analysis Period (min)	15
	ICU Level of Service F

Intersection												
Int Delay, s/veh	3.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕	↕		↕			↕	
Traffic Vol, veh/h	1	0	0	14	0	98	0	660	20	158	774	2
Future Vol, veh/h	1	0	0	14	0	98	0	660	20	158	774	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	-	-	-	-	-	100	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	10	2	3	2	2	3	2
Mvmt Flow	1	0	0	16	0	109	0	733	22	176	860	2

















Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	2012	1968	861	1957	1958	744	862	0	0	755	0	0
Stage 1	1213	1213	-	744	744	-	-	-	-	-	-	-
Stage 2	799	755	-	1213	1214	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.3	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.39	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	44	63	355	48	64	402	780	-	-	855	-	-
Stage 1	222	255	-	407	421	-	-	-	-	-	-	-
Stage 2	379	417	-	222	254	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	22	38	355	33	39	402	780	-	-	855	-	-
Mov Cap-2 Maneuver	22	38	-	33	39	-	-	-	-	-	-	-
Stage 1	222	154	-	407	421	-	-	-	-	-	-	-
Stage 2	276	417	-	134	154	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	177.2		38.6		0		1.7	
HCM LOS	F		E					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	780	-	-	22	33	402	855	-	-
HCM Lane V/C Ratio	-	-	-	0.051	0.471	0.271	0.205	-	-
HCM Control Delay (s)	0	-	-	177.2	188.3	17.2	10.3	0	-
HCM Lane LOS	A	-	-	F	F	C	B	A	-
HCM 95th %tile Q(veh)	0	-	-	0.2	1.6	1.1	0.8	-	-

Lanes, Volumes, Timings
 3: S Point Road (NC 273) & BB Drive/Forest Hill Road

Henry Chapel TIA
 2024 Build PM - Ph 1B

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	0	0	1	0	8	0	848	3	15	1066	1
Future Volume (vph)	4	0	0	1	0	8	0	848	3	15	1066	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.878							
Flt Protected		0.950			0.995						0.999	
Satd. Flow (prot)	0	1770	0	0	1627	0	0	1863	0	0	1861	0
Flt Permitted		0.950			0.995						0.999	
Satd. Flow (perm)	0	1770	0	0	1627	0	0	1863	0	0	1861	0
Link Speed (mph)		25			25			45			45	
Link Distance (ft)		1341			477			2444			1975	
Travel Time (s)		36.6			13.0			37.0			29.9	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	4	0	0	1	0	9	0	942	3	17	1184	1
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	4	0	0	10	0	0	945	0	0	1202	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	78.2%
ICU Level of Service	D
Analysis Period (min)	15

Intersection												
Int Delay, s/veh	0.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Vol, veh/h	4	0	0	1	0	8	0	848	3	15	1066	1
Future Vol, veh/h	4	0	0	1	0	8	0	848	3	15	1066	1
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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	0	0	1	0	9	0	942	3	17	1184	1

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	2167	2164	1185	2163	2163	944	1185	0	0	945	0	0
Stage 1	1219	1219	-	944	944	-	-	-	-	-	-	-
Stage 2	948	945	-	1219	1219	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	34	47	230	34	47	318	589	-	-	726	-	-
Stage 1	220	253	-	315	341	-	-	-	-	-	-	-
Stage 2	313	340	-	220	253	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	31	44	230	32	44	318	589	-	-	726	-	-
Mov Cap-2 Maneuver	31	44	-	32	44	-	-	-	-	-	-	-
Stage 1	220	236	-	315	341	-	-	-	-	-	-	-
Stage 2	304	340	-	205	236	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	139.7		29		0		0.1	
HCM LOS	F		D					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	589	-	-	31	160	726	-	-
HCM Lane V/C Ratio	-	-	-	0.143	0.063	0.023	-	-
HCM Control Delay (s)	0	-	-	139.7	29	10.1	0	-
HCM Lane LOS	A	-	-	F	D	B	A	-
HCM 95th %tile Q(veh)	0	-	-	0.4	0.2	0.1	-	-

Lanes, Volumes, Timings
4: Colonial Drive & Forest Hill Road

Henry Chapel TIA
2024 Build PM - Ph 1B



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	4	8	1	4	8	1
Future Volume (vph)	4	8	1	4	8	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.907			0.986		
Flt Protected				0.990	0.957	
Satd. Flow (prot)	1477	0	0	1844	1602	0
Flt Permitted				0.990	0.957	
Satd. Flow (perm)	1477	0	0	1844	1602	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	477			1074	636	
Travel Time (s)	13.0			29.3	17.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	25%	13%	2%	2%	13%	2%
Adj. Flow (vph)	4	9	1	4	9	1
Shared Lane Traffic (%)						
Lane Group Flow (vph)	13	0	0	5	10	0
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	13.3% ICU Level of Service A
Analysis Period (min)	15

Intersection						
Int Delay, s/veh	3.3					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	4	8	1	4	8	1
Future Vol, veh/h	4	8	1	4	8	1
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	90	90	90	90	90	90
Heavy Vehicles, %	25	13	2	2	13	2
Mvmt Flow	4	9	1	4	9	1

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	13	0	15
Stage 1	-	-	-	-	9
Stage 2	-	-	-	-	6
Critical Hdwy	-	-	4.12	-	6.53
Critical Hdwy Stg 1	-	-	-	-	5.53
Critical Hdwy Stg 2	-	-	-	-	5.53
Follow-up Hdwy	-	-	2.218	-	3.617
Pot Cap-1 Maneuver	-	-	1606	-	976
Stage 1	-	-	-	-	986
Stage 2	-	-	-	-	989
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1606	-	975
Mov Cap-2 Maneuver	-	-	-	-	975
Stage 1	-	-	-	-	986
Stage 2	-	-	-	-	988

Approach	EB	WB	NB
HCM Control Delay, s	0	1.4	8.7
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	985	-	-	1606	-
HCM Lane V/C Ratio	0.01	-	-	0.001	-
HCM Control Delay (s)	8.7	-	-	7.2	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

Lanes, Volumes, Timings
 5: Colonial Drive & Timber Ridge Road

Henry Chapel TIA
 2024 Build PM - Ph 1B



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	5	3	2	3	5
Future Volume (vph)	0	5	3	2	3	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.865		0.946			
Flt Protected						0.984
Satd. Flow (prot)	1611	0	1490	0	0	1640
Flt Permitted						0.984
Satd. Flow (perm)	1611	0	1490	0	0	1640
Link Speed (mph)	25		25			25
Link Distance (ft)	2169		1055			636
Travel Time (s)	59.2		28.8			17.3
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	33%	2%	2%	20%
Adj. Flow (vph)	0	6	3	2	3	6
Shared Lane Traffic (%)						
Lane Group Flow (vph)	6	0	5	0	0	9
Sign Control	Stop		Free			Free

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	13.3%
	ICU Level of Service A
Analysis Period (min)	15

Intersection						
Int Delay, s/veh	3.5					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	5	3	2	3	5
Future Vol, veh/h	0	5	3	2	3	5
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	90	90	90	90	90	90
Heavy Vehicles, %	2	2	33	2	2	20
Mvmt Flow	0	6	3	2	3	6





















Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	16	4	0	0	5
Stage 1	4	-	-	-	-
Stage 2	12	-	-	-	-
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	1002	1080	-	-	1616
Stage 1	1019	-	-	-	-
Stage 2	1011	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	1000	1080	-	-	1616
Mov Cap-2 Maneuver	1000	-	-	-	-
Stage 1	1019	-	-	-	-
Stage 2	1009	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.4	0	2.7
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	1080	1616
HCM Lane V/C Ratio	-	-	0.005	0.002
HCM Control Delay (s)	-	-	8.4	7.2
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0	0

Lanes, Volumes, Timings
6: S Point Road (NC 273) & Belmont MS/Belwood Drive

Henry Chapel TIA
2024 Build PM - Ph 1B

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	23	2	11	3	1	31	6	918	2	43	1145	5
Future Volume (vph)	23	2	11	3	1	31	6	918	2	43	1145	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		3%			0%			1%			0%	
Storage Length (ft)	0		175	0		0	200		0	100		200
Storage Lanes	0		1	0		0	1		0	1		1
Taper Length (ft)	25			25			100			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.879							0.850
Flt Protected		0.956			0.996		0.950			0.950		
Satd. Flow (prot)	0	1754	795	0	1631	0	1761	1853	0	1770	1863	1583
Flt Permitted		0.956			0.996		0.950			0.225		
Satd. Flow (perm)	0	1754	795	0	1631	0	1761	1853	0	419	1863	1583
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		35			25			35			35	
Link Distance (ft)		1017			1050			1975			1373	
Travel Time (s)		19.8			28.6			38.5			26.7	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	100%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Adj. Flow (vph)	26	2	12	3	1	34	7	1020	2	48	1272	6
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	28	12	0	38	0	7	1022	0	48	1272	6
Turn Type	Split	NA	pm+ov	Split	NA		Prot	NA		Perm	NA	pm+ov
Protected Phases	4	4	5	8	8		5	2			6	4
Permitted Phases			4							6		6
Detector Phase	4	4	5	8	8		5	2		6	6	4
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0		7.0	12.0		12.0	12.0	7.0
Minimum Split (s)	11.9	11.9	12.1	14.0	14.0		12.1	17.6		32.6	32.6	11.9
Total Split (s)	12.0	12.0	13.0	14.0	14.0		13.0	94.0		81.0	81.0	12.0
Total Split (%)	10.0%	10.0%	10.8%	11.7%	11.7%		10.8%	78.3%		67.5%	67.5%	10.0%
Maximum Green (s)	7.1	7.1	7.9	7.0	7.0		7.9	88.4		75.4	75.4	7.1
Yellow Time (s)	3.0	3.0	3.0	5.0	5.0		3.0	4.5		4.5	4.5	3.0
All-Red Time (s)	1.9	1.9	2.1	2.0	2.0		2.1	1.1		1.1	1.1	1.9
Lost Time Adjust (s)		0.1	-0.1		-2.0		-0.1	-0.6		-0.6	-0.6	0.1
Total Lost Time (s)		5.0	5.0		5.0		5.0	5.0		5.0	5.0	5.0
Lead/Lag			Lead				Lead			Lag	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		2.0	6.0		6.0	6.0	2.0
Minimum Gap (s)	2.0	2.0	2.0	2.0	2.0		2.0	3.0		3.0	3.0	2.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0		0.0	15.0		15.0	15.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0		0.0	45.0		45.0	45.0	0.0
Recall Mode	None	None	None	None	None		None	Min		Min	Min	None
Walk Time (s)										7.0	7.0	
Flash Dont Walk (s)										20.0	20.0	
Pedestrian Calls (#/hr)										0	0	
Act Efect Green (s)		7.0	11.1		9.1		7.2	90.7		86.3	86.3	93.0

Lanes, Volumes, Timings
 6: S Point Road (NC 273) & Belmont MS/Belwood Drive

Henry Chapel TIA
 2024 Build PM - Ph 1B

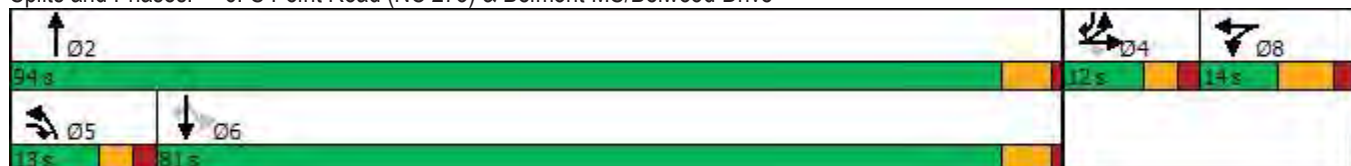


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Actuated g/C Ratio		0.06	0.10		0.08		0.07	0.84		0.80	0.80	0.86
v/c Ratio		0.25	0.15		0.28		0.06	0.66		0.14	0.85	0.00
Control Delay		57.6	37.0		55.8		53.5	9.4		8.6	22.3	3.8
Queue Delay		0.0	0.0		0.0		0.0	0.0		0.0	0.0	0.0
Total Delay		57.6	37.0		55.8		53.5	9.4		8.6	22.3	3.8
LOS		E	D		E		D	A		A	C	A
Approach Delay		51.4			55.8			9.7			21.7	
Approach LOS		D			E			A			C	
Queue Length 50th (ft)		19	6		26		5	395		9	695	1
Queue Length 95th (ft)		52	23		65		21	564		34	#1346	4
Internal Link Dist (ft)		937			970			1895			1293	
Turn Bay Length (ft)			175				200			100		200
Base Capacity (vph)		114	88		137		131	1594		335	1489	1363
Starvation Cap Reductn		0	0		0		0	0		0	0	0
Spillback Cap Reductn		0	0		0		0	0		0	0	0
Storage Cap Reductn		0	0		0		0	0		0	0	0
Reduced v/c Ratio		0.25	0.14		0.28		0.05	0.64		0.14	0.85	0.00

Intersection Summary



















Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 108
 Natural Cycle: 130
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.85
 Intersection Signal Delay: 17.6
 Intersection LOS: B
 Intersection Capacity Utilization 84.4%
 ICU Level of Service E
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 6: S Point Road (NC 273) & Belmont MS/Belwood Drive



Lanes, Volumes, Timings
 7: S Point Road (NC 273) & McKee Farm Road/Stowe Road

Henry Chapel TIA
 2024 Build PM - Ph 1B

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	25	9	15	26	2	51	12	949	23	69	1162	48
Future Volume (vph)	25	9	15	26	2	51	12	949	23	69	1162	48
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		200	0		0	0		0	100		0
Storage Lanes	0		1	0		0	0		0	1		0
Taper Length (ft)	25			25			25			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.913			0.997			0.994	
Flt Protected		0.964			0.984			0.999		0.950		
Satd. Flow (prot)	0	1796	1583	0	1673	0	0	1855	0	1770	1852	0
Flt Permitted		0.964			0.984			0.999		0.950		
Satd. Flow (perm)	0	1796	1583	0	1673	0	0	1855	0	1770	1852	0
Link Speed (mph)		25			25			35			35	
Link Distance (ft)		1043			1485			1373			492	
Travel Time (s)		28.4			40.5			26.7			9.6	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	28	10	17	29	2	57	13	1054	26	77	1291	53
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	38	17	0	88	0	0	1093	0	77	1344	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	82.1%
ICU Level of Service	E
Analysis Period (min)	15

HCM 6th TWSC
 7: S Point Road (NC 273) & McKee Farm Road/Stowe Road

Henry Chapel TIA
 2024 Build PM - Ph 1B

Intersection												
Int Delay, s/veh	69.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗		↕			↕		↗	↘	
Traffic Vol, veh/h	25	9	15	26	2	51	12	949	23	69	1162	48
Future Vol, veh/h	25	9	15	26	2	51	12	949	23	69	1162	48
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	-	-	200	-	-	-	-	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	28	10	17	29	2	57	13	1054	26	77	1291	53

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	2595	2578	1318	2578	2591	1067	1344	0	0	1080	0	0
Stage 1	1472	1472	-	1093	1093	-	-	-	-	-	-	-
Stage 2	1123	1106	-	1485	1498	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	~ 17	26	192	~ 17	25	270	513	-	-	646	-	-
Stage 1	158	191	-	260	290	-	-	-	-	-	-	-
Stage 2	250	286	-	155	186	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	~ 11	21	192	~ 9	21	270	513	-	-	646	-	-
Mov Cap-2 Maneuver	~ 11	21	-	~ 9	21	-	-	-	-	-	-	-
Stage 1	148	168	-	243	271	-	-	-	-	-	-	-
Stage 2	183	268	-	117	164	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, \$	1013.7		1453.4		0.1		0.6	
HCM LOS	F		F					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	513	-	-	13	192	25	646	-	-
HCM Lane V/C Ratio	0.026	-	-	2.906	0.087	3.511	0.119	-	-
HCM Control Delay (s)	12.2	0		\$ 1449.7	25	\$ 1453.4	11.3	-	-
HCM Lane LOS	B	A	-	F	D	F	B	-	-
HCM 95th %tile Q(veh)	0.1	-	-	5.6	0.3	10.9	0.4	-	-

Notes
 ~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Lanes, Volumes, Timings

Henry Chapel TIA

8: S Point Road (NC 273) & South Point HS/Red Raider Run

2024 Build PM - Ph 1B



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↕	↗	↖	↕	↗	↖	↕	↗
Traffic Volume (vph)	0	0	0	207	5	213	12	889	89	122	1088	3
Future Volume (vph)	0	0	0	207	5	213	12	889	89	122	1088	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			4%			-1%			1%	
Storage Length (ft)	0		0	0		100	175		0	100		0
Storage Lanes	0		0	0		1	1		0	1		0
Taper Length (ft)	25			25			100			75		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t						0.850		0.986				
Fl _t Protected					0.954		0.950			0.950		
Satd. Flow (prot)	0	0	0	0	1742	1552	1778	1830	0	1761	1853	0
Fl _t Permitted					0.954		0.950			0.950		
Satd. Flow (perm)	0	0	0	0	1742	1552	1778	1830	0	1761	1853	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		25			25			35			35	
Link Distance (ft)		1017			1038			492			625	
Travel Time (s)		27.7			28.3			9.6			12.2	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	3%	2%	2%	2%	2%
Adj. Flow (vph)	0	0	0	230	6	237	13	988	99	136	1209	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	236	237	13	1087	0	136	1212	0
Turn Type				Perm	NA	pm+ov	Prot	NA		Prot	NA	
Protected Phases					8	1	5	2		1	6	
Permitted Phases				8		8						
Detector Phase				8	8	1	5	2		1	6	
Switch Phase												
Minimum Initial (s)				7.0	7.0	7.0	7.0	10.0		7.0	10.0	
Minimum Split (s)				25.4	25.4	12.6	12.1	27.7		12.6	23.7	
Total Split (s)				26.0	26.0	18.0	13.0	86.0		18.0	91.0	
Total Split (%)				20.0%	20.0%	13.8%	10.0%	66.2%		13.8%	70.0%	
Maximum Green (s)				20.6	20.6	12.4	7.9	80.3		12.4	85.3	
Yellow Time (s)				3.0	3.0	3.0	3.0	3.9		3.0	3.9	
All-Red Time (s)				2.4	2.4	2.6	2.1	1.8		2.6	1.8	
Lost Time Adjust (s)					-0.4	-0.6	-0.1	-0.7		-0.6	-0.7	
Total Lost Time (s)					5.0	5.0	5.0	5.0		5.0	5.0	
Lead/Lag						Lead	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)				2.0	2.0	2.0	2.0	3.0		2.0	3.0	
Recall Mode				None	None	None	None	C-Max		None	C-Max	
Walk Time (s)				7.0	7.0			7.0				
Flash Dont Walk (s)				13.0	13.0			15.0				
Pedestrian Calls (#/hr)				0	0			0				
Act Effct Green (s)					19.9	37.4	7.1	82.6		12.5	95.2	
Actuated g/C Ratio					0.15	0.29	0.05	0.64		0.10	0.73	
v/c Ratio					0.89	0.53	0.13	0.93		0.80	0.89	
Control Delay					86.3	43.5	61.8	37.5		57.1	14.9	

Lanes, Volumes, Timings
 8: S Point Road (NC 273) & South Point HS/Red Raider Run

Henry Chapel TIA
 2024 Build PM - Ph 1B

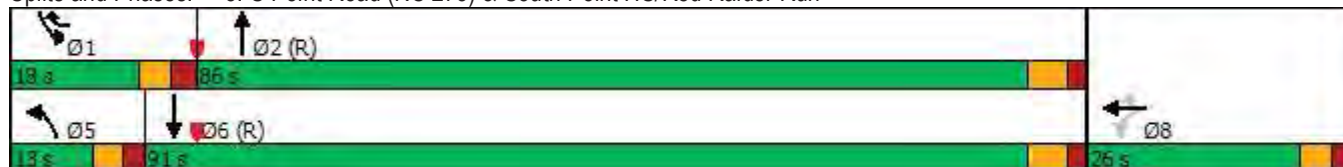


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay					0.0	0.8	0.0	1.2		0.0	23.6	
Total Delay					86.3	44.3	61.8	38.8		57.1	38.5	
LOS					F	D	E	D		E	D	
Approach Delay					65.2			39.0			40.4	
Approach LOS					E			D			D	
Queue Length 50th (ft)					195	165	11	800		108	573	
Queue Length 95th (ft)					#335	250	33	#1164		m106	m554	
Internal Link Dist (ft)		937			958			412			545	
Turn Bay Length (ft)						100	175			100		
Base Capacity (vph)					281	453	109	1163		177	1357	
Starvation Cap Reductn					0	0	0	0		0	193	
Spillback Cap Reductn					0	62	0	18		0	0	
Storage Cap Reductn					0	0	0	0		0	0	
Reduced v/c Ratio					0.84	0.61	0.12	0.95		0.77	1.04	

Intersection Summary
























Area Type: Other
 Cycle Length: 130
 Actuated Cycle Length: 130
 Offset: 44 (34%), Referenced to phase 2:NBT and 6:SBT, Start of Green
 Natural Cycle: 120
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.93
 Intersection Signal Delay: 43.9
 Intersection LOS: D
 Intersection Capacity Utilization 87.5%
 ICU Level of Service E
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 8: S Point Road (NC 273) & South Point HS/Red Raider Run



Lanes, Volumes, Timings
 9: S Point Road (NC 273) & Nixon Road/R L Stowe Road

Henry Chapel TIA
 2024 Build PM - Ph 1B

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	67	98	72	584	108	38	61	519	497	73	572	74
Future Volume (vph)	67	98	72	584	108	38	61	519	497	73	572	74
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		1%			1%			1%			1%	
Storage Length (ft)	200		100	225		0	280		225	25		100
Storage Lanes	1		1	1		0	1		1	1		1
Taper Length (ft)	250			100			100			125		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.961				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1761	1853	1545	1744	1756	0	1761	1853	1545	1761	1853	1560
Flt Permitted	0.950			0.950			0.950			0.174		
Satd. Flow (perm)	1761	1853	1545	1744	1756	0	1761	1853	1545	322	1853	1560
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		25			35			35			35	
Link Distance (ft)		1003			1016			625			1000	
Travel Time (s)		27.4			19.8			12.2			19.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	4%	3%	4%	2%	2%	2%	4%	2%	2%	3%
Adj. Flow (vph)	74	109	80	649	120	42	68	577	552	81	636	82
Shared Lane Traffic (%)												
Lane Group Flow (vph)	74	109	80	649	162	0	68	577	552	81	636	82
Turn Type	Split	NA	pm+ov	Split	NA		Prot	NA	pm+ov	D.Pm	NA	pm+ov
Protected Phases	3	3	5	4	4		5	2	4		6	3
Permitted Phases			3						2	2		6
Detector Phase	3	3	5	4	4		5	2	4	2	6	3
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0		7.0	10.0	7.0	10.0	10.0	7.0
Minimum Split (s)	25.0	25.0	12.8	13.3	13.3		12.8	24.1	13.3	24.1	24.1	25.0
Total Split (s)	25.0	25.0	13.0	48.0	48.0		13.0	57.0	48.0	57.0	44.0	25.0
Total Split (%)	19.2%	19.2%	10.0%	36.9%	36.9%		10.0%	43.8%	36.9%	43.8%	33.8%	19.2%
Maximum Green (s)	19.0	19.0	7.2	41.7	41.7		7.2	50.9	41.7	50.9	37.9	19.0
Yellow Time (s)	3.8	3.8	3.0	4.4	4.4		3.0	3.8	4.4	3.8	3.8	3.8
All-Red Time (s)	2.2	2.2	2.8	1.9	1.9		2.8	2.3	1.9	2.3	2.3	2.2
Lost Time Adjust (s)	-1.0	-1.0	-0.8	-1.3	-1.3		-0.8	-1.1	-1.3	-1.1	-1.1	-1.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lead	Lead	Lag	Lag		Lead		Lag		Lag	Lead
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		2.0	3.0	2.0	3.0	3.0	2.0
Recall Mode	None	None	None	None	None		None	C-Max	None	C-Max	C-Max	None
Walk Time (s)	7.0	7.0						7.0		7.0		7.0
Flash Dont Walk (s)	12.0	12.0						11.0		11.0		12.0
Pedestrian Calls (#/hr)	0	0						0		0		0
Act Effct Green (s)	13.0	13.0	20.9	50.0	50.0		8.0	52.0	107.0	52.0	39.0	57.0
Actuated g/C Ratio	0.10	0.10	0.16	0.38	0.38		0.06	0.40	0.82	0.40	0.30	0.44
v/c Ratio	0.42	0.59	0.32	0.97	0.24		0.64	0.78	0.43	0.63	1.14	0.12
Control Delay	61.2	68.4	27.3	67.6	29.3		66.1	38.9	1.7	56.3	126.1	21.3

Lanes, Volumes, Timings
 9: S Point Road (NC 273) & Nixon Road/R L Stowe Road

Henry Chapel TIA
 2024 Build PM - Ph 1B



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay	0.0	0.0	20.8	0.0	0.0		0.0	4.0	0.7	0.0	0.8	0.0
Total Delay	61.2	68.4	48.1	67.6	29.3		66.1	43.0	2.4	56.3	126.9	21.3
LOS	E	E	D	E	C		E	D	A	E	F	C
Approach Delay		60.2			60.0			25.6			108.9	
Approach LOS		E			E			C			F	
Queue Length 50th (ft)	60	89	32	532	92		55	448	16	54	~627	40
Queue Length 95th (ft)	106	146	53	#840	156		m69	m504	m73	#138	#860	69
Internal Link Dist (ft)		923			936			545			920	
Turn Bay Length (ft)	200		100	225			280		225	25		100
Base Capacity (vph)	270	285	249	670	675		108	741	1271	128	556	768
Starvation Cap Reductn	0	0	0	0	0		0	99	387	0	0	0
Spillback Cap Reductn	0	0	153	0	0		0	0	0	0	51	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.27	0.38	0.83	0.97	0.24		0.63	0.90	0.62	0.63	1.26	0.11

Intersection Summary

Area Type: Other
 Cycle Length: 130
 Actuated Cycle Length: 130
 Offset: 0 (0%), Referenced to phase 2:NBSB and 6:SBT, Start of Green
 Natural Cycle: 150
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.14
 Intersection Signal Delay: 59.3
 Intersection LOS: E
 Intersection Capacity Utilization 90.8%
 ICU Level of Service E
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 9: S Point Road (NC 273) & Nixon Road/R L Stowe Road



Lanes, Volumes, Timings
 10: Henry Chapel Road & Access 1

Henry Chapel TIA
 2024 Build PM - Ph 1B



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↔		↘	↙
Traffic Volume (vph)	72	107	70	0	0	42
Future Volume (vph)	72	107	70	0	0	42
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t					0.865	
Fl _t Protected		0.980				
Satd. Flow (prot)	0	1825	1743	0	1611	0
Fl _t Permitted		0.980				
Satd. Flow (perm)	0	1825	1743	0	1611	0
Link Speed (mph)		25	25		25	
Link Distance (ft)		1293	1432		1041	
Travel Time (s)		35.3	39.1		28.4	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	9%	2%	2%	2%
Adj. Flow (vph)	80	119	78	0	0	47
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	199	78	0	47	0
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	26.3%
Analysis Period (min)	15
	ICU Level of Service A

Intersection						
Int Delay, s/veh	3.1					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	72	107	70	0	0	42
Future Vol, veh/h	72	107	70	0	0	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	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	9	2	2	2
Mvmt Flow	80	119	78	0	0	47

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	78	0	-	0	357 78
Stage 1	-	-	-	-	78 -
Stage 2	-	-	-	-	279 -
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	1520	-	-	-	641 983
Stage 1	-	-	-	-	945 -
Stage 2	-	-	-	-	768 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1520	-	-	-	605 983
Mov Cap-2 Maneuver	-	-	-	-	605 -
Stage 1	-	-	-	-	892 -
Stage 2	-	-	-	-	768 -

Approach	EB	WB	SB
HCM Control Delay, s	3	0	8.8
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1520	-	-	-	983
HCM Lane V/C Ratio	0.053	-	-	-	0.047
HCM Control Delay (s)	7.5	0	-	-	8.8
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0.2	-	-	-	0.1

Lanes, Volumes, Timings
 11: Henry Chapel Road & Access 2



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↔	↔		↔	↔
Traffic Volume (vph)	73	34	27	0	0	43
Future Volume (vph)	73	34	27	0	0	43
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t					0.865	
Fl _t Protected		0.967				
Satd. Flow (prot)	0	1801	1743	0	1611	0
Fl _t Permitted		0.967				
Satd. Flow (perm)	0	1801	1743	0	1611	0
Link Speed (mph)		25	25		25	
Link Distance (ft)		1432	1164		1055	
Travel Time (s)		39.1	31.7		28.8	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	9%	2%	2%	2%
Adj. Flow (vph)	81	38	30	0	0	48
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	119	30	0	48	0
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	22.5%
Analysis Period (min)	15
	ICU Level of Service A

Intersection						
Int Delay, s/veh	5.1					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	73	34	27	0	0	43
Future Vol, veh/h	73	34	27	0	0	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	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	9	2	2	2
Mvmt Flow	81	38	30	0	0	48

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	30	0	-	0	230 30
Stage 1	-	-	-	-	30 -
Stage 2	-	-	-	-	200 -
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	1583	-	-	-	758 1044
Stage 1	-	-	-	-	993 -
Stage 2	-	-	-	-	834 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1583	-	-	-	719 1044
Mov Cap-2 Maneuver	-	-	-	-	719 -
Stage 1	-	-	-	-	941 -
Stage 2	-	-	-	-	834 -

Approach	EB	WB	SB
HCM Control Delay, s	5	0	8.6
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1583	-	-	-	1044
HCM Lane V/C Ratio	0.051	-	-	-	0.046
HCM Control Delay (s)	7.4	0	-	-	8.6
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0.2	-	-	-	0.1



















2024 Build-out Conditions
Improved

Lanes, Volumes, Timings

2: S Point Road (NC 273) & S Point Church Road/Henry Chapel Road

Henry Chapel TIA

2024 Build IMP AM - Ph 1B

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	1	13	0	133	0	844	5	47	331	5
Future Volume (vph)	0	0	1	13	0	133	0	844	5	47	331	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		100	0		0	100		0
Storage Lanes	0		0	0		1	0		0	1		0
Taper Length (ft)	25			25			25			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.865				0.850		0.999			0.998	
Flt Protected					0.950					0.950		
Satd. Flow (prot)	0	1611	0	0	1770	1538	0	1850	0	1770	1757	0
Flt Permitted					0.950					0.950		
Satd. Flow (perm)	0	1611	0	0	1770	1538	0	1850	0	1770	1757	0
Link Speed (mph)		25			25			45			45	
Link Distance (ft)		1509			1293			1519			881	
Travel Time (s)		41.2			35.3			23.0			13.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	2%	2%	5%	2%	2%	100%	2%	8%	2%
Adj. Flow (vph)	0	0	1	14	0	148	0	938	6	52	368	6
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1	0	0	14	148	0	944	0	52	374	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	66.3%
ICU Level of Service	C
Analysis Period (min)	15

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	0	0	1	13	0	133	0	844	5	47	331	5
Future Vol, veh/h	0	0	1	13	0	133	0	844	5	47	331	5
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	-	-	-	-	-	100	-	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	5	2	2	100	2	8	2
Mvmt Flow	0	0	1	14	0	148	0	938	6	52	368	6




















Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	1490	1419	371	1417	1419	941	374	0	0	944	0	0
Stage 1	475	475	-	941	941	-	-	-	-	-	-	-
Stage 2	1015	944	-	476	478	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.25	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.345	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	102	137	675	115	137	315	1184	-	-	727	-	-
Stage 1	570	557	-	316	342	-	-	-	-	-	-	-
Stage 2	287	341	-	570	556	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	51	127	675	109	127	315	1184	-	-	727	-	-
Mov Cap-2 Maneuver	51	127	-	109	127	-	-	-	-	-	-	-
Stage 1	570	517	-	316	342	-	-	-	-	-	-	-
Stage 2	152	341	-	528	516	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10.3	27.6	0	1.3
HCM LOS	B	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1184	-	-	675	109	315	727	-	-
HCM Lane V/C Ratio	-	-	-	0.002	0.133	0.469	0.072	-	-
HCM Control Delay (s)	0	-	-	10.3	43	26.1	10.3	-	-
HCM Lane LOS	A	-	-	B	E	D	B	-	-
HCM 95th %tile Q(veh)	0	-	-	0	0.4	2.4	0.2	-	-

Lanes, Volumes, Timings
 7: S Point Road (NC 273) & McKee Farm Road/Stowe Road

Henry Chapel TIA
 2024 Build IMP AM - Ph 1B

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	15	5	20	17	1	57	25	1156	53	38	744	69
Future Volume (vph)	15	5	20	17	1	57	25	1156	53	38	744	69
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		200	0		0	0		0	100		0
Storage Lanes	0		1	0		0	0		0	1		1
Taper Length (ft)	25			25			25			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.898			0.994				0.850
Flt Protected		0.964			0.989			0.999		0.950		
Satd. Flow (prot)	0	1796	1524	0	1654	0	0	1850	0	1703	1810	1583
Flt Permitted		0.964			0.989			0.999		0.950		
Satd. Flow (perm)	0	1796	1524	0	1654	0	0	1850	0	1703	1810	1583
Link Speed (mph)		25			25			35				35
Link Distance (ft)		1043			1485			1373				492
Travel Time (s)		28.4			40.5			26.7				9.6
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	6%	2%	2%	2%	2%	2%	2%	6%	5%	2%
Adj. Flow (vph)	17	6	22	19	1	63	28	1284	59	42	827	77
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	23	22	0	83	0	0	1371	0	42	827	77
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	102.1%
Analysis Period (min)	15
	ICU Level of Service G

HCM 6th TWSC
 7: S Point Road (NC 273) & McKee Farm Road/Stowe Road

Henry Chapel TIA
 2024 Build IMP AM - Ph 1B

Intersection												
Int Delay, s/veh	20.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗		↕			↕		↗	↕	↗
Traffic Vol, veh/h	15	5	20	17	1	57	25	1156	53	38	744	69
Future Vol, veh/h	15	5	20	17	1	57	25	1156	53	38	744	69
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	-	-	200	-	-	-	-	-	-	100	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	6	2	2	2	2	2	2	6	5	2
Mvmt Flow	17	6	22	19	1	63	28	1284	59	42	827	77

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	2313	2310	827	2334	2358	1314	904	0	0	1343	0	0
Stage 1	911	911	-	1370	1370	-	-	-	-	-	-	-
Stage 2	1402	1399	-	964	988	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.26	7.12	6.52	6.22	4.12	-	-	4.16	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.354	3.518	4.018	3.318	2.218	-	-	2.254	-	-
Pot Cap-1 Maneuver	27	38	365	26	36	193	752	-	-	500	-	-
Stage 1	328	353	-	181	214	-	-	-	-	-	-	-
Stage 2	173	207	-	307	325	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	~ 15	30	365	~ 17	28	193	752	-	-	500	-	-
Mov Cap-2 Maneuver	~ 15	30	-	~ 17	28	-	-	-	-	-	-	-
Stage 1	278	323	-	154	182	-	-	-	-	-	-	-
Stage 2	98	176	-	260	298	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	330.5		413.9		0.2		0.6	
HCM LOS	F		F					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	752	-	-	17	365	56	500	-	-
HCM Lane V/C Ratio	0.037	-	-	1.307	0.061	1.488	0.084	-	-
HCM Control Delay (s)	10	0	-	645.5	15.5	413.9	12.9	-	-
HCM Lane LOS	A	A	-	F	C	F	B	-	-
HCM 95th %tile Q(veh)	0.1	-	-	3.2	0.2	7.6	0.3	-	-

Notes
 ~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Lanes, Volumes, Timings

8: S Point Road (NC 273) & South Point HS/Red Raider Run

Henry Chapel TIA

2024 Build IMP AM - Ph 1B



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↕	↗	↖	↕	↗	↖	↕	↗
Traffic Volume (vph)	0	0	0	133	34	147	65	1044	88	96	720	51
Future Volume (vph)	0	0	0	133	34	147	65	1044	88	96	720	51
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			4%			-1%			1%	
Storage Length (ft)	0		0	0		100	175		0	100		0
Storage Lanes	0		0	0		1	1		0	1		0
Taper Length (ft)	25			25			100			75		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Fr _t						0.850		0.988			0.990	
Fl _t Protected					0.962		0.950			0.950		
Satd. Flow (prot)	0	0	0	0	1756	1552	1778	3514	0	1761	3363	0
Fl _t Permitted					0.962		0.950			0.950		
Satd. Flow (perm)	0	0	0	0	1756	1552	1778	3514	0	1761	3363	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		25			25			35			35	
Link Distance (ft)		1017			1038			492			625	
Travel Time (s)		27.7			28.3			9.6			12.2	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	6%	2%
Adj. Flow (vph)	0	0	0	148	38	163	72	1160	98	107	800	57
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	186	163	72	1258	0	107	857	0
Turn Type				Perm	NA	pm+ov	Prot	NA		Prot	NA	
Protected Phases					8	1	5	2		1	6	
Permitted Phases				8		8						
Detector Phase				8	8	1	5	2		1	6	
Switch Phase												
Minimum Initial (s)				7.0	7.0	7.0	7.0	10.0		7.0	10.0	
Minimum Split (s)				25.4	25.4	12.6	12.1	27.7		12.6	23.7	
Total Split (s)				30.0	30.0	22.0	17.0	68.0		22.0	73.0	
Total Split (%)				25.0%	25.0%	18.3%	14.2%	56.7%		18.3%	60.8%	
Maximum Green (s)				24.6	24.6	16.4	11.9	62.3		16.4	67.3	
Yellow Time (s)				3.0	3.0	3.0	3.0	3.9		3.0	3.9	
All-Red Time (s)				2.4	2.4	2.6	2.1	1.8		2.6	1.8	
Lost Time Adjust (s)					-0.4	-0.6	-0.1	-0.7		-0.6	-0.7	
Total Lost Time (s)					5.0	5.0	5.0	5.0		5.0	5.0	
Lead/Lag						Lead	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)				2.0	2.0	2.0	2.0	3.0		2.0	3.0	
Recall Mode				None	None	None	None	C-Max		None	C-Max	
Walk Time (s)				7.0	7.0			7.0				
Flash Dont Walk (s)				13.0	13.0			15.0				
Pedestrian Calls (#/hr)				0	0			0				
Act Effct Green (s)					17.4	34.7	9.7	75.3		12.3	80.3	
Actuated g/C Ratio					0.14	0.29	0.08	0.63		0.10	0.67	
v/c Ratio					0.73	0.36	0.50	0.57		0.59	0.38	
Control Delay					65.1	34.5	64.4	15.6		71.9	7.3	

Lanes, Volumes, Timings
 8: S Point Road (NC 273) & South Point HS/Red Raider Run

Henry Chapel TIA
 2024 Build IMP AM - Ph 1B



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay					0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay					65.1	34.5	64.4	15.6		71.9	7.3	
LOS					E	C	E	B		E	A	
Approach Delay					50.8			18.2			14.4	
Approach LOS					D			B			B	
Queue Length 50th (ft)					139	100	55	277		88	53	
Queue Length 95th (ft)					207	141	101	435		m125	257	
Internal Link Dist (ft)		937			958			412			545	
Turn Bay Length (ft)						100	175			100		
Base Capacity (vph)					365	509	181	2205		249	2250	
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					0.51	0.32	0.40	0.57		0.43	0.38	

Intersection Summary
























Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 110 (92%), Referenced to phase 2:NBT and 6:SBT, Start of Green
 Natural Cycle: 70
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.73
 Intersection Signal Delay: 21.1
 Intersection LOS: C
 Intersection Capacity Utilization 59.1%
 ICU Level of Service B
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 8: S Point Road (NC 273) & South Point HS/Red Raider Run



Lanes, Volumes, Timings
 9: S Point Road (NC 273) & Nixon Road/R L Stowe Road

Henry Chapel TIA
 2024 Build IMP AM - Ph 1B

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	100	167	75	302	81	29	88	528	573	47	526	50
Future Volume (vph)	100	167	75	302	81	29	88	528	573	47	526	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		1%			1%			1%			1%	
Storage Length (ft)	200		100	225		200	280		225	25		100
Storage Lanes	1		1	1		1	1		0	1		1
Taper Length (ft)	250			100			100			125		
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.961				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1761	1853	1474	3197	1687	0	1678	1853	1575	1761	1853	1530
Flt Permitted	0.950			0.950			0.950			0.322		
Satd. Flow (perm)	1761	1853	1474	3197	1687	0	1678	1853	1575	597	1853	1530
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		25			35			35			35	
Link Distance (ft)		1003			1016			625			1000	
Travel Time (s)		27.4			19.8			12.2			19.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	9%	9%	9%	4%	7%	2%	2%	2%	2%	5%
Adj. Flow (vph)	111	186	83	336	90	32	98	587	637	52	584	56
Shared Lane Traffic (%)												
Lane Group Flow (vph)	111	186	83	336	122	0	98	587	637	52	584	56
Turn Type	Split	NA	pm+ov	Split	NA		Prot	NA	pm+ov	D.Pm	NA	pm+ov
Protected Phases	3	3	5	4	4		5	2	4		6	3
Permitted Phases			3						2	2		6
Detector Phase	3	3	5	4	4		5	2	4	2	6	3
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0		7.0	10.0	7.0	10.0	10.0	7.0
Minimum Split (s)	25.0	25.0	12.8	13.3	13.3		12.8	24.1	13.3	24.1	24.1	25.0
Total Split (s)	25.0	25.0	16.0	23.0	23.0		16.0	72.0	23.0	72.0	56.0	25.0
Total Split (%)	20.8%	20.8%	13.3%	19.2%	19.2%		13.3%	60.0%	19.2%	60.0%	46.7%	20.8%
Maximum Green (s)	19.0	19.0	10.2	16.7	16.7		10.2	65.9	16.7	65.9	49.9	19.0
Yellow Time (s)	3.8	3.8	3.0	4.4	4.4		3.0	3.8	4.4	3.8	3.8	3.8
All-Red Time (s)	2.2	2.2	2.8	1.9	1.9		2.8	2.3	1.9	2.3	2.3	2.2
Lost Time Adjust (s)	-1.0	-1.0	-0.8	-1.3	-1.3		-0.8	-1.1	-1.3	-1.1	-1.1	-1.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lead	Lead	Lag	Lag		Lead		Lag		Lag	Lead
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		2.0	3.0	2.0	3.0	3.0	2.0
Recall Mode	None	None	None	None	None		None	C-Max	None	C-Max	C-Max	None
Walk Time (s)	7.0	7.0						7.0		7.0		7.0
Flash Dont Walk (s)	12.0	12.0						11.0		11.0		12.0
Pedestrian Calls (#/hr)	0	0						0		0		0
Act Effct Green (s)	16.6	16.6	26.9	18.4	18.4		10.2	70.0	93.4	70.0	54.7	76.4
Actuated g/C Ratio	0.14	0.14	0.22	0.15	0.15		0.08	0.58	0.78	0.58	0.46	0.64
v/c Ratio	0.45	0.73	0.25	0.69	0.47		0.69	0.54	0.52	0.15	0.69	0.06
Control Delay	52.9	65.5	22.9	55.9	52.9		86.7	9.7	4.4	14.2	32.5	8.9

Lanes, Volumes, Timings
 9: S Point Road (NC 273) & Nixon Road/R L Stowe Road

Henry Chapel TIA
 2024 Build IMP AM - Ph 1B



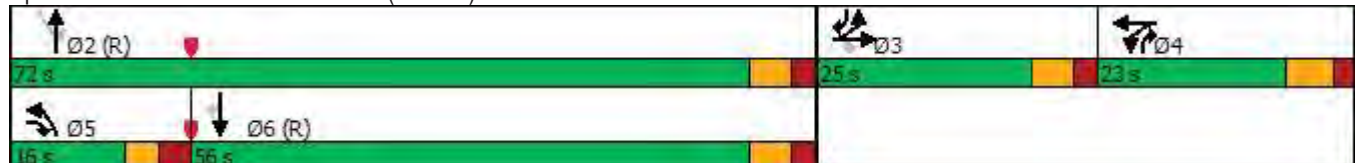
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.2	0.0	0.0	0.0	0.0
Total Delay	52.9	65.5	22.9	55.9	52.9		86.7	9.9	4.4	14.2	32.5	8.9
LOS	D	E	C	E	D		F	A	A	B	C	A
Approach Delay		52.5			55.1			12.9			29.2	
Approach LOS		D			E			B			C	
Queue Length 50th (ft)	80	139	34	125	85		62	199	80	19	373	16
Queue Length 95th (ft)	135	214	63	180	151		#147	101	93	42	518	32
Internal Link Dist (ft)		923			936			545			920	
Turn Bay Length (ft)	200		100	225			280		225	25		100
Base Capacity (vph)	293	308	339	508	268		153	1080	1221	348	844	1016
Starvation Cap Reductn	0	0	0	0	0		0	83	3	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.38	0.60	0.24	0.66	0.46		0.64	0.59	0.52	0.15	0.69	0.06

Intersection Summary

Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 8 (7%), Referenced to phase 2:NBSB and 6:SBT, Start of Green
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.73
 Intersection Signal Delay: 28.9
 Intersection Capacity Utilization 70.2%
 Analysis Period (min) 15
 Intersection LOS: C
 ICU Level of Service C

95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 9: S Point Road (NC 273) & Nixon Road/R L Stowe Road



Lanes, Volumes, Timings

2: S Point Road (NC 273) & S Point Church Road/Henry Chapel Road

Henry Chapel TIA

2024 Build IMP PM - Ph 1B



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕	↗		↕		↗	↖	↖
Traffic Volume (vph)	1	0	0	14	0	98	0	660	20	158	774	2
Future Volume (vph)	1	0	0	14	0	98	0	660	20	158	774	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		100	0		0	100		0
Storage Lanes	0		0	0		1	0		0	1		0
Taper Length (ft)	25			25			25			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt						0.850		0.996				
Flt Protected		0.950			0.950					0.950		
Satd. Flow (prot)	0	1770	0	0	1770	1468	0	1838	0	1770	1845	0
Flt Permitted		0.950			0.950					0.950		
Satd. Flow (perm)	0	1770	0	0	1770	1468	0	1838	0	1770	1845	0
Link Speed (mph)		25			25			45			45	
Link Distance (ft)		1509			1293			1519			881	
Travel Time (s)		41.2			35.3			23.0			13.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	2%	2%	10%	2%	3%	2%	2%	3%	2%
Adj. Flow (vph)	1	0	0	16	0	109	0	733	22	176	860	2
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1	0	0	16	109	0	755	0	176	862	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	90.1%
Analysis Period (min)	15
	ICU Level of Service E

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	1	0	0	14	0	98	0	660	20	158	774	2
Future Vol, veh/h	1	0	0	14	0	98	0	660	20	158	774	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	-	-	-	-	-	100	-	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	10	2	3	2	2	3	2
Mvmt Flow	1	0	0	16	0	109	0	733	22	176	860	2




















Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	2012	1968	861	1957	1958	744	862	0	0	755	0	0
Stage 1	1213	1213	-	744	744	-	-	-	-	-	-	-
Stage 2	799	755	-	1213	1214	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.3	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.39	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	44	63	355	48	64	402	780	-	-	855	-	-
Stage 1	222	255	-	407	421	-	-	-	-	-	-	-
Stage 2	379	417	-	222	254	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	27	50	355	40	51	402	780	-	-	855	-	-
Mov Cap-2 Maneuver	27	50	-	40	51	-	-	-	-	-	-	-
Stage 1	222	202	-	407	421	-	-	-	-	-	-	-
Stage 2	276	417	-	176	202	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	144	33	0	1.7
HCM LOS	F	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	780	-	-	27	40	402	855	-	-
HCM Lane V/C Ratio	-	-	-	0.041	0.389	0.271	0.205	-	-
HCM Control Delay (s)	0	-	-	144	143.7	17.2	10.3	-	-
HCM Lane LOS	A	-	-	F	F	C	B	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	1.3	1.1	0.8	-	-

Lanes, Volumes, Timings
 7: S Point Road (NC 273) & McKee Farm Road/Stowe Road

Henry Chapel TIA
 2024 Build IMP PM - Ph 1B

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	25	9	15	26	2	51	12	949	23	69	1162	48
Future Volume (vph)	25	9	15	26	2	51	12	949	23	69	1162	48
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		200	0		0	0		0	100		0
Storage Lanes	0		1	0		0	0		0	1		1
Taper Length (ft)	25			25			25			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.913			0.997				0.850
Flt Protected		0.964			0.984			0.999		0.950		
Satd. Flow (prot)	0	1796	1583	0	1673	0	0	1855	0	1770	1863	1583
Flt Permitted		0.964			0.984			0.999		0.950		
Satd. Flow (perm)	0	1796	1583	0	1673	0	0	1855	0	1770	1863	1583
Link Speed (mph)		25			25			35				35
Link Distance (ft)		1043			1485			1373				492
Travel Time (s)		28.4			40.5			26.7				9.6
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	28	10	17	29	2	57	13	1054	26	77	1291	53
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	38	17	0	88	0	0	1093	0	77	1291	53
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	79.2%
	ICU Level of Service D
Analysis Period (min)	15

HCM 6th TWSC
 7: S Point Road (NC 273) & McKee Farm Road/Stowe Road

Henry Chapel TIA
 2024 Build IMP PM - Ph 1B

Intersection												
Int Delay, s/veh	69.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗		↕			↕		↗	↕	↗
Traffic Vol, veh/h	25	9	15	26	2	51	12	949	23	69	1162	48
Future Vol, veh/h	25	9	15	26	2	51	12	949	23	69	1162	48
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	-	-	200	-	-	-	-	-	-	100	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	28	10	17	29	2	57	13	1054	26	77	1291	53

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	2568	2551	1291	2578	2591	1067	1344	0	0	1080	0	0
Stage 1	1445	1445	-	1093	1093	-	-	-	-	-	-	-
Stage 2	1123	1106	-	1485	1498	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	~ 17	27	199	~ 17	25	270	513	-	-	646	-	-
Stage 1	164	197	-	260	290	-	-	-	-	-	-	-
Stage 2	250	286	-	155	186	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	~ 11	22	199	~ 9	21	270	513	-	-	646	-	-
Mov Cap-2 Maneuver	~ 11	22	-	~ 9	21	-	-	-	-	-	-	-
Stage 1	154	174	-	243	271	-	-	-	-	-	-	-
Stage 2	183	268	-	118	164	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, \$	1013.5		1453.4		0.1		0.6	
HCM LOS	F		F					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	513	-	-	13	199	25	646	-	-
HCM Lane V/C Ratio	0.026	-	-	2.906	0.084	3.511	0.119	-	-
HCM Control Delay (s)	12.2	0		\$ 1449.7	24	\$ 1453.4	11.3	-	-
HCM Lane LOS	B	A	-	F	C	F	B	-	-
HCM 95th %tile Q(veh)	0.1	-	-	5.6	0.3	10.9	0.4	-	-

Notes
 ~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Lanes, Volumes, Timings
8: S Point Road (NC 273) & South Point HS/Red Raider Run

Henry Chapel TIA
2024 Build IMP PM - Ph 1B



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↕	↗	↖	↕	↗	↖	↕	↗
Traffic Volume (vph)	0	0	0	207	5	213	12	889	89	122	1088	3
Future Volume (vph)	0	0	0	207	5	213	12	889	89	122	1088	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			4%			-1%			1%	
Storage Length (ft)	0		0	0		100	175		0	100		0
Storage Lanes	0		0	0		1	1		0	1		0
Taper Length (ft)	25			25			100			75		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Fr _t						0.850		0.986				
Flt Protected					0.954		0.950			0.950		
Satd. Flow (prot)	0	0	0	0	1742	1552	1778	3476	0	1761	3522	0
Flt Permitted					0.954		0.950			0.950		
Satd. Flow (perm)	0	0	0	0	1742	1552	1778	3476	0	1761	3522	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		25			25			35			35	
Link Distance (ft)		1017			1038			492			625	
Travel Time (s)		27.7			28.3			9.6			12.2	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	3%	2%	2%	2%	2%
Adj. Flow (vph)	0	0	0	230	6	237	13	988	99	136	1209	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	236	237	13	1087	0	136	1212	0
Turn Type				Perm	NA	pm+ov	Prot	NA		Prot	NA	
Protected Phases					8	1	5	2		1	6	
Permitted Phases				8		8						
Detector Phase				8	8	1	5	2		1	6	
Switch Phase												
Minimum Initial (s)				7.0	7.0	7.0	7.0	10.0		7.0	10.0	
Minimum Split (s)				25.4	25.4	12.6	12.1	27.7		12.6	23.7	
Total Split (s)				38.0	38.0	26.0	13.0	66.0		26.0	79.0	
Total Split (%)				29.2%	29.2%	20.0%	10.0%	50.8%		20.0%	60.8%	
Maximum Green (s)				32.6	32.6	20.4	7.9	60.3		20.4	73.3	
Yellow Time (s)				3.0	3.0	3.0	3.0	3.9		3.0	3.9	
All-Red Time (s)				2.4	2.4	2.6	2.1	1.8		2.6	1.8	
Lost Time Adjust (s)					-0.4	-0.6	-0.1	-0.7		-0.6	-0.7	
Total Lost Time (s)					5.0	5.0	5.0	5.0		5.0	5.0	
Lead/Lag						Lead	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)				2.0	2.0	2.0	2.0	3.0		2.0	3.0	
Recall Mode				None	None	None	None	C-Max		None	C-Max	
Walk Time (s)				7.0	7.0			7.0				
Flash Dont Walk (s)				13.0	13.0			15.0				
Pedestrian Calls (#/hr)				0	0			0				
Act Effct Green (s)					22.4	42.4	7.1	77.6		15.0	92.7	
Actuated g/C Ratio					0.17	0.33	0.05	0.60		0.12	0.71	
v/c Ratio					0.79	0.47	0.13	0.52		0.67	0.48	
Control Delay					69.2	36.4	61.8	18.1		60.9	7.3	

Lanes, Volumes, Timings
 8: S Point Road (NC 273) & South Point HS/Red Raider Run

Henry Chapel TIA
 2024 Build IMP PM - Ph 1B



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay					0.0	0.0	0.0	0.0		0.0	0.5	
Total Delay					69.2	36.4	61.8	18.1		60.9	7.8	
LOS					E	D	E	B		E	A	
Approach Delay					52.8			18.6			13.1	
Approach LOS					D			B			B	
Queue Length 50th (ft)					193	158	11	268		91	37	
Queue Length 95th (ft)					268	201	33	418		m117	391	
Internal Link Dist (ft)		937			958			412			545	
Turn Bay Length (ft)						100	175			100		
Base Capacity (vph)					442	578	109	2075		284	2511	
Starvation Cap Reductn					0	0	0	0		0	760	
Spillback Cap Reductn					0	0	0	0		0	0	
Storage Cap Reductn					0	0	0	0		0	0	
Reduced v/c Ratio					0.53	0.41	0.12	0.52		0.48	0.69	

Intersection Summary

Area Type: Other
 Cycle Length: 130
 Actuated Cycle Length: 130
 Offset: 76 (58%), Referenced to phase 2:NBT and 6:SBT, Start of Green
 Natural Cycle: 70
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.79
 Intersection Signal Delay: 21.6
 Intersection Capacity Utilization 60.2%
 Analysis Period (min) 15
 Intersection LOS: C
 ICU Level of Service B
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 8: S Point Road (NC 273) & South Point HS/Red Raider Run



Lanes, Volumes, Timings
 9: S Point Road (NC 273) & Nixon Road/R L Stowe Road

Henry Chapel TIA
 2024 Build IMP PM - Ph 1B



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	67	98	72	584	108	38	61	519	497	73	572	74
Future Volume (vph)	67	98	72	584	108	38	61	519	497	73	572	74
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		1%			1%			1%			1%	
Storage Length (ft)	200		100	225		200	280		225	25		100
Storage Lanes	1		1	1		1	1		0	1		1
Taper Length (ft)	250			100			100			125		
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.961				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1761	1853	1545	3383	1756	0	1761	1853	1545	1761	1853	1560
Flt Permitted	0.950			0.950			0.950			0.306		
Satd. Flow (perm)	1761	1853	1545	3383	1756	0	1761	1853	1545	567	1853	1560
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		25			35			35			35	
Link Distance (ft)		1003			1016			625			1000	
Travel Time (s)		27.4			19.8			12.2			19.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	4%	3%	4%	2%	2%	2%	4%	2%	2%	3%
Adj. Flow (vph)	74	109	80	649	120	42	68	577	552	81	636	82
Shared Lane Traffic (%)												
Lane Group Flow (vph)	74	109	80	649	162	0	68	577	552	81	636	82
Turn Type	Split	NA	pm+ov	Split	NA		Prot	NA	pm+ov	D.Pm	NA	pm+ov
Protected Phases	3	3	5	4	4		5	2	4		6	3
Permitted Phases			3						2	2		6
Detector Phase	3	3	5	4	4		5	2	4	2	6	3
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0		7.0	10.0	7.0	10.0	10.0	7.0
Minimum Split (s)	25.0	25.0	12.8	13.3	13.3		12.8	24.1	13.3	24.1	24.1	25.0
Total Split (s)	25.0	25.0	13.0	34.0	34.0		13.0	71.0	34.0	71.0	58.0	25.0
Total Split (%)	19.2%	19.2%	10.0%	26.2%	26.2%		10.0%	54.6%	26.2%	54.6%	44.6%	19.2%
Maximum Green (s)	19.0	19.0	7.2	27.7	27.7		7.2	64.9	27.7	64.9	51.9	19.0
Yellow Time (s)	3.8	3.8	3.0	4.4	4.4		3.0	3.8	4.4	3.8	3.8	3.8
All-Red Time (s)	2.2	2.2	2.8	1.9	1.9		2.8	2.3	1.9	2.3	2.3	2.2
Lost Time Adjust (s)	-1.0	-1.0	-0.8	-1.3	-1.3		-0.8	-1.1	-1.3	-1.1	-1.1	-1.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lead	Lead	Lag	Lag		Lead		Lag		Lag	Lead
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		2.0	3.0	2.0	3.0	3.0	2.0
Recall Mode	None	None	None	None	None		None	C-Max	None	C-Max	C-Max	None
Walk Time (s)	7.0	7.0						7.0		7.0		7.0
Flash Dont Walk (s)	12.0	12.0						11.0		11.0		12.0
Pedestrian Calls (#/hr)	0	0						0		0		0
Act Effct Green (s)	13.0	13.0	21.6	30.4	30.4		8.6	71.6	107.0	71.6	58.0	76.0
Actuated g/C Ratio	0.10	0.10	0.17	0.23	0.23		0.07	0.55	0.82	0.55	0.45	0.58
v/c Ratio	0.42	0.59	0.31	0.82	0.39		0.59	0.57	0.43	0.26	0.77	0.09
Control Delay	61.2	68.4	27.8	56.5	44.7		96.8	14.2	3.2	20.0	39.4	12.8

Lanes, Volumes, Timings
 9: S Point Road (NC 273) & Nixon Road/R L Stowe Road

Henry Chapel TIA
 2024 Build IMP PM - Ph 1B

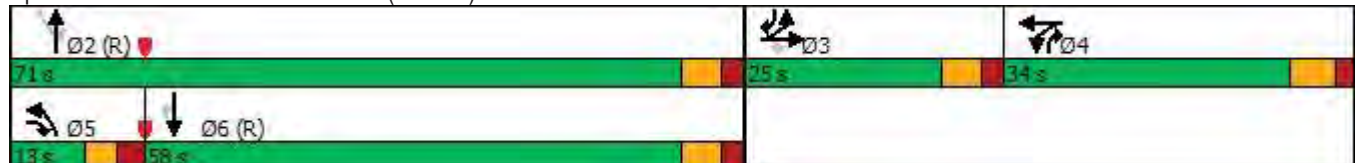


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.2	0.0	0.0	0.0	0.0
Total Delay	61.2	68.4	27.8	56.5	44.7		96.8	14.4	3.3	20.0	39.4	12.8
LOS	E	E	C	E	D		F	B	A	B	D	B
Approach Delay		54.0			54.2			14.0			34.7	
Approach LOS		D			D			B			C	
Queue Length 50th (ft)	60	89	34	263	114		58	153	55	36	470	31
Queue Length 95th (ft)	106	146	61	338	184		#127	184	105	77	#685	53
Internal Link Dist (ft)		923			936			545			920	
Turn Bay Length (ft)	200		100	225			280		225	25		100
Base Capacity (vph)	270	285	257	810	420		117	1020	1268	312	826	996
Starvation Cap Reductn	0	0	0	0	0		0	71	59	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.27	0.38	0.31	0.80	0.39		0.58	0.61	0.46	0.26	0.77	0.08

Intersection Summary

Area Type: Other
 Cycle Length: 130
 Actuated Cycle Length: 130
 Offset: 80 (62%), Referenced to phase 2:NBSB and 6:SBT, Start of Green
 Natural Cycle: 100
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.82
 Intersection Signal Delay: 33.4
 Intersection LOS: C
 Intersection Capacity Utilization 75.1%
 ICU Level of Service D
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 9: S Point Road (NC 273) & Nixon Road/R L Stowe Road



2025 Background Conditions

Lanes, Volumes, Timings
 1: S Point Road (NC 273) & Armstrong Road (NC 273)/Farm Road

Henry Chapel TIA
 2025 Background AM - Ph 2

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	557	0	30	0	0	0	63	172	0	0	68	220
Future Volume (vph)	557	0	30	0	0	0	63	172	0	0	68	220
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.993										0.897
Flt Protected		0.955						0.987				
Satd. Flow (prot)	0	1737	0	0	1863	0	0	1782	0	0	1556	0
Flt Permitted		0.955						0.987				
Satd. Flow (perm)	0	1737	0	0	1863	0	0	1782	0	0	1556	0
Link Speed (mph)		45			25			45			45	
Link Distance (ft)		1234			1013			1002			3097	
Travel Time (s)		18.7			27.6			15.2			46.9	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	36%	2%	2%	2%	14%	2%	2%	2%	8%	10%
Adj. Flow (vph)	619	0	33	0	0	0	70	191	0	0	76	244
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	652	0	0	0	0	0	261	0	0	320	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	72.3%
	ICU Level of Service C
Analysis Period (min)	15

Intersection												
Int Delay, s/veh	128.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	557	0	30	0	0	0	63	172	0	0	68	220
Future Vol, veh/h	557	0	30	0	0	0	63	172	0	0	68	220
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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	36	2	2	2	14	2	2	2	8	10
Mvmt Flow	619	0	33	0	0	0	70	191	0	0	76	244

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	529	529	198	546	651	191	320	0	0	191	0	0
Stage 1	198	198	-	331	331	-	-	-	-	-	-	-
Stage 2	331	331	-	215	320	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.56	7.12	6.52	6.22	4.24	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.624	3.518	4.018	3.318	2.326	-	-	2.218	-	-
Pot Cap-1 Maneuver	~ 460	455	764	448	388	851	1175	-	-	1383	-	-
Stage 1	804	737	-	682	645	-	-	-	-	-	-	-
Stage 2	682	645	-	787	652	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	~ 437	425	764	406	362	851	1175	-	-	1383	-	-
Mov Cap-2 Maneuver	~ 437	425	-	406	362	-	-	-	-	-	-	-
Stage 1	750	737	-	636	602	-	-	-	-	-	-	-
Stage 2	636	602	-	753	652	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	242.7	0	2.2	0
HCM LOS	F	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1175	-	-	447	1383	-	-
HCM Lane V/C Ratio	0.06	-	-	1.459	-	-	-
HCM Control Delay (s)	8.3	0	-	242.7	0	0	-
HCM Lane LOS	A	A	-	F	A	A	-
HCM 95th %tile Q(veh)	0.2	-	-	33.1	0	-	-

Notes
 ~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Lanes, Volumes, Timings

2: S Point Road (NC 273) & S Point Church Road/Henry Chapel Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	0	0	1	1	0	22	0	864	1	8	342	5
Future Volume (vph)	0	0	1	1	0	22	0	864	1	8	342	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.865			0.870						0.998	
Flt Protected					0.998						0.999	
Satd. Flow (prot)	0	1611	0	0	1573	0	0	1861	0	0	1758	0
Flt Permitted					0.998						0.999	
Satd. Flow (perm)	0	1611	0	0	1573	0	0	1861	0	0	1758	0
Link Speed (mph)		25			25			45			45	
Link Distance (ft)		1509			1293			1519			881	
Travel Time (s)		41.2			35.3			23.0			13.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	2%	2%	5%	2%	2%	100%	2%	8%	2%
Adj. Flow (vph)	0	0	1	1	0	24	0	960	1	9	380	6
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1	0	0	25	0	0	961	0	0	395	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 55.5% ICU Level of Service B

Analysis Period (min) 15

Intersection												
Int Delay, s/veh	0.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	1	1	0	22	0	864	1	8	342	5
Future Vol, veh/h	0	0	1	1	0	22	0	864	1	8	342	5
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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	5	2	2	100	2	8	2
Mvmt Flow	0	0	1	1	0	24	0	960	1	9	380	6

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	1374	1362	383	1363	1365	961	386	0	0	961	0	0
Stage 1	401	401	-	961	961	-	-	-	-	-	-	-
Stage 2	973	961	-	402	404	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.25	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.345	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	123	148	664	125	147	307	1172	-	-	716	-	-
Stage 1	626	601	-	308	335	-	-	-	-	-	-	-
Stage 2	303	335	-	625	599	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	112	146	664	123	145	307	1172	-	-	716	-	-
Mov Cap-2 Maneuver	112	146	-	123	145	-	-	-	-	-	-	-
Stage 1	626	591	-	308	335	-	-	-	-	-	-	-
Stage 2	279	335	-	614	589	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	10.4		18.7		0		0.2	
HCM LOS	B		C					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1172	-	-	664	288	716	-	-
HCM Lane V/C Ratio	-	-	-	0.002	0.089	0.012	-	-
HCM Control Delay (s)	0	-	-	10.4	18.7	10.1	0	-
HCM Lane LOS	A	-	-	B	C	B	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0.3	0	-	-

Lanes, Volumes, Timings
 3: S Point Road (NC 273) & BB Drive/Forest Hill Road

Henry Chapel TIA
 2025 Background AM - Ph 2



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	4	0	0	5	0	20	0	1055	7	8	402	2
Future Volume (vph)	4	0	0	5	0	20	0	1055	7	8	402	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.894			0.999			0.999	
Flt Protected		0.950			0.989						0.999	
Satd. Flow (prot)	0	1770	0	0	1610	0	0	1859	0	0	1774	0
Flt Permitted		0.950			0.989						0.999	
Satd. Flow (perm)	0	1770	0	0	1610	0	0	1859	0	0	1774	0
Link Speed (mph)		25			25			45			45	
Link Distance (ft)		1341			477			2444			1975	
Travel Time (s)		36.6			13.0			37.0			29.9	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	2%	2%	5%	2%	2%	17%	2%	7%	2%
Adj. Flow (vph)	4	0	0	6	0	22	0	1172	8	9	447	2
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	4	0	0	28	0	0	1180	0	0	458	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	66.0%
ICU Level of Service	C
Analysis Period (min)	15

Intersection												
Int Delay, s/veh	0.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	4	0	0	5	0	20	0	1055	7	8	402	2
Future Vol, veh/h	4	0	0	5	0	20	0	1055	7	8	402	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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	5	2	2	17	2	7	2
Mvmt Flow	4	0	0	6	0	22	0	1172	8	9	447	2

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1653	1646	448	1642	1643	1176	449	0	0	1180	0	0
Stage 1	466	466	-	1176	1176	-	-	-	-	-	-	-
Stage 2	1187	1180	-	466	467	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.25	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.345	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	78	99	611	80	100	230	1111	-	-	592	-	-
Stage 1	577	562	-	233	265	-	-	-	-	-	-	-
Stage 2	230	264	-	577	562	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	69	97	611	79	98	230	1111	-	-	592	-	-
Mov Cap-2 Maneuver	69	97	-	79	98	-	-	-	-	-	-	-
Stage 1	577	551	-	233	265	-	-	-	-	-	-	-
Stage 2	208	264	-	565	551	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	60.7		31		0		0.2	
HCM LOS	F		D					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1111	-	-	69	166	592	-	-
HCM Lane V/C Ratio	-	-	-	0.064	0.167	0.015	-	-
HCM Control Delay (s)	0	-	-	60.7	31	11.2	0	-
HCM Lane LOS	A	-	-	F	D	B	A	-
HCM 95th %tile Q(veh)	0	-	-	0.2	0.6	0	-	-

Lanes, Volumes, Timings
4: Colonial Drive & Forest Hill Road

Henry Chapel TIA
2025 Background AM - Ph 2



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	7	2	0	12	18	1
Future Volume (vph)	7	2	0	12	18	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.973			0.994		
Flt Protected				0.955		
Satd. Flow (prot)	1812	0	0	1863	1768	0
Flt Permitted				0.955		
Satd. Flow (perm)	1812	0	0	1863	1768	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	477			1074	636	
Travel Time (s)	13.0			29.3	17.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	8	2	0	13	20	1
Shared Lane Traffic (%)						
Lane Group Flow (vph)	10	0	0	13	21	0
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	13.3% ICU Level of Service A
Analysis Period (min)	15

Intersection						
Int Delay, s/veh	4.1					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	7	2	0	12	18	1
Future Vol, veh/h	7	2	0	12	18	1
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	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	8	2	0	13	20	1

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	10	0	22
Stage 1	-	-	-	-	9
Stage 2	-	-	-	-	13
Critical Hdwy	-	-	4.12	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	-	-	2.218	-	3.518
Pot Cap-1 Maneuver	-	-	1610	-	995
Stage 1	-	-	-	-	1014
Stage 2	-	-	-	-	1010
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1610	-	995
Mov Cap-2 Maneuver	-	-	-	-	995
Stage 1	-	-	-	-	1014
Stage 2	-	-	-	-	1010

Approach	EB	WB	NB
HCM Control Delay, s	0	0	8.7
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	999	-	-	1610	-
HCM Lane V/C Ratio	0.021	-	-	-	-
HCM Control Delay (s)	8.7	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Lanes, Volumes, Timings
 5: Colonial Drive & Timber Ridge Road

Henry Chapel TIA
 2025 Background AM - Ph 2



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	10	9	0	1	2
Future Volume (vph)	0	10	9	0	1	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.865					
Flt Protected						0.984
Satd. Flow (prot)	1611	0	1863	0	0	1833
Flt Permitted						0.984
Satd. Flow (perm)	1611	0	1863	0	0	1833
Link Speed (mph)	25		25		25	
Link Distance (ft)	1207		1055		636	
Travel Time (s)	32.9		28.8		17.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	11	10	0	1	2
Shared Lane Traffic (%)						
Lane Group Flow (vph)	11	0	10	0	0	3
Sign Control	Stop		Free		Free	

Intersection Summary	
Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	13.3% ICU Level of Service A
Analysis Period (min)	15

Intersection						
Int Delay, s/veh	4.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	10	9	0	1	2
Future Vol, veh/h	0	10	9	0	1	2
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	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	11	10	0	1	2

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	14	10	0	0	10	0
Stage 1	10	-	-	-	-	-
Stage 2	4	-	-	-	-	-
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	1005	1071	-	-	1610	-
Stage 1	1013	-	-	-	-	-
Stage 2	1019	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	1004	1071	-	-	1610	-
Mov Cap-2 Maneuver	1004	-	-	-	-	-
Stage 1	1013	-	-	-	-	-
Stage 2	1018	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.4	0	2.4
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	1071	1610
HCM Lane V/C Ratio	-	-	0.01	0.001
HCM Control Delay (s)	-	-	8.4	7.2
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0	0

Lanes, Volumes, Timings
6: S Point Road (NC 273) & Belmont MS/Belwood Drive

Henry Chapel TIA
2025 Background AM - Ph 2



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗		↔		↖	↗		↖	↕	↗
Traffic Volume (vph)	260	1	43	2	2	32	93	843	1	22	445	287
Future Volume (vph)	260	1	43	2	2	32	93	843	1	22	445	287
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		3%			0%			1%			0%	
Storage Length (ft)	0		175	0		0	200		0	100		200
Storage Lanes	0		1	0		0	1		0	1		1
Taper Length (ft)	25			25			100			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.878						0.850
Flt Protected		0.953			0.998		0.950			0.950		
Satd. Flow (prot)	0	1732	1560	0	1519	0	1744	1853	0	1770	1759	1568
Flt Permitted		0.953			0.998		0.950			0.119		
Satd. Flow (perm)	0	1732	1560	0	1519	0	1744	1853	0	222	1759	1568
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		35			25			35			35	
Link Distance (ft)		1017			1050			1975			1373	
Travel Time (s)		19.8			28.6			38.5			26.7	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	3%	2%	2%	100%	2%	5%	3%	2%	2%	2%	8%	3%
Adj. Flow (vph)	289	1	48	2	2	36	103	937	1	24	494	319
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	290	48	0	40	0	103	938	0	24	494	319
Turn Type	Split	NA	pm+ov	Split	NA		Prot	NA		Perm	NA	pm+ov
Protected Phases	4	4	5	8	8		5	2			6	4
Permitted Phases			4							6		6
Detector Phase	4	4	5	8	8		5	2		6	6	4
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0		7.0	12.0		12.0	12.0	7.0
Minimum Split (s)	11.9	11.9	12.1	14.0	14.0		12.1	17.6		32.6	32.6	11.9
Total Split (s)	31.0	31.0	19.0	14.0	14.0		19.0	75.0		56.0	56.0	31.0
Total Split (%)	25.8%	25.8%	15.8%	11.7%	11.7%		15.8%	62.5%		46.7%	46.7%	25.8%
Maximum Green (s)	26.1	26.1	13.9	7.0	7.0		13.9	69.4		50.4	50.4	26.1
Yellow Time (s)	3.0	3.0	3.0	5.0	5.0		3.0	4.5		4.5	4.5	3.0
All-Red Time (s)	1.9	1.9	2.1	2.0	2.0		2.1	1.1		1.1	1.1	1.9
Lost Time Adjust (s)		0.1	-0.1		-2.0		-0.1	-0.6		-0.6	-0.6	0.1
Total Lost Time (s)		5.0	5.0		5.0		5.0	5.0		5.0	5.0	5.0
Lead/Lag			Lead				Lead			Lag		Lag
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		2.0	6.0		6.0	6.0	2.0
Minimum Gap (s)	2.0	2.0	2.0	2.0	2.0		2.0	3.0		3.0	3.0	2.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0		0.0	15.0		15.0	15.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0		0.0	45.0		45.0	45.0	0.0
Recall Mode	None	None	None	None	None		None	Min		Min	Min	None
Walk Time (s)										7.0	7.0	
Flash Dont Walk (s)										20.0	20.0	
Pedestrian Calls (#/hr)										0	0	
Act Efect Green (s)		20.8	35.3		10.3		11.2	54.3		42.2	42.2	70.8

Lanes, Volumes, Timings
 6: S Point Road (NC 273) & Belmont MS/Belwood Drive

Henry Chapel TIA
 2025 Background AM - Ph 2



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Actuated g/C Ratio		0.22	0.38		0.11		0.12	0.58		0.45	0.45	0.76
v/c Ratio		0.75	0.08		0.24		0.49	0.87		0.24	0.62	0.27
Control Delay		52.1	17.3		53.5		55.4	28.7		29.5	27.6	6.9
Queue Delay		0.0	0.0		0.0		0.0	0.0		0.0	0.0	0.0
Total Delay		52.1	17.3		53.5		55.4	28.7		29.5	27.6	6.9
LOS		D	B		D		E	C		C	C	A
Approach Delay		47.2			53.5			31.4			19.8	
Approach LOS		D			D			C			B	
Queue Length 50th (ft)		187	16		26		68	537		11	270	81
Queue Length 95th (ft)		#341	40		67		135	#838		37	424	132
Internal Link Dist (ft)		937			970			1895			1293	
Turn Bay Length (ft)			175				200			100		200
Base Capacity (vph)		551	670		167		299	1396		134	1062	1234
Starvation Cap Reductn		0	0		0		0	0		0	0	0
Spillback Cap Reductn		0	0		0		0	0		0	0	0
Storage Cap Reductn		0	0		0		0	0		0	0	0
Reduced v/c Ratio		0.53	0.07		0.24		0.34	0.67		0.18	0.47	0.26

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 93.3

Natural Cycle: 90

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.87

Intersection Signal Delay: 29.8

Intersection LOS: C

Intersection Capacity Utilization 88.1%

ICU Level of Service E

Analysis Period (min) 15


















95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 6: S Point Road (NC 273) & Belmont MS/Belwood Drive



Lanes, Volumes, Timings
 7: S Point Road (NC 273) & McKee Farm Road/Stowe Road

Henry Chapel TIA
 2025 Background AM - Ph 2

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	15	5	20	17	1	58	26	1074	54	39	728	71
Future Volume (vph)	15	5	20	17	1	58	26	1074	54	39	728	71
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		0	100		0
Storage Lanes	0		0	0		0	0		0	1		0
Taper Length (ft)	25			25			25			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.934			0.897			0.994			0.987	
Flt Protected		0.981			0.989			0.999		0.950		
Satd. Flow (prot)	0	1675	0	0	1653	0	0	1850	0	1703	1791	0
Flt Permitted		0.981			0.989			0.999		0.950		
Satd. Flow (perm)	0	1675	0	0	1653	0	0	1850	0	1703	1791	0
Link Speed (mph)		25			25			35			35	
Link Distance (ft)		1043			1485			1373			492	
Travel Time (s)		28.4			40.5			26.7			9.6	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	6%	2%	2%	2%	2%	2%	2%	6%	5%	2%
Adj. Flow (vph)	17	6	22	19	1	64	29	1193	60	43	809	79
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	45	0	0	84	0	0	1282	0	43	888	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary	
Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	92.7% ICU Level of Service F
Analysis Period (min)	15

HCM 6th TWSC
 7: S Point Road (NC 273) & McKee Farm Road/Stowe Road

Henry Chapel TIA
 2025 Background AM - Ph 2

Intersection												
Int Delay, s/veh	16.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕		↕	↕	
Traffic Vol, veh/h	15	5	20	17	1	58	26	1074	54	39	728	71
Future Vol, veh/h	15	5	20	17	1	58	26	1074	54	39	728	71
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	-	-	-	-	-	-	-	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	6	2	2	2	2	2	2	6	5	2
Mvmt Flow	17	6	22	19	1	64	29	1193	60	43	809	79

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	2249	2246	849	2230	2255	1223	888	0	0	1253	0	0
Stage 1	935	935	-	1281	1281	-	-	-	-	-	-	-
Stage 2	1314	1311	-	949	974	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.26	7.12	6.52	6.22	4.12	-	-	4.16	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.354	3.518	4.018	3.318	2.218	-	-	2.254	-	-
Pot Cap-1 Maneuver	30	42	355	31	41	219	763	-	-	542	-	-
Stage 1	318	344	-	203	236	-	-	-	-	-	-	-
Stage 2	195	229	-	313	330	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	18	34	355	22	33	219	763	-	-	542	-	-
Mov Cap-2 Maneuver	18	34	-	22	33	-	-	-	-	-	-	-
Stage 1	277	317	-	177	206	-	-	-	-	-	-	-
Stage 2	119	200	-	265	304	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	348.5		268.5		0.2		0.6	
HCM LOS	F		F					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	763	-	-	39	71	542	-	-
HCM Lane V/C Ratio	0.038	-	-	1.14	1.189	0.08	-	-
HCM Control Delay (s)	9.9	0		\$ 348.5	268.5	12.2	-	-
HCM Lane LOS	A	A	-	F	F	B	-	-
HCM 95th %tile Q(veh)	0.1	-	-	4.4	6.5	0.3	-	-

Notes
 ~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Lanes, Volumes, Timings
 8: S Point Road (NC 273) & South Point HS/Red Raider Run

Henry Chapel TIA
 2025 Background AM - Ph 2



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↕	↗	↖	↕		↖	↗	
Traffic Volume (vph)	0	0	0	134	34	152	61	972	84	102	705	53
Future Volume (vph)	0	0	0	134	34	152	61	972	84	102	705	53
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			4%			-1%			1%	
Storage Length (ft)	0		0	0		100	175		0	100		0
Storage Lanes	0		0	0		1	1		0	1		0
Taper Length (ft)	25			25			100			75		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t						0.850		0.988			0.989	
Fl _t Protected					0.962		0.950			0.950		
Satd. Flow (prot)	0	0	0	0	1756	1552	1778	1850	0	1761	1769	0
Fl _t Permitted					0.962		0.950			0.950		
Satd. Flow (perm)	0	0	0	0	1756	1552	1778	1850	0	1761	1769	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		25			25			35			35	
Link Distance (ft)		1017			1038			492			625	
Travel Time (s)		27.7			28.3			9.6			12.2	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	6%	2%
Adj. Flow (vph)	0	0	0	149	38	169	68	1080	93	113	783	59
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	187	169	68	1173	0	113	842	0
Turn Type				Perm	NA	pm+ov	Prot	NA		Prot	NA	
Protected Phases					8	1	5	2		1	6	
Permitted Phases				8		8						
Detector Phase				8	8	1	5	2		1	6	
Switch Phase												
Minimum Initial (s)				7.0	7.0	7.0	7.0	10.0		7.0	10.0	
Minimum Split (s)				25.4	25.4	12.6	12.1	27.7		12.6	23.7	
Total Split (s)				26.0	26.0	13.0	13.0	81.0		13.0	81.0	
Total Split (%)				21.7%	21.7%	10.8%	10.8%	67.5%		10.8%	67.5%	
Maximum Green (s)				20.6	20.6	7.4	7.9	75.3		7.4	75.3	
Yellow Time (s)				3.0	3.0	3.0	3.0	3.9		3.0	3.9	
All-Red Time (s)				2.4	2.4	2.6	2.1	1.8		2.6	1.8	
Lost Time Adjust (s)					-0.4	-0.6	-0.1	-0.7		-0.6	-0.7	
Total Lost Time (s)					5.0	5.0	5.0	5.0		5.0	5.0	
Lead/Lag						Lead	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)				2.0	2.0	2.0	2.0	3.0		2.0	3.0	
Recall Mode				None	None	None	None	C-Max		None	C-Max	
Walk Time (s)				7.0	7.0			7.0				
Flash Dont Walk (s)				13.0	13.0			15.0				
Pedestrian Calls (#/hr)				0	0			0				
Act Effct Green (s)					16.9	32.6	8.2	77.4		10.7	82.3	
Actuated g/C Ratio					0.14	0.27	0.07	0.64		0.09	0.69	
v/c Ratio					0.76	0.40	0.56	0.98		0.72	0.69	
Control Delay					68.4	38.6	72.2	44.5		76.9	9.4	

Lanes, Volumes, Timings
 8: S Point Road (NC 273) & South Point HS/Red Raider Run

Henry Chapel TIA
 2025 Background AM - Ph 2

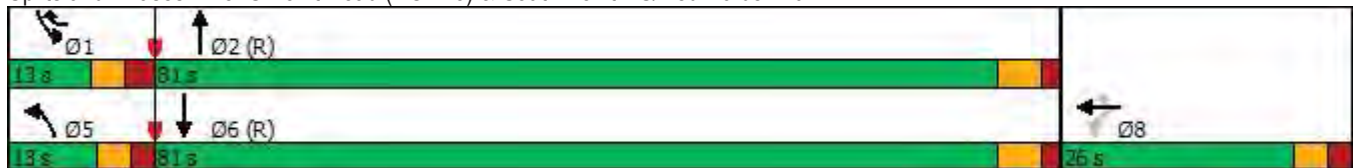


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay					0.0	0.0	0.0	0.0		0.0	0.3	
Total Delay					68.4	38.6	72.2	44.5		76.9	9.6	
LOS					E	D	E	D		E	A	
Approach Delay					54.2			46.1			17.6	
Approach LOS					D			D			B	
Queue Length 50th (ft)					140	105	52	~849		90	280	
Queue Length 95th (ft)					214	171	#111	#1206		m#135	m408	
Internal Link Dist (ft)		937			958			412			545	
Turn Bay Length (ft)						100	175			100		
Base Capacity (vph)					307	421	124	1192		157	1213	
Starvation Cap Reductn					0	0	0	0		0	64	
Spillback Cap Reductn					0	0	0	0		0	0	
Storage Cap Reductn					0	0	0	0		0	0	
Reduced v/c Ratio					0.61	0.40	0.55	0.98		0.72	0.73	

Intersection Summary
























Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 100 (83%), Referenced to phase 2:NBT and 6:SBT, Start of Green
 Natural Cycle: 120
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.98
 Intersection Signal Delay: 36.5
 Intersection LOS: D
 Intersection Capacity Utilization 83.8%
 ICU Level of Service E
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 8: S Point Road (NC 273) & South Point HS/Red Raider Run



