McDonough & Rea Associates, Inc.

Traffic and Transportation Consulting

Kevin P. McDonough (1953-1994)
John H. Rea, P.E.
Jay S. Troutman, Jr., P.E.
Scott T. Kennel

May 13, 2021

Manchester Township Zoning Board of Adjustment
Manchester Township
1 Colonial Drive
Manchester, New Jersey 08759

Re: Use Variance Plan
Lots 1 & 2 of Block 66
Manchester Township, Ocean County
MRA File No. 21-151

Dear Board Members:

McDonough & Rea Associates (MRA) has been asked to provide the Zoning Board with a *Traffic Impact Analysis* for a *Use Variance Plan* prepared by Professional Design Services LLC (PDS) for a 2-story building to be constructed on the noted property and to consist of the following elements:

- 40,000 SF of retail space on the first floor
- 34,000 SF of office space on the second floor

The property is located along the west side of South Hope Chapel Road (CR 547), north of its signalized intersection with Ridgeway Road (CR 571) and south of its intersection with Ridgeway Boulevard, as shown on *Figure 1*, a *Site Location Map* in the *Appendix*.

The PDS plan shows 2 proposed points of access to CR 547 and a total of 372 parking spaces in order to support the retail/office building. It should be noted that Manchester Township ordinance requirements call for 370 spaces to support the building; therefore, the parking requirement is met.

SCOPE OF STUDY

In order to prepare a thorough *Traffic Impact Analysis* for the retail/office plan, MRA conducted the following tasks:

1. Made field visits to the site to establish existing roadway and traffic conditions in the area.

Please reply to:
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☐ **105 Elm Street, Lower Level, Westfield, NJ 07090 • (908) 789-7180 • Fax (908) 789-7181**

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2. Conducted peak hour traffic counts in April of 2021 at the signalized intersection of CR 547/CR 571 during critical morning and afternoon peak hours.

3. Reviewed the April 2021 counts and compared them to historical counts prepared by this firm in June 2018 at the same location.

4. Prepared trip generation estimates for the retail and office space based upon Institute of Transportation Engineers (ITE) data.

5. Distributed site generated traffic north and south along CR 547 and through the CR 547/CR 571 intersection based upon the anticipated directional distribution of site traffic.

6. Conducted level of service capacity analyses for the off-site signalized intersection of CR 547 /CR 571 and for the site driveways to CR 547 in accordance with *Highway Capacity Manual* procedures.

7. Reviewed the *Conceptual Site Plan* with respect to availability and accessibility of the parking supply and adherence to proper traffic engineering principles.

The following report sets forth the database accumulated and the conclusions reached with respect to the Manchester retail/office *Use Variance Plan*.

EXISTING CONDITIONS/TRAFFIC VOLUMES

The subject property is located on the west side of CR 547, also known as South Hope Chapel Road and contains approximately 10.4 acres. CR 547 is a 2-lane north/south Ocean County arterial roadway with a posted speed limit of 50 MPH and a double yellow centerline in the vicinity of the subject property. To the south, CR 547 intersects CR 571 (Ridgeway Road) at a signalized intersection with multiple approach lanes on each approach. To the north, Ridgeway Boulevard intersects CR 547 at an angled "Y" type intersection.

Traffic volume data was collected by conducting manual turning movement counts in April of 2021 at the CR 547/CR 571 intersection. A comparison of the April 2021 counts to counts conducted by this firm in June of 2018 (when schools were still open) revealed that the 2018 traffic counts were higher, presumably due to normal peak hour traffic flow prior to the Covid 19 pandemic shut downs. Therefore, the higher June 2018 traffic counts were utilized as a basis for this report. Copies of the 2018 and 2021 traffic counts are appended to this report.

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In order to establish base, *no-build* traffic volumes for the 2031 design year, in accordance with Ocean County Planning Board protocol, MRA reviewed the traffic study prepared by this firm for the proposed *Jackson Trails* residential community of 459 units to be located north of this property, also on the west side of CR 547 in Jackson Township just north of the Manchester border. Although that project has not been officially approved by Jackson Township, MRA assumed it would be approved and would be generating traffic by the 2031 design year. *Figure 2* in the *Appendix* illustrates design year 2031 *no-build* traffic volumes which are based the higher June 2018 traffic counts conducted by this firm at CR 547/CR 571 and includes traffic to be generated by *Jackson Trails* as well as other approved projects proximate to the area within Jackson Township

TRIP GENERATION AND DISTRIBUTION

Estimates of traffic to be generated by the retail and office space were made after consulting the *10th Edition* of the ITE *Trip Generation Manual. Table I* illustrates the anticipated peak hour traffic generation from the 2 components of the *Use Variance Plan*, including the percentage of pass-by traffic that will be generated by the retail component. Pass-by traffic is classified as that traffic that is already on the road passing the site and is diverted into the site driveways, and is therefore not new traffic drawn to the area. In order to provide a conservative or worst case analysis, MRA assumed that all traffic generated by the retail component of the *Use Variance Plan* would be *new* traffic and did not take a credit for pass-by traffic.

TABLE I
TRIP GENERATION
RETAIL/OFFICE BUILDING

	AM PSH			PM PSH		
USE	IN	OUT	TOTAL	IN	OUT	TOTAL
34,000 SF office space	51	8	59	7	34	41
40,000 SF shopping center	64	50	114	132	144	276
Pass-by traffic	0	0	0	66	72	138
New traffic	0	0	0	66	72	138
Total	**115**	**58**	**173**	**139**	**178**	**317**

With respect to the anticipated distribution of site generated traffic, a review was made of adjacent population densities, including the *Jackson Trails* project just to the north of this property. Accordingly, traffic was distributed as follows:

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- 2/3 to and from the north
- 1/3 to and from the south

Site generated and distributed traffic volumes are shown in *Figure 3* in the *Appendix* and, as previously indicated, do not take a credit for pass-by traffic in order to prepare a conservative or worst case analysis.

Site generated and distributed traffic volumes were then surcharged onto 2031 no-build volumes and are shown on *Figure 4* in the *Appendix* entitled *Design Year 2031 Build Traffic Volumes.*

ANALYSIS OF FUTURE TRAFFIC

Traffic engineers calculate levels of service of unsignalized and signalized intersections which relate to the quality of traffic flow. Level of service is a measure of average control delay. Average control delay is the time lost due to deceleration and the amount of time from when a vehicle is stopped for a traffic control device (or at the end of the queue) to when the vehicle departs the intersection. Delay is a relative quantity of driver discomfort, frustration, fuel consumption, and loss in travel time.

Levels of service range from "A" to "F," with "A" being the highest, or best attainable level of service. Level of service "E" with average control delays of not more than 50 seconds per vehicle at an unsignalized intersection or 80 seconds per vehicle at a signalized intersection indicates near to or at capacity conditions and is generally considered the limit of acceptable level of service and delay.

Full definitions of levels of service for unsignalized and signalized intersections as well as level of service summaries are included in the *Appendix*. The intersections studied by this report were analyzed according to the procedures set forth in the *Highway Capacity Manual 2010*, using the *McTrans Highway Capacity Software (HCS7)*, release 7.9.5.

CR547/CR 571

At this signalized intersection, findings were that the intersection will operate at level of service "C" for both the *no-build* and *build* condition for the 2031 design year. All approaches to the intersection will operate at level of service "C", as well. For the PM peak street hour, the intersection will operate at an overall level of service "D" for both the *no-build* and *build* condition. Also, all approaches will operate at level of service "D" or better. Therefore, this signalized off-site intersection will not be significantly impacted by the Manchester *Use Variance* proposal.

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SITE DRIVEWAYS

Two site driveways to CR 547 are proposed. Findings were that exiting movements to CR 547 from the driveways will operate at level of service "D" or better during both the AM and PM peak street hours. Therefore, the site driveways will operate at acceptable levels of service, as well.

USE VARIANCE PLAN

The *Use Variance Plan* prepared by PDS shows 2 points of access to CR 547 and 372 parking spaces that are well distributed around the building. A total of 370 parking spaces are required under Manchester Township code; therefore, the parking requirement is met.

