

# final report

March 7, 2022

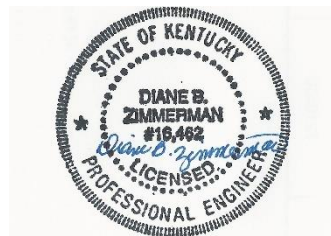
## Traffic Impact Study

\*With traffic assigned through the City of Hurstbourne

*Apartments  
Oxmoor Partial Lot 4B and 5  
Louisville, KY*

Prepared for

Louisville Metro Planning Commission



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## INTRODUCTION

The development plan for an apartment community on Christian Way in Louisville, KY shows 345 apartment units. **Figure 1** displays a map of the site. Access to the community will be from two entrances on the Christian Way. The purpose of this study is to examine the traffic impacts of the development upon the adjacent highway system. For this study, the impact area was defined to be the intersections of Shelbyville Road with New LaGrange Road, Oxmoor Lane, Christian Way, and Lyndon Lane and Hurstbourne Parkway at Linn Station Road.

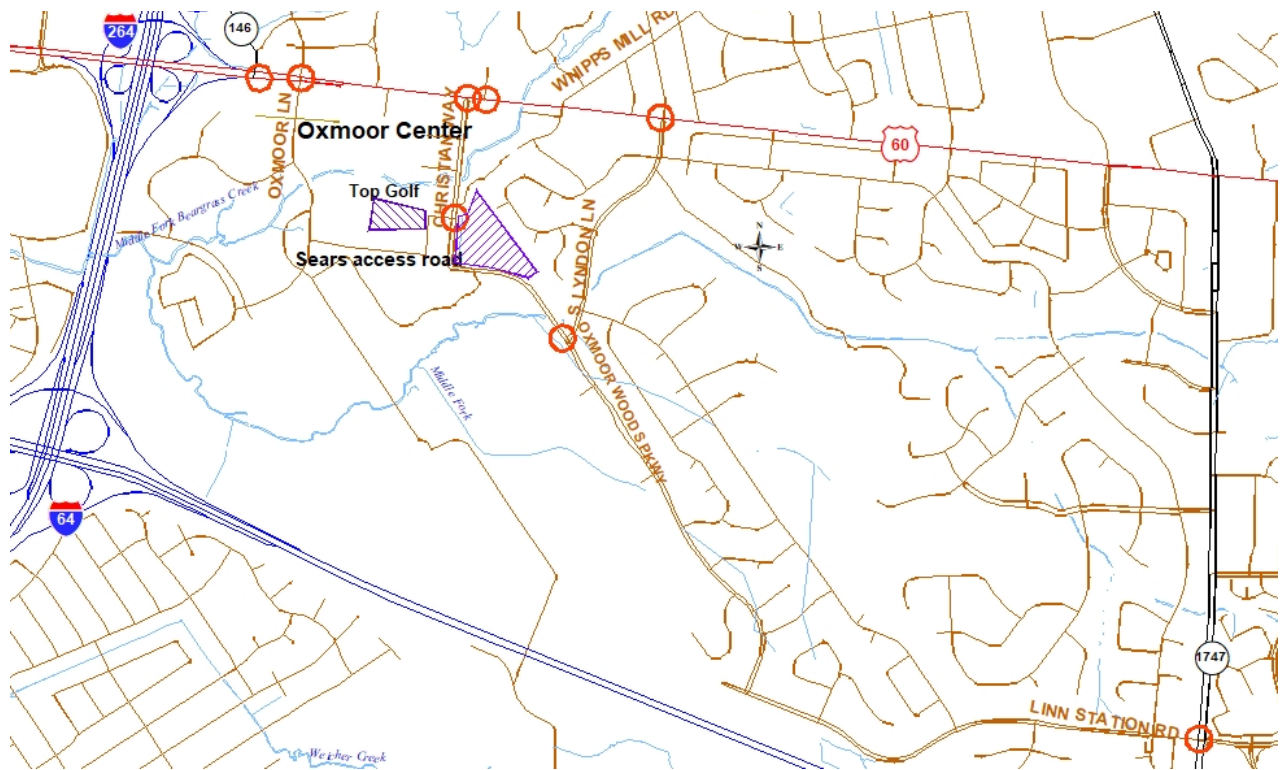


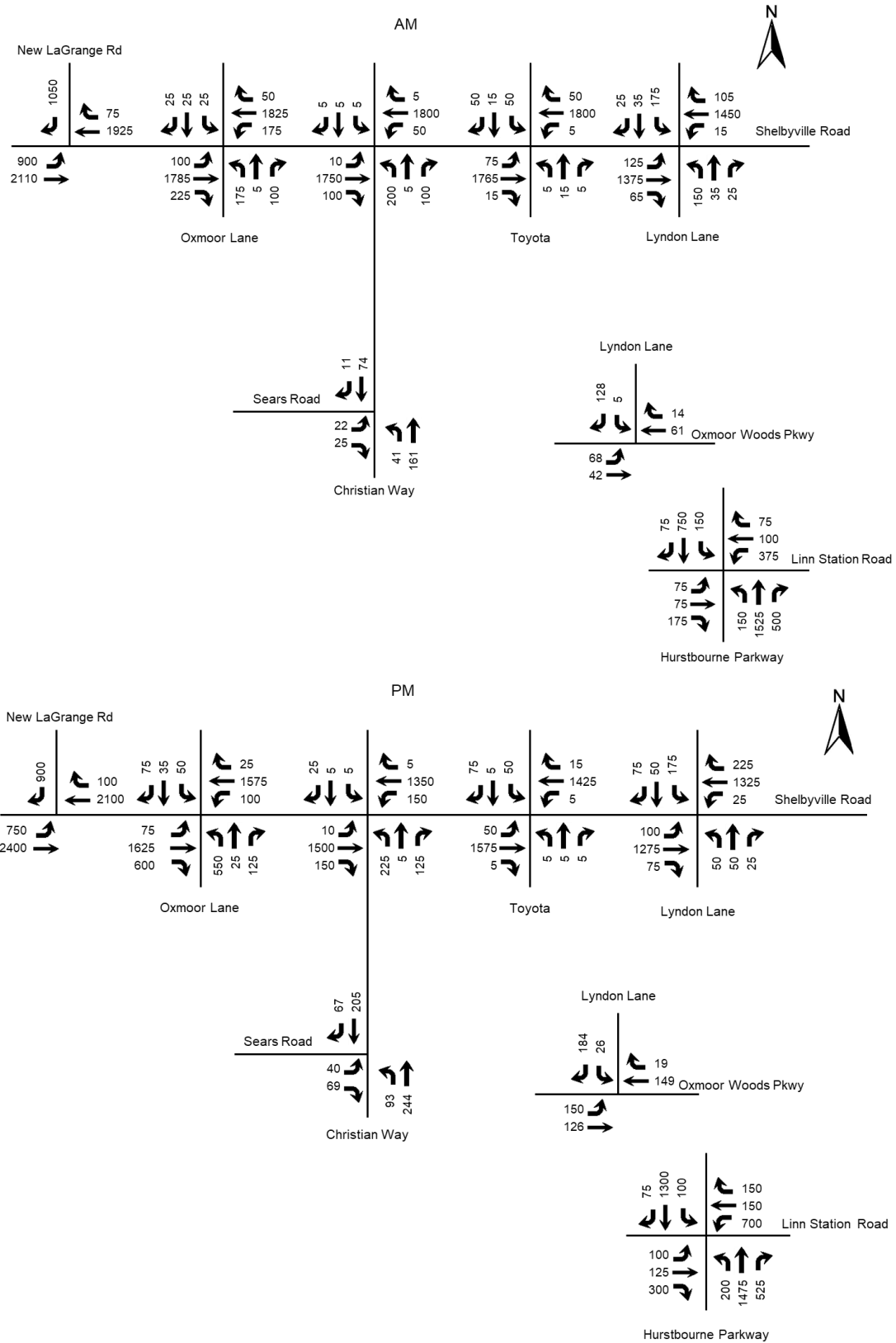
Figure 1. Site Map

## EXISTING CONDITIONS

Christian Way is maintained by Louisville Metro. The road has four lanes with a twenty-two-foot median with an estimated 2021 AADT of 8,500 vehicles per day. There is a sidewalk on the east side between Shelbyville Road and Christian Court. The speed limit is 25 mph. The intersection of the Oxmoor Center is controlled with a stop sign on the driveway.