Lanes, Volumes, Timings
 9: S Point Road (NC 273) & Nixon Road/R L Stowe Road

Henry Chapel TIA
 2025 Background AM - Ph 2

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	113	181	82	291	89	30	94	496	533	48	523	57
Future Volume (vph)	113	181	82	291	89	30	94	496	533	48	523	57
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		1%			1%			1%			1%	
Storage Length (ft)	200		100	225		0	280		225	25		100
Storage Lanes	1		1	1		0	1		1	1		1
Taper Length (ft)	250			100			100			125		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.962				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1761	1853	1474	1648	1688	0	1678	1853	1575	1761	1853	1530
Flt Permitted	0.950			0.950			0.950			0.302		
Satd. Flow (perm)	1761	1853	1474	1648	1688	0	1678	1853	1575	560	1853	1530
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		25			35			35			35	
Link Distance (ft)		1003			1016			625			1000	
Travel Time (s)		27.4			19.8			12.2			19.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	9%	9%	9%	4%	7%	2%	2%	2%	2%	5%
Adj. Flow (vph)	126	201	91	323	99	33	104	551	592	53	581	63
Shared Lane Traffic (%)												
Lane Group Flow (vph)	126	201	91	323	132	0	104	551	592	53	581	63
Turn Type	Split	NA	pm+ov	Split	NA		Prot	NA	pm+ov	D.Pm	NA	pm+ov
Protected Phases	3	3	5	4	4		5	2	4		6	3
Permitted Phases			3						2	2		6
Detector Phase	3	3	5	4	4		5	2	4	2	6	3
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0		7.0	10.0	7.0	10.0	10.0	7.0
Minimum Split (s)	25.0	25.0	12.8	13.3	13.3		12.8	24.1	13.3	24.1	24.1	25.0
Total Split (s)	25.0	25.0	15.0	32.0	32.0		15.0	63.0	32.0	63.0	48.0	25.0
Total Split (%)	20.8%	20.8%	12.5%	26.7%	26.7%		12.5%	52.5%	26.7%	52.5%	40.0%	20.8%
Maximum Green (s)	19.0	19.0	9.2	25.7	25.7		9.2	56.9	25.7	56.9	41.9	19.0
Yellow Time (s)	3.8	3.8	3.0	4.4	4.4		3.0	3.8	4.4	3.8	3.8	3.8
All-Red Time (s)	2.2	2.2	2.8	1.9	1.9		2.8	2.3	1.9	2.3	2.3	2.2
Lost Time Adjust (s)	-1.0	-1.0	-0.8	-1.3	-1.3		-0.8	-1.1	-1.3	-1.1	-1.1	-1.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lead	Lead	Lag	Lag		Lead		Lag		Lag	Lead
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		2.0	3.0	2.0	3.0	3.0	2.0
Recall Mode	None	None	None	None	None		None	C-Max	None	C-Max	C-Max	None
Walk Time (s)	7.0	7.0						7.0		7.0		7.0
Flash Dont Walk (s)	12.0	12.0						11.0		11.0		12.0
Pedestrian Calls (#/hr)	0	0						0		0		0
Act Effct Green (s)	17.2	17.2	27.1	26.5	26.5		9.9	61.3	92.8	61.3	46.4	68.6
Actuated g/C Ratio	0.14	0.14	0.23	0.22	0.22		0.08	0.51	0.77	0.51	0.39	0.57
v/c Ratio	0.50	0.76	0.27	0.89	0.35		0.75	0.58	0.49	0.19	0.81	0.07
Control Delay	53.9	67.5	21.5	71.5	42.2		79.9	17.5	6.0	19.8	44.7	12.3

Lanes, Volumes, Timings
 9: S Point Road (NC 273) & Nixon Road/R L Stowe Road

Henry Chapel TIA
 2025 Background AM - Ph 2



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.8	0.5	0.0	0.0	0.0
Total Delay	53.9	67.5	21.5	71.5	42.2		79.9	18.2	6.5	19.8	44.7	12.3
LOS	D	E	C	E	D		E	B	A	B	D	B
Approach Delay		53.4			63.0			17.8			39.9	
Approach LOS		D			E			B			D	
Queue Length 50th (ft)	90	150	32	238	85		78	211	153	23	417	22
Queue Length 95th (ft)	151	230	58	#406	146		m87	m229	m158	52	#622	42
Internal Link Dist (ft)		923			936			545			920	
Turn Bay Length (ft)	200		100	225			280		225	25		100
Base Capacity (vph)	293	308	337	378	387		143	946	1218	285	715	910
Starvation Cap Reductn	0	0	0	0	0		0	155	269	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.43	0.65	0.27	0.85	0.34		0.73	0.70	0.62	0.19	0.81	0.07

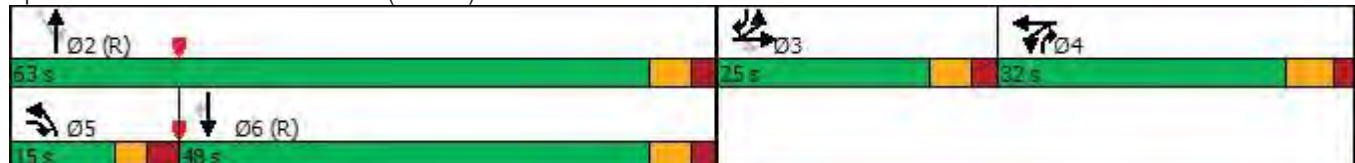
Intersection Summary

Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 8 (7%), Referenced to phase 2:NBSB and 6:SBT, Start of Green
 Natural Cycle: 100
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.89
 Intersection Signal Delay: 35.9
 Intersection Capacity Utilization 76.8%
 Analysis Period (min) 15
 Intersection LOS: D
 ICU Level of Service D

95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

















m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 9: S Point Road (NC 273) & Nixon Road/R L Stowe Road



Lanes, Volumes, Timings
 1: S Point Road (NC 273) & Armstrong Road (NC 273)/Farm Road

Henry Chapel TIA
 2025 Background PM - Ph 2

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	454	0	37	0	0	1	53	100	0	2	128	580
Future Volume (vph)	454	0	37	0	0	1	53	100	0	2	128	580
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.990			0.865							0.890
Flt Protected		0.956						0.983				
Satd. Flow (prot)	0	1760	0	0	1611	0	0	1772	0	0	1645	0
Flt Permitted		0.956						0.983				
Satd. Flow (perm)	0	1760	0	0	1611	0	0	1772	0	0	1645	0
Link Speed (mph)		45			25			45			45	
Link Distance (ft)		1234			1013			1002			3097	
Travel Time (s)		18.7			27.6			15.2			46.9	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	4%	2%	2%	2%	8%	4%	2%	2%	2%	3%
Adj. Flow (vph)	504	0	41	0	0	1	59	111	0	2	142	644
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	545	0	0	1	0	0	170	0	0	788	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	90.2%
ICU Level of Service	E
Analysis Period (min)	15

HCM 6th TWSC
 1: S Point Road (NC 273) & Armstrong Road (NC 273)/Farm Road

Henry Chapel TIA
 2025 Background PM - Ph 2

Intersection												
Int Delay, s/veh	110.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	454	0	37	0	0	1	53	100	0	2	128	580
Future Vol, veh/h	454	0	37	0	0	1	53	100	0	2	128	580
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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	4	2	2	2	8	4	2	2	2	3
Mvmt Flow	504	0	41	0	0	1	59	111	0	2	142	644

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	698	697	464	718	1019	111	786	0	0	111	0	0
Stage 1	468	468	-	229	229	-	-	-	-	-	-	-
Stage 2	230	229	-	489	790	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.24	7.12	6.52	6.22	4.18	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.336	3.518	4.018	3.318	2.272	-	-	2.218	-	-
Pot Cap-1 Maneuver	~ 355	365	594	344	237	942	807	-	-	1479	-	-
Stage 1	575	561	-	774	715	-	-	-	-	-	-	-
Stage 2	773	715	-	561	402	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	~ 333	335	594	300	218	942	807	-	-	1479	-	-
Mov Cap-2 Maneuver	~ 333	335	-	300	218	-	-	-	-	-	-	-
Stage 1	530	559	-	714	659	-	-	-	-	-	-	-
Stage 2	712	659	-	521	401	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	304.9	8.8	3.4	0
HCM LOS	F	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	807	-	-	344	942	1479	-	-
HCM Lane V/C Ratio	0.073	-	-	1.586	0.001	0.002	-	-
HCM Control Delay (s)	9.8	0		\$ 304.9	8.8	7.4	0	-
HCM Lane LOS	A	A	-	F	A	A	A	-
HCM 95th %tile Q(veh)	0.2	-	-	31.7	0	0	-	-

Notes
 ~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Lanes, Volumes, Timings

2: S Point Road (NC 273) & S Point Church Road/Henry Chapel Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	1	0	0	5	0	23	0	678	5	29	793	2
Future Volume (vph)	1	0	0	5	0	23	0	678	5	29	793	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.890			0.999				
Flt Protected		0.950			0.991						0.998	
Satd. Flow (prot)	0	1770	0	0	1544	0	0	1843	0	0	1842	0
Flt Permitted		0.950			0.991						0.998	
Satd. Flow (perm)	0	1770	0	0	1544	0	0	1843	0	0	1842	0
Link Speed (mph)		25			25			45			45	
Link Distance (ft)		1509			1293			1519			881	
Travel Time (s)		41.2			35.3			23.0			13.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	2%	2%	10%	2%	3%	2%	2%	3%	2%
Adj. Flow (vph)	1	0	0	6	0	26	0	753	6	32	881	2
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1	0	0	32	0	0	759	0	0	915	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 75.3% ICU Level of Service D

Analysis Period (min) 15

Intersection												
Int Delay, s/veh	0.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	1	0	0	5	0	23	0	678	5	29	793	2
Future Vol, veh/h	1	0	0	5	0	23	0	678	5	29	793	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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	10	2	3	2	2	3	2
Mvmt Flow	1	0	0	6	0	26	0	753	6	32	881	2

















Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1715	1705	882	1702	1703	756	883	0	0	759	0	0
Stage 1	946	946	-	756	756	-	-	-	-	-	-	-
Stage 2	769	759	-	946	947	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.3	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.39	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	71	91	345	72	92	395	766	-	-	852	-	-
Stage 1	314	340	-	400	416	-	-	-	-	-	-	-
Stage 2	394	415	-	314	340	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	63	84	345	68	85	395	766	-	-	852	-	-
Mov Cap-2 Maneuver	63	84	-	68	85	-	-	-	-	-	-	-
Stage 1	314	315	-	400	416	-	-	-	-	-	-	-
Stage 2	369	415	-	291	315	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	63.2	24.8	0	0.3
HCM LOS	F	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	766	-	-	63	213	852	-	-
HCM Lane V/C Ratio	-	-	-	0.018	0.146	0.038	-	-
HCM Control Delay (s)	0	-	-	63.2	24.8	9.4	0	-
HCM Lane LOS	A	-	-	F	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.5	0.1	-	-

Lanes, Volumes, Timings
 3: S Point Road (NC 273) & BB Drive/Forest Hill Road

Henry Chapel TIA
 2025 Background PM - Ph 2

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	0	0	1	0	9	0	793	3	15	959	1
Future Volume (vph)	4	0	0	1	0	9	0	793	3	15	959	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.877							
Flt Protected		0.950			0.995						0.999	
Satd. Flow (prot)	0	1770	0	0	1625	0	0	1863	0	0	1861	0
Flt Permitted		0.950			0.995						0.999	
Satd. Flow (perm)	0	1770	0	0	1625	0	0	1863	0	0	1861	0
Link Speed (mph)		25			25			45			45	
Link Distance (ft)		1341			477			2444			1975	
Travel Time (s)		36.6			13.0			37.0			29.9	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	4	0	0	1	0	10	0	881	3	17	1066	1
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	4	0	0	11	0	0	884	0	0	1084	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 72.5% ICU Level of Service C

Analysis Period (min) 15

Intersection												
Int Delay, s/veh	0.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	4	0	0	1	0	9	0	793	3	15	959	1
Future Vol, veh/h	4	0	0	1	0	9	0	793	3	15	959	1
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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	0	0	1	0	10	0	881	3	17	1066	1

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1989	1985	1067	1984	1984	883	1067	0	0	884	0	0
Stage 1	1101	1101	-	883	883	-	-	-	-	-	-	-
Stage 2	888	884	-	1101	1101	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	45	61	270	46	61	345	653	-	-	765	-	-
Stage 1	257	288	-	340	364	-	-	-	-	-	-	-
Stage 2	338	363	-	257	288	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	42	58	270	44	58	345	653	-	-	765	-	-
Mov Cap-2 Maneuver	42	58	-	44	58	-	-	-	-	-	-	-
Stage 1	257	272	-	340	364	-	-	-	-	-	-	-
Stage 2	328	363	-	243	272	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB		
HCM Control Delay, s	100.6		23.6		0		0.2		
HCM LOS	F		C						

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	653	-	-	42	205	765	-	-
HCM Lane V/C Ratio	-	-	-	0.106	0.054	0.022	-	-
HCM Control Delay (s)	0	-	-	100.6	23.6	9.8	0	-
HCM Lane LOS	A	-	-	F	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.3	0.2	0.1	-	-

Lanes, Volumes, Timings
4: Colonial Drive & Forest Hill Road

Henry Chapel TIA
2025 Background PM - Ph 2



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	4	9	1	4	9	1
Future Volume (vph)	4	9	1	4	9	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.904			0.988		
Flt Protected				0.990	0.957	
Satd. Flow (prot)	1475	0	0	1844	1604	0
Flt Permitted				0.990	0.957	
Satd. Flow (perm)	1475	0	0	1844	1604	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	477			1074	636	
Travel Time (s)	13.0			29.3	17.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	25%	13%	2%	2%	13%	2%
Adj. Flow (vph)	4	10	1	4	10	1
Shared Lane Traffic (%)						
Lane Group Flow (vph)	14	0	0	5	11	0
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	13.3%
ICU Level of Service	A
Analysis Period (min)	15

Intersection						
Int Delay, s/veh	3.4					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	4	9	1	4	9	1
Future Vol, veh/h	4	9	1	4	9	1
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	90	90	90	90	90	90
Heavy Vehicles, %	25	13	2	2	13	2
Mvmt Flow	4	10	1	4	10	1

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	14	0	15
Stage 1	-	-	-	-	9
Stage 2	-	-	-	-	6
Critical Hdwy	-	-	4.12	-	6.53
Critical Hdwy Stg 1	-	-	-	-	5.53
Critical Hdwy Stg 2	-	-	-	-	5.53
Follow-up Hdwy	-	-	2.218	-	3.617
Pot Cap-1 Maneuver	-	-	1604	-	976
Stage 1	-	-	-	-	986
Stage 2	-	-	-	-	989
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1604	-	975
Mov Cap-2 Maneuver	-	-	-	-	975
Stage 1	-	-	-	-	986
Stage 2	-	-	-	-	988

Approach	EB	WB	NB
HCM Control Delay, s	0	1.4	8.7
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	984	-	-	1604	-
HCM Lane V/C Ratio	0.011	-	-	0.001	-
HCM Control Delay (s)	8.7	-	-	7.2	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

Lanes, Volumes, Timings
 5: Colonial Drive & Timber Ridge Road

Henry Chapel TIA
 2025 Background PM - Ph 2



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	5	3	2	3	5
Future Volume (vph)	0	5	3	2	3	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.865		0.946			
Flt Protected						0.984
Satd. Flow (prot)	1611	0	1490	0	0	1640
Flt Permitted						0.984
Satd. Flow (perm)	1611	0	1490	0	0	1640
Link Speed (mph)	25		25			25
Link Distance (ft)	1207		1055			636
Travel Time (s)	32.9		28.8			17.3
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	33%	2%	2%	20%
Adj. Flow (vph)	0	6	3	2	3	6
Shared Lane Traffic (%)						
Lane Group Flow (vph)	6	0	5	0	0	9
Sign Control	Stop		Free			Free

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	13.3%
ICU Level of Service	A
Analysis Period (min)	15

Intersection						
Int Delay, s/veh	3.5					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	TT		TT			TT
Traffic Vol, veh/h	0	5	3	2	3	5
Future Vol, veh/h	0	5	3	2	3	5
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	90	90	90	90	90	90
Heavy Vehicles, %	2	2	33	2	2	20
Mvmt Flow	0	6	3	2	3	6

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	16	4	0	0	5
Stage 1	4	-	-	-	-
Stage 2	12	-	-	-	-
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	1002	1080	-	-	1616
Stage 1	1019	-	-	-	-
Stage 2	1011	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	1000	1080	-	-	1616
Mov Cap-2 Maneuver	1000	-	-	-	-
Stage 1	1019	-	-	-	-
Stage 2	1009	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.4	0	2.7
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	1080	1616
HCM Lane V/C Ratio	-	-	0.005	0.002
HCM Control Delay (s)	-	-	8.4	7.2
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0	0

Lanes, Volumes, Timings
6: S Point Road (NC 273) & Belmont MS/Belwood Drive

Henry Chapel TIA
2025 Background PM - Ph 2



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗		↔		↖	↗		↖	↕	↗
Traffic Volume (vph)	23	2	4	3	1	32	2	868	2	44	1046	5
Future Volume (vph)	23	2	4	3	1	32	2	868	2	44	1046	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		3%			0%			1%			0%	
Storage Length (ft)	0		175	0		0	200		0	100		200
Storage Lanes	0		1	0		0	1		0	1		1
Taper Length (ft)	25			25			100			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.878						0.850
Flt Protected		0.956			0.996		0.950			0.950		
Satd. Flow (prot)	0	1754	795	0	1629	0	1761	1853	0	1770	1863	1583
Flt Permitted		0.956			0.996		0.950			0.241		
Satd. Flow (perm)	0	1754	795	0	1629	0	1761	1853	0	449	1863	1583
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		35			25			35			35	
Link Distance (ft)		1017			1050			1975			1373	
Travel Time (s)		19.8			28.6			38.5			26.7	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	100%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Adj. Flow (vph)	26	2	4	3	1	36	2	964	2	49	1162	6
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	28	4	0	40	0	2	966	0	49	1162	6
Turn Type	Split	NA	pm+ov	Split	NA		Prot	NA		Perm	NA	pm+ov
Protected Phases	4	4	5	8	8		5	2			6	4
Permitted Phases			4							6		6
Detector Phase	4	4	5	8	8		5	2		6	6	4
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0		7.0	12.0		12.0	12.0	7.0
Minimum Split (s)	11.9	11.9	12.1	14.0	14.0		12.1	17.6		32.6	32.6	11.9
Total Split (s)	12.0	12.0	13.0	14.0	14.0		13.0	94.0		81.0	81.0	12.0
Total Split (%)	10.0%	10.0%	10.8%	11.7%	11.7%		10.8%	78.3%		67.5%	67.5%	10.0%
Maximum Green (s)	7.1	7.1	7.9	7.0	7.0		7.9	88.4		75.4	75.4	7.1
Yellow Time (s)	3.0	3.0	3.0	5.0	5.0		3.0	4.5		4.5	4.5	3.0
All-Red Time (s)	1.9	1.9	2.1	2.0	2.0		2.1	1.1		1.1	1.1	1.9
Lost Time Adjust (s)		0.1	-0.1		-2.0		-0.1	-0.6		-0.6	-0.6	0.1
Total Lost Time (s)		5.0	5.0		5.0		5.0	5.0		5.0	5.0	5.0
Lead/Lag			Lead				Lead			Lag		Lag
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		2.0	6.0		6.0	6.0	2.0
Minimum Gap (s)	2.0	2.0	2.0	2.0	2.0		2.0	3.0		3.0	3.0	2.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0		0.0	15.0		15.0	15.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0		0.0	45.0		45.0	45.0	0.0
Recall Mode	None	None	None	None	None		None	Min		Min	Min	None
Walk Time (s)										7.0	7.0	
Flash Dont Walk (s)										20.0	20.0	
Pedestrian Calls (#/hr)										0	0	
Act Efect Green (s)		7.5	11.2		9.8		7.7	78.5		76.6	76.6	82.6

Lanes, Volumes, Timings
 6: S Point Road (NC 273) & Belmont MS/Belwood Drive

Henry Chapel TIA
 2025 Background PM - Ph 2

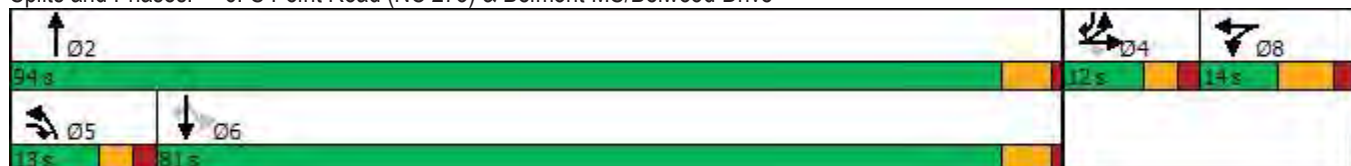


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Actuated g/C Ratio		0.08	0.12		0.10		0.08	0.84		0.81	0.81	0.88
v/c Ratio		0.20	0.04		0.24		0.01	0.62		0.13	0.77	0.00
Control Delay		53.6	32.0		51.8		51.0	8.9		7.3	15.9	3.0
Queue Delay		0.0	0.0		0.0		0.0	0.0		0.0	0.0	0.0
Total Delay		53.6	32.0		51.8		51.0	8.9		7.3	15.9	3.0
LOS		D	C		D		D	A		A	B	A
Approach Delay		50.9			51.8			9.0			15.5	
Approach LOS		D			D			A			B	
Queue Length 50th (ft)		20	2		28		1	349		10	535	1
Queue Length 95th (ft)		52	11		67		10	494		34	#1165	4
Internal Link Dist (ft)		937			970			1895			1293	
Turn Bay Length (ft)			175				200			100		200
Base Capacity (vph)		142	103		169		163	1620		365	1516	1391
Starvation Cap Reductn		0	0		0		0	0		0	0	0
Spillback Cap Reductn		0	0		0		0	0		0	0	0
Storage Cap Reductn		0	0		0		0	0		0	0	0
Reduced v/c Ratio		0.20	0.04		0.24		0.01	0.60		0.13	0.77	0.00

Intersection Summary


















Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 94
 Natural Cycle: 110
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.77
 Intersection Signal Delay: 13.9
 Intersection LOS: B
 Intersection Capacity Utilization 79.2%
 ICU Level of Service D
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 6: S Point Road (NC 273) & Belmont MS/Belwood Drive



Lanes, Volumes, Timings
 7: S Point Road (NC 273) & McKee Farm Road/Stowe Road

Henry Chapel TIA
 2025 Background PM - Ph 2

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	26	10	15	26	2	53	12	899	23	71	1063	49
Future Volume (vph)	26	10	15	26	2	53	12	899	23	71	1063	49
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		0	100		0
Storage Lanes	0		0	0		0	0		0	1		0
Taper Length (ft)	25			25			25			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.960			0.911			0.997				0.993
Flt Protected		0.975			0.984			0.999		0.950		
Satd. Flow (prot)	0	1744	0	0	1670	0	0	1855	0	1770	1850	0
Flt Permitted		0.975			0.984			0.999		0.950		
Satd. Flow (perm)	0	1744	0	0	1670	0	0	1855	0	1770	1850	0
Link Speed (mph)		25			25			35				35
Link Distance (ft)		1043			1485			1373				492
Travel Time (s)		28.4			40.5			26.7				9.6
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	29	11	17	29	2	59	13	999	26	79	1181	54
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	57	0	0	90	0	0	1038	0	79	1235	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary	
Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	70.9% ICU Level of Service C
Analysis Period (min)	15

HCM 6th TWSC
 7: S Point Road (NC 273) & McKee Farm Road/Stowe Road

Henry Chapel TIA
 2025 Background PM - Ph 2

Intersection												
Int Delay, s/veh	62.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕		↕	↕	
Traffic Vol, veh/h	26	10	15	26	2	53	12	899	23	71	1063	49
Future Vol, veh/h	26	10	15	26	2	53	12	899	23	71	1063	49
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	-	-	-	-	-	-	-	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	29	11	17	29	2	59	13	999	26	79	1181	54

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	2435	2417	1208	2418	2431	1012	1235	0	0	1025	0	0
Stage 1	1366	1366	-	1038	1038	-	-	-	-	-	-	-
Stage 2	1069	1051	-	1380	1393	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	~ 22	33	223	~ 22	32	290	564	-	-	677	-	-
Stage 1	182	215	-	279	308	-	-	-	-	-	-	-
Stage 2	268	304	-	178	209	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	~ 14	28	223	~ 12	27	290	564	-	-	677	-	-
Mov Cap-2 Maneuver	~ 14	28	-	~ 12	27	-	-	-	-	-	-	-
Stage 1	172	190	-	264	291	-	-	-	-	-	-	-
Stage 2	201	288	-	137	185	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, \$	1084.8		1036.5		0.1		0.7	
HCM LOS	F		F					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	564	-	-	22	33	677	-	-
HCM Lane V/C Ratio	0.024	-	-	2.576	2.727	0.117	-	-
HCM Control Delay (s)	11.5	0	\$ 1084.8	\$ 1036.5	11	-	-	-
HCM Lane LOS	B	A	-	F	F	B	-	-
HCM 95th %tile Q(veh)	0.1	-	-	7.3	10.4	0.4	-	-

Notes
 ~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Lanes, Volumes, Timings
 8: S Point Road (NC 273) & South Point HS/Red Raider Run

Henry Chapel TIA
 2025 Background PM - Ph 2



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↕	↗	↖	↕	↗	↖	↕	↗
Traffic Volume (vph)	0	0	0	204	5	223	8	847	87	128	995	3
Future Volume (vph)	0	0	0	204	5	223	8	847	87	128	995	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			4%			-1%			1%	
Storage Length (ft)	0		0	0		100	175		0	100		0
Storage Lanes	0		0	0		1	1		0	1		0
Taper Length (ft)	25			25			100			75		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t						0.850		0.986				
Fl _t Protected					0.954		0.950			0.950		
Satd. Flow (prot)	0	0	0	0	1742	1552	1778	1830	0	1761	1853	0
Fl _t Permitted					0.954		0.950			0.950		
Satd. Flow (perm)	0	0	0	0	1742	1552	1778	1830	0	1761	1853	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		25			25			35			35	
Link Distance (ft)		1017			1038			492			625	
Travel Time (s)		27.7			28.3			9.6			12.2	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	3%	2%	2%	2%	2%
Adj. Flow (vph)	0	0	0	227	6	248	9	941	97	142	1106	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	233	248	9	1038	0	142	1109	0
Turn Type				Perm	NA	pm+ov	Prot	NA		Prot	NA	
Protected Phases					8	1	5	2		1	6	
Permitted Phases				8		8						
Detector Phase				8	8	1	5	2		1	6	
Switch Phase												
Minimum Initial (s)				7.0	7.0	7.0	7.0	10.0		7.0	10.0	
Minimum Split (s)				25.4	25.4	12.6	12.1	27.7		12.6	23.7	
Total Split (s)				26.0	26.0	18.0	13.0	86.0		18.0	91.0	
Total Split (%)				20.0%	20.0%	13.8%	10.0%	66.2%		13.8%	70.0%	
Maximum Green (s)				20.6	20.6	12.4	7.9	80.3		12.4	85.3	
Yellow Time (s)				3.0	3.0	3.0	3.0	3.9		3.0	3.9	
All-Red Time (s)				2.4	2.4	2.6	2.1	1.8		2.6	1.8	
Lost Time Adjust (s)					-0.4	-0.6	-0.1	-0.7		-0.6	-0.7	
Total Lost Time (s)					5.0	5.0	5.0	5.0		5.0	5.0	
Lead/Lag						Lead	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)				2.0	2.0	2.0	2.0	3.0		2.0	3.0	
Recall Mode				None	None	None	None	C-Max		None	C-Max	
Walk Time (s)				7.0	7.0			7.0				
Flash Dont Walk (s)				13.0	13.0			15.0				
Pedestrian Calls (#/hr)				0	0			0				
Act Effct Green (s)					19.8	37.5	7.1	82.5		12.7	97.8	
Actuated g/C Ratio					0.15	0.29	0.05	0.63		0.10	0.75	
v/c Ratio					0.88	0.55	0.09	0.89		0.83	0.80	
Control Delay					85.6	44.2	60.6	32.2		67.7	12.0	

Lanes, Volumes, Timings
 8: S Point Road (NC 273) & South Point HS/Red Raider Run

Henry Chapel TIA
 2025 Background PM - Ph 2

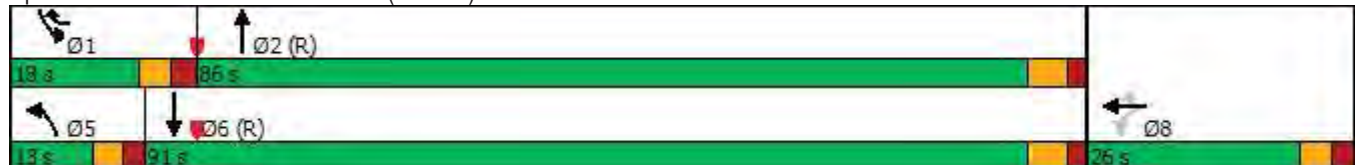


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay					0.0	0.9	0.0	0.0		0.0	4.7	
Total Delay					85.6	45.1	60.6	32.2		67.7	16.6	
LOS					F	D	E	C		E	B	
Approach Delay					64.7			32.5			22.4	
Approach LOS					E			C			C	
Queue Length 50th (ft)					193	174	7	717		114	525	
Queue Length 95th (ft)					#330	263	26	#1077		m121	m546	
Internal Link Dist (ft)		937			958			412			545	
Turn Bay Length (ft)						100	175			100		
Base Capacity (vph)					281	452	109	1161		178	1394	
Starvation Cap Reductn					0	0	0	0		0	218	
Spillback Cap Reductn					0	58	0	0		0	0	
Storage Cap Reductn					0	0	0	0		0	0	
Reduced v/c Ratio					0.83	0.63	0.08	0.89		0.80	0.94	

Intersection Summary
























Area Type: Other
 Cycle Length: 130
 Actuated Cycle Length: 130
 Offset: 44 (34%), Referenced to phase 2:NBT and 6:SBT, Start of Green
 Natural Cycle: 100
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.89
 Intersection Signal Delay: 33.5
 Intersection LOS: C
 Intersection Capacity Utilization 82.4%
 ICU Level of Service E
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 8: S Point Road (NC 273) & South Point HS/Red Raider Run



Lanes, Volumes, Timings
 9: S Point Road (NC 273) & Nixon Road/R L Stowe Road

Henry Chapel TIA
 2025 Background PM - Ph 2

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	76	108	73	537	123	39	71	499	473	75	532	88
Future Volume (vph)	76	108	73	537	123	39	71	499	473	75	532	88
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		1%			1%			1%			1%	
Storage Length (ft)	200		100	225		0	280		225	25		100
Storage Lanes	1		1	1		0	1		1	1		1
Taper Length (ft)	250			100			100			125		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.964				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1761	1853	1545	1744	1760	0	1761	1853	1545	1761	1853	1560
Flt Permitted	0.950			0.950			0.950			0.205		
Satd. Flow (perm)	1761	1853	1545	1744	1760	0	1761	1853	1545	380	1853	1560
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		25			35			35			35	
Link Distance (ft)		1003			1016			625			1000	
Travel Time (s)		27.4			19.8			12.2			19.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	4%	3%	4%	2%	2%	2%	4%	2%	2%	3%
Adj. Flow (vph)	84	120	81	597	137	43	79	554	526	83	591	98
Shared Lane Traffic (%)												
Lane Group Flow (vph)	84	120	81	597	180	0	79	554	526	83	591	98
Turn Type	Split	NA	pm+ov	Split	NA		Prot	NA	pm+ov	D.Pm	NA	pm+ov
Protected Phases	3	3	5	4	4		5	2	4		6	3
Permitted Phases			3						2	2		6
Detector Phase	3	3	5	4	4		5	2	4	2	6	3
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0		7.0	10.0	7.0	10.0	10.0	7.0
Minimum Split (s)	25.0	25.0	12.8	13.3	13.3		12.8	24.1	13.3	24.1	24.1	25.0
Total Split (s)	25.0	25.0	13.0	47.0	47.0		13.0	58.0	47.0	58.0	45.0	25.0
Total Split (%)	19.2%	19.2%	10.0%	36.2%	36.2%		10.0%	44.6%	36.2%	44.6%	34.6%	19.2%
Maximum Green (s)	19.0	19.0	7.2	40.7	40.7		7.2	51.9	40.7	51.9	38.9	19.0
Yellow Time (s)	3.8	3.8	3.0	4.4	4.4		3.0	3.8	4.4	3.8	3.8	3.8
All-Red Time (s)	2.2	2.2	2.8	1.9	1.9		2.8	2.3	1.9	2.3	2.3	2.2
Lost Time Adjust (s)	-1.0	-1.0	-0.8	-1.3	-1.3		-0.8	-1.1	-1.3	-1.1	-1.1	-1.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lead	Lead	Lag	Lag		Lead		Lag		Lag	Lead
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		2.0	3.0	2.0	3.0	3.0	2.0
Recall Mode	None	None	None	None	None		None	C-Max	None	C-Max	C-Max	None
Walk Time (s)	7.0	7.0						7.0		7.0		7.0
Flash Dont Walk (s)	12.0	12.0						11.0		11.0		12.0
Pedestrian Calls (#/hr)	0	0						0		0		0
Act Effct Green (s)	13.8	13.8	21.7	48.2	48.2		8.0	53.0	106.2	53.0	40.0	58.8
Actuated g/C Ratio	0.11	0.11	0.17	0.37	0.37		0.06	0.41	0.82	0.41	0.31	0.45
v/c Ratio	0.45	0.61	0.31	0.92	0.28		0.74	0.73	0.42	0.54	1.04	0.14
Control Delay	61.3	68.3	26.6	61.0	31.1		75.3	37.2	2.1	44.8	91.2	20.6

Lanes, Volumes, Timings
 9: S Point Road (NC 273) & Nixon Road/R L Stowe Road

Henry Chapel TIA
 2025 Background PM - Ph 2

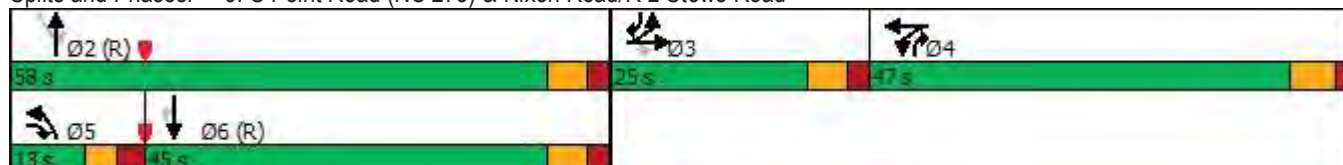


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay	0.0	0.0	4.9	0.0	0.0		0.0	2.7	0.6	0.0	16.2	0.0
Total Delay	61.3	68.3	31.4	61.0	31.1		75.3	39.9	2.7	44.8	107.4	20.6
LOS	E	E	C	E	C		E	D	A	D	F	C
Approach Delay		55.7			54.1			25.4			89.6	
Approach LOS		E			D			C			F	
Queue Length 50th (ft)	68	98	31	478	106		66	408	32	52	~536	47
Queue Length 95th (ft)	117	158	52	#768	176		m83	m491	m90	117	#763	78
Internal Link Dist (ft)		923			936			545			920	
Turn Bay Length (ft)	200		100	225			280		225	25		100
Base Capacity (vph)	270	285	259	646	652		108	755	1262	154	571	780
Starvation Cap Reductn	0	0	0	0	0		0	108	386	0	0	0
Spillback Cap Reductn	0	0	124	0	0		0	0	0	0	24	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.31	0.42	0.60	0.92	0.28		0.73	0.86	0.60	0.54	1.08	0.13

Intersection Summary

Area Type: Other
 Cycle Length: 130
 Actuated Cycle Length: 130
 Offset: 0 (0%), Referenced to phase 2:NBSB and 6:SBT, Start of Green
 Natural Cycle: 140
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.04
 Intersection Signal Delay: 52.3
 Intersection LOS: D
 Intersection Capacity Utilization 86.8%
 ICU Level of Service E
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 m Volume for 95th percentile queue is metered by upstream signal.

















Splits and Phases: 9: S Point Road (NC 273) & Nixon Road/R L Stowe Road



2025 Build-out Conditions

Lanes, Volumes, Timings
 1: S Point Road (NC 273) & Armstrong Road (NC 273)/Farm Road

Henry Chapel TIA
 2025 Build AM - Ph 2

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	565	0	30	0	0	0	63	172	0	0	68	242
Future Volume (vph)	565	0	30	0	0	0	63	172	0	0	68	242
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.993										0.895
Flt Protected		0.955						0.987				
Satd. Flow (prot)	0	1738	0	0	1863	0	0	1782	0	0	1552	0
Flt Permitted		0.955						0.987				
Satd. Flow (perm)	0	1738	0	0	1863	0	0	1782	0	0	1552	0
Link Speed (mph)		45			25			45			45	
Link Distance (ft)		1234			1013			1002			3097	
Travel Time (s)		18.7			27.6			15.2			46.9	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	36%	2%	2%	2%	14%	2%	2%	2%	8%	10%
Adj. Flow (vph)	628	0	33	0	0	0	70	191	0	0	76	269
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	661	0	0	0	0	0	261	0	0	345	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 74.1% ICU Level of Service D

Analysis Period (min) 15

HCM 6th TWSC
 1: S Point Road (NC 273) & Armstrong Road (NC 273)/Farm Road

Henry Chapel TIA
 2025 Build AM - Ph 2

Intersection												
Int Delay, s/veh	139.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	565	0	30	0	0	0	63	172	0	0	68	242
Future Vol, veh/h	565	0	30	0	0	0	63	172	0	0	68	242
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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	36	2	2	2	14	2	2	2	8	10
Mvmt Flow	628	0	33	0	0	0	70	191	0	0	76	269

Major/Minor	Minor2		Minor1			Major1			Major2			
Conflicting Flow All	542	542	211	558	676	191	345	0	0	191	0	0
Stage 1	211	211	-	331	331	-	-	-	-	-	-	-
Stage 2	331	331	-	227	345	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.56	7.12	6.52	6.22	4.24	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.624	3.518	4.018	3.318	2.326	-	-	2.218	-	-
Pot Cap-1 Maneuver	~ 451	447	751	440	375	851	1150	-	-	1383	-	-
Stage 1	791	728	-	682	645	-	-	-	-	-	-	-
Stage 2	682	645	-	776	636	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	~ 428	417	751	399	350	851	1150	-	-	1383	-	-
Mov Cap-2 Maneuver	~ 428	417	-	399	350	-	-	-	-	-	-	-
Stage 1	737	728	-	636	601	-	-	-	-	-	-	-
Stage 2	636	601	-	742	636	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	266.2	0	2.2	0
HCM LOS	F	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1150	-	-	437	1383	-	-
HCM Lane V/C Ratio	0.061	-	-	1.513	-	-	-
HCM Control Delay (s)	8.3	0	-	266.2	0	0	-
HCM Lane LOS	A	A	-	F	A	A	-
HCM 95th %tile Q(veh)	0.2	-	-	35.1	0	-	-

Notes
 ~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕	↗		↕		↖	↗	
Traffic Volume (vph)	0	0	1	23	0	174	0	864	9	61	342	5
Future Volume (vph)	0	0	1	23	0	174	0	864	9	61	342	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		100	0		0	150		0
Storage Lanes	0		0	0		1	0		0	1		0
Taper Length (ft)	25			25			25			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.865				0.850		0.999			0.998	
Flt Protected					0.950					0.950		
Satd. Flow (prot)	0	1611	0	0	1770	1538	0	1843	0	1770	1757	0
Flt Permitted					0.950					0.950		
Satd. Flow (perm)	0	1611	0	0	1770	1538	0	1843	0	1770	1757	0
Link Speed (mph)		25			25			45			45	
Link Distance (ft)		1509			1293			1519			881	
Travel Time (s)		41.2			35.3			23.0			13.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	2%	2%	5%	2%	2%	100%	2%	8%	2%
Adj. Flow (vph)	0	0	1	26	0	193	0	960	10	68	380	6
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1	0	0	26	193	0	970	0	68	386	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	70.1%
Analysis Period (min)	15
	ICU Level of Service C

Intersection												
Int Delay, s/veh	5.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕	↕		↕		↕	↕	
Traffic Vol, veh/h	0	0	1	23	0	174	0	864	9	61	342	5
Future Vol, veh/h	0	0	1	23	0	174	0	864	9	61	342	5
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	-	-	-	-	-	100	-	-	-	150	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	5	2	2	100	2	8	2
Mvmt Flow	0	0	1	26	0	193	0	960	10	68	380	6

















Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1581	1489	383	1485	1487	965	386	0	0	970	0	0
Stage 1	519	519	-	965	965	-	-	-	-	-	-	-
Stage 2	1062	970	-	520	522	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.25	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.345	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	88	124	664	103	124	305	1172	-	-	710	-	-
Stage 1	540	533	-	306	333	-	-	-	-	-	-	-
Stage 2	270	331	-	539	531	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	30	112	664	95	112	305	1172	-	-	710	-	-
Mov Cap-2 Maneuver	30	112	-	95	112	-	-	-	-	-	-	-
Stage 1	540	482	-	306	333	-	-	-	-	-	-	-
Stage 2	99	331	-	487	480	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10.4	37.7	0	1.6
HCM LOS	B	E		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1172	-	-	664	95	305	710	-	-
HCM Lane V/C Ratio	-	-	-	0.002	0.269	0.634	0.095	-	-
HCM Control Delay (s)	0	-	-	10.4	56.3	35.2	10.6	-	-
HCM Lane LOS	A	-	-	B	F	E	B	-	-
HCM 95th %tile Q(veh)	0	-	-	0	1	4	0.3	-	-

Lanes, Volumes, Timings
 3: S Point Road (NC 273) & BB Drive/Forest Hill Road

Henry Chapel TIA
 2025 Build AM - Ph 2

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	0	0	5	0	64	0	1207	7	23	455	2
Future Volume (vph)	4	0	0	5	0	64	0	1207	7	23	455	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.876			0.999			0.999	
Flt Protected		0.950			0.996						0.998	
Satd. Flow (prot)	0	1770	0	0	1582	0	0	1859	0	0	1775	0
Flt Permitted		0.950			0.996						0.998	
Satd. Flow (perm)	0	1770	0	0	1582	0	0	1859	0	0	1775	0
Link Speed (mph)		25			25			45			45	
Link Distance (ft)		1341			477			2444			1975	
Travel Time (s)		36.6			13.0			37.0			29.9	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	2%	2%	5%	2%	2%	17%	2%	7%	2%
Adj. Flow (vph)	4	0	0	6	0	71	0	1341	8	26	506	2
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	4	0	0	77	0	0	1349	0	0	534	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	74.7%
	ICU Level of Service D
Analysis Period (min)	15

Intersection												
Int Delay, s/veh	2.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	4	0	0	5	0	64	0	1207	7	23	455	2
Future Vol, veh/h	4	0	0	5	0	64	0	1207	7	23	455	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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	5	2	2	17	2	7	2
Mvmt Flow	4	0	0	6	0	71	0	1341	8	26	506	2

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	1940	1908	507	1904	1905	1345	508	0	0	1349	0	0
Stage 1	559	559	-	1345	1345	-	-	-	-	-	-	-
Stage 2	1381	1349	-	559	560	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.25	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.345	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	49	68	566	52	69	183	1057	-	-	510	-	-
Stage 1	513	511	-	187	220	-	-	-	-	-	-	-
Stage 2	178	219	-	513	511	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	28	63	566	49	64	183	1057	-	-	510	-	-
Mov Cap-2 Maneuver	28	63	-	49	64	-	-	-	-	-	-	-
Stage 1	513	475	-	187	220	-	-	-	-	-	-	-
Stage 2	109	219	-	477	475	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	156.4		50.1		0		0.6	
HCM LOS	F		F					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1057	-	-	28	153	510	-	-
HCM Lane V/C Ratio	-	-	-	0.159	0.501	0.05	-	-
HCM Control Delay (s)	0	-	-	156.4	50.1	12.4	0	-
HCM Lane LOS	A	-	-	F	F	B	A	-
HCM 95th %tile Q(veh)	0	-	-	0.5	2.4	0.2	-	-

Lanes, Volumes, Timings
 4: Colonial Drive & Forest Hill Road

Henry Chapel TIA
 2025 Build AM - Ph 2



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	7	17	0	12	62	1
Future Volume (vph)	7	17	0	12	62	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.905			0.998		
Flt Protected				0.953		
Satd. Flow (prot)	1686	0	0	1863	1772	0
Flt Permitted				0.953		
Satd. Flow (perm)	1686	0	0	1863	1772	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	477			1074	636	
Travel Time (s)	13.0			29.3	17.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	8	19	0	13	69	1
Shared Lane Traffic (%)						
Lane Group Flow (vph)	27	0	0	13	70	0
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	13.5%
Analysis Period (min)	15
	ICU Level of Service A

Intersection						
Int Delay, s/veh	5.7					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	7	17	0	12	62	1
Future Vol, veh/h	7	17	0	12	62	1
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	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	8	19	0	13	69	1

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	27	0	31
Stage 1	-	-	-	-	18
Stage 2	-	-	-	-	13
Critical Hdwy	-	-	4.12	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	-	-	2.218	-	3.518
Pot Cap-1 Maneuver	-	-	1587	-	983
Stage 1	-	-	-	-	1005
Stage 2	-	-	-	-	1010
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1587	-	983
Mov Cap-2 Maneuver	-	-	-	-	983
Stage 1	-	-	-	-	1005
Stage 2	-	-	-	-	1010

Approach	EB	WB	NB
HCM Control Delay, s	0	0	8.9
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	984	-	-	1587	-
HCM Lane V/C Ratio	0.071	-	-	-	-
HCM Control Delay (s)	8.9	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0.2	-	-	0	-

Lanes, Volumes, Timings
 5: Colonial Drive & Timber Ridge Road/Access 3



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	54	9	0	16	2
Future Volume (vph)	0	54	9	0	16	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.865					
Flt Protected						0.957
Satd. Flow (prot)	1611	0	1863	0	0	1783
Flt Permitted						0.957
Satd. Flow (perm)	1611	0	1863	0	0	1783
Link Speed (mph)	25		25		25	
Link Distance (ft)	2169		1055		636	
Travel Time (s)	59.2		28.8		17.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	60	10	0	18	2
Shared Lane Traffic (%)						
Lane Group Flow (vph)	60	0	10	0	0	20
Sign Control	Stop		Free		Free	

Intersection Summary	
Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	17.7% ICU Level of Service A
Analysis Period (min)	15

Intersection						
Int Delay, s/veh	7.2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	54	9	0	16	2
Future Vol, veh/h	0	54	9	0	16	2
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	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	60	10	0	18	2





















Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	48	10	0	0	10	0
Stage 1	10	-	-	-	-	-
Stage 2	38	-	-	-	-	-
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	962	1071	-	-	1610	-
Stage 1	1013	-	-	-	-	-
Stage 2	984	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	951	1071	-	-	1610	-
Mov Cap-2 Maneuver	951	-	-	-	-	-
Stage 1	1013	-	-	-	-	-
Stage 2	973	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.6	0	6.5
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	1071	1610
HCM Lane V/C Ratio	-	-	0.056	0.011
HCM Control Delay (s)	-	-	8.6	7.3
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0

Lanes, Volumes, Timings
6: S Point Road (NC 273) & Belmont MS/Belwood Drive

Henry Chapel TIA
2025 Build AM - Ph 2

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	260	1	46	2	2	32	104	1028	1	22	510	287
Future Volume (vph)	260	1	46	2	2	32	104	1028	1	22	510	287
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		3%			0%			1%			0%	
Storage Length (ft)	0		175	0		0	200		0	100		200
Storage Lanes	0		1	0		0	1		0	1		1
Taper Length (ft)	25			25			100			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.878							0.850
Flt Protected		0.953			0.998		0.950			0.950		
Satd. Flow (prot)	0	1732	1560	0	1519	0	1744	1853	0	1770	1759	1568
Flt Permitted		0.953			0.998		0.950			0.074		
Satd. Flow (perm)	0	1732	1560	0	1519	0	1744	1853	0	138	1759	1568
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		35			25			35			35	
Link Distance (ft)		1017			1050			1975			1373	
Travel Time (s)		19.8			28.6			38.5			26.7	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	3%	2%	2%	100%	2%	5%	3%	2%	2%	2%	8%	3%
Adj. Flow (vph)	289	1	51	2	2	36	116	1142	1	24	567	319
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	290	51	0	40	0	116	1143	0	24	567	319
Turn Type	Split	NA	pm+ov	Split	NA		Prot	NA		Perm	NA	pm+ov
Protected Phases	4	4	5	8	8		5	2			6	4
Permitted Phases			4							6		6
Detector Phase	4	4	5	8	8		5	2		6	6	4
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0		7.0	12.0		12.0	12.0	7.0
Minimum Split (s)	11.9	11.9	12.1	14.0	14.0		12.1	17.6		32.6	32.6	11.9
Total Split (s)	31.0	31.0	19.0	14.0	14.0		19.0	75.0		56.0	56.0	31.0
Total Split (%)	25.8%	25.8%	15.8%	11.7%	11.7%		15.8%	62.5%		46.7%	46.7%	25.8%
Maximum Green (s)	26.1	26.1	13.9	7.0	7.0		13.9	69.4		50.4	50.4	26.1
Yellow Time (s)	3.0	3.0	3.0	5.0	5.0		3.0	4.5		4.5	4.5	3.0
All-Red Time (s)	1.9	1.9	2.1	2.0	2.0		2.1	1.1		1.1	1.1	1.9
Lost Time Adjust (s)		0.1	-0.1		-2.0		-0.1	-0.6		-0.6	-0.6	0.1
Total Lost Time (s)		5.0	5.0		5.0		5.0	5.0		5.0	5.0	5.0
Lead/Lag			Lead				Lead			Lag	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		2.0	6.0		6.0	6.0	2.0
Minimum Gap (s)	2.0	2.0	2.0	2.0	2.0		2.0	3.0		3.0	3.0	2.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0		0.0	15.0		15.0	15.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0		0.0	45.0		45.0	45.0	0.0
Recall Mode	None	None	None	None	None		None	Min		Min	Min	None
Walk Time (s)										7.0	7.0	
Flash Dont Walk (s)										20.0	20.0	
Pedestrian Calls (#/hr)										0	0	
Act Efect Green (s)		22.0	35.6		9.1		11.3	70.7		54.4	54.4	81.4

Lanes, Volumes, Timings
 6: S Point Road (NC 273) & Belmont MS/Belwood Drive

Henry Chapel TIA
 2025 Build AM - Ph 2



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Actuated g/C Ratio		0.20	0.32		0.08		0.10	0.64		0.49	0.49	0.74
v/c Ratio		0.84	0.10		0.32		0.65	0.97		0.36	0.66	0.28
Control Delay		65.4	19.0		59.1		66.8	41.4		42.4	28.9	6.8
Queue Delay		0.0	0.0		0.0		0.0	0.0		0.0	0.0	0.0
Total Delay		65.4	19.0		59.1		66.8	41.4		42.4	28.9	6.8
LOS		E	B		E		E	D		D	C	A
Approach Delay		58.5			59.1			43.7			21.5	
Approach LOS		E			E			D			C	
Queue Length 50th (ft)		213	21		30		87	~948		12	347	84
Queue Length 95th (ft)		#341	43		67		150	#1229		#51	514	132
Internal Link Dist (ft)		937			970			1895			1293	
Turn Bay Length (ft)			175				200			100		200
Base Capacity (vph)		411	541		124		223	1184		67	864	1214
Starvation Cap Reductn		0	0		0		0	0		0	0	0
Spillback Cap Reductn		0	0		0		0	0		0	0	0
Storage Cap Reductn		0	0		0		0	0		0	0	0
Reduced v/c Ratio		0.71	0.09		0.32		0.52	0.97		0.36	0.66	0.26

Intersection Summary




















Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 110.6
 Natural Cycle: 110
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.97
 Intersection Signal Delay: 38.0
 Intersection LOS: D
 Intersection Capacity Utilization 97.8%
 ICU Level of Service F
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 6: S Point Road (NC 273) & Belmont MS/Belwood Drive



Lanes, Volumes, Timings
 7: S Point Road (NC 273) & McKee Farm Road/Stowe Road

Henry Chapel TIA
 2025 Build AM - Ph 2

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	15	5	20	17	1	58	26	1259	54	39	793	71
Future Volume (vph)	15	5	20	17	1	58	26	1259	54	39	793	71
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		200	0		0	0		0	100		0
Storage Lanes	0		1	0		0	0		0	1		1
Taper Length (ft)	25			25			25			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.897			0.995				0.850
Flt Protected		0.964			0.989			0.999		0.950		
Satd. Flow (prot)	0	1796	1524	0	1653	0	0	1852	0	1703	1810	1583
Flt Permitted		0.964			0.989			0.999		0.950		
Satd. Flow (perm)	0	1796	1524	0	1653	0	0	1852	0	1703	1810	1583
Link Speed (mph)		25			25			35				35
Link Distance (ft)		1043			1485			1373				492
Travel Time (s)		28.4			40.5			26.7				9.6
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	6%	2%	2%	2%	2%	2%	2%	6%	5%	2%
Adj. Flow (vph)	17	6	22	19	1	64	29	1399	60	43	881	79
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	23	22	0	84	0	0	1488	0	43	881	79
Sign Control		Stop			Stop			Free			Free	

Intersection Summary	
Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	108.4% ICU Level of Service G
Analysis Period (min)	15

HCM 6th TWSC
 7: S Point Road (NC 273) & McKee Farm Road/Stowe Road

Henry Chapel TIA
 2025 Build AM - Ph 2

Intersection												
Int Delay, s/veh	35.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗		↕			↕		↗	↕	↗
Traffic Vol, veh/h	15	5	20	17	1	58	26	1259	54	39	793	71
Future Vol, veh/h	15	5	20	17	1	58	26	1259	54	39	793	71
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	-	-	200	-	-	-	-	-	-	100	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	6	2	2	2	2	2	2	6	5	2
Mvmt Flow	17	6	22	19	1	64	29	1399	60	43	881	79

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	2487	2484	881	2508	2533	1429	960	0	0	1459	0	0
Stage 1	967	967	-	1487	1487	-	-	-	-	-	-	-
Stage 2	1520	1517	-	1021	1046	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.26	7.12	6.52	6.22	4.12	-	-	4.16	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.354	3.518	4.018	3.318	2.218	-	-	2.254	-	-
Pot Cap-1 Maneuver	20	29	340	19	27	165	717	-	-	451	-	-
Stage 1	306	333	-	155	188	-	-	-	-	-	-	-
Stage 2	148	182	-	285	305	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	~ 9	20	340	~ 11	19	165	717	-	-	451	-	-
Mov Cap-2 Maneuver	~ 9	20	-	~ 11	19	-	-	-	-	-	-	-
Stage 1	238	301	-	121	146	-	-	-	-	-	-	-
Stage 2	70	142	-	237	276	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB		
HCM Control Delay, s	658.2		757.8		0.2		0.6		
HCM LOS	F		F						

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	717	-	-	10	340	39	451	-	-
HCM Lane V/C Ratio	0.04	-	-	2.222	0.065	2.165	0.096	-	-
HCM Control Delay (s)	10.2	0	-	1300	16.3	757.8	13.8	-	-
HCM Lane LOS	B	A	-	F	C	F	B	-	-
HCM 95th %tile Q(veh)	0.1	-	-	3.8	0.2	9.1	0.3	-	-

Notes
 ~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Lanes, Volumes, Timings

Henry Chapel TIA

8: S Point Road (NC 273) & South Point HS/Red Raider Run

2025 Build AM - Ph 2



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↕	↗	↖	↕	↕	↖	↗	↕
Traffic Volume (vph)	0	0	0	138	34	152	72	1135	95	102	766	53
Future Volume (vph)	0	0	0	138	34	152	72	1135	95	102	766	53
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			4%			-1%			1%	
Storage Length (ft)	0		0	0		100	175		0	100		0
Storage Lanes	0		0	0		1	1		0	1		0
Taper Length (ft)	25			25			100			75		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Fr _t						0.850		0.988			0.990	
Fl _t Protected					0.961		0.950			0.950		
Satd. Flow (prot)	0	0	0	0	1754	1552	1778	3514	0	1761	3363	0
Fl _t Permitted					0.961		0.950			0.950		
Satd. Flow (perm)	0	0	0	0	1754	1552	1778	3514	0	1761	3363	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		25			25			35			35	
Link Distance (ft)		1017			1038			492			625	
Travel Time (s)		27.7			28.3			9.6			12.2	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	6%	2%
Adj. Flow (vph)	0	0	0	153	38	169	80	1261	106	113	851	59
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	191	169	80	1367	0	113	910	0
Turn Type				Perm	NA	pm+ov	Prot	NA		Prot	NA	
Protected Phases					8	1	5	2		1	6	
Permitted Phases				8		8						
Detector Phase				8	8	1	5	2		1	6	
Switch Phase												
Minimum Initial (s)				7.0	7.0	7.0	7.0	10.0		7.0	10.0	
Minimum Split (s)				25.4	25.4	12.6	12.1	27.7		12.6	23.7	
Total Split (s)				26.0	26.0	13.0	13.0	81.0		13.0	81.0	
Total Split (%)				21.7%	21.7%	10.8%	10.8%	67.5%		10.8%	67.5%	
Maximum Green (s)				20.6	20.6	7.4	7.9	75.3		7.4	75.3	
Yellow Time (s)				3.0	3.0	3.0	3.0	3.9		3.0	3.9	
All-Red Time (s)				2.4	2.4	2.6	2.1	1.8		2.6	1.8	
Lost Time Adjust (s)					-0.4	-0.6	-0.1	-0.7		-0.6	-0.7	
Total Lost Time (s)					5.0	5.0	5.0	5.0		5.0	5.0	
Lead/Lag						Lead	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)				2.0	2.0	2.0	2.0	3.0		2.0	3.0	
Recall Mode				None	None	None	None	C-Max		None	C-Max	
Walk Time (s)				7.0	7.0			7.0				
Flash Dont Walk (s)				13.0	13.0			15.0				
Pedestrian Calls (#/hr)				0	0			0				
Act Effct Green (s)					17.1	32.7	8.6	77.3		10.6	79.3	
Actuated g/C Ratio					0.14	0.27	0.07	0.64		0.09	0.66	
v/c Ratio					0.77	0.40	0.63	0.60		0.72	0.41	
Control Delay					68.9	38.5	76.5	14.1		79.3	7.7	

Lanes, Volumes, Timings
 8: S Point Road (NC 273) & South Point HS/Red Raider Run

Henry Chapel TIA
 2025 Build AM - Ph 2



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay					0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay					68.9	38.5	76.5	14.1		79.3	7.7	
LOS					E	D	E	B		E	A	
Approach Delay					54.6			17.6			15.6	
Approach LOS					D			B			B	
Queue Length 50th (ft)					143	105	60	311		86	161	
Queue Length 95th (ft)					219	171	#138	376		m#165	215	
Internal Link Dist (ft)		937			958			412			545	
Turn Bay Length (ft)						100	175			100		
Base Capacity (vph)					306	423	129	2263		156	2223	
Starvation Cap Reductn					0	0	0	0		0	0	
Spillback Cap Reductn					0	0	0	39		0	0	
Storage Cap Reductn					0	0	0	0		0	0	
Reduced v/c Ratio					0.62	0.40	0.62	0.61		0.72	0.41	

Intersection Summary

Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 100 (83%), Referenced to phase 2:NBT and 6:SBT, Start of Green
 Natural Cycle: 75
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.77
 Intersection Signal Delay: 21.6
 Intersection LOS: C
 Intersection Capacity Utilization 62.2%
 ICU Level of Service B
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 8: S Point Road (NC 273) & South Point HS/Red Raider Run



Lanes, Volumes, Timings
 9: S Point Road (NC 273) & Nixon Road/R L Stowe Road

Henry Chapel TIA
 2025 Build AM - Ph 2

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	113	181	86	321	89	30	94	572	620	48	550	57
Future Volume (vph)	113	181	86	321	89	30	94	572	620	48	550	57
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		1%			1%			1%			1%	
Storage Length (ft)	200		100	225		200	280		225	25		100
Storage Lanes	1		1	1		1	1		0	1		1
Taper Length (ft)	250			100			100			125		
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.962				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1761	1853	1474	3197	1688	0	1678	1853	1575	1761	1853	1530
Flt Permitted	0.950			0.950			0.950			0.250		
Satd. Flow (perm)	1761	1853	1474	3197	1688	0	1678	1853	1575	463	1853	1530
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		25			35			35			35	
Link Distance (ft)		1003			1016			625			1000	
Travel Time (s)		27.4			19.8			12.2			19.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	9%	9%	9%	4%	7%	2%	2%	2%	2%	5%
Adj. Flow (vph)	126	201	96	357	99	33	104	636	689	53	611	63
Shared Lane Traffic (%)												
Lane Group Flow (vph)	126	201	96	357	132	0	104	636	689	53	611	63
Turn Type	Split	NA	pm+ov	Split	NA		Prot	NA	pm+ov	D.Pm	NA	pm+ov
Protected Phases	3	3	5	4	4		5	2	4		6	3
Permitted Phases			3						2	2		6
Detector Phase	3	3	5	4	4		5	2	4	2	6	3
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0		7.0	10.0	7.0	10.0	10.0	7.0
Minimum Split (s)	25.0	25.0	12.8	13.3	13.3		12.8	24.1	13.3	24.1	24.1	25.0
Total Split (s)	25.0	25.0	15.0	32.0	32.0		15.0	63.0	32.0	63.0	48.0	25.0
Total Split (%)	20.8%	20.8%	12.5%	26.7%	26.7%		12.5%	52.5%	26.7%	52.5%	40.0%	20.8%
Maximum Green (s)	19.0	19.0	9.2	25.7	25.7		9.2	56.9	25.7	56.9	41.9	19.0
Yellow Time (s)	3.8	3.8	3.0	4.4	4.4		3.0	3.8	4.4	3.8	3.8	3.8
All-Red Time (s)	2.2	2.2	2.8	1.9	1.9		2.8	2.3	1.9	2.3	2.3	2.2
Lost Time Adjust (s)	-1.0	-1.0	-0.8	-1.3	-1.3		-0.8	-1.1	-1.3	-1.1	-1.1	-1.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lead	Lead	Lag	Lag		Lead		Lag		Lag	Lead
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		2.0	3.0	2.0	3.0	3.0	2.0
Recall Mode	None	None	None	None	None		None	C-Max	None	C-Max	C-Max	None
Walk Time (s)	7.0	7.0						7.0		7.0		7.0
Flash Dont Walk (s)	12.0	12.0						11.0		11.0		12.0
Pedestrian Calls (#/hr)	0	0						0		0		0
Act Effct Green (s)	17.2	17.2	27.1	24.4	24.4		9.9	63.4	92.8	63.4	48.5	70.7
Actuated g/C Ratio	0.14	0.14	0.23	0.20	0.20		0.08	0.53	0.77	0.53	0.40	0.59
v/c Ratio	0.50	0.76	0.29	0.55	0.38		0.75	0.65	0.57	0.22	0.82	0.07
Control Delay	53.9	67.5	22.0	45.7	43.9		93.2	17.2	5.6	20.7	44.0	12.0

Lanes, Volumes, Timings
 9: S Point Road (NC 273) & Nixon Road/R L Stowe Road

Henry Chapel TIA
 2025 Build AM - Ph 2

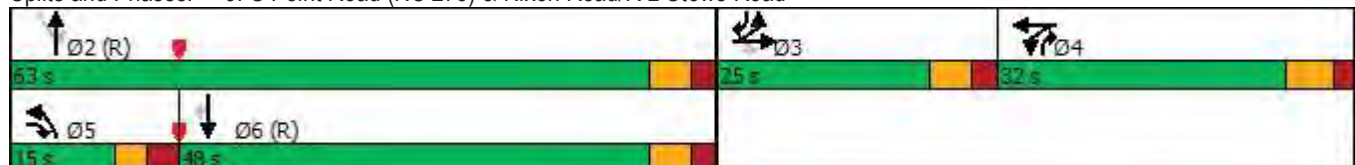


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.3	0.0	0.0	0.0	0.0
Total Delay	53.9	67.5	22.0	45.7	43.9		93.2	17.4	5.6	20.7	44.0	12.0
LOS	D	E	C	D	D		F	B	A	C	D	B
Approach Delay		53.1			45.2			17.2			39.5	
Approach LOS		D			D			B			D	
Queue Length 50th (ft)	90	150	34	122	85		71	353	128	23	450	22
Queue Length 95th (ft)	151	230	61	173	146		m#164	524	152	54	#675	42
Internal Link Dist (ft)		923			936			545			920	
Turn Bay Length (ft)	200		100	225			280		225	25		100
Base Capacity (vph)	293	308	337	728	384		143	979	1215	244	748	937
Starvation Cap Reductn	0	0	0	0	0		0	54	3	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.43	0.65	0.28	0.49	0.34		0.73	0.69	0.57	0.22	0.82	0.07

Intersection Summary

Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 8 (7%), Referenced to phase 2:NBSB and 6:SBT, Start of Green
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.82
 Intersection Signal Delay: 31.9
 Intersection LOS: C
 Intersection Capacity Utilization 73.8%
 ICU Level of Service D
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 9: S Point Road (NC 273) & Nixon Road/R L Stowe Road



Lanes, Volumes, Timings
 10: Henry Chapel Road & Access 1

Henry Chapel TIA
 2025 Build AM - Ph 2



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	38	32	88	0	0	109
Future Volume (vph)	38	32	88	0	0	109
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t					0.865	
Fl _t Protected		0.974				
Satd. Flow (prot)	0	1721	1810	0	1611	0
Fl _t Permitted		0.974				
Satd. Flow (perm)	0	1721	1810	0	1611	0
Link Speed (mph)		25	25		25	
Link Distance (ft)		1293	1432		1041	
Travel Time (s)		35.3	39.1		28.4	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	14%	5%	2%	2%	2%
Adj. Flow (vph)	42	36	98	0	0	121
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	78	98	0	121	0
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	23.9%
ICU Level of Service	A
Analysis Period (min)	15

Intersection						
Int Delay, s/veh	4.9					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	38	32	88	0	0	109
Future Vol, veh/h	38	32	88	0	0	109
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	90	90	90	90	90	90
Heavy Vehicles, %	2	14	5	2	2	2
Mvmt Flow	42	36	98	0	0	121

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	98	0	-	0	218 98
Stage 1	-	-	-	-	98 -
Stage 2	-	-	-	-	120 -
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	1495	-	-	-	770 958
Stage 1	-	-	-	-	926 -
Stage 2	-	-	-	-	905 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1495	-	-	-	748 958
Mov Cap-2 Maneuver	-	-	-	-	748 -
Stage 1	-	-	-	-	899 -
Stage 2	-	-	-	-	905 -

Approach	EB	WB	SB
HCM Control Delay, s	4.1	0	9.3
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1495	-	-	-	958
HCM Lane V/C Ratio	0.028	-	-	-	0.126
HCM Control Delay (s)	7.5	0	-	-	9.3
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0.1	-	-	-	0.4

Lanes, Volumes, Timings
 11: Henry Chapel Road & Access 2



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↔	↔		↔	↔
Traffic Volume (vph)	23	9	23	0	0	65
Future Volume (vph)	23	9	23	0	0	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t					0.865	
Fl _t Protected		0.965				
Satd. Flow (prot)	0	1741	1810	0	1611	0
Fl _t Permitted		0.965				
Satd. Flow (perm)	0	1741	1810	0	1611	0
Link Speed (mph)		25	25		25	
Link Distance (ft)		1432	1164		1055	
Travel Time (s)		39.1	31.7		28.8	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	14%	5%	2%	2%	2%
Adj. Flow (vph)	26	10	26	0	0	72
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	36	26	0	72	0
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	19.1%
ICU Level of Service	A
Analysis Period (min)	15

Intersection						
Int Delay, s/veh	6.1					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	23	9	23	0	0	65
Future Vol, veh/h	23	9	23	0	0	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	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	14	5	2	2	2
Mvmt Flow	26	10	26	0	0	72

















Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	26	0	-	0	88
Stage 1	-	-	-	-	26
Stage 2	-	-	-	-	62
Critical Hdwy	4.12	-	-	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	2.218	-	-	-	3.518
Pot Cap-1 Maneuver	1588	-	-	-	913
Stage 1	-	-	-	-	997
Stage 2	-	-	-	-	961
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1588	-	-	-	898
Mov Cap-2 Maneuver	-	-	-	-	898
Stage 1	-	-	-	-	981
Stage 2	-	-	-	-	961

Approach	EB	WB	SB
HCM Control Delay, s	5.2	0	8.7
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1588	-	-	-	1050
HCM Lane V/C Ratio	0.016	-	-	-	0.069
HCM Control Delay (s)	7.3	0	-	-	8.7
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.2

Lanes, Volumes, Timings
 1: S Point Road (NC 273) & Armstrong Road (NC 273)/Farm Road

Henry Chapel TIA
 2025 Build PM - Ph 2

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	480	0	37	0	0	1	53	100	0	2	128	595
Future Volume (vph)	480	0	37	0	0	1	53	100	0	2	128	595
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.990			0.865							0.889
Flt Protected		0.956						0.983				
Satd. Flow (prot)	0	1761	0	0	1611	0	0	1772	0	0	1643	0
Flt Permitted		0.956						0.983				
Satd. Flow (perm)	0	1761	0	0	1611	0	0	1772	0	0	1643	0
Link Speed (mph)		45			25			45			45	
Link Distance (ft)		1234			1013			1002			3097	
Travel Time (s)		18.7			27.6			15.2			46.9	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	4%	2%	2%	2%	8%	4%	2%	2%	2%	3%
Adj. Flow (vph)	533	0	41	0	0	1	59	111	0	2	142	661
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	574	0	0	1	0	0	170	0	0	805	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 91.7% ICU Level of Service F

Analysis Period (min) 15

HCM 6th TWSC
 1: S Point Road (NC 273) & Armstrong Road (NC 273)/Farm Road

Henry Chapel TIA
 2025 Build PM - Ph 2

Intersection												
Int Delay, s/veh	130.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	480	0	37	0	0	1	53	100	0	2	128	595
Future Vol, veh/h	480	0	37	0	0	1	53	100	0	2	128	595
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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	4	2	2	2	8	4	2	2	2	3
Mvmt Flow	533	0	41	0	0	1	59	111	0	2	142	661

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	707	706	473	726	1036	111	803	0	0	111	0	0
Stage 1	477	477	-	229	229	-	-	-	-	-	-	-
Stage 2	230	229	-	497	807	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.24	7.12	6.52	6.22	4.18	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.336	3.518	4.018	3.318	2.272	-	-	2.218	-	-
Pot Cap-1 Maneuver	~ 350	361	587	340	232	942	795	-	-	1479	-	-
Stage 1	569	556	-	774	715	-	-	-	-	-	-	-
Stage 2	773	715	-	555	394	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	~ 328	331	587	296	213	942	795	-	-	1479	-	-
Mov Cap-2 Maneuver	~ 328	331	-	296	213	-	-	-	-	-	-	-
Stage 1	~ 524	554	-	713	659	-	-	-	-	-	-	-
Stage 2	711	659	-	515	393	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	352.2	8.8	3.4	0
HCM LOS	F	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	795	-	-	339	942	1479	-	-
HCM Lane V/C Ratio	0.074	-	-	1.695	0.001	0.002	-	-
HCM Control Delay (s)	9.9	0		\$ 352.2	8.8	7.4	0	-
HCM Lane LOS	A	A	-	F	A	A	A	-
HCM 95th %tile Q(veh)	0.2	-	-	35.5	0	0	-	-

Notes
 ~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Lanes, Volumes, Timings

2: S Point Road (NC 273) & S Point Church Road/Henry Chapel Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕	↗		↕		↗	↕	↗
Traffic Volume (vph)	1	0	0	20	0	130	0	678	31	209	793	2
Future Volume (vph)	1	0	0	20	0	130	0	678	31	209	793	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		100	0		0	150		0
Storage Lanes	0		0	0		1	0		0	1		0
Taper Length (ft)	25			25			25			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt						0.850		0.994				
Flt Protected		0.950			0.950					0.950		
Satd. Flow (prot)	0	1770	0	0	1770	1468	0	1834	0	1770	1845	0
Flt Permitted		0.950			0.950					0.950		
Satd. Flow (perm)	0	1770	0	0	1770	1468	0	1834	0	1770	1845	0
Link Speed (mph)		25			25			45			45	
Link Distance (ft)		1509			1293			1519			881	
Travel Time (s)		41.2			35.3			23.0			13.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	2%	2%	10%	2%	3%	2%	2%	3%	2%
Adj. Flow (vph)	1	0	0	22	0	144	0	753	34	232	881	2
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1	0	0	22	144	0	787	0	232	883	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	92.8%
Analysis Period (min)	15
	ICU Level of Service F

Intersection												
Int Delay, s/veh	5.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↔			↕	↕		↕↔		↕	↕	
Traffic Vol, veh/h	1	0	0	20	0	130	0	678	31	209	793	2
Future Vol, veh/h	1	0	0	20	0	130	0	678	31	209	793	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	-	-	-	-	-	100	-	-	-	150	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	10	2	3	2	2	3	2
Mvmt Flow	1	0	0	22	0	144	0	753	34	232	881	2

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	2188	2133	882	2116	2117	770	883	0	0	787	0	0
Stage 1	1346	1346	-	770	770	-	-	-	-	-	-	-
Stage 2	842	787	-	1346	1347	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.3	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.39	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	33	49	345	37	51	388	766	-	-	832	-	-
Stage 1	187	220	-	393	410	-	-	-	-	-	-	-
Stage 2	359	403	-	187	220	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	16	35	345	29	37	388	766	-	-	832	-	-
Mov Cap-2 Maneuver	16	35	-	29	37	-	-	-	-	-	-	-
Stage 1	187	159	-	393	410	-	-	-	-	-	-	-
Stage 2	225	403	-	135	159	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	246.2		55.7		0		2.3	
HCM LOS	F		F					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	766	-	-	16	29	388	832	-	-
HCM Lane V/C Ratio	-	-	-	0.069	0.766	0.372	0.279	-	-
HCM Control Delay (s)	0	-	-	246.2	290	19.7	11	-	-
HCM Lane LOS	A	-	-	F	F	C	B	-	-
HCM 95th %tile Q(veh)	0	-	-	0.2	2.5	1.7	1.1	-	-

Lanes, Volumes, Timings
 3: S Point Road (NC 273) & BB Drive/Forest Hill Road

Henry Chapel TIA
 2025 Build PM - Ph 2



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	4	0	0	1	0	39	0	900	3	67	1139	1
Future Volume (vph)	4	0	0	1	0	39	0	900	3	67	1139	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt						0.868						
Flt Protected	0.950							0.999		0.997		
Satd. Flow (prot)	0	1770	0	0	1615	0	0	1863	0	0	1857	0
Flt Permitted	0.950							0.999		0.997		
Satd. Flow (perm)	0	1770	0	0	1615	0	0	1863	0	0	1857	0
Link Speed (mph)	25				25			45			45	
Link Distance (ft)	1341				477			2444			1975	
Travel Time (s)	36.6				13.0			37.0			29.9	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	4	0	0	1	0	43	0	1000	3	74	1266	1
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	4	0	0	44	0	0	1003	0	0	1341	0
Sign Control	Stop				Stop			Free			Free	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 124.6% ICU Level of Service H

Analysis Period (min) 15

Intersection												
Int Delay, s/veh	1.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	4	0	0	1	0	39	0	900	3	67	1139	1
Future Vol, veh/h	4	0	0	1	0	39	0	900	3	67	1139	1
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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	0	0	1	0	43	0	1000	3	74	1266	1

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	2438	2418	1267	2417	2417	1002	1267	0	0	1003	0	0
Stage 1	1415	1415	-	1002	1002	-	-	-	-	-	-	-
Stage 2	1023	1003	-	1415	1415	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	22	32	206	22	33	294	548	-	-	690	-	-
Stage 1	170	204	-	292	320	-	-	-	-	-	-	-
Stage 2	284	320	-	170	204	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	13	20	206	16	21	294	548	-	-	690	-	-
Mov Cap-2 Maneuver	13	20	-	16	21	-	-	-	-	-	-	-
Stage 1	170	130	-	292	320	-	-	-	-	-	-	-
Stage 2	242	320	-	108	130	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	387.9		27.4		0		0.6	
HCM LOS	F		D					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	548	-	-	13	205	690	-	-
HCM Lane V/C Ratio	-	-	-	0.342	0.217	0.108	-	-
HCM Control Delay (s)	0	-	-	\$ 387.9	27.4	10.8	0	-
HCM Lane LOS	A	-	-	F	D	B	A	-
HCM 95th %tile Q(veh)	0	-	-	0.9	0.8	0.4	-	-

Notes
 ~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Lanes, Volumes, Timings
4: Colonial Drive & Forest Hill Road

Henry Chapel TIA
2025 Build PM - Ph 2



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	4	61	1	4	39	1
Future Volume (vph)	4	61	1	4	39	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.872				0.997	
Flt Protected				0.990	0.953	
Satd. Flow (prot)	1458	0	0	1844	1601	0
Flt Permitted				0.990	0.953	
Satd. Flow (perm)	1458	0	0	1844	1601	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	477			1074	636	
Travel Time (s)	13.0			29.3	17.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	25%	13%	2%	2%	13%	2%
Adj. Flow (vph)	4	68	1	4	43	1
Shared Lane Traffic (%)						
Lane Group Flow (vph)	72	0	0	5	44	0
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	14.0%
ICU Level of Service	A
Analysis Period (min)	15

Intersection						
Int Delay, s/veh	3.3					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	4	61	1	4	39	1
Future Vol, veh/h	4	61	1	4	39	1
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	90	90	90	90	90	90
Heavy Vehicles, %	25	13	2	2	13	2
Mvmt Flow	4	68	1	4	43	1

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	72	0	44 38
Stage 1	-	-	-	-	38 -
Stage 2	-	-	-	-	6 -
Critical Hdwy	-	-	4.12	-	6.53 6.22
Critical Hdwy Stg 1	-	-	-	-	5.53 -
Critical Hdwy Stg 2	-	-	-	-	5.53 -
Follow-up Hdwy	-	-	2.218	-	3.617 3.318
Pot Cap-1 Maneuver	-	-	1528	-	939 1034
Stage 1	-	-	-	-	957 -
Stage 2	-	-	-	-	989 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1528	-	938 1034
Mov Cap-2 Maneuver	-	-	-	-	938 -
Stage 1	-	-	-	-	957 -
Stage 2	-	-	-	-	988 -

Approach	EB	WB	NB
HCM Control Delay, s	0	1.5	9
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	940	-	-	1528	-
HCM Lane V/C Ratio	0.047	-	-	0.001	-
HCM Control Delay (s)	9	-	-	7.4	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Lanes, Volumes, Timings
 5: Colonial Drive & Timber Ridge Road/Access 3

Henry Chapel TIA
 2025 Build PM - Ph 2



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	35	3	2	55	5
Future Volume (vph)	0	35	3	2	55	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.865		0.946			
Flt Protected						0.956
Satd. Flow (prot)	1611	0	1490	0	0	1753
Flt Permitted						0.956
Satd. Flow (perm)	1611	0	1490	0	0	1753
Link Speed (mph)	25		25			25
Link Distance (ft)	2169		1055			636
Travel Time (s)	59.2		28.8			17.3
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	33%	2%	2%	20%
Adj. Flow (vph)	0	39	3	2	61	6
Shared Lane Traffic (%)						
Lane Group Flow (vph)	39	0	5	0	0	67
Sign Control	Stop		Free			Free

Intersection Summary	
Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	20.0% ICU Level of Service A
Analysis Period (min)	15

Intersection						
Int Delay, s/veh	7					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	35	3	2	55	5
Future Vol, veh/h	0	35	3	2	55	5
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	90	90	90	90	90	90
Heavy Vehicles, %	2	2	33	2	2	20
Mvmt Flow	0	39	3	2	61	6

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	132	4	0	0	5
Stage 1	4	-	-	-	-
Stage 2	128	-	-	-	-
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	862	1080	-	-	1616
Stage 1	1019	-	-	-	-
Stage 2	898	-	-	-	-
Platoon blocked, %					
Mov Cap-1 Maneuver	829	1080	-	-	1616
Mov Cap-2 Maneuver	829	-	-	-	-
Stage 1	1019	-	-	-	-
Stage 2	864	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.5	0	6.7
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	1080	1616
HCM Lane V/C Ratio	-	-	0.036	0.038
HCM Control Delay (s)	-	-	8.5	7.3
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0.1

Lanes, Volumes, Timings
6: S Point Road (NC 273) & Belmont MS/Belwood Drive

Henry Chapel TIA
2025 Build PM - Ph 2



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗		↔		↖	↗		↖	↕	↗
Traffic Volume (vph)	23	2	17	3	1	32	10	997	2	44	1265	5
Future Volume (vph)	23	2	17	3	1	32	10	997	2	44	1265	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		3%			0%			1%			0%	
Storage Length (ft)	0		175	0		0	200		0	100		200
Storage Lanes	0		1	0		0	1		0	1		1
Taper Length (ft)	25			25			100			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.878						0.850
Flt Protected		0.956			0.996		0.950			0.950		
Satd. Flow (prot)	0	1754	795	0	1629	0	1761	1853	0	1770	1863	1583
Flt Permitted		0.956			0.996		0.950			0.188		
Satd. Flow (perm)	0	1754	795	0	1629	0	1761	1853	0	350	1863	1583
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		35			25			35			35	
Link Distance (ft)		1017			1050			1975			1373	
Travel Time (s)		19.8			28.6			38.5			26.7	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	100%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Adj. Flow (vph)	26	2	19	3	1	36	11	1108	2	49	1406	6
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	28	19	0	40	0	11	1110	0	49	1406	6
Turn Type	Split	NA	pm+ov	Split	NA		Prot	NA		Perm	NA	pm+ov
Protected Phases	4	4	5	8	8		5	2			6	4
Permitted Phases			4							6		6
Detector Phase	4	4	5	8	8		5	2		6	6	4
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0		7.0	12.0		12.0	12.0	7.0
Minimum Split (s)	11.9	11.9	12.1	14.0	14.0		12.1	17.6		32.6	32.6	11.9
Total Split (s)	12.0	12.0	13.0	14.0	14.0		13.0	94.0		81.0	81.0	12.0
Total Split (%)	10.0%	10.0%	10.8%	11.7%	11.7%		10.8%	78.3%		67.5%	67.5%	10.0%
Maximum Green (s)	7.1	7.1	7.9	7.0	7.0		7.9	88.4		75.4	75.4	7.1
Yellow Time (s)	3.0	3.0	3.0	5.0	5.0		3.0	4.5		4.5	4.5	3.0
All-Red Time (s)	1.9	1.9	2.1	2.0	2.0		2.1	1.1		1.1	1.1	1.9
Lost Time Adjust (s)		0.1	-0.1		-2.0		-0.1	-0.6		-0.6	-0.6	0.1
Total Lost Time (s)		5.0	5.0		5.0		5.0	5.0		5.0	5.0	5.0
Lead/Lag			Lead			Lead				Lag		Lag
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		2.0	6.0		6.0	6.0	2.0
Minimum Gap (s)	2.0	2.0	2.0	2.0	2.0		2.0	3.0		3.0	3.0	2.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0		0.0	15.0		15.0	15.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0		0.0	45.0		45.0	45.0	0.0
Recall Mode	None	None	None	None	None		None	Min		Min	Min	None
Walk Time (s)										7.0	7.0	
Flash Dont Walk (s)										20.0	20.0	
Pedestrian Calls (#/hr)										0	0	
Act Efect Green (s)		7.0	11.0		9.1		7.2	92.9		86.2	86.2	92.8

Lanes, Volumes, Timings
 6: S Point Road (NC 273) & Belmont MS/Belwood Drive

Henry Chapel TIA
 2025 Build PM - Ph 2



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Actuated g/C Ratio		0.06	0.10		0.08		0.07	0.84		0.78	0.78	0.84
v/c Ratio		0.25	0.24		0.30		0.10	0.71		0.18	0.96	0.00
Control Delay		58.9	41.8		57.5		55.3	10.8		10.4	36.1	4.0
Queue Delay		0.0	0.0		0.0		0.0	0.0		0.0	0.0	0.0
Total Delay		58.9	41.8		57.5		55.3	10.8		10.4	36.1	4.0
LOS		E	D		E		E	B		B	D	A
Approach Delay		52.0			57.5			11.3			35.1	
Approach LOS		D			E			B			D	
Queue Length 50th (ft)		21	11		30		8	480		15	~1296	1
Queue Length 95th (ft)		53	31		67		28	701		37	#1568	4
Internal Link Dist (ft)		937			970			1895			1293	
Turn Bay Length (ft)			175				200			100		200
Base Capacity (vph)		112	86		134		129	1570		274	1459	1335
Starvation Cap Reductn		0	0		0		0	0		0	0	0
Spillback Cap Reductn		0	0		0		0	0		0	0	0
Storage Cap Reductn		0	0		0		0	0		0	0	0
Reduced v/c Ratio		0.25	0.22		0.30		0.09	0.71		0.18	0.96	0.00

Intersection Summary




















Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 110
 Natural Cycle: 150
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.96
 Intersection Signal Delay: 25.7
 Intersection LOS: C
 Intersection Capacity Utilization 90.7%
 ICU Level of Service E
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 6: S Point Road (NC 273) & Belmont MS/Belwood Drive