CONCLUSIONS

It is concluded, based on the analysis set forth in this report, that the *Use Variance Plan* to permit 40,000 SF of retail space on the ground floor and 34,000 SF of office space on the second floor of the proposed 2-story building can be approved and operate compatibly with future 2031 design year traffic flows. Levels of service at the site driveways to CR 547 and at the off-site CR 547/CR 571 intersection will not be significantly impacted by the proposal and will continue to operate within acceptable traffic engineering parameters.

The *Use Variance Plan* prepared by PDS shows adequate parking that is well distributed around the building.

A representative from MRA will be in attendance at an upcoming Manchester Township Zoning Board of Adjustment meeting to answer any questions board members, board experts or the public may have.

Very truly yours,

John H. Rea, PE
Principal

Scott T. Kennel
Sr. Associate

cc: April Jenkins
Graham Macfarlane, PE

APPENDIX

McDONOUGH & REA ASSOCIATES

TRAFFIC AND TRANSPORTATION CONSULTING

FIGURE 1

JOB NO. 21-151

DATE: MAY 2021

SUBJECT: MANCHESTER RETAIL / OFFICE
SITE LOCATION MAP

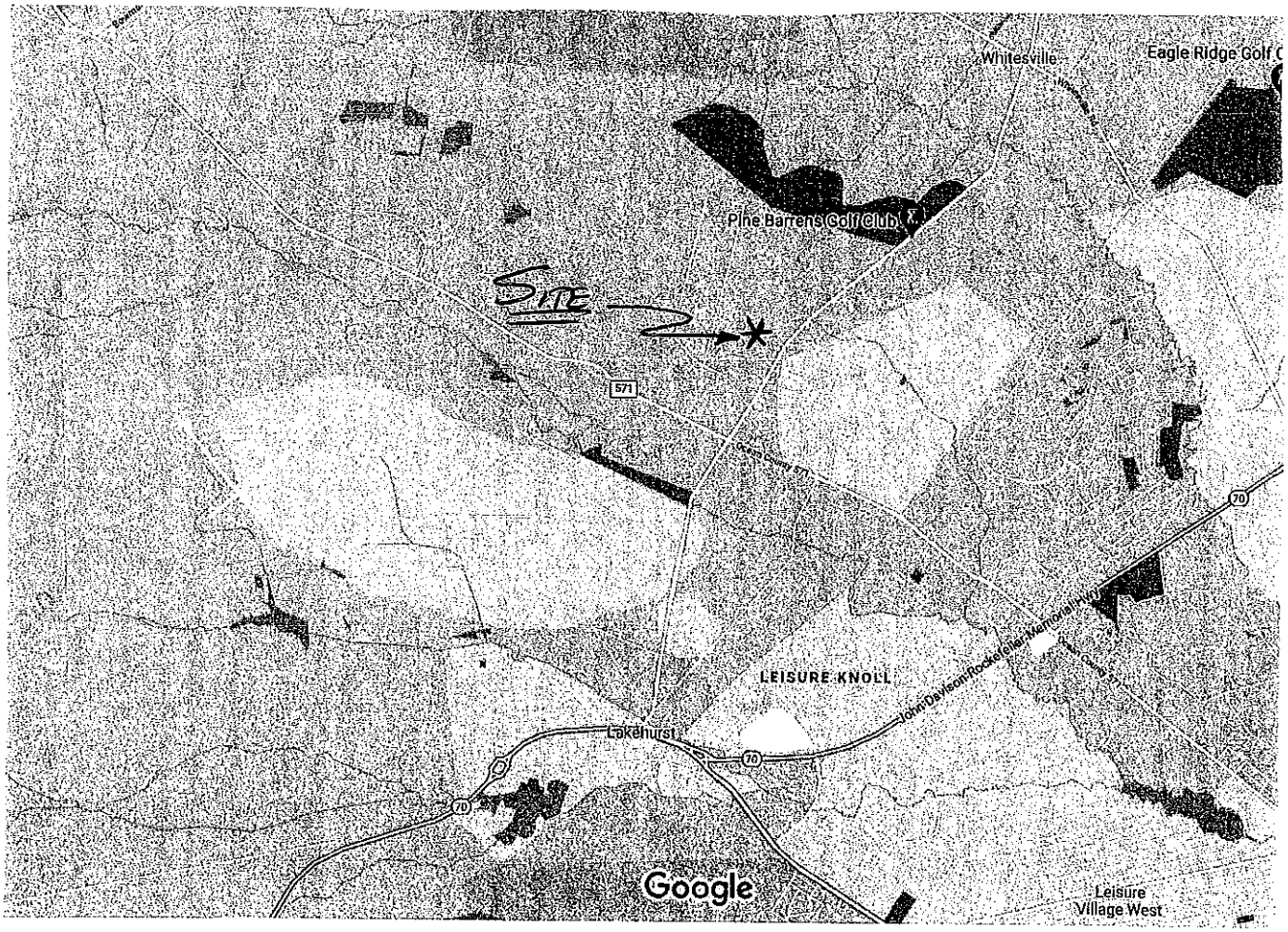

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FIGURE 2

JOB NO. 21-151

DATE: MAY 2021

SUBJECT: MANCHESTER RETAIL / OFFICE
2031 NO - BUILD TRAFFIC VOLUMES

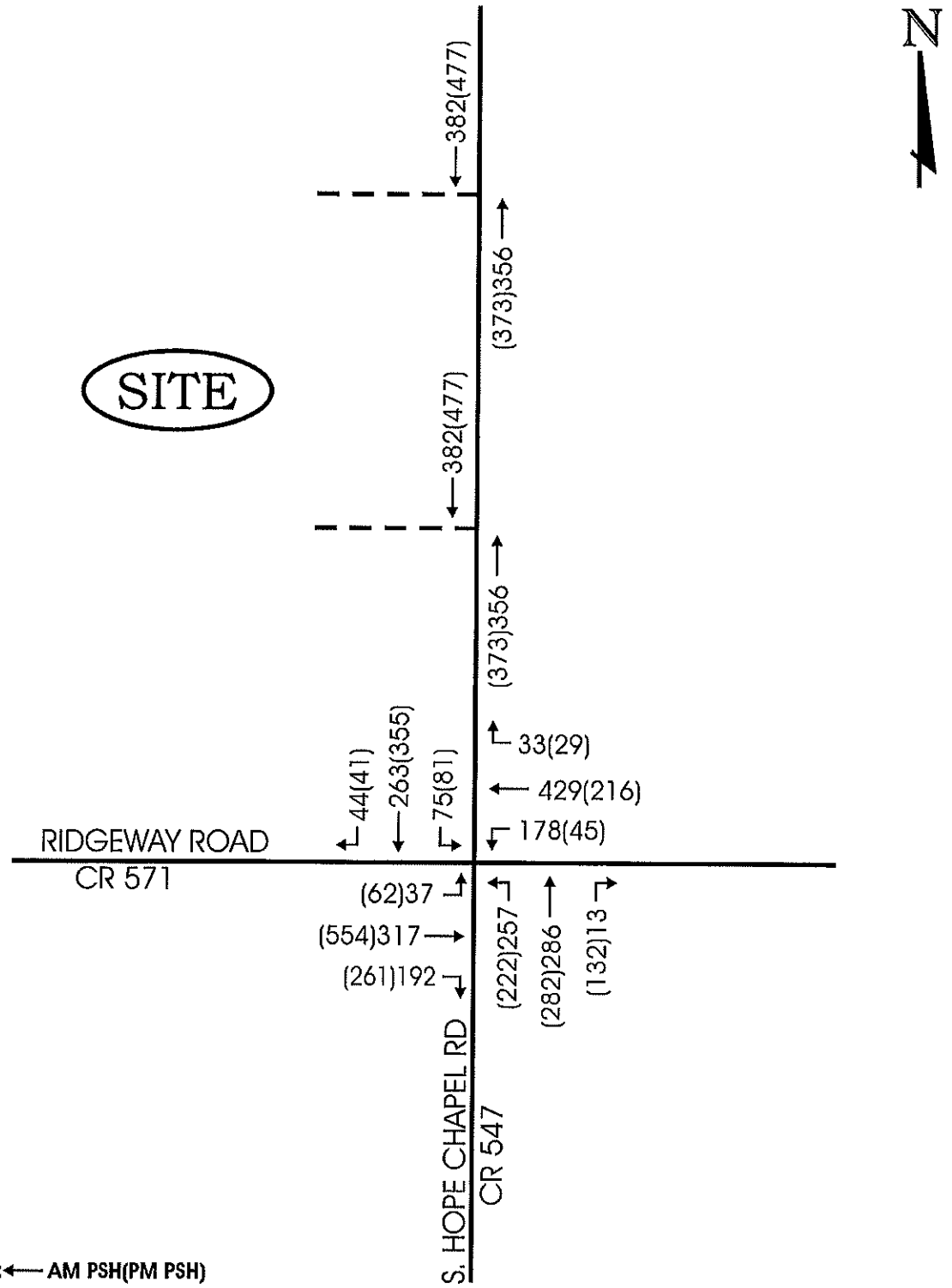

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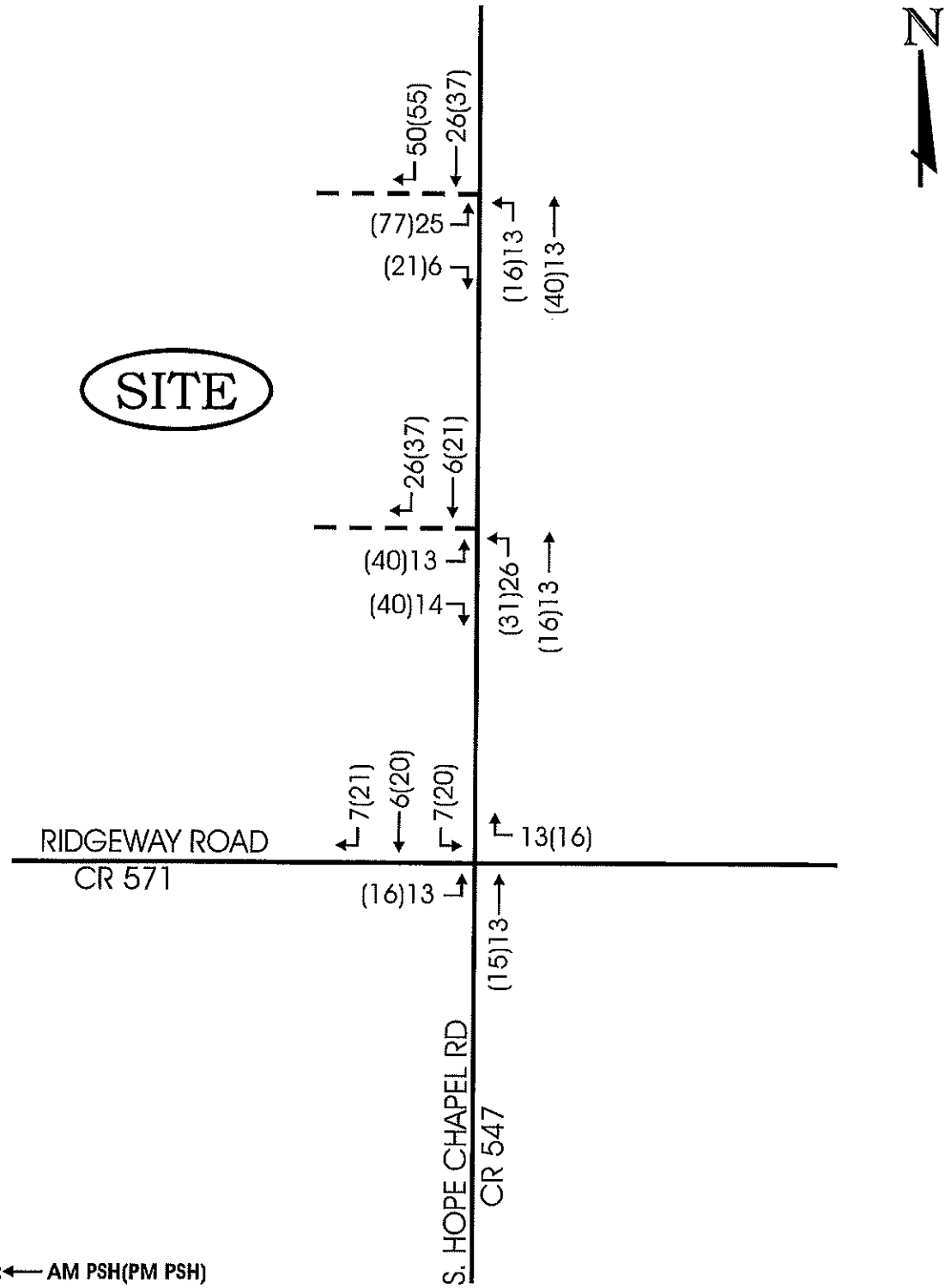
FIGURE 3

JOB NO. 21-151

DATE: MAY 2021

SUBJECT: MANCHESTER RETAIL / OFFICE
SITE GENERATED AM(PM) TRAFFIC VOLUMES



LEGEND:← AM PSH(PM PSH)

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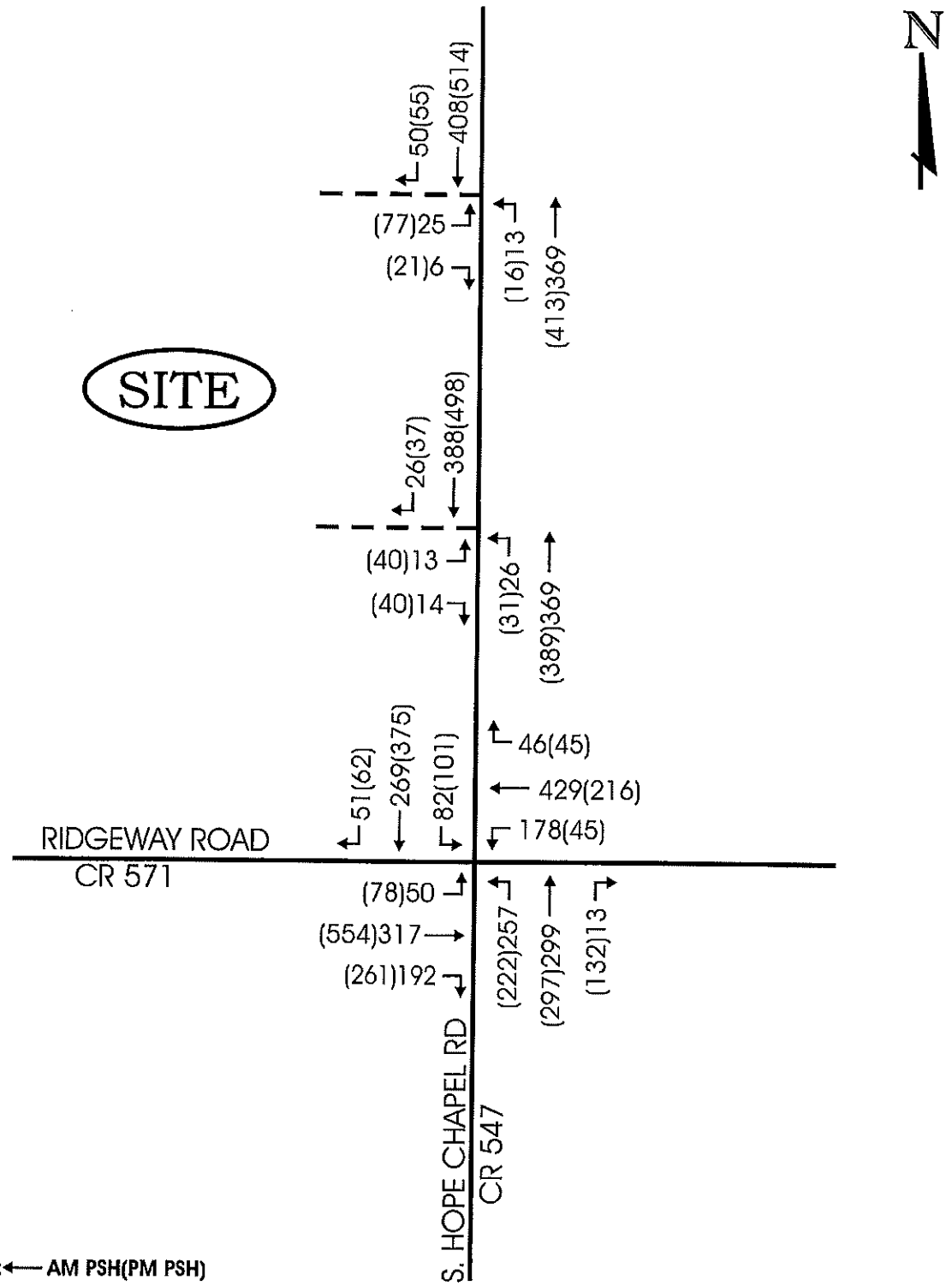
FIGURE 4