Peak hour traffic counts for the intersections adjacent to Oxmoor Center were obtained on May 17, 2018. The Shelbyville Road and Hurstbourne Parkway intersections were obtained from the Metro Traffic Engineering Synchro model 2021 counts. **Figure 2** illustrate the a.m. and p.m. peak hour traffic volumes.

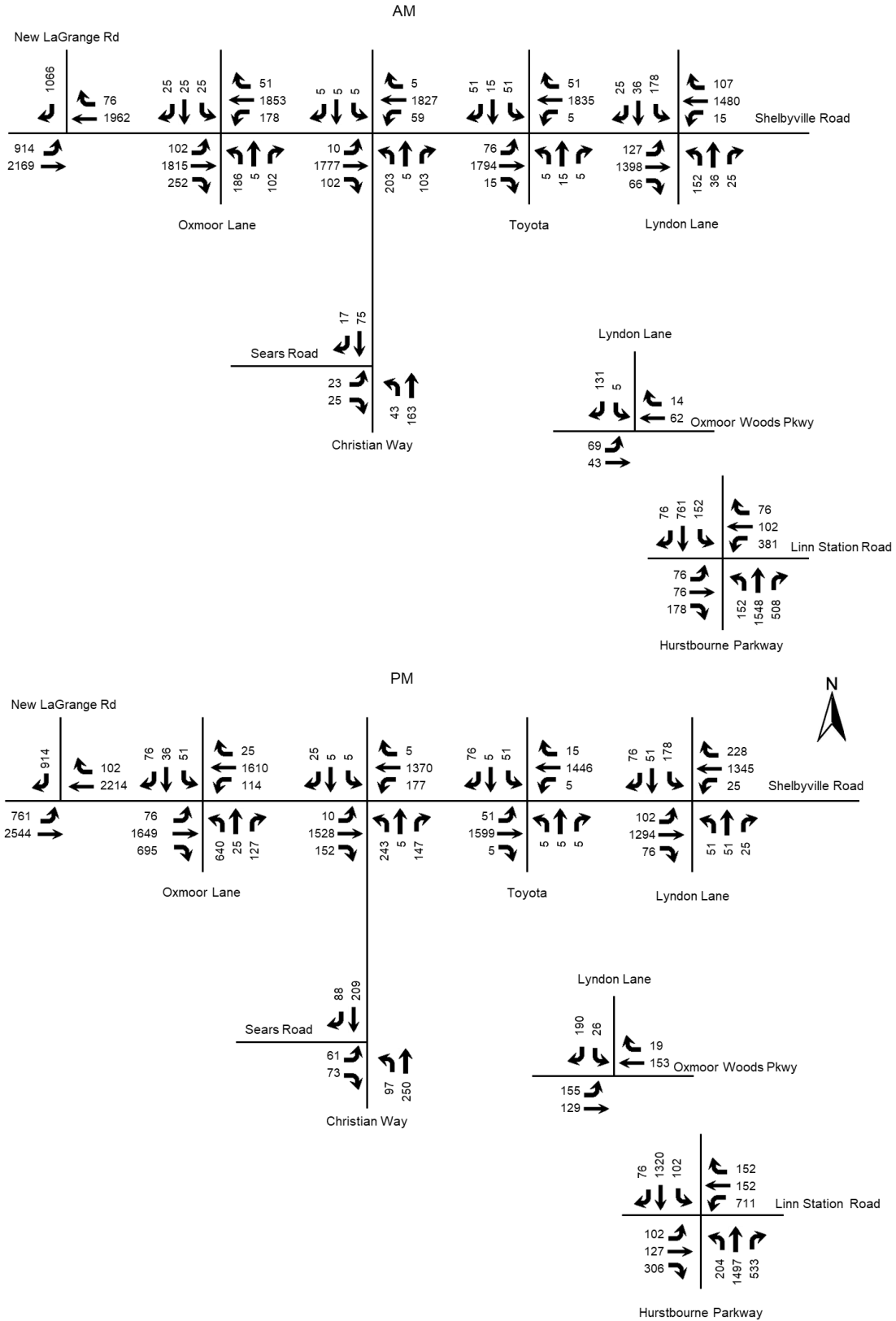
Oxmoor Lot 5 Apartments  
Traffic Impact Study