Lanes, Volumes, Timings
 7: S Point Road (NC 273) & McKee Farm Road/Stowe Road

Henry Chapel TIA
 2025 Build PM - Ph 2

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	26	10	15	26	2	53	12	1028	23	71	1282	49
Future Volume (vph)	26	10	15	26	2	53	12	1028	23	71	1282	49
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		200	0		0	0		0	100		0
Storage Lanes	0		1	0		0	0		0	1		1
Taper Length (ft)	25			25			25			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.911			0.997				0.850
Flt Protected		0.965			0.984			0.999		0.950		
Satd. Flow (prot)	0	1798	1583	0	1670	0	0	1855	0	1770	1863	1583
Flt Permitted		0.965			0.984			0.999		0.950		
Satd. Flow (perm)	0	1798	1583	0	1670	0	0	1855	0	1770	1863	1583
Link Speed (mph)		25			25			35				35
Link Distance (ft)		1043			1485			1373				492
Travel Time (s)		28.4			40.5			26.7				9.6
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	29	11	17	29	2	59	13	1142	26	79	1424	54
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	40	17	0	90	0	0	1181	0	79	1424	54
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 85.6% ICU Level of Service E

Analysis Period (min) 15

HCM 6th TWSC
 7: S Point Road (NC 273) & McKee Farm Road/Stowe Road

Henry Chapel TIA
 2025 Build PM - Ph 2

Intersection												
Int Delay, s/veh	148.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗		↕			↕		↗	↕	↗
Traffic Vol, veh/h	26	10	15	26	2	53	12	1028	23	71	1282	49
Future Vol, veh/h	26	10	15	26	2	53	12	1028	23	71	1282	49
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	-	-	200	-	-	-	-	-	-	100	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	29	11	17	29	2	59	13	1142	26	79	1424	54

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	2794	2776	1424	2804	2817	1155	1478	0	0	1168	0	0
Stage 1	1582	1582	-	1181	1181	-	-	-	-	-	-	-
Stage 2	1212	1194	-	1623	1636	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	~ 12	19	166	~ 12	18	240	456	-	-	598	-	-
Stage 1	137	169	-	232	264	-	-	-	-	-	-	-
Stage 2	222	260	-	129	159	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	~ 7	15	166	~ 4	14	240	456	-	-	598	-	-
Mov Cap-2 Maneuver	~ 7	15	-	~ 4	14	-	-	-	-	-	-	-
Stage 1	126	147	-	213	242	-	-	-	-	-	-	-
Stage 2	152	239	-	93	138	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s\$ 1918		\$ 3542.7	0.1	0.6
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	456	-	-	8	166	12	598	-	-
HCM Lane V/C Ratio	0.029	-	-	5	0.1	7.5	0.132	-	-
HCM Control Delay (s)	13.1	0	-\$ 2705	29	\$ 3542.7	11.9	-	-	-
HCM Lane LOS	B	A	-	F	D	F	B	-	-
HCM 95th %tile Q(veh)	0.1	-	-	6.4	0.3	12.5	0.5	-	-

Notes
 ~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Lanes, Volumes, Timings

Henry Chapel TIA

8: S Point Road (NC 273) & South Point HS/Red Raider Run

2025 Build PM - Ph 2



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↕	↗	↖	↕	↗	↖	↕	↗
Traffic Volume (vph)	0	0	0	217	5	223	15	961	95	128	1201	3
Future Volume (vph)	0	0	0	217	5	223	15	961	95	128	1201	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			4%			-1%			1%	
Storage Length (ft)	0		0	0		100	175		0	100		0
Storage Lanes	0		0	0		1	1		0	1		0
Taper Length (ft)	25			25			100			75		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Fr _t						0.850		0.986				
Flt Protected					0.953		0.950			0.950		
Satd. Flow (prot)	0	0	0	0	1740	1552	1778	3476	0	1761	3522	0
Flt Permitted					0.953		0.950			0.950		
Satd. Flow (perm)	0	0	0	0	1740	1552	1778	3476	0	1761	3522	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		25			25			35			35	
Link Distance (ft)		1017			1038			492			625	
Travel Time (s)		27.7			28.3			9.6			12.2	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	3%	2%	2%	2%	2%
Adj. Flow (vph)	0	0	0	241	6	248	17	1068	106	142	1334	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	247	248	17	1174	0	142	1337	0
Turn Type				Perm	NA	pm+ov	Prot	NA		Prot	NA	
Protected Phases					8	1	5	2		1	6	
Permitted Phases				8		8						
Detector Phase				8	8	1	5	2		1	6	
Switch Phase												
Minimum Initial (s)				7.0	7.0	7.0	7.0	10.0		7.0	10.0	
Minimum Split (s)				25.4	25.4	12.6	12.1	27.7		12.6	23.7	
Total Split (s)				26.0	26.0	18.0	13.0	86.0		18.0	91.0	
Total Split (%)				20.0%	20.0%	13.8%	10.0%	66.2%		13.8%	70.0%	
Maximum Green (s)				20.6	20.6	12.4	7.9	80.3		12.4	85.3	
Yellow Time (s)				3.0	3.0	3.0	3.0	3.9		3.0	3.9	
All-Red Time (s)				2.4	2.4	2.6	2.1	1.8		2.6	1.8	
Lost Time Adjust (s)					-0.4	-0.6	-0.1	-0.7		-0.6	-0.7	
Total Lost Time (s)					5.0	5.0	5.0	5.0		5.0	5.0	
Lead/Lag						Lead	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)				2.0	2.0	2.0	2.0	3.0		2.0	3.0	
Recall Mode				None	None	None	None	C-Max		None	C-Max	
Walk Time (s)				7.0	7.0			7.0				
Flash Dont Walk (s)				13.0	13.0			15.0				
Pedestrian Calls (#/hr)				0	0			0				
Act Effct Green (s)					20.3	37.8	7.3	82.2		12.5	94.7	
Actuated g/C Ratio					0.16	0.29	0.06	0.63		0.10	0.73	
v/c Ratio					0.91	0.55	0.17	0.53		0.84	0.52	
Control Delay					89.9	43.9	62.5	14.6		80.4	8.7	

Lanes, Volumes, Timings
 8: S Point Road (NC 273) & South Point HS/Red Raider Run

Henry Chapel TIA
 2025 Build PM - Ph 2

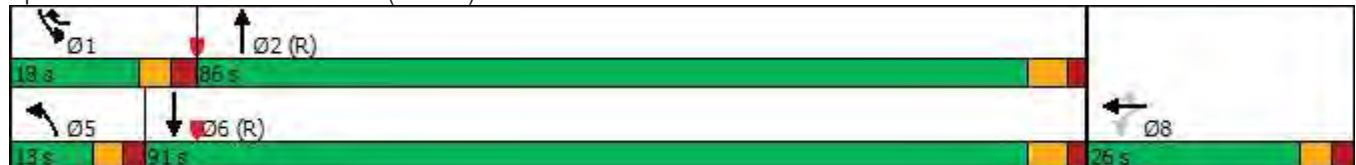


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay					0.0	0.3	0.0	0.0		0.0	0.3	
Total Delay					89.9	44.3	62.5	14.6		80.4	8.9	
LOS					F	D	E	B		F	A	
Approach Delay					67.1			15.3			15.8	
Approach LOS					E			B			B	
Queue Length 50th (ft)					206	174	14	278		117	201	
Queue Length 95th (ft)					#358	263	40	336		m#171	m347	
Internal Link Dist (ft)		937			958			412			545	
Turn Bay Length (ft)						100	175			100		
Base Capacity (vph)					281	456	109	2197		176	2566	
Starvation Cap Reductn					0	0	0	0		0	508	
Spillback Cap Reductn					0	29	0	58		0	0	
Storage Cap Reductn					0	0	0	0		0	0	
Reduced v/c Ratio					0.88	0.58	0.16	0.55		0.81	0.65	

Intersection Summary
























Area Type: Other
 Cycle Length: 130
 Actuated Cycle Length: 130
 Offset: 44 (34%), Referenced to phase 2:NBT and 6:SBT, Start of Green
 Natural Cycle: 75
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.91
 Intersection Signal Delay: 23.6
 Intersection LOS: C
 Intersection Capacity Utilization 63.9%
 ICU Level of Service B
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 8: S Point Road (NC 273) & South Point HS/Red Raider Run



Lanes, Volumes, Timings
 9: S Point Road (NC 273) & Nixon Road/R L Stowe Road

Henry Chapel TIA
 2025 Build PM - Ph 2

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	76	108	86	640	123	39	71	552	534	75	622	88
Future Volume (vph)	76	108	86	640	123	39	71	552	534	75	622	88
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		1%			1%			1%			1%	
Storage Length (ft)	200		100	225		200	280		225	25		100
Storage Lanes	1		1	1		1	1		0	1		1
Taper Length (ft)	250			100			100			125		
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.964				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1761	1853	1545	3383	1760	0	1761	1853	1545	1761	1853	1560
Flt Permitted	0.950			0.950			0.950			0.251		
Satd. Flow (perm)	1761	1853	1545	3383	1760	0	1761	1853	1545	465	1853	1560
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		25			35			35			35	
Link Distance (ft)		1003			1016			625			1000	
Travel Time (s)		27.4			19.8			12.2			19.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	4%	3%	4%	2%	2%	2%	4%	2%	2%	3%
Adj. Flow (vph)	84	120	96	711	137	43	79	613	593	83	691	98
Shared Lane Traffic (%)												
Lane Group Flow (vph)	84	120	96	711	180	0	79	613	593	83	691	98
Turn Type	Split	NA	pm+ov	Split	NA		Prot	NA	pm+ov	D.Pm	NA	pm+ov
Protected Phases	3	3	5	4	4		5	2	4		6	3
Permitted Phases			3						2	2		6
Detector Phase	3	3	5	4	4		5	2	4	2	6	3
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0		7.0	10.0	7.0	10.0	10.0	7.0
Minimum Split (s)	25.0	25.0	12.8	13.3	13.3		12.8	24.1	13.3	24.1	24.1	25.0
Total Split (s)	25.0	25.0	13.0	47.0	47.0		13.0	58.0	47.0	58.0	45.0	25.0
Total Split (%)	19.2%	19.2%	10.0%	36.2%	36.2%		10.0%	44.6%	36.2%	44.6%	34.6%	19.2%
Maximum Green (s)	19.0	19.0	7.2	40.7	40.7		7.2	51.9	40.7	51.9	38.9	19.0
Yellow Time (s)	3.8	3.8	3.0	4.4	4.4		3.0	3.8	4.4	3.8	3.8	3.8
All-Red Time (s)	2.2	2.2	2.8	1.9	1.9		2.8	2.3	1.9	2.3	2.3	2.2
Lost Time Adjust (s)	-1.0	-1.0	-0.8	-1.3	-1.3		-0.8	-1.1	-1.3	-1.1	-1.1	-1.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lead	Lead	Lag	Lag		Lead		Lag		Lag	Lead
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		2.0	3.0	2.0	3.0	3.0	2.0
Recall Mode	None	None	None	None	None		None	C-Max	None	C-Max	C-Max	None
Walk Time (s)	7.0	7.0						7.0		7.0		7.0
Flash Dont Walk (s)	12.0	12.0						11.0		11.0		12.0
Pedestrian Calls (#/hr)	0	0						0		0		0
Act Effct Green (s)	13.8	13.8	24.1	34.9	34.9		10.3	66.3	106.2	66.3	51.0	69.8
Actuated g/C Ratio	0.11	0.11	0.19	0.27	0.27		0.08	0.51	0.82	0.51	0.39	0.54
v/c Ratio	0.45	0.61	0.34	0.78	0.38		0.57	0.65	0.47	0.35	0.95	0.12
Control Delay	61.3	68.3	26.1	50.2	40.1		66.1	35.6	6.1	28.0	63.0	16.9

Lanes, Volumes, Timings
 9: S Point Road (NC 273) & Nixon Road/R L Stowe Road

Henry Chapel TIA
 2025 Build PM - Ph 2

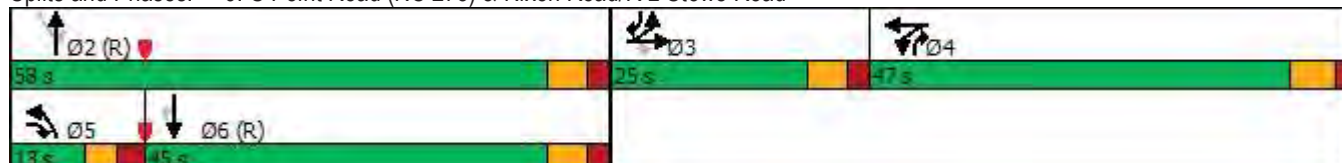


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	1.9	0.4	0.0	0.0	0.0
Total Delay	61.3	68.3	26.1	50.2	40.1		66.1	37.5	6.5	28.0	63.0	16.9
LOS	E	E	C	D	D		E	D	A	C	E	B
Approach Delay		52.8			48.2			24.9			54.5	
Approach LOS		D			D			C			D	
Queue Length 50th (ft)	68	98	38	287	124		66	439	258	40	569	40
Queue Length 95th (ft)	117	158	59	330	178		#143	629	384	104	#949	78
Internal Link Dist (ft)		923			936			545			920	
Turn Bay Length (ft)	200		100	225			280		225	25		100
Base Capacity (vph)	270	285	286	1094	569		139	944	1259	237	727	912
Starvation Cap Reductn	0	0	0	0	0		0	188	261	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.31	0.42	0.34	0.65	0.32		0.57	0.81	0.59	0.35	0.95	0.11

Intersection Summary

Area Type: Other
 Cycle Length: 130
 Actuated Cycle Length: 130
 Offset: 0 (0%), Referenced to phase 2:NBSB and 6:SBT, Start of Green
 Natural Cycle: 110
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.95
 Intersection Signal Delay: 41.3
 Intersection LOS: D
 Intersection Capacity Utilization 79.3%
 ICU Level of Service D
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 9: S Point Road (NC 273) & Nixon Road/R L Stowe Road



Lanes, Volumes, Timings
 10: Henry Chapel Road & Access 1

Henry Chapel TIA
 2025 Build PM - Ph 2



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	129	111	74	0	0	76
Future Volume (vph)	129	111	74	0	0	76
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t					0.865	
Fl _t Protected		0.974				
Satd. Flow (prot)	0	1814	1743	0	1611	0
Fl _t Permitted		0.974				
Satd. Flow (perm)	0	1814	1743	0	1611	0
Link Speed (mph)		25	25		25	
Link Distance (ft)		1293	1432		1041	
Travel Time (s)		35.3	39.1		28.4	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	9%	2%	2%	2%
Adj. Flow (vph)	143	123	82	0	0	84
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	266	82	0	84	0
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	31.0%
	ICU Level of Service A
Analysis Period (min)	15

Intersection						
Int Delay, s/veh	4.3					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	129	111	74	0	0	76
Future Vol, veh/h	129	111	74	0	0	76
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	90	90	90	90	90	90
Heavy Vehicles, %	2	2	9	2	2	2
Mvmt Flow	143	123	82	0	0	84

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	82	0	-	0	491 82
Stage 1	-	-	-	-	82 -
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	1515	-	-	-	537 978
Stage 1	-	-	-	-	941 -
Stage 2	-	-	-	-	671 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1515	-	-	-	483 978
Mov Cap-2 Maneuver	-	-	-	-	483 -
Stage 1	-	-	-	-	846 -
Stage 2	-	-	-	-	671 -

Approach	EB	WB	SB
HCM Control Delay, s	4.1	0	9
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1515	-	-	-	978
HCM Lane V/C Ratio	0.095	-	-	-	0.086
HCM Control Delay (s)	7.6	0	-	-	9
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0.3	-	-	-	0.3

Lanes, Volumes, Timings
 11: Henry Chapel Road & Access 2

Henry Chapel TIA
 2025 Build PM - Ph 2



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	77	34	28	0	0	46
Future Volume (vph)	77	34	28	0	0	46
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t					0.865	
Fl _t Protected		0.966				
Satd. Flow (prot)	0	1799	1743	0	1611	0
Fl _t Permitted		0.966				
Satd. Flow (perm)	0	1799	1743	0	1611	0
Link Speed (mph)		25	25		25	
Link Distance (ft)		1432	1164		1055	
Travel Time (s)		39.1	31.7		28.8	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	9%	2%	2%	2%
Adj. Flow (vph)	86	38	31	0	0	51
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	124	31	0	51	0
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	22.7%
ICU Level of Service	A
Analysis Period (min)	15

Intersection						
Int Delay, s/veh	5.2					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	77	34	28	0	0	46
Future Vol, veh/h	77	34	28	0	0	46
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	90	90	90	90	90	90
Heavy Vehicles, %	2	2	9	2	2	2
Mvmt Flow	86	38	31	0	0	51

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	31	0	-	0	241 31
Stage 1	-	-	-	-	31 -
Stage 2	-	-	-	-	210 -
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	1582	-	-	-	747 1043
Stage 1	-	-	-	-	992 -
Stage 2	-	-	-	-	825 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1582	-	-	-	705 1043
Mov Cap-2 Maneuver	-	-	-	-	705 -
Stage 1	-	-	-	-	936 -
Stage 2	-	-	-	-	825 -


















Approach	EB	WB	SB
HCM Control Delay, s	5.1	0	8.6
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1582	-	-	-	1043
HCM Lane V/C Ratio	0.054	-	-	-	0.049
HCM Control Delay (s)	7.4	0	-	-	8.6
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0.2	-	-	-	0.2

2025 Build-out Conditions
Improved

Lanes, Volumes, Timings
 1: S Point Road (NC 273) & Armstrong Road (NC 273)/Farm Road

Henry Chapel TIA
 2025 Build IMP AM - Ph 2

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	565	0	30	0	0	0	63	172	0	0	68	242
Future Volume (vph)	565	0	30	0	0	0	63	172	0	0	68	242
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		0	0		100
Storage Lanes	0		0	0		0	0		0	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.993										0.850
Flt Protected		0.955						0.987				
Satd. Flow (prot)	0	1738	0	0	1863	0	0	1782	0	0	1759	1468
Flt Permitted		0.955						0.987				
Satd. Flow (perm)	0	1738	0	0	1863	0	0	1782	0	0	1759	1468
Link Speed (mph)		45			25			45			45	
Link Distance (ft)		1234			1013			1002			3097	
Travel Time (s)		18.7			27.6			15.2			46.9	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	36%	2%	2%	2%	14%	2%	2%	2%	8%	10%
Adj. Flow (vph)	628	0	33	0	0	0	70	191	0	0	76	269
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	661	0	0	0	0	0	261	0	0	76	269
Sign Control		Stop			Stop			Free			Free	

Intersection Summary	
Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	59.0% ICU Level of Service B
Analysis Period (min)	15

HCM 6th TWSC
 1: S Point Road (NC 273) & Armstrong Road (NC 273)/Farm Road

Henry Chapel TIA
 2025 Build IMP AM - Ph 2

Intersection												
Int Delay, s/veh	75.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	↕
Traffic Vol, veh/h	565	0	30	0	0	0	63	172	0	0	68	242
Future Vol, veh/h	565	0	30	0	0	0	63	172	0	0	68	242
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	-	-	-	-	-	-	-	-	-	-	-	100
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	36	2	2	2	14	2	2	2	8	10
Mvmt Flow	628	0	33	0	0	0	70	191	0	0	76	269

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	407	407	76	558	676	191	345	0	0	191	0	0
Stage 1	76	76	-	331	331	-	-	-	-	-	-	-
Stage 2	331	331	-	227	345	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.56	7.12	6.52	6.22	4.24	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.624	3.518	4.018	3.318	2.326	-	-	2.218	-	-
Pot Cap-1 Maneuver	~ 555	533	898	440	375	851	1150	-	-	1383	-	-
Stage 1	933	832	-	682	645	-	-	-	-	-	-	-
Stage 2	682	645	-	776	636	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	~ 526	497	898	402	350	851	1150	-	-	1383	-	-
Mov Cap-2 Maneuver	~ 526	497	-	402	350	-	-	-	-	-	-	-
Stage 1	870	832	-	636	601	-	-	-	-	-	-	-
Stage 2	636	601	-	747	636	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	143.8	0	2.2	0
HCM LOS	F	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1150	-	-	537	1383	-	-
HCM Lane V/C Ratio	0.061	-	-	1.231	-	-	-
HCM Control Delay (s)	8.3	0	-	143.8	0	0	-
HCM Lane LOS	A	A	-	F	A	A	-
HCM 95th %tile Q(veh)	0.2	-	-	25.3	0	-	-

Notes
 ~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Lanes, Volumes, Timings

2: S Point Road (NC 273) & S Point Church Road/Henry Chapel Road

Henry Chapel TIA

2025 Build IMP AM - Ph 2



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕	↕		↕		↕	↕	↕
Traffic Volume (vph)	0	0	1	23	0	174	0	864	9	61	342	5
Future Volume (vph)	0	0	1	23	0	174	0	864	9	61	342	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		175	0		0	225		0
Storage Lanes	0		0	0		1	0		0	1		0
Taper Length (ft)	25			25			25			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.865				0.850		0.999			0.998	
Flt Protected					0.950					0.950		
Satd. Flow (prot)	0	1611	0	0	1770	1538	0	1843	0	1770	1757	0
Flt Permitted					0.976					0.950		
Satd. Flow (perm)	0	1611	0	0	1818	1538	0	1843	0	1770	1757	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		25			25			45			45	
Link Distance (ft)		1509			1293			1519			881	
Travel Time (s)		41.2			35.3			23.0			13.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	2%	2%	5%	2%	2%	100%	2%	8%	2%
Adj. Flow (vph)	0	0	1	26	0	193	0	960	10	68	380	6
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1	0	0	26	193	0	970	0	68	386	0
Turn Type		NA		Perm	NA	pm+ov		NA		Prot	NA	
Protected Phases		4			8	1		2		1	6	
Permitted Phases	4			8		8	2					
Detector Phase	4	4		8	8	1	2	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0	7.0	12.0	12.0		7.0	12.0	
Minimum Split (s)	14.0	14.0		14.0	14.0	14.0	19.0	19.0		14.0	19.0	
Total Split (s)	14.0	14.0		14.0	14.0	14.0	62.0	62.0		14.0	76.0	
Total Split (%)	15.6%	15.6%		15.6%	15.6%	15.6%	68.9%	68.9%		15.6%	84.4%	
Maximum Green (s)	7.0	7.0		7.0	7.0	7.0	55.0	55.0		7.0	69.0	
Yellow Time (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0	5.0	
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		-2.0			-2.0	-2.0		-2.0		-2.0	-2.0	
Total Lost Time (s)		5.0			5.0	5.0		5.0		5.0	5.0	
Lead/Lag						Lead	Lag	Lag		Lead		
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None	None	Min	Min		None	Min	
Act Effect Green (s)		9.6			9.6	13.8		43.9		9.6	62.6	
Actuated g/C Ratio		0.14			0.14	0.20		0.64		0.14	0.92	
v/c Ratio		0.00			0.10	0.62		0.82		0.27	0.24	
Control Delay		35.0			34.8	35.6		17.7		36.0	1.9	
Queue Delay		0.0			0.0	0.0		0.0		0.0	0.0	
Total Delay		35.0			34.8	35.6		17.7		36.0	1.9	
LOS		C			C	D		B		D	A	
Approach Delay		35.0			35.5			17.7			7.0	

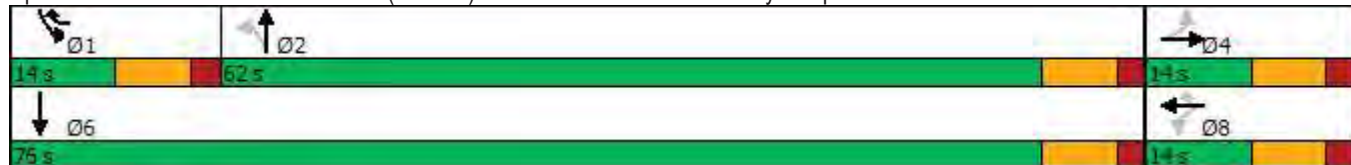


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach LOS		C			D			B			A	
Queue Length 50th (ft)		0			8	64		186		21	0	
Queue Length 95th (ft)		5			39	161		595		79	69	
Internal Link Dist (ft)		1429			1213			1439			801	
Turn Bay Length (ft)					175					225		
Base Capacity (vph)		225			254	311		1573		248	1609	
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		0.00			0.10	0.62		0.62		0.27	0.24	

Intersection Summary



















Area Type:	Other
Cycle Length:	90
Actuated Cycle Length:	68.4
Natural Cycle:	75
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.82
Intersection Signal Delay:	17.1
Intersection LOS:	B
Intersection Capacity Utilization:	75.1%
ICU Level of Service:	D
Analysis Period (min):	15

Splits and Phases: 2: S Point Road (NC 273) & S Point Church Road/Henry Chapel Road



Lanes, Volumes, Timings
 3: S Point Road (NC 273) & BB Drive/Forest Hill Road

Henry Chapel TIA
 2025 Build IMP AM - Ph 2

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	4	0	0	69	0	1207	7	23	455	2
Future Volume (vph)	0	0	4	0	0	69	0	1207	7	23	455	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		0	100		0
Storage Lanes	0		1	0		1	0		0	1		0
Taper Length (ft)	25			25			25			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.865			0.865		0.999				0.999
Flt Protected										0.950		
Satd. Flow (prot)	0	0	1611	0	0	1565	0	1859	0	1770	1774	0
Flt Permitted										0.950		
Satd. Flow (perm)	0	0	1611	0	0	1565	0	1859	0	1770	1774	0
Link Speed (mph)		25			25			45			45	
Link Distance (ft)		1341			477			2444			1582	
Travel Time (s)		36.6			13.0			37.0			24.0	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	2%	2%	5%	2%	2%	17%	2%	7%	2%
Adj. Flow (vph)	0	0	4	0	0	77	0	1341	8	26	506	2
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	4	0	0	77	0	1349	0	26	508	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	74.9%
ICU Level of Service	D
Analysis Period (min)	15

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	0	0	4	0	0	69	0	1207	7	23	455	2
Future Vol, veh/h	0	0	4	0	0	69	0	1207	7	23	455	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	-	-	0	-	-	0	-	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	5	2	2	17	2	7	2
Mvmt Flow	0	0	4	0	0	77	0	1341	8	26	506	2

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	-	-	507	-	-	1345	508	0	0	1349	0	0
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	6.22	-	-	6.25	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.318	-	-	3.345	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	0	0	566	0	0	183	1057	-	-	510	-	-
Stage 1	0	0	-	0	0	-	-	-	-	-	-	-
Stage 2	0	0	-	0	0	-	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	566	-	-	183	1057	-	-	510	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	11.4		38.2		0		0.6	
HCM LOS	B		E					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1057	-	-	566	183	510	-	-
HCM Lane V/C Ratio	-	-	-	0.008	0.419	0.05	-	-
HCM Control Delay (s)	0	-	-	11.4	38.2	12.4	-	-
HCM Lane LOS	A	-	-	B	E	B	-	-
HCM 95th %tile Q(veh)	0	-	-	0	1.9	0.2	-	-

Lanes, Volumes, Timings
6: S Point Road (NC 273) & Belmont MS/Belwood Drive

Henry Chapel TIA
2025 Build IMP AM - Ph 2



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗		↔		↖	↕↔		↖	↕↕	↗
Traffic Volume (vph)	260	1	46	2	2	32	104	1028	1	22	510	287
Future Volume (vph)	260	1	46	2	2	32	104	1028	1	22	510	287
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		3%			0%			1%			0%	
Storage Length (ft)	0		175	0		0	200		0	100		200
Storage Lanes	0		1	0		0	1		0	1		1
Taper Length (ft)	25			25			100			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	1.00
Frt			0.850			0.878						0.850
Flt Protected		0.953			0.998		0.950			0.950		
Satd. Flow (prot)	0	1732	1560	0	1519	0	1744	3522	0	1770	3343	1568
Flt Permitted		0.953			0.998		0.950			0.235		
Satd. Flow (perm)	0	1732	1560	0	1519	0	1744	3522	0	438	3343	1568
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		35			25			35			35	
Link Distance (ft)		1017			1050			394			1373	
Travel Time (s)		19.8			28.6			7.7			26.7	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	3%	2%	2%	100%	2%	5%	3%	2%	2%	2%	8%	3%
Adj. Flow (vph)	289	1	51	2	2	36	116	1142	1	24	567	319
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	290	51	0	40	0	116	1143	0	24	567	319
Turn Type	Split	NA	pm+ov	Split	NA		Prot	NA		Perm	NA	pm+ov
Protected Phases	4	4	5	8	8		5	2			6	4
Permitted Phases			4							6		6
Detector Phase	4	4	5	8	8		5	2		6	6	4
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0		7.0	12.0		12.0	12.0	7.0
Minimum Split (s)	11.9	11.9	12.1	14.0	14.0		12.1	17.6		32.6	32.6	11.9
Total Split (s)	41.0	41.0	22.0	14.0	14.0		22.0	65.0		43.0	43.0	41.0
Total Split (%)	34.2%	34.2%	18.3%	11.7%	11.7%		18.3%	54.2%		35.8%	35.8%	34.2%
Maximum Green (s)	36.1	36.1	16.9	7.0	7.0		16.9	59.4		37.4	37.4	36.1
Yellow Time (s)	3.0	3.0	3.0	5.0	5.0		3.0	4.5		4.5	4.5	3.0
All-Red Time (s)	1.9	1.9	2.1	2.0	2.0		2.1	1.1		1.1	1.1	1.9
Lost Time Adjust (s)		0.1	-0.1		-2.0		-0.1	-0.6		-0.6	-0.6	0.1
Total Lost Time (s)		5.0	5.0		5.0		5.0	5.0		5.0	5.0	5.0
Lead/Lag			Lead				Lead			Lag		Lag
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		2.0	6.0		6.0	6.0	2.0
Minimum Gap (s)	2.0	2.0	2.0	2.0	2.0		2.0	3.0		3.0	3.0	2.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0		0.0	15.0		15.0	15.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0		0.0	45.0		45.0	45.0	0.0
Recall Mode	None	None	None	None	None		None	Min		Min	Min	None
Walk Time (s)										7.0	7.0	
Flash Dont Walk (s)										20.0	20.0	
Pedestrian Calls (#/hr)										0	0	
Act Efect Green (s)		18.3	32.7		10.3		11.0	34.0		22.0	22.0	48.0

Lanes, Volumes, Timings
 6: S Point Road (NC 273) & Belmont MS/Belwood Drive

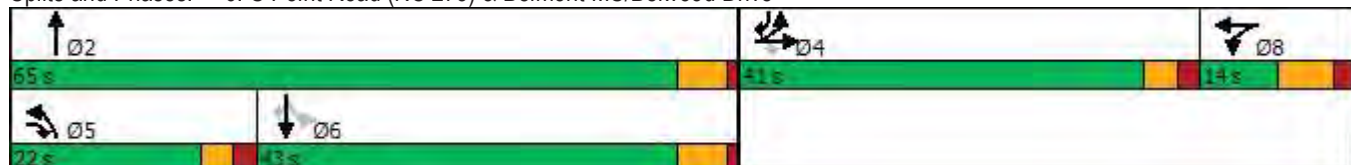
Henry Chapel TIA
 2025 Build IMP AM - Ph 2



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Actuated g/C Ratio		0.26	0.46		0.15		0.16	0.48		0.31	0.31	0.68
v/c Ratio		0.65	0.07		0.18		0.43	0.67		0.18	0.55	0.30
Control Delay		34.1	8.9		39.7		39.1	18.2		30.4	27.3	9.2
Queue Delay		0.0	0.0		0.0		0.0	0.0		0.0	0.0	0.0
Total Delay		34.1	8.9		39.7		39.1	18.2		30.4	27.3	9.2
LOS		C	A		D		D	B		C	C	A
Approach Delay		30.3			39.7			20.1			21.0	
Approach LOS		C			D			C			C	
Queue Length 50th (ft)		126	8		17		51	221		9	126	78
Queue Length 95th (ft)		252	26		60		126	368		36	230	147
Internal Link Dist (ft)		937			970			314			1293	
Turn Bay Length (ft)			175				200			100		200
Base Capacity (vph)		1012	908		221		481	2867		266	2031	1315
Starvation Cap Reductn		0	0		0		0	0		0	0	0
Spillback Cap Reductn		0	0		0		0	0		0	0	0
Storage Cap Reductn		0	0		0		0	0		0	0	0
Reduced v/c Ratio		0.29	0.06		0.18		0.24	0.40		0.09	0.28	0.24




















Intersection Summary	
Area Type:	Other
Cycle Length:	120
Actuated Cycle Length:	70.7
Natural Cycle:	80
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.67
Intersection Signal Delay:	22.1
Intersection LOS:	C
Intersection Capacity Utilization:	72.1%
ICU Level of Service:	C
Analysis Period (min):	15

Splits and Phases: 6: S Point Road (NC 273) & Belmont MS/Belwood Drive



Lanes, Volumes, Timings
 7: S Point Road (NC 273) & McKee Farm Road/Stowe Road

Henry Chapel TIA
 2025 Build IMP AM - Ph 2

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	15	5	20	17	1	58	26	1259	54	39	793	71
Future Volume (vph)	15	5	20	17	1	58	26	1259	54	39	793	71
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		200	0		0	0		0	100		0
Storage Lanes	0		1	0		0	0		0	1		0
Taper Length (ft)	25			25			25			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	1.00	0.95	0.95
Frt			0.850		0.897			0.994			0.988	
Flt Protected		0.964			0.989			0.999		0.950		
Satd. Flow (prot)	0	1796	1524	0	1653	0	0	3514	0	1703	3405	0
Flt Permitted		0.964			0.989			0.999		0.950		
Satd. Flow (perm)	0	1796	1524	0	1653	0	0	3514	0	1703	3405	0
Link Speed (mph)		25			25			35			35	
Link Distance (ft)		1043			1485			1373			492	
Travel Time (s)		28.4			40.5			26.7			9.6	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	6%	2%	2%	2%	2%	2%	2%	6%	5%	2%
Adj. Flow (vph)	17	6	22	19	1	64	29	1399	60	43	881	79
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	23	22	0	84	0	0	1488	0	43	960	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary	
Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	73.1% ICU Level of Service D
Analysis Period (min)	15

HCM 6th TWSC
 7: S Point Road (NC 273) & McKee Farm Road/Stowe Road

Henry Chapel TIA
 2025 Build IMP AM - Ph 2

Intersection												
Int Delay, s/veh	12.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗		↕			↕↗		↗	↕↗	
Traffic Vol, veh/h	15	5	20	17	1	58	26	1259	54	39	793	71
Future Vol, veh/h	15	5	20	17	1	58	26	1259	54	39	793	71
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	-	-	200	-	-	-	-	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	6	2	2	2	2	2	2	6	5	2
Mvmt Flow	17	6	22	19	1	64	29	1399	60	43	881	79

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1765	2524	480	2017	2533	730	960	0	0	1459	0	0
Stage 1	1007	1007	-	1487	1487	-	-	-	-	-	-	-
Stage 2	758	1517	-	530	1046	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	7.02	7.54	6.54	6.94	4.14	-	-	4.22	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.36	3.52	4.02	3.32	2.22	-	-	2.26	-	-
Pot Cap-1 Maneuver	53	27	521	34	27	365	712	-	-	440	-	-
Stage 1	258	317	-	130	186	-	-	-	-	-	-	-
Stage 2	365	180	-	500	304	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	32	19	521	20	19	365	712	-	-	440	-	-
Mov Cap-2 Maneuver	32	19	-	20	19	-	-	-	-	-	-	-
Stage 1	200	286	-	101	145	-	-	-	-	-	-	-
Stage 2	232	140	-	424	274	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	168.3		260.9		1.2		0.6	
HCM LOS	F		F					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	712	-	-	27	521	72	440	-	-
HCM Lane V/C Ratio	0.041	-	-	0.823	0.043	1.173	0.098	-	-
HCM Control Delay (s)	10.3	1.1	-	324.3	12.2	260.9	14.1	-	-
HCM Lane LOS	B	A	-	F	B	F	B	-	-
HCM 95th %tile Q(veh)	0.1	-	-	2.6	0.1	6.5	0.3	-	-

Lanes, Volumes, Timings
 1: S Point Road (NC 273) & Armstrong Road (NC 273)/Farm Road

Henry Chapel TIA
 2025 Build IMP PM - Ph 2



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	↕
Traffic Volume (vph)	480	0	37	0	0	1	53	100	0	2	128	595
Future Volume (vph)	480	0	37	0	0	1	53	100	0	2	128	595
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		0	0		100
Storage Lanes	0		0	0		0	0		0	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.990			0.865							0.850
Flt Protected		0.956						0.983			0.999	
Satd. Flow (prot)	0	1761	0	0	1611	0	0	1772	0	0	1861	1568
Flt Permitted		0.956						0.983			0.999	
Satd. Flow (perm)	0	1761	0	0	1611	0	0	1772	0	0	1861	1568
Link Speed (mph)		45			25			45			45	
Link Distance (ft)		1234			1013			1002			3097	
Travel Time (s)		18.7			27.6			15.2			46.9	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	4%	2%	2%	2%	8%	4%	2%	2%	2%	3%
Adj. Flow (vph)	533	0	41	0	0	1	59	111	0	2	142	661
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	574	0	0	1	0	0	170	0	0	144	661
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	60.6%
Analysis Period (min)	15
	ICU Level of Service B

Intersection												
Int Delay, s/veh	27											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	↗
Traffic Vol, veh/h	480	0	37	0	0	1	53	100	0	2	128	595
Future Vol, veh/h	480	0	37	0	0	1	53	100	0	2	128	595
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	-	-	-	-	-	-	-	-	-	-	-	100
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	4	2	2	2	8	4	2	2	2	3
Mvmt Flow	533	0	41	0	0	1	59	111	0	2	142	661

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	376	375	142	726	1036	111	803	0	0	111	0	0
Stage 1	146	146	-	229	229	-	-	-	-	-	-	-
Stage 2	230	229	-	497	807	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.24	7.12	6.52	6.22	4.18	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.336	3.518	4.018	3.318	2.272	-	-	2.218	-	-
Pot Cap-1 Maneuver	581	556	900	340	232	942	795	-	-	1479	-	-
Stage 1	857	776	-	774	715	-	-	-	-	-	-	-
Stage 2	773	715	-	555	394	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	544	510	900	304	213	942	795	-	-	1479	-	-
Mov Cap-2 Maneuver	544	510	-	304	213	-	-	-	-	-	-	-
Stage 1	789	774	-	713	659	-	-	-	-	-	-	-
Stage 2	711	659	-	528	393	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	72	8.8	3.4	0
HCM LOS	F	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	795	-	-	560	942	1479	-	-
HCM Lane V/C Ratio	0.074	-	-	1.026	0.001	0.002	-	-
HCM Control Delay (s)	9.9	0	-	72	8.8	7.4	0	-
HCM Lane LOS	A	A	-	F	A	A	A	-
HCM 95th %tile Q(veh)	0.2	-	-	15.6	0	0	-	-

Lanes, Volumes, Timings

2: S Point Road (NC 273) & S Point Church Road/Henry Chapel Road

Henry Chapel TIA

2025 Build IMP PM - Ph 2



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕	↕		↕		↕	↕	
Traffic Volume (vph)	1	0	0	20	0	130	0	678	31	209	793	2
Future Volume (vph)	1	0	0	20	0	130	0	678	31	209	793	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		175	0		0	225		0
Storage Lanes	0		0	0		1	0		0	1		0
Taper Length (ft)	25			25			25			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt						0.850		0.994				
Flt Protected		0.950			0.950					0.950		
Satd. Flow (prot)	0	1770	0	0	1770	1468	0	1834	0	1770	1845	0
Flt Permitted		0.976			0.976					0.950		
Satd. Flow (perm)	0	1818	0	0	1818	1468	0	1834	0	1770	1845	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		25			25			45			45	
Link Distance (ft)		1509			1293			1519			881	
Travel Time (s)		41.2			35.3			23.0			13.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	2%	2%	10%	2%	3%	2%	2%	3%	2%
Adj. Flow (vph)	1	0	0	22	0	144	0	753	34	232	881	2
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1	0	0	22	144	0	787	0	232	883	0
Turn Type	Perm	NA		Perm	NA	pm+ov		NA		Prot	NA	
Protected Phases		4			8	1		2		1	6	
Permitted Phases	4			8		8	2					
Detector Phase	4	4		8	8	1	2	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0	7.0	12.0	12.0		7.0	12.0	
Minimum Split (s)	14.0	14.0		14.0	14.0	14.0	19.0	19.0		14.0	19.0	
Total Split (s)	14.0	14.0		14.0	14.0	22.0	54.0	54.0		22.0	76.0	
Total Split (%)	15.6%	15.6%		15.6%	15.6%	24.4%	60.0%	60.0%		24.4%	84.4%	
Maximum Green (s)	7.0	7.0		7.0	7.0	15.0	47.0	47.0		15.0	69.0	
Yellow Time (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0	5.0	
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		-2.0			-2.0	-2.0		-2.0		-2.0	-2.0	
Total Lost Time (s)		5.0			5.0	5.0		5.0		5.0	5.0	
Lead/Lag						Lead	Lag	Lag		Lead		
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None	None	Min	Min		None	Min	
Act Effct Green (s)		9.9			9.9	19.8		35.7		15.6	60.9	
Actuated g/C Ratio		0.15			0.15	0.30		0.54		0.23	0.92	
v/c Ratio		0.00			0.08	0.33		0.80		0.56	0.52	
Control Delay		36.0			35.1	22.5		21.0		33.6	3.5	
Queue Delay		0.0			0.0	0.0		0.0		0.0	0.0	
Total Delay		36.0			35.1	22.5		21.0		33.6	3.5	
LOS		D			D	C		C		C	A	
Approach Delay		36.0			24.1			21.0			9.8	

Lanes, Volumes, Timings
 2: S Point Road (NC 273) & S Point Church Road/Henry Chapel Road

Henry Chapel TIA
 2025 Build IMP PM - Ph 2



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach LOS		D			C			C				A
Queue Length 50th (ft)		0			7	42		197		70		0
Queue Length 95th (ft)		5			35	107		502		#220		233
Internal Link Dist (ft)		1429			1213			1439				801
Turn Bay Length (ft)						175				225		
Base Capacity (vph)		270			270	503		1415		496		1689
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		0.00			0.08	0.29		0.56		0.47		0.52

Intersection Summary



















Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 66.5
 Natural Cycle: 70
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.80
 Intersection Signal Delay: 15.2
 Intersection LOS: B
 Intersection Capacity Utilization 97.8%
 ICU Level of Service F
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 2: S Point Road (NC 273) & S Point Church Road/Henry Chapel Road



Lanes, Volumes, Timings
 3: S Point Road (NC 273) & BB Drive/Forest Hill Road

Henry Chapel TIA
 2025 Build IMP PM - Ph 2

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	4	0	0	40	0	900	3	67	1139	1
Future Volume (vph)	0	0	4	0	0	40	0	900	3	67	1139	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		0	100		0
Storage Lanes	0		1	0		1	0		0	1		0
Taper Length (ft)	25			25			25			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.865			0.865						
Flt Protected										0.950		
Satd. Flow (prot)	0	0	1611	0	0	1611	0	1863	0	1770	1863	0
Flt Permitted										0.950		
Satd. Flow (perm)	0	0	1611	0	0	1611	0	1863	0	1770	1863	0
Link Speed (mph)		25			25			45			45	
Link Distance (ft)		1341			477			2444			1582	
Travel Time (s)		36.6			13.0			37.0			24.0	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	4	0	0	44	0	1000	3	74	1266	1
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	4	0	0	44	0	1003	0	74	1267	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	70.0%
Analysis Period (min)	15
	ICU Level of Service C

Intersection												
Int Delay, s/veh	0.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations			↗			↗		↔		↗	↘	
Traffic Vol, veh/h	0	0	4	0	0	40	0	900	3	67	1139	1
Future Vol, veh/h	0	0	4	0	0	40	0	900	3	67	1139	1
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	-	-	0	-	-	0	-	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	4	0	0	44	0	1000	3	74	1266	1






















Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	-	-	1267	-	-	1002	1267	0	0	1003	0	0
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	6.22	-	-	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.318	-	-	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	0	0	206	0	0	294	548	-	-	690	-	-
Stage 1	0	0	-	0	0	-	-	-	-	-	-	-
Stage 2	0	0	-	0	0	-	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	206	-	-	294	548	-	-	690	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	22.9		19.4		0		0.6	
HCM LOS	C		C					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	548	-	-	206	294	690	-	-
HCM Lane V/C Ratio	-	-	-	0.022	0.151	0.108	-	-
HCM Control Delay (s)	0	-	-	22.9	19.4	10.8	-	-
HCM Lane LOS	A	-	-	C	C	B	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.5	0.4	-	-

Lanes, Volumes, Timings
6: S Point Road (NC 273) & Belmont MS/Belwood Drive

Henry Chapel TIA
2025 Build IMP PM - Ph 2

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	23	2	17	3	1	32	10	997	2	44	1265	5
Future Volume (vph)	23	2	17	3	1	32	10	997	2	44	1265	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		3%			0%			1%			0%	
Storage Length (ft)	0		175	0		0	200		0	100		200
Storage Lanes	0		1	0		0	1		0	1		1
Taper Length (ft)	25			25			100			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	1.00
Frt			0.850			0.878						0.850
Flt Protected		0.956			0.996		0.950			0.950		
Satd. Flow (prot)	0	1754	795	0	1629	0	1761	3522	0	1770	3539	1583
Flt Permitted		0.956			0.996		0.950			0.257		
Satd. Flow (perm)	0	1754	795	0	1629	0	1761	3522	0	479	3539	1583
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		35			25			35			35	
Link Distance (ft)		1017			1050			394			1373	
Travel Time (s)		19.8			28.6			7.7			26.7	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	100%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Adj. Flow (vph)	26	2	19	3	1	36	11	1108	2	49	1406	6
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	28	19	0	40	0	11	1110	0	49	1406	6
Turn Type	Split	NA	pm+ov	Split	NA		Prot	NA		Perm	NA	pm+ov
Protected Phases	4	4	5	8	8		5	2			6	4
Permitted Phases			4							6		6
Detector Phase	4	4	5	8	8		5	2		6	6	4
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0		7.0	12.0		12.0	12.0	7.0
Minimum Split (s)	11.9	11.9	12.1	14.0	14.0		12.1	17.6		32.6	32.6	11.9
Total Split (s)	13.0	13.0	13.0	16.0	16.0		13.0	91.0		78.0	78.0	13.0
Total Split (%)	10.8%	10.8%	10.8%	13.3%	13.3%		10.8%	75.8%		65.0%	65.0%	10.8%
Maximum Green (s)	8.1	8.1	7.9	9.0	9.0		7.9	85.4		72.4	72.4	8.1
Yellow Time (s)	3.0	3.0	3.0	5.0	5.0		3.0	4.5		4.5	4.5	3.0
All-Red Time (s)	1.9	1.9	2.1	2.0	2.0		2.1	1.1		1.1	1.1	1.9
Lost Time Adjust (s)		0.1	-0.1		-2.0		-0.1	-0.6		-0.6	-0.6	0.1
Total Lost Time (s)		5.0	5.0		5.0		5.0	5.0		5.0	5.0	5.0
Lead/Lag			Lead				Lead			Lag		Lag
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		2.0	6.0		6.0	6.0	2.0
Minimum Gap (s)	2.0	2.0	2.0	2.0	2.0		2.0	3.0		3.0	3.0	2.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0		0.0	15.0		15.0	15.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0		0.0	45.0		45.0	45.0	0.0
Recall Mode	None	None	None	None	None		None	Min		Min	Min	None
Walk Time (s)										7.0	7.0	
Flash Dont Walk (s)										20.0	20.0	
Pedestrian Calls (#/hr)										0	0	
Act Efect Green (s)		8.0	11.6		10.5		8.0	52.9		49.3	49.3	55.4

Lanes, Volumes, Timings
 6: S Point Road (NC 273) & Belmont MS/Belwood Drive

Henry Chapel TIA
 2025 Build IMP PM - Ph 2



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Actuated g/C Ratio		0.12	0.17		0.15		0.12	0.77		0.72	0.72	0.81
v/c Ratio		0.14	0.14		0.16		0.05	0.41		0.14	0.55	0.00
Control Delay		39.6	22.5		36.7		39.5	6.9		12.1	12.7	5.2
Queue Delay		0.0	0.0		0.0		0.0	0.0		0.0	0.0	0.0
Total Delay		39.6	22.5		36.7		39.5	6.9		12.1	12.7	5.2
LOS		D	C		D		D	A		B	B	A
Approach Delay		32.7			36.7			7.3			12.6	
Approach LOS		C			D			A			B	
Queue Length 50th (ft)		11	4		16		4	147		9	212	1
Queue Length 95th (ft)		45	24		56		24	210		38	428	5
Internal Link Dist (ft)		937			970			314			1293	
Turn Bay Length (ft)			175				200			100		200
Base Capacity (vph)		230	145		294		231	3426		439	3243	1284
Starvation Cap Reductn		0	0		0		0	0		0	0	0
Spillback Cap Reductn		0	0		0		0	0		0	0	0
Storage Cap Reductn		0	0		0		0	0		0	0	0
Reduced v/c Ratio		0.12	0.13		0.14		0.05	0.32		0.11	0.43	0.00

Intersection Summary




















Area Type:	Other
Cycle Length:	120
Actuated Cycle Length:	68.7
Natural Cycle:	75
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.55
Intersection Signal Delay:	11.1
Intersection LOS:	B
Intersection Capacity Utilization:	59.1%
ICU Level of Service:	B
Analysis Period (min):	15

Splits and Phases: 6: S Point Road (NC 273) & Belmont MS/Belwood Drive



Lanes, Volumes, Timings
 7: S Point Road (NC 273) & McKee Farm Road/Stowe Road

Henry Chapel TIA
 2025 Build IMP PM - Ph 2

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	26	10	15	26	2	53	12	1028	23	71	1282	49
Future Volume (vph)	26	10	15	26	2	53	12	1028	23	71	1282	49
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		200	0		0	0		0	100		0
Storage Lanes	0		1	0		0	0		0	1		0
Taper Length (ft)	25			25			25			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	1.00	0.95	0.95
Frt			0.850		0.911			0.997			0.995	
Flt Protected		0.965			0.984			0.999		0.950		
Satd. Flow (prot)	0	1798	1583	0	1670	0	0	3525	0	1770	3522	0
Flt Permitted		0.965			0.984			0.999		0.950		
Satd. Flow (perm)	0	1798	1583	0	1670	0	0	3525	0	1770	3522	0
Link Speed (mph)		25			25			35			35	
Link Distance (ft)		1043			1485			1373			492	
Travel Time (s)		28.4			40.5			26.7			9.6	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	29	11	17	29	2	59	13	1142	26	79	1424	54
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	40	17	0	90	0	0	1181	0	79	1478	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	77.1%
	ICU Level of Service D
Analysis Period (min)	15

HCM 6th TWSC
 7: S Point Road (NC 273) & McKee Farm Road/Stowe Road

Henry Chapel TIA
 2025 Build IMP PM - Ph 2

Intersection												
Int Delay, s/veh	62.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↕		↕			↕		↕	↕	
Traffic Vol, veh/h	26	10	15	26	2	53	12	1028	23	71	1282	49
Future Vol, veh/h	26	10	15	26	2	53	12	1028	23	71	1282	49
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	-	-	200	-	-	-	-	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	29	11	17	29	2	59	13	1142	26	79	1424	54

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	2207	2803	739	2057	2817	584	1478	0	0	1168	0	0
Stage 1	1609	1609	-	1181	1181	-	-	-	-	-	-	-
Stage 2	598	1194	-	876	1636	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	~ 25	18	360	32	18	455	452	-	-	594	-	-
Stage 1	109	162	-	202	262	-	-	-	-	-	-	-
Stage 2	456	258	-	310	157	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	~ 16	14	360	~ 9	14	455	452	-	-	594	-	-
Mov Cap-2 Maneuver	~ 16	14	-	~ 9	14	-	-	-	-	-	-	-
Stage 1	100	140	-	185	240	-	-	-	-	-	-	-
Stage 2	361	237	-	236	136	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, \$	904.3	1420.1	0.6	0.6
HCM LOS	F	F		

















Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	452	-	-	15	360	26	594	-	-
HCM Lane V/C Ratio	0.029	-	-	2.667	0.046	3.462	0.133	-	-
HCM Control Delay (s)	13.2	0.5	\$	1274.7	15	\$	1420.1	12	-
HCM Lane LOS	B	A	-	F	C	F	B	-	-
HCM 95th %tile Q(veh)	0.1	-	-	5.7	0.1	11.1	0.5	-	-

Notes
 ~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

2026 Background Conditions

Lanes, Volumes, Timings
 1: S Point Road (NC 273) & Armstrong Road (NC 273)/Farm Road

Henry Chapel TIA
 2026 Background AM - Ph 3

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	568	0	30	0	0	0	64	176	0	0	69	224
Future Volume (vph)	568	0	30	0	0	0	64	176	0	0	69	224
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.993										0.897
Flt Protected		0.955						0.987				
Satd. Flow (prot)	0	1738	0	0	1863	0	0	1783	0	0	1556	0
Flt Permitted		0.955						0.987				
Satd. Flow (perm)	0	1738	0	0	1863	0	0	1783	0	0	1556	0
Link Speed (mph)		45			25			45			45	
Link Distance (ft)		1234			1013			1002			3097	
Travel Time (s)		18.7			27.6			15.2			46.9	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	36%	2%	2%	2%	14%	2%	2%	2%	8%	10%
Adj. Flow (vph)	631	0	33	0	0	0	71	196	0	0	77	249
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	664	0	0	0	0	0	267	0	0	326	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 73.5% ICU Level of Service D

Analysis Period (min) 15

Intersection												
Int Delay, s/veh	141.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	568	0	30	0	0	0	64	176	0	0	69	224
Future Vol, veh/h	568	0	30	0	0	0	64	176	0	0	69	224
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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	36	2	2	2	14	2	2	2	8	10
Mvmt Flow	631	0	33	0	0	0	71	196	0	0	77	249

Major/Minor	Minor2		Minor1			Major1			Major2			
Conflicting Flow All	540	540	202	556	664	196	326	0	0	196	0	0
Stage 1	202	202	-	338	338	-	-	-	-	-	-	-
Stage 2	338	338	-	218	326	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.56	7.12	6.52	6.22	4.24	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.624	3.518	4.018	3.318	2.326	-	-	2.218	-	-
Pot Cap-1 Maneuver	~ 453	449	760	442	381	845	1169	-	-	1377	-	-
Stage 1	800	734	-	676	641	-	-	-	-	-	-	-
Stage 2	676	641	-	784	648	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	~ 429	418	760	400	355	845	1169	-	-	1377	-	-
Mov Cap-2 Maneuver	~ 429	418	-	400	355	-	-	-	-	-	-	-
Stage 1	746	734	-	630	597	-	-	-	-	-	-	-
Stage 2	~ 630	597	-	750	648	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	266.4	0	2.2	0
HCM LOS	F	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1169	-	-	439	-	1377	-
HCM Lane V/C Ratio	0.061	-	-	1.514	-	-	-
HCM Control Delay (s)	8.3	0	-	266.4	0	0	-
HCM Lane LOS	A	A	-	F	A	A	-
HCM 95th %tile Q(veh)	0.2	-	-	35.2	-	0	-

Notes
 ~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Lanes, Volumes, Timings

2: S Point Road (NC 273) & S Point Church Road/Henry Chapel Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	0	0	1	1	0	22	0	882	1	8	349	6
Future Volume (vph)	0	0	1	1	0	22	0	882	1	8	349	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.865			0.870							0.998
Flt Protected					0.998							0.999
Satd. Flow (prot)	0	1611	0	0	1573	0	0	1861	0	0	1758	0
Flt Permitted					0.998							0.999
Satd. Flow (perm)	0	1611	0	0	1573	0	0	1861	0	0	1758	0
Link Speed (mph)		25			25			45			45	
Link Distance (ft)		1509			1293			1519			881	
Travel Time (s)		41.2			35.3			23.0			13.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	2%	2%	5%	2%	2%	100%	2%	8%	2%
Adj. Flow (vph)	0	0	1	1	0	24	0	980	1	9	388	7
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1	0	0	25	0	0	981	0	0	404	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 56.5% ICU Level of Service B

Analysis Period (min) 15

Intersection												
Int Delay, s/veh	0.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	1	1	0	22	0	882	1	8	349	6
Future Vol, veh/h	0	0	1	1	0	22	0	882	1	8	349	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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	5	2	2	100	2	8	2
Mvmt Flow	0	0	1	1	0	24	0	980	1	9	388	7

















Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	1403	1391	392	1391	1394	981	395	0	0	981	0	0
Stage 1	410	410	-	981	981	-	-	-	-	-	-	-
Stage 2	993	981	-	410	413	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.25	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.345	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	117	142	657	120	141	299	1164	-	-	704	-	-
Stage 1	619	595	-	300	328	-	-	-	-	-	-	-
Stage 2	296	328	-	619	594	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	106	140	657	118	139	299	1164	-	-	704	-	-
Mov Cap-2 Maneuver	106	140	-	118	139	-	-	-	-	-	-	-
Stage 1	619	585	-	300	328	-	-	-	-	-	-	-
Stage 2	272	328	-	608	584	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	10.5		19.1		0		0.2	
HCM LOS	B		C					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1164	-	-	657	280	704	-	-
HCM Lane V/C Ratio	-	-	-	0.002	0.091	0.013	-	-
HCM Control Delay (s)	0	-	-	10.5	19.1	10.2	0	-
HCM Lane LOS	A	-	-	B	C	B	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0.3	0	-	-

Lanes, Volumes, Timings
 3: S Point Road (NC 273) & BB Drive/Forest Hill Road

Henry Chapel TIA
 2026 Background AM - Ph 3

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	0	0	6	0	21	0	1078	8	8	411	2
Future Volume (vph)	4	0	0	6	0	21	0	1078	8	8	411	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.896			0.999			0.999	
Flt Protected		0.950			0.988						0.999	
Satd. Flow (prot)	0	1770	0	0	1613	0	0	1859	0	0	1774	0
Flt Permitted		0.950			0.988						0.999	
Satd. Flow (perm)	0	1770	0	0	1613	0	0	1859	0	0	1774	0
Link Speed (mph)		25			25			45			45	
Link Distance (ft)		1341			477			2444			1975	
Travel Time (s)		36.6			13.0			37.0			29.9	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	2%	2%	5%	2%	2%	17%	2%	7%	2%
Adj. Flow (vph)	4	0	0	7	0	23	0	1198	9	9	457	2
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	4	0	0	30	0	0	1207	0	0	468	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 67.2% ICU Level of Service C

Analysis Period (min) 15

Intersection												
Int Delay, s/veh	0.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	4	0	0	6	0	21	0	1078	8	8	411	2
Future Vol, veh/h	4	0	0	6	0	21	0	1078	8	8	411	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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	5	2	2	17	2	7	2
Mvmt Flow	4	0	0	7	0	23	0	1198	9	9	457	2

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1690	1683	458	1679	1680	1203	459	0	0	1207	0	0
Stage 1	476	476	-	1203	1203	-	-	-	-	-	-	-
Stage 2	1214	1207	-	476	477	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.25	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.345	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	74	94	603	75	95	221	1102	-	-	578	-	-
Stage 1	570	557	-	225	257	-	-	-	-	-	-	-
Stage 2	222	256	-	570	556	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	65	92	603	74	93	221	1102	-	-	578	-	-
Mov Cap-2 Maneuver	65	92	-	74	93	-	-	-	-	-	-	-
Stage 1	570	545	-	225	257	-	-	-	-	-	-	-
Stage 2	199	256	-	558	544	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	64.4		34.2		0		0.2	
HCM LOS	F		D					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1102	-	-	65	153	578	-	-
HCM Lane V/C Ratio	-	-	-	0.068	0.196	0.015	-	-
HCM Control Delay (s)	0	-	-	64.4	34.2	11.3	0	-
HCM Lane LOS	A	-	-	F	D	B	A	-
HCM 95th %tile Q(veh)	0	-	-	0.2	0.7	0	-	-

Lanes, Volumes, Timings
 4: Colonial Drive & Forest Hill Road



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	8	2	0	12	19	1
Future Volume (vph)	8	2	0	12	19	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.975			0.994		
Flt Protected				0.954		
Satd. Flow (prot)	1816	0	0	1863	1766	0
Flt Permitted				0.954		
Satd. Flow (perm)	1816	0	0	1863	1766	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	477			1074	636	
Travel Time (s)	13.0			29.3	17.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	9	2	0	13	21	1
Shared Lane Traffic (%)						
Lane Group Flow (vph)	11	0	0	13	22	0
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	13.3%
Analysis Period (min)	15
	ICU Level of Service A

Intersection						
Int Delay, s/veh	4.1					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	8	2	0	12	19	1
Future Vol, veh/h	8	2	0	12	19	1
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	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	9	2	0	13	21	1

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	11	0	23
Stage 1	-	-	-	-	10
Stage 2	-	-	-	-	13
Critical Hdwy	-	-	4.12	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	-	-	2.218	-	3.518
Pot Cap-1 Maneuver	-	-	1608	-	993
Stage 1	-	-	-	-	1013
Stage 2	-	-	-	-	1010
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1608	-	993
Mov Cap-2 Maneuver	-	-	-	-	993
Stage 1	-	-	-	-	1013
Stage 2	-	-	-	-	1010

Approach	EB	WB	NB
HCM Control Delay, s	0	0	8.7
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	997	-	-	1608	-
HCM Lane V/C Ratio	0.022	-	-	-	-
HCM Control Delay (s)	8.7	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Lanes, Volumes, Timings
 5: Colonial Drive & Timber Ridge Road



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	10	9	0	1	2
Future Volume (vph)	0	10	9	0	1	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.865					
Flt Protected						0.984
Satd. Flow (prot)	1611	0	1863	0	0	1833
Flt Permitted						0.984
Satd. Flow (perm)	1611	0	1863	0	0	1833
Link Speed (mph)	25		25		25	
Link Distance (ft)	1207		1055		636	
Travel Time (s)	32.9		28.8		17.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	11	10	0	1	2
Shared Lane Traffic (%)						
Lane Group Flow (vph)	11	0	10	0	0	3
Sign Control	Stop		Free		Free	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 13.3% ICU Level of Service A

Analysis Period (min) 15

Intersection						
Int Delay, s/veh	4.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W		T			T
Traffic Vol, veh/h	0	10	9	0	1	2
Future Vol, veh/h	0	10	9	0	1	2
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	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	11	10	0	1	2





















Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	14	10	0	0	10	0
Stage 1	10	-	-	-	-	-
Stage 2	4	-	-	-	-	-
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	1005	1071	-	-	1610	-
Stage 1	1013	-	-	-	-	-
Stage 2	1019	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	1004	1071	-	-	1610	-
Mov Cap-2 Maneuver	1004	-	-	-	-	-
Stage 1	1013	-	-	-	-	-
Stage 2	1018	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.4	0	2.4
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	1071	1610
HCM Lane V/C Ratio	-	-	0.01	0.001
HCM Control Delay (s)	-	-	8.4	7.2
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0	0

Lanes, Volumes, Timings
6: S Point Road (NC 273) & Belmont MS/Belwood Drive

Henry Chapel TIA
2026 Background AM - Ph 3

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	267	1	44	2	2	33	95	860	1	23	455	294
Future Volume (vph)	267	1	44	2	2	33	95	860	1	23	455	294
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		3%			0%			1%			0%	
Storage Length (ft)	0		175	0		0	200		0	100		200
Storage Lanes	0		1	0		0	1		0	1		1
Taper Length (ft)	25			25			100			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.878							0.850
Flt Protected		0.953			0.998		0.950			0.950		
Satd. Flow (prot)	0	1732	1560	0	1521	0	1744	1853	0	1770	1759	1568
Flt Permitted		0.953			0.998		0.950			0.107		
Satd. Flow (perm)	0	1732	1560	0	1521	0	1744	1853	0	199	1759	1568
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		35			25			35			35	
Link Distance (ft)		1017			1050			1975			1373	
Travel Time (s)		19.8			28.6			38.5			26.7	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	3%	2%	2%	100%	2%	5%	3%	2%	2%	2%	8%	3%
Adj. Flow (vph)	297	1	49	2	2	37	106	956	1	26	506	327
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	298	49	0	41	0	106	957	0	26	506	327
Turn Type	Split	NA	pm+ov	Split	NA		Prot	NA		Perm	NA	pm+ov
Protected Phases	4	4	5	8	8		5	2			6	4
Permitted Phases			4							6		6
Detector Phase	4	4	5	8	8		5	2		6	6	4
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0		7.0	12.0		12.0	12.0	7.0
Minimum Split (s)	11.9	11.9	12.1	14.0	14.0		12.1	17.6		32.6	32.6	11.9
Total Split (s)	31.0	31.0	20.0	14.0	14.0		20.0	75.0		55.0	55.0	31.0
Total Split (%)	25.8%	25.8%	16.7%	11.7%	11.7%		16.7%	62.5%		45.8%	45.8%	25.8%
Maximum Green (s)	26.1	26.1	14.9	7.0	7.0		14.9	69.4		49.4	49.4	26.1
Yellow Time (s)	3.0	3.0	3.0	5.0	5.0		3.0	4.5		4.5	4.5	3.0
All-Red Time (s)	1.9	1.9	2.1	2.0	2.0		2.1	1.1		1.1	1.1	1.9
Lost Time Adjust (s)		0.1	-0.1		-2.0		-0.1	-0.6		-0.6	-0.6	0.1
Total Lost Time (s)		5.0	5.0		5.0		5.0	5.0		5.0	5.0	5.0
Lead/Lag			Lead				Lead			Lag	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		2.0	6.0		6.0	6.0	2.0
Minimum Gap (s)	2.0	2.0	2.0	2.0	2.0		2.0	3.0		3.0	3.0	2.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0		0.0	15.0		15.0	15.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0		0.0	45.0		45.0	45.0	0.0
Recall Mode	None	None	None	None	None		None	Min		Min	Min	None
Walk Time (s)										7.0	7.0	
Flash Dont Walk (s)										20.0	20.0	
Pedestrian Calls (#/hr)										0	0	
Act Efect Green (s)		21.4	36.1		10.2		11.5	56.0		43.7	43.7	72.7

Lanes, Volumes, Timings
 6: S Point Road (NC 273) & Belmont MS/Belwood Drive

Henry Chapel TIA
 2026 Background AM - Ph 3



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Actuated g/C Ratio		0.22	0.38		0.11		0.12	0.59		0.46	0.46	0.76
v/c Ratio		0.77	0.08		0.25		0.51	0.88		0.29	0.63	0.27
Control Delay		53.7	17.4		54.6		56.2	29.9		33.5	28.3	7.0
Queue Delay		0.0	0.0		0.0		0.0	0.0		0.0	0.0	0.0
Total Delay		53.7	17.4		54.6		56.2	29.9		33.5	28.3	7.0
LOS		D	B		D		E	C		C	C	A
Approach Delay		48.6			54.6			32.5			20.3	
Approach LOS		D			D			C			C	
Queue Length 50th (ft)		203	18		28		74	579		12	288	84
Queue Length 95th (ft)		#357	41		69		137	#921		43	445	141
Internal Link Dist (ft)		937			970			1895			1293	
Turn Bay Length (ft)			175				200			100		200
Base Capacity (vph)		531	678		161		309	1367		116	1031	1227
Starvation Cap Reductn		0	0		0		0	0		0	0	0
Spillback Cap Reductn		0	0		0		0	0		0	0	0
Storage Cap Reductn		0	0		0		0	0		0	0	0
Reduced v/c Ratio		0.56	0.07		0.25		0.34	0.70		0.22	0.49	0.27

Intersection Summary


















Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 95.6
 Natural Cycle: 90
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.88
 Intersection Signal Delay: 30.8
 Intersection LOS: C
 Intersection Capacity Utilization 89.3%
 ICU Level of Service E
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 6: S Point Road (NC 273) & Belmont MS/Belwood Drive



Lanes, Volumes, Timings
 7: S Point Road (NC 273) & McKee Farm Road/Stowe Road

Henry Chapel TIA
 2026 Background AM - Ph 3

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	15	5	21	17	1	60	26	1096	56	40	744	73
Future Volume (vph)	15	5	21	17	1	60	26	1096	56	40	744	73
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		0	100		0
Storage Lanes	0		0	0		0	0		0	1		0
Taper Length (ft)	25			25			25			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.932			0.896			0.994			0.987	
Flt Protected		0.982			0.989			0.999		0.950		
Satd. Flow (prot)	0	1672	0	0	1651	0	0	1850	0	1703	1791	0
Flt Permitted		0.982			0.989			0.999		0.950		
Satd. Flow (perm)	0	1672	0	0	1651	0	0	1850	0	1703	1791	0
Link Speed (mph)		25			25			35			35	
Link Distance (ft)		1043			1485			1373			492	
Travel Time (s)		28.4			40.5			26.7			9.6	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	6%	2%	2%	2%	2%	2%	2%	6%	5%	2%
Adj. Flow (vph)	17	6	23	19	1	67	29	1218	62	44	827	81
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	46	0	0	87	0	0	1309	0	44	908	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary	
Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	94.1% ICU Level of Service F
Analysis Period (min)	15

HCM 6th TWSC
 7: S Point Road (NC 273) & McKee Farm Road/Stowe Road

Henry Chapel TIA
 2026 Background AM - Ph 3

Intersection												
Int Delay, s/veh	21.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕		↕	↕	
Traffic Vol, veh/h	15	5	21	17	1	60	26	1096	56	40	744	73
Future Vol, veh/h	15	5	21	17	1	60	26	1096	56	40	744	73
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	-	-	-	-	-	-	-	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	6	2	2	2	2	2	2	6	5	2
Mvmt Flow	17	6	23	19	1	67	29	1218	62	44	827	81

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	2297	2294	868	2277	2303	1249	908	0	0	1280	0	0
Stage 1	956	956	-	1307	1307	-	-	-	-	-	-	-
Stage 2	1341	1338	-	970	996	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.26	7.12	6.52	6.22	4.12	-	-	4.16	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.354	3.518	4.018	3.318	2.218	-	-	2.254	-	-
Pot Cap-1 Maneuver	27	39	346	28	38	211	750	-	-	529	-	-
Stage 1	310	336	-	196	230	-	-	-	-	-	-	-
Stage 2	188	222	-	304	322	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	~ 15	31	346	19	30	211	750	-	-	529	-	-
Mov Cap-2 Maneuver	~ 15	31	-	19	30	-	-	-	-	-	-	-
Stage 1	268	308	-	169	198	-	-	-	-	-	-	-
Stage 2	110	192	-	255	295	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	451.3		342.5		0.2		0.6	
HCM LOS	F		F					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	750	-	-	34	64	529	-	-
HCM Lane V/C Ratio	0.039	-	-	1.34	1.354	0.084	-	-
HCM Control Delay (s)	10	0		\$ 451.3	\$ 342.5	12.4	-	-
HCM Lane LOS	A	A	-	F	F	B	-	-
HCM 95th %tile Q(veh)	0.1	-	-	4.9	7.3	0.3	-	-

Notes
 ~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Lanes, Volumes, Timings
 8: S Point Road (NC 273) & South Point HS/Red Raider Run

Henry Chapel TIA
 2026 Background AM - Ph 3



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↕	↗	↖	↕		↖	↗	
Traffic Volume (vph)	0	0	0	137	35	156	62	993	86	105	721	54
Future Volume (vph)	0	0	0	137	35	156	62	993	86	105	721	54
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			4%			-1%			1%	
Storage Length (ft)	0		0	0		100	175		0	100		0
Storage Lanes	0		0	0		1	1		0	1		0
Taper Length (ft)	25			25			100			75		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t						0.850		0.988			0.990	
Fl _t Protected					0.962		0.950			0.950		
Satd. Flow (prot)	0	0	0	0	1756	1552	1778	1850	0	1761	1770	0
Fl _t Permitted					0.962		0.950			0.950		
Satd. Flow (perm)	0	0	0	0	1756	1552	1778	1850	0	1761	1770	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		25			25			35			35	
Link Distance (ft)		1017			1038			492			625	
Travel Time (s)		27.7			28.3			9.6			12.2	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	6%	2%
Adj. Flow (vph)	0	0	0	152	39	173	69	1103	96	117	801	60
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	191	173	69	1199	0	117	861	0
Turn Type				Perm	NA	pm+ov	Prot	NA		Prot	NA	
Protected Phases					8	1	5	2		1	6	
Permitted Phases				8		8						
Detector Phase				8	8	1	5	2		1	6	
Switch Phase												
Minimum Initial (s)				7.0	7.0	7.0	7.0	10.0		7.0	10.0	
Minimum Split (s)				25.4	25.4	12.6	12.1	27.7		12.6	23.7	
Total Split (s)				26.0	26.0	13.0	13.0	81.0		13.0	81.0	
Total Split (%)				21.7%	21.7%	10.8%	10.8%	67.5%		10.8%	67.5%	
Maximum Green (s)				20.6	20.6	7.4	7.9	75.3		7.4	75.3	
Yellow Time (s)				3.0	3.0	3.0	3.0	3.9		3.0	3.9	
All-Red Time (s)				2.4	2.4	2.6	2.1	1.8		2.6	1.8	
Lost Time Adjust (s)					-0.4	-0.6	-0.1	-0.7		-0.6	-0.7	
Total Lost Time (s)					5.0	5.0	5.0	5.0		5.0	5.0	
Lead/Lag						Lead	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)				2.0	2.0	2.0	2.0	3.0		2.0	3.0	
Recall Mode				None	None	None	None	C-Max		None	C-Max	
Walk Time (s)				7.0	7.0			7.0				
Flash Dont Walk (s)				13.0	13.0			15.0				
Pedestrian Calls (#/hr)				0	0			0				
Act Effct Green (s)					17.1	33.0	8.2	77.0		11.0	82.2	
Actuated g/C Ratio					0.14	0.28	0.07	0.64		0.09	0.68	
v/c Ratio					0.77	0.41	0.57	1.01		0.73	0.71	
Control Delay					68.9	38.5	72.9	51.5		76.3	9.7	

Lanes, Volumes, Timings
 8: S Point Road (NC 273) & South Point HS/Red Raider Run

Henry Chapel TIA
 2026 Background AM - Ph 3



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay					0.0	0.0	0.0	0.0		0.0	0.3	
Total Delay					68.9	38.5	72.9	51.5		76.3	10.1	
LOS					E	D	E	D		E	B	
Approach Delay					54.5			52.7			18.0	
Approach LOS					D			D			B	
Queue Length 50th (ft)					143	108	52	~988		93	295	
Queue Length 95th (ft)					219	176	#114	#1248		m#138	m417	
Internal Link Dist (ft)		937			958			412			545	
Turn Bay Length (ft)						100	175			100		
Base Capacity (vph)					307	427	124	1186		160	1212	
Starvation Cap Reductn					0	0	0	0		0	64	
Spillback Cap Reductn					0	0	0	0		0	0	
Storage Cap Reductn					0	0	0	0		0	0	
Reduced v/c Ratio					0.62	0.41	0.56	1.01		0.73	0.75	

Intersection Summary

Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 92 (77%), Referenced to phase 2:NBT and 6:SBT, Start of Green
 Natural Cycle: 130
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.01
 Intersection Signal Delay: 39.9
 Intersection Capacity Utilization 85.2%
 Analysis Period (min) 15

Intersection LOS: D
 ICU Level of Service E
























- ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
- m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 8: S Point Road (NC 273) & South Point HS/Red Raider Run



Lanes, Volumes, Timings
 9: S Point Road (NC 273) & Nixon Road/R L Stowe Road

Henry Chapel TIA
 2026 Background AM - Ph 3

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	116	185	84	297	91	30	95	506	545	49	536	59
Future Volume (vph)	116	185	84	297	91	30	95	506	545	49	536	59
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		1%			1%			1%			1%	
Storage Length (ft)	200		100	225		0	280		225	25		100
Storage Lanes	1		1	1		0	1		1	1		1
Taper Length (ft)	250			100			100			125		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.963				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1761	1853	1474	1648	1689	0	1678	1853	1575	1761	1853	1530
Flt Permitted	0.950			0.950			0.950			0.290		
Satd. Flow (perm)	1761	1853	1474	1648	1689	0	1678	1853	1575	537	1853	1530
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		25			35			35			35	
Link Distance (ft)		1003			1016			625			1000	
Travel Time (s)		27.4			19.8			12.2			19.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	9%	9%	9%	4%	7%	2%	2%	2%	2%	5%
Adj. Flow (vph)	129	206	93	330	101	33	106	562	606	54	596	66
Shared Lane Traffic (%)												
Lane Group Flow (vph)	129	206	93	330	134	0	106	562	606	54	596	66
Turn Type	Split	NA	pm+ov	Split	NA		Prot	NA	pm+ov	D.Pm	NA	pm+ov
Protected Phases	3	3	5	4	4		5	2	4		6	3
Permitted Phases			3						2	2		6
Detector Phase	3	3	5	4	4		5	2	4	2	6	3
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0		7.0	10.0	7.0	10.0	10.0	7.0
Minimum Split (s)	25.0	25.0	12.8	13.3	13.3		12.8	24.1	13.3	24.1	24.1	25.0
Total Split (s)	25.0	25.0	15.0	32.0	32.0		15.0	63.0	32.0	63.0	48.0	25.0
Total Split (%)	20.8%	20.8%	12.5%	26.7%	26.7%		12.5%	52.5%	26.7%	52.5%	40.0%	20.8%
Maximum Green (s)	19.0	19.0	9.2	25.7	25.7		9.2	56.9	25.7	56.9	41.9	19.0
Yellow Time (s)	3.8	3.8	3.0	4.4	4.4		3.0	3.8	4.4	3.8	3.8	3.8
All-Red Time (s)	2.2	2.2	2.8	1.9	1.9		2.8	2.3	1.9	2.3	2.3	2.2
Lost Time Adjust (s)	-1.0	-1.0	-0.8	-1.3	-1.3		-0.8	-1.1	-1.3	-1.1	-1.1	-1.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lead	Lead	Lag	Lag		Lead		Lag		Lag	Lead
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		2.0	3.0	2.0	3.0	3.0	2.0
Recall Mode	None	None	None	None	None		None	C-Max	None	C-Max	C-Max	None
Walk Time (s)	7.0	7.0						7.0		7.0		7.0
Flash Dont Walk (s)	12.0	12.0						11.0		11.0		12.0
Pedestrian Calls (#/hr)	0	0						0		0		0
Act Effct Green (s)	17.4	17.4	27.4	26.8	26.8		10.0	60.9	92.6	60.9	45.9	68.2
Actuated g/C Ratio	0.14	0.14	0.23	0.22	0.22		0.08	0.51	0.77	0.51	0.38	0.57
v/c Ratio	0.51	0.77	0.28	0.90	0.36		0.76	0.60	0.50	0.20	0.84	0.08
Control Delay	54.0	68.2	21.5	73.0	42.2		78.7	17.9	6.2	20.2	47.3	12.4

Lanes, Volumes, Timings
 9: S Point Road (NC 273) & Nixon Road/R L Stowe Road

Henry Chapel TIA
 2026 Background AM - Ph 3

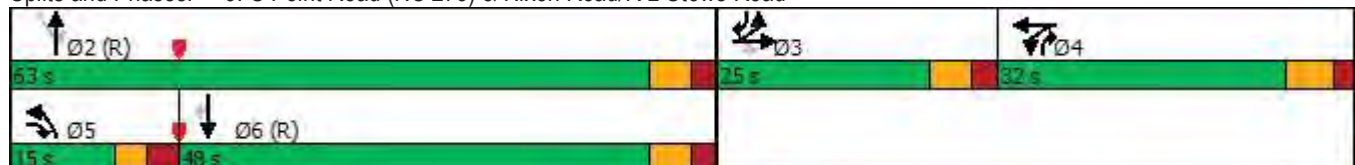


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.9	0.6	0.0	0.0	0.0
Total Delay	54.0	68.2	21.5	73.0	42.2		78.7	18.8	6.7	20.2	47.3	12.4
LOS	D	E	C	E	D		E	B	A	C	D	B
Approach Delay		53.8			64.1			18.0			42.1	
Approach LOS		D			E			B			D	
Queue Length 50th (ft)	92	154	32	245	87		79	218	157	23	434	23
Queue Length 95th (ft)	154	235	60	#418	148		m87	m228	m156	53	#648	44
Internal Link Dist (ft)		923			936			545			920	
Turn Bay Length (ft)	200		100	225			280		225	25		100
Base Capacity (vph)	293	308	339	379	389		143	939	1214	272	707	903
Starvation Cap Reductn	0	0	0	0	0		0	155	267	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.44	0.67	0.27	0.87	0.34		0.74	0.72	0.64	0.20	0.84	0.07

Intersection Summary

















Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 0 (0%), Referenced to phase 2:NBSB and 6:SBT, Start of Green
 Natural Cycle: 100
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.90
 Intersection Signal Delay: 36.7
 Intersection LOS: D
 Intersection Capacity Utilization 77.8%
 ICU Level of Service D
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 9: S Point Road (NC 273) & Nixon Road/R L Stowe Road



Lanes, Volumes, Timings
 1: S Point Road (NC 273) & Armstrong Road (NC 273)/Farm Road

Henry Chapel TIA
 2026 Background PM - Ph 3

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	463	0	38	0	0	1	54	102	0	2	131	591
Future Volume (vph)	463	0	38	0	0	1	54	102	0	2	131	591
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.990			0.865							0.890
Flt Protected		0.956						0.983				
Satd. Flow (prot)	0	1760	0	0	1611	0	0	1772	0	0	1645	0
Flt Permitted		0.956						0.983				
Satd. Flow (perm)	0	1760	0	0	1611	0	0	1772	0	0	1645	0
Link Speed (mph)		45			25			45			45	
Link Distance (ft)		1234			1013			1002			3097	
Travel Time (s)		18.7			27.6			15.2			46.9	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	4%	2%	2%	2%	8%	4%	2%	2%	2%	3%
Adj. Flow (vph)	514	0	42	0	0	1	60	113	0	2	146	657
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	556	0	0	1	0	0	173	0	0	805	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 91.7% ICU Level of Service F

Analysis Period (min) 15

Intersection												
Int Delay, s/veh	123.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	463	0	38	0	0	1	54	102	0	2	131	591
Future Vol, veh/h	463	0	38	0	0	1	54	102	0	2	131	591
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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	4	2	2	2	8	4	2	2	2	3
Mvmt Flow	514	0	42	0	0	1	60	113	0	2	146	657

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	713	712	475	733	1040	113	803	0	0	113	0	0
Stage 1	479	479	-	233	233	-	-	-	-	-	-	-
Stage 2	234	233	-	500	807	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.24	7.12	6.52	6.22	4.18	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.336	3.518	4.018	3.318	2.272	-	-	2.218	-	-
Pot Cap-1 Maneuver	~ 347	358	586	336	230	940	795	-	-	1476	-	-
Stage 1	568	555	-	770	712	-	-	-	-	-	-	-
Stage 2	769	712	-	553	394	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	~ 324	328	586	292	211	940	795	-	-	1476	-	-
Mov Cap-2 Maneuver	~ 324	328	-	292	211	-	-	-	-	-	-	-
Stage 1	522	553	-	708	654	-	-	-	-	-	-	-
Stage 2	706	654	-	512	393	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	338.4	8.8	3.4	0
HCM LOS	F	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	795	-	-	335	940	1476	-	-
HCM Lane V/C Ratio	0.075	-	-	1.662	0.001	0.002	-	-
HCM Control Delay (s)	9.9	0		\$ 338.4	8.8	7.4	0	-
HCM Lane LOS	A	A	-	F	A	A	A	-
HCM 95th %tile Q(veh)	0.2	-	-	33.9	0	0	-	-

Notes
 ~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Lanes, Volumes, Timings

2: S Point Road (NC 273) & S Point Church Road/Henry Chapel Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	1	0	0	5	0	23	0	692	5	30	809	2
Future Volume (vph)	1	0	0	5	0	23	0	692	5	30	809	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.890			0.999				
Flt Protected		0.950			0.991						0.998	
Satd. Flow (prot)	0	1770	0	0	1544	0	0	1843	0	0	1842	0
Flt Permitted		0.950			0.991						0.998	
Satd. Flow (perm)	0	1770	0	0	1544	0	0	1843	0	0	1842	0
Link Speed (mph)		25			25			45			45	
Link Distance (ft)		1509			1293			1519			881	
Travel Time (s)		41.2			35.3			23.0			13.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	2%	2%	10%	2%	3%	2%	2%	3%	2%
Adj. Flow (vph)	1	0	0	6	0	26	0	769	6	33	899	2
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1	0	0	32	0	0	775	0	0	934	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 77.0%

ICU Level of Service D

Analysis Period (min) 15

Intersection												
Int Delay, s/veh	0.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	1	0	0	5	0	23	0	692	5	30	809	2
Future Vol, veh/h	1	0	0	5	0	23	0	692	5	30	809	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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	10	2	3	2	2	3	2
Mvmt Flow	1	0	0	6	0	26	0	769	6	33	899	2

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1751	1741	900	1738	1739	772	901	0	0	775	0	0
Stage 1	966	966	-	772	772	-	-	-	-	-	-	-
Stage 2	785	775	-	966	967	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.3	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.39	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	67	87	337	68	87	387	754	-	-	841	-	-
Stage 1	306	333	-	392	409	-	-	-	-	-	-	-
Stage 2	386	408	-	306	333	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	59	80	337	64	80	387	754	-	-	841	-	-
Mov Cap-2 Maneuver	59	80	-	64	80	-	-	-	-	-	-	-
Stage 1	306	307	-	392	409	-	-	-	-	-	-	-
Stage 2	361	408	-	282	307	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	67.2		25.8		0		0.3	
HCM LOS	F		D					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	754	-	-	59	204	841	-	-
HCM Lane V/C Ratio	-	-	-	0.019	0.153	0.04	-	-
HCM Control Delay (s)	0	-	-	67.2	25.8	9.5	0	-
HCM Lane LOS	A	-	-	F	D	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.5	0.1	-	-