JOB NO. 21-151

DATE: MAY 2021

SUBJECT: MANCHESTER RETAIL / OFFICE
2031 BUILD TRAFFIC VOLUMES



LEGEND:← AM PSH(PM PSH)

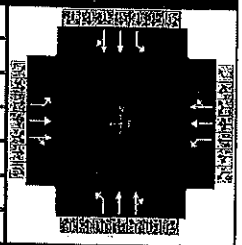
LEVEL OF SERVICE FOR SIGNALIZED INTERSECTIONS[1]

Level of Service	Description	Control (Signal) Delay Per Vehicle (Seconds)
A	Very short delay, good progression; most vehicles do not stop at intersection.	≤ 10.0
B	Generally good progression and/or short cycle length; more vehicles stop at intersection than at Level of Service "A."	> 10.0 and ≤ 20.0
C	Fair progression and/or longer cycle length; significant number of vehicles stop at intersection, though many still pass through without stopping.	> 20.0 and ≤ 35.0
D	Congestion becomes noticeable; longer delays from unfavorable progression, long cycle lengths, or high volume/capacity ratios; many vehicles stop at intersection.	> 35.0 and ≤ 55.0
E	Considered to be the limit of acceptable delay; indicative of poor progression, long cycle lengths, or high volume/capacity ratios; frequent individual cycles failures.	> 55.0 and ≤ 80.0
F	Often an indication of over-saturation (i.e., arrival flow exceeds capacity); also caused by poor progression and long cycles lengths; capacity is not necessarily exceeded under this level of service.	> 80.0

[1] Transportation Research Board, Highway Capacity Manual 2010, National Research Council, Washington, DC, 2010.

HCS7 Signalized Intersection Results Summary

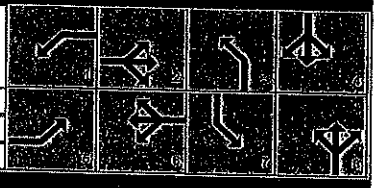
General Information				Intersection Information	
Agency	MRA			Duration, h	0.250
Analyst	STK	Analysis Date		Area Type	Other
Jurisdiction		Time Period	AM	PHF	0.90
Urban Street	CR 571-CR 547	Analysis Year	2031 NOBUILD	Analysis Period	1> 7:00
Intersection		File Name	21-151ANB-1.xus		
Project Description	21-151ANB-1				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	37	317	192	178	429	33	257	286	13	75	263	44

Signal Information			
Cycle, s	90.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	7.0	25.0	10.0	26.0	0.0	0.0	
Yellow	3.0	5.0	5.0	5.0	0.0	0.0	
Red	0.0	2.0	0.0	2.0	0.0	0.0	



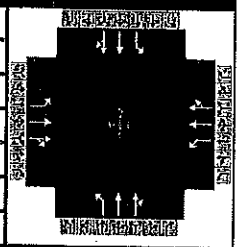
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6	3	8	7	4
Case Number	1.1	4.0	1.1	4.0	1.1	4.0	1.1	4.0
Phase Duration, s	10.0	32.0	10.0	32.0	15.0	33.0	15.0	33.0
Change Period, ($Y+R_c$), s	3.0	7.0	3.0	7.0	5.0	7.0	5.0	7.0
Max Allow Headway (MAH), s	2.7	0.0	2.7	0.0	2.7	2.9	2.7	2.9
Queue Clearance Time (g_s), s	3.4		9.0		12.0	8.3	4.7	8.7
Green Extension Time (g_e), s	0.0	0.0	0.0	0.0	0.0	1.0	0.0	1.0
Phase Call Probability	1.00		1.00		1.00	1.00	1.00	1.00
Max Out Probability	0.14		1.00		1.00	0.00	0.01	0.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (v), veh/h	41	299	267	198	259	254	286	167	165	83	173	168
Adjusted Saturation Flow Rate (s), veh/h/ln	1781	1870	1635	1781	1870	1823	1781	1870	1841	1781	1870	1777
Queue Service Time (g_s), s	1.4	12.3	12.7	7.0	10.5	10.5	10.0	6.3	6.3	2.7	6.5	6.7
Cycle Queue Clearance Time (g_c), s	1.4	12.3	12.7	7.0	10.5	10.5	10.0	6.3	6.3	2.7	6.5	6.7
Green Ratio (g/C)	0.36	0.28	0.28	0.36	0.28	0.28	0.40	0.29	0.29	0.40	0.29	0.29
Capacity (c), veh/h	341	520	454	315	520	506	478	540	532	484	540	513
Volume-to-Capacity Ratio (X)	0.120	0.575	0.588	0.627	0.499	0.502	0.597	0.309	0.311	0.172	0.320	0.327
Back of Queue (Q), ft/ln (85 th percentile)	26.8	208.5	190.4	139.4	179	173.9	171	114.8	112.4	49.4	118.7	114.7
Back of Queue (Q), veh/ln (85 th percentile)	1.1	8.2	7.6	5.5	7.0	7.0	6.7	4.5	4.5	1.9	4.7	4.6
Queue Storage Ratio (RQ) (85 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d_1), s/veh	20.0	27.9	28.1	23.0	27.2	27.3	20.1	25.0	25.0	17.4	25.1	25.1
Incremental Delay (d_2), s/veh	0.7	4.6	5.5	9.1	3.4	3.5	5.4	1.5	1.5	0.8	1.6	1.7
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	20.8	32.5	33.5	32.1	30.6	30.8	25.5	26.5	26.5	18.2	26.6	26.8
Level of Service (LOS)	C	C	C	C	C	C	C	C	C	B	C	C
Approach Delay, s/veh / LOS	32.2	C		31.1	C		26.0	C		25.1	C	
Intersection Delay, s/veh / LOS	29.0						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS								
Bicycle LOS Score / LOS								

HCS7 Signalized Intersection Results Summary

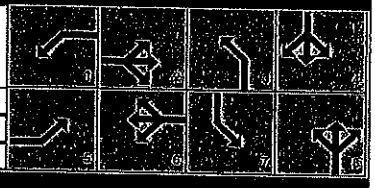
General Information				Intersection Information	
Agency	MRA			Duration, h	0.250
Analyst	STK	Analysis Date		Area Type	Other
Jurisdiction		Time Period	AM	PHF	0.90
Urban Street	CR 571-CR 547	Analysis Year	2031 BUILD	Analysis Period	1> 7:00
Intersection		File Name	21-151AFB-1.xus		
Project Description	21-151AFB-1				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	50	317	192	178	429	46	257	299	13	82	269	51

Signal Information			
Cycle, s	90.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	7.0	25.0	10.0	26.0	0.0	0.0	
Yellow	3.0	5.0	5.0	5.0	0.0	0.0	
Red	0.0	2.0	0.0	2.0	0.0	0.0	