## **FUTURE CONDITIONS**

The estimated project completion date is 2024. The annual growth rate for the area has been determined in other studies in the vicinity to be 0.5%. Additionally, trip generation for Top Golf and the restaurants in front of Oxmoor Center was also included. The Oxmoor Farm will be developed in stages and each stage will be required to submit a traffic study reflecting the current traffic and the development proposed. Therefore, additional traffic from the Oxmoor Farm has not been included. The No Build volumes are shown in **Figure 3**.

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Traffic Impact Study

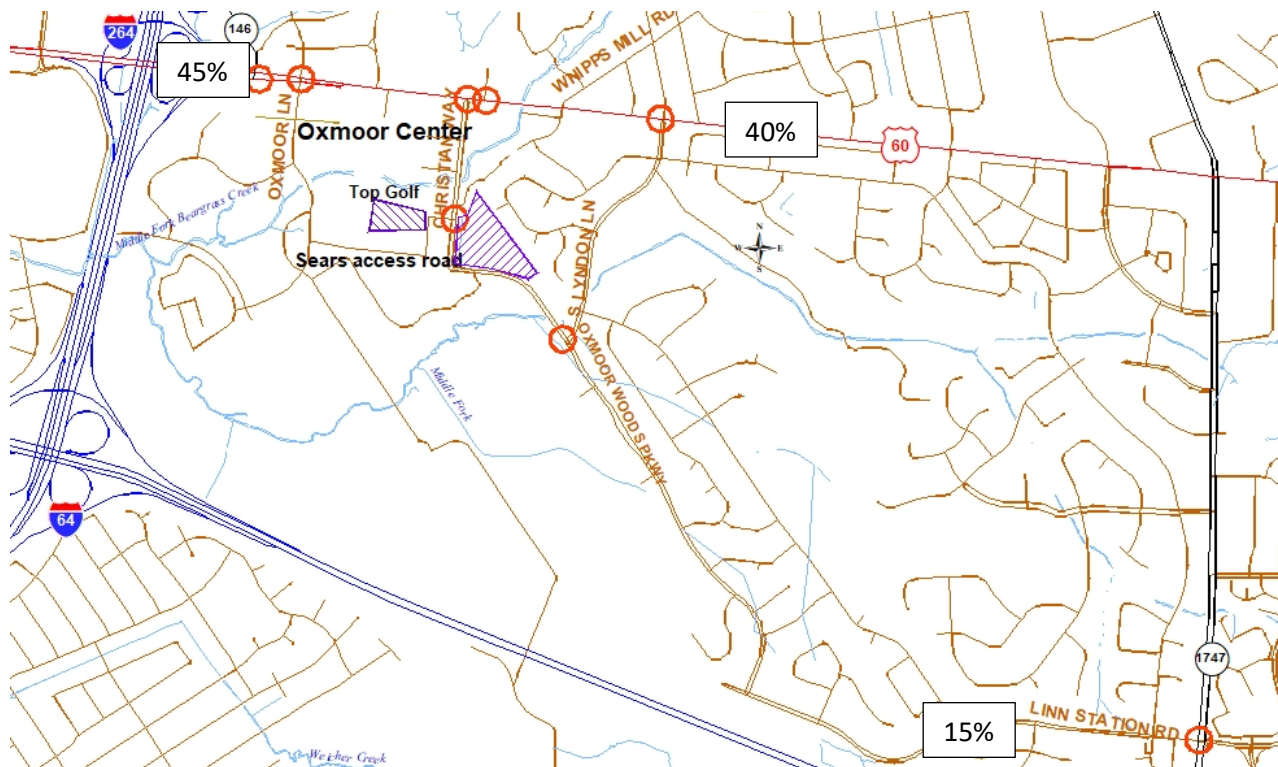


## TRIP GENERATION

The Institute of Transportation Engineers Trip Generation Manual, 11<sup>th</sup> Edition contains trip generation rates for a