Lanes, Volumes, Timings
 3: S Point Road (NC 273) & BB Drive/Forest Hill Road

Henry Chapel TIA
 2026 Background PM - Ph 3



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	4	0	0	1	0	9	0	810	3	15	979	1
Future Volume (vph)	4	0	0	1	0	9	0	810	3	15	979	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.877							
Flt Protected		0.950			0.995						0.999	
Satd. Flow (prot)	0	1770	0	0	1625	0	0	1863	0	0	1861	0
Flt Permitted		0.950			0.995						0.999	
Satd. Flow (perm)	0	1770	0	0	1625	0	0	1863	0	0	1861	0
Link Speed (mph)		25			25			45			45	
Link Distance (ft)		1341			477			2444			1975	
Travel Time (s)		36.6			13.0			37.0			29.9	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	4	0	0	1	0	10	0	900	3	17	1088	1
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	4	0	0	11	0	0	903	0	0	1106	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 73.6% ICU Level of Service D

Analysis Period (min) 15

Intersection												
Int Delay, s/veh	0.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	4	0	0	1	0	9	0	810	3	15	979	1
Future Vol, veh/h	4	0	0	1	0	9	0	810	3	15	979	1
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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	0	0	1	0	10	0	900	3	17	1088	1

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	2030	2026	1089	2025	2025	902	1089	0	0	903	0	0
Stage 1	1123	1123	-	902	902	-	-	-	-	-	-	-
Stage 2	907	903	-	1123	1123	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	42	58	262	43	58	336	641	-	-	753	-	-
Stage 1	250	281	-	332	356	-	-	-	-	-	-	-
Stage 2	330	356	-	250	281	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	39	55	262	41	55	336	641	-	-	753	-	-
Mov Cap-2 Maneuver	39	55	-	41	55	-	-	-	-	-	-	-
Stage 1	250	265	-	332	356	-	-	-	-	-	-	-
Stage 2	320	356	-	236	265	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	108.8		24.6		0		0.1	
HCM LOS	F		C					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	641	-	-	39	195	753	-	-
HCM Lane V/C Ratio	-	-	-	0.114	0.057	0.022	-	-
HCM Control Delay (s)	0	-	-	108.8	24.6	9.9	0	-
HCM Lane LOS	A	-	-	F	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.4	0.2	0.1	-	-

Lanes, Volumes, Timings
4: Colonial Drive & Forest Hill Road

Henry Chapel TIA
2026 Background PM - Ph 3



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	4	9	1	4	9	1
Future Volume (vph)	4	9	1	4	9	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.904			0.988		
Flt Protected				0.990	0.957	
Satd. Flow (prot)	1475	0	0	1844	1604	0
Flt Permitted				0.990	0.957	
Satd. Flow (perm)	1475	0	0	1844	1604	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	477			1074	636	
Travel Time (s)	13.0			29.3	17.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	25%	13%	2%	2%	13%	2%
Adj. Flow (vph)	4	10	1	4	10	1
Shared Lane Traffic (%)						
Lane Group Flow (vph)	14	0	0	5	11	0
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	13.3%
	ICU Level of Service A
Analysis Period (min)	15

Intersection						
Int Delay, s/veh	3.4					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	4	9	1	4	9	1
Future Vol, veh/h	4	9	1	4	9	1
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	90	90	90	90	90	90
Heavy Vehicles, %	25	13	2	2	13	2
Mvmt Flow	4	10	1	4	10	1

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	14	0	15
Stage 1	-	-	-	-	9
Stage 2	-	-	-	-	6
Critical Hdwy	-	-	4.12	-	6.53
Critical Hdwy Stg 1	-	-	-	-	5.53
Critical Hdwy Stg 2	-	-	-	-	5.53
Follow-up Hdwy	-	-	2.218	-	3.617
Pot Cap-1 Maneuver	-	-	1604	-	976
Stage 1	-	-	-	-	986
Stage 2	-	-	-	-	989
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1604	-	975
Mov Cap-2 Maneuver	-	-	-	-	975
Stage 1	-	-	-	-	986
Stage 2	-	-	-	-	988

Approach	EB	WB	NB
HCM Control Delay, s	0	1.4	8.7
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	984	-	-	1604	-
HCM Lane V/C Ratio	0.011	-	-	0.001	-
HCM Control Delay (s)	8.7	-	-	7.2	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

Lanes, Volumes, Timings
5: Colonial Drive & Timber Ridge Road

Henry Chapel TIA
2026 Background PM - Ph 3



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	6	3	2	3	6
Future Volume (vph)	0	6	3	2	3	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.865		0.946			
Flt Protected						0.985
Satd. Flow (prot)	1611	0	1490	0	0	1633
Flt Permitted						0.985
Satd. Flow (perm)	1611	0	1490	0	0	1633
Link Speed (mph)	25		25			25
Link Distance (ft)	1207		1055			636
Travel Time (s)	32.9		28.8			17.3
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	33%	2%	2%	20%
Adj. Flow (vph)	0	7	3	2	3	7
Shared Lane Traffic (%)						
Lane Group Flow (vph)	7	0	5	0	0	10
Sign Control	Stop		Free			Free

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	13.3%
	ICU Level of Service A
Analysis Period (min)	15

Intersection						
Int Delay, s/veh	3.6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	6	3	2	3	6
Future Vol, veh/h	0	6	3	2	3	6
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	90	90	90	90	90	90
Heavy Vehicles, %	2	2	33	2	2	20
Mvmt Flow	0	7	3	2	3	7





















Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	17	4	0	0	5
Stage 1	4	-	-	-	-
Stage 2	13	-	-	-	-
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	1001	1080	-	-	1616
Stage 1	1019	-	-	-	-
Stage 2	1010	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	999	1080	-	-	1616
Mov Cap-2 Maneuver	999	-	-	-	-
Stage 1	1019	-	-	-	-
Stage 2	1008	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.4	0	2.4
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	1080	1616
HCM Lane V/C Ratio	-	-	0.006	0.002
HCM Control Delay (s)	-	-	8.4	7.2
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0	0

Lanes, Volumes, Timings
6: S Point Road (NC 273) & Belmont MS/Belwood Drive

Henry Chapel TIA
2026 Background PM - Ph 3

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	24	2	4	3	1	32	2	887	2	45	1067	5
Future Volume (vph)	24	2	4	3	1	32	2	887	2	45	1067	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		3%			0%			1%			0%	
Storage Length (ft)	0		175	0		0	200		0	100		200
Storage Lanes	0		1	0		0	1		0	1		1
Taper Length (ft)	25			25			100			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.878							0.850
Flt Protected		0.956			0.996		0.950			0.950		
Satd. Flow (prot)	0	1754	795	0	1629	0	1761	1853	0	1770	1863	1583
Flt Permitted		0.956			0.996		0.950			0.233		
Satd. Flow (perm)	0	1754	795	0	1629	0	1761	1853	0	434	1863	1583
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		35			25			35			35	
Link Distance (ft)		1017			1050			1975			1373	
Travel Time (s)		19.8			28.6			38.5			26.7	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	100%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Adj. Flow (vph)	27	2	4	3	1	36	2	986	2	50	1186	6
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	29	4	0	40	0	2	988	0	50	1186	6
Turn Type	Split	NA	pm+ov	Split	NA		Prot	NA		Perm	NA	pm+ov
Protected Phases	4	4	5	8	8		5	2			6	4
Permitted Phases			4							6		6
Detector Phase	4	4	5	8	8		5	2		6	6	4
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0		7.0	12.0		12.0	12.0	7.0
Minimum Split (s)	11.9	11.9	12.1	14.0	14.0		12.1	17.6		32.6	32.6	11.9
Total Split (s)	12.0	12.0	13.0	14.0	14.0		13.0	94.0		81.0	81.0	12.0
Total Split (%)	10.0%	10.0%	10.8%	11.7%	11.7%		10.8%	78.3%		67.5%	67.5%	10.0%
Maximum Green (s)	7.1	7.1	7.9	7.0	7.0		7.9	88.4		75.4	75.4	7.1
Yellow Time (s)	3.0	3.0	3.0	5.0	5.0		3.0	4.5		4.5	4.5	3.0
All-Red Time (s)	1.9	1.9	2.1	2.0	2.0		2.1	1.1		1.1	1.1	1.9
Lost Time Adjust (s)		0.1	-0.1		-2.0		-0.1	-0.6		-0.6	-0.6	0.1
Total Lost Time (s)		5.0	5.0		5.0		5.0	5.0		5.0	5.0	5.0
Lead/Lag			Lead				Lead			Lag	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		2.0	6.0		6.0	6.0	2.0
Minimum Gap (s)	2.0	2.0	2.0	2.0	2.0		2.0	3.0		3.0	3.0	2.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0		0.0	15.0		15.0	15.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0		0.0	45.0		45.0	45.0	0.0
Recall Mode	None	None	None	None	None		None	Min		Min	Min	None
Walk Time (s)										7.0	7.0	
Flash Dont Walk (s)										20.0	20.0	
Pedestrian Calls (#/hr)										0	0	
Act Efect Green (s)		7.2	11.1		9.4		7.4	82.1		80.1	80.1	86.3

Lanes, Volumes, Timings
 6: S Point Road (NC 273) & Belmont MS/Belwood Drive

Henry Chapel TIA
 2026 Background PM - Ph 3



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Actuated g/C Ratio		0.07	0.11		0.10		0.08	0.84		0.81	0.81	0.88
v/c Ratio		0.22	0.04		0.26		0.02	0.64		0.14	0.78	0.00
Control Delay		54.5	32.0		52.8		51.0	9.2		7.4	16.5	3.0
Queue Delay		0.0	0.0		0.0		0.0	0.0		0.0	0.0	0.0
Total Delay		54.5	32.0		52.8		51.0	9.2		7.4	16.5	3.0
LOS		D	C		D		D	A		A	B	A
Approach Delay		51.8			52.8			9.3			16.1	
Approach LOS		D			D			A			B	
Queue Length 50th (ft)		20	2		28		1	367		10	565	1
Queue Length 95th (ft)		54	11		67		10	521		35	#1204	4
Internal Link Dist (ft)		937			970			1895			1293	
Turn Bay Length (ft)			175				200			100		200
Base Capacity (vph)		130	97		155		149	1621		353	1517	1390
Starvation Cap Reductn		0	0		0		0	0		0	0	0
Spillback Cap Reductn		0	0		0		0	0		0	0	0
Storage Cap Reductn		0	0		0		0	0		0	0	0
Reduced v/c Ratio		0.22	0.04		0.26		0.01	0.61		0.14	0.78	0.00

Intersection Summary


















Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 98.3
 Natural Cycle: 120
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.78
 Intersection Signal Delay: 14.3
 Intersection LOS: B
 Intersection Capacity Utilization 80.3%
 ICU Level of Service D
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 6: S Point Road (NC 273) & Belmont MS/Belwood Drive



Lanes, Volumes, Timings
 7: S Point Road (NC 273) & McKee Farm Road/Stowe Road

Henry Chapel TIA
 2026 Background PM - Ph 3

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	26	10	15	27	2	54	12	918	24	73	1085	51
Future Volume (vph)	26	10	15	27	2	54	12	918	24	73	1085	51
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		0	100		0
Storage Lanes	0		0	0		0	0		0	1		0
Taper Length (ft)	25			25			25			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.960			0.912			0.997			0.993	
Flt Protected		0.975			0.984			0.999		0.950		
Satd. Flow (prot)	0	1744	0	0	1672	0	0	1855	0	1770	1850	0
Flt Permitted		0.975			0.984			0.999		0.950		
Satd. Flow (perm)	0	1744	0	0	1672	0	0	1855	0	1770	1850	0
Link Speed (mph)		25			25			35			35	
Link Distance (ft)		1043			1485			1373			492	
Travel Time (s)		28.4			40.5			26.7			9.6	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	29	11	17	30	2	60	13	1020	27	81	1206	57
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	57	0	0	92	0	0	1060	0	81	1263	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary	
Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	72.3% ICU Level of Service C
Analysis Period (min)	15

HCM 6th TWSC
 7: S Point Road (NC 273) & McKee Farm Road/Stowe Road

Henry Chapel TIA
 2026 Background PM - Ph 3

Intersection												
Int Delay, s/veh	69.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕		↕	↕	
Traffic Vol, veh/h	26	10	15	27	2	54	12	918	24	73	1085	51
Future Vol, veh/h	26	10	15	27	2	54	12	918	24	73	1085	51
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	-	-	-	-	-	-	-	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	29	11	17	30	2	60	13	1020	27	81	1206	57

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	2488	2470	1235	2471	2485	1034	1263	0	0	1047	0	0
Stage 1	1397	1397	-	1060	1060	-	-	-	-	-	-	-
Stage 2	1091	1073	-	1411	1425	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	~ 20	30	215	~ 20	29	282	550	-	-	665	-	-
Stage 1	175	208	-	271	301	-	-	-	-	-	-	-
Stage 2	260	297	-	171	201	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	~ 13	25	215	~ 11	24	282	550	-	-	665	-	-
Mov Cap-2 Maneuver	~ 13	25	-	~ 11	24	-	-	-	-	-	-	-
Stage 1	165	183	-	256	284	-	-	-	-	-	-	-
Stage 2	192	280	-	130	176	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, \$	1153.7		1211.2		0.1		0.7	
HCM LOS	F		F					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	550	-	-	21	30	665	-	-
HCM Lane V/C Ratio	0.024	-	-	2.698	3.074	0.122	-	-
HCM Control Delay (s)	11.7	0		\$ 1153.7	\$ 1211.2	11.2	-	-
HCM Lane LOS	B	A	-	F	F	B	-	-
HCM 95th %tile Q(veh)	0.1	-	-	7.3	10.9	0.4	-	-

Notes
 ~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Lanes, Volumes, Timings
 8: S Point Road (NC 273) & South Point HS/Red Raider Run

Henry Chapel TIA
 2026 Background PM - Ph 3



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↕	↗	↖	↕		↖	↗	
Traffic Volume (vph)	0	0	0	209	6	228	9	865	89	131	1016	3
Future Volume (vph)	0	0	0	209	6	228	9	865	89	131	1016	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			4%			-1%			1%	
Storage Length (ft)	0		0	0		100	175		0	100		0
Storage Lanes	0		0	0		1	1		0	1		0
Taper Length (ft)	25			25			100			75		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t						0.850		0.986				
Fl _t Protected					0.954		0.950			0.950		
Satd. Flow (prot)	0	0	0	0	1742	1552	1778	1830	0	1761	1853	0
Fl _t Permitted					0.954		0.950			0.950		
Satd. Flow (perm)	0	0	0	0	1742	1552	1778	1830	0	1761	1853	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		25			25			35			35	
Link Distance (ft)		1017			1038			492			625	
Travel Time (s)		27.7			28.3			9.6			12.2	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	3%	2%	2%	2%	2%
Adj. Flow (vph)	0	0	0	232	7	253	10	961	99	146	1129	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	239	253	10	1060	0	146	1132	0
Turn Type				Perm	NA	pm+ov	Prot	NA		Prot	NA	
Protected Phases					8	1	5	2		1	6	
Permitted Phases				8		8						
Detector Phase				8	8	1	5	2		1	6	
Switch Phase												
Minimum Initial (s)				7.0	7.0	7.0	7.0	10.0		7.0	10.0	
Minimum Split (s)				25.4	25.4	12.6	12.1	27.7		12.6	23.7	
Total Split (s)				26.0	26.0	18.0	13.0	86.0		18.0	91.0	
Total Split (%)				20.0%	20.0%	13.8%	10.0%	66.2%		13.8%	70.0%	
Maximum Green (s)				20.6	20.6	12.4	7.9	80.3		12.4	85.3	
Yellow Time (s)				3.0	3.0	3.0	3.0	3.9		3.0	3.9	
All-Red Time (s)				2.4	2.4	2.6	2.1	1.8		2.6	1.8	
Lost Time Adjust (s)					-0.4	-0.6	-0.1	-0.7		-0.6	-0.7	
Total Lost Time (s)					5.0	5.0	5.0	5.0		5.0	5.0	
Lead/Lag						Lead	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)				2.0	2.0	2.0	2.0	3.0		2.0	3.0	
Recall Mode				None	None	None	None	C-Max		None	C-Max	
Walk Time (s)				7.0	7.0			7.0				
Flash Dont Walk (s)				13.0	13.0			15.0				
Pedestrian Calls (#/hr)				0	0			0				
Act Effct Green (s)					20.0	37.7	7.1	82.3		12.7	97.5	
Actuated g/C Ratio					0.15	0.29	0.05	0.63		0.10	0.75	
v/c Ratio					0.89	0.56	0.10	0.92		0.85	0.81	
Control Delay					86.9	44.4	61.0	34.9		68.6	12.4	

Lanes, Volumes, Timings
 8: S Point Road (NC 273) & South Point HS/Red Raider Run

Henry Chapel TIA
 2026 Background PM - Ph 3



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay					0.0	1.0	0.0	0.2		0.0	6.9	
Total Delay					86.9	45.4	61.0	35.1		68.6	19.2	
LOS					F	D	E	D		E	B	
Approach Delay					65.6			35.3			24.9	
Approach LOS					E			D			C	
Queue Length 50th (ft)					198	178	8	753		118	537	
Queue Length 95th (ft)					#342	269	27	#1117		m122	m547	
Internal Link Dist (ft)		937			958			412			545	
Turn Bay Length (ft)						100	175			100		
Base Capacity (vph)					281	454	109	1158		176	1390	
Starvation Cap Reductn					0	0	0	0		0	219	
Spillback Cap Reductn					0	62	0	5		0	0	
Storage Cap Reductn					0	0	0	0		0	0	
Reduced v/c Ratio					0.85	0.65	0.09	0.92		0.83	0.97	

Intersection Summary
























Area Type: Other
 Cycle Length: 130
 Actuated Cycle Length: 130
 Offset: 44 (34%), Referenced to phase 2:NBT and 6:SBT, Start of Green
 Natural Cycle: 110
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.92
 Intersection Signal Delay: 35.9
 Intersection LOS: D
 Intersection Capacity Utilization 83.9%
 ICU Level of Service E
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 8: S Point Road (NC 273) & South Point HS/Red Raider Run



Lanes, Volumes, Timings
 9: S Point Road (NC 273) & Nixon Road/R L Stowe Road

Henry Chapel TIA
 2026 Background PM - Ph 3

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	78	110	74	548	125	39	72	510	483	77	544	90
Future Volume (vph)	78	110	74	548	125	39	72	510	483	77	544	90
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		1%			1%			1%			1%	
Storage Length (ft)	200		100	225		0	280		225	25		100
Storage Lanes	1		1	1		0	1		1	1		1
Taper Length (ft)	250			100			100			125		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.965				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1761	1853	1545	1744	1762	0	1761	1853	1545	1761	1853	1560
Flt Permitted	0.950			0.950			0.950			0.192		
Satd. Flow (perm)	1761	1853	1545	1744	1762	0	1761	1853	1545	356	1853	1560
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		25			35			35			35	
Link Distance (ft)		1003			1016			625			1000	
Travel Time (s)		27.4			19.8			12.2			19.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	4%	3%	4%	2%	2%	2%	4%	2%	2%	3%
Adj. Flow (vph)	87	122	82	609	139	43	80	567	537	86	604	100
Shared Lane Traffic (%)												
Lane Group Flow (vph)	87	122	82	609	182	0	80	567	537	86	604	100
Turn Type	Split	NA	pm+ov	Split	NA		Prot	NA	pm+ov	D.Pm	NA	pm+ov
Protected Phases	3	3	5	4	4		5	2	4		6	3
Permitted Phases			3						2	2		6
Detector Phase	3	3	5	4	4		5	2	4	2	6	3
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0		7.0	10.0	7.0	10.0	10.0	7.0
Minimum Split (s)	25.0	25.0	12.8	13.3	13.3		12.8	24.1	13.3	24.1	24.1	25.0
Total Split (s)	25.0	25.0	13.0	47.0	47.0		13.0	58.0	47.0	58.0	45.0	25.0
Total Split (%)	19.2%	19.2%	10.0%	36.2%	36.2%		10.0%	44.6%	36.2%	44.6%	34.6%	19.2%
Maximum Green (s)	19.0	19.0	7.2	40.7	40.7		7.2	51.9	40.7	51.9	38.9	19.0
Yellow Time (s)	3.8	3.8	3.0	4.4	4.4		3.0	3.8	4.4	3.8	3.8	3.8
All-Red Time (s)	2.2	2.2	2.8	1.9	1.9		2.8	2.3	1.9	2.3	2.3	2.2
Lost Time Adjust (s)	-1.0	-1.0	-0.8	-1.3	-1.3		-0.8	-1.1	-1.3	-1.1	-1.1	-1.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lead	Lead	Lag	Lag		Lead		Lag		Lag	Lead
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		2.0	3.0	2.0	3.0	3.0	2.0
Recall Mode	None	None	None	None	None		None	C-Max	None	C-Max	C-Max	None
Walk Time (s)	7.0	7.0						7.0		7.0		7.0
Flash Dont Walk (s)	12.0	12.0						11.0		11.0		12.0
Pedestrian Calls (#/hr)	0	0						0		0		0
Act Effct Green (s)	13.9	13.9	21.9	48.1	48.1		8.0	53.0	106.1	53.0	40.0	59.0
Actuated g/C Ratio	0.11	0.11	0.17	0.37	0.37		0.06	0.41	0.82	0.41	0.31	0.45
v/c Ratio	0.46	0.62	0.32	0.94	0.28		0.75	0.75	0.43	0.59	1.06	0.14
Control Delay	61.5	68.2	26.5	64.7	31.3		75.0	37.4	2.1	49.9	97.4	20.5

Lanes, Volumes, Timings
 9: S Point Road (NC 273) & Nixon Road/R L Stowe Road

Henry Chapel TIA
 2026 Background PM - Ph 3



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay	0.0	0.0	7.4	0.0	0.0		0.0	3.2	0.7	0.0	16.2	0.0
Total Delay	61.5	68.2	33.9	64.7	31.3		75.0	40.6	2.7	49.9	113.6	20.5
LOS	E	E	C	E	C		E	D	A	D	F	C
Approach Delay		56.5			57.0			25.7			94.9	
Approach LOS		E			E			C			F	
Queue Length 50th (ft)	70	100	31	493	107		66	424	33	56	~558	48
Queue Length 95th (ft)	120	160	52	#793	179		m82	m494	m93	#134	#788	78
Internal Link Dist (ft)		923			936			545			920	
Turn Bay Length (ft)	200		100	225			280		225	25		100
Base Capacity (vph)	270	285	260	645	651		108	755	1260	145	571	780
Starvation Cap Reductn	0	0	0	0	0		0	107	386	0	0	0
Spillback Cap Reductn	0	0	137	0	0		0	0	0	0	28	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.32	0.43	0.67	0.94	0.28		0.74	0.88	0.61	0.59	1.11	0.13

Intersection Summary

Area Type: Other
 Cycle Length: 130
 Actuated Cycle Length: 130
 Offset: 0 (0%), Referenced to phase 2:NBSB and 6:SBT, Start of Green
 Natural Cycle: 150
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.06
 Intersection Signal Delay: 54.6
 Intersection Capacity Utilization 88.0%
 Analysis Period (min) 15
 Intersection LOS: D
 ICU Level of Service E

~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.


















Splits and Phases: 9: S Point Road (NC 273) & Nixon Road/R L Stowe Road



2026 Build-out Conditions

Lanes, Volumes, Timings
 1: S Point Road (NC 273) & Armstrong Road (NC 273)/Farm Road

Henry Chapel TIA
 2026 Build AM - Ph 3

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	578	0	30	0	0	0	64	176	0	0	69	253
Future Volume (vph)	578	0	30	0	0	0	64	176	0	0	69	253
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		0	0		100
Storage Lanes	0		0	0		0	0		0	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.993										0.850
Flt Protected		0.955						0.987				
Satd. Flow (prot)	0	1738	0	0	1863	0	0	1783	0	0	1759	1468
Flt Permitted		0.955						0.987				
Satd. Flow (perm)	0	1738	0	0	1863	0	0	1783	0	0	1759	1468
Link Speed (mph)		45			25			45			45	
Link Distance (ft)		1234			1013			1002			3097	
Travel Time (s)		18.7			27.6			15.2			46.9	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	36%	2%	2%	2%	14%	2%	2%	2%	8%	10%
Adj. Flow (vph)	642	0	33	0	0	0	71	196	0	0	77	281
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	675	0	0	0	0	0	267	0	0	77	281
Sign Control		Stop			Stop			Free			Free	

Intersection Summary	
Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	60.0% ICU Level of Service B
Analysis Period (min)	15

Intersection												
Int Delay, s/veh	84.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	↗
Traffic Vol, veh/h	578	0	30	0	0	0	64	176	0	0	69	253
Future Vol, veh/h	578	0	30	0	0	0	64	176	0	0	69	253
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	-	-	-	-	-	-	-	-	-	-	-	100
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	36	2	2	2	14	2	2	2	8	10
Mvmt Flow	642	0	33	0	0	0	71	196	0	0	77	281

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	415	415	77	572	696	196	358	0	0	196	0	0
Stage 1	77	77	-	338	338	-	-	-	-	-	-	-
Stage 2	338	338	-	234	358	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.56	7.12	6.52	6.22	4.24	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.624	3.518	4.018	3.318	2.326	-	-	2.218	-	-
Pot Cap-1 Maneuver	~ 548	528	897	431	365	845	1137	-	-	1377	-	-
Stage 1	932	831	-	676	641	-	-	-	-	-	-	-
Stage 2	676	641	-	769	628	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	~ 518	491	897	393	339	845	1137	-	-	1377	-	-
Mov Cap-2 Maneuver	~ 518	491	-	393	339	-	-	-	-	-	-	-
Stage 1	867	831	-	629	596	-	-	-	-	-	-	-
Stage 2	~ 629	596	-	740	628	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	162.4	0	2.2	0
HCM LOS	F	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1137	-	-	529	1377	-	-
HCM Lane V/C Ratio	0.063	-	-	1.277	-	-	-
HCM Control Delay (s)	8.4	0	-	162.4	0	0	-
HCM Lane LOS	A	A	-	F	A	A	-
HCM 95th %tile Q(veh)	0.2	-	-	27.5	0	-	-

Notes
 ~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Lanes, Volumes, Timings

Henry Chapel TIA

2: S Point Road (NC 273) & S Point Church Road/Henry Chapel Road

2026 Build AM - Ph 3



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕	↕		↕		↕	↕	↕
Traffic Volume (vph)	0	0	1	30	0	199	0	882	11	70	349	6
Future Volume (vph)	0	0	1	30	0	199	0	882	11	70	349	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		175	0		0	225		0
Storage Lanes	0		0	0		1	0		0	1		0
Taper Length (ft)	25			25			25			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.865				0.850		0.998			0.997	
Flt Protected					0.950					0.950		
Satd. Flow (prot)	0	1611	0	0	1770	1538	0	1838	0	1770	1756	0
Flt Permitted					0.757					0.950		
Satd. Flow (perm)	0	1611	0	0	1410	1538	0	1838	0	1770	1756	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		25			25			45			45	
Link Distance (ft)		1509			1293			1519			881	
Travel Time (s)		41.2			35.3			23.0			13.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	2%	2%	5%	2%	2%	100%	2%	8%	2%
Adj. Flow (vph)	0	0	1	33	0	221	0	980	12	78	388	7
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1	0	0	33	221	0	992	0	78	395	0
Turn Type		NA		Perm	NA	pm+ov		NA		Prot	NA	
Protected Phases		4			8	1		2		1	6	
Permitted Phases	4			8		8	2					
Detector Phase	4	4		8	8	1	2	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0	7.0	12.0	12.0		7.0	12.0	
Minimum Split (s)	14.0	14.0		14.0	14.0	14.0	19.0	19.0		14.0	19.0	
Total Split (s)	14.0	14.0		14.0	14.0	14.0	62.0	62.0		14.0	76.0	
Total Split (%)	15.6%	15.6%		15.6%	15.6%	15.6%	68.9%	68.9%		15.6%	84.4%	
Maximum Green (s)	7.0	7.0		7.0	7.0	7.0	55.0	55.0		7.0	69.0	
Yellow Time (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0	5.0	
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		-2.0			-2.0	-2.0		-2.0		-2.0	-2.0	
Total Lost Time (s)		5.0			5.0	5.0		5.0		5.0	5.0	
Lead/Lag						Lead	Lag	Lag		Lead		
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None	None	Min	Min		None	Min	
Act Effct Green (s)		9.7			9.7	16.7		46.6		9.7	64.7	
Actuated g/C Ratio		0.13			0.13	0.23		0.63		0.13	0.87	
v/c Ratio		0.00			0.18	0.64		0.86		0.34	0.26	
Control Delay		37.0			39.2	37.1		21.3		40.7	2.5	
Queue Delay		0.0			0.0	0.0		0.0		0.0	0.0	
Total Delay		37.0			39.2	37.1		21.3		40.7	2.5	
LOS		D			D	D		C		D	A	
Approach Delay		37.0			37.3			21.3			8.8	



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach LOS		D			D			C				A
Queue Length 50th (ft)		1			18	109		404		42	46	
Queue Length 95th (ft)		5			47	183		#669		87	71	
Internal Link Dist (ft)		1429			1213			1439			801	
Turn Bay Length (ft)						175				225		
Base Capacity (vph)		211			185	345		1435		232	1535	
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		0.00			0.18	0.64		0.69		0.34	0.26	

Intersection Summary


















Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 74.1
 Natural Cycle: 80
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.86
 Intersection Signal Delay: 20.2
 Intersection LOS: C
 Intersection Capacity Utilization 77.7%
 ICU Level of Service D
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 2: S Point Road (NC 273) & S Point Church Road/Henry Chapel Road



Lanes, Volumes, Timings
 3: S Point Road (NC 273) & BB Drive/Forest Hill Road

Henry Chapel TIA
 2026 Build AM - Ph 3

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	4	0	0	115	0	1255	8	39	473	2
Future Volume (vph)	0	0	4	0	0	115	0	1255	8	39	473	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		0	100		0
Storage Lanes	0		1	0		1	0		0	1		0
Taper Length (ft)	25			25			25			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.865			0.865		0.999			0.999	
Flt Protected										0.950		
Satd. Flow (prot)	0	0	1611	0	0	1565	0	1859	0	1770	1774	0
Flt Permitted										0.950		
Satd. Flow (perm)	0	0	1611	0	0	1565	0	1859	0	1770	1774	0
Link Speed (mph)		25			25			45			45	
Link Distance (ft)		1341			477			2444			1582	
Travel Time (s)		36.6			13.0			37.0			24.0	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	2%	2%	5%	2%	2%	17%	2%	7%	2%
Adj. Flow (vph)	0	0	4	0	0	128	0	1394	9	43	526	2
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	4	0	0	128	0	1403	0	43	528	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary	
Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	80.3% ICU Level of Service D
Analysis Period (min)	15

Intersection												
Int Delay, s/veh	4.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations			↗			↗		↔		↗	↘	
Traffic Vol, veh/h	0	0	4	0	0	115	0	1255	8	39	473	2
Future Vol, veh/h	0	0	4	0	0	115	0	1255	8	39	473	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	-	-	0	-	-	0	-	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	5	2	2	17	2	7	2
Mvmt Flow	0	0	4	0	0	128	0	1394	9	43	526	2

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	-	-	527	-	-	1399	528	0	0	1403	0	0
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	6.22	-	-	6.25	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.318	-	-	3.345	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	0	0	551	0	0	170	1039	-	-	487	-	-
Stage 1	0	0	-	0	0	-	-	-	-	-	-	-
Stage 2	0	0	-	0	0	-	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	551	-	-	170	1039	-	-	487	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	11.6		71.7		0		1	
HCM LOS	B		F					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1039	-	-	551	170	487	-	-
HCM Lane V/C Ratio	-	-	-	0.008	0.752	0.089	-	-
HCM Control Delay (s)	0	-	-	11.6	71.7	13.1	-	-
HCM Lane LOS	A	-	-	B	F	B	-	-
HCM 95th %tile Q(veh)	0	-	-	0	4.8	0.3	-	-

Lanes, Volumes, Timings
 4: Colonial Drive & Forest Hill Road



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	8	33	0	12	107	1
Future Volume (vph)	8	33	0	12	107	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.891			0.999		
Flt Protected				0.953		
Satd. Flow (prot)	1660	0	0	1863	1773	0
Flt Permitted				0.953		
Satd. Flow (perm)	1660	0	0	1863	1773	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	477			1074	636	
Travel Time (s)	13.0			29.3	17.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	9	37	0	13	119	1
Shared Lane Traffic (%)						
Lane Group Flow (vph)	46	0	0	13	120	0
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 16.0% ICU Level of Service A

Analysis Period (min) 15

Intersection						
Int Delay, s/veh	6.2					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	8	33	0	12	107	1
Future Vol, veh/h	8	33	0	12	107	1
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	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	9	37	0	13	119	1

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	46	0	41
Stage 1	-	-	-	-	28
Stage 2	-	-	-	-	13
Critical Hdwy	-	-	4.12	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	-	-	2.218	-	3.518
Pot Cap-1 Maneuver	-	-	1562	-	970
Stage 1	-	-	-	-	995
Stage 2	-	-	-	-	1010
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1562	-	970
Mov Cap-2 Maneuver	-	-	-	-	970
Stage 1	-	-	-	-	995
Stage 2	-	-	-	-	1010

Approach	EB	WB	NB
HCM Control Delay, s	0	0	9.2
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	971	-	-	1562	-
HCM Lane V/C Ratio	0.124	-	-	-	-
HCM Control Delay (s)	9.2	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0.4	-	-	0	-

Lanes, Volumes, Timings
 5: Colonial Drive & Timber Ridge Road/Access 3



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	98	9	0	32	2
Future Volume (vph)	0	98	9	0	32	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.865					
Flt Protected						0.955
Satd. Flow (prot)	1611	0	1863	0	0	1779
Flt Permitted						0.955
Satd. Flow (perm)	1611	0	1863	0	0	1779
Link Speed (mph)	25		25		25	
Link Distance (ft)	2169		1055		636	
Travel Time (s)	59.2		28.8		17.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	109	10	0	36	2
Shared Lane Traffic (%)						
Lane Group Flow (vph)	109	0	10	0	0	38
Sign Control	Stop		Free		Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	21.3% ICU Level of Service A
Analysis Period (min)	15

Intersection						
Int Delay, s/veh	7.7					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	98	9	0	32	2
Future Vol, veh/h	0	98	9	0	32	2
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	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	109	10	0	36	2





















Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	84	10	0	0	10	0
Stage 1	10	-	-	-	-	-
Stage 2	74	-	-	-	-	-
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	918	1071	-	-	1610	-
Stage 1	1013	-	-	-	-	-
Stage 2	949	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	898	1071	-	-	1610	-
Mov Cap-2 Maneuver	898	-	-	-	-	-
Stage 1	1013	-	-	-	-	-
Stage 2	928	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.7	0	6.9
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	1071	1610
HCM Lane V/C Ratio	-	-	0.102	0.022
HCM Control Delay (s)	-	-	8.7	7.3
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0.3	0.1

Lanes, Volumes, Timings
6: S Point Road (NC 273) & Belmont MS/Belwood Drive

Henry Chapel TIA
2026 Build AM - Ph 3

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	267	1	49	2	2	33	110	1110	1	23	543	294
Future Volume (vph)	267	1	49	2	2	33	110	1110	1	23	543	294
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		3%			0%			1%			0%	
Storage Length (ft)	0		175	0		0	200		0	100		200
Storage Lanes	0		1	0		0	1		0	1		1
Taper Length (ft)	25			25			100			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	1.00
Frt			0.850		0.878							0.850
Flt Protected		0.953			0.998		0.950			0.950		
Satd. Flow (prot)	0	1732	1560	0	1521	0	1744	3522	0	1770	3343	1568
Flt Permitted		0.953			0.998		0.950			0.191		
Satd. Flow (perm)	0	1732	1560	0	1521	0	1744	3522	0	356	3343	1568
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		35			25			35			35	
Link Distance (ft)		1017			1050			394			1373	
Travel Time (s)		19.8			28.6			7.7			26.7	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	3%	2%	2%	100%	2%	5%	3%	2%	2%	2%	8%	3%
Adj. Flow (vph)	297	1	54	2	2	37	122	1233	1	26	603	327
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	298	54	0	41	0	122	1234	0	26	603	327
Turn Type	Split	NA	pm+ov	Split	NA		Prot	NA		Perm	NA	pm+ov
Protected Phases	4	4	5	8	8		5	2			6	4
Permitted Phases			4							6		6
Detector Phase	4	4	5	8	8		5	2		6	6	4
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0		7.0	12.0		12.0	12.0	7.0
Minimum Split (s)	11.9	11.9	12.1	14.0	14.0		12.1	17.6		32.6	32.6	11.9
Total Split (s)	31.0	31.0	20.0	14.0	14.0		20.0	75.0		55.0	55.0	31.0
Total Split (%)	25.8%	25.8%	16.7%	11.7%	11.7%		16.7%	62.5%		45.8%	45.8%	25.8%
Maximum Green (s)	26.1	26.1	14.9	7.0	7.0		14.9	69.4		49.4	49.4	26.1
Yellow Time (s)	3.0	3.0	3.0	5.0	5.0		3.0	4.5		4.5	4.5	3.0
All-Red Time (s)	1.9	1.9	2.1	2.0	2.0		2.1	1.1		1.1	1.1	1.9
Lost Time Adjust (s)		0.1	-0.1		-2.0		-0.1	-0.6		-0.6	-0.6	0.1
Total Lost Time (s)		5.0	5.0		5.0		5.0	5.0		5.0	5.0	5.0
Lead/Lag			Lead				Lead			Lag	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		2.0	6.0		6.0	6.0	2.0
Minimum Gap (s)	2.0	2.0	2.0	2.0	2.0		2.0	3.0		3.0	3.0	2.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0		0.0	15.0		15.0	15.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0		0.0	45.0		45.0	45.0	0.0
Recall Mode	None	None	None	None	None		None	Min		Min	Min	None
Walk Time (s)										7.0	7.0	
Flash Dont Walk (s)										20.0	20.0	
Pedestrian Calls (#/hr)										0	0	
Act Efect Green (s)		18.8	32.7		10.0		10.9	36.0		23.9	23.9	50.0

Lanes, Volumes, Timings
 6: S Point Road (NC 273) & Belmont MS/Belwood Drive

Henry Chapel TIA
 2026 Build AM - Ph 3



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Actuated g/C Ratio		0.26	0.45		0.14		0.15	0.49		0.33	0.33	0.69
v/c Ratio		0.67	0.08		0.20		0.47	0.71		0.22	0.55	0.30
Control Delay		35.7	9.3		39.9		40.8	18.8		31.9	26.8	9.1
Queue Delay		0.0	0.0		0.0		0.0	0.0		0.0	0.0	0.0
Total Delay		35.7	9.3		39.9		40.8	18.8		31.9	26.8	9.1
LOS		D	A		D		D	B		C	C	A
Approach Delay		31.7			39.9			20.8			20.9	
Approach LOS		C			D			C			C	
Queue Length 50th (ft)		136	10		19		57	256		10	140	81
Queue Length 95th (ft)		259	28		59		128	385		38	231	147
Internal Link Dist (ft)		937			970			314			1293	
Turn Bay Length (ft)			175				200			100		200
Base Capacity (vph)		688	825		209		399	3084		255	2396	1170
Starvation Cap Reductn		0	0		0		0	0		0	0	0
Spillback Cap Reductn		0	0		0		0	0		0	0	0
Storage Cap Reductn		0	0		0		0	0		0	0	0
Reduced v/c Ratio		0.43	0.07		0.20		0.31	0.40		0.10	0.25	0.28




















Intersection Summary	
Area Type:	Other
Cycle Length:	120
Actuated Cycle Length:	72.8
Natural Cycle:	80
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.71
Intersection Signal Delay:	22.5
Intersection LOS:	C
Intersection Capacity Utilization:	74.7%
ICU Level of Service:	D
Analysis Period (min):	15

Splits and Phases: 6: S Point Road (NC 273) & Belmont MS/Belwood Drive



Lanes, Volumes, Timings
 7: S Point Road (NC 273) & McKee Farm Road/Stowe Road

Henry Chapel TIA
 2026 Build AM - Ph 3

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	15	5	21	17	1	60	26	1346	56	40	832	73
Future Volume (vph)	15	5	21	17	1	60	26	1346	56	40	832	73
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		200	0		0	0		0	100		0
Storage Lanes	0		1	0		0	0		0	1		0
Taper Length (ft)	25			25			25			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	1.00	0.95	0.95
Frt			0.850		0.896			0.994			0.988	
Flt Protected		0.964			0.989			0.999		0.950		
Satd. Flow (prot)	0	1796	1524	0	1651	0	0	3514	0	1703	3405	0
Flt Permitted		0.964			0.989			0.999		0.950		
Satd. Flow (perm)	0	1796	1524	0	1651	0	0	3514	0	1703	3405	0
Link Speed (mph)		25			25			35			35	
Link Distance (ft)		1043			1485			1373			492	
Travel Time (s)		28.4			40.5			26.7			9.6	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	6%	2%	2%	2%	2%	2%	2%	6%	5%	2%
Adj. Flow (vph)	17	6	23	19	1	67	29	1496	62	44	924	81
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	23	23	0	87	0	0	1587	0	44	1005	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary	
Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	75.6%
	ICU Level of Service D
Analysis Period (min)	15

HCM 6th TWSC
 7: S Point Road (NC 273) & McKee Farm Road/Stowe Road

Henry Chapel TIA
 2026 Build AM - Ph 3

Intersection												
Int Delay, s/veh	22.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗		↕			↕		↗	↕	
Traffic Vol, veh/h	15	5	21	17	1	60	26	1346	56	40	832	73
Future Vol, veh/h	15	5	21	17	1	60	26	1346	56	40	832	73
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	-	-	200	-	-	-	-	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	6	2	2	2	2	2	2	6	5	2
Mvmt Flow	17	6	23	19	1	67	29	1496	62	44	924	81

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1860	2669	503	2138	2678	779	1005	0	0	1558	0	0
Stage 1	1053	1053	-	1585	1585	-	-	-	-	-	-	-
Stage 2	807	1616	-	553	1093	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	7.02	7.54	6.54	6.94	4.14	-	-	4.22	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.36	3.52	4.02	3.32	2.22	-	-	2.26	-	-
Pot Cap-1 Maneuver	45	22	503	28	22	339	685	-	-	402	-	-
Stage 1	242	301	-	113	167	-	-	-	-	-	-	-
Stage 2	341	161	-	485	288	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	23	13	503	~ 13	13	339	685	-	-	402	-	-
Mov Cap-2 Maneuver	23	13	-	~ 13	13	-	-	-	-	-	-	-
Stage 1	162	268	-	75	112	-	-	-	-	-	-	-
Stage 2	181	108	-	403	257	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	275	\$ 530.8	1.8	0.6
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	685	-	-	19	503	50	402	-	-
HCM Lane V/C Ratio	0.042	-	-	1.17	0.046	1.733	0.111	-	-
HCM Control Delay (s)	10.5	1.7	\$ 550.7	12.5	\$ 530.8	15.1	-	-	-
HCM Lane LOS	B	A	-	F	B	F	C	-	-
HCM 95th %tile Q(veh)	0.1	-	-	3.1	0.1	8.4	0.4	-	-

Notes
 ~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Lanes, Volumes, Timings

Henry Chapel TIA

8: S Point Road (NC 273) & South Point HS/Red Raider Run

2026 Build AM - Ph 3



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↕	↗	↖	↕	↗	↖	↕	↗
Traffic Volume (vph)	0	0	0	142	35	156	76	1214	101	105	804	54
Future Volume (vph)	0	0	0	142	35	156	76	1214	101	105	804	54
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			4%			-1%			1%	
Storage Length (ft)	0		0	0		100	175		0	100		0
Storage Lanes	0		0	0		1	1		0	1		0
Taper Length (ft)	25			25			100			75		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Fr _t						0.850		0.989			0.991	
Fl _t Protected					0.961		0.950			0.950		
Satd. Flow (prot)	0	0	0	0	1754	1552	1778	3518	0	1761	3366	0
Fl _t Permitted					0.961		0.950			0.950		
Satd. Flow (perm)	0	0	0	0	1754	1552	1778	3518	0	1761	3366	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		25			25			35			35	
Link Distance (ft)		1017			1038			492			625	
Travel Time (s)		27.7			28.3			9.6			12.2	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	6%	2%
Adj. Flow (vph)	0	0	0	158	39	173	84	1349	112	117	893	60
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	197	173	84	1461	0	117	953	0
Turn Type				Perm	NA	pm+ov	Prot	NA		Prot	NA	
Protected Phases					8	1	5	2		1	6	
Permitted Phases				8		8						
Detector Phase				8	8	1	5	2		1	6	
Switch Phase												
Minimum Initial (s)				7.0	7.0	7.0	7.0	10.0		7.0	10.0	
Minimum Split (s)				25.4	25.4	12.6	12.1	27.7		12.6	23.7	
Total Split (s)				26.0	26.0	13.0	13.0	81.0		13.0	81.0	
Total Split (%)				21.7%	21.7%	10.8%	10.8%	67.5%		10.8%	67.5%	
Maximum Green (s)				20.6	20.6	7.4	7.9	75.3		7.4	75.3	
Yellow Time (s)				3.0	3.0	3.0	3.0	3.9		3.0	3.9	
All-Red Time (s)				2.4	2.4	2.6	2.1	1.8		2.6	1.8	
Lost Time Adjust (s)					-0.4	-0.6	-0.1	-0.7		-0.6	-0.7	
Total Lost Time (s)					5.0	5.0	5.0	5.0		5.0	5.0	
Lead/Lag						Lead	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)				2.0	2.0	2.0	2.0	3.0		2.0	3.0	
Recall Mode				None	None	None	None	C-Max		None	C-Max	
Walk Time (s)				7.0	7.0			7.0				
Flash Dont Walk (s)				13.0	13.0			15.0				
Pedestrian Calls (#/hr)				0	0			0				
Act Effct Green (s)					17.4	33.1	8.6	76.9		10.7	79.0	
Actuated g/C Ratio					0.14	0.28	0.07	0.64		0.09	0.66	
v/c Ratio					0.78	0.41	0.66	0.65		0.75	0.43	
Control Delay					69.4	38.5	78.8	15.1		79.7	8.0	

Lanes, Volumes, Timings
 8: S Point Road (NC 273) & South Point HS/Red Raider Run

Henry Chapel TIA
 2026 Build AM - Ph 3

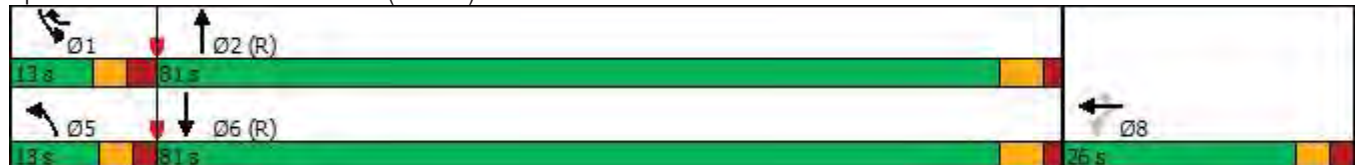


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay					0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay					69.4	38.5	78.8	15.2		79.7	8.0	
LOS					E	D	E	B		E	A	
Approach Delay					54.9			18.6			15.9	
Approach LOS					D			B			B	
Queue Length 50th (ft)					148	108	63	347		90	182	
Queue Length 95th (ft)					225	176	#146	419		m#163	m225	
Internal Link Dist (ft)		937			958			412			545	
Turn Bay Length (ft)						100	175			100		
Base Capacity (vph)					306	427	130	2254		157	2215	
Starvation Cap Reductn					0	0	0	0		0	0	
Spillback Cap Reductn					0	0	0	43		0	0	
Storage Cap Reductn					0	0	0	0		0	0	
Reduced v/c Ratio					0.64	0.41	0.65	0.66		0.75	0.43	

Intersection Summary
























Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 92 (77%), Referenced to phase 2:NBT and 6:SBT, Start of Green
 Natural Cycle: 80
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.78
 Intersection Signal Delay: 22.1
 Intersection LOS: C
 Intersection Capacity Utilization 64.8%
 ICU Level of Service C
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 8: S Point Road (NC 273) & South Point HS/Red Raider Run



Lanes, Volumes, Timings
 9: S Point Road (NC 273) & Nixon Road/R L Stowe Road

Henry Chapel TIA
 2026 Build AM - Ph 3

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	116	185	89	338	91	30	95	609	663	49	573	59
Future Volume (vph)	116	185	89	338	91	30	95	609	663	49	573	59
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		1%			1%			1%			1%	
Storage Length (ft)	200		100	225		200	280		0	25		100
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	250			100			100			125		
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.963				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1761	1853	1474	3197	1689	0	1678	1853	1575	1761	1853	1530
Flt Permitted	0.950			0.950			0.950			0.214		
Satd. Flow (perm)	1761	1853	1474	3197	1689	0	1678	1853	1575	397	1853	1530
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		25			35			35			35	
Link Distance (ft)		1003			1016			625			1000	
Travel Time (s)		27.4			19.8			12.2			19.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	9%	9%	9%	4%	7%	2%	2%	2%	2%	5%
Adj. Flow (vph)	129	206	99	376	101	33	106	677	737	54	637	66
Shared Lane Traffic (%)												
Lane Group Flow (vph)	129	206	99	376	134	0	106	677	737	54	637	66
Turn Type	Split	NA	pm+ov	Split	NA		Prot	NA	pm+ov	D.Pm	NA	pm+ov
Protected Phases	3	3	5	4	4		5	2	4		6	3
Permitted Phases			3						2	2		6
Detector Phase	3	3	5	4	4		5	2	4	2	6	3
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0		7.0	10.0	7.0	10.0	10.0	7.0
Minimum Split (s)	25.0	25.0	12.8	13.3	13.3		12.8	24.1	13.3	24.1	24.1	25.0
Total Split (s)	25.0	25.0	15.0	32.0	32.0		15.0	63.0	32.0	63.0	48.0	25.0
Total Split (%)	20.8%	20.8%	12.5%	26.7%	26.7%		12.5%	52.5%	26.7%	52.5%	40.0%	20.8%
Maximum Green (s)	19.0	19.0	9.2	25.7	25.7		9.2	56.9	25.7	56.9	41.9	19.0
Yellow Time (s)	3.8	3.8	3.0	4.4	4.4		3.0	3.8	4.4	3.8	3.8	3.8
All-Red Time (s)	2.2	2.2	2.8	1.9	1.9		2.8	2.3	1.9	2.3	2.3	2.2
Lost Time Adjust (s)	-1.0	-1.0	-0.8	-1.3	-1.3		-0.8	-1.1	-1.3	-1.1	-1.1	-1.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lead	Lead	Lag	Lag		Lead		Lag		Lag	Lead
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		2.0	3.0	2.0	3.0	3.0	2.0
Recall Mode	None	None	None	None	None		None	C-Max	None	C-Max	C-Max	None
Walk Time (s)	7.0	7.0						7.0		7.0		7.0
Flash Dont Walk (s)	12.0	12.0						11.0		11.0		12.0
Pedestrian Calls (#/hr)	0	0						0		0		0
Act Effct Green (s)	17.4	17.4	27.4	25.1	25.1		10.0	62.6	92.6	62.6	47.6	69.9
Actuated g/C Ratio	0.14	0.14	0.23	0.21	0.21		0.08	0.52	0.77	0.52	0.40	0.58
v/c Ratio	0.51	0.77	0.29	0.56	0.38		0.76	0.70	0.61	0.26	0.87	0.07
Control Delay	54.0	68.2	21.9	45.7	43.4		92.9	18.3	5.9	22.7	48.9	12.1

Lanes, Volumes, Timings
 9: S Point Road (NC 273) & Nixon Road/R L Stowe Road

Henry Chapel TIA
 2026 Build AM - Ph 3

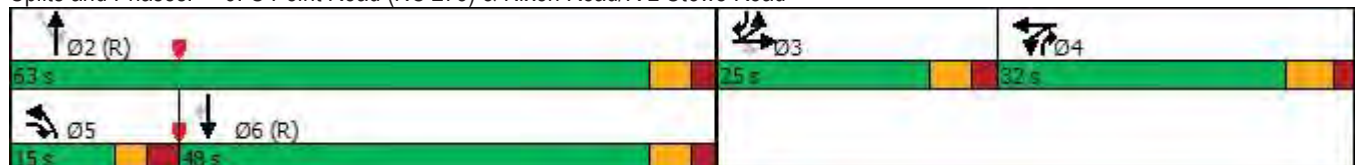


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.4	0.0	0.0	0.0	0.0
Total Delay	54.0	68.2	21.9	45.7	43.4		92.9	18.6	5.9	22.7	48.9	12.1
LOS	D	E	C	D	D		F	B	A	C	D	B
Approach Delay		53.4			45.1			17.7			43.8	
Approach LOS		D			D			B			D	
Queue Length 50th (ft)	92	154	35	130	87		73	385	136	24	479	23
Queue Length 95th (ft)	154	235	63	182	148		m#151	556	162	58	#719	44
Internal Link Dist (ft)		923			936			545			920	
Turn Bay Length (ft)	200		100	225			280			25		100
Base Capacity (vph)	293	308	339	726	384		143	965	1206	206	734	925
Starvation Cap Reductn	0	0	0	0	0		0	53	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.44	0.67	0.29	0.52	0.35		0.74	0.74	0.61	0.26	0.87	0.07

Intersection Summary

Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 0 (0%), Referenced to phase 2:NBSB and 6:SBT, Start of Green
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.87
 Intersection Signal Delay: 33.0
 Intersection LOS: C
 Intersection Capacity Utilization 76.4%
 ICU Level of Service D
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 9: S Point Road (NC 273) & Nixon Road/R L Stowe Road



Lanes, Volumes, Timings
 10: Henry Chapel Road & Access 1



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↔		↙	↘
Traffic Volume (vph)	51	30	82	0	0	147
Future Volume (vph)	51	30	82	0	0	147
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t					0.865	
Fl _t Protected		0.969				
Satd. Flow (prot)	0	1730	1810	0	1611	0
Fl _t Permitted		0.969				
Satd. Flow (perm)	0	1730	1810	0	1611	0
Link Speed (mph)		25	25		25	
Link Distance (ft)		1293	1432		1041	
Travel Time (s)		35.3	39.1		28.4	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	14%	5%	2%	2%	2%
Adj. Flow (vph)	57	33	91	0	0	163
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	90	91	0	163	0
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	26.8%
ICU Level of Service	A
Analysis Period (min)	15

Intersection						
Int Delay, s/veh	5.7					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	51	30	82	0	0	147
Future Vol, veh/h	51	30	82	0	0	147
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	90	90	90	90	90	90
Heavy Vehicles, %	2	14	5	2	2	2
Mvmt Flow	57	33	91	0	0	163

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	91	0	-	0	238 91
Stage 1	-	-	-	-	91 -
Stage 2	-	-	-	-	147 -
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	1504	-	-	-	750 967
Stage 1	-	-	-	-	933 -
Stage 2	-	-	-	-	880 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1504	-	-	-	721 967
Mov Cap-2 Maneuver	-	-	-	-	721 -
Stage 1	-	-	-	-	897 -
Stage 2	-	-	-	-	880 -

Approach	EB	WB	SB
HCM Control Delay, s	4.7	0	9.5
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1504	-	-	-	967
HCM Lane V/C Ratio	0.038	-	-	-	0.169
HCM Control Delay (s)	7.5	0	-	-	9.5
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0.1	-	-	-	0.6

Lanes, Volumes, Timings
 11: Henry Chapel Road & Access 2



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	21	9	23	0	0	59
Future Volume (vph)	21	9	23	0	0	59
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t					0.865	
Fl _t Protected		0.966				
Satd. Flow (prot)	0	1737	1810	0	1611	0
Fl _t Permitted		0.966				
Satd. Flow (perm)	0	1737	1810	0	1611	0
Link Speed (mph)		25	25		25	
Link Distance (ft)		1432	1164		1055	
Travel Time (s)		39.1	31.7		28.8	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	14%	5%	2%	2%	2%
Adj. Flow (vph)	23	10	26	0	0	66
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	33	26	0	66	0
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	18.6%
ICU Level of Service	A
Analysis Period (min)	15

Intersection						
Int Delay, s/veh	5.9					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	21	9	23	0	0	59
Future Vol, veh/h	21	9	23	0	0	59
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	90	90	90	90	90	90
Heavy Vehicles, %	2	14	5	2	2	2
Mvmt Flow	23	10	26	0	0	66


















Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	26	0	-	0	82
Stage 1	-	-	-	-	26
Stage 2	-	-	-	-	56
Critical Hdwy	4.12	-	-	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	2.218	-	-	-	3.518
Pot Cap-1 Maneuver	1588	-	-	-	920
Stage 1	-	-	-	-	997
Stage 2	-	-	-	-	967
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	1588	-	-	-	906
Mov Cap-2 Maneuver	-	-	-	-	906
Stage 1	-	-	-	-	982
Stage 2	-	-	-	-	967

Approach	EB	WB	SB
HCM Control Delay, s	5.1	0	8.7
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1588	-	-	-	1050
HCM Lane V/C Ratio	0.015	-	-	-	0.062
HCM Control Delay (s)	7.3	0	-	-	8.7
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.2

Lanes, Volumes, Timings
 1: S Point Road (NC 273) & Armstrong Road (NC 273)/Farm Road

Henry Chapel TIA
 2026 Build PM - Ph 3

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	498	0	38	0	0	1	54	102	0	2	131	612
Future Volume (vph)	498	0	38	0	0	1	54	102	0	2	131	612
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		0	0		100
Storage Lanes	0		0	0		0	0		0	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.990			0.865							0.850
Flt Protected		0.956						0.983			0.999	
Satd. Flow (prot)	0	1761	0	0	1611	0	0	1772	0	0	1861	1568
Flt Permitted		0.956						0.983			0.999	
Satd. Flow (perm)	0	1761	0	0	1611	0	0	1772	0	0	1861	1568
Link Speed (mph)		45			25			45			45	
Link Distance (ft)		1234			1013			1002			3097	
Travel Time (s)		18.7			27.6			15.2			46.9	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	4%	2%	2%	2%	8%	4%	2%	2%	2%	3%
Adj. Flow (vph)	553	0	42	0	0	1	60	113	0	2	146	680
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	595	0	0	1	0	0	173	0	0	148	680
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	61.9%
Analysis Period (min)	15
	ICU Level of Service B

Intersection												
Int Delay, s/veh	33.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	↕
Traffic Vol, veh/h	498	0	38	0	0	1	54	102	0	2	131	612
Future Vol, veh/h	498	0	38	0	0	1	54	102	0	2	131	612
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	-	-	-	-	-	-	-	-	-	-	-	100
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	4	2	2	2	8	4	2	2	2	3
Mvmt Flow	553	0	42	0	0	1	60	113	0	2	146	680

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	384	383	146	744	1063	113	826	0	0	113	0	0
Stage 1	150	150	-	233	233	-	-	-	-	-	-	-
Stage 2	234	233	-	511	830	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.24	7.12	6.52	6.22	4.18	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.336	3.518	4.018	3.318	2.272	-	-	2.218	-	-
Pot Cap-1 Maneuver	574	550	896	331	223	940	779	-	-	1476	-	-
Stage 1	853	773	-	770	712	-	-	-	-	-	-	-
Stage 2	769	712	-	545	385	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	~ 536	503	896	295	204	940	779	-	-	1476	-	-
Mov Cap-2 Maneuver	~ 536	503	-	295	204	-	-	-	-	-	-	-
Stage 1	783	771	-	707	654	-	-	-	-	-	-	-
Stage 2	705	654	-	518	384	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	88.3	8.8	3.5	0
HCM LOS	F	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	779	-	-	552	940	1476	-	-
HCM Lane V/C Ratio	0.077	-	-	1.079	0.001	0.002	-	-
HCM Control Delay (s)	10	0	-	88.3	8.8	7.4	0	-
HCM Lane LOS	B	A	-	F	A	A	A	-
HCM 95th %tile Q(veh)	0.2	-	-	17.9	0	0	-	-

Notes
 ~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Lanes, Volumes, Timings

Henry Chapel TIA

2: S Point Road (NC 273) & S Point Church Road/Henry Chapel Road

2026 Build PM - Ph 3



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔	↔		↔		↔	↔	↔
Traffic Volume (vph)	1	0	0	26	0	147	0	692	40	241	809	2
Future Volume (vph)	1	0	0	26	0	147	0	692	40	241	809	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		175	0		0	225		0
Storage Lanes	0		0	0		1	0		0	1		0
Taper Length (ft)	25			25			25			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt						0.850		0.993				
Flt Protected		0.950			0.950					0.950		
Satd. Flow (prot)	0	1770	0	0	1770	1468	0	1833	0	1770	1845	0
Flt Permitted		0.952			0.952					0.950		
Satd. Flow (perm)	0	1773	0	0	1773	1468	0	1833	0	1770	1845	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		25			25			45			45	
Link Distance (ft)		1509			1293			1519			881	
Travel Time (s)		41.2			35.3			23.0			13.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	2%	2%	10%	2%	3%	2%	2%	3%	2%
Adj. Flow (vph)	1	0	0	29	0	163	0	769	44	268	899	2
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1	0	0	29	163	0	813	0	268	901	0
Turn Type	Perm	NA		Perm	NA	pm+ov		NA		Prot	NA	
Protected Phases		4			8	1		2		1	6	
Permitted Phases	4			8		8	2					
Detector Phase	4	4		8	8	1	2	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0	7.0	12.0	12.0		7.0	12.0	
Minimum Split (s)	14.0	14.0		14.0	14.0	14.0	19.0	19.0		14.0	19.0	
Total Split (s)	14.0	14.0		14.0	14.0	22.0	54.0	54.0		22.0	76.0	
Total Split (%)	15.6%	15.6%		15.6%	15.6%	24.4%	60.0%	60.0%		24.4%	84.4%	
Maximum Green (s)	7.0	7.0		7.0	7.0	15.0	47.0	47.0		15.0	69.0	
Yellow Time (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0	5.0	
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		-2.0			-2.0	-2.0		-2.0		-2.0	-2.0	
Total Lost Time (s)		5.0			5.0	5.0		5.0		5.0	5.0	
Lead/Lag						Lead	Lag	Lag		Lead		
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None	None	Min	Min		None	Min	
Act Effect Green (s)		9.7			9.7	20.9		39.2		16.5	64.9	
Actuated g/C Ratio		0.14			0.14	0.29		0.55		0.23	0.92	
v/c Ratio		0.00			0.12	0.38		0.80		0.65	0.53	
Control Delay		36.0			36.4	24.6		21.3		38.5	3.6	
Queue Delay		0.0			0.0	0.0		0.0		0.0	0.0	
Total Delay		36.0			36.4	24.6		21.3		38.5	3.6	
LOS		D			D	C		C		D	A	
Approach Delay		36.0			26.4			21.3			11.6	



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach LOS		D			C			C				B
Queue Length 50th (ft)		0			12	65		214		111		0
Queue Length 95th (ft)		5			42	120		#536		#271		242
Internal Link Dist (ft)		1429			1213			1439				801
Turn Bay Length (ft)						175				225		
Base Capacity (vph)		242			242	470		1332		456		1675
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		0.00			0.12	0.35		0.61		0.59		0.54

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 70.9

Natural Cycle: 75

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.80

Intersection Signal Delay: 16.5

Intersection LOS: B

Intersection Capacity Utilization 99.9%

ICU Level of Service F

Analysis Period (min) 15

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



















Queue shown is maximum after two cycles.

Splits and Phases: 2: S Point Road (NC 273) & S Point Church Road/Henry Chapel Road



Lanes, Volumes, Timings
 3: S Point Road (NC 273) & BB Drive/Forest Hill Road

Henry Chapel TIA
 2026 Build PM - Ph 3

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	4	0	0	72	0	934	3	121	1190	1
Future Volume (vph)	0	0	4	0	0	72	0	934	3	121	1190	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		0	100		0
Storage Lanes	0		1	0		1	0		0	1		0
Taper Length (ft)	25			25			25			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.865			0.865						
Flt Protected										0.950		
Satd. Flow (prot)	0	0	1611	0	0	1611	0	1863	0	1770	1863	0
Flt Permitted										0.950		
Satd. Flow (perm)	0	0	1611	0	0	1611	0	1863	0	1770	1863	0
Link Speed (mph)		25			25			45			45	
Link Distance (ft)		1341			477			2444			1582	
Travel Time (s)		36.6			13.0			37.0			24.0	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	4	0	0	80	0	1038	3	134	1322	1
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	4	0	0	80	0	1041	0	134	1323	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	103.9%
Analysis Period (min)	15
	ICU Level of Service G

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	4	0	0	72	0	934	3	121	1190	1
Future Vol, veh/h	0	0	4	0	0	72	0	934	3	121	1190	1
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	-	-	0	-	-	0	-	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	4	0	0	80	0	1038	3	134	1322	1

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	-	-	1323	-	-	1040	1323	0	0	1041	0	0
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	6.22	-	-	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.318	-	-	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	0	0	191	0	0	280	522	-	-	668	-	-
Stage 1	0	0	-	0	0	-	-	-	-	-	-	-
Stage 2	0	0	-	0	0	-	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	191	-	-	280	522	-	-	668	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB				
HCM Control Delay, s	24.3		22.9		0		1.1				
HCM LOS	C		C								

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	522	-	-	191	280	668	-	-
HCM Lane V/C Ratio	-	-	-	0.023	0.286	0.201	-	-
HCM Control Delay (s)	0	-	-	24.3	22.9	11.7	-	-
HCM Lane LOS	A	-	-	C	C	B	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	1.1	0.7	-	-

Lanes, Volumes, Timings
 4: Colonial Drive & Forest Hill Road



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	4	115	1	4	71	1
Future Volume (vph)	4	115	1	4	71	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.869			0.998		
Flt Protected				0.990	0.953	
Satd. Flow (prot)	1456	0	0	1844	1601	0
Flt Permitted				0.990	0.953	
Satd. Flow (perm)	1456	0	0	1844	1601	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	477			1074	636	
Travel Time (s)	13.0			29.3	17.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	25%	13%	2%	2%	13%	2%
Adj. Flow (vph)	4	128	1	4	79	1
Shared Lane Traffic (%)						
Lane Group Flow (vph)	132	0	0	5	80	0
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	18.0%
Analysis Period (min)	15
	ICU Level of Service A

Intersection						
Int Delay, s/veh	3.5					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	4	115	1	4	71	1
Future Vol, veh/h	4	115	1	4	71	1
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	90	90	90	90	90	90
Heavy Vehicles, %	25	13	2	2	13	2
Mvmt Flow	4	128	1	4	79	1

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	132	0	74
Stage 1	-	-	-	-	68
Stage 2	-	-	-	-	6
Critical Hdwy	-	-	4.12	-	6.53
Critical Hdwy Stg 1	-	-	-	-	5.53
Critical Hdwy Stg 2	-	-	-	-	5.53
Follow-up Hdwy	-	-	2.218	-	3.617
Pot Cap-1 Maneuver	-	-	1453	-	903
Stage 1	-	-	-	-	928
Stage 2	-	-	-	-	989
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1453	-	902
Mov Cap-2 Maneuver	-	-	-	-	902
Stage 1	-	-	-	-	928
Stage 2	-	-	-	-	988

Approach	EB	WB	NB
HCM Control Delay, s	0	1.5	9.4
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	903	-	-	1453	-
HCM Lane V/C Ratio	0.089	-	-	0.001	-
HCM Control Delay (s)	9.4	-	-	7.5	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.3	-	-	0	-

Lanes, Volumes, Timings
 5: Colonial Drive & Timber Ridge Road/Access 3



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	68	3	2	109	6
Future Volume (vph)	0	68	3	2	109	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.865		0.946			
Flt Protected						0.955
Satd. Flow (prot)	1611	0	1490	0	0	1762
Flt Permitted						0.955
Satd. Flow (perm)	1611	0	1490	0	0	1762
Link Speed (mph)	25		25			25
Link Distance (ft)	2169		1055			636
Travel Time (s)	59.2		28.8			17.3
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	33%	2%	2%	20%
Adj. Flow (vph)	0	76	3	2	121	7
Shared Lane Traffic (%)						
Lane Group Flow (vph)	76	0	5	0	0	128
Sign Control	Stop		Free			Free

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	23.9%
Analysis Period (min)	15
	ICU Level of Service A

Intersection						
Int Delay, s/veh	7.4					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	68	3	2	109	6
Future Vol, veh/h	0	68	3	2	109	6
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	90	90	90	90	90	90
Heavy Vehicles, %	2	2	33	2	2	20
Mvmt Flow	0	76	3	2	121	7

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	253	4	0	0	5
Stage 1	4	-	-	-	-
Stage 2	249	-	-	-	-
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	736	1080	-	-	1616
Stage 1	1019	-	-	-	-
Stage 2	792	-	-	-	-
Platoon blocked, %					
Mov Cap-1 Maneuver	681	1080	-	-	1616
Mov Cap-2 Maneuver	681	-	-	-	-
Stage 1	1019	-	-	-	-
Stage 2	733	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.6	0	7
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	1080	1616
HCM Lane V/C Ratio	-	-	0.07	0.075
HCM Control Delay (s)	-	-	8.6	7.4
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0.2

Lanes, Volumes, Timings
6: S Point Road (NC 273) & Belmont MS/Belwood Drive

Henry Chapel TIA
2026 Build PM - Ph 3



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗		↔		↖	↕↔		↖	↕↕	↗
Traffic Volume (vph)	24	2	22	3	1	32	12	1063	2	45	1366	5
Future Volume (vph)	24	2	22	3	1	32	12	1063	2	45	1366	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		3%			0%			1%			0%	
Storage Length (ft)	0		175	0		0	200		0	100		200
Storage Lanes	0		1	0		0	1		0	1		1
Taper Length (ft)	25			25			100			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	1.00
Frt			0.850		0.878							0.850
Flt Protected		0.956			0.996		0.950			0.950		
Satd. Flow (prot)	0	1754	795	0	1629	0	1761	3522	0	1770	3539	1583
Flt Permitted		0.956			0.996		0.950			0.239		
Satd. Flow (perm)	0	1754	795	0	1629	0	1761	3522	0	445	3539	1583
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		35			25			35			35	
Link Distance (ft)		1017			1050			394			1373	
Travel Time (s)		19.8			28.6			7.7			26.7	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	100%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Adj. Flow (vph)	27	2	24	3	1	36	13	1181	2	50	1518	6
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	29	24	0	40	0	13	1183	0	50	1518	6
Turn Type	Split	NA	pm+ov	Split	NA		Prot	NA		Perm	NA	pm+ov
Protected Phases	4	4	5	8	8		5	2			6	4
Permitted Phases			4							6		6
Detector Phase	4	4	5	8	8		5	2		6	6	4
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0		7.0	12.0		12.0	12.0	7.0
Minimum Split (s)	11.9	11.9	12.1	14.0	14.0		12.1	17.6		32.6	32.6	11.9
Total Split (s)	12.0	12.0	13.0	14.0	14.0		13.0	94.0		81.0	81.0	12.0
Total Split (%)	10.0%	10.0%	10.8%	11.7%	11.7%		10.8%	78.3%		67.5%	67.5%	10.0%
Maximum Green (s)	7.1	7.1	7.9	7.0	7.0		7.9	88.4		75.4	75.4	7.1
Yellow Time (s)	3.0	3.0	3.0	5.0	5.0		3.0	4.5		4.5	4.5	3.0
All-Red Time (s)	1.9	1.9	2.1	2.0	2.0		2.1	1.1		1.1	1.1	1.9
Lost Time Adjust (s)		0.1	-0.1		-2.0		-0.1	-0.6		-0.6	-0.6	0.1
Total Lost Time (s)		5.0	5.0		5.0		5.0	5.0		5.0	5.0	5.0
Lead/Lag			Lead				Lead			Lag	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		2.0	6.0		6.0	6.0	2.0
Minimum Gap (s)	2.0	2.0	2.0	2.0	2.0		2.0	3.0		3.0	3.0	2.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0		0.0	15.0		15.0	15.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0		0.0	45.0		45.0	45.0	0.0
Recall Mode	None	None	None	None	None		None	Min		Min	Min	None
Walk Time (s)										7.0	7.0	
Flash Dont Walk (s)										20.0	20.0	
Pedestrian Calls (#/hr)										0	0	
Act Efect Green (s)		7.8	11.4		10.1		8.0	59.1		53.2	53.2	59.0

Lanes, Volumes, Timings
 6: S Point Road (NC 273) & Belmont MS/Belwood Drive

Henry Chapel TIA
 2026 Build PM - Ph 3



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Actuated g/C Ratio		0.11	0.15		0.14		0.11	0.80		0.72	0.72	0.80
v/c Ratio		0.16	0.20		0.18		0.07	0.42		0.16	0.60	0.00
Control Delay		42.7	26.8		40.5		41.9	6.2		12.2	13.9	5.2
Queue Delay		0.0	0.0		0.0		0.0	0.0		0.0	0.0	0.0
Total Delay		42.7	26.8		40.5		41.9	6.2		12.2	13.9	5.2
LOS		D	C		D		D	A		B	B	A
Approach Delay		35.5			40.5			6.5			13.8	
Approach LOS		D			D			A			B	
Queue Length 50th (ft)		15	8		20		7	162		15	359	1
Queue Length 95th (ft)		47	30		57		27	205		37	450	5
Internal Link Dist (ft)		937			970			314			1293	
Turn Bay Length (ft)			175				200			100		200
Base Capacity (vph)		186	132		222		214	3430		399	3178	1261
Starvation Cap Reductn		0	0		0		0	0		0	0	0
Spillback Cap Reductn		0	0		0		0	0		0	0	0
Storage Cap Reductn		0	0		0		0	0		0	0	0
Reduced v/c Ratio		0.16	0.18		0.18		0.06	0.34		0.13	0.48	0.00




















Intersection Summary	
Area Type:	Other
Cycle Length:	120
Actuated Cycle Length:	74.1
Natural Cycle:	80
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.60
Intersection Signal Delay:	11.6
Intersection LOS:	B
Intersection Capacity Utilization	61.9%
ICU Level of Service	B
Analysis Period (min)	15

Splits and Phases: 6: S Point Road (NC 273) & Belmont MS/Belwood Drive



Lanes, Volumes, Timings
 7: S Point Road (NC 273) & McKee Farm Road/Stowe Road

Henry Chapel TIA
 2026 Build PM - Ph 3

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	26	10	15	27	2	54	12	1094	24	73	1384	51
Future Volume (vph)	26	10	15	27	2	54	12	1094	24	73	1384	51
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		200	0		0	0		0	100		0
Storage Lanes	0		1	0		0	0		0	1		0
Taper Length (ft)	25			25			25			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	1.00	0.95	0.95
Frt			0.850		0.912			0.997			0.995	
Flt Protected		0.965			0.984			0.999		0.950		
Satd. Flow (prot)	0	1798	1583	0	1672	0	0	3525	0	1770	3522	0
Flt Permitted		0.965			0.984			0.999		0.950		
Satd. Flow (perm)	0	1798	1583	0	1672	0	0	3525	0	1770	3522	0
Link Speed (mph)		25			25			35			35	
Link Distance (ft)		1043			1485			1373			492	
Travel Time (s)		28.4			40.5			26.7			9.6	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	29	11	17	30	2	60	13	1216	27	81	1538	57
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	40	17	0	92	0	0	1256	0	81	1595	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	78.9%
ICU Level of Service	D
Analysis Period (min)	15

HCM 6th TWSC
 7: S Point Road (NC 273) & McKee Farm Road/Stowe Road

Henry Chapel TIA
 2026 Build PM - Ph 3

Intersection												
Int Delay, s/veh	25											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗		↕			↕		↗	↕	
Traffic Vol, veh/h	26	10	15	27	2	54	12	1094	24	73	1384	51
Future Vol, veh/h	26	10	15	27	2	54	12	1094	24	73	1384	51
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	-	-	200	-	-	-	-	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	29	11	17	30	2	60	13	1216	27	81	1538	57

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	2364	2998	798	2193	3013	622	1595	0	0	1243	0	0
Stage 1	1729	1729	-	1256	1256	-	-	-	-	-	-	-
Stage 2	635	1269	-	937	1757	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	~ 19	13	329	~ 25	13	430	407	-	-	556	-	-
Stage 1	92	141	-	181	241	-	-	-	-	-	-	-
Stage 2	433	238	-	285	137	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	~ 11	~ 10	329	-	10	430	407	-	-	556	-	-
Mov Cap-2 Maneuver	~ 11	~ 10	-	-	10	-	-	-	-	-	-	-
Stage 1	82	120	-	162	216	-	-	-	-	-	-	-
Stage 2	330	213	-	210	117	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, \$1323.1			0.8	0.6
HCM LOS	F	-		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	407	-	-	11	329	-	556	-	-
HCM Lane V/C Ratio	0.033	-	-	3.636	0.051	-	0.146	-	-
HCM Control Delay (s)	14.1	0.7	\$ 1867.5	16.5	-	12.6	-	-	-
HCM Lane LOS	B	A	-	F	C	-	B	-	-
HCM 95th %tile Q(veh)	0.1	-	-	6.1	0.2	-	0.5	-	-

Notes
 ~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Lanes, Volumes, Timings

Henry Chapel TIA

8: S Point Road (NC 273) & South Point HS/Red Raider Run

2026 Build PM - Ph 3



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↕	↗	↖	↕	↗	↖	↕	↗
Traffic Volume (vph)	0	0	0	226	6	228	19	1020	100	131	1298	3
Future Volume (vph)	0	0	0	226	6	228	19	1020	100	131	1298	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			4%			-1%			1%	
Storage Length (ft)	0		0	0		100	175		0	100		0
Storage Lanes	0		0	0		1	1		0	1		0
Taper Length (ft)	25			25			100			75		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Fr _t						0.850		0.987				
Fl _t Protected					0.954		0.950			0.950		
Satd. Flow (prot)	0	0	0	0	1742	1552	1778	3480	0	1761	3522	0
Fl _t Permitted					0.954		0.950			0.950		
Satd. Flow (perm)	0	0	0	0	1742	1552	1778	3480	0	1761	3522	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		25			25			35			35	
Link Distance (ft)		1017			1038			492			625	
Travel Time (s)		27.7			28.3			9.6			12.2	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	3%	2%	2%	2%	2%
Adj. Flow (vph)	0	0	0	251	7	253	21	1133	111	146	1442	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	258	253	21	1244	0	146	1445	0
Turn Type				Perm	NA	pm+ov	Prot	NA		Prot	NA	
Protected Phases					8	1	5	2		1	6	
Permitted Phases				8		8						
Detector Phase				8	8	1	5	2		1	6	
Switch Phase												
Minimum Initial (s)				7.0	7.0	7.0	7.0	10.0		7.0	10.0	
Minimum Split (s)				25.4	25.4	12.6	12.1	27.7		12.6	23.7	
Total Split (s)				26.0	26.0	18.0	13.0	86.0		18.0	91.0	
Total Split (%)				20.0%	20.0%	13.8%	10.0%	66.2%		13.8%	70.0%	
Maximum Green (s)				20.6	20.6	12.4	7.9	80.3		12.4	85.3	
Yellow Time (s)				3.0	3.0	3.0	3.0	3.9		3.0	3.9	
All-Red Time (s)				2.4	2.4	2.6	2.1	1.8		2.6	1.8	
Lost Time Adjust (s)					-0.4	-0.6	-0.1	-0.7		-0.6	-0.7	
Total Lost Time (s)					5.0	5.0	5.0	5.0		5.0	5.0	
Lead/Lag						Lead	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)				2.0	2.0	2.0	2.0	3.0		2.0	3.0	
Recall Mode				None	None	None	None	C-Max		None	C-Max	
Walk Time (s)				7.0	7.0			7.0				
Flash Dont Walk (s)				13.0	13.0			15.0				
Pedestrian Calls (#/hr)				0	0			0				
Act Effct Green (s)					20.6	38.2	7.3	81.8		12.6	92.0	
Actuated g/C Ratio					0.16	0.29	0.06	0.63		0.10	0.71	
v/c Ratio					0.93	0.55	0.21	0.57		0.85	0.58	
Control Delay					94.1	43.9	63.7	15.3		78.5	10.1	

Lanes, Volumes, Timings
 8: S Point Road (NC 273) & South Point HS/Red Raider Run

Henry Chapel TIA
 2026 Build PM - Ph 3



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay					0.0	0.4	0.0	0.0		0.0	0.2	
Total Delay					94.1	44.3	63.7	15.4		78.5	10.3	
LOS					F	D	E	B		E	B	
Approach Delay					69.4			16.2			16.6	
Approach LOS					E			B			B	
Queue Length 50th (ft)					217	178	17	304		120	317	
Queue Length 95th (ft)					#379	269	46	365		m#150	m358	
Internal Link Dist (ft)		937			958			412			545	
Turn Bay Length (ft)						100	175			100		
Base Capacity (vph)					281	460	109	2189		176	2491	
Starvation Cap Reductn					0	0	0	0		0	334	
Spillback Cap Reductn					0	31	0	87		0	0	
Storage Cap Reductn					0	0	0	0		0	0	
Reduced v/c Ratio					0.92	0.59	0.19	0.59		0.83	0.67	

Intersection Summary

Area Type: Other
 Cycle Length: 130
 Actuated Cycle Length: 130
 Offset: 44 (34%), Referenced to phase 2:NBT and 6:SBT, Start of Green
 Natural Cycle: 75
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.93
 Intersection Signal Delay: 24.4
 Intersection LOS: C
 Intersection Capacity Utilization 67.1%
 ICU Level of Service C
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 8: S Point Road (NC 273) & South Point HS/Red Raider Run



Lanes, Volumes, Timings
 9: S Point Road (NC 273) & Nixon Road/R L Stowe Road

Henry Chapel TIA
 2026 Build PM - Ph 3

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	78	110	92	689	125	39	72	582	566	77	667	90
Future Volume (vph)	78	110	92	689	125	39	72	582	566	77	667	90
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		1%			1%			1%			1%	
Storage Length (ft)	200		100	225		200	280		0	25		100
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	250			100			100			125		
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.965				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1761	1853	1545	3383	1762	0	1761	1853	1545	1761	1853	1560
Flt Permitted	0.950			0.950			0.950			0.212		
Satd. Flow (perm)	1761	1853	1545	3383	1762	0	1761	1853	1545	393	1853	1560
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		25			35			35			35	
Link Distance (ft)		1003			1016			625			1000	
Travel Time (s)		27.4			19.8			12.2			19.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	4%	3%	4%	2%	2%	2%	4%	2%	2%	3%
Adj. Flow (vph)	87	122	102	766	139	43	80	647	629	86	741	100
Shared Lane Traffic (%)												
Lane Group Flow (vph)	87	122	102	766	182	0	80	647	629	86	741	100
Turn Type	Split	NA	pm+ov	Split	NA		Prot	NA	pm+ov	D.Pm	NA	pm+ov
Protected Phases	3	3	5	4	4		5	2	4		6	3
Permitted Phases			3						2	2		6
Detector Phase	3	3	5	4	4		5	2	4	2	6	3
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0		7.0	10.0	7.0	10.0	10.0	7.0
Minimum Split (s)	25.0	25.0	12.8	13.3	13.3		12.8	24.1	13.3	24.1	24.1	25.0
Total Split (s)	25.0	25.0	13.0	47.0	47.0		13.0	58.0	47.0	58.0	45.0	25.0
Total Split (%)	19.2%	19.2%	10.0%	36.2%	36.2%		10.0%	44.6%	36.2%	44.6%	34.6%	19.2%
Maximum Green (s)	19.0	19.0	7.2	40.7	40.7		7.2	51.9	40.7	51.9	38.9	19.0
Yellow Time (s)	3.8	3.8	3.0	4.4	4.4		3.0	3.8	4.4	3.8	3.8	3.8
All-Red Time (s)	2.2	2.2	2.8	1.9	1.9		2.8	2.3	1.9	2.3	2.3	2.2
Lost Time Adjust (s)	-1.0	-1.0	-0.8	-1.3	-1.3		-0.8	-1.1	-1.3	-1.1	-1.1	-1.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lead	Lead	Lag	Lag		Lead		Lag		Lag	Lead
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		2.0	3.0	2.0	3.0	3.0	2.0
Recall Mode	None	None	None	None	None		None	C-Max	None	C-Max	C-Max	None
Walk Time (s)	7.0	7.0						7.0		7.0		7.0
Flash Dont Walk (s)	12.0	12.0						11.0		11.0		12.0
Pedestrian Calls (#/hr)	0	0						0		0		0
Act Effct Green (s)	13.9	13.9	24.1	36.7	36.7		10.2	64.4	106.1	64.4	49.1	68.1
Actuated g/C Ratio	0.11	0.11	0.19	0.28	0.28		0.08	0.50	0.82	0.50	0.38	0.52
v/c Ratio	0.46	0.62	0.36	0.80	0.37		0.58	0.71	0.50	0.44	1.06	0.12
Control Delay	61.5	68.2	26.4	49.9	38.6		65.9	38.5	6.4	34.3	90.2	17.7

Lanes, Volumes, Timings
 9: S Point Road (NC 273) & Nixon Road/R L Stowe Road

Henry Chapel TIA
 2026 Build PM - Ph 3



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	2.9	0.5	0.0	0.0	0.0
Total Delay	61.5	68.2	26.4	49.9	38.6		65.9	41.4	6.9	34.3	90.2	17.7
LOS	E	E	C	D	D		E	D	A	C	F	B
Approach Delay		52.6			47.7			26.8			77.2	
Approach LOS		D			D			C			E	
Queue Length 50th (ft)	70	100	39	306	122		67	487	285	46	~713	43
Queue Length 95th (ft)	120	160	62	358	179		m#153	#711	423	118	#1040	78
Internal Link Dist (ft)		923			936			545			920	
Turn Bay Length (ft)	200		100	225			280			25		100
Base Capacity (vph)	270	285	287	1097	571		138	917	1252	194	700	889
Starvation Cap Reductn	0	0	0	0	0		0	169	258	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.32	0.43	0.36	0.70	0.32		0.58	0.86	0.63	0.44	1.06	0.11

Intersection Summary

Area Type: Other
 Cycle Length: 130
 Actuated Cycle Length: 130
 Offset: 0 (0%), Referenced to phase 2:NBSB and 6:SBT, Start of Green
 Natural Cycle: 130
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.06
 Intersection Signal Delay: 47.9
 Intersection LOS: D
 Intersection Capacity Utilization 83.1%
 ICU Level of Service E
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 9: S Point Road (NC 273) & Nixon Road/R L Stowe Road



Lanes, Volumes, Timings
 10: Henry Chapel Road & Access 1



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↔		↙	↘
Traffic Volume (vph)	176	105	70	0	0	104
Future Volume (vph)	176	105	70	0	0	104
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t					0.865	
Fl _t Protected		0.970				
Satd. Flow (prot)	0	1807	1743	0	1611	0
Fl _t Permitted		0.970				
Satd. Flow (perm)	0	1807	1743	0	1611	0
Link Speed (mph)		25	25		25	
Link Distance (ft)		1293	1432		1041	
Travel Time (s)		35.3	39.1		28.4	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	9%	2%	2%	2%
Adj. Flow (vph)	196	117	78	0	0	116
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	313	78	0	116	0
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	35.0% ICU Level of Service A
Analysis Period (min)	15

Intersection						
Int Delay, s/veh	5.1					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	176	105	70	0	0	104
Future Vol, veh/h	176	105	70	0	0	104
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	90	90	90	90	90	90
Heavy Vehicles, %	2	2	9	2	2	2
Mvmt Flow	196	117	78	0	0	116

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	78	0	-	0	587 78
Stage 1	-	-	-	-	78 -
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	1520	-	-	-	472 983
Stage 1	-	-	-	-	945 -
Stage 2	-	-	-	-	604 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1520	-	-	-	407 983
Mov Cap-2 Maneuver	-	-	-	-	407 -
Stage 1	-	-	-	-	815 -
Stage 2	-	-	-	-	604 -

Approach	EB	WB	SB
HCM Control Delay, s	4.8	0	9.2
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1520	-	-	-	983
HCM Lane V/C Ratio	0.129	-	-	-	0.118
HCM Control Delay (s)	7.7	0	-	-	9.2
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0.4	-	-	-	0.4

Lanes, Volumes, Timings
 11: Henry Chapel Road & Access 2



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↔		↙	↘
Traffic Volume (vph)	70	35	29	0	0	41
Future Volume (vph)	70	35	29	0	0	41
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t					0.865	
Fl _t Protected		0.968				
Satd. Flow (prot)	0	1803	1743	0	1611	0
Fl _t Permitted		0.968				
Satd. Flow (perm)	0	1803	1743	0	1611	0
Link Speed (mph)		25	25		25	
Link Distance (ft)		1432	1164		1055	
Travel Time (s)		39.1	31.7		28.8	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	9%	2%	2%	2%
Adj. Flow (vph)	78	39	32	0	0	46
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	117	32	0	46	0
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	22.4%
ICU Level of Service	A
Analysis Period (min)	15

Intersection						
Int Delay, s/veh	5					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	70	35	29	0	0	41
Future Vol, veh/h	70	35	29	0	0	41
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	90	90	90	90	90	90
Heavy Vehicles, %	2	2	9	2	2	2
Mvmt Flow	78	39	32	0	0	46

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	32	0	-	0	227 32
Stage 1	-	-	-	-	32 -
Stage 2	-	-	-	-	195 -
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	1580	-	-	-	761 1042
Stage 1	-	-	-	-	991 -
Stage 2	-	-	-	-	838 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1580	-	-	-	723 1042
Mov Cap-2 Maneuver	-	-	-	-	723 -
Stage 1	-	-	-	-	941 -
Stage 2	-	-	-	-	838 -


















Approach	EB	WB	SB
HCM Control Delay, s	4.9	0	8.6
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1580	-	-	-	1042
HCM Lane V/C Ratio	0.049	-	-	-	0.044
HCM Control Delay (s)	7.4	0	-	-	8.6
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0.2	-	-	-	0.1

2026 Build-out Conditions
FINAL

Lanes, Volumes, Timings
 1: S Point Road (NC 273) & Armstrong Road (NC 273)/Farm Road

Henry Chapel TIA
 2026 Build FINAL AM - Ph 3

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	578	0	30	0	0	0	64	176	0	0	69	253
Future Volume (vph)	578	0	30	0	0	0	64	176	0	0	69	253
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		0	0		100
Storage Lanes	0		0	0		0	0		0	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.993										0.850
Flt Protected		0.955						0.987				
Satd. Flow (prot)	0	1738	0	0	1863	0	0	1783	0	0	1759	1468
Flt Permitted		0.955						0.987				
Satd. Flow (perm)	0	1738	0	0	1863	0	0	1783	0	0	1759	1468
Link Speed (mph)		45			25			45			45	
Link Distance (ft)		1234			1013			1002			3097	
Travel Time (s)		18.7			27.6			15.2			46.9	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	36%	2%	2%	2%	14%	2%	2%	2%	8%	10%
Adj. Flow (vph)	642	0	33	0	0	0	71	196	0	0	77	281
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	675	0	0	0	0	0	267	0	0	77	281
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	60.0%
Analysis Period (min)	15
	ICU Level of Service B

Intersection												
Int Delay, s/veh	84.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	↗
Traffic Vol, veh/h	578	0	30	0	0	0	64	176	0	0	69	253
Future Vol, veh/h	578	0	30	0	0	0	64	176	0	0	69	253
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	-	-	-	-	-	-	-	-	-	-	-	100
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	36	2	2	2	14	2	2	2	8	10
Mvmt Flow	642	0	33	0	0	0	71	196	0	0	77	281

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	415	415	77	572	696	196	358	0	0	196	0	0
Stage 1	77	77	-	338	338	-	-	-	-	-	-	-
Stage 2	338	338	-	234	358	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.56	7.12	6.52	6.22	4.24	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.624	3.518	4.018	3.318	2.326	-	-	2.218	-	-
Pot Cap-1 Maneuver	~ 548	528	897	431	365	845	1137	-	-	1377	-	-
Stage 1	932	831	-	676	641	-	-	-	-	-	-	-
Stage 2	676	641	-	769	628	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	~ 518	491	897	393	339	845	1137	-	-	1377	-	-
Mov Cap-2 Maneuver	~ 518	491	-	393	339	-	-	-	-	-	-	-
Stage 1	867	831	-	629	596	-	-	-	-	-	-	-
Stage 2	~ 629	596	-	740	628	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	162.4	0	2.2	0
HCM LOS	F	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1137	-	-	529	-	1377	-
HCM Lane V/C Ratio	0.063	-	-	1.277	-	-	-
HCM Control Delay (s)	8.4	0	-	162.4	0	0	-
HCM Lane LOS	A	A	-	F	A	A	-
HCM 95th %tile Q(veh)	0.2	-	-	27.5	-	0	-

Notes
 ~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Lanes, Volumes, Timings

2: S Point Road (NC 273) & S Point Church Road/Henry Chapel Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕	↕		↕		↕	↕	↕
Traffic Volume (vph)	0	0	1	30	0	199	0	882	11	70	349	6
Future Volume (vph)	0	0	1	30	0	199	0	882	11	70	349	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		200	0		0	275		0
Storage Lanes	0		0	0		1	0		0	1		0
Taper Length (ft)	25			25			25			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.865				0.850		0.998			0.997	
Flt Protected					0.950					0.950		
Satd. Flow (prot)	0	1611	0	0	1770	1538	0	1838	0	1770	1756	0
Flt Permitted					0.757					0.950		
Satd. Flow (perm)	0	1611	0	0	1410	1538	0	1838	0	1770	1756	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		25			25			45			45	
Link Distance (ft)		1509			1293			1519			881	
Travel Time (s)		41.2			35.3			23.0			13.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	2%	2%	5%	2%	2%	100%	2%	8%	2%
Adj. Flow (vph)	0	0	1	33	0	221	0	980	12	78	388	7
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1	0	0	33	221	0	992	0	78	395	0
Turn Type		NA		Perm	NA	pm+ov		NA		Prot	NA	
Protected Phases		4			8	1		2		1	6	
Permitted Phases	4			8		8	2					
Detector Phase	4	4		8	8	1	2	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0	7.0	12.0	12.0		7.0	12.0	
Minimum Split (s)	14.0	14.0		14.0	14.0	14.0	19.0	19.0		14.0	19.0	
Total Split (s)	14.0	14.0		14.0	14.0	14.0	62.0	62.0		14.0	76.0	
Total Split (%)	15.6%	15.6%		15.6%	15.6%	15.6%	68.9%	68.9%		15.6%	84.4%	
Maximum Green (s)	7.0	7.0		7.0	7.0	7.0	55.0	55.0		7.0	69.0	
Yellow Time (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0	5.0	
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		-2.0			-2.0	-2.0		-2.0		-2.0	-2.0	
Total Lost Time (s)		5.0			5.0	5.0		5.0		5.0	5.0	
Lead/Lag						Lead	Lag	Lag		Lead		
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None	None	Min	Min		None	Min	
Act Effct Green (s)		9.7			9.7	16.7		46.6		9.7	64.7	
Actuated g/C Ratio		0.13			0.13	0.23		0.63		0.13	0.87	
v/c Ratio		0.00			0.18	0.64		0.86		0.34	0.26	
Control Delay		37.0			39.2	37.1		21.3		40.7	2.5	
Queue Delay		0.0			0.0	0.0		0.0		0.0	0.0	
Total Delay		37.0			39.2	37.1		21.3		40.7	2.5	
LOS		D			D	D		C		D	A	
Approach Delay		37.0			37.3			21.3			8.8	

Lanes, Volumes, Timings

2: S Point Road (NC 273) & S Point Church Road/Henry Chapel Road

Henry Chapel TIA

2026 Build FINAL AM - Ph 3



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach LOS		D			D			C				A
Queue Length 50th (ft)		1			18	109		404		42	46	
Queue Length 95th (ft)		5			47	183		#669		87	71	
Internal Link Dist (ft)		1429			1213			1439			801	
Turn Bay Length (ft)						200				275		
Base Capacity (vph)		211			185	345		1435		232	1535	
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		0.00			0.18	0.64		0.69		0.34	0.26	

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 74.1

Natural Cycle: 80

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.86

Intersection Signal Delay: 20.2

Intersection LOS: C

Intersection Capacity Utilization 77.7%

ICU Level of Service D

Analysis Period (min) 15

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



















Queue shown is maximum after two cycles.