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6	3	8	7	4
Case Number	1.1	4.0	1.1	4.0	1.1	4.0	1.1	4.0
Phase Duration, s	10.0	32.0	10.0	32.0	15.0	33.0	15.0	33.0
Change Period ($Y+R_c$), s	3.0	7.0	3.0	7.0	5.0	7.0	5.0	7.0
Max Allow Headway (MAH), s	2.7	0.0	2.7	0.0	2.7	2.9	2.7	2.9
Queue Clearance Time (g_s), s	3.9		9.0		12.0	8.6	4.9	9.0
Green Extension Time (g_e), s	0.0	0.0	0.0	0.0	0.0	1.1	0.0	1.1
Phase Call Probability	1.00		1.00		1.00	1.00	1.00	1.00
Max Out Probability	0.41		1.00		1.00	0.00	0.02	0.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (v), veh/h	56	299	267	198	268	260	286	174	173	91	181	175
Adjusted Saturation Flow Rate (s), veh/h/ln	1781	1870	1635	1781	1870	1806	1781	1870	1843	1781	1870	1767
Queue Service Time (g_s), s	1.9	12.3	12.7	7.0	10.8	10.9	10.0	6.6	6.6	2.9	6.8	7.0
Cycle Queue Clearance Time (g_c), s	1.9	12.3	12.7	7.0	10.8	10.9	10.0	6.6	6.6	2.9	6.8	7.0
Green Ratio (g/C)	0.36	0.28	0.28	0.36	0.28	0.28	0.40	0.29	0.29	0.40	0.29	0.29
Capacity (c), veh/h	336	520	454	315	520	502	471	540	532	478	540	511
Volume-to-Capacity Ratio (X)	0.165	0.575	0.588	0.627	0.515	0.519	0.606	0.322	0.324	0.191	0.335	0.342
Back of Queue (Q), ft/ln (85 th percentile)	36.8	208.5	190.4	139.4	185.2	179	171.7	119.3	116.9	54.4	123.5	119.1
Back of Queue (Q), veh/ln (85 th percentile)	1.4	8.2	7.6	5.5	7.3	7.2	6.8	4.7	4.7	2.1	4.9	4.8
Queue Storage Ratio (RQ) (85 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d_1), s/veh	20.3	27.9	28.1	23.0	27.4	27.4	20.1	25.1	25.1	17.5	25.2	25.3
Incremental Delay (d_2), s/veh	1.1	4.6	5.5	9.1	3.6	3.8	5.7	1.6	1.6	0.9	1.7	1.8
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	21.3	32.5	33.5	32.1	31.0	31.2	25.8	26.7	26.7	18.4	26.9	27.1
Level of Service (LOS)	C	C	C	C	C	C	C	C	C	B	C	C
Approach Delay, s/veh / LOS	32.0	C		31.4	C		26.3	C		25.2	C	
Intersection Delay, s/veh / LOS	29.1						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS								
Bicycle LOS Score / LOS								

HCS7 Signalized Intersection Results Summary

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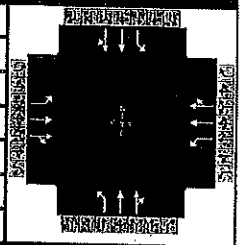
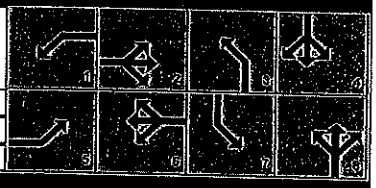


Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	62	554	261	45	216	29	222	282	132	81	355	41

Signal Information			
Cycle, s	90.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	7.0	25.0	10.0	26.0	0.0	0.0
Yellow	3.0	5.0	5.0	5.0	0.0	0.0
Red	0.0	2.0	0.0	2.0	0.0	0.0



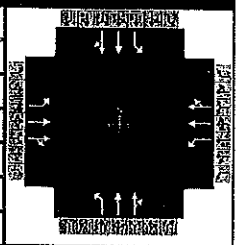
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6	3	8	7	4
Case Number	11	4.0	11	4.0	11	4.0	11	4.0
Phase Duration, s	10.0	32.0	10.0	32.0	15.0	33.0	15.0	33.0
Change Period, ($Y+R_c$), s	3.0	7.0	3.0	7.0	5.0	7.0	5.0	7.0
Max Allow Headway (MAH), s	2.7	0.0	2.7	0.0	2.7	3.0	2.7	3.0
Queue Clearance Time (g_s), s	4.3		3.7		10.7	11.7	4.9	10.8
Green Extension Time (g_e), s	0.0	0.0	0.0	0.0	0.0	1.4	0.0	1.4
Phase Call Probability	1.00		1.00		1.00	1.00	1.00	1.00
Max Out Probability	1.00		0.28		1.00	0.01	0.02	0.01

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (v), veh/h	69	479	427	50	138	135	247	240	220	90	223	217
Adjusted Saturation Flow Rate (s), veh/h/ln	1781	1870	1667	1781	1870	1793	1781	1870	1670	1781	1870	1802
Queue Service Time (g_s), s	2.3	22.4	22.4	1.7	5.2	5.3	8.7	9.4	9.7	2.9	8.7	8.8
Cycle Queue Clearance Time (g_c), s	2.3	22.4	22.4	1.7	5.2	5.3	8.7	9.4	9.7	2.9	8.7	8.8
Green Ratio (g/C)	0.36	0.28	0.28	0.36	0.28	0.28	0.40	0.29	0.29	0.40	0.29	0.29
Capacity (c), veh/h	437	520	463	223	520	498	439	540	483	426	540	521
Volume-to-Capacity Ratio (X)	0.158	0.921	0.922	0.224	0.265	0.270	0.562	0.443	0.457	0.211	0.412	0.417
Back of Queue (Q), ft/ln (85 th percentile)	44.5	415.6	377	35.5	98.3	95.5	148.9	162.1	150.8	54.6	150.9	146
Back of Queue (Q), veh/ln (85 th percentile)	1.8	16.4	15.1	1.4	3.9	3.8	5.9	6.4	6.0	2.1	5.9	5.8
Queue Storage Ratio (RQ) (85 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d_1), s/veh	19.8	31.5	31.6	22.7	25.3	25.4	19.7	26.1	26.2	17.9	25.8	25.9
Incremental Delay (d_2), s/veh	0.8	24.2	26.3	2.3	1.2	1.3	5.1	2.6	3.1	1.1	2.3	2.5
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	20.5	55.7	57.8	25.0	26.6	26.7	24.8	28.7	29.3	19.0	28.2	28.3
Level of Service (LOS)	C	E	E	C	C	C	C	C	C	B	C	C
Approach Delay, s/veh / LOS	54.1	D		26.4	C		27.5	C		26.7	C	
Intersection Delay, s/veh / LOS	37.4						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS								
Bicycle LOS Score / LOS								

HCS7 Signalized Intersection Results Summary

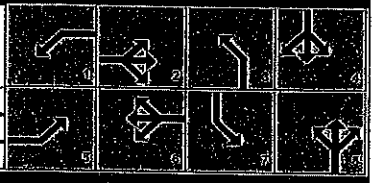
General Information				Intersection Information	
Agency	MRA			Duration, h	0.250
Analyst	STK	Analysis Date		Area Type	Other
Jurisdiction		Time Period	PM	PHF	0.90
Urban Street	CR 571-CR 547	Analysis Year	2031 BUILD	Analysis Period	1> 7:00
Intersection		File Name	21-151PFB-1.xus		
Project Description	21-151PFB-1				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	78	554	261	45	216	45	222	297	132	101	375	62

Signal Information			
Cycle, s	90.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	7.0	25.0	10.0	26.0	0.0	0.0	
Yellow	3.0	5.0	5.0	5.0	0.0	0.0	
Red	0.0	2.0	0.0	2.0	0.0	0.0	



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6	3	8	7	4
Case Number	1.1	4.0	1.1	4.0	1.1	4.0	1.1	4.0
Phase Duration, s	10.0	32.0	10.0	32.0	15.0	33.0	15.0	33.0
Change Period ($Y+R_c$), s	3.0	7.0	3.0	7.0	5.0	7.0	5.0	7.0
Max Allow Headway (MAH), s	2.7	0.0	2.7	0.0	2.7	3.0	2.7	3.0
Queue Clearance Time (g_s), s	5.0		3.7		10.7	12.1	5.6	11.9
Green Extension Time (g_e), s	0.0	0.0	0.0	0.0	0.0	1.5	0.0	1.5
Phase Call Probability	1.00		1.00		1.00	1.00	1.00	1.00
Max Out Probability	1.00		0.28		1.00	0.01	0.08	0.01