wide range of developments. The land use of “Multifamily Housing Low-Rise (220)” was reviewed and determined to be the best match. The trip generation results are listed in **Table 1**. The trips were assigned to the highway network with the percentages shown in **Figure 4**. **Figure 5** shows the trips generated by this development and distributed throughout the road network during the peak hours. **Figure 6** displays the individual turning movements for the peak hours when the development is completed.

**Table 1. Peak Hour Trips Generated by Site**

Land Use	A.M. Peak Hour			P.M. Peak Hour		
	Trips	In	Out	Trips	In	Out
Multifamily Housing Mid-Rise (345 units)	130	31	99	169	106	63



**Figure 4. Trip Distribution Percentages**

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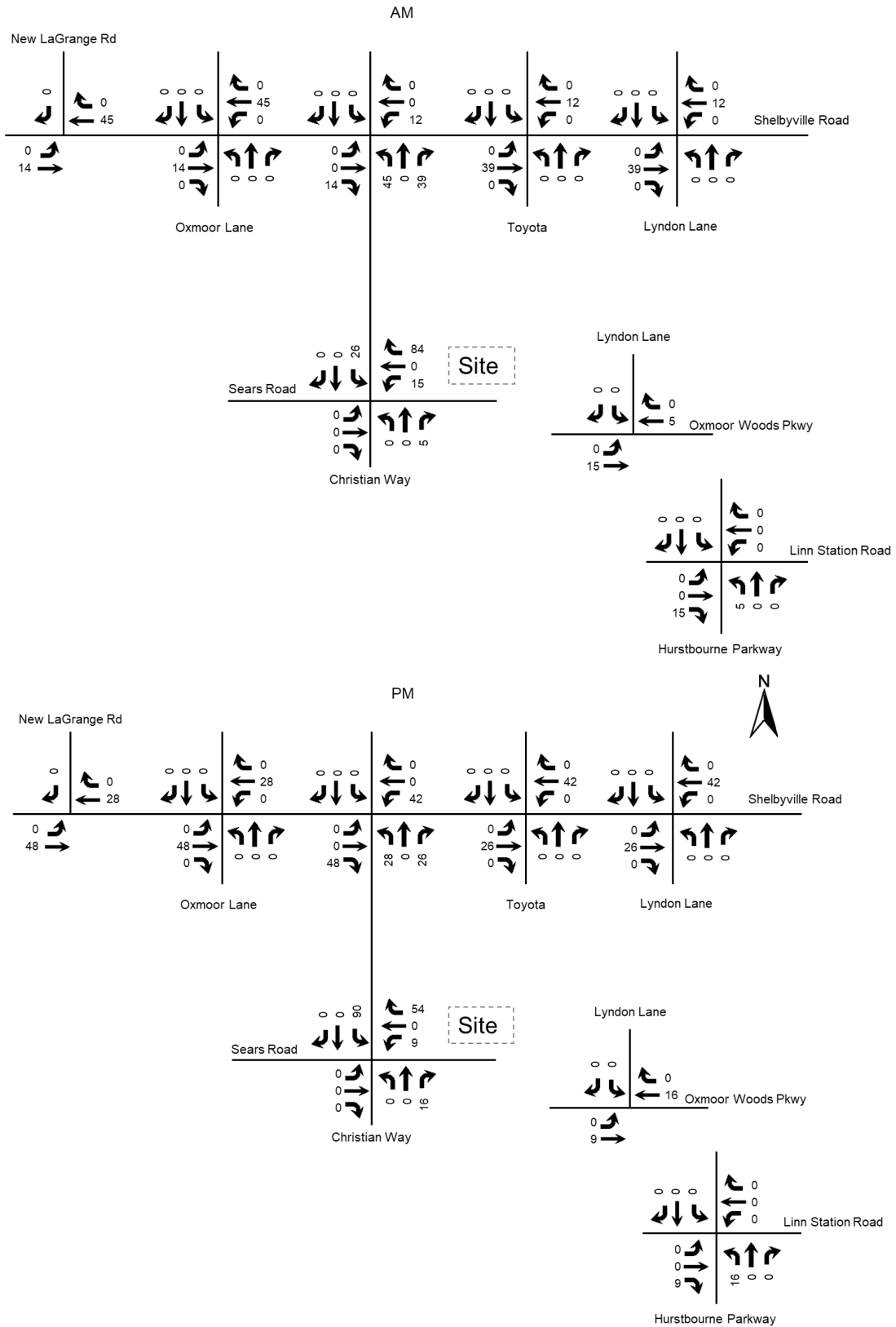