Splits and Phases: 2: S Point Road (NC 273) & S Point Church Road/Henry Chapel Road



Lanes, Volumes, Timings
 3: S Point Road (NC 273) & BB Drive/Forest Hill Road

Henry Chapel TIA
 2026 Build FINAL AM - Ph 3

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	4	0	0	115	0	1255	8	39	473	2
Future Volume (vph)	0	0	4	0	0	115	0	1255	8	39	473	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		0	175		0
Storage Lanes	0		1	0		1	0		0	1		0
Taper Length (ft)	25			25			25			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.865			0.865		0.999				0.999
Flt Protected										0.950		
Satd. Flow (prot)	0	0	1611	0	0	1565	0	1859	0	1770	1774	0
Flt Permitted										0.950		
Satd. Flow (perm)	0	0	1611	0	0	1565	0	1859	0	1770	1774	0
Link Speed (mph)		25			25			45			45	
Link Distance (ft)		1341			477			2444			1381	
Travel Time (s)		36.6			13.0			37.0			20.9	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	2%	2%	5%	2%	2%	17%	2%	7%	2%
Adj. Flow (vph)	0	0	4	0	0	128	0	1394	9	43	526	2
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	4	0	0	128	0	1403	0	43	528	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary	
Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	80.3% ICU Level of Service D
Analysis Period (min)	15

Intersection												
Int Delay, s/veh	4.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations			↗			↗		↔		↗	↘	
Traffic Vol, veh/h	0	0	4	0	0	115	0	1255	8	39	473	2
Future Vol, veh/h	0	0	4	0	0	115	0	1255	8	39	473	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	-	-	0	-	-	0	-	-	-	175	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	5	2	2	17	2	7	2
Mvmt Flow	0	0	4	0	0	128	0	1394	9	43	526	2

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	-	-	527	-	-	1399	528	0	0	1403	0	0
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	6.22	-	-	6.25	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.318	-	-	3.345	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	0	0	551	0	0	170	1039	-	-	487	-	-
Stage 1	0	0	-	0	0	-	-	-	-	-	-	-
Stage 2	0	0	-	0	0	-	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	551	-	-	170	1039	-	-	487	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	11.6		71.7		0		1	
HCM LOS	B		F					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1039	-	-	551	170	487	-	-
HCM Lane V/C Ratio	-	-	-	0.008	0.752	0.089	-	-
HCM Control Delay (s)	0	-	-	11.6	71.7	13.1	-	-
HCM Lane LOS	A	-	-	B	F	B	-	-
HCM 95th %tile Q(veh)	0	-	-	0	4.8	0.3	-	-

Lanes, Volumes, Timings
4: Colonial Drive & Forest Hill Road

Henry Chapel TIA
2026 Build FINAL AM - Ph 3



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	8	33	0	12	107	1
Future Volume (vph)	8	33	0	12	107	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.891			0.999		
Flt Protected				0.953		
Satd. Flow (prot)	1660	0	0	1863	1773	0
Flt Permitted				0.953		
Satd. Flow (perm)	1660	0	0	1863	1773	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	477			1074	636	
Travel Time (s)	13.0			29.3	17.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	9	37	0	13	119	1
Shared Lane Traffic (%)						
Lane Group Flow (vph)	46	0	0	13	120	0
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	16.0% ICU Level of Service A
Analysis Period (min)	15

Intersection						
Int Delay, s/veh	6.2					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	8	33	0	12	107	1
Future Vol, veh/h	8	33	0	12	107	1
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	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	9	37	0	13	119	1

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	46	0	41
Stage 1	-	-	-	-	28
Stage 2	-	-	-	-	13
Critical Hdwy	-	-	4.12	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	-	-	2.218	-	3.518
Pot Cap-1 Maneuver	-	-	1562	-	970
Stage 1	-	-	-	-	995
Stage 2	-	-	-	-	1010
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1562	-	970
Mov Cap-2 Maneuver	-	-	-	-	970
Stage 1	-	-	-	-	995
Stage 2	-	-	-	-	1010

Approach	EB	WB	NB
HCM Control Delay, s	0	0	9.2
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	971	-	-	1562	-
HCM Lane V/C Ratio	0.124	-	-	-	-
HCM Control Delay (s)	9.2	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0.4	-	-	0	-

Lanes, Volumes, Timings
 5: Colonial Drive & Timber Ridge Road/Access 3



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	98	9	0	32	2
Future Volume (vph)	0	98	9	0	32	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.865					
Flt Protected						0.955
Satd. Flow (prot)	1611	0	1863	0	0	1779
Flt Permitted						0.955
Satd. Flow (perm)	1611	0	1863	0	0	1779
Link Speed (mph)	25		25		25	
Link Distance (ft)	2169		1055		636	
Travel Time (s)	59.2		28.8		17.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	109	10	0	36	2
Shared Lane Traffic (%)						
Lane Group Flow (vph)	109	0	10	0	0	38
Sign Control	Stop		Free		Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	21.3% ICU Level of Service A
Analysis Period (min)	15

Intersection						
Int Delay, s/veh	7.7					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	98	9	0	32	2
Future Vol, veh/h	0	98	9	0	32	2
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	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	109	10	0	36	2

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	84	10	0	0	10	0
Stage 1	10	-	-	-	-	-
Stage 2	74	-	-	-	-	-
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	918	1071	-	-	1610	-
Stage 1	1013	-	-	-	-	-
Stage 2	949	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	898	1071	-	-	1610	-
Mov Cap-2 Maneuver	898	-	-	-	-	-
Stage 1	1013	-	-	-	-	-
Stage 2	928	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.7	0	6.9
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	1071	1610
HCM Lane V/C Ratio	-	-	0.102	0.022
HCM Control Delay (s)	-	-	8.7	7.3
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0.3	0.1

Lanes, Volumes, Timings
6: S Point Road (NC 273) & Belmont MS/Belwood Drive

Henry Chapel TIA
2026 Build FINAL AM - Ph 3



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗		↔		↖	↕↔		↖	↕↕	↗
Traffic Volume (vph)	267	1	49	2	2	33	110	1110	1	23	543	294
Future Volume (vph)	267	1	49	2	2	33	110	1110	1	23	543	294
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		3%			0%			1%			0%	
Storage Length (ft)	0		175	0		0	200		0	100		200
Storage Lanes	0		1	0		0	1		0	1		1
Taper Length (ft)	25			25			100			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	1.00
Frt			0.850		0.878							0.850
Flt Protected		0.953			0.998		0.950			0.950		
Satd. Flow (prot)	0	1732	1560	0	1521	0	1744	3522	0	1770	3343	1568
Flt Permitted		0.953			0.998		0.950			0.191		
Satd. Flow (perm)	0	1732	1560	0	1521	0	1744	3522	0	356	3343	1568
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		35			25			35				35
Link Distance (ft)		1017			1050			400				1373
Travel Time (s)		19.8			28.6			7.8				26.7
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	3%	2%	2%	100%	2%	5%	3%	2%	2%	2%	8%	3%
Adj. Flow (vph)	297	1	54	2	2	37	122	1233	1	26	603	327
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	298	54	0	41	0	122	1234	0	26	603	327
Turn Type	Split	NA	pm+ov	Split	NA		Prot	NA		Perm	NA	pm+ov
Protected Phases	4	4	5	8	8		5	2			6	4
Permitted Phases			4							6		6
Detector Phase	4	4	5	8	8		5	2		6	6	4
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0		7.0	12.0		12.0	12.0	7.0
Minimum Split (s)	11.9	11.9	12.1	14.0	14.0		12.1	17.6		32.6	32.6	11.9
Total Split (s)	31.0	31.0	20.0	14.0	14.0		20.0	75.0		55.0	55.0	31.0
Total Split (%)	25.8%	25.8%	16.7%	11.7%	11.7%		16.7%	62.5%		45.8%	45.8%	25.8%
Maximum Green (s)	26.1	26.1	14.9	7.0	7.0		14.9	69.4		49.4	49.4	26.1
Yellow Time (s)	3.0	3.0	3.0	5.0	5.0		3.0	4.5		4.5	4.5	3.0
All-Red Time (s)	1.9	1.9	2.1	2.0	2.0		2.1	1.1		1.1	1.1	1.9
Lost Time Adjust (s)		0.1	-0.1		-2.0		-0.1	-0.6		-0.6	-0.6	0.1
Total Lost Time (s)		5.0	5.0		5.0		5.0	5.0		5.0	5.0	5.0
Lead/Lag			Lead				Lead			Lag	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		2.0	6.0		6.0	6.0	2.0
Minimum Gap (s)	2.0	2.0	2.0	2.0	2.0		2.0	3.0		3.0	3.0	2.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0		0.0	15.0		15.0	15.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0		0.0	45.0		45.0	45.0	0.0
Recall Mode	None	None	None	None	None		None	Min		Min	Min	None
Walk Time (s)										7.0	7.0	
Flash Dont Walk (s)										20.0	20.0	
Pedestrian Calls (#/hr)										0	0	
Act Efect Green (s)		18.8	32.7		10.0		10.9	36.0		23.9	23.9	50.0

Lanes, Volumes, Timings
 6: S Point Road (NC 273) & Belmont MS/Belwood Drive

Henry Chapel TIA
 2026 Build FINAL AM - Ph 3



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Actuated g/C Ratio		0.26	0.45		0.14		0.15	0.49		0.33	0.33	0.69
v/c Ratio		0.67	0.08		0.20		0.47	0.71		0.22	0.55	0.30
Control Delay		35.7	9.3		39.9		40.8	18.8		31.9	26.8	9.1
Queue Delay		0.0	0.0		0.0		0.0	0.0		0.0	0.0	0.0
Total Delay		35.7	9.3		39.9		40.8	18.8		31.9	26.8	9.1
LOS		D	A		D		D	B		C	C	A
Approach Delay		31.7			39.9			20.8			20.9	
Approach LOS		C			D			C			C	
Queue Length 50th (ft)		136	10		19		57	256		10	140	81
Queue Length 95th (ft)		259	28		59		128	385		38	231	147
Internal Link Dist (ft)		937			970			320			1293	
Turn Bay Length (ft)			175				200			100		200
Base Capacity (vph)		688	825		209		399	3084		255	2396	1170
Starvation Cap Reductn		0	0		0		0	0		0	0	0
Spillback Cap Reductn		0	0		0		0	0		0	0	0
Storage Cap Reductn		0	0		0		0	0		0	0	0
Reduced v/c Ratio		0.43	0.07		0.20		0.31	0.40		0.10	0.25	0.28




















Intersection Summary	
Area Type:	Other
Cycle Length:	120
Actuated Cycle Length:	72.8
Natural Cycle:	80
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.71
Intersection Signal Delay:	22.5
Intersection LOS:	C
Intersection Capacity Utilization:	74.7%
ICU Level of Service:	D
Analysis Period (min):	15

Splits and Phases: 6: S Point Road (NC 273) & Belmont MS/Belwood Drive



Lanes, Volumes, Timings
 7: S Point Road (NC 273) & McKee Farm Road/Stowe Road

Henry Chapel TIA
 2026 Build FINAL AM - Ph 3

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	15	5	21	17	1	60	26	1346	56	40	832	73
Future Volume (vph)	15	5	21	17	1	60	26	1346	56	40	832	73
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		200	0		0	0		0	100		0
Storage Lanes	0		1	0		0	0		0	1		0
Taper Length (ft)	25			25			25			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	1.00	0.95	0.95
Frt			0.850		0.896			0.994			0.988	
Flt Protected		0.964			0.989			0.999		0.950		
Satd. Flow (prot)	0	1796	1524	0	1651	0	0	3514	0	1703	3405	0
Flt Permitted		0.964			0.989			0.999		0.950		
Satd. Flow (perm)	0	1796	1524	0	1651	0	0	3514	0	1703	3405	0
Link Speed (mph)		25			25			35			35	
Link Distance (ft)		1043			1485			1373			492	
Travel Time (s)		28.4			40.5			26.7			9.6	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	6%	2%	2%	2%	2%	2%	2%	6%	5%	2%
Adj. Flow (vph)	17	6	23	19	1	67	29	1496	62	44	924	81
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	23	23	0	87	0	0	1587	0	44	1005	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary	
Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	75.6%
	ICU Level of Service D
Analysis Period (min)	15

HCM 6th TWSC
 7: S Point Road (NC 273) & McKee Farm Road/Stowe Road

Henry Chapel TIA
 2026 Build FINAL AM - Ph 3

Intersection												
Int Delay, s/veh	22.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗		↕			↕		↗	↕	
Traffic Vol, veh/h	15	5	21	17	1	60	26	1346	56	40	832	73
Future Vol, veh/h	15	5	21	17	1	60	26	1346	56	40	832	73
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	-	-	200	-	-	-	-	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	6	2	2	2	2	2	2	6	5	2
Mvmt Flow	17	6	23	19	1	67	29	1496	62	44	924	81

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1860	2669	503	2138	2678	779	1005	0	0	1558	0	0
Stage 1	1053	1053	-	1585	1585	-	-	-	-	-	-	-
Stage 2	807	1616	-	553	1093	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	7.02	7.54	6.54	6.94	4.14	-	-	4.22	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.36	3.52	4.02	3.32	2.22	-	-	2.26	-	-
Pot Cap-1 Maneuver	45	22	503	28	22	339	685	-	-	402	-	-
Stage 1	242	301	-	113	167	-	-	-	-	-	-	-
Stage 2	341	161	-	485	288	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	23	13	503	~ 13	13	339	685	-	-	402	-	-
Mov Cap-2 Maneuver	23	13	-	~ 13	13	-	-	-	-	-	-	-
Stage 1	162	268	-	75	112	-	-	-	-	-	-	-
Stage 2	181	108	-	403	257	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	275	\$ 530.8	1.8	0.6
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	685	-	-	19	503	50	402	-	-
HCM Lane V/C Ratio	0.042	-	-	1.17	0.046	1.733	0.111	-	-
HCM Control Delay (s)	10.5	1.7	\$ 550.7	12.5	\$ 530.8	15.1	-	-	-
HCM Lane LOS	B	A	-	F	B	F	C	-	-
HCM 95th %tile Q(veh)	0.1	-	-	3.1	0.1	8.4	0.4	-	-

Notes
 ~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Lanes, Volumes, Timings

8: S Point Road (NC 273) & South Point HS/Red Raider Run

Henry Chapel TIA

2026 Build FINAL AM - Ph 3



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↕	↗	↖	↕	↕	↖	↗	↕
Traffic Volume (vph)	0	0	0	142	35	156	76	1214	101	105	804	54
Future Volume (vph)	0	0	0	142	35	156	76	1214	101	105	804	54
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			4%			-1%			1%	
Storage Length (ft)	0		0	0		100	175		0	100		0
Storage Lanes	0		0	0		1	1		0	1		0
Taper Length (ft)	25			25			100			75		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Fr _t						0.850		0.989			0.991	
Fl _t Protected					0.961		0.950			0.950		
Satd. Flow (prot)	0	0	0	0	1754	1552	1778	3518	0	1761	3366	0
Fl _t Permitted					0.961		0.950			0.950		
Satd. Flow (perm)	0	0	0	0	1754	1552	1778	3518	0	1761	3366	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		25			25			35			35	
Link Distance (ft)		1017			1038			492			625	
Travel Time (s)		27.7			28.3			9.6			12.2	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	6%	2%
Adj. Flow (vph)	0	0	0	158	39	173	84	1349	112	117	893	60
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	197	173	84	1461	0	117	953	0
Turn Type				Perm	NA	pm+ov	Prot	NA		Prot	NA	
Protected Phases					8	1	5	2		1	6	
Permitted Phases				8		8						
Detector Phase				8	8	1	5	2		1	6	
Switch Phase												
Minimum Initial (s)				7.0	7.0	7.0	7.0	10.0		7.0	10.0	
Minimum Split (s)				25.4	25.4	12.6	12.1	27.7		12.6	23.7	
Total Split (s)				26.0	26.0	13.0	13.0	81.0		13.0	81.0	
Total Split (%)				21.7%	21.7%	10.8%	10.8%	67.5%		10.8%	67.5%	
Maximum Green (s)				20.6	20.6	7.4	7.9	75.3		7.4	75.3	
Yellow Time (s)				3.0	3.0	3.0	3.0	3.9		3.0	3.9	
All-Red Time (s)				2.4	2.4	2.6	2.1	1.8		2.6	1.8	
Lost Time Adjust (s)					-0.4	-0.6	-0.1	-0.7		-0.6	-0.7	
Total Lost Time (s)					5.0	5.0	5.0	5.0		5.0	5.0	
Lead/Lag						Lead	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)				2.0	2.0	2.0	2.0	3.0		2.0	3.0	
Recall Mode				None	None	None	None	C-Max		None	C-Max	
Walk Time (s)				7.0	7.0			7.0				
Flash Dont Walk (s)				13.0	13.0			15.0				
Pedestrian Calls (#/hr)				0	0			0				
Act Effct Green (s)					17.4	33.1	8.6	76.9		10.7	79.0	
Actuated g/C Ratio					0.14	0.28	0.07	0.64		0.09	0.66	
v/c Ratio					0.78	0.41	0.66	0.65		0.75	0.43	
Control Delay					69.4	38.5	78.8	15.1		76.7	7.7	

Lanes, Volumes, Timings
 8: S Point Road (NC 273) & South Point HS/Red Raider Run

Henry Chapel TIA
 2026 Build FINAL AM - Ph 3

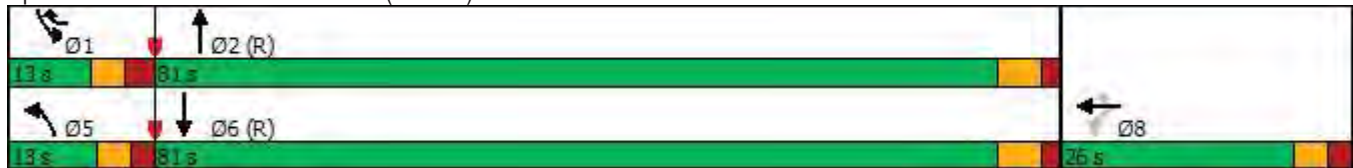


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay					0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay					69.4	38.5	78.8	15.2		76.7	7.7	
LOS					E	D	E	B		E	A	
Approach Delay					54.9			18.6			15.2	
Approach LOS					D			B			B	
Queue Length 50th (ft)					148	108	63	347		85	171	
Queue Length 95th (ft)					225	176	#146	419		m#159	m214	
Internal Link Dist (ft)		937			958			412				545
Turn Bay Length (ft)						100	175			100		
Base Capacity (vph)					306	427	130	2254		157	2215	
Starvation Cap Reductn					0	0	0	0		0	0	
Spillback Cap Reductn					0	0	0	38		0	0	
Storage Cap Reductn					0	0	0	0		0	0	
Reduced v/c Ratio					0.64	0.41	0.65	0.66		0.75	0.43	

Intersection Summary
























Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 94 (78%), Referenced to phase 2:NBT and 6:SBT, Start of Green
 Natural Cycle: 80
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.78
 Intersection Signal Delay: 21.9
 Intersection LOS: C
 Intersection Capacity Utilization 64.8%
 ICU Level of Service C
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 8: S Point Road (NC 273) & South Point HS/Red Raider Run



Lanes, Volumes, Timings
 9: S Point Road (NC 273) & Nixon Road/R L Stowe Road

Henry Chapel TIA
 2026 Build FINAL AM - Ph 3

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	116	185	89	338	91	30	95	609	663	49	573	59
Future Volume (vph)	116	185	89	338	91	30	95	609	663	49	573	59
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		1%			1%			1%			1%	
Storage Length (ft)	200		100	225		225	280		0	25		100
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	250			100			100			125		
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.963				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1761	1853	1474	3197	1689	0	1678	1853	1575	1761	1853	1530
Flt Permitted	0.950			0.950			0.950			0.214		
Satd. Flow (perm)	1761	1853	1474	3197	1689	0	1678	1853	1575	397	1853	1530
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		25			35			35			35	
Link Distance (ft)		1003			1016			625			1000	
Travel Time (s)		27.4			19.8			12.2			19.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	9%	9%	9%	4%	7%	2%	2%	2%	2%	5%
Adj. Flow (vph)	129	206	99	376	101	33	106	677	737	54	637	66
Shared Lane Traffic (%)												
Lane Group Flow (vph)	129	206	99	376	134	0	106	677	737	54	637	66
Turn Type	Split	NA	pm+ov	Split	NA		Prot	NA	pm+ov	D.Pm	NA	pm+ov
Protected Phases	3	3	5	4	4		5	2	4		6	3
Permitted Phases			3						2	2		6
Detector Phase	3	3	5	4	4		5	2	4	2	6	3
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0		7.0	10.0	7.0	10.0	10.0	7.0
Minimum Split (s)	25.0	25.0	12.8	13.3	13.3		12.8	24.1	13.3	24.1	24.1	25.0
Total Split (s)	25.0	25.0	15.0	32.0	32.0		15.0	63.0	32.0	63.0	48.0	25.0
Total Split (%)	20.8%	20.8%	12.5%	26.7%	26.7%		12.5%	52.5%	26.7%	52.5%	40.0%	20.8%
Maximum Green (s)	19.0	19.0	9.2	25.7	25.7		9.2	56.9	25.7	56.9	41.9	19.0
Yellow Time (s)	3.8	3.8	3.0	4.4	4.4		3.0	3.8	4.4	3.8	3.8	3.8
All-Red Time (s)	2.2	2.2	2.8	1.9	1.9		2.8	2.3	1.9	2.3	2.3	2.2
Lost Time Adjust (s)	-1.0	-1.0	-0.8	-1.3	-1.3		-0.8	-1.1	-1.3	-1.1	-1.1	-1.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lead	Lead	Lag	Lag		Lead		Lag		Lag	Lead
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		2.0	3.0	2.0	3.0	3.0	2.0
Recall Mode	None	None	None	None	None		None	C-Max	None	C-Max	C-Max	None
Walk Time (s)	7.0	7.0						7.0		7.0		7.0
Flash Dont Walk (s)	12.0	12.0						11.0		11.0		12.0
Pedestrian Calls (#/hr)	0	0						0		0		0
Act Effct Green (s)	17.4	17.4	27.4	25.1	25.1		10.0	62.6	92.6	62.6	47.6	69.9
Actuated g/C Ratio	0.14	0.14	0.23	0.21	0.21		0.08	0.52	0.77	0.52	0.40	0.58
v/c Ratio	0.51	0.77	0.29	0.56	0.38		0.76	0.70	0.61	0.26	0.87	0.07
Control Delay	54.0	68.2	21.9	45.7	43.4		94.6	18.2	6.1	22.7	48.9	12.1

Lanes, Volumes, Timings
 9: S Point Road (NC 273) & Nixon Road/R L Stowe Road

Henry Chapel TIA
 2026 Build FINAL AM - Ph 3

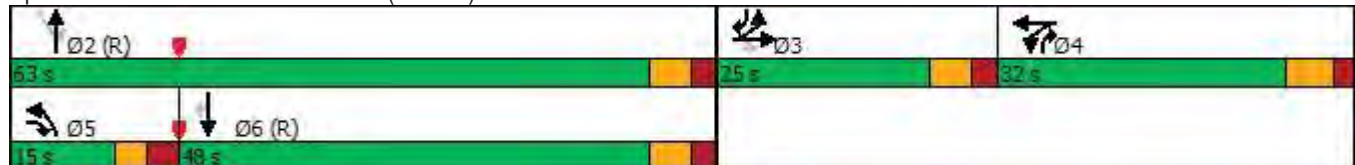


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.4	0.0	0.0	0.0	0.0
Total Delay	54.0	68.2	21.9	45.7	43.4		94.6	18.5	6.1	22.7	48.9	12.1
LOS	D	E	C	D	D		F	B	A	C	D	B
Approach Delay		53.4			45.1			17.8			43.8	
Approach LOS		D			D			B			D	
Queue Length 50th (ft)	92	154	35	130	87		74	332	144	24	479	23
Queue Length 95th (ft)	154	235	63	182	148		m#151	504	166	58	#719	44
Internal Link Dist (ft)		923			936			545			920	
Turn Bay Length (ft)	200		100	225			280			25		100
Base Capacity (vph)	293	308	339	726	384		143	965	1206	206	734	925
Starvation Cap Reductn	0	0	0	0	0		0	53	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.44	0.67	0.29	0.52	0.35		0.74	0.74	0.61	0.26	0.87	0.07

Intersection Summary

Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 0 (0%), Referenced to phase 2:NBSB and 6:SBT, Start of Green
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.87
 Intersection Signal Delay: 33.0
 Intersection LOS: C
 Intersection Capacity Utilization 76.4%
 ICU Level of Service D
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 9: S Point Road (NC 273) & Nixon Road/R L Stowe Road



Lanes, Volumes, Timings
 10: Henry Chapel Road & Access 1



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	51	30	82	0	0	147
Future Volume (vph)	51	30	82	0	0	147
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t						0.865
Fl _t Protected	0.969					
Satd. Flow (prot)	0	1730	1810	0	1611	0
Fl _t Permitted	0.969					
Satd. Flow (perm)	0	1730	1810	0	1611	0
Link Speed (mph)	25		25	25		
Link Distance (ft)	1293		1432	1041		
Travel Time (s)	35.3		39.1	28.4		
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	14%	5%	2%	2%	2%
Adj. Flow (vph)	57	33	91	0	0	163
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	90	91	0	163	0
Sign Control	Free		Free	Stop		

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	26.8%
	ICU Level of Service A
Analysis Period (min)	15

Intersection						
Int Delay, s/veh	5.7					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	51	30	82	0	0	147
Future Vol, veh/h	51	30	82	0	0	147
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	90	90	90	90	90	90
Heavy Vehicles, %	2	14	5	2	2	2
Mvmt Flow	57	33	91	0	0	163

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	91	0	-	0	238
Stage 1	-	-	-	-	91
Stage 2	-	-	-	-	147
Critical Hdwy	4.12	-	-	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	2.218	-	-	-	3.518
Pot Cap-1 Maneuver	1504	-	-	-	750
Stage 1	-	-	-	-	933
Stage 2	-	-	-	-	880
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1504	-	-	-	721
Mov Cap-2 Maneuver	-	-	-	-	721
Stage 1	-	-	-	-	897
Stage 2	-	-	-	-	880

Approach	EB	WB	SB
HCM Control Delay, s	4.7	0	9.5
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1504	-	-	-	967
HCM Lane V/C Ratio	0.038	-	-	-	0.169
HCM Control Delay (s)	7.5	0	-	-	9.5
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0.1	-	-	-	0.6

Lanes, Volumes, Timings
 11: Henry Chapel Road & Access 2



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	21	9	23	0	0	59
Future Volume (vph)	21	9	23	0	0	59
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t					0.865	
Fl _t Protected		0.966				
Satd. Flow (prot)	0	1737	1810	0	1611	0
Fl _t Permitted		0.966				
Satd. Flow (perm)	0	1737	1810	0	1611	0
Link Speed (mph)		25	25		25	
Link Distance (ft)		1432	1164		1055	
Travel Time (s)		39.1	31.7		28.8	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	14%	5%	2%	2%	2%
Adj. Flow (vph)	23	10	26	0	0	66
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	33	26	0	66	0
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	18.6%
ICU Level of Service	A
Analysis Period (min)	15

Intersection						
Int Delay, s/veh	5.9					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	21	9	23	0	0	59
Future Vol, veh/h	21	9	23	0	0	59
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	90	90	90	90	90	90
Heavy Vehicles, %	2	14	5	2	2	2
Mvmt Flow	23	10	26	0	0	66

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	26	0	-	0	82 26
Stage 1	-	-	-	-	26 -
Stage 2	-	-	-	-	56 -
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	1588	-	-	-	920 1050
Stage 1	-	-	-	-	997 -
Stage 2	-	-	-	-	967 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1588	-	-	-	906 1050
Mov Cap-2 Maneuver	-	-	-	-	906 -
Stage 1	-	-	-	-	982 -
Stage 2	-	-	-	-	967 -

Approach	EB	WB	SB
HCM Control Delay, s	5.1	0	8.7
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1588	-	-	-	1050
HCM Lane V/C Ratio	0.015	-	-	-	0.062
HCM Control Delay (s)	7.3	0	-	-	8.7
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.2

Lanes, Volumes, Timings
 1: S Point Road (NC 273) & Armstrong Road (NC 273)/Farm Road

Henry Chapel TIA
 2026 Build FINAL PM - Ph 3



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	↕
Traffic Volume (vph)	498	0	38	0	0	1	54	102	0	2	131	612
Future Volume (vph)	498	0	38	0	0	1	54	102	0	2	131	612
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		0	0		100
Storage Lanes	0		0	0		0	0		0	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.990			0.865							0.850
Flt Protected		0.956						0.983			0.999	
Satd. Flow (prot)	0	1761	0	0	1611	0	0	1772	0	0	1861	1568
Flt Permitted		0.956						0.983			0.999	
Satd. Flow (perm)	0	1761	0	0	1611	0	0	1772	0	0	1861	1568
Link Speed (mph)		45			25			45			45	
Link Distance (ft)		1234			1013			1002			3097	
Travel Time (s)		18.7			27.6			15.2			46.9	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	4%	2%	2%	2%	8%	4%	2%	2%	2%	3%
Adj. Flow (vph)	553	0	42	0	0	1	60	113	0	2	146	680
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	595	0	0	1	0	0	173	0	0	148	680
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	61.9%
Analysis Period (min)	15
	ICU Level of Service B

Intersection												
Int Delay, s/veh	33.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	↗
Traffic Vol, veh/h	498	0	38	0	0	1	54	102	0	2	131	612
Future Vol, veh/h	498	0	38	0	0	1	54	102	0	2	131	612
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	-	-	-	-	-	-	-	-	-	-	-	100
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	4	2	2	2	8	4	2	2	2	3
Mvmt Flow	553	0	42	0	0	1	60	113	0	2	146	680

Major/Minor	Minor2		Minor1			Major1		Major2				
Conflicting Flow All	384	383	146	744	1063	113	826	0	0	113	0	0
Stage 1	150	150	-	233	233	-	-	-	-	-	-	-
Stage 2	234	233	-	511	830	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.24	7.12	6.52	6.22	4.18	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.336	3.518	4.018	3.318	2.272	-	-	2.218	-	-
Pot Cap-1 Maneuver	574	550	896	331	223	940	779	-	-	1476	-	-
Stage 1	853	773	-	770	712	-	-	-	-	-	-	-
Stage 2	769	712	-	545	385	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	~ 536	503	896	295	204	940	779	-	-	1476	-	-
Mov Cap-2 Maneuver	~ 536	503	-	295	204	-	-	-	-	-	-	-
Stage 1	783	771	-	707	654	-	-	-	-	-	-	-
Stage 2	705	654	-	518	384	-	-	-	-	-	-	-

Approach	EB		WB			NB		SB		
HCM Control Delay, s	88.3		8.8			3.5		0		
HCM LOS	F		A							

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	779	-	-	552	940	1476	-	-
HCM Lane V/C Ratio	0.077	-	-	1.079	0.001	0.002	-	-
HCM Control Delay (s)	10	0	-	88.3	8.8	7.4	0	-
HCM Lane LOS	B	A	-	F	A	A	A	-
HCM 95th %tile Q(veh)	0.2	-	-	17.9	0	0	-	-

Notes
 ~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Lanes, Volumes, Timings

2: S Point Road (NC 273) & S Point Church Road/Henry Chapel Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕	↕		↕		↕	↕	↕
Traffic Volume (vph)	1	0	0	26	0	147	0	692	40	241	809	2
Future Volume (vph)	1	0	0	26	0	147	0	692	40	241	809	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		200	0		0	275		0
Storage Lanes	0		0	0		1	0		0	1		0
Taper Length (ft)	25			25			25			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt						0.850		0.993				
Flt Protected		0.950			0.950					0.950		
Satd. Flow (prot)	0	1770	0	0	1770	1468	0	1833	0	1770	1845	0
Flt Permitted		0.952			0.952					0.950		
Satd. Flow (perm)	0	1773	0	0	1773	1468	0	1833	0	1770	1845	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		25			25			45			45	
Link Distance (ft)		1509			1293			1519			881	
Travel Time (s)		41.2			35.3			23.0			13.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	2%	2%	10%	2%	3%	2%	2%	3%	2%
Adj. Flow (vph)	1	0	0	29	0	163	0	769	44	268	899	2
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1	0	0	29	163	0	813	0	268	901	0
Turn Type	Perm	NA		Perm	NA	pm+ov		NA		Prot	NA	
Protected Phases		4			8	1		2		1	6	
Permitted Phases	4			8		8	2					
Detector Phase	4	4		8	8	1	2	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0	7.0	12.0	12.0		7.0	12.0	
Minimum Split (s)	14.0	14.0		14.0	14.0	14.0	19.0	19.0		14.0	19.0	
Total Split (s)	14.0	14.0		14.0	14.0	22.0	54.0	54.0		22.0	76.0	
Total Split (%)	15.6%	15.6%		15.6%	15.6%	24.4%	60.0%	60.0%		24.4%	84.4%	
Maximum Green (s)	7.0	7.0		7.0	7.0	15.0	47.0	47.0		15.0	69.0	
Yellow Time (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0	5.0	
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		-2.0			-2.0	-2.0		-2.0		-2.0	-2.0	
Total Lost Time (s)		5.0			5.0	5.0		5.0		5.0	5.0	
Lead/Lag						Lead	Lag	Lag		Lead		
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None	None	Min	Min		None	Min	
Act Effct Green (s)		9.7			9.7	20.9		39.2		16.5	64.9	
Actuated g/C Ratio		0.14			0.14	0.29		0.55		0.23	0.92	
v/c Ratio		0.00			0.12	0.38		0.80		0.65	0.53	
Control Delay		36.0			36.4	24.6		21.3		38.5	3.6	
Queue Delay		0.0			0.0	0.0		0.0		0.0	0.0	
Total Delay		36.0			36.4	24.6		21.3		38.5	3.6	
LOS		D			D	C		C		D	A	
Approach Delay		36.0			26.4			21.3			11.6	

Lanes, Volumes, Timings

2: S Point Road (NC 273) & S Point Church Road/Henry Chapel Road

Henry Chapel TIA

2026 Build FINAL PM - Ph 3



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach LOS		D			C			C				B
Queue Length 50th (ft)		0			12	65		214		111		0
Queue Length 95th (ft)		5			42	120		#536		#271		242
Internal Link Dist (ft)		1429			1213			1439				801
Turn Bay Length (ft)						200				275		
Base Capacity (vph)		242			242	470		1332		456		1675
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		0.00			0.12	0.35		0.61		0.59		0.54

Intersection Summary



















Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 70.9
 Natural Cycle: 75
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.80
 Intersection Signal Delay: 16.5
 Intersection LOS: B
 Intersection Capacity Utilization 99.9%
 ICU Level of Service F
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 2: S Point Road (NC 273) & S Point Church Road/Henry Chapel Road



Lanes, Volumes, Timings
 3: S Point Road (NC 273) & BB Drive/Forest Hill Road

Henry Chapel TIA
 2026 Build FINAL PM - Ph 3

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	4	0	0	72	0	934	3	121	1190	1
Future Volume (vph)	0	0	4	0	0	72	0	934	3	121	1190	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		0	175		0
Storage Lanes	0		1	0		1	0		0	1		0
Taper Length (ft)	25			25			25			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.865			0.865						
Flt Protected										0.950		
Satd. Flow (prot)	0	0	1611	0	0	1611	0	1863	0	1770	1863	0
Flt Permitted										0.950		
Satd. Flow (perm)	0	0	1611	0	0	1611	0	1863	0	1770	1863	0
Link Speed (mph)		25			25			45			45	
Link Distance (ft)		1341			477			2444			1381	
Travel Time (s)		36.6			13.0			37.0			20.9	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	4	0	0	80	0	1038	3	134	1322	1
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	4	0	0	80	0	1041	0	134	1323	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	103.9%
Analysis Period (min)	15
	ICU Level of Service G

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	4	0	0	72	0	934	3	121	1190	1
Future Vol, veh/h	0	0	4	0	0	72	0	934	3	121	1190	1
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	-	-	0	-	-	0	-	-	-	175	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	4	0	0	80	0	1038	3	134	1322	1

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	-	-	1323	-	-	1040	1323	0	0	1041	0	0
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	6.22	-	-	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.318	-	-	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	0	0	191	0	0	280	522	-	-	668	-	-
Stage 1	0	0	-	0	0	-	-	-	-	-	-	-
Stage 2	0	0	-	0	0	-	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	191	-	-	280	522	-	-	668	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB				
HCM Control Delay, s	24.3		22.9		0		1.1				
HCM LOS	C		C								

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	522	-	-	191	280	668	-	-
HCM Lane V/C Ratio	-	-	-	0.023	0.286	0.201	-	-
HCM Control Delay (s)	0	-	-	24.3	22.9	11.7	-	-
HCM Lane LOS	A	-	-	C	C	B	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	1.1	0.7	-	-

Lanes, Volumes, Timings
4: Colonial Drive & Forest Hill Road

Henry Chapel TIA
2026 Build FINAL PM - Ph 3



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	4	115	1	4	71	1
Future Volume (vph)	4	115	1	4	71	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.869			0.998		
Flt Protected				0.990	0.953	
Satd. Flow (prot)	1456	0	0	1844	1601	0
Flt Permitted				0.990	0.953	
Satd. Flow (perm)	1456	0	0	1844	1601	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	477			1074	636	
Travel Time (s)	13.0			29.3	17.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	25%	13%	2%	2%	13%	2%
Adj. Flow (vph)	4	128	1	4	79	1
Shared Lane Traffic (%)						
Lane Group Flow (vph)	132	0	0	5	80	0
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 18.0% ICU Level of Service A

Analysis Period (min) 15

Intersection						
Int Delay, s/veh	3.5					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	4	115	1	4	71	1
Future Vol, veh/h	4	115	1	4	71	1
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	90	90	90	90	90	90
Heavy Vehicles, %	25	13	2	2	13	2
Mvmt Flow	4	128	1	4	79	1

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	132	0	74 68
Stage 1	-	-	-	-	68 -
Stage 2	-	-	-	-	6 -
Critical Hdwy	-	-	4.12	-	6.53 6.22
Critical Hdwy Stg 1	-	-	-	-	5.53 -
Critical Hdwy Stg 2	-	-	-	-	5.53 -
Follow-up Hdwy	-	-	2.218	-	3.617 3.318
Pot Cap-1 Maneuver	-	-	1453	-	903 995
Stage 1	-	-	-	-	928 -
Stage 2	-	-	-	-	989 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1453	-	902 995
Mov Cap-2 Maneuver	-	-	-	-	902 -
Stage 1	-	-	-	-	928 -
Stage 2	-	-	-	-	988 -

Approach	EB	WB	NB
HCM Control Delay, s	0	1.5	9.4
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	903	-	-	1453	-
HCM Lane V/C Ratio	0.089	-	-	0.001	-
HCM Control Delay (s)	9.4	-	-	7.5	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.3	-	-	0	-

Lanes, Volumes, Timings
 5: Colonial Drive & Timber Ridge Road/Access 3

Henry Chapel TIA
 2026 Build FINAL PM - Ph 3



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	68	3	2	109	6
Future Volume (vph)	0	68	3	2	109	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.865		0.946			
Flt Protected						0.955
Satd. Flow (prot)	1611	0	1490	0	0	1762
Flt Permitted						0.955
Satd. Flow (perm)	1611	0	1490	0	0	1762
Link Speed (mph)	25		25			25
Link Distance (ft)	2169		1055			636
Travel Time (s)	59.2		28.8			17.3
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	33%	2%	2%	20%
Adj. Flow (vph)	0	76	3	2	121	7
Shared Lane Traffic (%)						
Lane Group Flow (vph)	76	0	5	0	0	128
Sign Control	Stop		Free			Free

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	23.9%
Analysis Period (min)	15
	ICU Level of Service A

Intersection						
Int Delay, s/veh	7.4					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	68	3	2	109	6
Future Vol, veh/h	0	68	3	2	109	6
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	90	90	90	90	90	90
Heavy Vehicles, %	2	2	33	2	2	20
Mvmt Flow	0	76	3	2	121	7






















Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	253	4	0	0	5
Stage 1	4	-	-	-	-
Stage 2	249	-	-	-	-
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	736	1080	-	-	1616
Stage 1	1019	-	-	-	-
Stage 2	792	-	-	-	-
Platoon blocked, %					
Mov Cap-1 Maneuver	681	1080	-	-	1616
Mov Cap-2 Maneuver	681	-	-	-	-
Stage 1	1019	-	-	-	-
Stage 2	733	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.6	0	7
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	1080	1616
HCM Lane V/C Ratio	-	-	0.07	0.075
HCM Control Delay (s)	-	-	8.6	7.4
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0.2

Lanes, Volumes, Timings
6: S Point Road (NC 273) & Belmont MS/Belwood Drive

Henry Chapel TIA
2026 Build FINAL PM - Ph 3

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	24	2	22	3	1	32	12	1063	2	45	1366	5
Future Volume (vph)	24	2	22	3	1	32	12	1063	2	45	1366	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		3%			0%			1%			0%	
Storage Length (ft)	0		175	0		0	200		0	100		200
Storage Lanes	0		1	0		0	1		0	1		1
Taper Length (ft)	25			25			100			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	1.00
Frt			0.850		0.878							0.850
Flt Protected		0.956			0.996		0.950			0.950		
Satd. Flow (prot)	0	1754	795	0	1629	0	1761	3522	0	1770	3539	1583
Flt Permitted		0.956			0.996		0.950			0.239		
Satd. Flow (perm)	0	1754	795	0	1629	0	1761	3522	0	445	3539	1583
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		35			25			35			35	
Link Distance (ft)		1017			1050			400			1373	
Travel Time (s)		19.8			28.6			7.8			26.7	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	100%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Adj. Flow (vph)	27	2	24	3	1	36	13	1181	2	50	1518	6
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	29	24	0	40	0	13	1183	0	50	1518	6
Turn Type	Split	NA	pm+ov	Split	NA		Prot	NA		Perm	NA	pm+ov
Protected Phases	4	4	5	8	8		5	2			6	4
Permitted Phases			4							6		6
Detector Phase	4	4	5	8	8		5	2		6	6	4
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0		7.0	12.0		12.0	12.0	7.0
Minimum Split (s)	11.9	11.9	12.1	14.0	14.0		12.1	17.6		32.6	32.6	11.9
Total Split (s)	12.0	12.0	13.0	14.0	14.0		13.0	94.0		81.0	81.0	12.0
Total Split (%)	10.0%	10.0%	10.8%	11.7%	11.7%		10.8%	78.3%		67.5%	67.5%	10.0%
Maximum Green (s)	7.1	7.1	7.9	7.0	7.0		7.9	88.4		75.4	75.4	7.1
Yellow Time (s)	3.0	3.0	3.0	5.0	5.0		3.0	4.5		4.5	4.5	3.0
All-Red Time (s)	1.9	1.9	2.1	2.0	2.0		2.1	1.1		1.1	1.1	1.9
Lost Time Adjust (s)		0.1	-0.1		-2.0		-0.1	-0.6		-0.6	-0.6	0.1
Total Lost Time (s)		5.0	5.0		5.0		5.0	5.0		5.0	5.0	5.0
Lead/Lag			Lead				Lead			Lag	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		2.0	6.0		6.0	6.0	2.0
Minimum Gap (s)	2.0	2.0	2.0	2.0	2.0		2.0	3.0		3.0	3.0	2.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0		0.0	15.0		15.0	15.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0		0.0	45.0		45.0	45.0	0.0
Recall Mode	None	None	None	None	None		None	Min		Min	Min	None
Walk Time (s)										7.0	7.0	
Flash Dont Walk (s)										20.0	20.0	
Pedestrian Calls (#/hr)										0	0	
Act Efect Green (s)		7.8	11.4		10.1		8.0	59.1		53.2	53.2	59.0

Lanes, Volumes, Timings
 6: S Point Road (NC 273) & Belmont MS/Belwood Drive

Henry Chapel TIA
 2026 Build FINAL PM - Ph 3



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Actuated g/C Ratio		0.11	0.15		0.14		0.11	0.80		0.72	0.72	0.80
v/c Ratio		0.16	0.20		0.18		0.07	0.42		0.16	0.60	0.00
Control Delay		42.7	26.8		40.5		41.9	6.2		12.2	13.9	5.2
Queue Delay		0.0	0.0		0.0		0.0	0.0		0.0	0.0	0.0
Total Delay		42.7	26.8		40.5		41.9	6.2		12.2	13.9	5.2
LOS		D	C		D		D	A		B	B	A
Approach Delay		35.5			40.5			6.5			13.8	
Approach LOS		D			D			A			B	
Queue Length 50th (ft)		15	8		20		7	162		15	359	1
Queue Length 95th (ft)		47	30		57		27	205		37	450	5
Internal Link Dist (ft)		937			970			320			1293	
Turn Bay Length (ft)			175				200			100		200
Base Capacity (vph)		186	132		222		214	3430		399	3178	1261
Starvation Cap Reductn		0	0		0		0	0		0	0	0
Spillback Cap Reductn		0	0		0		0	0		0	0	0
Storage Cap Reductn		0	0		0		0	0		0	0	0
Reduced v/c Ratio		0.16	0.18		0.18		0.06	0.34		0.13	0.48	0.00

Intersection Summary




















Area Type:	Other
Cycle Length:	120
Actuated Cycle Length:	74.1
Natural Cycle:	80
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.60
Intersection Signal Delay:	11.6
Intersection LOS:	B
Intersection Capacity Utilization:	61.9%
ICU Level of Service:	B
Analysis Period (min):	15

Splits and Phases: 6: S Point Road (NC 273) & Belmont MS/Belwood Drive



Lanes, Volumes, Timings
 7: S Point Road (NC 273) & McKee Farm Road/Stowe Road

Henry Chapel TIA
 2026 Build FINAL PM - Ph 3

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	26	10	15	27	2	54	12	1094	24	73	1384	51
Future Volume (vph)	26	10	15	27	2	54	12	1094	24	73	1384	51
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		200	0		0	0		0	100		0
Storage Lanes	0		1	0		0	0		0	1		0
Taper Length (ft)	25			25			25			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	1.00	0.95	0.95
Frt			0.850		0.912			0.997			0.995	
Flt Protected		0.965			0.984			0.999		0.950		
Satd. Flow (prot)	0	1798	1583	0	1672	0	0	3525	0	1770	3522	0
Flt Permitted		0.965			0.984			0.999		0.950		
Satd. Flow (perm)	0	1798	1583	0	1672	0	0	3525	0	1770	3522	0
Link Speed (mph)		25			25			35			35	
Link Distance (ft)		1043			1485			1373			492	
Travel Time (s)		28.4			40.5			26.7			9.6	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	29	11	17	30	2	60	13	1216	27	81	1538	57
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	40	17	0	92	0	0	1256	0	81	1595	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	78.9%
	ICU Level of Service D
Analysis Period (min)	15

HCM 6th TWSC
 7: S Point Road (NC 273) & McKee Farm Road/Stowe Road

Henry Chapel TIA
 2026 Build FINAL PM - Ph 3

Intersection												
Int Delay, s/veh	25											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗		↕			↕		↗	↕	
Traffic Vol, veh/h	26	10	15	27	2	54	12	1094	24	73	1384	51
Future Vol, veh/h	26	10	15	27	2	54	12	1094	24	73	1384	51
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	-	-	200	-	-	-	-	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	29	11	17	30	2	60	13	1216	27	81	1538	57

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	2364	2998	798	2193	3013	622	1595	0	0	1243	0	0
Stage 1	1729	1729	-	1256	1256	-	-	-	-	-	-	-
Stage 2	635	1269	-	937	1757	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	~ 19	13	329	~ 25	13	430	407	-	-	556	-	-
Stage 1	92	141	-	181	241	-	-	-	-	-	-	-
Stage 2	433	238	-	285	137	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	~ 11	~ 10	329	-	10	430	407	-	-	556	-	-
Mov Cap-2 Maneuver	~ 11	~ 10	-	-	10	-	-	-	-	-	-	-
Stage 1	82	120	-	162	216	-	-	-	-	-	-	-
Stage 2	330	213	-	210	117	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, \$1323.1			0.8	0.6
HCM LOS	F	-		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	407	-	-	11	329	-	556	-	-
HCM Lane V/C Ratio	0.033	-	-	3.636	0.051	-	0.146	-	-
HCM Control Delay (s)	14.1	0.7	\$ 1867.5	16.5	-	12.6	-	-	-
HCM Lane LOS	B	A	-	F	C	-	B	-	-
HCM 95th %tile Q(veh)	0.1	-	-	6.1	0.2	-	0.5	-	-

Notes
 ~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Lanes, Volumes, Timings

8: S Point Road (NC 273) & South Point HS/Red Raider Run

Henry Chapel TIA

2026 Build FINAL PM - Ph 3



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↕	↗	↖	↕	↗	↖	↕	↗
Traffic Volume (vph)	0	0	0	226	6	228	19	1020	100	131	1298	3
Future Volume (vph)	0	0	0	226	6	228	19	1020	100	131	1298	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			4%			-1%			1%	
Storage Length (ft)	0		0	0		100	175		0	100		0
Storage Lanes	0		0	0		1	1		0	1		0
Taper Length (ft)	25			25			100			75		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Fr _t						0.850		0.987				
Fl _t Protected					0.954		0.950			0.950		
Satd. Flow (prot)	0	0	0	0	1742	1552	1778	3480	0	1761	3522	0
Fl _t Permitted					0.954		0.950			0.950		
Satd. Flow (perm)	0	0	0	0	1742	1552	1778	3480	0	1761	3522	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		25			25			35			35	
Link Distance (ft)		1017			1038			492			625	
Travel Time (s)		27.7			28.3			9.6			12.2	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	3%	2%	2%	2%	2%
Adj. Flow (vph)	0	0	0	251	7	253	21	1133	111	146	1442	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	258	253	21	1244	0	146	1445	0
Turn Type				Perm	NA	pm+ov	Prot	NA		Prot	NA	
Protected Phases					8	1	5	2		1	6	
Permitted Phases				8		8						
Detector Phase				8	8	1	5	2		1	6	
Switch Phase												
Minimum Initial (s)				7.0	7.0	7.0	7.0	10.0		7.0	10.0	
Minimum Split (s)				25.4	25.4	12.6	12.1	27.7		12.6	23.7	
Total Split (s)				26.0	26.0	18.0	13.0	86.0		18.0	91.0	
Total Split (%)				20.0%	20.0%	13.8%	10.0%	66.2%		13.8%	70.0%	
Maximum Green (s)				20.6	20.6	12.4	7.9	80.3		12.4	85.3	
Yellow Time (s)				3.0	3.0	3.0	3.0	3.9		3.0	3.9	
All-Red Time (s)				2.4	2.4	2.6	2.1	1.8		2.6	1.8	
Lost Time Adjust (s)					-0.4	-0.6	-0.1	-0.7		-0.6	-0.7	
Total Lost Time (s)					5.0	5.0	5.0	5.0		5.0	5.0	
Lead/Lag						Lead	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)				2.0	2.0	2.0	2.0	3.0		2.0	3.0	
Recall Mode				None	None	None	None	C-Max		None	C-Max	
Walk Time (s)				7.0	7.0			7.0				
Flash Dont Walk (s)				13.0	13.0			15.0				
Pedestrian Calls (#/hr)				0	0			0				
Act Effct Green (s)					20.6	38.2	7.3	81.8		12.6	92.0	
Actuated g/C Ratio					0.16	0.29	0.06	0.63		0.10	0.71	
v/c Ratio					0.93	0.55	0.21	0.57		0.85	0.58	
Control Delay					94.1	43.9	63.7	15.3		78.5	10.1	

Lanes, Volumes, Timings
 8: S Point Road (NC 273) & South Point HS/Red Raider Run

Henry Chapel TIA
 2026 Build FINAL PM - Ph 3



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay					0.0	0.4	0.0	0.0		0.0	0.2	
Total Delay					94.1	44.3	63.7	15.4		78.5	10.3	
LOS					F	D	E	B		E	B	
Approach Delay					69.4			16.2			16.6	
Approach LOS					E			B			B	
Queue Length 50th (ft)					217	178	17	304		120	317	
Queue Length 95th (ft)					#379	269	46	365		m#150	m358	
Internal Link Dist (ft)		937			958			412			545	
Turn Bay Length (ft)						100	175			100		
Base Capacity (vph)					281	460	109	2189		176	2491	
Starvation Cap Reductn					0	0	0	0		0	334	
Spillback Cap Reductn					0	31	0	87		0	0	
Storage Cap Reductn					0	0	0	0		0	0	
Reduced v/c Ratio					0.92	0.59	0.19	0.59		0.83	0.67	

Intersection Summary

Area Type: Other
 Cycle Length: 130
 Actuated Cycle Length: 130
 Offset: 44 (34%), Referenced to phase 2:NBT and 6:SBT, Start of Green
 Natural Cycle: 75
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.93
 Intersection Signal Delay: 24.4
 Intersection LOS: C
 Intersection Capacity Utilization 67.1%
 ICU Level of Service C
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 8: S Point Road (NC 273) & South Point HS/Red Raider Run



Lanes, Volumes, Timings
 9: S Point Road (NC 273) & Nixon Road/R L Stowe Road

Henry Chapel TIA
 2026 Build FINAL PM - Ph 3



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	78	110	92	689	125	39	72	582	566	77	667	90
Future Volume (vph)	78	110	92	689	125	39	72	582	566	77	667	90
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		1%			1%			1%			1%	
Storage Length (ft)	200		100	225		225	280		0	25		100
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	250			100			100			125		
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.965				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1761	1853	1545	3383	1762	0	1761	1853	1545	1761	1853	1560
Flt Permitted	0.950			0.950			0.950			0.212		
Satd. Flow (perm)	1761	1853	1545	3383	1762	0	1761	1853	1545	393	1853	1560
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		25			35			35			35	
Link Distance (ft)		1003			1016			625			1000	
Travel Time (s)		27.4			19.8			12.2			19.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	4%	3%	4%	2%	2%	2%	4%	2%	2%	3%
Adj. Flow (vph)	87	122	102	766	139	43	80	647	629	86	741	100
Shared Lane Traffic (%)												
Lane Group Flow (vph)	87	122	102	766	182	0	80	647	629	86	741	100
Turn Type	Split	NA	pm+ov	Split	NA		Prot	NA	pm+ov	D.Pm	NA	pm+ov
Protected Phases	3	3	5	4	4		5	2	4		6	3
Permitted Phases			3						2	2		6
Detector Phase	3	3	5	4	4		5	2	4	2	6	3
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0		7.0	10.0	7.0	10.0	10.0	7.0
Minimum Split (s)	25.0	25.0	12.8	13.3	13.3		12.8	24.1	13.3	24.1	24.1	25.0
Total Split (s)	25.0	25.0	13.0	47.0	47.0		13.0	58.0	47.0	58.0	45.0	25.0
Total Split (%)	19.2%	19.2%	10.0%	36.2%	36.2%		10.0%	44.6%	36.2%	44.6%	34.6%	19.2%
Maximum Green (s)	19.0	19.0	7.2	40.7	40.7		7.2	51.9	40.7	51.9	38.9	19.0
Yellow Time (s)	3.8	3.8	3.0	4.4	4.4		3.0	3.8	4.4	3.8	3.8	3.8
All-Red Time (s)	2.2	2.2	2.8	1.9	1.9		2.8	2.3	1.9	2.3	2.3	2.2
Lost Time Adjust (s)	-1.0	-1.0	-0.8	-1.3	-1.3		-0.8	-1.1	-1.3	-1.1	-1.1	-1.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lead	Lead	Lag	Lag		Lead		Lag		Lag	Lead
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		2.0	3.0	2.0	3.0	3.0	2.0
Recall Mode	None	None	None	None	None		None	C-Max	None	C-Max	C-Max	None
Walk Time (s)	7.0	7.0						7.0		7.0		7.0
Flash Dont Walk (s)	12.0	12.0						11.0		11.0		12.0
Pedestrian Calls (#/hr)	0	0						0		0		0
Act Effct Green (s)	13.9	13.9	24.1	36.7	36.7		10.2	64.4	106.1	64.4	49.1	68.1
Actuated g/C Ratio	0.11	0.11	0.19	0.28	0.28		0.08	0.50	0.82	0.50	0.38	0.52
v/c Ratio	0.46	0.62	0.36	0.80	0.37		0.58	0.71	0.50	0.44	1.06	0.12
Control Delay	61.5	68.2	26.4	49.9	38.6		65.9	38.5	6.4	34.3	90.2	17.7

Lanes, Volumes, Timings
 9: S Point Road (NC 273) & Nixon Road/R L Stowe Road

Henry Chapel TIA
 2026 Build FINAL PM - Ph 3



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	2.9	0.5	0.0	0.0	0.0
Total Delay	61.5	68.2	26.4	49.9	38.6		65.9	41.4	6.9	34.3	90.2	17.7
LOS	E	E	C	D	D		E	D	A	C	F	B
Approach Delay		52.6			47.7			26.8			77.2	
Approach LOS		D			D			C			E	
Queue Length 50th (ft)	70	100	39	306	122		67	487	285	46	~713	43
Queue Length 95th (ft)	120	160	62	358	179		m#153	#711	423	118	#1040	78
Internal Link Dist (ft)		923			936			545			920	
Turn Bay Length (ft)	200		100	225			280			25		100
Base Capacity (vph)	270	285	287	1097	571		138	917	1252	194	700	889
Starvation Cap Reductn	0	0	0	0	0		0	169	258	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.32	0.43	0.36	0.70	0.32		0.58	0.86	0.63	0.44	1.06	0.11

Intersection Summary

Area Type: Other
 Cycle Length: 130
 Actuated Cycle Length: 130
 Offset: 0 (0%), Referenced to phase 2:NBSB and 6:SBT, Start of Green
 Natural Cycle: 130
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.06
 Intersection Signal Delay: 47.9
 Intersection LOS: D
 Intersection Capacity Utilization 83.1%
 ICU Level of Service E
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 9: S Point Road (NC 273) & Nixon Road/R L Stowe Road



Lanes, Volumes, Timings
 10: Henry Chapel Road & Access 1



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↔		↙	↘
Traffic Volume (vph)	176	105	70	0	0	104
Future Volume (vph)	176	105	70	0	0	104
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t					0.865	
Fl _t Protected		0.970				
Satd. Flow (prot)	0	1807	1743	0	1611	0
Fl _t Permitted		0.970				
Satd. Flow (perm)	0	1807	1743	0	1611	0
Link Speed (mph)		25	25		25	
Link Distance (ft)		1293	1432		1041	
Travel Time (s)		35.3	39.1		28.4	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	9%	2%	2%	2%
Adj. Flow (vph)	196	117	78	0	0	116
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	313	78	0	116	0
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	35.0% ICU Level of Service A
Analysis Period (min)	15

Intersection						
Int Delay, s/veh	5.1					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	176	105	70	0	0	104
Future Vol, veh/h	176	105	70	0	0	104
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	90	90	90	90	90	90
Heavy Vehicles, %	2	2	9	2	2	2
Mvmt Flow	196	117	78	0	0	116

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	78	0	-	0	587 78
Stage 1	-	-	-	-	78 -
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	1520	-	-	-	472 983
Stage 1	-	-	-	-	945 -
Stage 2	-	-	-	-	604 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1520	-	-	-	407 983
Mov Cap-2 Maneuver	-	-	-	-	407 -
Stage 1	-	-	-	-	815 -
Stage 2	-	-	-	-	604 -

Approach	EB	WB	SB
HCM Control Delay, s	4.8	0	9.2
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1520	-	-	-	983
HCM Lane V/C Ratio	0.129	-	-	-	0.118
HCM Control Delay (s)	7.7	0	-	-	9.2
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0.4	-	-	-	0.4

Lanes, Volumes, Timings
 11: Henry Chapel Road & Access 2



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↔	↔		↔	
Traffic Volume (vph)	70	35	29	0	0	41
Future Volume (vph)	70	35	29	0	0	41
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t					0.865	
Fl _t Protected		0.968				
Satd. Flow (prot)	0	1803	1743	0	1611	0
Fl _t Permitted		0.968				
Satd. Flow (perm)	0	1803	1743	0	1611	0
Link Speed (mph)		25	25		25	
Link Distance (ft)		1432	1164		1055	
Travel Time (s)		39.1	31.7		28.8	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	9%	2%	2%	2%
Adj. Flow (vph)	78	39	32	0	0	46
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	117	32	0	46	0
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	22.4%
ICU Level of Service	A
Analysis Period (min)	15

Intersection						
Int Delay, s/veh	5					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	70	35	29	0	0	41
Future Vol, veh/h	70	35	29	0	0	41
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	90	90	90	90	90	90
Heavy Vehicles, %	2	2	9	2	2	2
Mvmt Flow	78	39	32	0	0	46

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	32	0	-	0	227 32
Stage 1	-	-	-	-	32 -
Stage 2	-	-	-	-	195 -
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	1580	-	-	-	761 1042
Stage 1	-	-	-	-	991 -
Stage 2	-	-	-	-	838 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1580	-	-	-	723 1042
Mov Cap-2 Maneuver	-	-	-	-	723 -
Stage 1	-	-	-	-	941 -
Stage 2	-	-	-	-	838 -


















Approach	EB	WB	SB
HCM Control Delay, s	4.9	0	8.6
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1580	-	-	-	1042
HCM Lane V/C Ratio	0.049	-	-	-	0.044
HCM Control Delay (s)	7.4	0	-	-	8.6
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0.2	-	-	-	0.1

2031 Build-out +5 Conditions

Lanes, Volumes, Timings
 1: S Point Road (NC 273) & Armstrong Road (NC 273)/Farm Road

Henry Chapel TIA
 2031 Build+5 AM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	650	0	33	0	0	0	71	203	0	0	81	286
Future Volume (vph)	650	0	33	0	0	0	71	203	0	0	81	286
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		0	0		100
Storage Lanes	0		0	0		0	0		0	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.993										0.850
Flt Protected		0.955						0.987				
Satd. Flow (prot)	0	1738	0	0	1863	0	0	1784	0	0	1759	1468
Flt Permitted		0.955						0.987				
Satd. Flow (perm)	0	1738	0	0	1863	0	0	1784	0	0	1759	1468
Link Speed (mph)		45			25			45			45	
Link Distance (ft)		1234			1013			1002			3097	
Travel Time (s)		18.7			27.6			15.2			46.9	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	36%	2%	2%	2%	14%	2%	2%	2%	8%	10%
Adj. Flow (vph)	722	0	37	0	0	0	79	226	0	0	90	318
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	759	0	0	0	0	0	305	0	0	90	318
Sign Control		Stop			Stop			Free			Free	

Intersection Summary	
Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	66.0% ICU Level of Service C
Analysis Period (min)	15

HCM 6th TWSC
 1: S Point Road (NC 273) & Armstrong Road (NC 273)/Farm Road

Henry Chapel TIA
 2031 Build+5 AM

Intersection												
Int Delay, s/veh	151.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	↗
Traffic Vol, veh/h	650	0	33	0	0	0	71	203	0	0	81	286
Future Vol, veh/h	650	0	33	0	0	0	71	203	0	0	81	286
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	-	-	-	-	-	-	-	-	-	-	-	100
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	36	2	2	2	14	2	2	2	8	10
Mvmt Flow	722	0	37	0	0	0	79	226	0	0	90	318

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	474	474	90	652	792	226	408	0	0	226	0	0
Stage 1	90	90	-	384	384	-	-	-	-	-	-	-
Stage 2	384	384	-	268	408	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.56	7.12	6.52	6.22	4.24	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.624	3.518	4.018	3.318	2.326	-	-	2.218	-	-
Pot Cap-1 Maneuver	~ 501	489	882	381	322	813	1089	-	-	1342	-	-
Stage 1	917	820	-	639	611	-	-	-	-	-	-	-
Stage 2	~ 639	611	-	738	597	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	~ 469	448	882	342	295	813	1089	-	-	1342	-	-
Mov Cap-2 Maneuver	~ 469	448	-	342	295	-	-	-	-	-	-	-
Stage 1	841	820	-	586	560	-	-	-	-	-	-	-
Stage 2	~ 586	560	-	707	597	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	293	0	2.2	0
HCM LOS	F	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1089	-	-	480	-	1342	-
HCM Lane V/C Ratio	0.072	-	-	1.581	-	-	-
HCM Control Delay (s)	8.6	0	-	293	0	0	-
HCM Lane LOS	A	A	-	F	A	A	-
HCM 95th %tile Q(veh)	0.2	-	-	41.7	-	0	-

Notes
 ~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Lanes, Volumes, Timings

Henry Chapel TIA

2: S Point Road (NC 273) & S Point Church Road/Henry Chapel Road

2031 Build+5 AM



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕	↕		↕		↕	↕	↕
Traffic Volume (vph)	0	0	1	30	0	203	0	999	11	72	401	6
Future Volume (vph)	0	0	1	30	0	203	0	999	11	72	401	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		200	0		0	275		0
Storage Lanes	0		0	0		1	0		0	1		0
Taper Length (ft)	25			25			25			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.865				0.850		0.999			0.998	
Flt Protected					0.950					0.950		
Satd. Flow (prot)	0	1611	0	0	1770	1538	0	1842	0	1770	1757	0
Flt Permitted					0.757					0.950		
Satd. Flow (perm)	0	1611	0	0	1410	1538	0	1842	0	1770	1757	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		25			25			45			45	
Link Distance (ft)		1509			1293			1519			881	
Travel Time (s)		41.2			35.3			23.0			13.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	2%	2%	5%	2%	2%	100%	2%	8%	2%
Adj. Flow (vph)	0	0	1	33	0	226	0	1110	12	80	446	7
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1	0	0	33	226	0	1122	0	80	453	0
Turn Type		NA		Perm	NA	pm+ov		NA		Prot	NA	
Protected Phases		4			8	1		2		1	6	
Permitted Phases	4			8		8	2					
Detector Phase	4	4		8	8	1	2	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0	7.0	12.0	12.0		7.0	12.0	
Minimum Split (s)	14.0	14.0		14.0	14.0	14.0	19.0	19.0		14.0	19.0	
Total Split (s)	14.0	14.0		14.0	14.0	14.0	62.0	62.0		14.0	76.0	
Total Split (%)	15.6%	15.6%		15.6%	15.6%	15.6%	68.9%	68.9%		15.6%	84.4%	
Maximum Green (s)	7.0	7.0		7.0	7.0	7.0	55.0	55.0		7.0	69.0	
Yellow Time (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0	5.0	
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		-2.0			-2.0	-2.0		-2.0		-2.0	-2.0	
Total Lost Time (s)		5.0			5.0	5.0		5.0		5.0	5.0	
Lead/Lag						Lead	Lag	Lag		Lead		
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None	None	Min	Min		None	Min	
Act Effct Green (s)		9.2			9.2	16.8		53.9		9.2	70.7	
Actuated g/C Ratio		0.11			0.11	0.21		0.67		0.11	0.87	
v/c Ratio		0.01			0.21	0.71		0.91		0.40	0.30	
Control Delay		37.0			40.3	42.9		26.9		43.6	2.6	
Queue Delay		0.0			0.0	0.0		0.0		0.0	0.0	
Total Delay		37.0			40.3	42.9		26.9		43.6	2.6	
LOS		D			D	D		C		D	A	
Approach Delay		37.0			42.6			26.9			8.7	



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach LOS		D			D			C				A
Queue Length 50th (ft)		1			18	112		540		44	55	
Queue Length 95th (ft)		5			47	188		#884		89	84	
Internal Link Dist (ft)		1429			1213			1439			801	
Turn Bay Length (ft)						200				275		
Base Capacity (vph)		183			160	318		1327		201	1531	
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		0.01			0.21	0.71		0.85		0.40	0.30	

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 80.9

Natural Cycle: 90

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.91

Intersection Signal Delay: 24.0

Intersection LOS: C

Intersection Capacity Utilization 84.1%

ICU Level of Service E

Analysis Period (min) 15

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



















Queue shown is maximum after two cycles.