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (v), veh/h	87	479	427	50	147	143	247	248	229	112	247	238
Adjusted Saturation Flow Rate (s), veh/h/ln	1781	1870	1667	1781	1870	1759	1781	1870	1677	1781	1870	1778
Queue Service Time (g_s), s	3.0	22.4	22.4	1.7	5.6	5.7	8.7	9.8	10.1	3.6	9.8	9.9
Cycle Queue Clearance Time (g_c), s	3.0	22.4	22.4	1.7	5.6	5.7	8.7	9.8	10.1	3.6	9.8	9.9
Green Ratio (g/C)	0.36	0.28	0.28	0.36	0.28	0.28	0.40	0.29	0.29	0.40	0.29	0.29
Capacity (c), veh/h	427	520	463	223	520	489	421	540	484	420	540	514
Volume-to-Capacity Ratio (X)	0.203	0.921	0.922	0.224	0.283	0.292	0.587	0.459	0.472	0.267	0.458	0.464
Back of Queue (Q), ft/ln (85 th percentile)	57	415.6	377	35.5	104.4	100.9	150.8	167.7	156.5	69.6	167.1	160.3
Back of Queue (Q), veh/ln (85 th percentile)	2.2	16.4	15.1	1.4	4.1	4.0	5.9	6.6	6.3	2.7	6.6	6.4
Queue Storage Ratio (RQ) (85 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d_1), s/veh	20.0	31.5	31.6	22.7	25.5	25.5	19.9	26.2	26.3	18.2	26.2	26.3
Incremental Delay (d_2), s/veh	1.1	24.2	26.3	2.3	1.4	1.5	5.9	2.8	3.3	1.6	2.8	3.0
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	21.1	55.7	57.8	25.0	26.8	27.1	25.8	29.0	29.6	19.8	29.0	29.3
Level of Service (LOS)	C	E	E	C	C	C	C	C	C	B	C	C
Approach Delay, s/veh / LOS	53.6	D		26.7	C		28.1	C		27.4	C	
Intersection Delay, s/veh / LOS	37.3						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS								
Bicycle LOS Score / LOS								

LEVEL OF SERVICE CRITERIA
FOR
TWO-WAY STOP-CONTROLLED INTERSECTIONS[1]

Level of Service	Average Control Delay
A	$\leq$ 10.0 Seconds Per Vehicle
B	> 10.0 and $\leq$ 15.0 Seconds Per Vehicle
C	> 15.0 and $\leq$ 25.0 Seconds Per Vehicle
D	> 25.0 and $\leq$ 35.0 Seconds Per Vehicle
E	> 35.0 and $\leq$ 50.0 Seconds Per Vehicle
F	> 50.0 Seconds Per Vehicle

[1] Transportation Research Board, Highway Capacity Manual 2010, National Research Council, Washington, DC, 2010.

HCS7 Two-Way Stop-Control Report

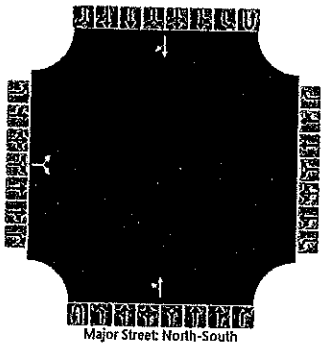
General Information

Analyst	STK
Agency/Co.	MRA
Date Performed	5/12/2021
Analysis Year	2031
Time Analyzed	AM
Intersection Orientation	North-South
Project Description	21-151AFB-2 BUILD

Site Information

Intersection	S HOPE CHAPEL&SITE NORTH
Jurisdiction	
East/West Street	NORTH ACCESS
North/South Street	SOUTH HOPE CHAPEL
Peak Hour Factor	0.95
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	0	0	0	0	1	0	0	0	1	0
Configuration			LR							LT						TR
Volume (veh/h)		25		6						13	369				408	50
Percent Heavy Vehicles (%)		3		3						3						
Proportion Time Blocked																
Percent Grade (%)		0														
Right Turn Channelized																
Median Type | Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1		6.2						4.1						
Critical Headway (sec)		6.43		6.23						4.13						
Base Follow-Up Headway (sec)		3.5		3.3						2.2						
Follow-Up Headway (sec)		3.53		3.33						2.23						

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			33							14						
Capacity, c (veh/h)			347							1075						
v/c Ratio			0.09							0.01						
95% Queue Length, Q_{95} (veh)			0.3							0.0						
Control Delay (s/veh)			16.5							8.4						
Level of Service (LOS)			C							A						
Approach Delay (s/veh)		16.5								0.4						
Approach LOS		C														

HCS7 Two-Way Stop-Control Report

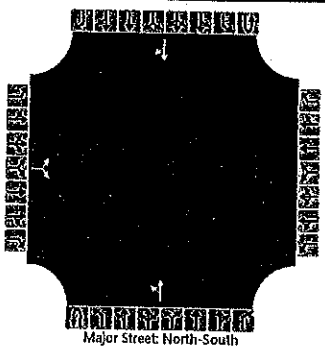
General Information

Analyst	STK
Agency/Co.	MRA
Date Performed	5/12/2021
Analysis Year	2031
Time Analyzed	PM
Intersection Orientation	North-South
Project Description	21-151PFB-2 BUILD

Site Information

Intersection	S HOPE CHAPEL&SITE NORTH
Jurisdiction	
East/West Street	NORTH ACCESS
North/South Street	SOUTH HOPE CHAPEL
Peak Hour Factor	0.95
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	0	0	0	0	1	0	0	0	1	0
Configuration			LR							LT						TR
Volume (veh/h)		77		21						16	413				514	55
Percent Heavy Vehicles (%)		3		3						3						
Proportion Time Blocked																
Percent Grade (%)		0														
Right Turn Channelized																
Median Type | Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1		6.2						4.1						
Critical Headway (sec)		6.43		6.23						4.13						
Base Follow-Up Headway (sec)		3.5		3.3						2.2						
Follow-Up Headway (sec)		3.53		3.33						2.23						

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			103							17						
Capacity, c (veh/h)			280							973						
v/c Ratio			0.37							0.02						
95% Queue Length, Q_{95} (veh)			1.6							0.1						
Control Delay (s/veh)			25.2							8.8						
Level of Service (LOS)			D							A						
Approach Delay (s/veh)		25.2								0.5						
Approach LOS		D														

HCS7 Two-Way Stop-Control Report

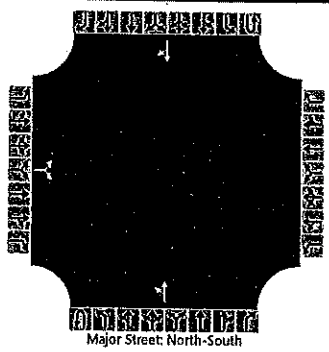
General Information

Analyst	STK
Agency/Co.	MRA
Date Performed	5/12/2021
Analysis Year	2031
Time Analyzed	AM
Intersection Orientation	North-South
Project Description	21-151AFB-3 BUILD

Site Information

Intersection	S HOPE CHAPEL&SITE SOUTH
Jurisdiction	
East/West Street	SOUTH ACCESS
North/South Street	SOUTH HOPE CHAPEL
Peak Hour Factor	0.95
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	0	0	0	0	1	0	0	0	1	0
Configuration			LR							LT						TR
Volume (veh/h)		13		14						26	369				388	26
Percent Heavy Vehicles (%)		3		3						3						
Proportion Time Blocked																
Percent Grade (%)		0														
Right Turn Channelized																
Median Type | Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1		6.2						4.1						
Critical Headway (sec)		6.43		6.23						4.13						
Base Follow-Up Headway (sec)		3.5		3.3						2.2						
Follow-Up Headway (sec)		3.53		3.33						2.23						

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			28							27						
Capacity, c (veh/h)			423							1119						
v/c Ratio			0.07							0.02						
95% Queue Length, Q_{95} (veh)			0.2							0.1						
Control Delay (s/veh)			14.1							8.3						
Level of Service (LOS)			B							A						
Approach Delay (s/veh)		14.1								0.8						
Approach LOS		B														

HCS7 Two-Way Stop-Control Report

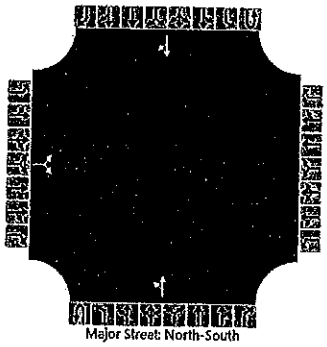
General Information

Analyst	STK
Agency/Co.	MRA
Date Performed	5/12/2021
Analysis Year	2031
Time Analyzed	PM
Intersection Orientation	North-South
Project Description	21-151PFB-3 BUILD