Figure 5. Peak Hour Trips Generated by Site



Oxmoor Lot 5 Apartments  
Traffic Impact Study

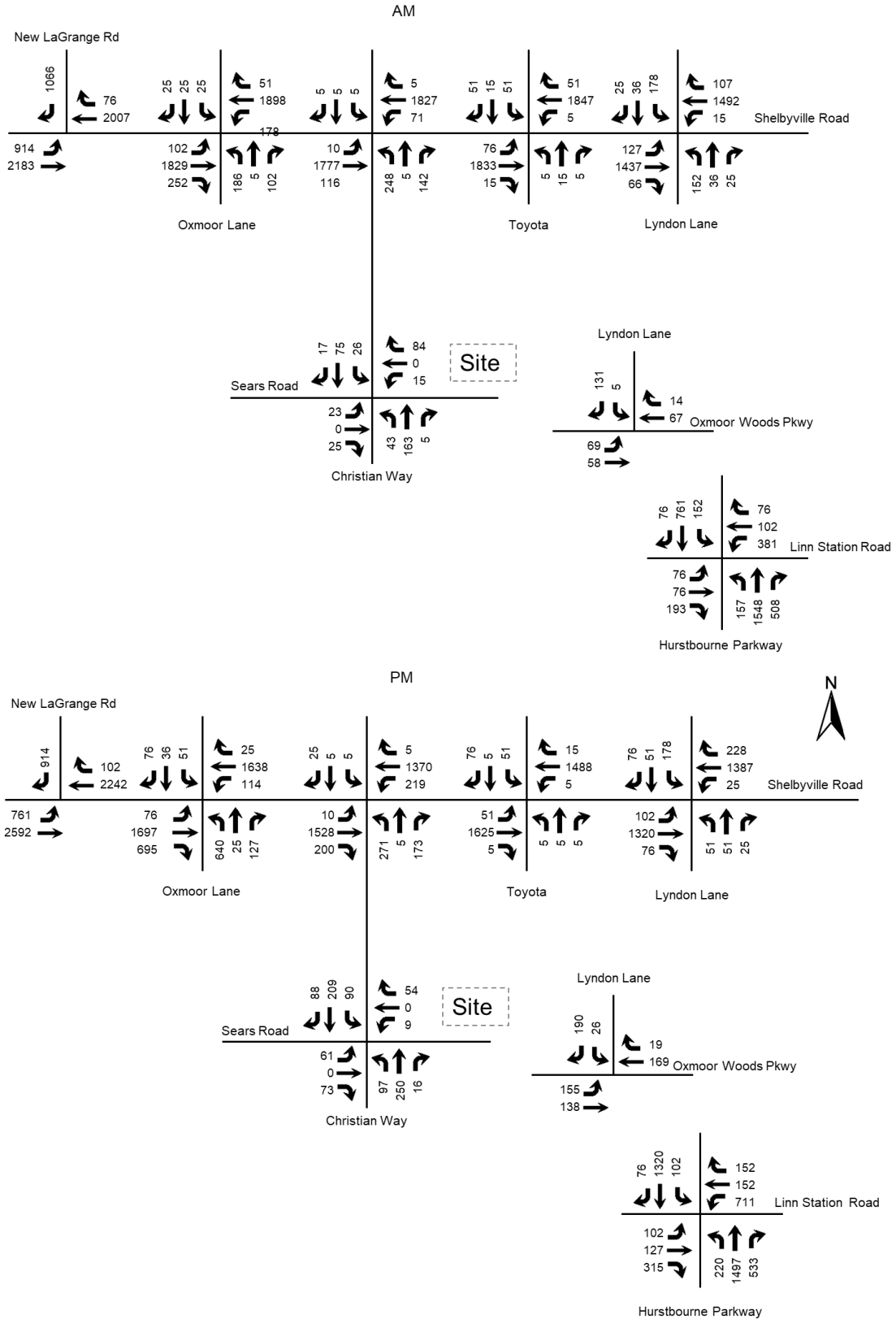


Figure 6. Build Peak Hour Volumes

## ANALYSIS

The qualitative measure of operation for a roadway facility or intersection is evaluated by assigning a “Level of Service”. Level of Service is a ranking scale from A through F, “A” is the best operating condition and “F” is the worst. Level of Service results depend upon the facility that is analyzed. In this case, the Level of Service is based upon the total delay experienced at an intersection.

To evaluate the impact of the proposed development, the vehicle delays at the intersections were determined using procedures detailed in the Highway Capacity Manual, 6<sup>th</sup> edition. Future delays and Level of Service were determined for the intersections using the Synchro (version 11) software. The delays and Level of Service are summarized in **Table 2**.

**Table 2. Peak Hour Level of Service**

Approach	A.M.			P.M.		
	2021	2024 No Build	2024 Build	2021	2024 No Build	2024 Build