Splits and Phases: 2: S Point Road (NC 273) & S Point Church Road/Henry Chapel Road



Lanes, Volumes, Timings
 3: S Point Road (NC 273) & BB Drive/Forest Hill Road

Henry Chapel TIA
 2031 Build+5 AM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	5	0	0	118	0	1399	8	40	534	2
Future Volume (vph)	0	0	5	0	0	118	0	1399	8	40	534	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		0	175		0
Storage Lanes	0		1	0		1	0		0	1		0
Taper Length (ft)	25			25			25			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.865			0.865		0.999			0.999	
Flt Protected										0.950		
Satd. Flow (prot)	0	0	1611	0	0	1565	0	1859	0	1770	1774	0
Flt Permitted										0.950		
Satd. Flow (perm)	0	0	1611	0	0	1565	0	1859	0	1770	1774	0
Link Speed (mph)		25			25			45			45	
Link Distance (ft)		1341			477			2444			1372	
Travel Time (s)		36.6			13.0			37.0			20.8	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	2%	2%	5%	2%	2%	17%	2%	7%	2%
Adj. Flow (vph)	0	0	6	0	0	131	0	1554	9	44	593	2
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	6	0	0	131	0	1563	0	44	595	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	88.1%
Analysis Period (min)	15
	ICU Level of Service E

Intersection												
Int Delay, s/veh	7.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations			↗			↗		↔		↗	↘	
Traffic Vol, veh/h	0	0	5	0	0	118	0	1399	8	40	534	2
Future Vol, veh/h	0	0	5	0	0	118	0	1399	8	40	534	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	-	-	0	-	-	0	-	-	-	175	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	5	2	2	17	2	7	2
Mvmt Flow	0	0	6	0	0	131	0	1554	9	44	593	2

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	-	-	594	-	-	1559	595	0	0	1563	0	0
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	6.22	-	-	6.25	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.318	-	-	3.345	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	0	0	505	0	0	136	981	-	-	423	-	-
Stage 1	0	0	-	0	0	-	-	-	-	-	-	-
Stage 2	0	0	-	0	0	-	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	505	-	-	136	981	-	-	423	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	12.2		130.8		0		1	
HCM LOS	B		F					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	981	-	-	505	136	423	-	-
HCM Lane V/C Ratio	-	-	-	0.011	0.964	0.105	-	-
HCM Control Delay (s)	0	-	-	12.2	130.8	14.5	-	-
HCM Lane LOS	A	-	-	B	F	B	-	-
HCM 95th %tile Q(veh)	0	-	-	0	6.7	0.3	-	-

Lanes, Volumes, Timings
4: Colonial Drive & Forest Hill Road

Henry Chapel TIA
2031 Build+5 AM



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	8	33	0	14	109	1
Future Volume (vph)	8	33	0	14	109	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.891			0.999		
Flt Protected				0.953		
Satd. Flow (prot)	1660	0	0	1863	1773	0
Flt Permitted				0.953		
Satd. Flow (perm)	1660	0	0	1863	1773	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	477			1074	636	
Travel Time (s)	13.0			29.3	17.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	9	37	0	16	121	1
Shared Lane Traffic (%)						
Lane Group Flow (vph)	46	0	0	16	122	0
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	16.1% ICU Level of Service A
Analysis Period (min)	15

Intersection						
Int Delay, s/veh	6.2					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	8	33	0	14	109	1
Future Vol, veh/h	8	33	0	14	109	1
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	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	9	37	0	16	121	1

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	46	0	44
Stage 1	-	-	-	-	28
Stage 2	-	-	-	-	16
Critical Hdwy	-	-	4.12	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	-	-	2.218	-	3.518
Pot Cap-1 Maneuver	-	-	1562	-	967
Stage 1	-	-	-	-	995
Stage 2	-	-	-	-	1007
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1562	-	967
Mov Cap-2 Maneuver	-	-	-	-	967
Stage 1	-	-	-	-	995
Stage 2	-	-	-	-	1007

Approach	EB	WB	NB
HCM Control Delay, s	0	0	9.3
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	968	-	-	1562	-
HCM Lane V/C Ratio	0.126	-	-	-	-
HCM Control Delay (s)	9.3	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0.4	-	-	0	-

Lanes, Volumes, Timings
 5: Colonial Drive & Timber Ridge Road/Access 3

Henry Chapel TIA
 2031 Build+5 AM



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	99	10	0	32	2
Future Volume (vph)	0	99	10	0	32	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.865					
Flt Protected						0.955
Satd. Flow (prot)	1611	0	1863	0	0	1779
Flt Permitted						0.955
Satd. Flow (perm)	1611	0	1863	0	0	1779
Link Speed (mph)	25		25		25	
Link Distance (ft)	2169		1055		636	
Travel Time (s)	59.2		28.8		17.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	110	11	0	36	2
Shared Lane Traffic (%)						
Lane Group Flow (vph)	110	0	11	0	0	38
Sign Control	Stop		Free		Free	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 21.3% ICU Level of Service A

Analysis Period (min) 15

Intersection						
Int Delay, s/veh	7.7					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	99	10	0	32	2
Future Vol, veh/h	0	99	10	0	32	2
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	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	110	11	0	36	2






















Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	85	11	0	0	11	0
Stage 1	11	-	-	-	-	-
Stage 2	74	-	-	-	-	-
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	916	1070	-	-	1608	-
Stage 1	1012	-	-	-	-	-
Stage 2	949	-	-	-	-	-
Platoon blocked, %			-	-	-	-
Mov Cap-1 Maneuver	896	1070	-	-	1608	-
Mov Cap-2 Maneuver	896	-	-	-	-	-
Stage 1	1012	-	-	-	-	-
Stage 2	928	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.8	0	6.9
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	1070	1608
HCM Lane V/C Ratio	-	-	0.103	0.022
HCM Control Delay (s)	-	-	8.8	7.3
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0.3	0.1

Lanes, Volumes, Timings
6: S Point Road (NC 273) & Belmont MS/Belwood Drive

Henry Chapel TIA
2031 Build+5 AM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	301	1	54	2	2	36	120	1222	1	25	609	332
Future Volume (vph)	301	1	54	2	2	36	120	1222	1	25	609	332
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		3%			0%			1%			0%	
Storage Length (ft)	0		175	0		0	200		0	100		200
Storage Lanes	0		1	0		0	1		0	1		1
Taper Length (ft)	25			25			100			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	1.00
Frt			0.850		0.877							0.850
Flt Protected		0.953			0.998		0.950			0.950		
Satd. Flow (prot)	0	1732	1560	0	1523	0	1744	3522	0	1770	3343	1568
Flt Permitted		0.953			0.998		0.950			0.168		
Satd. Flow (perm)	0	1732	1560	0	1523	0	1744	3522	0	313	3343	1568
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		35			25			35			35	
Link Distance (ft)		1017			1050			404			1373	
Travel Time (s)		19.8			28.6			7.9			26.7	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	3%	2%	2%	100%	2%	5%	3%	2%	2%	2%	8%	3%
Adj. Flow (vph)	334	1	60	2	2	40	133	1358	1	28	677	369
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	335	60	0	44	0	133	1359	0	28	677	369
Turn Type	Split	NA	pm+ov	Split	NA		Prot	NA		Perm	NA	pm+ov
Protected Phases	4	4	5	8	8		5	2			6	4
Permitted Phases			4							6		6
Detector Phase	4	4	5	8	8		5	2		6	6	4
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0		7.0	12.0		12.0	12.0	7.0
Minimum Split (s)	11.9	11.9	12.1	14.0	14.0		12.1	17.6		32.6	32.6	11.9
Total Split (s)	31.0	31.0	20.0	14.0	14.0		20.0	75.0		55.0	55.0	31.0
Total Split (%)	25.8%	25.8%	16.7%	11.7%	11.7%		16.7%	62.5%		45.8%	45.8%	25.8%
Maximum Green (s)	26.1	26.1	14.9	7.0	7.0		14.9	69.4		49.4	49.4	26.1
Yellow Time (s)	3.0	3.0	3.0	5.0	5.0		3.0	4.5		4.5	4.5	3.0
All-Red Time (s)	1.9	1.9	2.1	2.0	2.0		2.1	1.1		1.1	1.1	1.9
Lost Time Adjust (s)		0.1	-0.1		-2.0		-0.1	-0.6		-0.6	-0.6	0.1
Total Lost Time (s)		5.0	5.0		5.0		5.0	5.0		5.0	5.0	5.0
Lead/Lag			Lead				Lead			Lag	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		2.0	6.0		6.0	6.0	2.0
Minimum Gap (s)	2.0	2.0	2.0	2.0	2.0		2.0	3.0		3.0	3.0	2.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0		0.0	15.0		15.0	15.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0		0.0	45.0		45.0	45.0	0.0
Recall Mode	None	None	None	None	None		None	Min		Min	Min	None
Walk Time (s)										7.0	7.0	
Flash Dont Walk (s)										20.0	20.0	
Pedestrian Calls (#/hr)										0	0	
Act Efect Green (s)		22.0	36.2		9.8		11.3	40.1		23.4	23.4	50.8

Lanes, Volumes, Timings
 6: S Point Road (NC 273) & Belmont MS/Belwood Drive

Henry Chapel TIA
 2031 Build+5 AM



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Actuated g/C Ratio		0.28	0.45		0.12		0.14	0.50		0.29	0.29	0.64
v/c Ratio		0.70	0.08		0.24		0.54	0.77		0.31	0.69	0.37
Control Delay		38.6	10.2		43.7		45.9	21.3		37.0	31.1	9.6
Queue Delay		0.0	0.0		0.0		0.0	0.0		0.0	0.0	0.0
Total Delay		38.6	10.2		43.7		45.9	21.3		37.0	31.1	9.6
LOS		D	B		D		D	C		D	C	A
Approach Delay		34.3			43.7			23.5			23.8	
Approach LOS		C			D			C			C	
Queue Length 50th (ft)		167	12		23		71	346		13	183	98
Queue Length 95th (ft)		#332	33		64		143	443		42	261	168
Internal Link Dist (ft)		937			970			324			1293	
Turn Bay Length (ft)			175				200			100		200
Base Capacity (vph)		610	802		185		354	2959		209	2237	1117
Starvation Cap Reductn		0	0		0		0	0		0	0	0
Spillback Cap Reductn		0	0		0		0	0		0	0	0
Storage Cap Reductn		0	0		0		0	0		0	0	0
Reduced v/c Ratio		0.55	0.07		0.24		0.38	0.46		0.13	0.30	0.33

Intersection Summary




















Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 80
 Natural Cycle: 80
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.77
 Intersection Signal Delay: 25.3
 Intersection LOS: C
 Intersection Capacity Utilization 79.7%
 ICU Level of Service D
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 6: S Point Road (NC 273) & Belmont MS/Belwood Drive



Lanes, Volumes, Timings
 7: S Point Road (NC 273) & McKee Farm Road/Stowe Road

Henry Chapel TIA
 2031 Build+5 AM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	17	6	23	19	1	84	29	1487	62	57	935	82
Future Volume (vph)	17	6	23	19	1	84	29	1487	62	57	935	82
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		200	0		0	0		0	100		0
Storage Lanes	0		1	0		0	0		0	1		0
Taper Length (ft)	25			25			25			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	1.00	0.95	0.95
Frt			0.850		0.891			0.994			0.988	
Flt Protected		0.965			0.991			0.999		0.950		
Satd. Flow (prot)	0	1798	1524	0	1645	0	0	3514	0	1703	3405	0
Flt Permitted		0.965			0.991			0.999		0.950		
Satd. Flow (perm)	0	1798	1524	0	1645	0	0	3514	0	1703	3405	0
Link Speed (mph)		25			25			35			35	
Link Distance (ft)		1043			1485			1373			492	
Travel Time (s)		28.4			40.5			26.7			9.6	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	6%	2%	2%	2%	2%	2%	2%	6%	5%	2%
Adj. Flow (vph)	19	7	26	21	1	93	32	1652	69	63	1039	91
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	26	26	0	115	0	0	1753	0	63	1130	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	83.4%
Analysis Period (min)	15
	ICU Level of Service E

HCM 6th TWSC
 7: S Point Road (NC 273) & McKee Farm Road/Stowe Road

Henry Chapel TIA
 2031 Build+5 AM

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	17	6	23	19	1	84	29	1487	62	57	935	82
Future Vol, veh/h	17	6	23	19	1	84	29	1487	62	57	935	82
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	-	-	200	-	-	-	-	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	6	2	2	2	2	2	2	6	5	2
Mvmt Flow	19	7	26	21	1	93	32	1652	69	63	1039	91

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	2102	2996	565	2400	3007	861	1130	0	0	1721	0	0
Stage 1	1211	1211	-	1751	1751	-	-	-	-	-	-	-
Stage 2	891	1785	-	649	1256	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	7.02	7.54	6.54	6.94	4.14	-	-	4.22	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.36	3.52	4.02	3.32	2.22	-	-	2.26	-	-
Pot Cap-1 Maneuver	30	13	458	~17	13	299	614	-	-	347	-	-
Stage 1	193	253	-	89	138	-	-	-	-	-	-	-
Stage 2	304	133	-	425	241	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	-	0	458	-	0	299	614	-	-	347	-	-
Mov Cap-2 Maneuver	-	0	-	-	0	-	-	-	-	-	-	-
Stage 1	193	207	-	89	0	-	-	-	-	-	-	-
Stage 2	-	0	-	318	197	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s					5.3		0.9	
HCM LOS	-		-					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	614	-	-	-	458	-	347	-	-
HCM Lane V/C Ratio	0.052	-	-	-	0.056	-	0.183	-	-
HCM Control Delay (s)	11.2	5.4	-	-	13.3	-	17.7	-	-
HCM Lane LOS	B	A	-	-	B	-	C	-	-
HCM 95th %tile Q(veh)	0.2	-	-	-	0.2	-	0.7	-	-

Notes
 ~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Lanes, Volumes, Timings

Henry Chapel TIA

8: S Point Road (NC 273) & South Point HS/Red Raider Run

2031 Build+5 AM



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↕	↗	↖	↕	↗	↖	↕	↗
Traffic Volume (vph)	0	0	0	159	40	177	83	1361	110	118	917	61
Future Volume (vph)	0	0	0	159	40	177	83	1361	110	118	917	61
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			4%			-1%			1%	
Storage Length (ft)	0		0	0		100	175		0	100		0
Storage Lanes	0		0	0		1	1		0	1		0
Taper Length (ft)	25			25			100			75		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Fr _t						0.850		0.989			0.991	
Fl _t Protected					0.961		0.950			0.950		
Satd. Flow (prot)	0	0	0	0	1754	1552	1778	3518	0	1761	3366	0
Fl _t Permitted					0.961		0.950			0.950		
Satd. Flow (perm)	0	0	0	0	1754	1552	1778	3518	0	1761	3366	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		25			25			35			35	
Link Distance (ft)		1017			1038			492			625	
Travel Time (s)		27.7			28.3			9.6			12.2	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	6%	2%
Adj. Flow (vph)	0	0	0	177	44	197	92	1512	122	131	1019	68
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	221	197	92	1634	0	131	1087	0
Turn Type				Perm	NA	pm+ov	Prot	NA		Prot	NA	
Protected Phases					8	1	5	2		1	6	
Permitted Phases				8		8						
Detector Phase				8	8	1	5	2		1	6	
Switch Phase												
Minimum Initial (s)				7.0	7.0	7.0	7.0	10.0		7.0	10.0	
Minimum Split (s)				25.4	25.4	12.6	12.1	27.7		12.6	23.7	
Total Split (s)				26.0	26.0	13.0	13.0	81.0		13.0	81.0	
Total Split (%)				21.7%	21.7%	10.8%	10.8%	67.5%		10.8%	67.5%	
Maximum Green (s)				20.6	20.6	7.4	7.9	75.3		7.4	75.3	
Yellow Time (s)				3.0	3.0	3.0	3.0	3.9		3.0	3.9	
All-Red Time (s)				2.4	2.4	2.6	2.1	1.8		2.6	1.8	
Lost Time Adjust (s)					-0.4	-0.6	-0.1	-0.7		-0.6	-0.7	
Total Lost Time (s)					5.0	5.0	5.0	5.0		5.0	5.0	
Lead/Lag						Lead	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)				2.0	2.0	2.0	2.0	3.0		2.0	3.0	
Recall Mode				None	None	None	None	C-Max		None	C-Max	
Walk Time (s)				7.0	7.0			7.0				
Flash Dont Walk (s)				13.0	13.0			15.0				
Pedestrian Calls (#/hr)				0	0			0				
Act Effct Green (s)					18.5	34.0	8.4	76.0		10.5	78.1	
Actuated g/C Ratio					0.15	0.28	0.07	0.63		0.09	0.65	
v/c Ratio					0.82	0.45	0.74	0.73		0.85	0.50	
Control Delay					72.6	39.3	87.8	17.6		85.2	9.1	

Lanes, Volumes, Timings
 8: S Point Road (NC 273) & South Point HS/Red Raider Run

Henry Chapel TIA
 2031 Build+5 AM



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay					0.0	0.0	0.0	0.1		0.0	0.3	
Total Delay					72.6	39.3	87.8	17.7		85.2	9.4	
LOS					E	D	F	B		F	A	
Approach Delay					56.9			21.4			17.5	
Approach LOS					E			C			B	
Queue Length 50th (ft)					165	125	71	423		~106	223	
Queue Length 95th (ft)					#268	199	#162	511		m#169	m227	
Internal Link Dist (ft)		937			958			412			545	
Turn Bay Length (ft)						100	175			100		
Base Capacity (vph)					306	439	126	2228		154	2190	
Starvation Cap Reductn					0	0	0	0		0	465	
Spillback Cap Reductn					0	0	0	77		0	0	
Storage Cap Reductn					0	0	0	0		0	0	
Reduced v/c Ratio					0.72	0.45	0.73	0.76		0.85	0.63	

Intersection Summary
























Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 92 (77%), Referenced to phase 2:NBT and 6:SBT, Start of Green
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.85
 Intersection Signal Delay: 24.4
 Intersection LOS: C
 Intersection Capacity Utilization 71.1%
 ICU Level of Service C
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 8: S Point Road (NC 273) & South Point HS/Red Raider Run



Lanes, Volumes, Timings
 9: S Point Road (NC 273) & Nixon Road/R L Stowe Road

Henry Chapel TIA
 2031 Build+5 AM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	133	210	123	375	104	34	143	667	725	55	640	68
Future Volume (vph)	133	210	123	375	104	34	143	667	725	55	640	68
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		1%			1%			1%			1%	
Storage Length (ft)	200		100	225		225	280		0	25		100
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	250			100			100			125		
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.963				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1761	1853	1474	3197	1689	0	1678	1853	1575	1761	1853	1530
Flt Permitted	0.950			0.950			0.950			0.149		
Satd. Flow (perm)	1761	1853	1474	3197	1689	0	1678	1853	1575	276	1853	1530
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		25			35			35			35	
Link Distance (ft)		1003			1016			625			1000	
Travel Time (s)		27.4			19.8			12.2			19.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	9%	9%	9%	4%	7%	2%	2%	2%	2%	5%
Adj. Flow (vph)	148	233	137	417	116	38	159	741	806	61	711	76
Shared Lane Traffic (%)												
Lane Group Flow (vph)	148	233	137	417	154	0	159	741	806	61	711	76
Turn Type	Split	NA	pm+ov	Split	NA		Prot	NA	pm+ov	D.Pm	NA	pm+ov
Protected Phases	3	3	5	4	4		5	2	4		6	3
Permitted Phases			3						2	2		6
Detector Phase	3	3	5	4	4		5	2	4	2	6	3
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0		7.0	10.0	7.0	10.0	10.0	7.0
Minimum Split (s)	25.0	25.0	12.8	13.3	13.3		12.8	24.1	13.3	24.1	24.1	25.0
Total Split (s)	25.0	25.0	15.0	32.0	32.0		15.0	63.0	32.0	63.0	48.0	25.0
Total Split (%)	20.8%	20.8%	12.5%	26.7%	26.7%		12.5%	52.5%	26.7%	52.5%	40.0%	20.8%
Maximum Green (s)	19.0	19.0	9.2	25.7	25.7		9.2	56.9	25.7	56.9	41.9	19.0
Yellow Time (s)	3.8	3.8	3.0	4.4	4.4		3.0	3.8	4.4	3.8	3.8	3.8
All-Red Time (s)	2.2	2.2	2.8	1.9	1.9		2.8	2.3	1.9	2.3	2.3	2.2
Lost Time Adjust (s)	-1.0	-1.0	-0.8	-1.3	-1.3		-0.8	-1.1	-1.3	-1.1	-1.1	-1.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lead	Lead	Lag	Lag		Lead		Lag		Lag	Lead
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		2.0	3.0	2.0	3.0	3.0	2.0
Recall Mode	None	None	None	None	None		None	C-Max	None	C-Max	C-Max	None
Walk Time (s)	7.0	7.0						7.0		7.0		7.0
Flash Dont Walk (s)	12.0	12.0						11.0		11.0		12.0
Pedestrian Calls (#/hr)	0	0						0		0		0
Act Effct Green (s)	18.4	18.4	30.6	26.4	26.4		12.2	60.2	91.6	60.2	43.0	66.4
Actuated g/C Ratio	0.15	0.15	0.26	0.22	0.22		0.10	0.50	0.76	0.50	0.36	0.55
v/c Ratio	0.55	0.82	0.36	0.59	0.42		0.94	0.80	0.67	0.44	1.07	0.09
Control Delay	54.7	72.1	22.2	45.8	43.8		107.0	21.4	6.4	33.3	93.4	12.5

Lanes, Volumes, Timings
 9: S Point Road (NC 273) & Nixon Road/R L Stowe Road

Henry Chapel TIA
 2031 Build+5 AM



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	1.1	0.0	0.0	0.0	0.0
Total Delay	54.7	72.1	22.2	45.8	43.8		107.0	22.5	6.5	33.3	93.4	12.5
LOS	D	E	C	D	D		F	C	A	C	F	B
Approach Delay		54.0			45.3			22.8			81.9	
Approach LOS		D			D			C			F	
Queue Length 50th (ft)	106	174	49	149	102		~140	418	151	30	~611	26
Queue Length 95th (ft)	174	#290	84	203	168		m#240	573	172	80	#845	49
Internal Link Dist (ft)		923			936			545			920	
Turn Bay Length (ft)	200		100	225			280			25		100
Base Capacity (vph)	293	308	376	730	386		170	930	1202	138	663	867
Starvation Cap Reductn	0	0	0	0	0		0	58	9	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.51	0.76	0.36	0.57	0.40		0.94	0.85	0.68	0.44	1.07	0.09

Intersection Summary

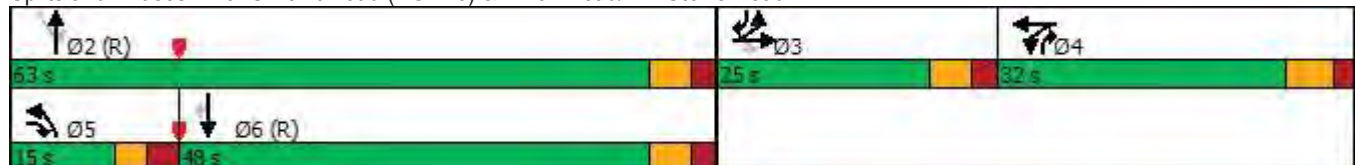
Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 0 (0%), Referenced to phase 2:NBSB and 6:SBT, Start of Green
 Natural Cycle: 100
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.07
 Intersection Signal Delay: 44.5
 Intersection Capacity Utilization 81.9%
 Analysis Period (min) 15
 Intersection LOS: D
 ICU Level of Service D

~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 9: S Point Road (NC 273) & Nixon Road/R L Stowe Road



Lanes, Volumes, Timings
 10: Henry Chapel Road & Access 1

Henry Chapel TIA
 2031 Build+5 AM



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	51	32	86	0	0	147
Future Volume (vph)	51	32	86	0	0	147
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.865	
Flt Protected		0.970				
Satd. Flow (prot)	0	1728	1810	0	1611	0
Flt Permitted		0.970				
Satd. Flow (perm)	0	1728	1810	0	1611	0
Link Speed (mph)		25	25		25	
Link Distance (ft)		1293	1432		1041	
Travel Time (s)		35.3	39.1		28.4	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	14%	5%	2%	2%	2%
Adj. Flow (vph)	57	36	96	0	0	163
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	93	96	0	163	0
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	26.9%
ICU Level of Service	A
Analysis Period (min)	15

Intersection						
Int Delay, s/veh	5.6					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	51	32	86	0	0	147
Future Vol, veh/h	51	32	86	0	0	147
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	90	90	90	90	90	90
Heavy Vehicles, %	2	14	5	2	2	2
Mvmt Flow	57	36	96	0	0	163

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	96	0	-	0	246 96
Stage 1	-	-	-	-	96 -
Stage 2	-	-	-	-	150 -
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	1498	-	-	-	742 960
Stage 1	-	-	-	-	928 -
Stage 2	-	-	-	-	878 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1498	-	-	-	713 960
Mov Cap-2 Maneuver	-	-	-	-	713 -
Stage 1	-	-	-	-	892 -
Stage 2	-	-	-	-	878 -

Approach	EB	WB	SB
HCM Control Delay, s	4.6	0	9.5
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1498	-	-	-	960
HCM Lane V/C Ratio	0.038	-	-	-	0.17
HCM Control Delay (s)	7.5	0	-	-	9.5
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0.1	-	-	-	0.6

Lanes, Volumes, Timings
 11: Henry Chapel Road & Access 2

Henry Chapel TIA
 2031 Build+5 AM



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↔	↔		↔	
Traffic Volume (vph)	21	11	27	0	0	59
Future Volume (vph)	21	11	27	0	0	59
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.865	
Flt Protected		0.968				
Satd. Flow (prot)	0	1733	1810	0	1611	0
Flt Permitted		0.968				
Satd. Flow (perm)	0	1733	1810	0	1611	0
Link Speed (mph)		25	25		25	
Link Distance (ft)		1432	1164		1055	
Travel Time (s)		39.1	31.7		28.8	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	14%	5%	2%	2%	2%
Adj. Flow (vph)	23	12	30	0	0	66
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	35	30	0	66	0
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	18.7%
ICU Level of Service	A
Analysis Period (min)	15

Intersection						
Int Delay, s/veh	5.7					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	21	11	27	0	0	59
Future Vol, veh/h	21	11	27	0	0	59
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	90	90	90	90	90	90
Heavy Vehicles, %	2	14	5	2	2	2
Mvmt Flow	23	12	30	0	0	66

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	30	0	-	0	88 30
Stage 1	-	-	-	-	30 -
Stage 2	-	-	-	-	58 -
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	1583	-	-	-	913 1044
Stage 1	-	-	-	-	993 -
Stage 2	-	-	-	-	965 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1583	-	-	-	899 1044
Mov Cap-2 Maneuver	-	-	-	-	899 -
Stage 1	-	-	-	-	978 -
Stage 2	-	-	-	-	965 -

Approach	EB	WB	SB
HCM Control Delay, s	4.8	0	8.7
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1583	-	-	-	1044
HCM Lane V/C Ratio	0.015	-	-	-	0.063
HCM Control Delay (s)	7.3	0	-	-	8.7
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.2

Lanes, Volumes, Timings
 1: S Point Road (NC 273) & Armstrong Road (NC 273)/Farm Road

Henry Chapel TIA
 2031 Build+5 PM



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	↕
Traffic Volume (vph)	562	0	42	0	0	1	60	119	0	2	152	688
Future Volume (vph)	562	0	42	0	0	1	60	119	0	2	152	688
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		0	0		100
Storage Lanes	0		0	0		0	0		0	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.991			0.865							0.850
Flt Protected		0.956						0.983			0.999	
Satd. Flow (prot)	0	1762	0	0	1611	0	0	1773	0	0	1861	1568
Flt Permitted		0.956						0.983			0.999	
Satd. Flow (perm)	0	1762	0	0	1611	0	0	1773	0	0	1861	1568
Link Speed (mph)		45			25			45			45	
Link Distance (ft)		1234			1013			1002			3097	
Travel Time (s)		18.7			27.6			15.2			46.9	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	4%	2%	2%	2%	8%	4%	2%	2%	2%	3%
Adj. Flow (vph)	624	0	47	0	0	1	67	132	0	2	169	764
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	671	0	0	1	0	0	199	0	0	171	764
Sign Control		Stop			Stop			Free			Free	

Intersection Summary	
Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	68.1% ICU Level of Service C
Analysis Period (min)	15

HCM 6th TWSC
 1: S Point Road (NC 273) & Armstrong Road (NC 273)/Farm Road

Henry Chapel TIA
 2031 Build+5 PM

Intersection												
Int Delay, s/veh	71.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	↗
Traffic Vol, veh/h	562	0	42	0	0	1	60	119	0	2	152	688
Future Vol, veh/h	562	0	42	0	0	1	60	119	0	2	152	688
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	-	-	-	-	-	-	-	-	-	-	-	100
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	4	2	2	2	8	4	2	2	2	3
Mvmt Flow	624	0	47	0	0	1	67	132	0	2	169	764

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	440	439	169	845	1203	132	933	0	0	132	0	0
Stage 1	173	173	-	266	266	-	-	-	-	-	-	-
Stage 2	267	266	-	579	937	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.24	7.12	6.52	6.22	4.18	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.336	3.518	4.018	3.318	2.272	-	-	2.218	-	-
Pot Cap-1 Maneuver	~ 527	512	870	283	184	917	710	-	-	1453	-	-
Stage 1	829	756	-	739	689	-	-	-	-	-	-	-
Stage 2	738	689	-	501	343	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	~ 484	458	870	246	165	917	710	-	-	1453	-	-
Mov Cap-2 Maneuver	~ 484	458	-	246	165	-	-	-	-	-	-	-
Stage 1	744	754	-	664	619	-	-	-	-	-	-	-
Stage 2	662	619	-	473	342	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB			
HCM Control Delay, s	191.7		8.9		3.6		0			
HCM LOS	F		A							

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	710	-	-	499	917	1453	-	-
HCM Lane V/C Ratio	0.094	-	-	1.345	0.001	0.002	-	-
HCM Control Delay (s)	10.6	0	-	191.7	8.9	7.5	0	-
HCM Lane LOS	B	A	-	F	A	A	A	-
HCM 95th %tile Q(veh)	0.3	-	-	29.9	0	0	-	-

Notes
 ~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Lanes, Volumes, Timings

Henry Chapel TIA

2: S Point Road (NC 273) & S Point Church Road/Henry Chapel Road

2031 Build+5 PM



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕	↕		↕		↕	↕	
Traffic Volume (vph)	1	0	0	27	0	151	0	790	41	246	917	2
Future Volume (vph)	1	0	0	27	0	151	0	790	41	246	917	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		200	0		0	275		0
Storage Lanes	0		0	0		1	0		0	1		0
Taper Length (ft)	25			25			25			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt						0.850		0.993				
Flt Protected		0.950			0.950					0.950		
Satd. Flow (prot)	0	1770	0	0	1770	1468	0	1833	0	1770	1845	0
Flt Permitted		0.738			0.757					0.950		
Satd. Flow (perm)	0	1375	0	0	1410	1468	0	1833	0	1770	1845	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		25			25			45			45	
Link Distance (ft)		1509			1293			1519			881	
Travel Time (s)		41.2			35.3			23.0			13.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	2%	2%	10%	2%	3%	2%	2%	3%	2%
Adj. Flow (vph)	1	0	0	30	0	168	0	878	46	273	1019	2
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1	0	0	30	168	0	924	0	273	1021	0
Turn Type	Perm	NA		Perm	NA	pm+ov		NA		Prot	NA	
Protected Phases		4			8	1		2		1	6	
Permitted Phases	4			8		8	2					
Detector Phase	4	4		8	8	1	2	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0	7.0	12.0	12.0		7.0	12.0	
Minimum Split (s)	14.0	14.0		14.0	14.0	14.0	19.0	19.0		14.0	19.0	
Total Split (s)	14.0	14.0		14.0	14.0	22.0	54.0	54.0		22.0	76.0	
Total Split (%)	15.6%	15.6%		15.6%	15.6%	24.4%	60.0%	60.0%		24.4%	84.4%	
Maximum Green (s)	7.0	7.0		7.0	7.0	15.0	47.0	47.0		15.0	69.0	
Yellow Time (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0	5.0	
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		-2.0			-2.0	-2.0		-2.0		-2.0	-2.0	
Total Lost Time (s)		5.0			5.0	5.0		5.0		5.0	5.0	
Lead/Lag						Lead	Lag	Lag		Lead		
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None	None	Min	Min		None	Min	
Act Effct Green (s)		9.4			9.4	24.0		44.1		16.7	68.6	
Actuated g/C Ratio		0.12			0.12	0.31		0.56		0.21	0.87	
v/c Ratio		0.01			0.18	0.38		0.90		0.73	0.63	
Control Delay		37.0			39.6	24.7		30.4		45.2	5.7	
Queue Delay		0.0			0.0	0.0		0.0		0.0	0.0	
Total Delay		37.0			39.6	24.7		30.4		45.2	5.7	
LOS		D			D	C		C		D	A	
Approach Delay		37.0			26.9			30.4			14.0	



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach LOS		D			C			C				B
Queue Length 50th (ft)		1			16	70		453		150	207	
Queue Length 95th (ft)		5			43	123		#737		#280	325	
Internal Link Dist (ft)		1429			1213			1439			801	
Turn Bay Length (ft)						200				275		
Base Capacity (vph)		164			168	468		1191		399	1611	
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		0.01			0.18	0.36		0.78		0.68	0.63	

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 78.5

Natural Cycle: 90

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.90

Intersection Signal Delay: 21.3

Intersection LOS: C

Intersection Capacity Utilization 110.8%

ICU Level of Service H

Analysis Period (min) 15

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



















Queue shown is maximum after two cycles.

Splits and Phases: 2: S Point Road (NC 273) & S Point Church Road/Henry Chapel Road



Lanes, Volumes, Timings
 3: S Point Road (NC 273) & BB Drive/Forest Hill Road

Henry Chapel TIA
 2031 Build+5 PM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	5	0	0	73	0	1049	4	123	1322	1
Future Volume (vph)	0	0	5	0	0	73	0	1049	4	123	1322	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		0	175		0
Storage Lanes	0		1	0		1	0		0	1		0
Taper Length (ft)	25			25			25			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.865			0.865						
Flt Protected										0.950		
Satd. Flow (prot)	0	0	1611	0	0	1611	0	1863	0	1770	1863	0
Flt Permitted										0.950		
Satd. Flow (perm)	0	0	1611	0	0	1611	0	1863	0	1770	1863	0
Link Speed (mph)		25			25			45			45	
Link Distance (ft)		1341			477			2444			1372	
Travel Time (s)		36.6			13.0			37.0			20.8	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	6	0	0	81	0	1166	4	137	1469	1
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	6	0	0	81	0	1170	0	137	1470	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	105.5%
Analysis Period (min)	15
	ICU Level of Service G

Intersection												
Int Delay, s/veh	1.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations			↗			↗		↔		↗	↘	
Traffic Vol, veh/h	0	0	5	0	0	73	0	1049	4	123	1322	1
Future Vol, veh/h	0	0	5	0	0	73	0	1049	4	123	1322	1
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	-	-	0	-	-	0	-	-	-	175	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	6	0	0	81	0	1166	4	137	1469	1

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	-	-	1470	-	-	1168	1470	0	0	1170	0	0
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	6.22	-	-	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.318	-	-	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	0	0	156	0	0	235	459	-	-	597	-	-
Stage 1	0	0	-	0	0	-	-	-	-	-	-	-
Stage 2	0	0	-	0	0	-	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	156	-	-	235	459	-	-	597	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB			
HCM Control Delay, s	28.9		28.2		0		1.1			
HCM LOS	D		D							

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	459	-	-	156	235	597	-	-
HCM Lane V/C Ratio	-	-	-	0.036	0.345	0.229	-	-
HCM Control Delay (s)	0	-	-	28.9	28.2	12.8	-	-
HCM Lane LOS	A	-	-	D	D	B	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	1.5	0.9	-	-

Lanes, Volumes, Timings
4: Colonial Drive & Forest Hill Road

Henry Chapel TIA
2031 Build+5 PM



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	5	116	1	5	72	1
Future Volume (vph)	5	116	1	5	72	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.871			0.998		
Flt Protected				0.993	0.953	
Satd. Flow (prot)	1458	0	0	1850	1601	0
Flt Permitted				0.993	0.953	
Satd. Flow (perm)	1458	0	0	1850	1601	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	477			1074	636	
Travel Time (s)	13.0			29.3	17.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	25%	13%	2%	2%	13%	2%
Adj. Flow (vph)	6	129	1	6	80	1
Shared Lane Traffic (%)						
Lane Group Flow (vph)	135	0	0	7	81	0
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 18.2% ICU Level of Service A

Analysis Period (min) 15

Intersection						
Int Delay, s/veh	3.5					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	5	116	1	5	72	1
Future Vol, veh/h	5	116	1	5	72	1
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	90	90	90	90	90	90
Heavy Vehicles, %	25	13	2	2	13	2
Mvmt Flow	6	129	1	6	80	1

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	135	0	79
Stage 1	-	-	-	-	71
Stage 2	-	-	-	-	8
Critical Hdwy	-	-	4.12	-	6.53
Critical Hdwy Stg 1	-	-	-	-	5.53
Critical Hdwy Stg 2	-	-	-	-	5.53
Follow-up Hdwy	-	-	2.218	-	3.617
Pot Cap-1 Maneuver	-	-	1449	-	897
Stage 1	-	-	-	-	925
Stage 2	-	-	-	-	987
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1449	-	896
Mov Cap-2 Maneuver	-	-	-	-	896
Stage 1	-	-	-	-	925
Stage 2	-	-	-	-	986

Approach	EB	WB	NB
HCM Control Delay, s	0	1.2	9.4
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	897	-	-	1449	-
HCM Lane V/C Ratio	0.09	-	-	0.001	-
HCM Control Delay (s)	9.4	-	-	7.5	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.3	-	-	0	-

Lanes, Volumes, Timings
 5: Colonial Drive & Timber Ridge Road/Access 3

Henry Chapel TIA
 2031 Build+5 PM



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	68	4	2	110	6
Future Volume (vph)	0	68	4	2	110	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.865		0.955			
Flt Protected						0.955
Satd. Flow (prot)	1611	0	1479	0	0	1762
Flt Permitted						0.955
Satd. Flow (perm)	1611	0	1479	0	0	1762
Link Speed (mph)	25		25			25
Link Distance (ft)	2169		1055			636
Travel Time (s)	59.2		28.8			17.3
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	33%	2%	2%	20%
Adj. Flow (vph)	0	76	4	2	122	7
Shared Lane Traffic (%)						
Lane Group Flow (vph)	76	0	6	0	0	129
Sign Control	Stop		Free			Free

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	24.0%
Analysis Period (min)	15
	ICU Level of Service A

Intersection						
Int Delay, s/veh	7.4					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	T		T		T	
Traffic Vol, veh/h	0	68	4	2	110	6
Future Vol, veh/h	0	68	4	2	110	6
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	90	90	90	90	90	90
Heavy Vehicles, %	2	2	33	2	2	20
Mvmt Flow	0	76	4	2	122	7






















Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	256	5	0	0	6	0
Stage 1	5	-	-	-	-	-
Stage 2	251	-	-	-	-	-
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	733	1078	-	-	1615	-
Stage 1	1018	-	-	-	-	-
Stage 2	791	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	677	1078	-	-	1615	-
Mov Cap-2 Maneuver	677	-	-	-	-	-
Stage 1	1018	-	-	-	-	-
Stage 2	731	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.6	0	7
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	1078	1615
HCM Lane V/C Ratio	-	-	0.07	0.076
HCM Control Delay (s)	-	-	8.6	7.4
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0.2

Lanes, Volumes, Timings
6: S Point Road (NC 273) & Belmont MS/Belwood Drive

Henry Chapel TIA
2031 Build+5 PM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	26	2	22	3	1	35	12	1184	2	49	1504	6
Future Volume (vph)	26	2	22	3	1	35	12	1184	2	49	1504	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		3%			0%			1%			0%	
Storage Length (ft)	0		175	0		0	200		0	100		200
Storage Lanes	0		1	0		0	1		0	1		1
Taper Length (ft)	25			25			100			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	1.00
Frt			0.850		0.878							0.850
Flt Protected		0.955			0.997		0.950			0.950		
Satd. Flow (prot)	0	1752	795	0	1631	0	1761	3522	0	1770	3539	1583
Flt Permitted		0.955			0.997		0.950			0.204		
Satd. Flow (perm)	0	1752	795	0	1631	0	1761	3522	0	380	3539	1583
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		35			25			35			35	
Link Distance (ft)		1017			1050			404			1373	
Travel Time (s)		19.8			28.6			7.9			26.7	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	100%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Adj. Flow (vph)	29	2	24	3	1	39	13	1316	2	54	1671	7
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	31	24	0	43	0	13	1318	0	54	1671	7
Turn Type	Split	NA	pm+ov	Split	NA		Prot	NA		Perm	NA	pm+ov
Protected Phases	4	4	5	8	8		5	2			6	4
Permitted Phases			4							6		6
Detector Phase	4	4	5	8	8		5	2		6	6	4
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0		7.0	12.0		12.0	12.0	7.0
Minimum Split (s)	11.9	11.9	12.1	14.0	14.0		12.1	17.6		32.6	32.6	11.9
Total Split (s)	12.0	12.0	13.0	14.0	14.0		13.0	94.0		81.0	81.0	12.0
Total Split (%)	10.0%	10.0%	10.8%	11.7%	11.7%		10.8%	78.3%		67.5%	67.5%	10.0%
Maximum Green (s)	7.1	7.1	7.9	7.0	7.0		7.9	88.4		75.4	75.4	7.1
Yellow Time (s)	3.0	3.0	3.0	5.0	5.0		3.0	4.5		4.5	4.5	3.0
All-Red Time (s)	1.9	1.9	2.1	2.0	2.0		2.1	1.1		1.1	1.1	1.9
Lost Time Adjust (s)		0.1	-0.1		-2.0		-0.1	-0.6		-0.6	-0.6	0.1
Total Lost Time (s)		5.0	5.0		5.0		5.0	5.0		5.0	5.0	5.0
Lead/Lag			Lead				Lead			Lag	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		2.0	6.0		6.0	6.0	2.0
Minimum Gap (s)	2.0	2.0	2.0	2.0	2.0		2.0	3.0		3.0	3.0	2.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0		0.0	15.0		15.0	15.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0		0.0	45.0		45.0	45.0	0.0
Recall Mode	None	None	None	None	None		None	Min		Min	Min	None
Walk Time (s)										7.0	7.0	
Flash Dont Walk (s)										20.0	20.0	
Pedestrian Calls (#/hr)										0	0	
Act Efect Green (s)		7.8	11.3		10.1		8.0	66.8		60.9	60.9	66.7

Lanes, Volumes, Timings
 6: S Point Road (NC 273) & Belmont MS/Belwood Drive

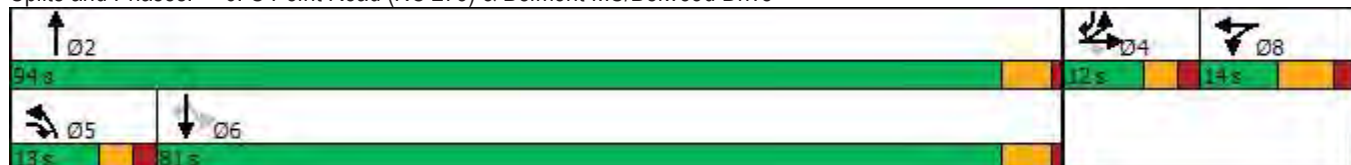
Henry Chapel TIA
 2031 Build+5 PM



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Actuated g/C Ratio		0.10	0.14		0.12		0.10	0.82		0.74	0.74	0.81
v/c Ratio		0.19	0.22		0.21		0.08	0.46		0.19	0.63	0.01
Control Delay		48.1	32.1		45.9		47.2	6.0		12.0	13.7	4.7
Queue Delay		0.0	0.0		0.0		0.0	0.0		0.0	0.0	0.0
Total Delay		48.1	32.1		45.9		47.2	6.0		12.0	13.7	4.7
LOS		D	C		D		D	A		B	B	A
Approach Delay		41.1			45.9			6.4			13.7	
Approach LOS		D			D			A			B	
Queue Length 50th (ft)		18	9		24		7	192		16	428	1
Queue Length 95th (ft)		54	35		67		30	236		40	525	5
Internal Link Dist (ft)		937			970			324			1293	
Turn Bay Length (ft)			175				200			100		200
Base Capacity (vph)		167	119		201		192	3274		324	3016	1290
Starvation Cap Reductn		0	0		0		0	0		0	0	0
Spillback Cap Reductn		0	0		0		0	0		0	0	0
Storage Cap Reductn		0	0		0		0	0		0	0	0
Reduced v/c Ratio		0.19	0.20		0.21		0.07	0.40		0.17	0.55	0.01




















Intersection Summary	
Area Type:	Other
Cycle Length:	120
Actuated Cycle Length:	81.9
Natural Cycle:	90
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.63
Intersection Signal Delay:	11.5
Intersection LOS:	B
Intersection Capacity Utilization:	65.7%
ICU Level of Service:	C
Analysis Period (min):	15

Splits and Phases: 6: S Point Road (NC 273) & Belmont MS/Belwood Drive



Lanes, Volumes, Timings
 7: S Point Road (NC 273) & McKee Farm Road/Stowe Road

Henry Chapel TIA
 2031 Build+5 PM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	30	11	17	29	2	80	13	1218	26	102	1522	57
Future Volume (vph)	30	11	17	29	2	80	13	1218	26	102	1522	57
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		200	0		0	0		0	100		0
Storage Lanes	0		1	0		0	0		0	1		0
Taper Length (ft)	25			25			25			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	1.00	0.95	0.95
Frt			0.850		0.902			0.997			0.995	
Flt Protected		0.965			0.987			0.999		0.950		
Satd. Flow (prot)	0	1798	1583	0	1658	0	0	3525	0	1770	3522	0
Flt Permitted		0.965			0.987			0.999		0.950		
Satd. Flow (perm)	0	1798	1583	0	1658	0	0	3525	0	1770	3522	0
Link Speed (mph)		25			25			35			35	
Link Distance (ft)		1043			1485			1373			492	
Travel Time (s)		28.4			40.5			26.7			9.6	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	33	12	19	32	2	89	14	1353	29	113	1691	63
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	45	19	0	123	0	0	1396	0	113	1754	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	102.1%
ICU Level of Service	G
Analysis Period (min)	15

HCM 6th TWSC
 7: S Point Road (NC 273) & McKee Farm Road/Stowe Road

Henry Chapel TIA
 2031 Build+5 PM

Intersection												
Int Delay, s/veh	85.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗		↕			↕		↗	↕	
Traffic Vol, veh/h	30	11	17	29	2	80	13	1218	26	102	1522	57
Future Vol, veh/h	30	11	17	29	2	80	13	1218	26	102	1522	57
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	-	-	200	-	-	-	-	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	33	12	19	32	2	89	14	1353	29	113	1691	63

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	2655	3359	877	2474	3376	691	1754	0	0	1382	0	0
Stage 1	1949	1949	-	1396	1396	-	-	-	-	-	-	-
Stage 2	706	1410	-	1078	1980	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	~ 11	~ 8	292	~ 15	7	387	353	-	-	492	-	-
Stage 1	66	110	-	148	206	-	-	-	-	-	-	-
Stage 2	393	203	-	233	106	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	~ 4	~ 5	292	-	4	387	353	-	-	492	-	-
Mov Cap-2 Maneuver	~ 4	~ 5	-	-	4	-	-	-	-	-	-	-
Stage 1	55	85	-	122	170	-	-	-	-	-	-	-
Stage 2	247	168	-	144	82	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, \$4541.3			1.4	0.9
HCM LOS	F	-		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	353	-	-	4	292	-	492	-	-
HCM Lane V/C Ratio	0.041	-	-	11.389	0.065	-	0.23	-	-
HCM Control Delay (s)	15.6	1.3		\$ 6416.8	18.2	-	14.5	-	-
HCM Lane LOS	C	A	-	F	C	-	B	-	-
HCM 95th %tile Q(veh)	0.1	-	-	7.5	0.2	-	0.9	-	-

Notes
 ~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Lanes, Volumes, Timings

Henry Chapel TIA

8: S Point Road (NC 273) & South Point HS/Red Raider Run

2031 Build+5 PM



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↕	↗	↖	↕	↗	↖	↕	↗
Traffic Volume (vph)	0	0	0	249	6	258	19	1158	109	149	1451	4
Future Volume (vph)	0	0	0	249	6	258	19	1158	109	149	1451	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			4%			-1%			1%	
Storage Length (ft)	0		0	0		100	175		0	100		0
Storage Lanes	0		0	0		1	1		0	1		0
Taper Length (ft)	25			25			100			75		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Fr _t						0.850		0.987				
Flt Protected					0.954		0.950			0.950		
Satd. Flow (prot)	0	0	0	0	1742	1552	1778	3479	0	1761	3522	0
Flt Permitted					0.954		0.950			0.950		
Satd. Flow (perm)	0	0	0	0	1742	1552	1778	3479	0	1761	3522	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		25			25			35			35	
Link Distance (ft)		1017			1038			492			625	
Travel Time (s)		27.7			28.3			9.6			12.2	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	3%	2%	2%	2%	2%
Adj. Flow (vph)	0	0	0	277	7	287	21	1287	121	166	1612	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	284	287	21	1408	0	166	1616	0
Turn Type				Perm	NA	pm+ov	Prot	NA		Prot	NA	
Protected Phases					8	1	5	2		1	6	
Permitted Phases				8		8						
Detector Phase				8	8	1	5	2		1	6	
Switch Phase												
Minimum Initial (s)				7.0	7.0	7.0	7.0	10.0		7.0	10.0	
Minimum Split (s)				25.4	25.4	12.6	12.1	27.7		12.6	23.7	
Total Split (s)				26.0	26.0	18.0	13.0	86.0		18.0	91.0	
Total Split (%)				20.0%	20.0%	13.8%	10.0%	66.2%		13.8%	70.0%	
Maximum Green (s)				20.6	20.6	12.4	7.9	80.3		12.4	85.3	
Yellow Time (s)				3.0	3.0	3.0	3.0	3.9		3.0	3.9	
All-Red Time (s)				2.4	2.4	2.6	2.1	1.8		2.6	1.8	
Lost Time Adjust (s)					-0.4	-0.6	-0.1	-0.7		-0.6	-0.7	
Total Lost Time (s)					5.0	5.0	5.0	5.0		5.0	5.0	
Lead/Lag						Lead	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)				2.0	2.0	2.0	2.0	3.0		2.0	3.0	
Recall Mode				None	None	None	None	C-Max		None	C-Max	
Walk Time (s)				7.0	7.0			7.0				
Flash Dont Walk (s)				13.0	13.0			15.0				
Pedestrian Calls (#/hr)				0	0			0				
Act Effct Green (s)					21.0	39.0	7.3	81.0		13.0	91.6	
Actuated g/C Ratio					0.16	0.30	0.06	0.62		0.10	0.70	
v/c Ratio					1.01	0.62	0.21	0.65		0.94	0.65	
Control Delay					110.2	45.9	63.7	17.3		67.1	9.3	

Lanes, Volumes, Timings
 8: S Point Road (NC 273) & South Point HS/Red Raider Run

Henry Chapel TIA
 2031 Build+5 PM



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay					0.0	1.5	0.0	0.2		0.0	0.3	
Total Delay					110.2	47.4	63.7	17.5		67.1	9.6	
LOS					F	D	E	B		E	A	
Approach Delay					78.7			18.2			14.9	
Approach LOS					E			B			B	
Queue Length 50th (ft)					~246	208	17	372		137	391	
Queue Length 95th (ft)					#431	309	46	445		m#149	m355	
Internal Link Dist (ft)		937			958			412			545	
Turn Bay Length (ft)						100	175			100		
Base Capacity (vph)					281	465	109	2167		176	2480	
Starvation Cap Reductn					0	0	0	0		0	293	
Spillback Cap Reductn					0	65	0	164		0	0	
Storage Cap Reductn					0	0	0	0		0	0	
Reduced v/c Ratio					1.01	0.72	0.19	0.70		0.94	0.74	

Intersection Summary
























Area Type: Other
 Cycle Length: 130
 Actuated Cycle Length: 130
 Offset: 44 (34%), Referenced to phase 2:NBT and 6:SBT, Start of Green
 Natural Cycle: 80
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.01
 Intersection Signal Delay: 25.8
 Intersection LOS: C
 Intersection Capacity Utilization 72.7%
 ICU Level of Service C
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 8: S Point Road (NC 273) & South Point HS/Red Raider Run



Lanes, Volumes, Timings
 9: S Point Road (NC 273) & Nixon Road/R L Stowe Road

Henry Chapel TIA
 2031 Build+5 PM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	91	126	142	752	143	44	121	641	622	86	728	105
Future Volume (vph)	91	126	142	752	143	44	121	641	622	86	728	105
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		1%			1%			1%			1%	
Storage Length (ft)	200		100	225		225	280		0	25		100
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	250			100			100			125		
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.965				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1761	1853	1545	3383	1762	0	1761	1853	1545	1761	1853	1560
Flt Permitted	0.950			0.950			0.950			0.137		
Satd. Flow (perm)	1761	1853	1545	3383	1762	0	1761	1853	1545	254	1853	1560
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		25			35			35			35	
Link Distance (ft)		1003			1016			625			1000	
Travel Time (s)		27.4			19.8			12.2			19.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	4%	3%	4%	2%	2%	2%	4%	2%	2%	3%
Adj. Flow (vph)	101	140	158	836	159	49	134	712	691	96	809	117
Shared Lane Traffic (%)												
Lane Group Flow (vph)	101	140	158	836	208	0	134	712	691	96	809	117
Turn Type	Split	NA	pm+ov	Split	NA		Prot	NA	pm+ov	D.Pm	NA	pm+ov
Protected Phases	3	3	5	4	4		5	2	4		6	3
Permitted Phases			3						2	2		6
Detector Phase	3	3	5	4	4		5	2	4	2	6	3
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0		7.0	10.0	7.0	10.0	10.0	7.0
Minimum Split (s)	25.0	25.0	12.8	13.3	13.3		12.8	24.1	13.3	24.1	24.1	25.0
Total Split (s)	25.0	25.0	13.0	47.0	47.0		13.0	58.0	47.0	58.0	45.0	25.0
Total Split (%)	19.2%	19.2%	10.0%	36.2%	36.2%		10.0%	44.6%	36.2%	44.6%	34.6%	19.2%
Maximum Green (s)	19.0	19.0	7.2	40.7	40.7		7.2	51.9	40.7	51.9	38.9	19.0
Yellow Time (s)	3.8	3.8	3.0	4.4	4.4		3.0	3.8	4.4	3.8	3.8	3.8
All-Red Time (s)	2.2	2.2	2.8	1.9	1.9		2.8	2.3	1.9	2.3	2.3	2.2
Lost Time Adjust (s)	-1.0	-1.0	-0.8	-1.3	-1.3		-0.8	-1.1	-1.3	-1.1	-1.1	-1.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lead	Lead	Lag	Lag		Lead		Lag		Lag	Lead
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		2.0	3.0	2.0	3.0	3.0	2.0
Recall Mode	None	None	None	None	None		None	C-Max	None	C-Max	C-Max	None
Walk Time (s)	7.0	7.0						7.0		7.0		7.0
Flash Dont Walk (s)	12.0	12.0						11.0		11.0		12.0
Pedestrian Calls (#/hr)	0	0						0		0		0
Act Effct Green (s)	15.0	15.0	29.9	38.7	38.7		14.9	61.2	105.0	61.2	41.3	61.3
Actuated g/C Ratio	0.12	0.12	0.23	0.30	0.30		0.11	0.47	0.81	0.47	0.32	0.47
v/c Ratio	0.50	0.65	0.45	0.83	0.40		0.66	0.82	0.55	0.81	1.37	0.16
Control Delay	61.5	69.0	27.5	50.2	38.1		63.6	44.5	7.3	78.1	214.4	19.9

Lanes, Volumes, Timings
 9: S Point Road (NC 273) & Nixon Road/R L Stowe Road

Henry Chapel TIA
 2031 Build+5 PM



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	12.7	0.8	0.0	0.0	0.0
Total Delay	61.5	69.0	27.5	50.2	38.1		63.6	57.2	8.1	78.1	214.4	19.9
LOS	E	E	C	D	D		E	E	A	E	F	B
Approach Delay		50.7			47.8			35.7			179.3	
Approach LOS		D			D			D			F	
Queue Length 50th (ft)	81	114	54	334	138		112	565	338	69	~917	56
Queue Length 95th (ft)	135	178	102	403	206		m#271	#836	516	#195	#1164	89
Internal Link Dist (ft)		923			936			545			920	
Turn Bay Length (ft)	200		100	225			280			25		100
Base Capacity (vph)	270	285	355	1098	572		202	872	1240	119	589	796
Starvation Cap Reductn	0	0	0	0	0		0	150	269	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.37	0.49	0.45	0.76	0.36		0.66	0.99	0.71	0.81	1.37	0.15

Intersection Summary

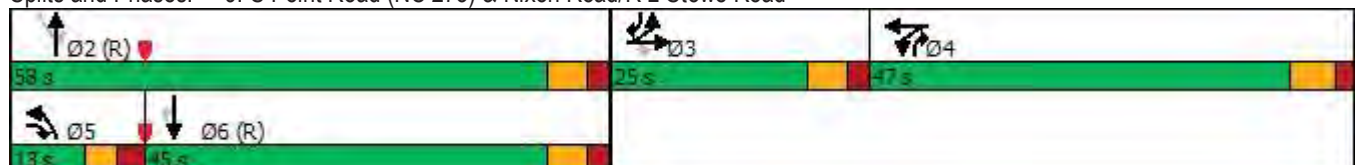
Area Type: Other
 Cycle Length: 130
 Actuated Cycle Length: 130
 Offset: 0 (0%), Referenced to phase 2:NBSB and 6:SBT, Start of Green
 Natural Cycle: 150
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.37
 Intersection Signal Delay: 77.0
 Intersection Capacity Utilization 89.8%
 Analysis Period (min) 15
 Intersection LOS: E
 ICU Level of Service E

~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 9: S Point Road (NC 273) & Nixon Road/R L Stowe Road



Lanes, Volumes, Timings
 10: Henry Chapel Road & Access 1

Henry Chapel TIA
 2031 Build+5 PM



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	176	111	74	0	0	104
Future Volume (vph)	176	111	74	0	0	104
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t					0.865	
Fl _t Protected		0.970				
Satd. Flow (prot)	0	1807	1743	0	1611	0
Fl _t Permitted		0.970				
Satd. Flow (perm)	0	1807	1743	0	1611	0
Link Speed (mph)		25	25		25	
Link Distance (ft)		1293	1432		1041	
Travel Time (s)		35.3	39.1		28.4	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	9%	2%	2%	2%
Adj. Flow (vph)	196	123	82	0	0	116
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	319	82	0	116	0
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	35.4%
ICU Level of Service	A
Analysis Period (min)	15

Intersection						
Int Delay, s/veh	5					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	176	111	74	0	0	104
Future Vol, veh/h	176	111	74	0	0	104
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	90	90	90	90	90	90
Heavy Vehicles, %	2	2	9	2	2	2
Mvmt Flow	196	123	82	0	0	116

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	82	0	-	0	597 82
Stage 1	-	-	-	-	82 -
Stage 2	-	-	-	-	515 -
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	1515	-	-	-	466 978
Stage 1	-	-	-	-	941 -
Stage 2	-	-	-	-	600 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1515	-	-	-	401 978
Mov Cap-2 Maneuver	-	-	-	-	401 -
Stage 1	-	-	-	-	810 -
Stage 2	-	-	-	-	600 -

Approach	EB	WB	SB
HCM Control Delay, s	4.7	0	9.2
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1515	-	-	-	978
HCM Lane V/C Ratio	0.129	-	-	-	0.118
HCM Control Delay (s)	7.7	0	-	-	9.2
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0.4	-	-	-	0.4

Lanes, Volumes, Timings
 11: Henry Chapel Road & Access 2

Henry Chapel TIA
 2031 Build+5 PM



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	70	41	33	0	0	41
Future Volume (vph)	70	41	33	0	0	41
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t					0.865	
Fl _t Protected		0.970				
Satd. Flow (prot)	0	1807	1743	0	1611	0
Fl _t Permitted		0.970				
Satd. Flow (perm)	0	1807	1743	0	1611	0
Link Speed (mph)		25	25		25	
Link Distance (ft)		1432	1164		1055	
Travel Time (s)		39.1	31.7		28.8	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	9%	2%	2%	2%
Adj. Flow (vph)	78	46	37	0	0	46
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	124	37	0	46	0
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	22.7%
ICU Level of Service	A
Analysis Period (min)	15

Intersection

Int Delay, s/veh 4.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	70	41	33	0	0	41
Future Vol, veh/h	70	41	33	0	0	41
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	90	90	90	90	90	90
Heavy Vehicles, %	2	2	9	2	2	2
Mvmt Flow	78	46	37	0	0	46

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	37	0	-	0	239 37
Stage 1	-	-	-	-	37 -
Stage 2	-	-	-	-	202 -
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	1574	-	-	-	749 1035
Stage 1	-	-	-	-	985 -
Stage 2	-	-	-	-	832 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1574	-	-	-	711 1035
Mov Cap-2 Maneuver	-	-	-	-	711 -
Stage 1	-	-	-	-	935 -
Stage 2	-	-	-	-	832 -

Approach	EB	WB	SB
HCM Control Delay, s	4.7	0	8.6
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1574	-	-	-	1035
HCM Lane V/C Ratio	0.049	-	-	-	0.044
HCM Control Delay (s)	7.4	0	-	-	8.6
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0.2	-	-	-	0.1

Queuing and Blocking Reports

2023 Build-out Conditions
Improved

Intersection: 1: S Point Road (NC 273) & Armstrong Road (NC 273)/Farm Road

Movement	EB	NB	SB
Directions Served	LTR	LTR	LTR
Maximum Queue (ft)	977	103	11
Average Queue (ft)	455	20	0
95th Queue (ft)	978	68	1
Link Distance (ft)	1200	967	3017
Upstream Blk Time (%)	3		
Queuing Penalty (veh)	0		
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 2: S Point Road (NC 273) & S Point Church Road/Henry Chapel Road

Movement	EB	WB	WB	SB
Directions Served	LTR	LT	R	LTR
Maximum Queue (ft)	18	40	97	139
Average Queue (ft)	1	8	42	27
95th Queue (ft)	10	31	76	97
Link Distance (ft)	1479	1245		809
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)			100	
Storage Blk Time (%)			0	
Queuing Penalty (veh)			0	

Intersection: 3: S Point Road (NC 273) & BB Drive/Forest Hill Road

Movement	EB	WB	SB
Directions Served	LTR	LTR	LTR
Maximum Queue (ft)	29	56	97
Average Queue (ft)	3	16	9
95th Queue (ft)	18	44	50
Link Distance (ft)	1300	406	1908
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 4: Colonial Drive & Forest Hill Road

Movement	NB
Directions Served	LR
Maximum Queue (ft)	39
Average Queue (ft)	13
95th Queue (ft)	38
Link Distance (ft)	584
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 5: Colonial Drive & Timber Ridge Road/Access 3

Movement	WB
Directions Served	LR
Maximum Queue (ft)	36
Average Queue (ft)	8
95th Queue (ft)	30
Link Distance (ft)	2141
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 6: S Point Road (NC 273) & Belmont MS/Belwood Drive

Movement	EB	EB	WB	NB	NB	SB	SB	SB
Directions Served	LT	R	LTR	L	TR	L	T	R
Maximum Queue (ft)	218	50	71	269	483	74	300	238
Average Queue (ft)	113	10	23	78	242	12	136	65
95th Queue (ft)	197	31	52	197	423	45	250	163
Link Distance (ft)	954		1003		1908		1268	
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)		175		200		100		200
Storage Blk Time (%)	2			0	10		14	0
Queuing Penalty (veh)	1			1	10		41	0

Intersection: 7: S Point Road (NC 273) & McKee Farm Road/Stowe Road

Movement	EB	EB	WB	NB	SB	SB
Directions Served	LT	R	LTR	LTR	L	TR
Maximum Queue (ft)	203	49	399	940	76	62
Average Queue (ft)	65	17	146	268	27	4
95th Queue (ft)	173	44	355	757	64	34
Link Distance (ft)	1003		1414	1268		431
Upstream Blk Time (%)				0		
Queuing Penalty (veh)				1		
Storage Bay Dist (ft)		200			100	
Storage Blk Time (%)	4				0	0
Queuing Penalty (veh)	1				1	0

Intersection: 8: S Point Road (NC 273) & South Point HS/Red Raider Run

Movement	WB	WB	NB	NB	SB	SB
Directions Served	LT	R	L	TR	L	TR
Maximum Queue (ft)	316	200	275	449	174	416
Average Queue (ft)	145	104	84	351	78	166
95th Queue (ft)	258	201	226	543	143	324
Link Distance (ft)	1001			431		526
Upstream Blk Time (%)				5		0
Queuing Penalty (veh)				56		0
Storage Bay Dist (ft)		100	175		100	
Storage Blk Time (%)	24	10		22	4	16
Queuing Penalty (veh)	35	16		13	30	15

Intersection: 9: S Point Road (NC 273) & Nixon Road/R L Stowe Road

Movement	EB	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	R	L	TR	L	T	R	L	T	R
Maximum Queue (ft)	159	261	183	324	396	142	286	177	150	618	200
Average Queue (ft)	72	129	52	217	119	65	114	84	64	297	54
95th Queue (ft)	138	230	131	319	283	122	224	153	145	498	173
Link Distance (ft)		960			973		526			958	
Upstream Blk Time (%)										0	
Queuing Penalty (veh)										0	
Storage Bay Dist (ft)	200		100	225		280		225	25		100
Storage Blk Time (%)	0	25	0	12	0		1		55	53	0
Queuing Penalty (veh)	0	43	1	13	0		6		308	50	1

Intersection: 10: Henry Chapel Road & Access 1

Movement

Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 11: Henry Chapel Road & Access 2

Movement **SB**

Directions Served LR
Maximum Queue (ft) 64
Average Queue (ft) 30
95th Queue (ft) 51
Link Distance (ft) 1028
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Network Summary

Network wide Queuing Penalty: 643

Intersection: 1: S Point Road (NC 273) & Armstrong Road (NC 273)/Farm Road

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	748	22	107	31
Average Queue (ft)	339	1	30	1
95th Queue (ft)	718	12	82	12
Link Distance (ft)	1200	982	967	3017
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 2: S Point Road (NC 273) & S Point Church Road/Henry Chapel Road

Movement	EB	WB	WB	SB
Directions Served	LTR	LT	R	LTR
Maximum Queue (ft)	12	48	78	247
Average Queue (ft)	1	10	36	65
95th Queue (ft)	9	37	68	169
Link Distance (ft)	1479	1245		809
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)			100	
Storage Blk Time (%)			0	
Queuing Penalty (veh)			0	

Intersection: 3: S Point Road (NC 273) & BB Drive/Forest Hill Road

Movement	EB	WB	SB
Directions Served	LTR	LTR	LTR
Maximum Queue (ft)	29	32	215
Average Queue (ft)	2	7	20
95th Queue (ft)	15	26	114
Link Distance (ft)	1300	406	1908
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 4: Colonial Drive & Forest Hill Road

Movement	NB
Directions Served	LR
Maximum Queue (ft)	42
Average Queue (ft)	8
95th Queue (ft)	31
Link Distance (ft)	584
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 5: Colonial Drive & Timber Ridge Road/Access 3

Movement	WB
Directions Served	LR
Maximum Queue (ft)	35
Average Queue (ft)	4
95th Queue (ft)	22
Link Distance (ft)	2141
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 6: S Point Road (NC 273) & Belmont MS/Belwood Drive

Movement	EB	EB	WB	NB	NB	SB	SB	SB
Directions Served	LT	R	LTR	L	TR	L	T	R
Maximum Queue (ft)	62	66	76	28	328	109	322	6
Average Queue (ft)	13	11	23	4	110	16	119	0
95th Queue (ft)	38	43	57	19	262	59	259	4
Link Distance (ft)	954		1003		1908		1268	
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)		175		200		100		200
Storage Blk Time (%)					2	0	6	
Queuing Penalty (veh)					0	1	3	

Intersection: 7: S Point Road (NC 273) & McKee Farm Road/Stowe Road

Movement	EB	EB	WB	NB	SB	SB
Directions Served	LT	R	LTR	LTR	L	TR
Maximum Queue (ft)	247	142	461	687	82	64
Average Queue (ft)	108	20	271	164	30	3
95th Queue (ft)	254	102	646	538	67	35
Link Distance (ft)	1003		1414	1268		431
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)		200			100	
Storage Blk Time (%)	16				0	0
Queuing Penalty (veh)	2				0	0

Intersection: 8: S Point Road (NC 273) & South Point HS/Red Raider Run

Movement	WB	WB	NB	NB	SB	SB
Directions Served	LT	R	L	TR	L	TR
Maximum Queue (ft)	500	200	134	454	175	526
Average Queue (ft)	233	153	13	358	97	244
95th Queue (ft)	412	238	56	527	174	483
Link Distance (ft)	1001			431		526
Upstream Blk Time (%)				5		0
Queuing Penalty (veh)				48		2
Storage Bay Dist (ft)		100	175		100	
Storage Blk Time (%)	43	25		24	11	12
Queuing Penalty (veh)	90	52		2	117	15

Intersection: 9: S Point Road (NC 273) & Nixon Road/R L Stowe Road

Movement	EB	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	R	L	TR	L	T	R	L	T	R
Maximum Queue (ft)	147	171	120	325	1027	231	398	330	149	720	200
Average Queue (ft)	59	81	46	323	913	61	242	84	67	364	65
95th Queue (ft)	122	148	94	340	1184	144	378	204	149	624	196
Link Distance (ft)		960			973		526			958	
Upstream Blk Time (%)					58					0	
Queuing Penalty (veh)					0					0	
Storage Bay Dist (ft)	200		100	225		280		225	25		100
Storage Blk Time (%)		12	0	72	0		11	0	51	54	0
Queuing Penalty (veh)		16	1	104	2		59	0	310	78	3

Intersection: 10: Henry Chapel Road & Access 1

Movement

Directions Served
 Maximum Queue (ft)
 Average Queue (ft)
 95th Queue (ft)
 Link Distance (ft)
 Upstream Blk Time (%)
 Queuing Penalty (veh)
 Storage Bay Dist (ft)
 Storage Blk Time (%)
 Queuing Penalty (veh)

Intersection: 11: Henry Chapel Road & Access 2

Movement	EB	SB
Directions Served	LT	LR
Maximum Queue (ft)	35	52
Average Queue (ft)	3	24
95th Queue (ft)	17	50
Link Distance (ft)	1371	1028
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 906

2025 Build-out Conditions
Improved

Intersection: 1: S Point Road (NC 273) & Armstrong Road (NC 273)/Farm Road

Movement	EB	NB	SB
Directions Served	LTR	LTR	R
Maximum Queue (ft)	1219	70	5
Average Queue (ft)	573	16	0
95th Queue (ft)	1287	50	3
Link Distance (ft)	1196	967	
Upstream Blk Time (%)	15		
Queuing Penalty (veh)	0		
Storage Bay Dist (ft)			100
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 2: S Point Road (NC 273) & S Point Church Road/Henry Chapel Road

Movement	EB	WB	WB	NB	SB	SB
Directions Served	LTR	LT	R	LTR	L	TR
Maximum Queue (ft)	23	150	186	304	104	109
Average Queue (ft)	1	24	93	160	32	20
95th Queue (ft)	11	80	162	274	76	75
Link Distance (ft)	1473	1237		1461		811
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)			175		225	
Storage Blk Time (%)		0	1			
Queuing Penalty (veh)		0	0			

Intersection: 3: S Point Road (NC 273) & BB Drive/Forest Hill Road

Movement	EB	WB	SB	B25
Directions Served	R	R	L	T
Maximum Queue (ft)	34	177	47	234
Average Queue (ft)	5	54	15	8
95th Queue (ft)	22	127	39	102
Link Distance (ft)	1300	406		317
Upstream Blk Time (%)				0
Queuing Penalty (veh)				0
Storage Bay Dist (ft)			100	
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 4: Colonial Drive & Forest Hill Road

Movement	NB
Directions Served	LR
Maximum Queue (ft)	58
Average Queue (ft)	29
95th Queue (ft)	51
Link Distance (ft)	584
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 5: Colonial Drive & Timber Ridge Road

Movement	WB
Directions Served	LR
Maximum Queue (ft)	60
Average Queue (ft)	29
95th Queue (ft)	55
Link Distance (ft)	2141
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 6: S Point Road (NC 273) & Belmont MS/Belwood Drive

Movement	EB	EB	WB	NB	NB	NB	SB	SB	SB	SB
Directions Served	LT	R	LTR	L	T	TR	L	T	T	R
Maximum Queue (ft)	219	94	83	118	218	229	62	263	234	171
Average Queue (ft)	118	16	26	55	109	114	8	142	72	58
95th Queue (ft)	198	58	65	110	193	202	48	245	192	128
Link Distance (ft)	941		987		317	317		1262	1262	
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)		175		200			100			200
Storage Blk Time (%)	2				1			18	1	0
Queuing Penalty (veh)	1				1			4	2	0

Intersection: 7: S Point Road (NC 273) & McKee Farm Road/Stowe Road

Movement	EB	EB	WB	NB	NB	SB	SB
Directions Served	LT	R	LTR	LT	TR	L	TR
Maximum Queue (ft)	84	47	161	153	40	80	27
Average Queue (ft)	23	16	57	28	2	23	1
95th Queue (ft)	63	44	166	97	20	56	12
Link Distance (ft)	991		1420	1262	1262		436
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)	200						100
Storage Blk Time (%)						0	
Queuing Penalty (veh)							0

Intersection: 8: S Point Road (NC 273) & South Point HS/Red Raider Run

Movement	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	LT	R	L	T	TR	L	T	TR
Maximum Queue (ft)	300	200	179	366	370	167	153	138
Average Queue (ft)	154	110	67	168	183	77	41	45
95th Queue (ft)	252	193	137	300	316	133	116	103
Link Distance (ft)	990			436	436		524	524
Upstream Blk Time (%)				0	0			
Queuing Penalty (veh)				0	0			
Storage Bay Dist (ft)	100		175				100	
Storage Blk Time (%)	28	9	0	5			10	1
Queuing Penalty (veh)	42	16	2	4			38	1

Intersection: 9: S Point Road (NC 273) & Nixon Road/R L Stowe Road

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	R	L	L	TR	L	T	R	L	T	R
Maximum Queue (ft)	189	268	196	229	257	214	169	290	213	149	622	200
Average Queue (ft)	87	131	51	122	158	88	72	126	97	62	323	57
95th Queue (ft)	158	217	123	211	228	168	138	241	188	144	591	189
Link Distance (ft)	947					974			524	524	952	
Upstream Blk Time (%)												3
Queuing Penalty (veh)												0
Storage Bay Dist (ft)	200			100	225	200		280			25	100
Storage Blk Time (%)	0	23	1	0	2	0			0	60	51	
Queuing Penalty (veh)	1	46	3	0	5	1			0	366	54	

Intersection: 10: Henry Chapel Road & Access 1

Movement	EB	SB
Directions Served	LT	LR
Maximum Queue (ft)	39	62
Average Queue (ft)	4	30
95th Queue (ft)	23	52
Link Distance (ft)	1237	1003
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 11: Henry Chapel Road & Access 2

Movement	EB	SB
Directions Served	LT	LR
Maximum Queue (ft)	6	68
Average Queue (ft)	0	30
95th Queue (ft)	5	53
Link Distance (ft)	1371	1028
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 587

Intersection: 1: S Point Road (NC 273) & Armstrong Road (NC 273)/Farm Road

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	R
Maximum Queue (ft)	868	17	148	23
Average Queue (ft)	353	1	35	1
95th Queue (ft)	807	7	104	11
Link Distance (ft)	1196	982	967	
Upstream Blk Time (%)	0			
Queuing Penalty (veh)	0			
Storage Bay Dist (ft)				100
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 2: S Point Road (NC 273) & S Point Church Road/Henry Chapel Road

Movement	EB	WB	WB	NB	SB	SB
Directions Served	LTR	LT	R	LTR	L	TR
Maximum Queue (ft)	6	59	138	356	179	156
Average Queue (ft)	0	15	62	176	89	29
95th Queue (ft)	5	43	114	292	152	103
Link Distance (ft)	1473	1237		1461		811
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)			175		225	
Storage Blk Time (%)			0		0	
Queuing Penalty (veh)			0		0	

Intersection: 3: S Point Road (NC 273) & BB Drive/Forest Hill Road

Movement	EB	WB	SB
Directions Served	R	R	L
Maximum Queue (ft)	29	52	74
Average Queue (ft)	3	21	23
95th Queue (ft)	18	45	53
Link Distance (ft)	1300	406	
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			100
Storage Blk Time (%)			0
Queuing Penalty (veh)			1

Intersection: 4: Colonial Drive & Forest Hill Road

Movement	NB
Directions Served	LR
Maximum Queue (ft)	69
Average Queue (ft)	25
95th Queue (ft)	58
Link Distance (ft)	584
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 5: Colonial Drive & Timber Ridge Road

Movement	WB	SB
Directions Served	LR	LT
Maximum Queue (ft)	65	6
Average Queue (ft)	20	0
95th Queue (ft)	49	0
Link Distance (ft)	2141	584
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 6: S Point Road (NC 273) & Belmont MS/Belwood Drive

Movement	EB	EB	WB	NB	NB	NB	SB	SB	SB	SB
Directions Served	LT	R	LTR	L	T	TR	L	T	T	R
Maximum Queue (ft)	58	102	78	37	180	176	200	738	704	69
Average Queue (ft)	16	20	23	6	52	56	31	326	204	3
95th Queue (ft)	42	68	57	24	131	141	128	698	614	44
Link Distance (ft)	941		987		317	317		1262	1262	
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)		175		200			100			200
Storage Blk Time (%)					0			18	1	
Queuing Penalty (veh)					0			8	0	

Intersection: 7: S Point Road (NC 273) & McKee Farm Road/Stowe Road

Movement	EB	EB	WB	NB	NB	SB	SB
Directions Served	LT	R	LTR	LT	TR	L	T
Maximum Queue (ft)	141	34	277	177	111	60	14
Average Queue (ft)	56	11	106	25	7	27	1
95th Queue (ft)	135	35	265	110	65	54	8
Link Distance (ft)	991		1420	1262	1262		436
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)		200				100	
Storage Blk Time (%)	2						
Queuing Penalty (veh)	0						

Intersection: 8: S Point Road (NC 273) & South Point HS/Red Raider Run

Movement	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	LT	R	L	T	TR	L	T	TR
Maximum Queue (ft)	592	200	139	344	333	174	330	269
Average Queue (ft)	266	162	18	160	168	98	150	96
95th Queue (ft)	490	242	75	283	290	174	283	209
Link Distance (ft)	990			436	436		524	524
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)		100	175			100		
Storage Blk Time (%)	48	24		6		16	9	
Queuing Penalty (veh)	107	53		1		94	11	

Intersection: 9: S Point Road (NC 273) & Nixon Road/R L Stowe Road

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	R	L	L	TR	L	T	R	L	T	R
Maximum Queue (ft)	139	191	144	323	513	300	379	540	317	149	1004	200
Average Queue (ft)	53	90	52	215	239	135	85	314	77	82	724	89
95th Queue (ft)	105	169	104	308	384	260	247	502	194	168	1147	243
Link Distance (ft)		947			974			524	524		952	
Upstream Blk Time (%)								1	0		20	
Queuing Penalty (veh)								4	0		0	
Storage Bay Dist (ft)	200		100	225		200	280			25		100
Storage Blk Time (%)		9	1	6	14	1		15		63	58	0
Queuing Penalty (veh)		14	2	28	67	7		11		443	95	2

Intersection: 10: Henry Chapel Road & Access 1

Movement	EB	SB
Directions Served	LT	LR
Maximum Queue (ft)	72	58
Average Queue (ft)	11	26
95th Queue (ft)	45	47
Link Distance (ft)	1237	1003
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 11: Henry Chapel Road & Access 2

Movement	EB	SB
Directions Served	LT	LR
Maximum Queue (ft)	35	50
Average Queue (ft)	2	24
95th Queue (ft)	16	48
Link Distance (ft)	1371	1028
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 948

2026 Background Conditions

Intersection: 1: S Point Road (NC 273) & Armstrong Road (NC 273)/Farm Road

Movement	EB	NB	SB
Directions Served	LTR	LTR	LTR
Maximum Queue (ft)	1164	106	1
Average Queue (ft)	624	21	0
95th Queue (ft)	1253	69	1
Link Distance (ft)	1200	967	3017
Upstream Blk Time (%)	15		
Queuing Penalty (veh)	0		
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 2: S Point Road (NC 273) & S Point Church Road/Henry Chapel Road

Movement	EB	WB	SB
Directions Served	LTR	LTR	LTR
Maximum Queue (ft)	12	53	108
Average Queue (ft)	1	18	9
95th Queue (ft)	8	47	61
Link Distance (ft)	1479	1236	824
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 3: S Point Road (NC 273) & BB Drive/Forest Hill Road

Movement	EB	WB	SB
Directions Served	LTR	LTR	LTR
Maximum Queue (ft)	33	55	213
Average Queue (ft)	3	19	12
95th Queue (ft)	17	46	89
Link Distance (ft)	1300	406	1908
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 4: Colonial Drive & Forest Hill Road

Movement	NB
Directions Served	LR
Maximum Queue (ft)	35
Average Queue (ft)	16
95th Queue (ft)	41
Link Distance (ft)	584
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 5: Colonial Drive & Timber Ridge Road

Movement	WB
Directions Served	LR
Maximum Queue (ft)	36
Average Queue (ft)	9
95th Queue (ft)	33
Link Distance (ft)	1179
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 6: S Point Road (NC 273) & Belmont MS/Belwood Drive

Movement	EB	EB	WB	NB	NB	SB	SB	SB
Directions Served	LT	R	LTR	L	TR	L	T	R
Maximum Queue (ft)	307	132	104	299	575	166	369	262
Average Queue (ft)	139	17	32	83	255	13	153	72
95th Queue (ft)	272	78	75	202	584	63	292	188
Link Distance (ft)	954		1003		1908		1280	
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)		175		200		100		200
Storage Blk Time (%)	7				11		18	0
Queuing Penalty (veh)	3				11		56	0

Intersection: 7: S Point Road (NC 273) & McKee Farm Road/Stowe Road

Movement	EB	WB	NB	SB	SB
Directions Served	LTR	LTR	LTR	L	TR
Maximum Queue (ft)	291	470	895	80	72
Average Queue (ft)	124	190	358	26	5
95th Queue (ft)	297	437	957	65	47
Link Distance (ft)	1005	1439	1280		431
Upstream Blk Time (%)			1		
Queuing Penalty (veh)			7		
Storage Bay Dist (ft)				100	
Storage Blk Time (%)				1	0
Queuing Penalty (veh)				5	0

Intersection: 8: S Point Road (NC 273) & South Point HS/Red Raider Run

Movement	WB	WB	NB	NB	SB	SB
Directions Served	LT	R	L	TR	L	TR
Maximum Queue (ft)	328	200	275	455	174	481
Average Queue (ft)	173	112	88	367	91	150
95th Queue (ft)	291	208	242	550	159	343
Link Distance (ft)	1001			431		526
Upstream Blk Time (%)				6		0
Queuing Penalty (veh)				71		0
Storage Bay Dist (ft)		100	175		100	
Storage Blk Time (%)	33	13		24	11	12
Queuing Penalty (veh)	51	22		15	84	13

Intersection: 9: S Point Road (NC 273) & Nixon Road/R L Stowe Road

Movement	EB	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	R	L	TR	L	T	R	L	T	R
Maximum Queue (ft)	176	267	182	324	674	168	256	225	149	714	200
Average Queue (ft)	81	140	67	258	271	77	124	109	64	346	48
95th Queue (ft)	150	245	158	372	663	144	213	196	148	647	173
Link Distance (ft)		960			973		526			958	
Upstream Blk Time (%)					0					1	
Queuing Penalty (veh)					0					0	
Storage Bay Dist (ft)	200		100	225		280		225	25		100
Storage Blk Time (%)	0	29	1	31	0		1	0	53	55	
Queuing Penalty (veh)	0	58	4	39	1		6	1	313	60	

Network Summary

Network wide Queuing Penalty: 820

Intersection: 1: S Point Road (NC 273) & Armstrong Road (NC 273)/Farm Road

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	1214	30	135	35
Average Queue (ft)	726	2	38	2
95th Queue (ft)	1402	13	100	16
Link Distance (ft)	1200	982	967	3017
Upstream Blk Time (%)	20			
Queuing Penalty (veh)	0			
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 2: S Point Road (NC 273) & S Point Church Road/Henry Chapel Road

Movement	EB	WB	SB
Directions Served	LTR	LTR	LTR
Maximum Queue (ft)	12	61	165
Average Queue (ft)	0	20	20
95th Queue (ft)	4	51	82
Link Distance (ft)	1479	1236	824
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 3: S Point Road (NC 273) & BB Drive/Forest Hill Road

Movement	EB	WB	SB
Directions Served	LTR	LTR	LTR
Maximum Queue (ft)	29	36	167
Average Queue (ft)	3	8	27
95th Queue (ft)	18	28	117
Link Distance (ft)	1300	406	1908
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 4: Colonial Drive & Forest Hill Road

Movement	NB
Directions Served	LR
Maximum Queue (ft)	49
Average Queue (ft)	10
95th Queue (ft)	37
Link Distance (ft)	584
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 5: Colonial Drive & Timber Ridge Road

Movement	WB
Directions Served	LR
Maximum Queue (ft)	31
Average Queue (ft)	7
95th Queue (ft)	27
Link Distance (ft)	1179
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 6: S Point Road (NC 273) & Belmont MS/Belwood Drive

Movement	EB	EB	WB	NB	NB	SB	SB	SB
Directions Served	LT	R	LTR	L	TR	L	T	R
Maximum Queue (ft)	58	46	64	32	310	150	345	59
Average Queue (ft)	14	4	24	1	108	20	108	2
95th Queue (ft)	42	24	55	11	253	78	255	43
Link Distance (ft)	954		1003		1908		1280	
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)		175		200		100		200
Storage Blk Time (%)					1	0	6	
Queuing Penalty (veh)					0	1	3	

Intersection: 7: S Point Road (NC 273) & McKee Farm Road/Stowe Road

Movement	EB	WB	NB	SB	SB
Directions Served	LTR	LTR	LTR	L	TR
Maximum Queue (ft)	286	302	611	69	24
Average Queue (ft)	117	113	119	28	1
95th Queue (ft)	258	271	406	60	15
Link Distance (ft)	1005	1439	1280		431
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)				100	
Storage Blk Time (%)					0
Queuing Penalty (veh)					0

Intersection: 8: S Point Road (NC 273) & South Point HS/Red Raider Run

Movement	WB	WB	NB	NB	SB	SB
Directions Served	LT	R	L	TR	L	TR
Maximum Queue (ft)	570	200	171	452	175	524
Average Queue (ft)	263	165	14	354	111	264
95th Queue (ft)	466	238	79	522	189	497
Link Distance (ft)	1001			431		526
Upstream Blk Time (%)				4		0
Queuing Penalty (veh)				44		2
Storage Bay Dist (ft)		100	175		100	
Storage Blk Time (%)	46	25		24	18	14
Queuing Penalty (veh)	106	55		2	180	19

Intersection: 9: S Point Road (NC 273) & Nixon Road/R L Stowe Road

Movement	EB	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	R	L	TR	L	T	R	L	T	R
Maximum Queue (ft)	142	205	168	325	903	286	504	425	149	1009	200
Average Queue (ft)	69	89	53	313	524	83	280	92	84	773	103
95th Queue (ft)	127	162	112	353	999	217	434	289	168	1204	258
Link Distance (ft)		960			973		526			958	
Upstream Blk Time (%)					6		0			39	
Queuing Penalty (veh)					0		1			0	
Storage Bay Dist (ft)	200		100	225		280		225	25		100
Storage Blk Time (%)		14	1	45	1		17		72	66	0
Queuing Penalty (veh)		21	2	75	4		93		459	110	0

Network Summary

Network wide Queuing Penalty: 1176

2026 Build-out Conditions
FINAL

Intersection: 1: S Point Road (NC 273) & Armstrong Road (NC 273)/Farm Road

Movement	EB	NB	SB
Directions Served	LTR	LTR	R
Maximum Queue (ft)	1144	80	2
Average Queue (ft)	652	19	0
95th Queue (ft)	1327	58	1
Link Distance (ft)	1196	967	
Upstream Blk Time (%)	22		
Queuing Penalty (veh)	0		
Storage Bay Dist (ft)			100
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 2: S Point Road (NC 273) & S Point Church Road/Henry Chapel Road

Movement	EB	WB	WB	NB	SB	SB
Directions Served	LTR	LT	R	LTR	L	TR
Maximum Queue (ft)	23	171	227	340	108	119
Average Queue (ft)	2	28	104	172	39	19
95th Queue (ft)	14	90	179	299	82	75
Link Distance (ft)	1473	1237		1461		811
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)			200		275	
Storage Blk Time (%)		0	1			
Queuing Penalty (veh)		1	0			

Intersection: 3: S Point Road (NC 273) & BB Drive/Forest Hill Road

Movement	EB	WB	NB	SB	B27
Directions Served	R	R	LTR	L	T
Maximum Queue (ft)	29	186	4	89	66
Average Queue (ft)	4	81	0	20	2
95th Queue (ft)	21	165	3	54	48
Link Distance (ft)	1300	406	2380		323
Upstream Blk Time (%)					0
Queuing Penalty (veh)					0
Storage Bay Dist (ft)				175	
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 4: Colonial Drive & Forest Hill Road

Movement	NB
Directions Served	LR
Maximum Queue (ft)	60
Average Queue (ft)	34
95th Queue (ft)	52
Link Distance (ft)	584
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 5: Colonial Drive & Timber Ridge Road/Access 3

Movement	WB	SB
Directions Served	LR	LT
Maximum Queue (ft)	65	6
Average Queue (ft)	37	0
95th Queue (ft)	58	4
Link Distance (ft)	2141	584
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 6: S Point Road (NC 273) & Belmont MS/Belwood Drive

Movement	EB	EB	WB	NB	NB	NB	SB	SB	SB	SB
Directions Served	LT	R	LTR	L	T	TR	L	T	T	R
Maximum Queue (ft)	302	95	90	145	227	221	76	278	215	177
Average Queue (ft)	133	15	27	66	116	121	9	144	79	61
95th Queue (ft)	231	57	67	125	204	199	41	241	182	129
Link Distance (ft)	941		987		323	323		1262	1262	
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)		175		200			100			200
Storage Blk Time (%)	4				1			18	0	0
Queuing Penalty (veh)	2				1			4	1	0

Intersection: 7: S Point Road (NC 273) & McKee Farm Road/Stowe Road

Movement	EB	EB	WB	NB	NB	SB	SB
Directions Served	LT	R	LTR	LT	TR	L	T
Maximum Queue (ft)	58	41	251	165	99	72	11
Average Queue (ft)	21	15	73	29	7	23	0
95th Queue (ft)	50	41	213	106	52	55	8
Link Distance (ft)	991		1420	1262	1262		436
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)		200				100	
Storage Blk Time (%)						0	
Queuing Penalty (veh)						0	

Intersection: 8: S Point Road (NC 273) & South Point HS/Red Raider Run

Movement	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	LT	R	L	T	TR	L	T	TR
Maximum Queue (ft)	347	200	219	378	368	155	150	168
Average Queue (ft)	171	111	79	184	198	79	49	55
95th Queue (ft)	301	202	166	318	323	140	121	125
Link Distance (ft)	990			436	436		524	524
Upstream Blk Time (%)				0	0			
Queuing Penalty (veh)				1	1			
Storage Bay Dist (ft)		100	175			100		
Storage Blk Time (%)	32	11	0	7		10	1	
Queuing Penalty (veh)	50	19	1	6		41	1	

Intersection: 9: S Point Road (NC 273) & Nixon Road/R L Stowe Road

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	R	L	L	TR	L	T	R	L	T	R
Maximum Queue (ft)	174	248	184	250	310	272	167	342	285	149	778	200
Average Queue (ft)	77	130	59	123	168	95	78	119	107	73	394	58
95th Queue (ft)	143	226	141	205	254	180	144	232	213	156	747	194
Link Distance (ft)		947			974			524	524			952
Upstream Blk Time (%)												5
Queuing Penalty (veh)												0
Storage Bay Dist (ft)	200		100	225		225	280			25		100
Storage Blk Time (%)	0	22	2	0	2	0		1		66	51	0
Queuing Penalty (veh)	0	46	5	0	6	0		1		421	55	0

Intersection: 10: Henry Chapel Road & Access 1

Movement	EB	SB
Directions Served	LT	LR
Maximum Queue (ft)	49	68
Average Queue (ft)	6	34
95th Queue (ft)	30	57
Link Distance (ft)	1237	1003
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 11: Henry Chapel Road & Access 2

Movement	EB	SB
Directions Served	LT	LR
Maximum Queue (ft)	18	55
Average Queue (ft)	1	29
95th Queue (ft)	8	52
Link Distance (ft)	1371	1028
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 661

Intersection: 1: S Point Road (NC 273) & Armstrong Road (NC 273)/Farm Road

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	R
Maximum Queue (ft)	670	24	85	15
Average Queue (ft)	343	1	25	1
95th Queue (ft)	801	9	65	9
Link Distance (ft)	1196	982	967	
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				100
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 2: S Point Road (NC 273) & S Point Church Road/Henry Chapel Road

Movement	EB	WB	WB	NB	SB	SB
Directions Served	LTR	LT	R	LTR	L	TR
Maximum Queue (ft)	18	93	201	367	218	155
Average Queue (ft)	1	23	79	190	108	37
95th Queue (ft)	9	62	149	332	185	113
Link Distance (ft)	1473	1237		1461		811
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)			200		275	
Storage Blk Time (%)		0	0		0	
Queuing Penalty (veh)		0	0		0	

Intersection: 3: S Point Road (NC 273) & BB Drive/Forest Hill Road

Movement	EB	WB	SB	B27
Directions Served	R	R	L	T
Maximum Queue (ft)	33	72	106	332
Average Queue (ft)	4	33	42	17
95th Queue (ft)	21	60	79	150
Link Distance (ft)	1300	406		323
Upstream Blk Time (%)				0
Queuing Penalty (veh)				2
Storage Bay Dist (ft)			175	
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 4: Colonial Drive & Forest Hill Road

Movement	NB
Directions Served	LR
Maximum Queue (ft)	70
Average Queue (ft)	34
95th Queue (ft)	59
Link Distance (ft)	584
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 5: Colonial Drive & Timber Ridge Road/Access 3

Movement	WB	SB
Directions Served	LR	LT
Maximum Queue (ft)	55	12
Average Queue (ft)	31	1
95th Queue (ft)	52	8
Link Distance (ft)	2141	584
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 6: S Point Road (NC 273) & Belmont MS/Belwood Drive

Movement	EB	EB	WB	NB	NB	NB	SB	SB	SB	SB
Directions Served	LT	R	LTR	L	T	TR	L	T	T	R
Maximum Queue (ft)	54	91	98	46	158	165	167	586	537	81
Average Queue (ft)	17	25	24	7	55	56	31	254	170	4
95th Queue (ft)	44	68	65	28	128	131	126	514	444	46
Link Distance (ft)	941		987		323	323		1262	1262	
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)		175		200			100			200
Storage Blk Time (%)					0			19	2	
Queuing Penalty (veh)					0			9	0	

Intersection: 7: S Point Road (NC 273) & McKee Farm Road/Stowe Road

Movement	EB	EB	WB	NB	NB	SB	SB	SB
Directions Served	LT	R	LTR	LT	TR	L	T	TR
Maximum Queue (ft)	142	52	352	170	106	62	10	8
Average Queue (ft)	63	13	154	30	5	23	0	0
95th Queue (ft)	143	39	356	116	45	50	7	4
Link Distance (ft)	991		1420	1262	1262		436	436
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)		200				100		
Storage Blk Time (%)	2					0		
Queuing Penalty (veh)	0					0		

Intersection: 8: S Point Road (NC 273) & South Point HS/Red Raider Run

Movement	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	LT	R	L	T	TR	L	T	TR
Maximum Queue (ft)	504	200	107	353	337	174	314	215
Average Queue (ft)	241	160	24	178	193	98	153	109
95th Queue (ft)	417	236	73	303	323	175	272	202
Link Distance (ft)	990			436	436		524	524
Upstream Blk Time (%)				0				
Queuing Penalty (veh)				0				
Storage Bay Dist (ft)		100	175			100		
Storage Blk Time (%)	46	24		8		16	10	
Queuing Penalty (veh)	106	55		1		103	13	

Intersection: 9: S Point Road (NC 273) & Nixon Road/R L Stowe Road

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	R	L	L	TR	L	T	R	L	T	R
Maximum Queue (ft)	116	203	150	323	410	321	321	523	242	149	1000	200
Average Queue (ft)	55	94	62	219	242	113	86	322	73	88	882	80
95th Queue (ft)	109	168	120	307	350	228	241	483	167	174	1161	232
Link Distance (ft)		947			974			524	524		952	
Upstream Blk Time (%)								1			51	
Queuing Penalty (veh)								4			0	
Storage Bay Dist (ft)	200		100	225		225	280		25		100	
Storage Blk Time (%)		10	2	6	10	0		16	67	60	0	
Queuing Penalty (veh)		18	4	28	54	1		12	512	100	0	

Intersection: 10: Henry Chapel Road & Access 1

Movement	EB	WB	SB
Directions Served	LT	TR	LR
Maximum Queue (ft)	76	4	59
Average Queue (ft)	15	0	30
95th Queue (ft)	54	3	53
Link Distance (ft)	1237	1371	1003
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 11: Henry Chapel Road & Access 2

Movement	EB	SB
Directions Served	LT	LR
Maximum Queue (ft)	33	58
Average Queue (ft)	2	24
95th Queue (ft)	16	51
Link Distance (ft)	1371	1028
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 1022

Auxiliary Turn-Lane Warrants

Int. #5: Colonial Drive and Timber Ridge Road (Phase 1A)

2023 Background

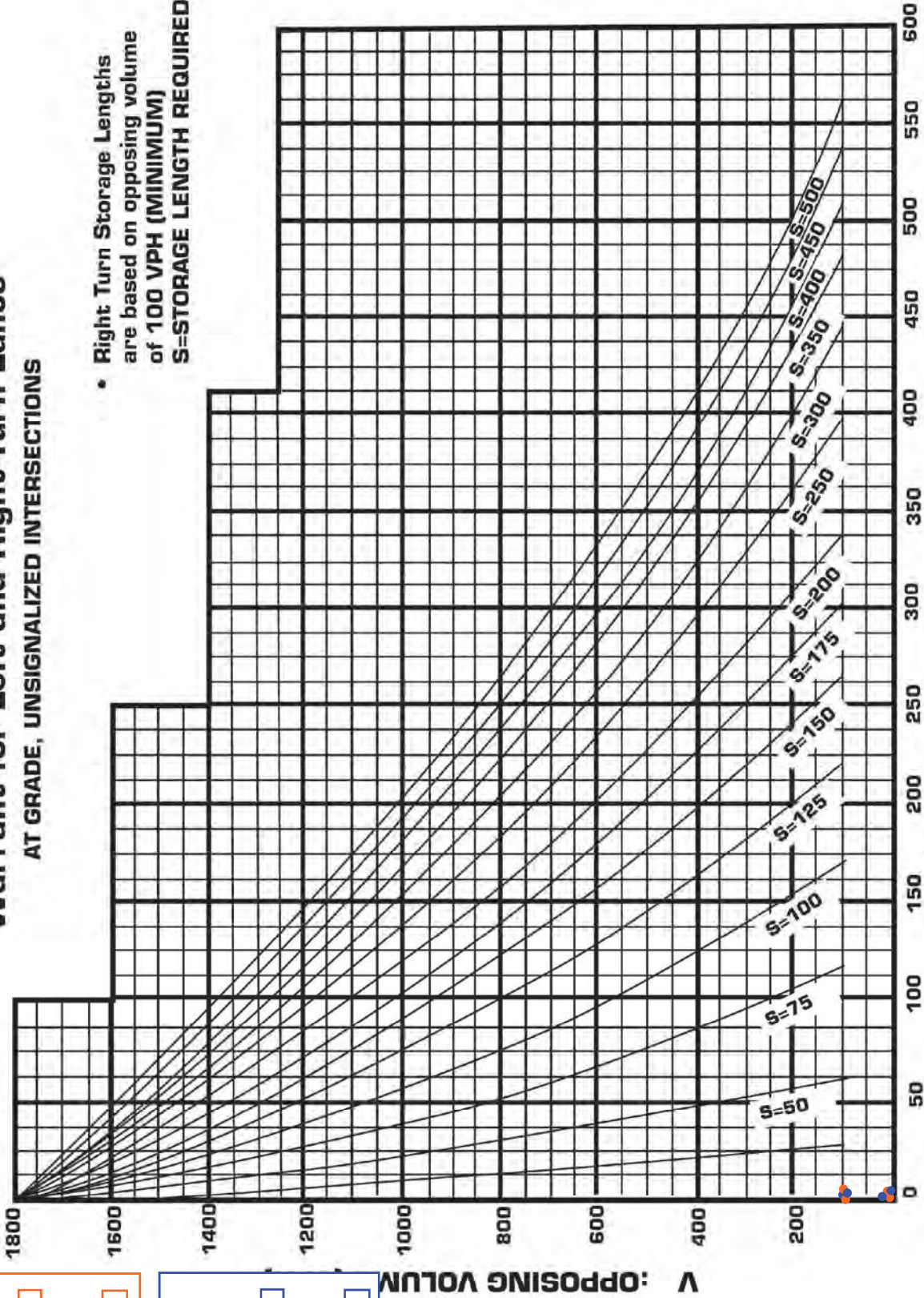
AM	PM
$V_{SBL} = 1$	$V_{SBL} = 3$
$V_o = 8$	$V_o = 5$
$S = 0'$	$S = 0'$
$V_{NBR} = 0$	$V_{NBR} = 2$
$V_o = 100$	$V_o = 100$
$S = 0'$	$S = 0'$

2023 Build

AM	PM
$V_{SBL} = 1$	$V_{SBL} = 3$
$V_o = 8$	$V_o = 5$
$S = 0'$	$S = 0'$
$V_{NBR} = 0$	$V_{NBR} = 2$
$V_o = 100$	$V_o = 100$
$S = 0'$	$S = 0'$

Warrant for Left and Right-Turn Lanes
AT GRADE, UNSIGNALIZED INTERSECTIONS

- Right Turn Storage Lengths are based on opposing volume of 100 VPH (MINIMUM)
S=STORAGE LENGTH REQUIRED



Note: Where adjacent signalization may provide opportunities for gaps in the traffic stream a reduction in the above storage values can be considered on a case by case basis.