Site Information

Intersection	S HOPE CHAPEL&SITE SOUTH
Jurisdiction	
East/West Street	SOUTH ACCESS
North/South Street	SOUTH HOPE CHAPEL
Peak Hour Factor	0.95
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	0	0	0	0	1	0	0	0	1	0
Configuration			LR							LT						TR
Volume (veh/h)		40		40						31	389				498	37
Percent Heavy Vehicles (%)		3		3						3						
Proportion Time Blocked																
Percent Grade (%)		0														
Right Turn Channelized																
Median Type | Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1		6.2						4.1						
Critical Headway (sec)		6.43		6.23						4.13						
Base Follow-Up Headway (sec)		3.5		3.3						2.2						
Follow-Up Headway (sec)		3.53		3.33						2.23						

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			84							33						
Capacity, c (veh/h)			342							1003						
v/c Ratio			0.25							0.03						
95% Queue Length, Q_{95} (veh)			1.0							0.1						
Control Delay (s/veh)			18.9							8.7						
Level of Service (LOS)			C							A						
Approach Delay (s/veh)		18.9								1.0						
Approach LOS		C														

OFFICE / RETAIL VARIANCE
RIDGEWAY RD & SOUTH HOPE CHAPEL RD
MANCHESTER TOWNSHIP, OCEAN COUNTY
MRA JOB 21-151 THURSDAY AM COUNT

McDonough & Rea Associates
1431 Lakewood Road Suite C
Manasquan NJ 08736
(732) 528-7076

File Name : 21151 test hope chapel & ridgeway am1
Site Code : 00021151
Start Date : 4/8/2021
Page No : 1

Groups Printed- CARS - TRUCKS - SCHOOL BUS

	South Hope Chapel Rd (CR 547) Southbound					Ridgeway Road (CR 571) Westbound					South Hope Chapel Rd (CR 547) Northbound					Ridgeway Road (CR 571) Eastbound					
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Int. Total
07:00 AM	6	41	1	3	51	21	68	6	1	96	35	46	3	0	84	9	36	23	5	73	304
07:15 AM	11	46	4	5	66	28	79	1	5	113	31	48	1	1	81	12	43	25	2	82	342
07:30 AM	8	51	8	1	68	18	74	9	2	103	37	46	2	1	86	13	58	22	9	102	359
07:45 AM	6	46	1	7	60	14	62	5	4	85	41	53	1	0	95	10	55	35	6	106	346
Total	31	184	14	16	245	81	283	21	12	397	144	193	7	2	346	44	192	105	22	363	1351
08:00 AM	5	32	3	3	43	6	74	8	4	92	41	56	4	0	101	15	63	22	5	105	341
08:15 AM	3	43	12	2	60	7	65	3	5	80	51	54	3	0	108	11	50	34	8	103	351
08:30 AM	8	38	2	5	53	11	63	3	0	77	31	46	2	0	79	15	56	28	13	112	321
08:45 AM	6	47	4	2	59	14	53	3	1	71	26	40	2	0	68	12	63	31	1	107	305
Total	22	160	21	12	215	38	255	17	10	320	149	196	11	0	356	53	232	115	27	427	1318
09:00 AM	5	49	5	3	62	12	67	2	5	86	26	38	0	2	66	14	53	19	4	90	304
09:15 AM	6	40	3	4	53	9	63	5	3	80	38	42	5	1	86	10	60	25	2	97	316
Grand Total	64	433	43	35	575	140	668	45	30	883	357	469	23	5	854	121	537	264	55	977	3289
Apprch %	11.1	75.3	7.5	6.1		15.9	75.7	5.1	3.4		41.8	54.9	2.7	0.6		12.4	55.0	27.0	5.6		
Total %	1.9	13.2	1.3	1.1	17.5	4.3	20.3	1.4	0.9	26.8	10.9	14.3	0.7	0.2	26.0	3.7	16.3	8.0	1.7	29.7	

	South Hope Chapel Rd (CR 547) Southbound					Ridgeway Road (CR 571) Westbound					South Hope Chapel Rd (CR 547) Northbound					Ridgeway Road (CR 571) Eastbound					
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Int. Total
Peak Hour From 07:00 AM to 09:15 AM - Peak 1 of 1																					
Intersection	07:30 AM																				
Volume	22	172	24	13	231	45	275	25	15	360	170	209	10	1	390	49	226	113	28	416	1397
Percent	9.5	74.5	10.4	5.6		12.5	76.4	6.9	4.2		43.6	53.6	2.6	0.3		11.8	54.3	27.2	6.7		
07:30 Volume	8	51	8	1	68	18	74	9	2	103	37	46	2	1	86	13	58	22	9	102	359
Peak Factor																					0.973
High Int.	07:30 AM					07:30 AM					08:15 AM					07:45 AM					
Volume	8	51	8	1	68	18	74	9	2	103	51	54	3	0	108	10	55	35	6	106	
Peak Factor					0.849					0.874					0.903					0.981	

OFFICE / RETAIL VARIANCE
RIDGEWAY RD & SOUTH HOPE CHAPEL RD
MANCHESTER TOWNSHIP, OCEAN COUNTY
MRA JOB 21-151 THURSDAY PM COUNT

McDonough & Rea Associates
1431 Lakewood Road Suite C
Manasquan NJ 08736
(732) 528-7076

File Name : 21151 test hope chapel & ridgeway pm1
Site Code : 00021151
Start Date : 4/8/2021
Page No : 1

Groups Printed- CARS - TRUCKS - SCHOOL BUS

	South Hope Chapel Rd (CR 547) Southbound					Ridgeway Road (CR 571) Westbound					South Hope Chapel Rd (CR 547) Northbound					Ridgeway Road (CR 571) Eastbound					
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Int. Total
04:00 PM	13	62	3	2	80	13	47	6	1	67	41	43	16	7	107	10	130	35	3	178	432
04:15 PM	18	67	9	1	95	14	56	13	3	86	50	52	14	6	122	12	139	38	4	193	496
04:30 PM	14	78	6	7	105	12	51	5	3	71	42	45	19	12	118	7	97	32	15	151	445
04:45 PM	17	64	1	1	83	13	67	4	3	87	46	41	11	8	106	12	127	41	10	190	466
Total	62	271	19	11	363	52	221	28	10	311	179	181	60	33	453	41	493	146	32	712	1839
05:00 PM	14	61	4	5	84	14	58	3	3	78	43	49	4	5	101	3	85	47	1	136	399
05:15 PM	18	58	11	6	93	5	76	8	3	92	52	60	9	3	124	8	92	49	10	159	468
05:30 PM	7	59	5	5	76	10	77	3	2	92	42	44	3	7	96	6	113	52	10	181	445
05:45 PM	17	52	6	5	80	12	67	1	3	83	42	47	5	5	99	11	113	32	6	162	424
Total	56	230	26	21	333	41	278	15	11	345	179	200	21	20	420	28	403	180	27	638	1736
06:00 PM	9	55	2	8	74	4	54	2	3	63	27	48	2	9	86	11	76	26	9	122	345
06:15 PM	13	46	3	4	66	7	62	4	2	75	29	44	6	0	79	10	82	35	6	133	353
06:30 PM	12	46	1	6	65	8	48	6	1	63	21	34	1	5	61	7	85	34	13	139	328
06:45 PM	10	43	5	1	59	13	45	5	2	65	34	34	4	6	78	3	79	38	7	127	329
Total	44	190	11	19	264	32	209	17	8	266	111	160	13	20	304	31	322	133	35	521	1355
Grand Total	162	691	56	51	960	125	708	60	29	922	469	541	94	73	1177	100	1218	459	94	1871	4930
Apprch %	16.9	72.0	5.8	5.3		13.6	76.8	6.5	3.1		39.8	46.0	8.0	6.2		5.3	65.1	24.5	5.0		
Total %	3.3	14.0	1.1	1.0	19.5	2.5	14.4	1.2	0.6	18.7	9.5	11.0	1.9	1.5	23.9	2.0	24.7	9.3	1.9	38.0	

	South Hope Chapel Rd (CR 547) Southbound					Ridgeway Road (CR 571) Westbound					South Hope Chapel Rd (CR 547) Northbound					Ridgeway Road (CR 571) Eastbound					
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Int. Total
Peak Hour From 04:00 PM to 06:45 PM - Peak 1 of 1																					
Intersection	04:00 PM																				
Volume	62	271	19	11	363	52	221	28	10	311	179	181	60	33	453	41	493	146	32	712	1839
Percent	17.1	74.7	5.2	3.0		16.7	71.1	9.0	3.2		39.5	40.0	13.2	7.3		5.8	69.2	20.5	4.5		
04:15 Volume	18	67	9	1	95	14	56	13	3	86	50	52	14	6	122	12	139	38	4	193	496
Peak Factor																					0.927
High Int.	04:30 PM					04:45 PM					04:15 PM					04:15 PM					
Volume	14	78	6	7	105	13	67	4	3	87	50	52	14	6	122	12	139	38	4	193	
Peak Factor					0.864					0.894					0.928					0.922	