<b>Shelbyville Road at New LaGrange Road</b>	<b>C</b> <b>25.0</b>	<b>C</b> <b>25.1</b>	<b>C</b> <b>25.1</b>	<b>B</b> <b>16.5</b>	<b>B</b> <b>16.6</b>	<b>B</b> <b>16.1</b>
Shelbyville Road Eastbound (Left)	C 25.5	C 25.5	C 25.3	A 8.8	A 8.5	A 7.8
Shelbyville Road Westbound	B 16.6	B 16.6	B 16.8	A 9.9	B 10.2	B 10.1
New LaGrange Road Southbound	E 63.7	E 65.4	E 65.4	E 66.8	E 69.1	E 69.1
<b>Shelbyville Road at Oxmoor Lane</b>	<b>C</b> <b>31.0</b>	<b>C</b> <b>31.9</b>	<b>C</b> <b>32.2</b>	<b>D</b> <b>42.7</b>	<b>D</b> <b>49.2</b>	<b>D</b> <b>48.9</b>
Shelbyville Road Eastbound	D 37.0	D 37.6	D 37.7	C 32.1	D 41.6	D 40.5
Shelbyville Road Westbound	B 15.8	B 16.9	B 17.9	D 43.7	D 48.3	D 49.2
Oxmoor Lane Northbound	F 84.8	F 84.6	F 84.6	E 66.4	E 67.3	E 67.3
Norwood Drive Southbound	E 75.4	E 75.4	E 75.4	F 81.9	F 82.2	F 82.2
<b>Shelbyville Road at Christian Way</b>	<b>C</b> <b>21.4</b>	<b>C</b> <b>22.3</b>	<b>C</b> <b>24.3</b>	<b>C</b> <b>20.7</b>	<b>C</b> <b>21.2</b>	<b>C</b> <b>23.2</b>
Shelbyville Road Eastbound	C 23.8	C 24.8	C 25.8	B 16.0	B 15.1	B 16.6
Shelbyville Road Westbound	A 9.8	B 10.7	B 12.2	A 9.3	B 10.5	B 12.2
Christian Way Northbound	E 74.6	E 74.5	E 73.9	F 84.8	F 84.1	F 83.3
Entrance Southbound	F 80.4	F 80.4	F 80.4	F 83.9	F 83.9	F 83.9