V_L : LEFT TURNING VOLUME (VPH)
 V_R : RIGHT TURNING VOLUME (VPH)

V : OPPOSING VOLUME

Int. #5: Colonial Drive and Timber Ridge Road (Phase 1B)

2024 Background

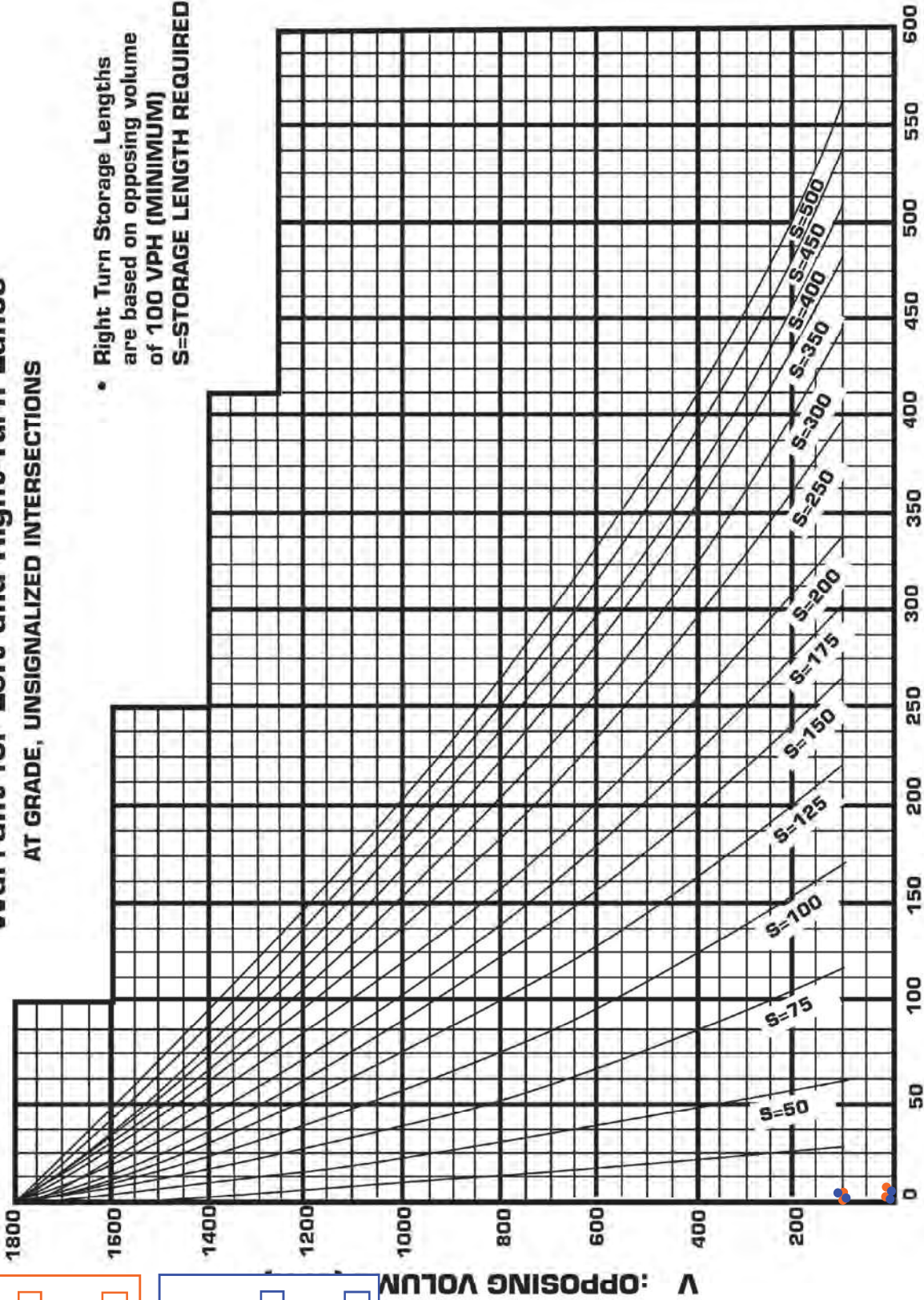
AM	PM
$V_{SBL} = 1$	$V_{SBL} = 3$
$V_o = 8$	$V_o = 5$
$S = 0'$	$S = 0'$
$V_{NBR} = 0$	$V_{NBR} = 2$
$V_o = 100$	$V_o = 100$
$S = 0'$	$S = 0'$

2024 Build

AM	PM
$V_{SBL} = 1$	$V_{SBL} = 3$
$V_o = 8$	$V_o = 5$
$S = 0'$	$S = 0'$
$V_{NBR} = 0$	$V_{NBR} = 2$
$V_o = 100$	$V_o = 100$
$S = 0'$	$S = 0'$

Warrant for Left and Right-Turn Lanes
AT GRADE, UNSIGNALIZED INTERSECTIONS

- Right Turn Storage Lengths are based on opposing volume of 100 VPH (MINIMUM)
S=STORAGE LENGTH REQUIRED



Note: Where adjacent signalization may provide opportunities for gaps in the traffic stream a reduction in the above storage values can be considered on a case by case basis.

V_L: LEFT TURNING VOLUME (VPH)
V_R: RIGHT TURNING VOLUME (VPH)

V_o: OPPOSING VOLUME

Int. #5: Colonial Drive and Timber Ridge Road (Phase 2)

2025 Background

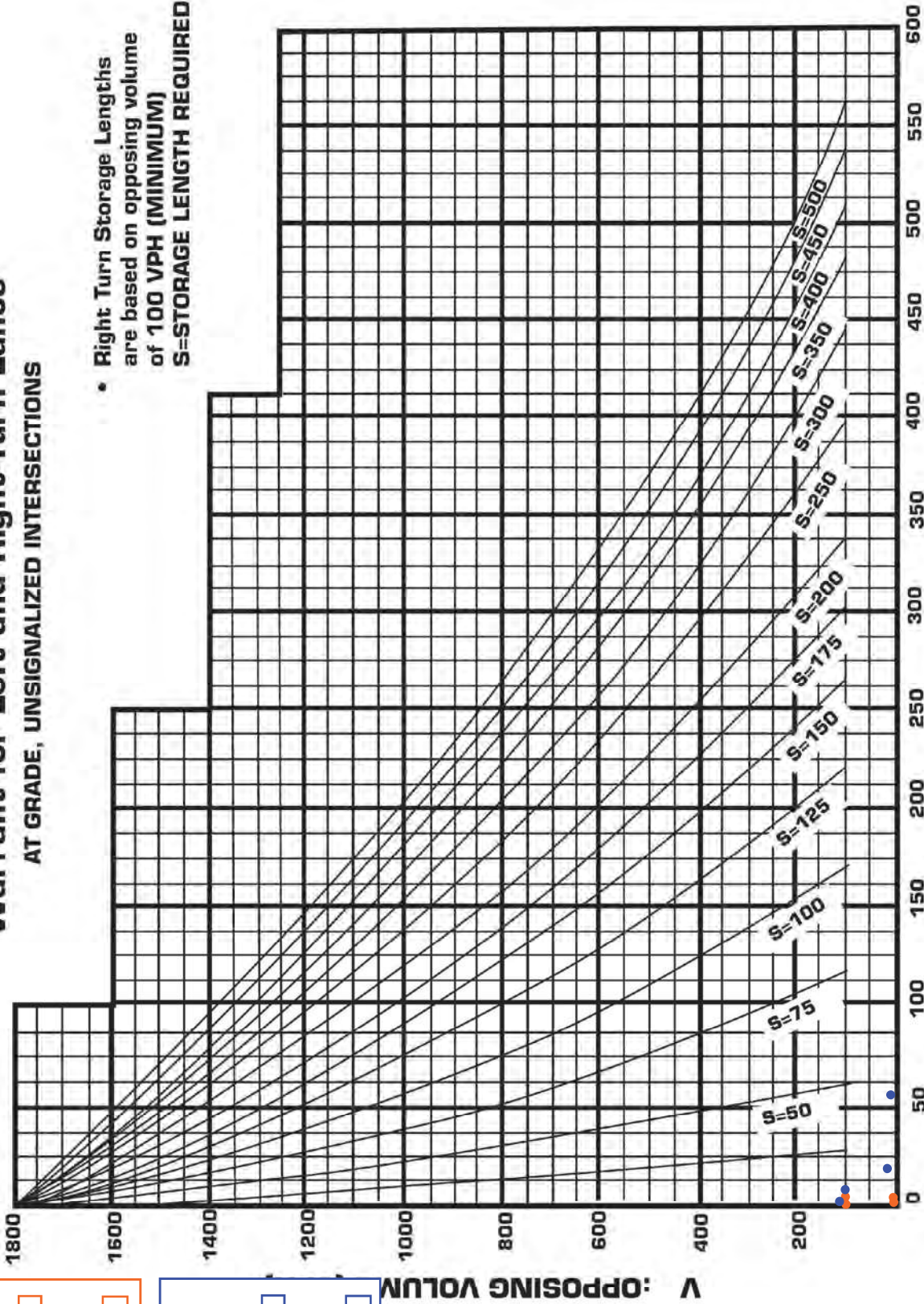
AM	PM
$V_{SBL} = 1$	$V_{SBL} = 3$
$V_o = 9$	$V_o = 5$
$S = 0'$	$S = 0'$
$V_{NBR} = 0$	$V_{NBR} = 2$
$V_o = 100$	$V_o = 100$
$S = 0'$	$S = 0'$

2025 Build

AM	PM
$V_{SBL} = 16$	$V_{SBL} = 55$
$V_o = 9$	$V_o = 5$
$S = 0'$	$S = 0'$
$V_{NBR} = 0$	$V_{NBR} = 2$
$V_o = 100$	$V_o = 100$
$S = 0'$	$S = 0'$

Warrant for Left and Right-Turn Lanes
AT GRADE, UNSIGNALIZED INTERSECTIONS

- Right Turn Storage Lengths are based on opposing volume of 100 VPH (MINIMUM)
S=STORAGE LENGTH REQUIRED



Note: Where adjacent signalization may provide opportunities for gaps in the traffic stream a reduction in the above storage values can be considered on a case by case basis.

V_o : LEFT TURNING VOLUME (VPH)
 V_r : RIGHT TURNING VOLUME (VPH)

Int. #5: Colonial Drive and Timber Ridge Road (Phase 3)

2026 Background

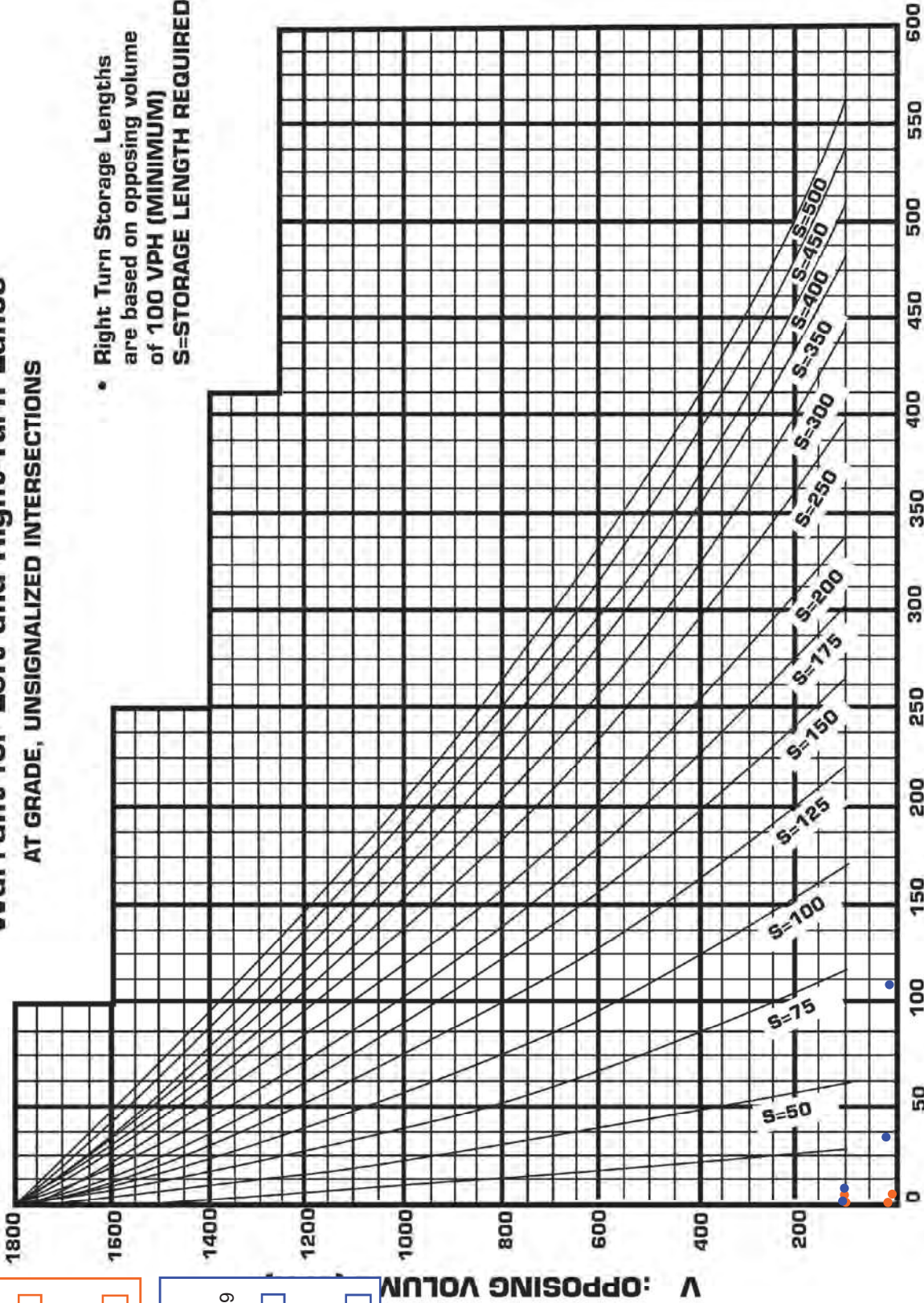
AM	PM
$V_{SBL} = 1$	$V_{SBL} = 3$
$V_o = 9$	$V_o = 5$
$S = 0'$	$S = 0'$
$V_{NBR} = 0$	$V_{NBR} = 2$
$V_o = 100$	$V_o = 100$
$S = 0'$	$S = 0'$

2026 Build

AM	PM
$V_{SBL} = 32$	$V_{SBL} = 109$
$V_o = 9$	$V_o = 5$
$S = 0'$	$S = 0'$
$V_{NBR} = 0$	$V_{NBR} = 2$
$V_o = 100$	$V_o = 100$
$S = 0'$	$S = 0'$

Warrant for Left and Right-Turn Lanes
AT GRADE, UNSIGNALIZED INTERSECTIONS

- Right Turn Storage Lengths are based on opposing volume of 100 VPH (MINIMUM)
S=STORAGE LENGTH REQUIRED



Note: Where adjacent signalization may provide opportunities for gaps in the traffic stream a reduction in the above storage values can be considered on a case by case basis.

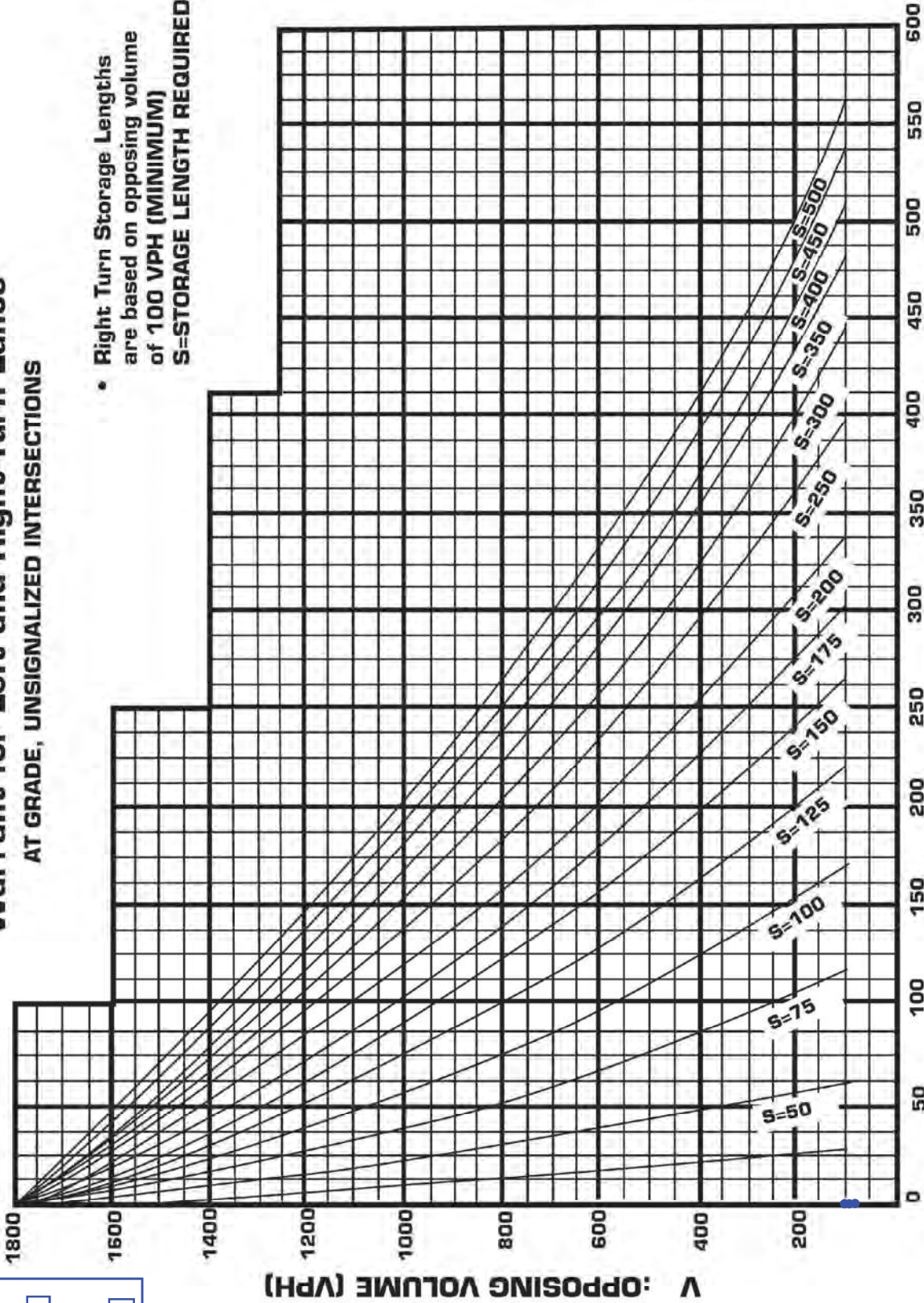
V_o : LEFT TURNING VOLUME (VPH)
 V_r : RIGHT TURNING VOLUME (VPH)

Int. #10: Henry Chapel Road and Access 1 (Phase 1A)

2023 Build	
AM	PM
$V_{EBL} = 0$	$V_{EBL} = 0$
$V_o = 90$	$V_o = 73$
$S = 0'$	$S = 0'$
$V_{WBR} = 0$	$V_{WBR} = 0$
$V_o = 100$	$V_o = 100$
$S = 0'$	$S = 0'$

Warrant for Left and Right-Turn Lanes
AT GRADE, UNSIGNALIZED INTERSECTIONS

- Right Turn Storage Lengths are based on opposing volume of 100 VPH (MINIMUM)
S=STORAGE LENGTH REQUIRED



Note: Where adjacent signalization may provide opportunities for gaps in the traffic stream a reduction in the above storage values can be considered on a case by case basis.

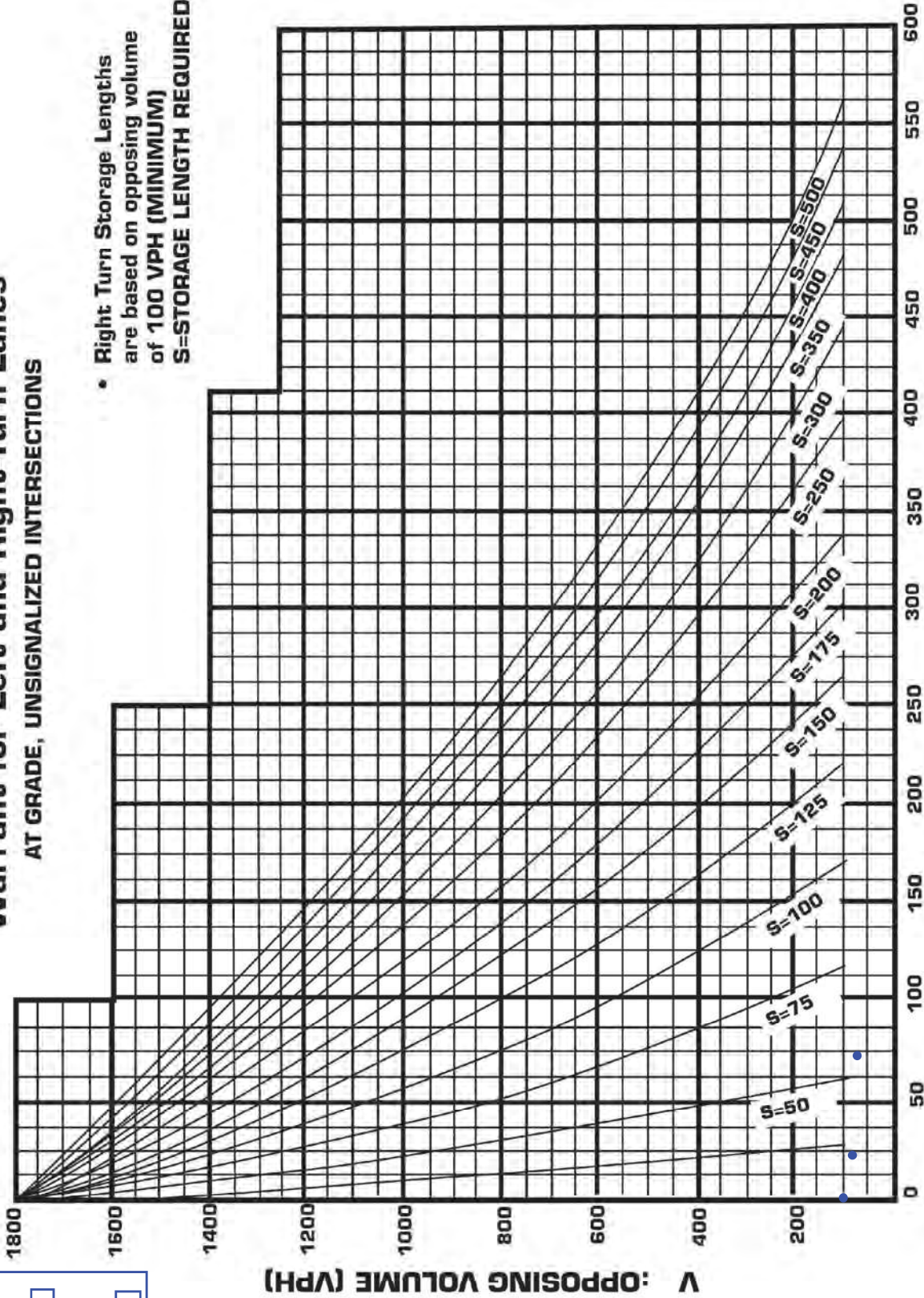
V_L : LEFT TURNING VOLUME (VPH)
 V_R : RIGHT TURNING VOLUME (VPH)

Int. #10: Henry Chapel Road and Access 1 (Phase 1B)

2024 Build	
AM	PM
$V_{EBL} = 22$	$V_{EBL} = 72$
$V_o = 84$	$V_o = 70$
$S = 0'$	$S = 0'$
$V_{WBR} = 0$	$V_{WBR} = 0$
$V_o = 100$	$V_o = 100$
$S = 0'$	$S = 0'$

Warrant for Left and Right-Turn Lanes
AT GRADE, UNSIGNALIZED INTERSECTIONS

- Right Turn Storage Lengths are based on opposing volume of 100 VPH (MINIMUM)
S=STORAGE LENGTH REQUIRED



Note: Where adjacent signalization may provide opportunities for gaps in the traffic stream a reduction in the above storage values can be considered on a case by case basis.

V_L : LEFT TURNING VOLUME (VPH)
 V_R : RIGHT TURNING VOLUME (VPH)

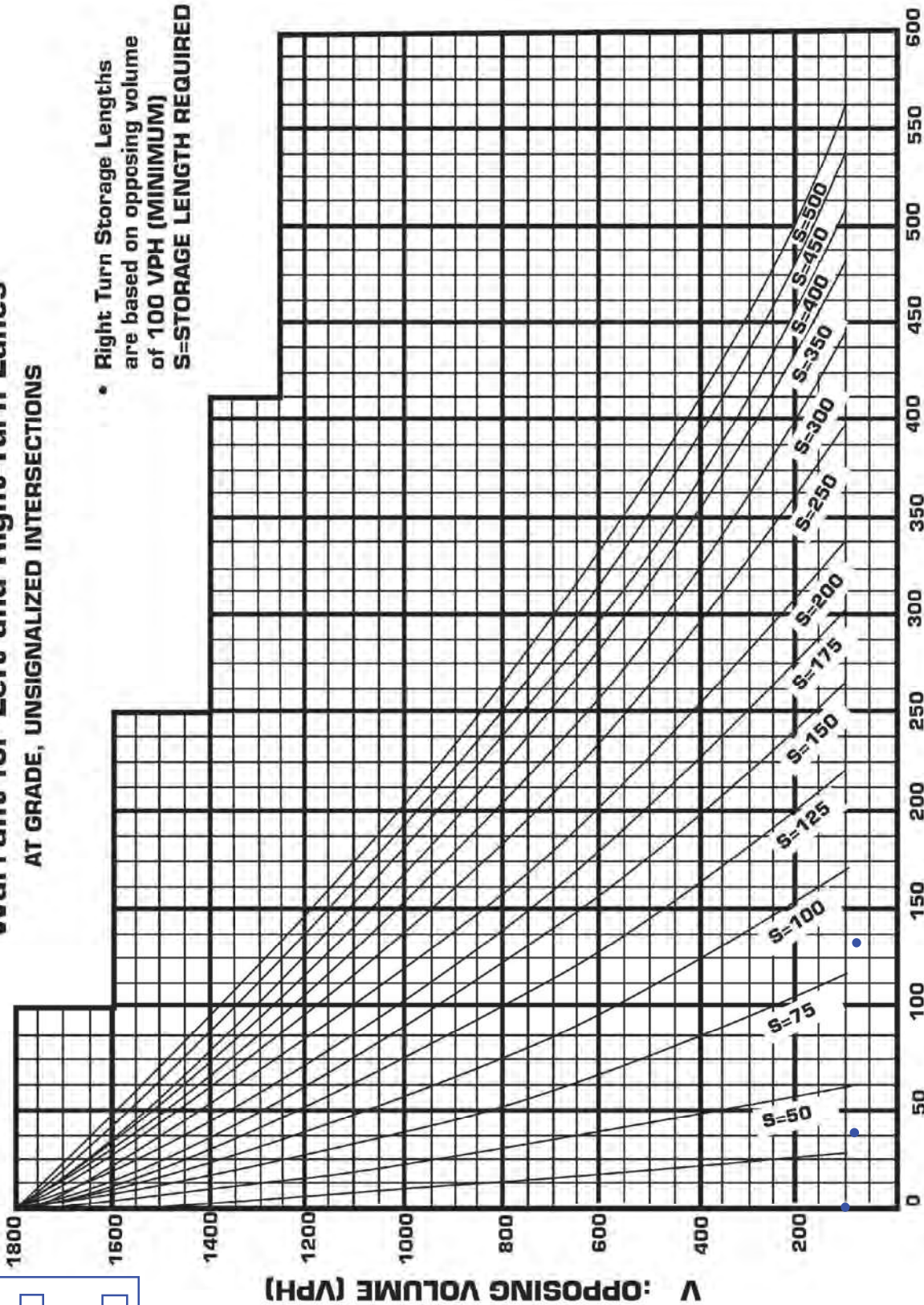
Int. #10: Henry Chapel Road and Access 1 (Phase 2)

2025 Build	
AM	PM
$V_{EBL} = 38$	$V_{EBL} = 129$
$V_o = 88$	$V_o = 74$
$S = 0'$	$S = 0'$
$V_{WBR} = 0$	$V_{WBR} = 0$
$V_o = 100$	$V_o = 100$
$S = 0'$	$S = 0'$

Warrant for Left and Right-Turn Lanes

AT GRADE, UNSIGNALIZED INTERSECTIONS

- Right Turn Storage Lengths are based on opposing volume of 100 VPH (MINIMUM)
S=STORAGE LENGTH REQUIRED



Note: Where adjacent signalization may provide opportunities for gaps in the traffic stream a reduction in the above storage values can be considered on a case by case basis.

V_L : LEFT TURNING VOLUME (VPH)
 V_R : RIGHT TURNING VOLUME (VPH)

Int. #10: Henry Chapel Road and Access 1 (Phase 3)

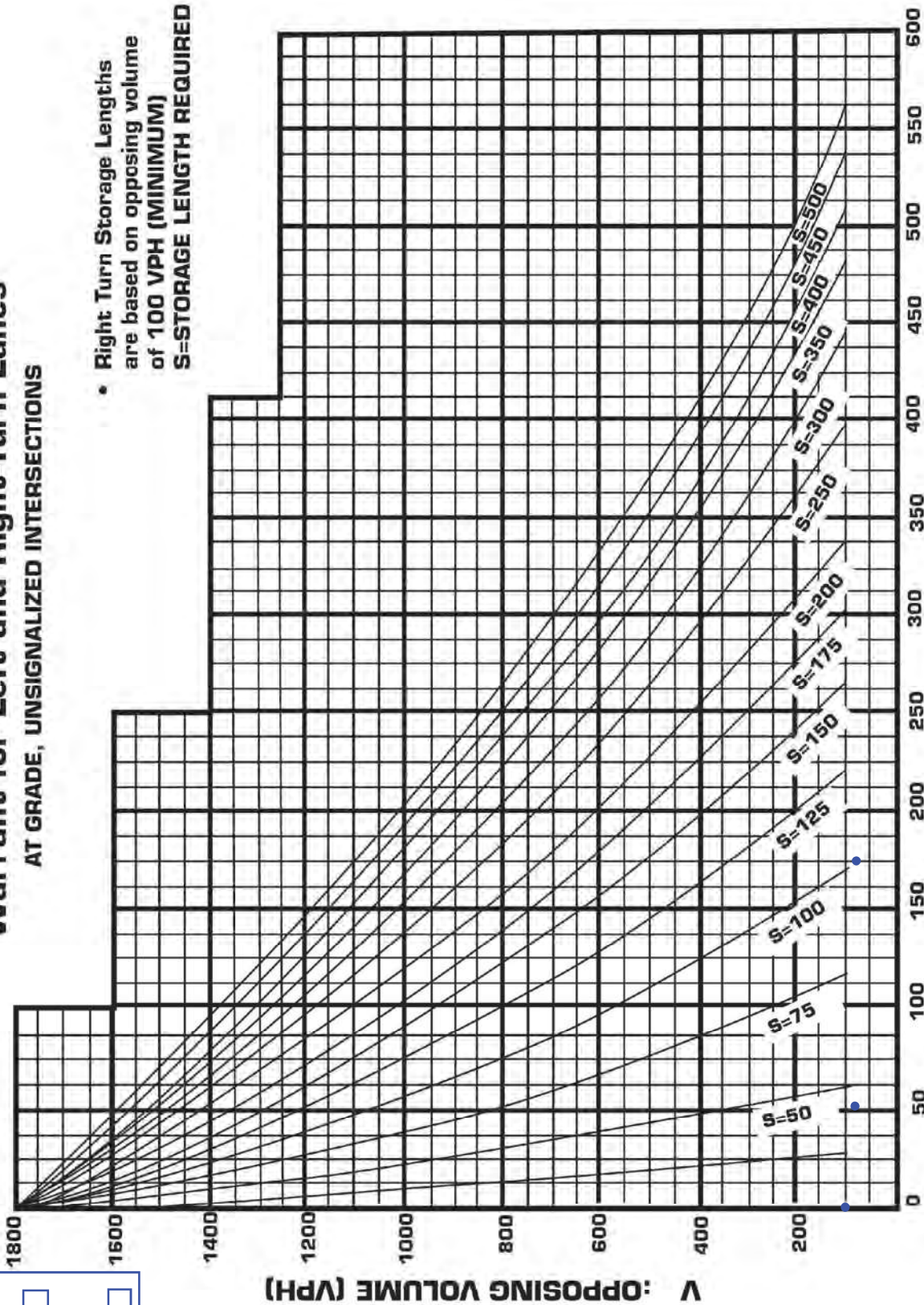
2026 Build

AM	PM
$V_{EBL} = 51$	$V_{EBL} = 176$
$V_o = 82$	$V_o = 70$
$S = 0'$	$S = 0'$
$V_{WBR} = 0$	$V_{WBR} = 0$
$V_o = 100$	$V_o = 100$
$S = 0'$	$S = 0'$

Warrant for Left and Right-Turn Lanes

AT GRADE, UNSIGNALIZED INTERSECTIONS

- Right Turn Storage Lengths are based on opposing volume of 100 VPH (MINIMUM)
S=STORAGE LENGTH REQUIRED



Note: Where adjacent signalization may provide opportunities for gaps in the traffic stream a reduction in the above storage values can be considered on a case by case basis.

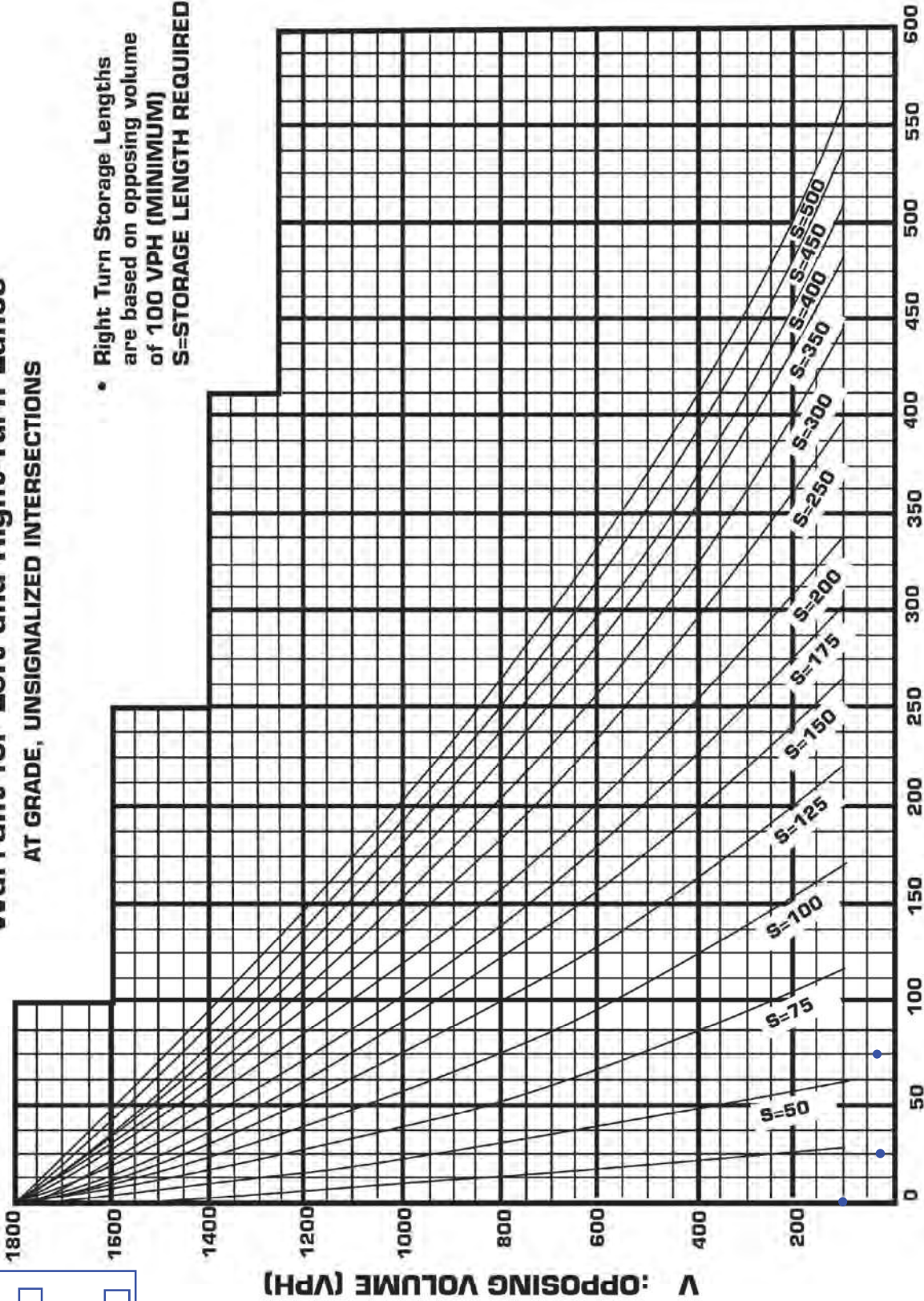
V_L : LEFT TURNING VOLUME (VPH)
 V_R : RIGHT TURNING VOLUME (VPH)

Int. #11: Henry Chapel Road and Access 2 (Phase 1A)

2023 Build	
AM	PM
$V_{EBL} = 24$	$V_{EBL} = 77$
$V_o = 22$	$V_o = 27$
$S = 0'$	$S = 0'$
$V_{WBR} = 0$	$V_{WBR} = 0$
$V_o = 100$	$V_o = 100$
$S = 0'$	$S = 0'$

Warrant for Left and Right-Turn Lanes
AT GRADE, UNSIGNALIZED INTERSECTIONS

- Right Turn Storage Lengths are based on opposing volume of 100 VPH (MINIMUM)
S=STORAGE LENGTH REQUIRED



Note: Where adjacent signalization may provide opportunities for gaps in the traffic stream a reduction in the above storage values can be considered on a case by case basis.

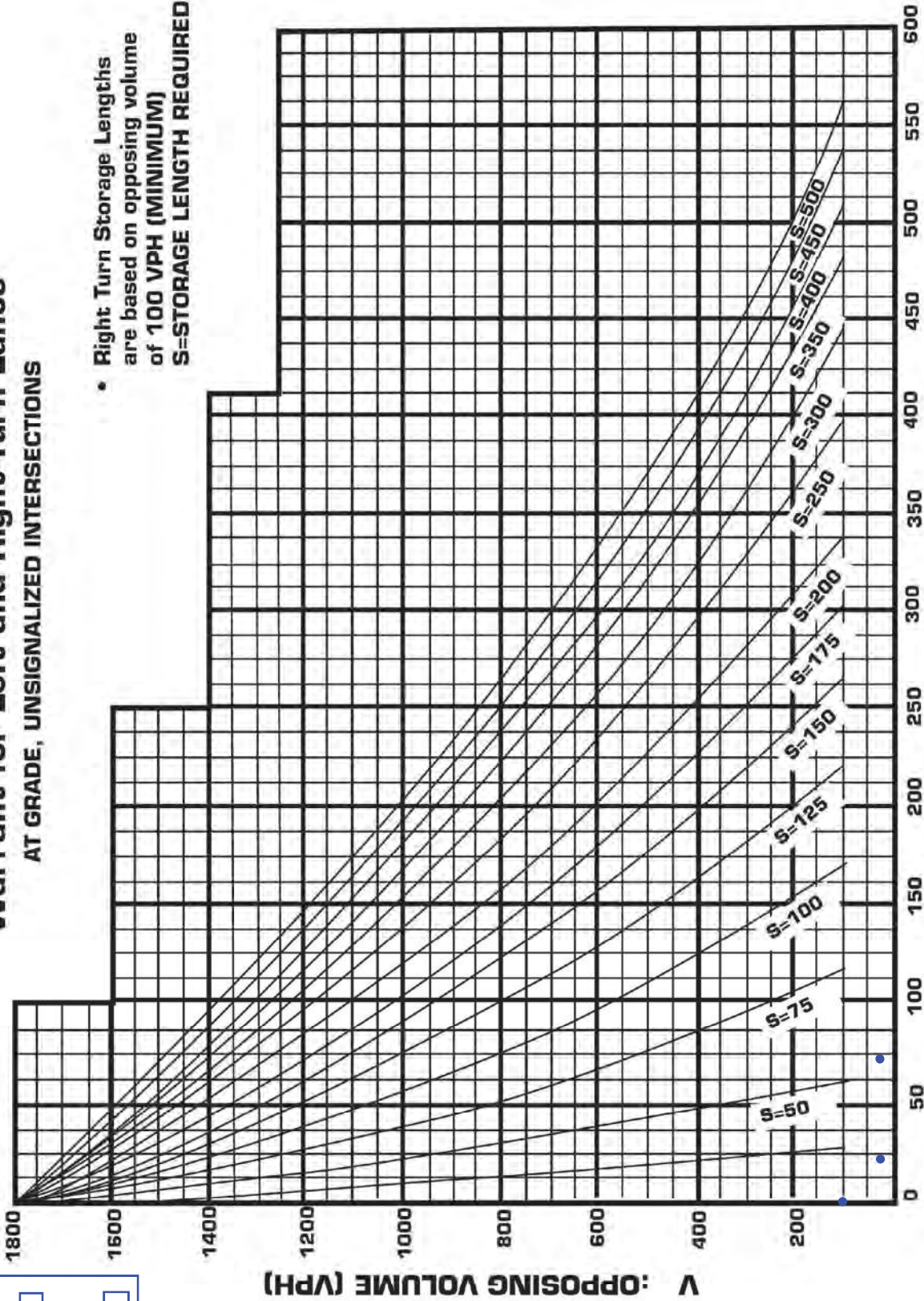
V_L : LEFT TURNING VOLUME (VPH)
 V_R : RIGHT TURNING VOLUME (VPH)

Int. #11: Henry Chapel Road and Access 2 (Phase 1B)

2024 Build	
AM	PM
$V_{EBL} = 22$	$V_{EBL} = 73$
$V_o = 22$	$V_o = 27$
$S = 0'$	$S = 0'$
$V_{WBR} = 0$	$V_{WBR} = 0$
$V_o = 100$	$V_o = 100$
$S = 0'$	$S = 0'$

Warrant for Left and Right-Turn Lanes
AT GRADE, UNSIGNALIZED INTERSECTIONS

- Right Turn Storage Lengths are based on opposing volume of 100 VPH (MINIMUM)
S=STORAGE LENGTH REQUIRED



Note: Where adjacent signalization may provide opportunities for gaps in the traffic stream a reduction in the above storage values can be considered on a case by case basis.

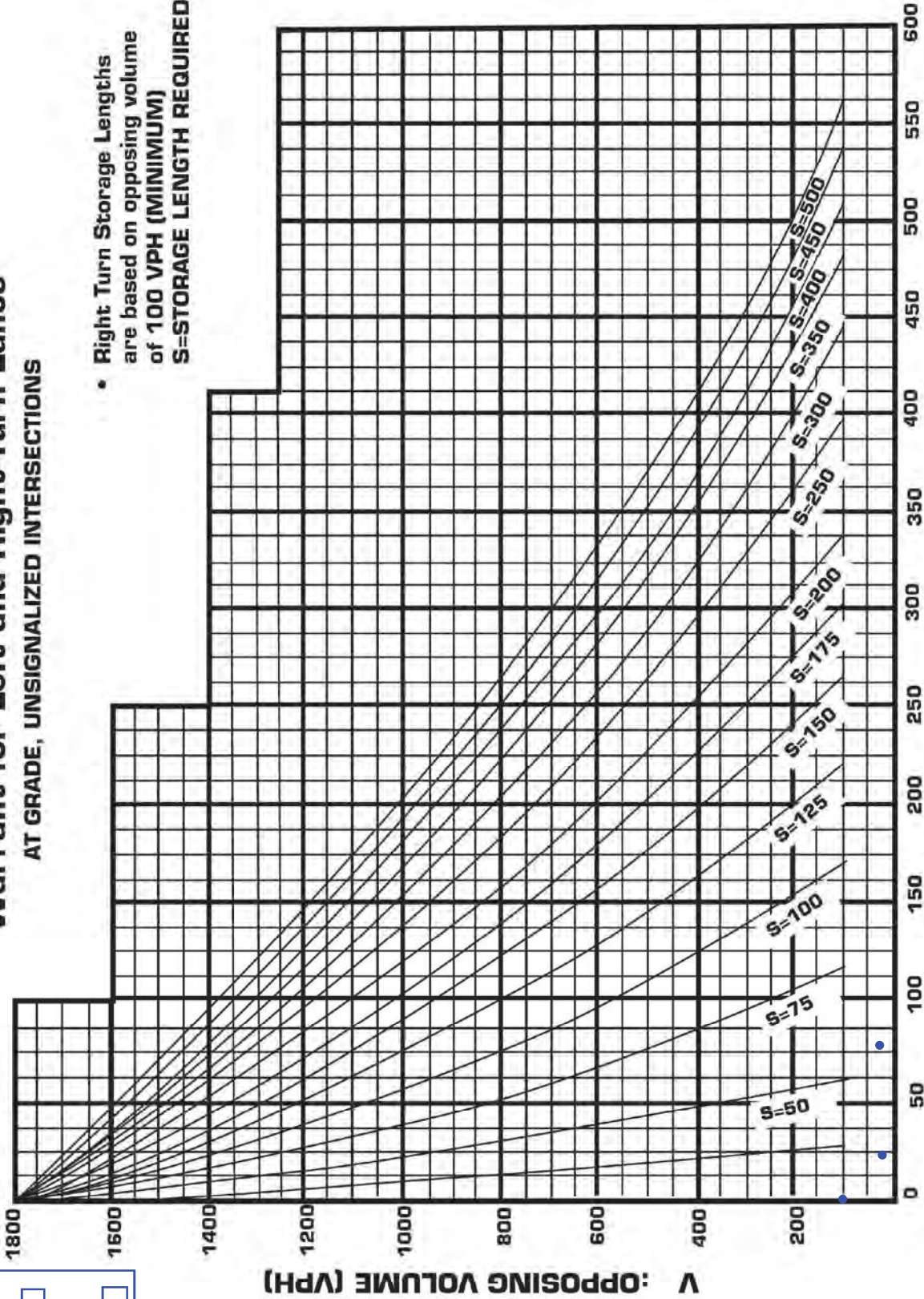
V_L : LEFT TURNING VOLUME (VPH)
 V_R : RIGHT TURNING VOLUME (VPH)

Int. #11: Henry Chapel Road and Access 2 (Phase 2)

2025 Build	
AM	PM
$V_{EBL} = 23$	$V_{EBL} = 77$
$V_o = 23$	$V_o = 28$
$S = 0'$	$S = 0'$
$V_{WBR} = 0$	$V_{WBR} = 0$
$V_o = 100$	$V_o = 100$
$S = 0'$	$S = 0'$

Warrant for Left and Right-Turn Lanes
AT GRADE, UNSIGNALIZED INTERSECTIONS

- Right Turn Storage Lengths are based on opposing volume of 100 VPH (MINIMUM)
S=STORAGE LENGTH REQUIRED



Note: Where adjacent signalization may provide opportunities for gaps in the traffic stream a reduction in the above storage values can be considered on a case by case basis.

V_L : LEFT TURNING VOLUME (VPH)
 V_R : RIGHT TURNING VOLUME (VPH)

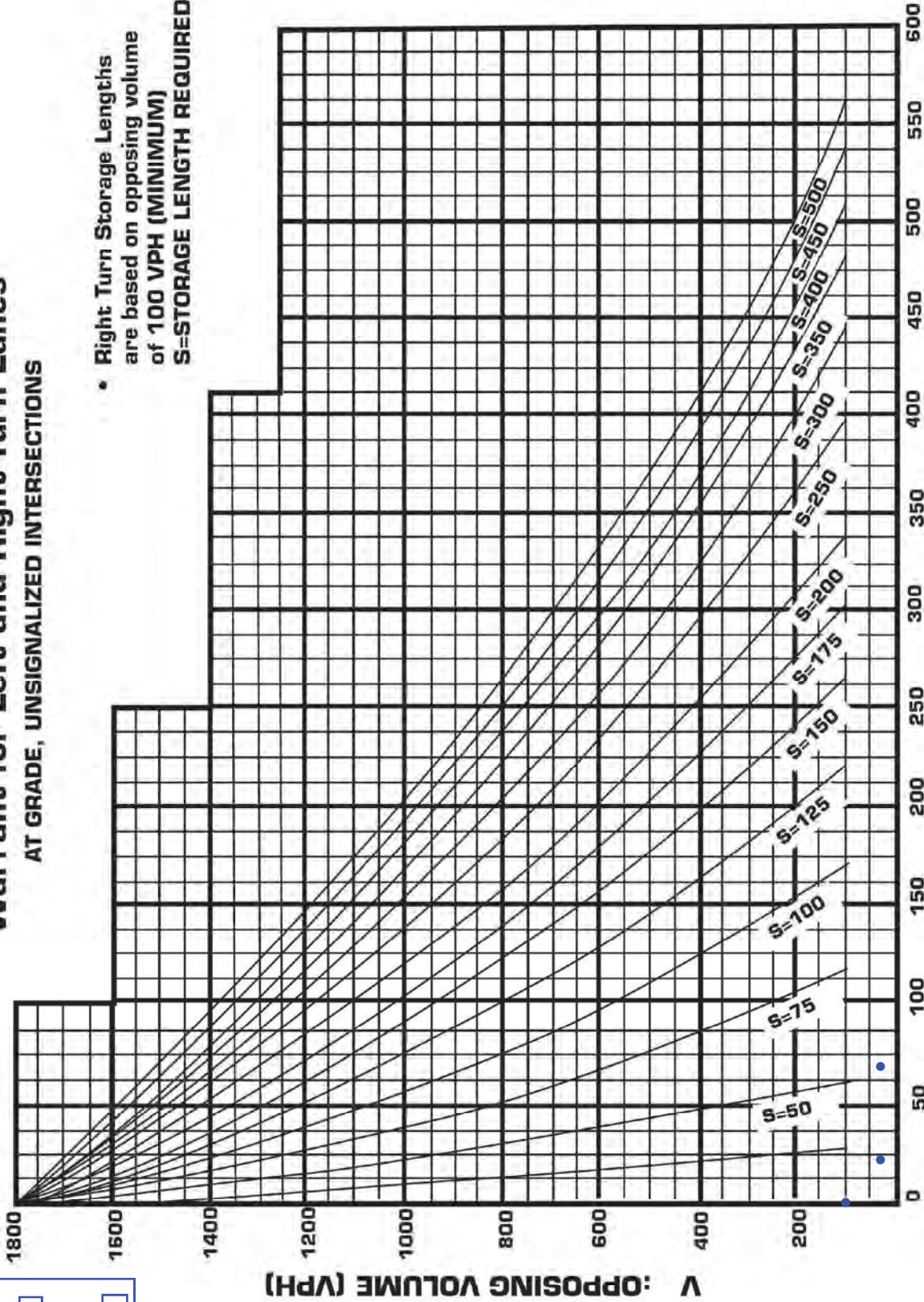
Int. #11: Henry Chapel Road and Access 2 (Phase 3)

2026 Build

AM	PM
$V_{EBL} = 21$	$V_{EBL} = 70$
$V_o = 23$	$V_o = 29$
$S = 0'$	$S = 0'$
$V_{WBR} = 0$	$V_{WBR} = 0$
$V_o = 100$	$V_o = 100$
$S = 0'$	$S = 0'$

Warrant for Left and Right-Turn Lanes
AT GRADE, UNSIGNALIZED INTERSECTIONS

- Right Turn Storage Lengths are based on opposing volume of 100 VPH (MINIMUM)
S=STORAGE LENGTH REQUIRED



Note: Where adjacent signalization may provide opportunities for gaps in the traffic stream a reduction in the above storage values can be considered on a case by case basis.

V_L : LEFT TURNING VOLUME (VPH)
 V_R : RIGHT TURNING VOLUME (VPH)

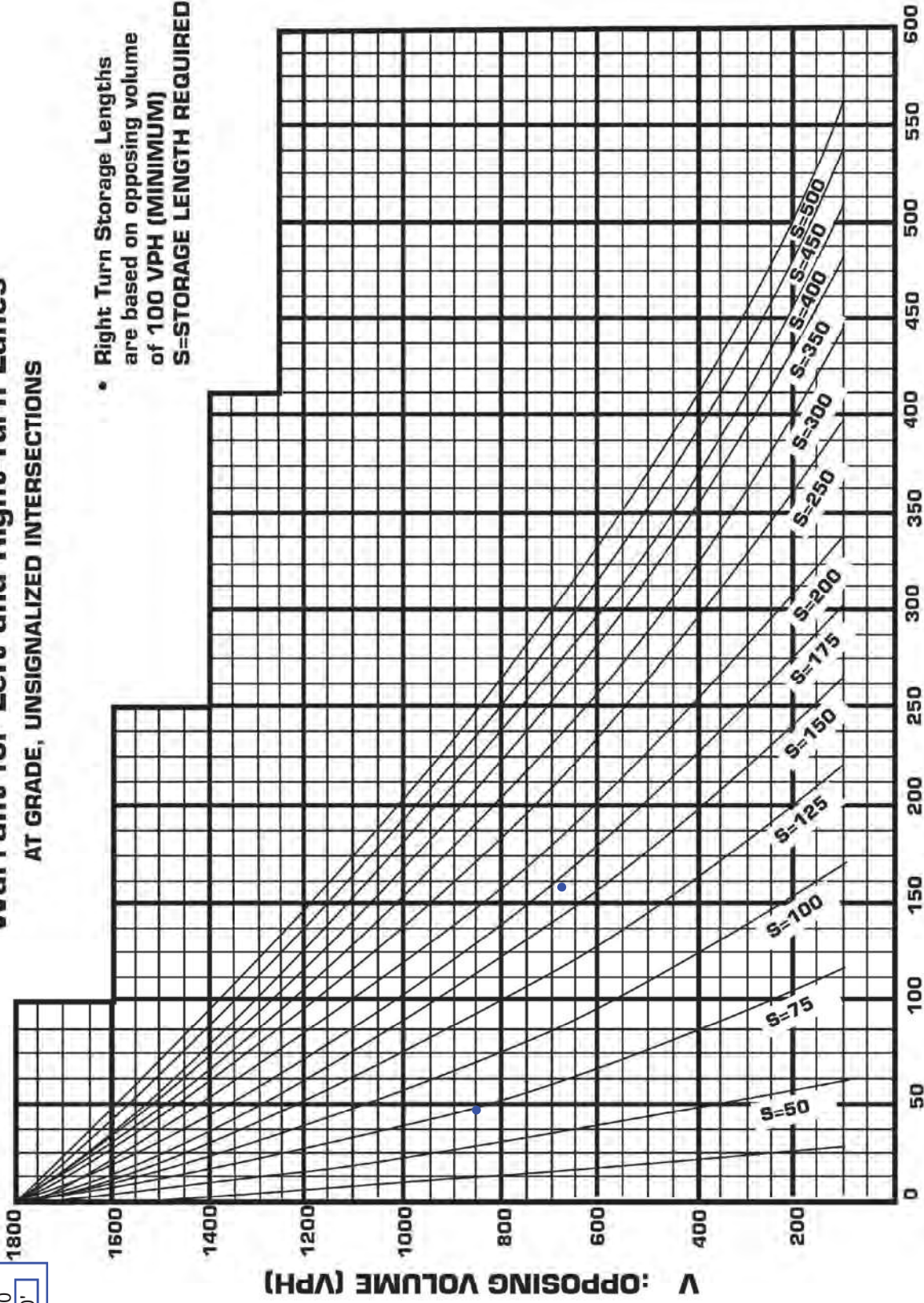
Int. #2: Colonial Drive and Timber Ridge Road (Phase 1B) - SUPPLEMENT

2024 Build

AM	PM
$V_{SBL} = 47$	$V_{SBL} = 158$
$V_o = 849$	$V_o = 680$
$S = 50'$	$S = 150'$

Warrant for Left and Right-Turn Lanes
AT GRADE, UNSIGNALIZED INTERSECTIONS

- Right Turn Storage Lengths are based on opposing volume of 100 VPH (MINIMUM)
S=STORAGE LENGTH REQUIRED



V_L : LEFT TURNING VOLUME (VPH)
 V_R : RIGHT TURNING VOLUME (VPH)

Note: Where adjacent signalization may provide opportunities for gaps in the traffic stream a reduction in the above storage values can be considered on a case by case basis.

Int. #3: S Point Road and Forest Hill Road (Phase 2) - SUPPLEMENT

2025 Build

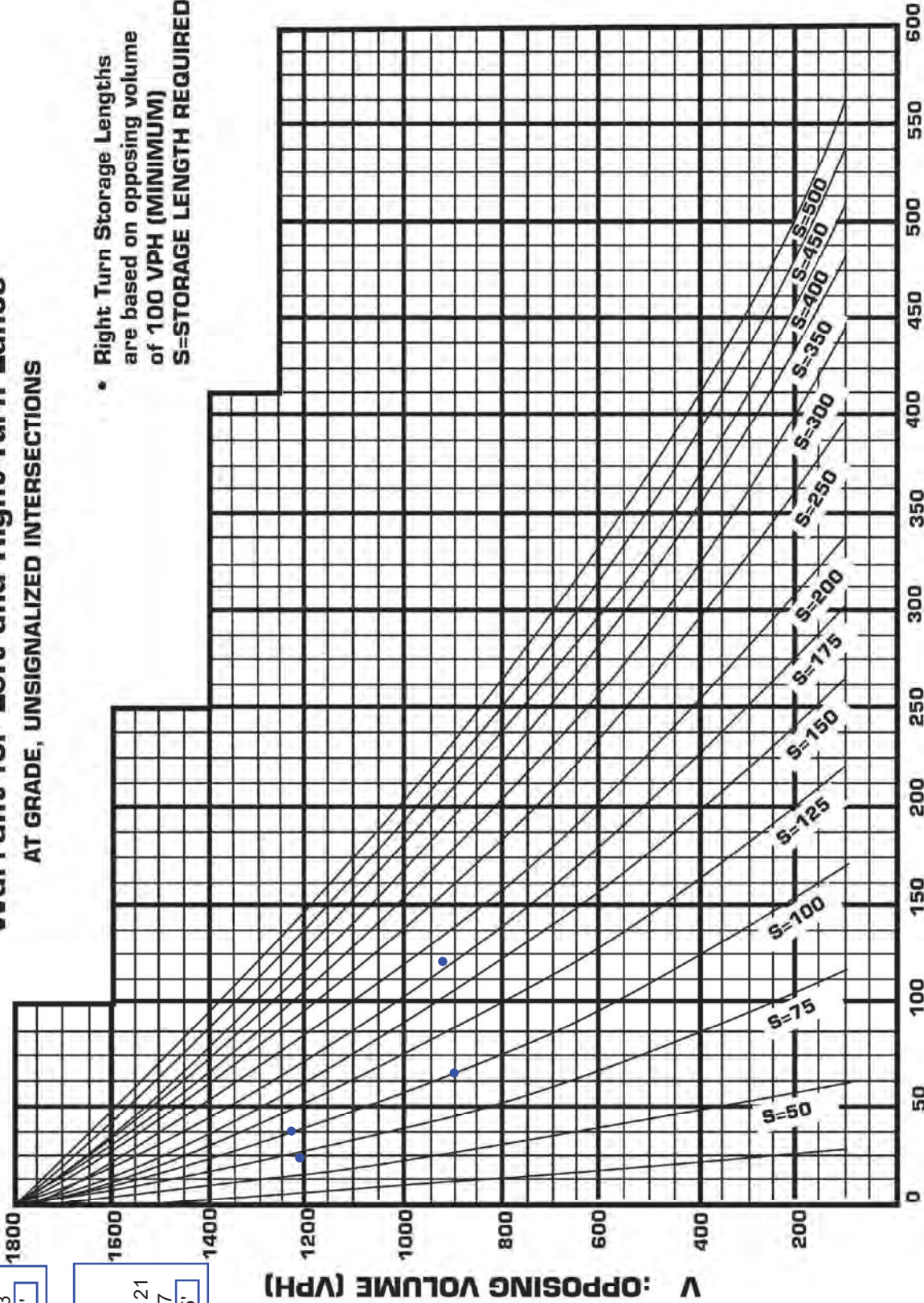
AM	PM
$V_{SBL} = 23$	$V_{SBL} = 67$
$V_o = 1214$	$V_o = 903$
$S = 50'$	$S = 100'$

2026 Build

AM	PM
$V_{SBL} = 39$	$V_{SBL} = 121$
$V_o = 1263$	$V_o = 937$
$S = 100'$	$S = 175'$

Warrant for Left and Right-Turn Lanes
AT GRADE, UNSIGNALIZED INTERSECTIONS

- Right Turn Storage Lengths are based on opposing volume of 100 VPH (MINIMUM)
S=STORAGE LENGTH REQUIRED



Note: Where adjacent signalization may provide opportunities for gaps in the traffic stream a reduction in the above storage values can be considered on a case by case basis.