MIELE FARM / 2018
S. HOPE CHAPEL & RIDGEWAY ROAD
JACKSON TOWNSHIP, OCEAN COUNTY
MRA JOB 18-177 THURSDAY AM COUNT

McDonough & Rea Associates
1431 Lakewood Road Suite C
Manasquan NJ 08736
(732) 528-7076

File Name : 18177 ridgeway & s hope chapel am1
Site Code : 00018177
Start Date : 6/14/2018
Page No : 1

Groups Printed- CARS - TRUCKS - SCHOOL BUS

	S. Hope Chapel Road (CR 547) Southbound					Ridgeway Road (CR 571) Westbound					S. Hope Chapel Road (CR 547) Northbound					Ridgeway Road (CR 571) Eastbound					
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Int. Total
07:00 AM	7	51	5	2	65	61	111	5	2	179	73	45	2	0	120	8	51	40	9	108	472
07:15 AM	18	62	8	6	94	48	103	8	0	159	62	52	2	5	121	11	57	39	10	117	491
07:30 AM	18	42	4	4	68	44	124	10	2	180	69	64	4	1	138	4	78	31	9	122	508
07:45 AM	14	65	3	8	90	44	92	3	0	139	51	51	2	0	104	9	68	41	11	129	462
Total	57	220	20	20	317	197	430	26	4	657	255	212	10	6	483	32	254	151	39	476	1933
08:00 AM	15	62	1	3	81	39	88	5	2	134	64	51	1	1	117	8	65	31	10	114	446
08:15 AM	10	37	4	2	53	35	86	3	5	129	50	54	1	2	107	9	77	32	10	128	417
08:30 AM	7	56	6	3	72	23	76	6	3	108	41	51	3	2	97	10	65	26	12	113	390
08:45 AM	11	60	3	1	75	18	69	6	1	94	42	44	3	2	91	13	85	34	13	145	405
Total	43	215	14	9	281	115	319	20	11	465	197	200	8	7	412	40	292	123	45	500	1658
09:00 AM	12	39	2	4	57	23	56	4	5	88	30	33	2	9	74	13	72	27	14	126	345
09:15 AM	5	35	3	2	45	14	56	0	2	72	28	29	4	2	63	9	62	23	10	104	284
Grand Total	117	509	39	35	700	349	861	50	22	1282	510	474	24	24	1032	94	680	324	108	1206	4220
Apprch %	16.7	72.7	5.6	5.0		27.2	67.2	3.9	1.7		49.4	45.9	2.3	2.3		7.8	56.4	26.9	9.0		
Total %	2.8	12.1	0.9	0.8	16.6	8.3	20.4	1.2	0.5	30.4	12.1	11.2	0.6	0.6	24.5	2.2	16.1	7.7	2.6	28.6	

	S. Hope Chapel Road (CR 547) Southbound					Ridgeway Road (CR 571) Westbound					S. Hope Chapel Road (CR 547) Northbound					Ridgeway Road (CR 571) Eastbound					
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Int. Total
Peak Hour From 07:00 AM to 09:15 AM - Peak 1 of 1																					
Intersection	07:00 AM																				
Volume	57	220	20	20	317	197	430	26	4	657	255	212	10	6	483	32	254	151	39	476	1933
Percent	18.0	69.4	6.3	6.3		30.0	65.4	4.0	0.6		52.8	43.9	2.1	1.2		6.7	53.4	31.7	8.2		
07:30 Volume	18	42	4	4	68	44	124	10	2	180	69	64	4	1	138	4	78	31	9	122	508
Peak Factor																					0.951
High Int.	07:15 AM					07:30 AM					07:30 AM					07:45 AM					
Volume	18	62	8	6	94	44	124	10	2	180	69	64	4	1	138	9	68	41	11	129	
Peak Factor					0.843					0.913					0.875					0.922	

MIELE FARM - 2018
S. HOPE CHAPEL & RIDGEWAY ROAD
JACKSON TOWNSHIP, OCEAN COUNTY
MRA JOB 18-177 WEDNESDAY PM COUNT

McDonough & Rea Associates
1431 Lakewood Road Suite C
Manasquan NJ 08736
(732) 528-7076

File Name : 18177 ridgeway & s hope chapel pm1
Site Code : 00018177
Start Date : 6/13/2018
Page No : 1

Groups Printed- CARS - TRUCKS - SCHOOL BUS

	S. Hope Chapel Road (CR 547) Southbound					Ridgeway Road (CR 571) Westbound					S. Hope Chapel Road (CR 547) Northbound					Ridgeway Road (CR 571) Eastbound					
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Int. Total
04:00 PM	20	42	5	6	73	18	46	8	3	75	66	60	52	16	194	11	99	34	10	154	496
04:15 PM	11	71	5	1	88	18	74	7	3	102	66	62	39	17	184	9	130	28	4	171	545
04:30 PM	16	77	6	1	100	12	53	6	1	72	58	62	53	20	193	8	115	41	14	178	543
04:45 PM	18	52	2	5	77	5	51	11	1	68	48	53	30	18	149	4	119	53	15	191	485
Total	65	242	18	13	338	53	224	32	8	317	238	237	174	71	720	32	463	156	43	694	2069
05:00 PM	19	65	9	1	94	13	60	2	0	75	48	60	31	7	146	13	134	54	10	211	526
05:15 PM	16	78	4	2	100	10	47	4	1	62	67	63	22	17	169	7	134	41	13	195	526
05:30 PM	17	51	5	2	75	12	49	10	0	71	51	40	14	7	112	9	107	42	8	166	424
05:45 PM	14	74	4	3	95	6	40	5	4	55	36	47	18	4	105	15	129	55	14	213	468
Total	66	268	22	8	364	41	196	21	5	263	202	210	85	35	532	44	504	192	45	785	1944
06:00 PM	9	48	3	7	67	2	38	4	1	45	42	33	6	11	92	2	95	30	4	131	335
06:15 PM	11	54	10	5	80	7	51	5	0	63	24	20	8	10	62	4	88	22	13	127	332
06:30 PM	9	51	3	1	64	8	36	2	2	48	24	39	8	10	81	2	107	34	5	148	341
06:45 PM	9	35	2	3	49	3	38	3	1	45	26	31	2	7	66	5	76	23	7	111	271
Total	38	188	18	16	260	20	163	14	4	201	116	123	24	38	301	13	366	109	29	517	1279
Grand Total	169	698	58	37	962	114	583	67	17	781	556	570	283	144	1553	89	1333	457	117	1996	5292
Apprch %	17.6	72.6	6.0	3.8		14.6	74.6	8.6	2.2		35.8	36.7	18.2	9.3		4.5	66.8	22.9	5.9		
Total %	3.2	13.2	1.1	0.7	18.2	2.2	11.0	1.3	0.3	14.8	10.5	10.8	5.3	2.7	29.3	1.7	25.2	8.6	2.2	37.7	

	S. Hope Chapel Road (CR 547) Southbound					Ridgeway Road (CR 571) Westbound					S. Hope Chapel Road (CR 547) Northbound					Ridgeway Road (CR 571) Eastbound					
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Int. Total
Peak Hour From 04:00 PM to 06:45 PM - Peak 1 of 1																					
Intersection	04:15 PM																				
Volume	64	265	22	8	359	48	238	26	5	317	220	237	153	62	672	34	498	176	43	751	2099
Percent	17.8	73.8	6.1	2.2		15.1	75.1	8.2	1.6		32.7	35.3	22.8	9.2		4.5	66.3	23.4	5.7		
04:15 Volume	11	71	5	1	88	18	74	7	3	102	66	62	39	17	184	9	130	28	4	171	545
Peak Factor																					0.963
High Int.	04:30 PM					04:15 PM					04:30 PM					05:00 PM					
Volume	16	77	6	1	100	18	74	7	3	102	58	62	53	20	193	13	134	54	10	211	
Peak Factor					0.898					0.777					0.870					0.890	