V_L : LEFT TURNING VOLUME (VPH)
 V_R : RIGHT TURNING VOLUME (VPH)

Crash Data

**North Carolina Department of Transportation
Traffic Engineering Accident Analysis System
Intersection Analysis Report**

Summary Statistics

High Level Crash Summary

Crash Type	Number of Crashes	Percent of Total
Total Crashes	2	100.00
Fatal Crashes	0	0.00
Non-Fatal Injury Crashes	0	0.00
Total Injury Crashes	0	0.00
Property Damage Only Crashes	2	100.00
Night Crashes	0	0.00
Wet Crashes	0	0.00
Alcohol/Drugs Involvement Crashes	0	0.00

Crash Severity Summary

Crash Type	Number of Crashes	Percent of Total
Total Crashes	2	100.00
Fatal Crashes	0	0.00
Class A Crashes	0	0.00
Class B Crashes	0	0.00
Class C Crashes	0	0.00
Property Damage Only Crashes	2	100.00

Vehicle Exposure Statistics

Annual ADT = 9300

Total Vehicle Exposure = 10.19 (MEV)

Crash Rate	Crashes Per 100 Million Vehicles Entered
Total Crash Rate	19.62
Fatal Crash Rate	0.00
Non Fatal Crash Rate	0.00
Night Crash Rate	0.00
Wet Crash Rate	0.00
EPDO Rate	19.62

**North Carolina Department of Transportation
Traffic Engineering Accident Analysis System
Intersection Analysis Report**

Miscellaneous Statistics

Severity Index =	1.00
EPDO Crash Index =	2.00
Estimated Property Damage Total = \$	5500.00

Accident Type Summary

Accident Type	Number of Crashes	Percent of Total
LEFT TURN, DIFFERENT ROADWAYS	2	100.00

Injury Summary

Injury Type	Number of Injuries	Percent of Total
Fatal Injuries	0	0.00
Class A Injuries	0	0.00
Class B Injuries	0	0.00
Class C Injuries	0	0.00
Total Non-Fatal Injuries	0	0.00
Total Injuries	0	0.00

**North Carolina Department of Transportation
Traffic Engineering Accident Analysis System
Intersection Analysis Report**

Monthly Summary

Month	Number of Crashes	Percent of Total
Jan	0	0.00
Feb	0	0.00
Mar	0	0.00
Apr	0	0.00
May	0	0.00
Jun	1	50.00
Jul	0	0.00
Aug	0	0.00
Sep	0	0.00
Oct	0	0.00
Nov	1	50.00
Dec	0	0.00

Daily Summary

Day	Number of Crashes	Percent of Total
Mon	0	0.00
Tue	1	50.00
Wed	0	0.00
Thu	0	0.00
Fri	0	0.00
Sat	1	50.00
Sun	0	0.00

**North Carolina Department of Transportation
Traffic Engineering Accident Analysis System
Intersection Analysis Report**

Hourly Summary

Hour	Number of Crashes	Percent of Total
0000-0059	0	0.00
0100-0159	0	0.00
0200-0259	0	0.00
0300-0359	0	0.00
0400-0459	0	0.00
0500-0559	0	0.00
0600-0659	0	0.00
0700-0759	0	0.00
0800-0859	1	50.00
0900-0959	0	0.00
1000-1059	0	0.00
1100-1159	0	0.00
1200-1259	0	0.00
1300-1359	0	0.00
1400-1459	1	50.00
1500-1559	0	0.00
1600-1659	0	0.00
1700-1759	0	0.00
1800-1859	0	0.00
1900-1959	0	0.00
2000-2059	0	0.00
2100-2159	0	0.00
2200-2259	0	0.00
2300-2359	0	0.00

**North Carolina Department of Transportation
Traffic Engineering Accident Analysis System
Intersection Analysis Report**

Light and Road Conditions Summary

Condition	Dry	Wet	Other	Total
Day	2	0	0	2
Dark	0	0	0	0
Other	0	0	0	0
Total	2	0	0	2

Vehicle Type Summary

Vehicle Type	Number Involved	Percent of Total
PASSENGER CAR	3	75.00
SINGLE UNIT TRUCK (2-AXLE, 6-TIRE)	1	25.00

North Carolina Department of Transportation
Traffic Engineering Accident Analysis System
Intersection Analysis Report

Yearly Totals Summary

Accident Totals

Year	Total Accidents	Fatal Accidents	Injury Accidents	Property Damage Only Accidents
2019	1	0	0	1
2020	0	0	0	0
2021	1	0	0	1
2022	0	0	0	0
Total	2	0	0	2

Injury Totals

Year	Fatal Injuries	Class A, B, or C Injuries
2019	0	0
2020	0	0
2021	0	0
2022	0	0
Total	0	0

Miscellaneous Totals

Year	Property Damage	EPDO Index
2019	\$ 4500	1.00
2020	\$ 0	0.00
2021	\$ 1000	1.00
2022	\$ 0	0.00
Total	\$ 5500	2.00

Type of Accident Totals

Year	Left Turn	Right Turn	Rear End	Run Off Road &				Other
				Fixed Object	Angle	Side Swipe		
2019	1	0	0	0	0	0	0	
2020	0	0	0	0	0	0	0	
2021	1	0	0	0	0	0	0	
2022	0	0	0	0	0	0	0	
Total	2	0	0	0	0	0	0	

**North Carolina Department of Transportation
Traffic Engineering Accident Analysis System
Intersection Analysis Report**

Summary Statistics

High Level Crash Summary

Crash Type	Number of Crashes	Percent of Total
Total Crashes	3	100.00
Fatal Crashes	0	0.00
Non-Fatal Injury Crashes	0	0.00
Total Injury Crashes	0	0.00
Property Damage Only Crashes	3	100.00
Night Crashes	1	33.33
Wet Crashes	1	33.33
Alcohol/Drugs Involvement Crashes	0	0.00

Crash Severity Summary

Crash Type	Number of Crashes	Percent of Total
Total Crashes	3	100.00
Fatal Crashes	0	0.00
Class A Crashes	0	0.00
Class B Crashes	0	0.00
Class C Crashes	0	0.00
Property Damage Only Crashes	3	100.00

Vehicle Exposure Statistics

Annual ADT = 14400

Total Vehicle Exposure = 15.78 (MEV)

Crash Rate	Crashes Per 100 Million Vehicles Entered
Total Crash Rate	19.01
Fatal Crash Rate	0.00
Non Fatal Crash Rate	0.00
Night Crash Rate	6.34
Wet Crash Rate	6.34
EPDO Rate	19.01

**North Carolina Department of Transportation
Traffic Engineering Accident Analysis System
Intersection Analysis Report**

Miscellaneous Statistics

Severity Index =	1.00
EPDO Crash Index =	3.00
Estimated Property Damage Total = \$	32500.00

Accident Type Summary

Accident Type	Number of Crashes	Percent of Total
ANGLE	2	66.67
FIXED OBJECT	1	33.33

Injury Summary

Injury Type	Number of Injuries	Percent of Total
Fatal Injuries	0	0.00
Class A Injuries	0	0.00
Class B Injuries	0	0.00
Class C Injuries	0	0.00
Total Non-Fatal Injuries	0	0.00
Total Injuries	0	0.00

**North Carolina Department of Transportation
Traffic Engineering Accident Analysis System
Intersection Analysis Report**

Monthly Summary

Month	Number of Crashes	Percent of Total
Jan	0	0.00
Feb	0	0.00
Mar	2	66.67
Apr	0	0.00
May	0	0.00
Jun	0	0.00
Jul	0	0.00
Aug	1	33.33
Sep	0	0.00
Oct	0	0.00
Nov	0	0.00
Dec	0	0.00

Daily Summary

Day	Number of Crashes	Percent of Total
Mon	0	0.00
Tue	0	0.00
Wed	0	0.00
Thu	2	66.67
Fri	0	0.00
Sat	1	33.33
Sun	0	0.00

**North Carolina Department of Transportation
Traffic Engineering Accident Analysis System
Intersection Analysis Report**

Hourly Summary

Hour	Number of Crashes	Percent of Total
0000-0059	0	0.00
0100-0159	0	0.00
0200-0259	0	0.00
0300-0359	0	0.00
0400-0459	0	0.00
0500-0559	0	0.00
0600-0659	0	0.00
0700-0759	0	0.00
0800-0859	0	0.00
0900-0959	0	0.00
1000-1059	0	0.00
1100-1159	0	0.00
1200-1259	0	0.00
1300-1359	1	33.33
1400-1459	0	0.00
1500-1559	0	0.00
1600-1659	0	0.00
1700-1759	0	0.00
1800-1859	1	33.33
1900-1959	1	33.33
2000-2059	0	0.00
2100-2159	0	0.00
2200-2259	0	0.00
2300-2359	0	0.00

**North Carolina Department of Transportation
Traffic Engineering Accident Analysis System
Intersection Analysis Report**

Light and Road Conditions Summary

Condition	Dry	Wet	Other	Total
Day	2	0	0	2
Dark	0	1	0	1
Other	0	0	0	0
Total	2	1	0	3

Object Struck Summary

Object Type	Times Struck	Percent of Total
OTHER FIXED OBJECT	1	100.00

Vehicle Type Summary

Vehicle Type	Number Involved	Percent of Total
PASSENGER CAR	2	40.00
SINGLE UNIT TRUCK (2-AXLE, 6-TIRE)	1	20.00
SPORT UTILITY	2	40.00

North Carolina Department of Transportation
Traffic Engineering Accident Analysis System
Intersection Analysis Report

Yearly Totals Summary

Accident Totals

Year	Total Accidents	Fatal Accidents	Injury Accidents	Property Damage Only Accidents
2019	0	0	0	0
2020	2	0	0	2
2021	1	0	0	1
2022	0	0	0	0
Total	3	0	0	3

Injury Totals

Year	Fatal Injuries	Class A, B, or C Injuries
2019	0	0
2020	0	0
2021	0	0
2022	0	0
Total	0	0

Miscellaneous Totals

Year	Property Damage	EPDO Index
2019	\$ 0	0.00
2020	\$ 28000	2.00
2021	\$ 4500	1.00
2022	\$ 0	0.00
Total	\$ 32500	3.00

Type of Accident Totals

Year	Left Turn	Right Turn	Rear End	Run Off Road &			
				Fixed Object	Angle	Side Swipe	Other
2019	0	0	0	0	0	0	0
2020	0	0	0	1	1	0	0
2021	0	0	0	0	1	0	0
2022	0	0	0	0	0	0	0
Total	0	0	0	1	2	0	0

**North Carolina Department of Transportation
Traffic Engineering Accident Analysis System
Intersection Analysis Report**

Intersection Road Combinations

Name	Code	Code	Name
NC 273	30000273	40002831	SR 2831
NC 273	30000273	50001366	B
NC 273	30000273	50010826	FOREST HILL
POINT	50024482	40002831	SR 2831
POINT	50024482	50001366	B
POINT	50024482	50010826	FOREST HILL

**North Carolina Department of Transportation
Traffic Engineering Accident Analysis System
Intersection Analysis Report**

Summary Statistics

High Level Crash Summary

Crash Type	Number of Crashes	Percent of Total
Total Crashes	4	100.00
Fatal Crashes	0	0.00
Non-Fatal Injury Crashes	1	25.00
Total Injury Crashes	1	25.00
Property Damage Only Crashes	3	75.00
Night Crashes	1	25.00
Wet Crashes	0	0.00
Alcohol/Drugs Involvement Crashes	0	0.00

Crash Severity Summary

Crash Type	Number of Crashes	Percent of Total
Total Crashes	4	100.00
Fatal Crashes	0	0.00
Class A Crashes	0	0.00
Class B Crashes	0	0.00
Class C Crashes	1	25.00
Property Damage Only Crashes	3	75.00

Vehicle Exposure Statistics

Annual ADT = 15900

Total Vehicle Exposure = 17.43 (MEV)

Crash Rate	Crashes Per 100 Million Vehicles Entered
Total Crash Rate	22.95
Fatal Crash Rate	0.00
Non Fatal Crash Rate	5.74
Night Crash Rate	5.74
Wet Crash Rate	0.00
EPDO Rate	65.42

**North Carolina Department of Transportation
Traffic Engineering Accident Analysis System
Intersection Analysis Report**

Miscellaneous Statistics

Severity Index =	2.85
EPDO Crash Index =	11.40
Estimated Property Damage Total = \$	33900.00

Accident Type Summary

Accident Type	Number of Crashes	Percent of Total
ANIMAL	1	25.00
REAR END, SLOW OR STOP	3	75.00

Injury Summary

Injury Type	Number of Injuries	Percent of Total
Fatal Injuries	0	0.00
Class A Injuries	0	0.00
Class B Injuries	0	0.00
Class C Injuries	1	100.00
Total Non-Fatal Injuries	1	100.00
Total Injuries	1	100.00

**North Carolina Department of Transportation
Traffic Engineering Accident Analysis System
Intersection Analysis Report**

Monthly Summary

Month	Number of Crashes	Percent of Total
Jan	0	0.00
Feb	0	0.00
Mar	0	0.00
Apr	0	0.00
May	1	25.00
Jun	1	25.00
Jul	0	0.00
Aug	0	0.00
Sep	1	25.00
Oct	0	0.00
Nov	0	0.00
Dec	1	25.00

Daily Summary

Day	Number of Crashes	Percent of Total
Mon	0	0.00
Tue	1	25.00
Wed	1	25.00
Thu	0	0.00
Fri	2	50.00
Sat	0	0.00
Sun	0	0.00

**North Carolina Department of Transportation
Traffic Engineering Accident Analysis System
Intersection Analysis Report**

Hourly Summary

Hour	Number of Crashes	Percent of Total
0000-0059	0	0.00
0100-0159	0	0.00
0200-0259	0	0.00
0300-0359	0	0.00
0400-0459	0	0.00
0500-0559	0	0.00
0600-0659	0	0.00
0700-0759	0	0.00
0800-0859	0	0.00
0900-0959	1	25.00
1000-1059	0	0.00
1100-1159	0	0.00
1200-1259	0	0.00
1300-1359	0	0.00
1400-1459	0	0.00
1500-1559	0	0.00
1600-1659	0	0.00
1700-1759	0	0.00
1800-1859	1	25.00
1900-1959	1	25.00
2000-2059	0	0.00
2100-2159	0	0.00
2200-2259	0	0.00
2300-2359	1	25.00

**North Carolina Department of Transportation
Traffic Engineering Accident Analysis System
Intersection Analysis Report**

Light and Road Conditions Summary

Condition	Dry	Wet	Other	Total
Day	3	0	0	3
Dark	1	0	0	1
Other	0	0	0	0
Total	4	0	0	4

Object Struck Summary

Object Type	Times Struck	Percent of Total
ANIMAL	1	100.00

Vehicle Type Summary

Vehicle Type	Number Involved	Percent of Total
MOTORCYCLE	1	12.50
PASSENGER CAR	5	62.50
SINGLE UNIT TRUCK (2-AXLE, 6-TIRE)	1	12.50
SPORT UTILITY	1	12.50

North Carolina Department of Transportation
Traffic Engineering Accident Analysis System
Intersection Analysis Report

Yearly Totals Summary

Accident Totals

Year	Total Accidents	Fatal Accidents	Injury Accidents	Property Damage Only Accidents
2019	1	0	0	1
2020	0	0	0	0
2021	3	0	1	2
2022	0	0	0	0
Total	4	0	1	3

Injury Totals

Year	Fatal Injuries	Class A, B, or C Injuries
2019	0	0
2020	0	0
2021	0	1
2022	0	0
Total	0	1

Miscellaneous Totals

Year	Property Damage	EPDO Index
2019	\$ 19000	1.00
2020	\$ 0	0.00
2021	\$ 14900	10.40
2022	\$ 0	0.00
Total	\$ 33900	11.40

Type of Accident Totals

Year	Left Turn	Right Turn	Rear End	Run Off Road &			
				Fixed Object	Angle	Side Swipe	Other
2019	0	0	1	0	0	0	0
2020	0	0	0	0	0	0	0
2021	0	0	2	0	0	0	1
2022	0	0	0	0	0	0	0
Total	0	0	3	0	0	0	1

**North Carolina Department of Transportation
Traffic Engineering Accident Analysis System
Intersection Analysis Report**

Summary Statistics

High Level Crash Summary

Crash Type	Number of Crashes	Percent of Total
Total Crashes	5	100.00
Fatal Crashes	0	0.00
Non-Fatal Injury Crashes	2	40.00
Total Injury Crashes	2	40.00
Property Damage Only Crashes	3	60.00
Night Crashes	1	20.00
Wet Crashes	0	0.00
Alcohol/Drugs Involvement Crashes	0	0.00

Crash Severity Summary

Crash Type	Number of Crashes	Percent of Total
Total Crashes	5	100.00
Fatal Crashes	0	0.00
Class A Crashes	0	0.00
Class B Crashes	1	20.00
Class C Crashes	1	20.00
Property Damage Only Crashes	3	60.00

Vehicle Exposure Statistics

Annual ADT = 19300

Total Vehicle Exposure = 21.15 (MEV)

Crash Rate	Crashes Per 100 Million Vehicles Entered
Total Crash Rate	23.64
Fatal Crash Rate	0.00
Non Fatal Crash Rate	9.46
Night Crash Rate	4.73
Wet Crash Rate	0.00
EPDO Rate	93.60

**North Carolina Department of Transportation
Traffic Engineering Accident Analysis System
Intersection Analysis Report**

Miscellaneous Statistics

Severity Index = 3.96
EPDO Crash Index = 19.80
Estimated Property Damage Total = \$ 35800.00

Accident Type Summary

Accident Type	Number of Crashes	Percent of Total
ANGLE	1	20.00
HEAD ON	1	20.00
LEFT TURN, DIFFERENT ROADWAYS	2	40.00
REAR END, SLOW OR STOP	1	20.00

Injury Summary

Injury Type	Number of Injuries	Percent of Total
Fatal Injuries	0	0.00
Class A Injuries	0	0.00
Class B Injuries	1	50.00
Class C Injuries	1	50.00
Total Non-Fatal Injuries	2	100.00
Total Injuries	2	100.00

**North Carolina Department of Transportation
Traffic Engineering Accident Analysis System
Intersection Analysis Report**

Monthly Summary

Month	Number of Crashes	Percent of Total
Jan	0	0.00
Feb	0	0.00
Mar	1	20.00
Apr	0	0.00
May	1	20.00
Jun	0	0.00
Jul	0	0.00
Aug	1	20.00
Sep	0	0.00
Oct	0	0.00
Nov	1	20.00
Dec	1	20.00

Daily Summary

Day	Number of Crashes	Percent of Total
Mon	0	0.00
Tue	1	20.00
Wed	1	20.00
Thu	1	20.00
Fri	1	20.00
Sat	0	0.00
Sun	1	20.00

**North Carolina Department of Transportation
Traffic Engineering Accident Analysis System
Intersection Analysis Report**

Hourly Summary

Hour	Number of Crashes	Percent of Total
0000-0059	0	0.00
0100-0159	0	0.00
0200-0259	0	0.00
0300-0359	0	0.00
0400-0459	0	0.00
0500-0559	0	0.00
0600-0659	0	0.00
0700-0759	1	20.00
0800-0859	1	20.00
0900-0959	0	0.00
1000-1059	0	0.00
1100-1159	0	0.00
1200-1259	1	20.00
1300-1359	0	0.00
1400-1459	0	0.00
1500-1559	1	20.00
1600-1659	0	0.00
1700-1759	1	20.00
1800-1859	0	0.00
1900-1959	0	0.00
2000-2059	0	0.00
2100-2159	0	0.00
2200-2259	0	0.00
2300-2359	0	0.00

**North Carolina Department of Transportation
Traffic Engineering Accident Analysis System
Intersection Analysis Report**

Light and Road Conditions Summary

Condition	Dry	Wet	Other	Total
Day	3	0	0	3
Dark	1	0	0	1
Other	1	0	0	1
Total	5	0	0	5

Vehicle Type Summary

Vehicle Type	Number Involved	Percent of Total
PASSENGER CAR	7	70.00
PICKUP	1	10.00
SPORT UTILITY	2	20.00

North Carolina Department of Transportation
Traffic Engineering Accident Analysis System
Intersection Analysis Report

Yearly Totals Summary

Accident Totals

Year	Total Accidents	Fatal Accidents	Injury Accidents	Property Damage Only Accidents
2019	1	0	0	1
2020	1	0	1	0
2021	3	0	1	2
2022	0	0	0	0
Total	5	0	2	3

Injury Totals

Year	Fatal Injuries	Class A, B, or C Injuries
2019	0	0
2020	0	1
2021	0	1
2022	0	0
Total	0	2

Miscellaneous Totals

Year	Property Damage	EPDO Index
2019	\$ 18000	1.00
2020	\$ 9400	8.40
2021	\$ 8400	10.40
2022	\$ 0	0.00
Total	\$ 35800	19.80

Type of Accident Totals

Year	Left Turn	Right Turn	Rear End	Run Off Road &			
				Fixed Object	Angle	Side Swipe	Other
2019	0	0	0	0	1	0	0
2020	0	0	0	0	0	0	1
2021	2	0	1	0	0	0	0
2022	0	0	0	0	0	0	0
Total	2	0	1	0	1	0	1

**North Carolina Department of Transportation
Traffic Engineering Accident Analysis System
Intersection Analysis Report**

Acc No	Crash ID	Date	Accident Type	Total Damage	Injuries				Condition			Road		Trfc Ctl	
					F	A	B	C	R	L	W	Ch	Ci	Dv	Op
8	106784099	10/22/2021 15:36	REAR END, SLOW OR STOP	\$ 4000	0	0	0	0	1	1	1	1	0	0	
Unit	1 : 1	Alchl/Drgs: 0	Speed: 20 MPH Dir: N	Veh Mnvr / Ped Actn: 4	Obj Strk:										
Unit	2 : 1	Alchl/Drgs: 0	Speed: 10 MPH Dir: N	Veh Mnvr / Ped Actn: 11	Obj Strk:										
Unit	3 : 5	Alchl/Drgs: 0	Speed: 5 MPH Dir: N	Veh Mnvr / Ped Actn: 11	Obj Strk:										

9	106812287	12/16/2021 12:43	ANGLE	\$ 5400	0	0	0	0	1	1	1	1	0	3	1
Unit	1 : 2	Alchl/Drgs: 0	Speed: 10 MPH Dir: W	Veh Mnvr / Ped Actn: 8	Obj Strk:										
Unit	2 : 1	Alchl/Drgs: 0	Speed: 35 MPH Dir: S	Veh Mnvr / Ped Actn: 4	Obj Strk:										

10	106887275	03/08/2022 08:52	REAR END, SLOW OR STOP	\$ 3500	0	0	0	0	1	1	1	1	0	0	
Unit	1 : 1	Alchl/Drgs: 7	Speed: 5 MPH Dir: N	Veh Mnvr / Ped Actn: 4	Obj Strk:										
Unit	2 : 1	Alchl/Drgs: 0	Speed: 5 MPH Dir: N	Veh Mnvr / Ped Actn: 4	Obj Strk:										
Unit	3 : 1	Alchl/Drgs: 0	Speed: 0 MPH Dir: N	Veh Mnvr / Ped Actn: 4	Obj Strk:										

Legend for Report Details:
 Acc No - Accident Number
 Injuries: F - Fatal, A - Class A, B - Class B, C - Class C
 Condition: R - Road Surface, L - Ambient Light, W - Weather
 Rd Ch - Road Character
 Rd Ci - Roadway Contributing Circumstances
 Trfc Ctl - Traffic Control: Dv - Device, Op - Operating
 Alchl/Drgs - Alcohol Drugs Suspected
 Veh Mnvr/Ped Actn - Vehicle Maneuver/Pedestrian Action
 Obj Strk - Object Struck

**North Carolina Department of Transportation
Traffic Engineering Accident Analysis System
Intersection Analysis Report**

Summary Statistics

High Level Crash Summary

Crash Type	Number of Crashes	Percent of Total
Total Crashes	10	100.00
Fatal Crashes	0	0.00
Non-Fatal Injury Crashes	1	10.00
Total Injury Crashes	1	10.00
Property Damage Only Crashes	9	90.00
Night Crashes	3	30.00
Wet Crashes	0	0.00
Alcohol/Drugs Involvement Crashes	2	20.00

Crash Severity Summary

Crash Type	Number of Crashes	Percent of Total
Total Crashes	10	100.00
Fatal Crashes	0	0.00
Class A Crashes	0	0.00
Class B Crashes	0	0.00
Class C Crashes	1	10.00
Property Damage Only Crashes	9	90.00

Vehicle Exposure Statistics

Annual ADT = 18500

Total Vehicle Exposure = 20.28 (MEV)

Crash Rate	Crashes Per 100 Million Vehicles Entered
Total Crash Rate	49.32
Fatal Crash Rate	0.00
Non Fatal Crash Rate	4.93
Night Crash Rate	14.80
Wet Crash Rate	0.00
EPDO Rate	85.82

**North Carolina Department of Transportation
Traffic Engineering Accident Analysis System
Intersection Analysis Report**

Miscellaneous Statistics

Severity Index =	1.74
EPDO Crash Index =	17.40
Estimated Property Damage Total = \$	34400.00

Accident Type Summary

Accident Type	Number of Crashes	Percent of Total
ANGLE	1	10.00
HEAD ON	1	10.00
LEFT TURN, DIFFERENT ROADWAYS	1	10.00
REAR END, SLOW OR STOP	6	60.00
SIDESWIPE, SAME DIRECTION	1	10.00

Injury Summary

Injury Type	Number of Injuries	Percent of Total
Fatal Injuries	0	0.00
Class A Injuries	0	0.00
Class B Injuries	0	0.00
Class C Injuries	1	100.00
Total Non-Fatal Injuries	1	100.00
Total Injuries	1	100.00

**North Carolina Department of Transportation
Traffic Engineering Accident Analysis System
Intersection Analysis Report**

Monthly Summary

Month	Number of Crashes	Percent of Total
Jan	0	0.00
Feb	1	10.00
Mar	2	20.00
Apr	0	0.00
May	1	10.00
Jun	0	0.00
Jul	2	20.00
Aug	0	0.00
Sep	0	0.00
Oct	2	20.00
Nov	1	10.00
Dec	1	10.00

Daily Summary

Day	Number of Crashes	Percent of Total
Mon	1	10.00
Tue	2	20.00
Wed	1	10.00
Thu	2	20.00
Fri	2	20.00
Sat	2	20.00
Sun	0	0.00

**North Carolina Department of Transportation
Traffic Engineering Accident Analysis System
Intersection Analysis Report**

Hourly Summary

Hour	Number of Crashes	Percent of Total
0000-0059	0	0.00
0100-0159	0	0.00
0200-0259	0	0.00
0300-0359	0	0.00
0400-0459	0	0.00
0500-0559	0	0.00
0600-0659	0	0.00
0700-0759	0	0.00
0800-0859	1	10.00
0900-0959	0	0.00
1000-1059	0	0.00
1100-1159	0	0.00
1200-1259	1	10.00
1300-1359	1	10.00
1400-1459	1	10.00
1500-1559	2	20.00
1600-1659	0	0.00
1700-1759	2	20.00
1800-1859	1	10.00
1900-1959	1	10.00
2000-2059	0	0.00
2100-2159	0	0.00
2200-2259	0	0.00
2300-2359	0	0.00

**North Carolina Department of Transportation
Traffic Engineering Accident Analysis System
Intersection Analysis Report**

Light and Road Conditions Summary

Condition	Dry	Wet	Other	Total
Day	7	0	0	7
Dark	3	0	0	3
Other	0	0	0	0
Total	10	0	0	10

Vehicle Type Summary

Vehicle Type	Number Involved	Percent of Total
PASSENGER CAR	8	34.78
PICKUP	5	21.74
SPORT UTILITY	8	34.78
VAN	2	8.70

**North Carolina Department of Transportation
Traffic Engineering Accident Analysis System
Intersection Analysis Report**

Yearly Totals Summary

Accident Totals

Year	Total Accidents	Fatal Accidents	Injury Accidents	Property Damage Only Accidents
2019	1	0	0	1
2020	2	0	0	2
2021	6	0	1	5
2022	1	0	0	1
Total	10	0	1	9

Injury Totals

Year	Fatal Injuries	Class A, B, or C Injuries
2019	0	0
2020	0	0
2021	0	1
2022	0	0
Total	0	1

Miscellaneous Totals

Year	Property Damage	EPDO Index
2019	\$ 3200	1.00
2020	\$ 5200	2.00
2021	\$ 22500	13.40
2022	\$ 3500	1.00
Total	\$ 34400	17.40

Type of Accident Totals

Year	Left Turn	Right Turn	Rear End	Run Off Road &			
				Fixed Object	Angle	Side Swipe	Other
2019	0	0	1	0	0	0	0
2020	1	0	0	0	0	0	1
2021	0	0	4	0	1	1	0
2022	0	0	1	0	0	0	0
Total	1	0	6	0	1	1	1

**North Carolina Department of Transportation
Traffic Engineering Accident Analysis System
Intersection Analysis Report**

Acc No	Crash ID	Date	Accident Type	Total Damage	Injuries				Condition			Road		Trfc Ctl	
					F	A	B	C	R	L	W	Ch	Ci	Dv	Op
Unit	2 : 4	Alch/Drgs: 0	Speed: 0 MPH Dir: N	Veh Mnvr / Ped Actn:				1	Obj Strk:						
9	106310460	08/17/2020 16:14	REAR END, SLOW OR STOP	\$ 1500	0	0	0	0	1	1	1	1	0	3	1
Unit	1 : 4	Alch/Drgs: 0	Speed: 5 MPH Dir: W	Veh Mnvr / Ped Actn:				4	Obj Strk:						
Unit	2 : 4	Alch/Drgs: 0	Speed: 0 MPH Dir: W	Veh Mnvr / Ped Actn:				11	Obj Strk:						
10	106312680	08/19/2020 08:57	ANGLE	\$ 7800	0	0	0	0	1	1	1	1	0	3	1
Unit	1 : 2	Alch/Drgs: 0	Speed: 35 MPH Dir: SW	Veh Mnvr / Ped Actn:				4	Obj Strk:						
Unit	2 : 2	Alch/Drgs: 0	Speed: 35 MPH Dir: SE	Veh Mnvr / Ped Actn:				4	Obj Strk:						
11	106312681	08/20/2020 09:16	REAR END, SLOW OR STOP	\$ 2100	0	0	0	0	1	1	1	1	0	3	1
Unit	1 : 2	Alch/Drgs: 7	Speed: 25 MPH Dir: NW	Veh Mnvr / Ped Actn:				4	Obj Strk:						
Unit	2 : 1	Alch/Drgs: 0	Speed: 0 MPH Dir: NW	Veh Mnvr / Ped Actn:				1	Obj Strk:						
12	106413119	11/23/2020 09:39	ANGLE	\$ 3000	0	0	0	0	1	1	1	1	0	3	1
Unit	1 : 1	Alch/Drgs: 0	Speed: 5 MPH Dir: N	Veh Mnvr / Ped Actn:				7	Obj Strk:						
Unit	2 : 1	Alch/Drgs: 0	Speed: 25 MPH Dir: E	Veh Mnvr / Ped Actn:				4	Obj Strk:						
13	106827974	01/06/2022 18:08	ANGLE	\$ 12500	0	0	0	0	1	2	1	1	0	3	1
Unit	1 : 4	Alch/Drgs: 0	Speed: 20 MPH Dir: S	Veh Mnvr / Ped Actn:				4	Obj Strk:						
Unit	2 : 1	Alch/Drgs: 0	Speed: 15 MPH Dir: W	Veh Mnvr / Ped Actn:				4	Obj Strk:						
14	106841421	01/22/2022 10:10	RAN OFF ROAD - RIGHT	\$ 3000	0	0	0	0	4	1	1	1	1	3	1
Unit	1 : 1	Alch/Drgs: 0	Speed: 15 MPH Dir: S	Veh Mnvr / Ped Actn:				8	Obj Strk:						

Legend for Report Details:
 Acc No - Accident Number
 Injuries: F - Fatal, A - Class A, B - Class B, C - Class C
 Condition: R - Road Surface, L - Ambient Light, W - Weather
 Rd Ch - Road Character
 Rd Ci - Roadway Contributing Circumstances
 Trfc Ctl - Traffic Control: Dv - Device, Op - Operating
 Alch/Drgs - Alcohol Drugs Suspected
 Veh Mnvr/Ped Actn - Vehicle Maneuver/Pedestrian Action
 Obj Strk - Object Struck

**North Carolina Department of Transportation
Traffic Engineering Accident Analysis System
Intersection Analysis Report**

Summary Statistics

High Level Crash Summary

Crash Type	Number of Crashes	Percent of Total
Total Crashes	14	100.00
Fatal Crashes	0	0.00
Non-Fatal Injury Crashes	0	0.00
Total Injury Crashes	0	0.00
Property Damage Only Crashes	14	100.00
Night Crashes	0	0.00
Wet Crashes	1	7.14
Alcohol/Drugs Involvement Crashes	0	0.00

Crash Severity Summary

Crash Type	Number of Crashes	Percent of Total
Total Crashes	14	100.00
Fatal Crashes	0	0.00
Class A Crashes	0	0.00
Class B Crashes	0	0.00
Class C Crashes	0	0.00
Property Damage Only Crashes	14	100.00

Vehicle Exposure Statistics

Annual ADT = 24100

Total Vehicle Exposure = 26.41 (MEV)

Crash Rate	Crashes Per 100 Million Vehicles Entered
Total Crash Rate	53.00
Fatal Crash Rate	0.00
Non Fatal Crash Rate	0.00
Night Crash Rate	0.00
Wet Crash Rate	3.79
EPDO Rate	53.00

**North Carolina Department of Transportation
Traffic Engineering Accident Analysis System
Intersection Analysis Report**

Miscellaneous Statistics

Severity Index =	1.00
EPDO Crash Index =	14.00
Estimated Property Damage Total = \$	62800.00

Accident Type Summary

Accident Type	Number of Crashes	Percent of Total
ANGLE	4	28.57
LEFT TURN, DIFFERENT ROADWAYS	1	7.14
OTHER NON-COLLISION	1	7.14
RAN OFF ROAD - RIGHT	1	7.14
REAR END, SLOW OR STOP	7	50.00

Injury Summary

Injury Type	Number of Injuries	Percent of Total
Fatal Injuries	0	0.00
Class A Injuries	0	0.00
Class B Injuries	0	0.00
Class C Injuries	0	0.00
Total Non-Fatal Injuries	0	0.00
Total Injuries	0	0.00

**North Carolina Department of Transportation
Traffic Engineering Accident Analysis System
Intersection Analysis Report**

Monthly Summary

Month	Number of Crashes	Percent of Total
Jan	2	14.29
Feb	0	0.00
Mar	0	0.00
Apr	0	0.00
May	1	7.14
Jun	1	7.14
Jul	4	28.57
Aug	4	28.57
Sep	1	7.14
Oct	0	0.00
Nov	1	7.14
Dec	0	0.00

Daily Summary

Day	Number of Crashes	Percent of Total
Mon	4	28.57
Tue	3	21.43
Wed	3	21.43
Thu	2	14.29
Fri	0	0.00
Sat	2	14.29
Sun	0	0.00

**North Carolina Department of Transportation
Traffic Engineering Accident Analysis System
Intersection Analysis Report**

Hourly Summary

Hour	Number of Crashes	Percent of Total
0000-0059	0	0.00
0100-0159	0	0.00
0200-0259	0	0.00
0300-0359	0	0.00
0400-0459	0	0.00
0500-0559	0	0.00
0600-0659	0	0.00
0700-0759	1	7.14
0800-0859	3	21.43
0900-0959	2	14.29
1000-1059	1	7.14
1100-1159	0	0.00
1200-1259	1	7.14
1300-1359	1	7.14
1400-1459	0	0.00
1500-1559	1	7.14
1600-1659	1	7.14
1700-1759	0	0.00
1800-1859	2	14.29
1900-1959	0	0.00
2000-2059	1	7.14
2100-2159	0	0.00
2200-2259	0	0.00
2300-2359	0	0.00

**North Carolina Department of Transportation
Traffic Engineering Accident Analysis System
Intersection Analysis Report**

Light and Road Conditions Summary

Condition	Dry	Wet	Other	Total
Day	11	0	1	12
Dark	0	0	0	0
Other	1	1	0	2
Total	12	1	1	14

Vehicle Type Summary

Vehicle Type	Number Involved	Percent of Total
PASSENGER CAR	12	44.44
PICKUP	7	25.93
SINGLE UNIT TRUCK (3 OR MORE AXLES)	1	3.70
SPORT UTILITY	6	22.22
UNKNOWN	1	3.70

**North Carolina Department of Transportation
Traffic Engineering Accident Analysis System
Intersection Analysis Report**

Yearly Totals Summary

Accident Totals

Year	Total Accidents	Fatal Accidents	Injury Accidents	Property Damage Only Accidents
2019	6	0	0	6
2020	6	0	0	6
2021	0	0	0	0
2022	2	0	0	2
Total	14	0	0	14

Injury Totals

Year	Fatal Injuries	Class A, B, or C Injuries
2019	0	0
2020	0	0
2021	0	0
2022	0	0
Total	0	0

Miscellaneous Totals

Year	Property Damage	EPDO Index
2019	\$ 12900	6.00
2020	\$ 34400	6.00
2021	\$ 0	0.00
2022	\$ 15500	2.00
Total	\$ 62800	14.00

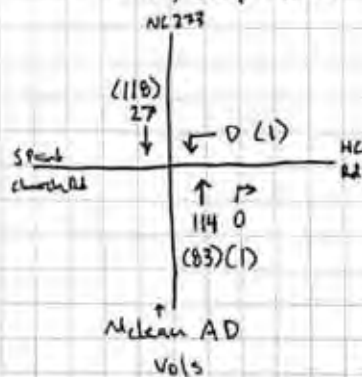
Type of Accident Totals

Year	Left Turn	Right Turn	Rear End	Run Off Road &			
				Fixed Object	Angle	Side Swipe	Other
2019	0	0	4	0	1	0	1
2020	1	0	3	0	2	0	0
2021	0	0	0	0	0	0	0
2022	0	0	0	1	1	0	0
Total	1	0	7	1	4	0	1

Signal Warrant Analysis

McLean AD:

→ use % of site trips assigned at S Point Road (NK 273) and S Point Church Road / Henry Chapel Road to determine % of trips for SWA.



→ 50% build-out factor, so take 50% of total ~~hour~~ Peak hour trips.

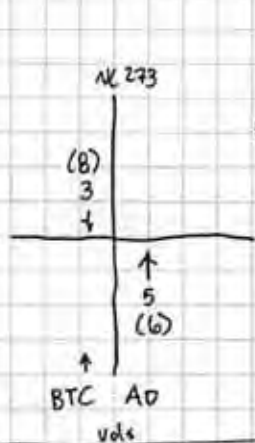
AM		PM	
in	out	in	out
235	529	742	551
$\frac{1}{2} \cdot 118$	265	371	276
$\frac{27}{118}$	$\frac{114}{265}$	$\frac{114}{371}$	$\frac{84}{276}$
= .23	.43	.32	.30

Average → $\frac{(.23 + .43 + .32 + .30)}{4} = 32\%$

Belmont Town Center AD:

→ same method used for McLean

→ 90% build-out factor, so 10% of peak hour trips

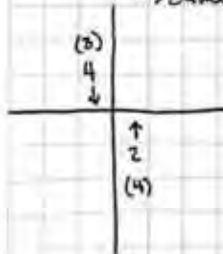


AM		PM	
in	out	in	out
287	223	319	352
$\frac{1}{10} \cdot 287$	22	32	35
$\frac{5}{29}$	$\frac{3}{22}$	$\frac{6}{32}$	$\frac{8}{35}$
= .17	.14	.19	.23

Average → $\frac{(.17 + .14 + .19 + .23)}{4} = 18\%$

South Fork AD (Phase 1):

→ same method outlined above.



AM		PM	
in	out	in	out
39	78	87	55
$\frac{2}{39}$	$\frac{4}{78}$	$\frac{4}{87}$	$\frac{3}{55}$
= 5%	3%	.05	.05
.05	.05	.05	.05

Average → 5%

Existing Traffic Counts

	Existing Traffic Counts																								
	S Point Road (NC 273)				S Point Road (NC 273)				S Point Church Road				Henry Chapel Road												
	NORTHBOUND		SOUTHBOUND		EASTBOUND		WESTBOUND		NORTHBOUND		SOUTHBOUND		EASTBOUND		WESTBOUND										
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	
6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15 AM	0	79	0	0	50	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:30 AM	0	137	0	0	85	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45 AM	0	137	0	0	82	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:00 AM	0	163	0	0	49	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	164	0	0	75	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	164	1	2	75	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0
7:45 AM	0	139	0	0	75	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	1	142	0	2	78	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	2	188	0	2	80	6	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
8:30 AM	5	104	1	1	87	9	13	7	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	106	1	3	78	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:00 AM	0	111	0	0	80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	84	2	1	61	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	77	0	3	70	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 AM	0	87	1	5	98	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00 AM	0	90	1	4	64	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15 AM	0	97	0	0	60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30 AM	0	63	1	2	59	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45 AM	0	78	1	2	51	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00 AM	0	89	3	2	88	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 AM	3	78	0	5	66	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	1	113	0	6	63	3	17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	0	81	0	6	73	2	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00 PM	0	95	2	5	90	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 PM	0	79	0	3	93	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 PM	0	79	0	4	85	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 PM	0	89	0	2	88	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:00 PM	0	83	0	6	88	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:15 PM	1	64	1	3	80	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:30 PM	0	62	0	2	73	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45 PM	0	88	0	6	76	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00 PM	0	81	1	2	80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15 PM	0	81	1	2	80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:30 PM	1	78	1	7	104	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45 PM	0	80	1	3	102	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 PM	0	87	2	4	84	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	86	2	3	106	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	87	1	3	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	71	1	9	129	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	1	84	0	0	144	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	112	0	9	145	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	115	2	10	138	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	145	0	4	101	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	118	0	6	166	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	121	0	4	151	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	140	1	5	148	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	141	0	5	153	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00 PM	1	108	4	5	151	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15 PM	0	113	0	9	116	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:30 PM	1	102	0	5	102	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45 PM	0	106	0	6	85	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Existing Hourly Volumes

	Existing Hourly Volumes																							
	S Point Road (NC 273)				S Point Road (NC 273)				S Point Church Road				Henry Chapel Road											
	NORTHBOUND		SOUTHBOUND		EASTBOUND		WESTBOUND		NORTHBOUND		SOUTHBOUND		EASTBOUND		WESTBOUND									
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:00 AM	1	418	0	2	212	2	2	0	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	8	488	1	7	274	5	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0
9:00 AM	8	430	2	8	323	16	16	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00 AM	4	336	0	14	269	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00 AM	4	308	3	9	231	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00 PM	4	341	4	19	282	18	26	0	0															

Development	Land Use	LUC	Daily Trips/2 (from TIA)	AD % Factor
McLean	Single-Family Detached	210	3562	0.5
	Single-Family Attached	215	262	0.5
	Shopping Center	820	4775	0.5

210 - Single-Family Homes					
	In (%)	Out (%)	In (K)	Out (K)	
1	6:00 AM - 7:00 AM	0.02	0.06	1.58	5.84
2	7:00 AM - 8:00 AM	0.03	0.10	3.07	9.97
3	8:00 AM - 9:00 AM	0.04	0.09	3.77	8.52
4	9:00 AM - 10:00 AM	0.03	0.06	3.35	5.77
5	10:00 AM - 11:00 AM	0.04	0.06	4.21	5.57
6	11:00 AM - 12:00 PM	0.05	0.05	5.42	5.10
7	12:00 PM - 1:00 PM	0.06	0.06	5.74	5.68
8	1:00 PM - 2:00 PM	0.06	0.06	6.12	6.01
9	2:00 PM - 3:00 PM	0.07	0.06	7.12	6.12
10	3:00 PM - 4:00 PM	0.09	0.06	8.70	6.24
11	4:00 PM - 5:00 PM	0.11	0.07	10.52	7.30
12	5:00 PM - 6:00 PM	0.10	0.07	10.02	7.31
13	6:00 PM - 7:00 PM	0.09	0.06	8.53	5.86

215 - Townhomes					
	In (%)	Out (%)	In (K)	Out (K)	
1	6:00 AM - 7:00 AM	0.01	0.06	1.07	5.85
2	7:00 AM - 8:00 AM	0.03	0.13	2.66	13.18
3	8:00 AM - 9:00 AM	0.04	0.09	3.82	9.31
4	9:00 AM - 10:00 AM	0.04	0.07	3.73	6.92
5	10:00 AM - 11:00 AM	0.04	0.04	4.01	4.28
6	11:00 AM - 12:00 PM	0.05	0.06	4.84	5.67
7	12:00 PM - 1:00 PM	0.05	0.05	5.43	5.06
8	1:00 PM - 2:00 PM	0.05	0.05	4.54	4.78
9	2:00 PM - 3:00 PM	0.06	0.06	5.54	6.03
10	3:00 PM - 4:00 PM	0.08	0.05	8.19	4.80
11	4:00 PM - 5:00 PM	0.10	0.05	9.79	5.14
12	5:00 PM - 6:00 PM	0.12	0.07	12.11	6.81
13	6:00 PM - 7:00 PM	0.10	0.07	9.77	6.56

820 - Commercial					
	In (%)	Out (%)	In (K)	Out (K)	
1	6:00 AM - 7:00 AM	0.01	0.00	0.86	0.48
2	7:00 AM - 8:00 AM	0.02	0.01	1.95	1.25
3	8:00 AM - 9:00 AM	0.03	0.02	2.95	1.94
4	9:00 AM - 10:00 AM	0.05	0.03	4.95	3.16
5	10:00 AM - 11:00 AM	0.07	0.05	7.00	5.27
6	11:00 AM - 12:00 PM	0.08	0.07	8.47	7.29
7	12:00 PM - 1:00 PM	0.10	0.09	9.63	8.86
8	1:00 PM - 2:00 PM	0.09	0.09	8.69	9.90
9	2:00 PM - 3:00 PM	0.08	0.09	7.82	8.62
10	3:00 PM - 4:00 PM	0.08	0.08	8.07	8.46
11	4:00 PM - 5:00 PM	0.09	0.09	8.57	8.74
12	5:00 PM - 6:00 PM	0.09	0.09	8.75	8.88
13	6:00 PM - 7:00 PM	0.08	0.08	7.69	7.81

S Point Road (NC 273) and Henry Chapel Road/S Point Church Road												
McLean												
Inbound %	Northbound			Southbound			Eastbound			Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
0%	3%	0%	0%	32%	0%	0%	0%	0%	0%	0%	0%	0%
0%	32%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

215 - Townhomes												
	S Point Road (NC 273)			S Point Road (NC 273)			S Point Church Road			Henry Chapel Road		
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND		
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
6:00 AM	7:00 AM	0	3	0	1	0	0	0	0	0	0	0
7:00 AM	8:00 AM	0	7	0	1	0	0	0	0	0	0	0
8:00 AM	9:00 AM	0	5	0	2	0	0	0	0	0	0	0
9:00 AM	10:00 AM	0	4	0	2	0	0	0	0	0	0	0
10:00 AM	11:00 AM	0	2	0	2	0	0	0	0	0	0	0
11:00 AM	12:00 PM	0	3	0	2	0	0	0	0	0	0	0
12:00 PM	1:00 PM	0	3	0	3	0	0	0	0	0	0	0
1:00 PM	2:00 PM	0	2	0	2	0	0	0	0	0	0	0
2:00 PM	3:00 PM	0	3	0	3	0	0	0	0	0	0	0
3:00 PM	4:00 PM	0	2	0	4	0	0	0	0	0	0	0
4:00 PM	5:00 PM	0	3	0	5	0	0	0	0	0	0	0
5:00 PM	6:00 PM	0	4	0	6	0	0	0	0	0	0	0
6:00 PM	7:00 PM	0	3	0	5	0	0	0	0	0	0	0

820 - Commercial												
	S Point Road (NC 273)			S Point Road (NC 273)			S Point Church Road			Henry Chapel Road		
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND		
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
6:00 AM	7:00 AM	0	4	0	7	0	0	0	0	0	0	0
7:00 AM	8:00 AM	0	10	0	10	0	0	0	0	0	0	0
8:00 AM	9:00 AM	0	14	0	23	0	0	0	0	0	0	0
9:00 AM	10:00 AM	0	24	0	38	0	0	0	0	0	0	0
10:00 AM	11:00 AM	0	40	0	53	0	0	0	0	0	0	0
11:00 AM	12:00 PM	0	56	0	65	0	0	0	0	0	0	0
12:00 PM	1:00 PM	0	68	0	74	0	0	0	0	0	0	0
1:00 PM	2:00 PM	0	69	0	66	0	0	0	0	0	0	0
2:00 PM	3:00 PM	0	66	0	60	0	0	0	0	0	0	0
3:00 PM	4:00 PM	0	85	0	82	0	0	0	0	0	0	0
4:00 PM	5:00 PM	0	87	0	85	0	0	0	0	0	0	0
5:00 PM	6:00 PM	0	68	0	67	0	0	0	0	0	0	0
6:00 PM	7:00 PM	0	60	0	59	0	0	0	0	0	0	0

2023 Background Hourly Volumes												
	S Point Road (NC 273)			S Point Road (NC 273)			S Point Church Road			Henry Chapel Road		
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND		
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
6:00 AM	7:00 AM	1	470	0	2	239	2	2	0	1	2	0
7:00 AM	8:00 AM	0	781	1	7	322	5	0	0	1	3	0
8:00 AM	9:00 AM	8	533	2	8	385	16	16	0	8	0	0
9:00 AM	10:00 AM	0	410	3	14	319	0	0	0	0	1	0
10:00 AM	11:00 AM	0	394	3	9	320	2	1	1	0	4	1
11:00 AM	12:00 PM	4	442	4	18	391	18	25	0	4	3	0
12:00 PM	1:00 PM	0	452	4	19	449	1	0	0	1	3	0
1:00 PM	2:00 PM	1	446	2	17	434	1	2	0	1	4	0
2:00 PM	3:00 PM	1	440	4	23	506	0	1	0	0	2	0
3:00 PM	4:00 PM	0	442	5	25	615	0	0	0	0	7	0
4:00 PM	5:00 PM	1	607	7	31	728	2	2	0	1	4	0
5:00 PM	6:00 PM	0	662	1	27	761	2	0	0	0	2	0
6:00 PM	7:00 PM	1	544	5	26	583	1	0	0	0	3	0

2024 Background Hourly Volumes												
	S Point Road (NC 273)			S Point Road (NC 273)			S Point Church Road			Henry Chapel Road		
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND		
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
6:00 AM	7:00 AM	1	481	0	2	245	2	2	0	1	2	0
7:00 AM	8:00 AM	0	799	1	7	329	5	0	0	1	3	0
8:00 AM	9:00 AM	8	545	2	8	393	17	17	0	8	0	0
9:00 AM	10:00 AM	0	419	3	15	326	0	0	0	0	1	0
10:00 AM	11:00 AM	0	402	3	9	326	2	1	1	0	4	1
11:00 AM	12:00 PM	4	450	4	20	398	19	25	0	4	3	0
12:00 PM	1:00 PM	0	452	4	19	449	1	0	0	1	3	0
1:00 PM	2:00 PM	1	455	2	18	442	1	2	0	1	4	0
2:00 PM	3:00 PM	1	448	4	23	516	0	1	0	0	2	0
3:00 PM	4:00 PM	0	450	5	25	627	0	0	0	0	7	0
4:00 PM	5:00 PM	1	619	7	32	743	2	2	0	1	4	0
5:00 PM	6:00 PM	0	678	1	27	772	2	0	0	0	2	0
6:00 PM	7:00 PM	1	555	5	26	595	1	0	0	0	3	0

2025 Background Hourly Volumes												
	S Point Road (NC 273)			S Point Road (NC 273)			S Point Church Road			Henry Chapel Road		
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND		
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
6:00 AM	7:00 AM	1	492	0	2	250	2	2	0	1	2	0
7:00 AM	8:00 AM	0	817	1	8	336	5	0	0	1	3	0
8:00 AM	9:00 AM	9	557	2	9	402	17	17	0	9	0	0
9:00 AM	10:00 AM	0	428	3	15	332	0	0	0	0	1	0
10:00 AM	11:00 AM	0	410	3	10	332	2	1	1	0	4	1
11:00 AM	12:00 PM	4	459	4	20	406	19	26	0	4	3	0
12:00 PM	1:00 PM	0	470	4	20	487	1	0	0	1	3	0
1:00 PM	2:00 PM	1	463	2	18	450	1	2	0	1	4	0
2:00 PM	3:00 PM	1	457	4	24	526	0	1	0	0	2	0
3:00 PM	4:00 PM	0	450	5	26	640	0	0	0	0	8	0
4:00 PM	5:00 PM	1	631	8	32	758	2	2	0	1	4	0
5:00 PM	6:00 PM	0	690	1	28	793	2	0	0	0	2	0
6:00 PM	7:00 PM	1	566	5	27	607	1	0	0	0	3	0

2026 Background Hourly Volumes												
	S Point Road (NC 273)			S Point Road (NC 273)			S Point Church Road			Henry Chapel Road		
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND		
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
6:00 AM	7:00 AM	1	503	0	2	256	2	2	0	1	2	0
7:00 AM	8:00 AM	0	835	1	8	343	5	0	0	1	3	0
8:00 AM	9:00 AM	9	569	2	9	411	19	19	0	9	0	0
9:00 AM	10:00 AM	0	437	3	15	339	0	0	0	0	1	0
10:00 AM	11:00 AM	0	418	3	10	338	2	1	1	0	4	1
11:00 AM	12:00 PM	4	468	4	21	413	20	26	0	4	3	0
12:00 PM	1:00 PM	0	479	4	21	496	1	0	0	1	3	0
1:00 PM	2:00 PM	1	472	2	1							

Development	Land Use	LUC	Daily Trips/2 (from TIA)	AD % Factor
Smith Farm	Single-Family Homes	210	110	1
	Townhomes	215	192	1

210 - Single-Family Homes							
	In (%)	Out (%)	In (K)	Out (K)			
1	6:00 AM - 7:00 AM	0.02	0.06	1.56	5.84		
2	7:00 AM - 8:00 AM	0.03	0.10	3.07	9.97		
3	8:00 AM - 9:00 AM	0.04	0.09	3.77	8.52		
4	9:00 AM - 10:00 AM	0.03	0.06	3.35	5.77		
5	10:00 AM - 11:00 AM	0.04	0.06	4.21	5.57		
6	11:00 AM - 12:00 PM	0.05	0.05	5.42	5.10		
7	12:00 PM - 1:00 PM	0.06	0.06	5.74	5.68		
8	1:00 PM - 2:00 PM	0.06	0.06	6.12	6.01		
9	2:00 PM - 3:00 PM	0.07	0.06	7.12	6.12		
10	3:00 PM - 4:00 PM	0.09	0.06	8.70	6.24		
11	4:00 PM - 5:00 PM	0.11	0.07	10.52	7.39		
12	5:00 PM - 6:00 PM	0.10	0.07	10.02	7.31		
13	6:00 PM - 7:00 PM	0.09	0.06	8.53	5.86		

215 - Townhomes							
	In (%)	Out (%)	In (K)	Out (K)			
1	6:00 AM - 7:00 AM	0.01	0.06	1.07	5.85		
2	7:00 AM - 8:00 AM	0.03	0.13	2.66	13.18		
3	8:00 AM - 9:00 AM	0.04	0.09	3.82	9.31		
4	9:00 AM - 10:00 AM	0.04	0.07	3.73	6.92		
5	10:00 AM - 11:00 AM	0.04	0.04	4.01	4.28		
6	11:00 AM - 12:00 PM	0.05	0.06	4.84	5.67		
7	12:00 PM - 1:00 PM	0.05	0.05	5.43	5.06		
8	1:00 PM - 2:00 PM	0.05	0.05	4.54	4.78		
9	2:00 PM - 3:00 PM	0.06	0.06	5.54	6.03		
10	3:00 PM - 4:00 PM	0.08	0.05	8.19	4.80		
11	4:00 PM - 5:00 PM	0.10	0.05	9.79	5.14		
12	5:00 PM - 6:00 PM	0.12	0.07	12.11	6.81		
13	6:00 PM - 7:00 PM	0.10	0.07	9.77	6.56		

S Point Road (NC 273) and Henry Chapel Road/S Point Church Road												
River Highway												
Inbound %	Northbound			Southbound			Eastbound			Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
	0%	10%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Outbound %	0%	0%	0%	0%	10%	0%	0%	0%	0%	0%	0%	0%

210 - Single-Family Homes												
	S Point Road (NC 273)			S Point Road (NC 273)			S Point Church Road			Henry Chapel Road		
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND		
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
6:00 AM - 7:00 AM	0	0	0	0	1	0	0	0	0	0	0	0
7:00 AM - 8:00 AM	0	0	0	0	1	0	0	0	0	0	0	0
8:00 AM - 9:00 AM	0	0	0	0	1	0	0	0	0	0	0	0
9:00 AM - 10:00 AM	0	0	0	0	1	0	0	0	0	0	0	0
10:00 AM - 11:00 AM	0	0	0	0	1	0	0	0	0	0	0	0
11:00 AM - 12:00 PM	0	1	0	0	1	0	0	0	0	0	0	0
12:00 PM - 1:00 PM	0	1	0	0	1	0	0	0	0	0	0	0
1:00 PM - 2:00 PM	0	1	0	0	1	0	0	0	0	0	0	0
2:00 PM - 3:00 PM	0	1	0	0	1	0	0	0	0	0	0	0
3:00 PM - 4:00 PM	0	1	0	0	1	0	0	0	0	0	0	0
4:00 PM - 5:00 PM	0	1	0	0	1	0	0	0	0	0	0	0
5:00 PM - 6:00 PM	0	1	0	0	1	0	0	0	0	0	0	0
6:00 PM - 7:00 PM	0	1	0	0	1	0	0	0	0	0	0	0

215 - Townhomes												
	S Point Road (NC 273)			S Point Road (NC 273)			S Point Church Road			Henry Chapel Road		
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND		
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
6:00 AM - 7:00 AM	0	0	9	0	1	0	0	0	0	0	9	0
7:00 AM - 8:00 AM	0	1	0	0	3	0	0	0	0	0	0	0
8:00 AM - 9:00 AM	0	1	0	0	2	0	0	0	0	0	0	0
9:00 AM - 10:00 AM	0	1	0	0	1	0	0	0	0	0	0	0
10:00 AM - 11:00 AM	0	1	0	0	1	0	0	0	0	0	0	0
11:00 AM - 12:00 PM	0	1	0	0	1	0	0	0	0	0	0	0
12:00 PM - 1:00 PM	0	1	0	0	1	0	0	0	0	0	0	0
1:00 PM - 2:00 PM	0	1	0	0	1	0	0	0	0	0	0	0
2:00 PM - 3:00 PM	0	1	0	0	1	0	0	0	0	0	0	0
3:00 PM - 4:00 PM	0	2	0	0	1	0	0	0	0	0	0	0
4:00 PM - 5:00 PM	0	2	0	0	1	0	0	0	0	0	0	0
5:00 PM - 6:00 PM	0	2	0	0	1	0	0	0	0	0	0	0
6:00 PM - 7:00 PM	0	2	0	0	1	0	0	0	0	0	0	0

2023 Background Hourly Volumes												
	S Point Road (NC 273)			S Point Road (NC 273)			S Point Church Road			Henry Chapel Road		
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND		
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
6:00 AM - 7:00 AM	1	471	0	2	242	2	2	0	1	2	0	19
7:00 AM - 8:00 AM	0	786	1	7	330	5	0	0	1	1	0	21
8:00 AM - 9:00 AM	8	539	2	8	393	16	16	0	8	0	0	24
9:00 AM - 10:00 AM	0	415	3	14	325	0	0	0	0	1	0	27
10:00 AM - 11:00 AM	0	401	3	9	327	2	1	1	0	4	1	15
11:00 AM - 12:00 PM	4	452	4	19	400	18	25	0	4	3	0	12
12:00 PM - 1:00 PM	0	463	4	19	480	1	0	0	1	3	0	19
1:00 PM - 2:00 PM	1	456	2	17	444	1	2	0	1	4	0	21
2:00 PM - 3:00 PM	1	449	4	23	515	0	1	0	0	2	0	18
3:00 PM - 4:00 PM	0	453	5	25	624	0	0	0	0	7	0	18
4:00 PM - 5:00 PM	1	620	7	31	740	2	2	0	1	4	0	17
5:00 PM - 6:00 PM	0	675	1	27	773	2	0	0	0	2	0	17
6:00 PM - 7:00 PM	1	556	5	26	594	1	0	0	0	3	0	19

2024 Background Hourly Volumes												
	S Point Road (NC 273)			S Point Road (NC 273)			S Point Church Road			Henry Chapel Road		
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND		
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
6:00 AM - 7:00 AM	1	482	0	2	248	2	2	0	1	2	0	20
7:00 AM - 8:00 AM	0	804	1	7	337	5	0	0	1	1	0	21
8:00 AM - 9:00 AM	8	551	2	8	401	17	17	0	8	0	0	24
9:00 AM - 10:00 AM	0	424	3	15	332	0	0	0	0	1	0	27
10:00 AM - 11:00 AM	0	409	3	9	335	2	1	1	0	4	1	16
11:00 AM - 12:00 PM	4	460	4	20	407	19	25	0	4	3	0	13
12:00 PM - 1:00 PM	0	472	4	20	489	1	0	0	1	3	0	20
1:00 PM - 2:00 PM	1	465	2	18	452	1	2	0	1	4	0	21
2:00 PM - 3:00 PM	1	457	4	23	525	0	1	0	0	2	0	19
3:00 PM - 4:00 PM	0	461	5	25	636	0	0	0	0	7	0	19
4:00 PM - 5:00 PM	1	632	7	32	755	2	2	0	1	4	0	18
5:00 PM - 6:00 PM	0	689	1	27	789	2	0	0	0	2	0	18
6:00 PM - 7:00 PM	1	567	5	26	606	1	0	0	0	3	0	20

2025 Background Hourly Volumes												
	S Point Road (NC 273)			S Point Road (NC 273)			S Point Church Road			Henry Chapel Road		
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND		
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
6:00 AM - 7:00 AM	1	493	0	2	253	2	2	0	1	2	0	20
7:00 AM - 8:00 AM	0	822	1	8	344	5	0	0	1	1	0	22
8:00 AM - 9:00 AM	9	563	2	9	410	17	17	0	9	0	0	25
9:00 AM - 10:00 AM	0	433	3	15	338	0	0	0	0	1	0	28
10:00 AM - 11:00 AM	0	417	3	10	339	2	1	1	0	4	1	16
11:00 AM - 12:00 PM	4	469	4	20	415	19	26	0	4	3	0	13
12:00 PM - 1:00 PM	0	481	4	20	498	1	0	0	1	3	0	20
1:00 PM - 2:00 PM	1	473	2	18	460	1	2	0	1	4	0	22
2:00 PM - 3:00 PM	1	466	4	24	535	0	1	0	0	2	0	19
3:00 PM - 4:00 PM	0	470	5	26	649	0	0	0	0	8	0	19
4:00 PM - 5:00 PM	1	644	8	32	770	2	2	0	1	4	0	18
5:00 PM - 6:00 PM	0	703	1	28	805	2	0	0	0	2	0	18
6:00 PM - 7:00 PM	1	578	5	27	618	1	0	0	0	3	0	20

2026 Background Hourly Volumes												
	S Point Road (NC 273)			S Point Road (NC 273)			S Point Church Road			Henry Chapel Road		
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND		
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
6:00 AM - 7:00 AM	1	504	0	2	250	2	2	0	1	2	0	21
7:00 AM - 8:00 AM	0	840	1	8	351	6	0	0	1	1	0	22
8:00 AM - 9:00 AM	9	575	2	9	419	18	18	0	9	0	0	25
9:00 AM - 10:00 AM	0	442	3	15	345	0	0	0	0	1	0	29
10:00 AM - 11:00 AM	0	425	3	10	345	2	1	1	0	4	1	17
11:00 AM - 12:00 PM	4	478	4	21	422	20	26	0	4	3	0	13
12:00 PM - 1:00 PM	0	490	4	21	507	1	0	0	1	3	0	21
1:00 PM - 2:00 PM	1	482	2	19	469	1	2	0	1	4	0	22
2:00 PM - 3:00 PM	1	474	4	24	545	0	1	0	0	2	0	20
3:00 PM - 4:00 PM	0	479	6	26	662	0	0	0	0	8	0	20
4:00 PM - 5:00 PM	1	657	8	33	786	2	2	0	1	4	0	19
5:00 PM - 6:00 PM	0	717	1	29	821	2	0	0	0	2	0	19
6:00 PM - 7:00 PM	1	590	6	28	630	1	0	0	0	3	0	21

Development	Land Use	LUC	Daily Trips/2 (from TA)	-
Henry Chapel	Single-Family Homes (1A)	210	824	1
	Single-Family Homes (1B)	210	822	1
	Single-Family Homes (2)	210	875	1
	Single-Family Homes (3)	210	715	1

210 - Single-Family Homes						
		K	In (%)	Out (%)	In (K)	Out (K)
1	6:00 AM - 7:00 AM	0.02	0.06	1.58	5.84	
2	7:00 AM - 8:00 AM	0.03	0.10	3.07	9.97	
3	8:00 AM - 9:00 AM	0.04	0.09	3.77	8.52	
4	9:00 AM - 10:00 AM	0.03	0.06	3.35	5.77	
5	10:00 AM - 11:00 AM	0.04	0.06	4.21	5.57	
6	11:00 AM - 12:00 PM	0.05	0.05	5.42	5.10	
7	12:00 PM - 1:00 PM	0.06	0.06	5.74	5.66	
8	1:00 PM - 2:00 PM	0.06	0.06	6.12	6.01	
9	2:00 PM - 3:00 PM	0.07	0.06	7.12	6.12	
10	3:00 PM - 4:00 PM	0.09	0.06	8.70	6.24	
11	4:00 PM - 5:00 PM	0.11	0.07	10.82	7.38	
12	5:00 PM - 6:00 PM	0.10	0.07	10.02	7.31	
13	6:00 PM - 7:00 PM	0.09	0.06	8.53	5.86	

S Point Road (NC 273) and Henry Chapel Road/S Point Church Road

Henry Chapel													
		Northbound			Southbound			Eastbound			Westbound		
		Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Inbound %		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Outbound %		0%	0%	0%	0%	0%	0%	0%	0%	0%	10%	0%	90%
Phase 1A													
		S Point Road (NC 273)			S Point Road (NC 273)			S Point Church Road			Henry Chapel Road		
		NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND		
		NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
6:00 AM - 7:00 AM		0	0	1	0	0	0	0	0	0	0	0	33
7:00 AM - 8:00 AM		0	0	2	17	0	0	0	0	0	6	6	56
8:00 AM - 9:00 AM		0	0	2	21	0	0	0	0	0	5	0	48
9:00 AM - 10:00 AM		0	0	2	19	0	0	0	0	0	4	0	32
10:00 AM - 11:00 AM		0	0	3	24	0	0	0	0	0	3	0	31
11:00 AM - 12:00 PM		0	0	3	30	0	0	0	0	0	3	0	29
12:00 PM - 1:00 PM		0	0	4	32	0	0	0	0	0	4	0	32
1:00 PM - 2:00 PM		0	0	4	34	0	0	0	0	0	4	0	34
2:00 PM - 3:00 PM		0	0	4	40	0	0	0	0	0	4	0	34
3:00 PM - 4:00 PM		0	0	5	49	0	0	0	0	0	4	0	35
4:00 PM - 5:00 PM		0	0	7	59	0	0	0	0	0	5	0	41
5:00 PM - 6:00 PM		0	0	6	56	0	0	0	0	0	5	0	41
6:00 PM - 7:00 PM		0	0	5	48	0	0	0	0	0	4	0	33

0.00 0.00

0.00 0.00

0.00 0.00

0.00 0.00

0.00 0.00

0.00 0.00

0.00 0.00

0.00 0.00

0.00 0.00

0.00 0.00

0.00 0.00

0.00 0.00

0.00 0.00

0.00 0.00

0.00 0.00

0.00 0.00

0.00 0.00

0.00 0.00

0.00 0.00

0.00 0.00

0.00 0.00

0.00 0.00

0.00 0.00

0.00 0.00

0.00 0.00

0.00 0.00

0.00 0.00

0.00 0.00

0.00 0.00

0.00 0.00

0.00 0.00

0.00 0.00

0.00 0.00

0.00 0.00

0.00 0.00

0.00 0.00

0.00 0.00

0.00 0.00

0.00 0.00

0.00 0.00

0.00 0.00

0.00 0.00

0.00 0.00

0.00 0.00

0.00 0.00

0.00 0.00

0.00 0.00

0.00 0.00

0.00 0.00

0.00 0.00

0.00 0.00

0.00 0.00

0.00 0.00

0.00 0.00

0.00 0.00

0.00 0.00

0.00 0.00

0.00 0.00

0.00 0.00

0.00 0.00

0.00 0.00

0.00 0.00

0.00 0.00

0.00 0.00

0.00 0.00

0.00 0.00

0.00 0.00

0.00 0.00

0.00 0.00

0.00 0.00

0.00 0.00

0.00 0.00

0.00 0.00

0.00 0.00

0.00 0.00

0.00 0.00

0.00 0.00

0.00 0.00

0.00 0.00

0.00 0.00

0.00 0.00

0.00 0.00

0.00 0.00

0.00 0.00

0.00 0.00

0.00 0.00

0.00 0.00

0.00 0.00

Phase 1B													
		S Point Road (NC 273)			S Point Road (NC 273)			S Point Church Road			Henry Chapel Road		
		NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND		
		NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
6:00 AM - 7:00 AM		0	0	2	16	0	0	0	0	0	7	0	60
7:00 AM - 8:00 AM		0	0	4	31	0	0	0	0	0	11	0	103
8:00 AM - 9:00 AM		0	0	4	39	0	0	0	0	0	9	0	88
9:00 AM - 10:00 AM		0	0	4	35	0	0	0	0	0	7	0	59
10:00 AM - 11:00 AM		0	0	5	44	0	0	0	0	0	8	0	57
11:00 AM - 12:00 PM		0	0	6	55	0	0	0	0	0	6	0	53
12:00 PM - 1:00 PM		0	0	7	59	0	0	0	0	0	7	0	59
1:00 PM - 2:00 PM		0	0	7	63	0	0	0	0	0	7	0	62
2:00 PM - 3:00 PM		0	0	8	73	0	0	0	0	0	7	0	63
3:00 PM - 4:00 PM		0	0	10	90	0	0	0	0	0	7	0	64
4:00 PM - 5:00 PM		0	0	12	108	0	0	0	0	0	9	0	70
5:00 PM - 6:00 PM		0	0	11	103	0	0	0	0	0	9	0	75
6:00 PM - 7:00 PM		0	0	9	88	0	0	0	0	0	7	0	61

Phase 2													
		S Point Road (NC 273)			S Point Road (NC 273)			S Point Church Road			Henry Chapel Road		
		NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND		
		NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
6:00 AM - 7:00 AM		0	0	3	26	0	0	0	0	0	12	0	96
7:00 AM - 8:00 AM		0	0	7	50	0	0	0	0	0	20	0	164
8:00 AM - 9:00 AM		0	0	7	62	0	0	0	0	0	16	0	140
9:00 AM - 10:00 AM		0	0	7	55	0	0	0	0	0	12	0	94
10:00 AM - 11:00 AM		0	0	9	70	0	0	0	0	0	11	0	91
11:00 AM - 12:00 PM		0	0	11	88	0	0	0	0	0	10	0	84
12:00 PM - 1:00 PM		0	0	12	94	0	0	0	0	0	12	0	94
1:00 PM - 2:00 PM		0	0	12	101	0	0	0	0	0	12	0	99
2:00 PM - 3:00 PM		0	0	14	117	0	0	0	0	0	12	0	101
3:00 PM - 4:00 PM		0	0	18	143	0	0	0	0	0	12	0	102
4:00 PM - 5:00 PM		0	0	21	172	0	0	0	0	0	15	0	121
5:00 PM - 6:00 PM		0	0	20	164	0	0	0	0	0	15	0	120
6:00 PM - 7:00 PM		0	0	16	140	0	0	0	0	0	12	0	97

Phase 2 Assignment

0.00 0.00

0.00 0.00

0.00 0.00

0.00 0.00

0.00 0.00

0.00 0.00

0.00 0.00

0.00 0.00

0.00 0.00

0.00 0.00

0.00 0.00

0.00 0.00

0.00 0.00

0.00 0.00

0.00 0.00

0.00 0.00

0.00 0.00

0.00 0.00

0.00 0.00

</

Henry Chapel SWA TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS Based on 2009 MUTCD

INTERSECTION NAME: S Ford Road (HC 212) and S Ford Church Road-Henry Chapel Road

DATE: 07/12/22

INTERSECTION CONDITION: (A) Signalized T-Inter

MAJOR STREET: S Ford Road (HC 212)
MINOR STREET: S Ford Church Road-Henry Chapel Road

OF APPROACH LANES: 1
OF APPROACH LANES: 1

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): N
85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): Y

USE 50% REDUCTION (Y OR N): N

	MAJOR ST BOTH APPROACHES	MINOR ST HIGHEST APPROACH	WARRANT 1, Condition A			WARRANT 1, Condition B			WARRANT 1, Combination Warrant						WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET	CONDITION A			CONDITION B				
									MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			350	105		525	53		400	120		600	60			
12:00 AM TO 01:00 AM																
01:00 AM TO 02:00 AM																
02:00 AM TO 03:00 AM																
03:00 AM TO 04:00 AM																
04:00 AM TO 05:00 AM																
05:00 AM TO 06:00 AM																
06:00 AM TO 07:00 AM	718	12	Y			Y			Y			Y				
07:00 AM TO 08:00 AM	1,129	12	Y			Y			Y			Y				
08:00 AM TO 09:00 AM	966	20	Y			Y			Y			Y				
09:00 AM TO 10:00 AM	757	15	Y			Y			Y			Y				
10:00 AM TO 11:00 AM	742	13	Y			Y			Y			Y				
11:00 AM TO 12:00 PM	897	27	Y			Y			Y			Y				
12:00 PM TO 01:00 PM	967	13	Y			Y			Y			Y				
01:00 PM TO 02:00 PM	921	15	Y			Y			Y			Y				
02:00 PM TO 03:00 PM	992	11	Y			Y			Y			Y				
03:00 PM TO 04:00 PM	1,107	16	Y			Y			Y			Y				
04:00 PM TO 05:00 PM	1,401	13	Y			Y			Y			Y				
05:00 PM TO 06:00 PM	1,478	11	Y			Y			Y			Y				
06:00 PM TO 07:00 PM	1,183	13	Y			Y			Y			Y				
07:00 PM TO 08:00 PM																
08:00 PM TO 09:00 PM																
09:00 PM TO 10:00 PM																
10:00 PM TO 11:00 PM																
11:00 PM TO 12:00 AM																
	13,258	191	0			0			0			0			0	0
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			8 HOURS OF BOTH COND. A AND COND. B NEEDED NOT SATISFIED						4 HRS NEEDED NOT SATISFIED	1 HR NEEDED NOT SATISFIED

WARRANT 1 -- Eight-Hour Vehicular Volume Warrant
 Condition A : Minimum Vehicular Volume
 Condition B : Interruption of Continuous Traffic
 Combination : Combination of Condition A and Condition B
 WARRANT 2 -- Four-Hour Vehicular Volume Warrant
 WARRANT 3 -- Peak Hour Warrant

Henry Chapel SWA
TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS
 Based on 2009 MUTCD

INTERSECTION NAME: **B Ford Road (HC 212) and B Ford Church Road-Henry Chapel Road**

DATE: **07/12/22**

INTERSECTION CONDITION: **2027 Business Day**

MAJOR STREET: **B Ford Road (HC 212)**
 MINOR STREET: **B Ford Church Road-Henry Chapel Road**

OF APPROACH LANES: **1**
 # OF APPROACH LANES: **1**

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): **N**
 85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): **Y**

USE 50% REDUCTION (Y OR N): **N**

	MAJOR ST BOTH APPROACHES	MINOR ST HIGHEST APPROACH	WARRANT 1, Condition A			WARRANT 1, Condition B			WARRANT 1, Combination Warrant						WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET	CONDITION A			CONDITION B				
									MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			350	105		525	53		400	120		600	60			
12:00 AM TO 01:00 AM																
01:00 AM TO 02:00 AM																
02:00 AM TO 03:00 AM																
03:00 AM TO 04:00 AM																
04:00 AM TO 05:00 AM																
05:00 AM TO 06:00 AM																
06:00 AM TO 07:00 AM	728	32	Y			Y			Y			Y				
07:00 AM TO 08:00 AM	1,148	46	Y			Y			Y			Y				
08:00 AM TO 09:00 AM	989	41	Y			Y			Y			Y				
09:00 AM TO 10:00 AM	778	35	Y			Y			Y			Y				
10:00 AM TO 11:00 AM	769	31	Y			Y			Y			Y				
11:00 AM TO 12:00 PM	930	27	Y			Y			Y			Y				
12:00 PM TO 01:00 PM	1,003	33	Y			Y			Y			Y				
01:00 PM TO 02:00 PM	959	36	Y			Y			Y			Y				
02:00 PM TO 03:00 PM	1,036	32	Y			Y			Y			Y				
03:00 PM TO 04:00 PM	1,161	38	Y			Y			Y			Y				
04:00 PM TO 05:00 PM	1,467	38	Y			Y			Y			Y				
05:00 PM TO 06:00 PM	1,540	36	Y			Y			Y			Y				
06:00 PM TO 07:00 PM	1,236	33	Y			Y			Y			Y				
07:00 PM TO 08:00 PM																
08:00 PM TO 09:00 PM																
09:00 PM TO 10:00 PM																
10:00 PM TO 11:00 PM																
11:00 PM TO 12:00 AM																
	13,744	458	0			0			0			0			0	0
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			8 HOURS OF BOTH COND. A AND COND. B NEEDED NOT SATISFIED						4 HRS NEEDED NOT SATISFIED	1 HR NEEDED NOT SATISFIED

WARRANT 1 -- Eight-Hour Vehicular Volume Warrant
 Condition A : Minimum Vehicular Volume
 Condition B : Interruption of Continuous Traffic
 Combination : Combination of Condition A and Condition B
 WARRANT 2 -- Four-Hour Vehicular Volume Warrant
 WARRANT 3 -- Peak Hour Warrant

Henry Chapel SWA TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS Based on 2009 MUTCD

INTERSECTION NAME: **S Ford Road (HC 273) and S Ford Church Road-Henry Chapel Road**

DATE: **07/12/22**

INTERSECTION CONDITION: **AAA Background T-10**

MAJOR STREET: **S Ford Road (HC 273)**
MINOR STREET: **S Ford Church Road-Henry Chapel Road**

OF APPROACH LANES: **1**
OF APPROACH LANES: **1**

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): **N**
85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): **Y**

USE 50% REDUCTION (Y OR N): **N**

	MAJOR ST BOTH APPROACHES	MINOR ST HIGHEST APPROACH	WARRANT 1, Condition A			WARRANT 1, Condition B			WARRANT 1, Combination Warrant						WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET	CONDITION A			CONDITION B				
									MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			350	105		525	53		400	120		600	60			
12:00 AM TO 01:00 AM																
01:00 AM TO 02:00 AM																
02:00 AM TO 03:00 AM																
03:00 AM TO 04:00 AM																
04:00 AM TO 05:00 AM																
05:00 AM TO 06:00 AM																
06:00 AM TO 07:00 AM	735	12	Y			Y			Y			Y				
07:00 AM TO 08:00 AM	1,154	12	Y			Y			Y			Y				
08:00 AM TO 09:00 AM	987	21	Y			Y			Y			Y				
09:00 AM TO 10:00 AM	774	15	Y			Y			Y			Y				
10:00 AM TO 11:00 AM	756	13	Y			Y			Y			Y				
11:00 AM TO 12:00 PM	914	27	Y			Y			Y			Y				
12:00 PM TO 01:00 PM	986	13	Y			Y			Y			Y				
01:00 PM TO 02:00 PM	939	15	Y			Y			Y			Y				
02:00 PM TO 03:00 PM	1,010	12	Y			Y			Y			Y				
03:00 PM TO 04:00 PM	1,127	17	Y			Y			Y			Y				
04:00 PM TO 05:00 PM	1,429	13	Y			Y			Y			Y				
05:00 PM TO 06:00 PM	1,508	11	Y			Y			Y			Y				
06:00 PM TO 07:00 PM	1,206	13	Y			Y			Y			Y				
07:00 PM TO 08:00 PM																
08:00 PM TO 09:00 PM																
09:00 PM TO 10:00 PM																
10:00 PM TO 11:00 PM																
11:00 PM TO 12:00 AM																
	13,525	194	0			0			0			0			0	0
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			8 HOURS OF BOTH COND. A AND COND. B NEEDED NOT SATISFIED						4 HRS NEEDED NOT SATISFIED	1 HR NEEDED NOT SATISFIED

WARRANT 1 -- Eight-Hour Vehicular Volume Warrant
 Condition A : Minimum Vehicular Volume
 Condition B : Interruption of Continuous Traffic
 Combination : Combination of Condition A and Condition B
 WARRANT 2 -- Four-Hour Vehicular Volume Warrant
 WARRANT 3 -- Peak Hour Warrant

Henry Chapel SWA
TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS
 Based on 2009 MUTCD

INTERSECTION NAME: **S Ford Road (HC 212) and S Ford Church Road-Henry Chapel Road**

DATE: **07/12/22**

INTERSECTION CONDITION: **2024 Business Date**

MAJOR STREET: **S Ford Road (HC 212)**
 MINOR STREET: **S Ford Church Road-Henry Chapel Road**

OF APPROACH LANES: **1**
 # OF APPROACH LANES: **1**

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): **N**
 85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): **Y**

USE 56% REDUCTION (Y OR N): **N**

	MAJOR ST BOTH APPROACHES	MINOR ST HIGHEST APPROACH	WARRANT 1, Condition A			WARRANT 1, Condition B			WARRANT 1, Combination Warrant						WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET	CONDITION A			CONDITION B				
									MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			350	105		525	53		400	120		600	60			
12:00 AM TO 01:00 AM																
01:00 AM TO 02:00 AM																
02:00 AM TO 03:00 AM																
03:00 AM TO 04:00 AM																
04:00 AM TO 05:00 AM																
05:00 AM TO 06:00 AM																
06:00 AM TO 07:00 AM	753	49	Y			Y			Y			Y				
07:00 AM TO 08:00 AM	1,189	74	Y			Y	Y	Y	Y			Y	Y	Y	Y	
08:00 AM TO 09:00 AM	1,030	65	Y			Y	Y	Y	Y			Y	Y	Y	Y	
09:00 AM TO 10:00 AM	813	51	Y			Y			Y			Y				
10:00 AM TO 11:00 AM	805	48	Y			Y			Y			Y				
11:00 AM TO 12:00 PM	975	42	Y			Y			Y			Y				
12:00 PM TO 01:00 PM	1,052	50	Y			Y			Y			Y				
01:00 PM TO 02:00 PM	1,009	53	Y			Y	Y	Y	Y			Y				
02:00 PM TO 03:00 PM	1,091	50	Y			Y			Y			Y				
03:00 PM TO 04:00 PM	1,227	56	Y			Y	Y	Y	Y			Y				
04:00 PM TO 05:00 PM	1,549	60	Y			Y	Y	Y	Y			Y	Y	Y	Y	
05:00 PM TO 06:00 PM	1,622	58	Y			Y	Y	Y	Y			Y				
06:00 PM TO 07:00 PM	1,303	51	Y			Y			Y			Y				
07:00 PM TO 08:00 PM																
08:00 PM TO 09:00 PM																
09:00 PM TO 10:00 PM																
10:00 PM TO 11:00 PM																
11:00 PM TO 12:00 AM																
	14,418	707	0			6			0			3			3	0
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			8 HOURS OF BOTH COND. A AND COND. B NEEDED NOT SATISFIED						4 HRS NEEDED NOT SATISFIED	1 HR NEEDED NOT SATISFIED

WARRANT 1 -- Eight-Hour Vehicular Volume Warrant
 Condition A : Minimum Vehicular Volume
 Condition B : Interruption of Continuous Traffic
 Combination : Combination of Condition A and Condition B
 WARRANT 2 -- Four-Hour Vehicular Volume Warrant
 WARRANT 3 -- Peak Hour Warrant

Henry Chapel SWA
TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS
 Based on 2009 MUTCD

INTERSECTION NAME: **S Ford Road (HC 212) and S Ford Church Road-Henry Chapel Road**

DATE: **07/12/22**

INTERSECTION CONDITION: **2025 Intersection Study**

MAJOR STREET: **S Ford Road (HC 212)**
 MINOR STREET: **S Ford Church Road-Henry Chapel Road**

OF APPROACH LANES: **1**
 # OF APPROACH LANES: **1**

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): **N**
 85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): **Y**

USE 50% REDUCTION (Y OR N): **N**

	MAJOR ST BOTH APPROACHES	MINOR ST HIGHEST APPROACH	WARRANT 1, Condition A			WARRANT 1, Condition B			WARRANT 1, Combination Warrant						WARRANT 2	WARRANT 3		
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET	CONDITION A			CONDITION B						
									MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET				
THRESHOLD VALUES			350	105		525	53		400	120		600	60					
12:00 AM TO 01:00 AM																		
01:00 AM TO 02:00 AM																		
02:00 AM TO 03:00 AM																		
03:00 AM TO 04:00 AM																		
04:00 AM TO 05:00 AM																		
05:00 AM TO 06:00 AM																		
06:00 AM TO 07:00 AM	753	12	Y			Y			Y			Y						
07:00 AM TO 08:00 AM	1,185	12	Y			Y			Y			Y						
08:00 AM TO 09:00 AM	1,016	22	Y			Y			Y			Y						
09:00 AM TO 10:00 AM	795	15	Y			Y			Y			Y						
10:00 AM TO 11:00 AM	778	13	Y			Y			Y			Y						
11:00 AM TO 12:00 PM	938	28	Y			Y			Y			Y						
12:00 PM TO 01:00 PM	1,012	13	Y			Y			Y			Y						
01:00 PM TO 02:00 PM	961	15	Y			Y			Y			Y						
02:00 PM TO 03:00 PM	1,037	12	Y			Y			Y			Y						
03:00 PM TO 04:00 PM	1,157	18	Y			Y			Y			Y						
04:00 PM TO 05:00 PM	1,464	13	Y			Y			Y			Y						
05:00 PM TO 06:00 PM	1,547	11	Y			Y			Y			Y						
06:00 PM TO 07:00 PM	1,236	13	Y			Y			Y			Y						
07:00 PM TO 08:00 PM																		
08:00 PM TO 09:00 PM																		
09:00 PM TO 10:00 PM																		
10:00 PM TO 11:00 PM																		
11:00 PM TO 12:00 AM																		
	13,879	197	0			0			0			0			0	0		
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			8 HOURS OF BOTH COND. A AND COND. B NEEDED NOT SATISFIED						4 HRS NEEDED NOT SATISFIED		1 HR NEEDED NOT SATISFIED	

WARRANT 1 -- Eight-Hour Vehicular Volume Warrant
 Condition A : Minimum Vehicular Volume
 Condition B : Interruption of Continuous Traffic
 Combination : Combination of Condition A and Condition B
 WARRANT 2 -- Four-Hour Vehicular Volume Warrant
 WARRANT 3 -- Peak Hour Warrant

Henry Chapel SWA TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS Based on 2009 MUTCD

INTERSECTION NAME: **B Ford Road (HC 212) and B Ford Church Road-Henry Chapel Road**

DATE: **07/12/22**

INTERSECTION CONDITION: **ATIS Business Date**

MAJOR STREET: **B Ford Road (HC 212)**
MINOR STREET: **B Ford Church Road-Henry Chapel Road**

OF APPROACH LANES: **1**
OF APPROACH LANES: **1**

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): **N**
85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): **Y**

USE 50% REDUCTION (Y OR N): **N**

	MAJOR ST BOTH APPROACHES	MINOR ST HIGHEST APPROACH	WARRANT 1, Condition A			WARRANT 1, Condition B			WARRANT 1, Combination Warrant						WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET	CONDITION A			CONDITION B				
									MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			350	105		525	53		400	120		600	60			
12:00 AM TO 01:00 AM																
01:00 AM TO 02:00 AM																
02:00 AM TO 03:00 AM																
03:00 AM TO 04:00 AM																
04:00 AM TO 05:00 AM																
05:00 AM TO 06:00 AM																
06:00 AM TO 07:00 AM	782	72	Y			Y	Y	Y	Y		Y	Y	Y	Y		
07:00 AM TO 08:00 AM	1,242	114	Y	Y	Y	Y	Y	Y	Y		Y	Y	Y	Y	Y	Y
08:00 AM TO 09:00 AM	1,085	99	Y			Y	Y	Y	Y		Y	Y	Y	Y	Y	Y
09:00 AM TO 10:00 AM	857	74	Y			Y	Y	Y	Y		Y	Y	Y	Y	Y	Y
10:00 AM TO 11:00 AM	857	70	Y			Y	Y	Y	Y		Y	Y	Y	Y	Y	Y
11:00 AM TO 12:00 PM	1,037	62	Y			Y	Y	Y	Y		Y	Y	Y	Y	Y	Y
12:00 PM TO 01:00 PM	1,118	72	Y			Y	Y	Y	Y		Y	Y	Y	Y	Y	Y
01:00 PM TO 02:00 PM	1,074	77	Y			Y	Y	Y	Y		Y	Y	Y	Y	Y	Y
02:00 PM TO 03:00 PM	1,168	74	Y			Y	Y	Y	Y		Y	Y	Y	Y	Y	Y
03:00 PM TO 04:00 PM	1,318	81	Y			Y	Y	Y	Y		Y	Y	Y	Y	Y	Y
04:00 PM TO 05:00 PM	1,657	89	Y			Y	Y	Y	Y		Y	Y	Y	Y	Y	Y
05:00 PM TO 06:00 PM	1,731	86	Y			Y	Y	Y	Y		Y	Y	Y	Y	Y	Y
06:00 PM TO 07:00 PM	1,392	74	Y			Y	Y	Y	Y		Y	Y	Y	Y	Y	Y
07:00 PM TO 08:00 PM																
08:00 PM TO 09:00 PM																
09:00 PM TO 10:00 PM																
10:00 PM TO 11:00 PM																
11:00 PM TO 12:00 AM																
	15,318	1,044	1			13			0			13			13	6
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED SATISFIED			8 HOURS OF BOTH COND. A AND COND. B NEEDED NOT SATISFIED			4 HRS NEEDED SATISFIED			1 HR NEEDED SATISFIED	

WARRANT 1 – Eight-Hour Vehicular Volume Warrant
 Condition A : Minimum Vehicular Volume
 Condition B : Interruption of Continuous Traffic
 Combination : Combination of Condition A and Condition B
 WARRANT 2 – Four-Hour Vehicular Volume Warrant
 WARRANT 3 – Peak Hour Warrant

Henry Chapel SWA TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS Based on 2009 MUTCD

INTERSECTION NAME: B Ford Road (HC 273) and B Ford Church Road-Henry Chapel Road

DATE: 07/12/22

INTERSECTION CONDITION: 3000 Signalized T-Inter

MAJOR STREET: B Ford Road (HC 273)
MINOR STREET: B Ford Church Road-Henry Chapel Road

OF APPROACH LANES: 1
OF APPROACH LANES: 1

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): N
85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): Y

USE 50% REDUCTION (Y OR N): N

	MAJOR ST BOTH APPROACHES	MINOR ST HIGHEST APPROACH	WARRANT 1, Condition A			WARRANT 1, Condition B			WARRANT 1, Combination Warrant						WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET	CONDITION A			CONDITION B				
									MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			350	105		525	53		400	120		600	60			
12:00 AM TO 01:00 AM																
01:00 AM TO 02:00 AM																
02:00 AM TO 03:00 AM																
03:00 AM TO 04:00 AM																
04:00 AM TO 05:00 AM																
05:00 AM TO 06:00 AM																
06:00 AM TO 07:00 AM	770	13	Y			Y			Y			Y				
07:00 AM TO 08:00 AM	1,211	12	Y			Y			Y			Y				
08:00 AM TO 09:00 AM	1,038	23	Y			Y			Y			Y				
09:00 AM TO 10:00 AM	811	16	Y			Y			Y			Y				
10:00 AM TO 11:00 AM	792	14	Y			Y			Y			Y				
11:00 AM TO 12:00 PM	956	28	Y			Y			Y			Y				
12:00 PM TO 01:00 PM	1,031	14	Y			Y			Y			Y				
01:00 PM TO 02:00 PM	980	15	Y			Y			Y			Y				
02:00 PM TO 03:00 PM	1,055	12	Y			Y			Y			Y				
03:00 PM TO 04:00 PM	1,180	18	Y			Y			Y			Y				
04:00 PM TO 05:00 PM	1,494	14	Y			Y			Y			Y				
05:00 PM TO 06:00 PM	1,578	12	Y			Y			Y			Y				
06:00 PM TO 07:00 PM	1,262	14	Y			Y			Y			Y				
07:00 PM TO 08:00 PM																
08:00 PM TO 09:00 PM																
09:00 PM TO 10:00 PM																
10:00 PM TO 11:00 PM																
11:00 PM TO 12:00 AM																
	14,158	205	0			0			0			0			0	0
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			8 HOURS OF BOTH COND. A AND COND. B NEEDED NOT SATISFIED						4 HRS NEEDED NOT SATISFIED	1 HR NEEDED NOT SATISFIED

WARRANT 1 -- Eight-Hour Vehicular Volume Warrant
 Condition A : Minimum Vehicular Volume
 Condition B : Interruption of Continuous Traffic
 Combination : Combination of Condition A and Condition B
 WARRANT 2 -- Four-Hour Vehicular Volume Warrant
 WARRANT 3 -- Peak Hour Warrant

Henry Chapel SWA
TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS
 Based on 2009 MUTCD

INTERSECTION NAME: **S Ford Road (HC 212) and S Ford Church Road-Henry Chapel Road**

DATE: **07/12/22**

INTERSECTION CONDITION: **RTD Signalized**

MAJOR STREET: **S Ford Road (HC 212)**
 MINOR STREET: **S Ford Church Road-Henry Chapel Road**

OF APPROACH LANES: **1**
 # OF APPROACH LANES: **1**

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): **N**
 85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): **Y**

USE 56% REDUCTION (Y OR N): **N**

	MAJOR ST BOTH APPROACHES	MINOR ST HIGHEST APPROACH	WARRANT 1, Condition A			WARRANT 1, Condition B			WARRANT 1, Combination Warrant						WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET	CONDITION A			CONDITION B				
									MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			350	105		525	53		400	120		600	60			
12:00 AM TO 01:00 AM																
01:00 AM TO 02:00 AM																
02:00 AM TO 03:00 AM																
03:00 AM TO 04:00 AM																
04:00 AM TO 05:00 AM																
05:00 AM TO 06:00 AM																
06:00 AM TO 07:00 AM	807	89	Y			Y	Y	Y	Y			Y	Y	Y	Y	Y
07:00 AM TO 08:00 AM	1,263	143	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
08:00 AM TO 09:00 AM	1,126	123	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
09:00 AM TO 10:00 AM	889	91	Y			Y	Y	Y	Y			Y	Y	Y	Y	Y
10:00 AM TO 11:00 AM	892	86	Y			Y	Y	Y	Y			Y	Y	Y	Y	Y
11:00 AM TO 12:00 PM	1,082	77	Y			Y	Y	Y	Y			Y	Y	Y	Y	Y
12:00 PM TO 01:00 PM	1,166	89	Y			Y	Y	Y	Y			Y	Y	Y	Y	Y
01:00 PM TO 02:00 PM	1,123	94	Y			Y	Y	Y	Y			Y	Y	Y	Y	Y
02:00 PM TO 03:00 PM	1,222	92	Y			Y	Y	Y	Y			Y	Y	Y	Y	Y
03:00 PM TO 04:00 PM	1,384	99	Y			Y	Y	Y	Y			Y	Y	Y	Y	Y
04:00 PM TO 05:00 PM	1,740	110	Y	Y	Y	Y	Y	Y	Y			Y	Y	Y	Y	Y
05:00 PM TO 06:00 PM	1,812	107	Y	Y	Y	Y	Y	Y	Y			Y	Y	Y	Y	Y
06:00 PM TO 07:00 PM	1,461	91	Y			Y	Y	Y	Y			Y	Y	Y	Y	Y
07:00 PM TO 08:00 PM																
08:00 PM TO 09:00 PM																
09:00 PM TO 10:00 PM																
10:00 PM TO 11:00 PM																
11:00 PM TO 12:00 AM																
	15,987	1,291	4			13			2			13			13	10
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED SATISFIED			8 HOURS OF BOTH COND. A AND COND. B NEEDED NOT SATISFIED						4 HRS NEEDED SATISFIED	1 HR NEEDED SATISFIED

WARRANT 1 – Eight-Hour Vehicular Volume Warrant
 Condition A : Minimum Vehicular Volume
 Condition B : Interruption of Continuous Traffic
 Combination : Combination of Condition A and Condition B
 WARRANT 2 – Four-Hour Vehicular Volume Warrant
 WARRANT 3 – Peak Hour Warrant

Belwood/Belmont MS Volumes

2022 Existing: AM (PM)