Oxmoor Lot 5 Apartments  
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Approach	A.M.			P.M.		
	2021	2024 No Build	2024 Build	2021	2024 No Build	2024 Build
<b>Shelbyville Road at Toyota</b>	<b>B</b> <b>11.9</b>	<b>B</b> <b>12.9</b>	<b>B</b> <b>13.7</b>	<b>A</b> <b>9.7</b>	<b>A</b> <b>9.9</b>	<b>B</b> <b>10.3</b>
Shelbyville Road Eastbound	A 4.6	A 5.1	A 6.5	A 4.6	A 4.6	A 5.0
Shelbyville Road Westbound	B 14.8	B 16.3	B 16.8	A 8.3	A 8.7	A 9.3
Entrance Northbound	E 69.4	E 69.4	E 69.4	E 78.2	E 78.1	E 78.1
Entrance Southbound	E 72.0	E 72.0	E 72.0	F 81.4	F 81.5	F 81.5
<b>Shelbyville Road at Lyndon Lane</b>	<b>C</b> <b>26.3</b>	<b>C</b> <b>27.4</b>	<b>C</b> <b>27.9</b>	<b>C</b> <b>31.0</b>	<b>C</b> <b>32.3</b>	<b>C</b> <b>33.6</b>
Shelbyville Road Eastbound	C 30.0	C 31.6	C 32.5	B 13.8	B 15.1	B 16.1
Shelbyville Road Westbound	B 10.3	B 11.3	B 11.7	C 33.0	C 34.7	D 36.7
Lyndon Laney Northbound	E 58.5	E 58.7	E 58.7	D 53.4	D 53.1	D 53.1
Lyndon Lane Southbound	F 80.0	E 79.9	E 79.9	F 93.8	F 94.7	F 94.7
<b>Christian Way at Sears Entrance</b>						
Sears Entrance Eastbound	B 10.2	B 10.3	B 11.3	B 12.2	B 13.6	C 19.2
Site Entrance Westbound			B 10.7			B 11.8
Christian Way Northbound (left)	A 7.6	A 7.6	A 7.6	A 8.4	A 8.5	A 8.5
Christian Way Southbound (left)			A 7.8			A 8.3
<b>Lyndon Lane at Oxmoor Woods Parkway</b>	<b>A</b> <b>8.5</b>	<b>A</b> <b>8.5</b>	<b>A</b> <b>8.6</b>	<b>A</b> <b>9.6</b>	<b>A</b> <b>9.7</b>	<b>A</b> <b>9.9</b>
Oxmoor Woods Parkway Eastbound	A 8.9	A 9.0	A 9.0	A 9.9	A 10.0	B 10.1
Oxmoor Woods Parkway Westbound	A 8.4	A 8.4	A 8.5	A 9.5	A 9.6	A 9.9
Lyndon Lane Southbound	A 8.2	A 8.2	A 8.3	A 9.4	A 9.5	A 9.6
<b>Hurstbourne Parkway at Linn Station Rd</b>	<b>C</b> <b>29.1</b>	<b>C</b> <b>29.5</b>	<b>C</b> <b>29.8</b>	<b>E</b> <b>60.2</b>	<b>E</b> <b>60.8</b>	<b>E</b> <b>61.3</b>
Linn Station Road Eastbound	E 71.7	E 71.7	E 71.6	F 86.5	F 88.5	F 91.0
Linn Station Road Westbound	D 41.3	D 41.7	D 41.7	F 118.7	F 120.0	F 120.0

Approach	A.M.			P.M.		
	2021	2024 No Build	2024 Build	2021	2024 No Build	2024 Build
Hurstbourne Parkway Northbound	C 24.0	C 24.4	C 24.6	D 44.8	D 44.7	D 44.9
Hurstbourne Parkway Southbound	B 19.5	B 19.9	B 20.0	C 34.0	C 34.8	C 35.4

*Key: Level of Service, Delay in seconds per vehicle*

The entrance was evaluated for turn lanes using the Kentucky Transportation Cabinet [Highway Design Guidance Manual](#) dated September, 2020. Using the volumes in Figure 6, a left turn lane is required at the entrance.

## CONCLUSIONS


















Based upon the volume of traffic generated by the development and the amount of traffic forecasted for the year 2024, there will be a minimal impact to the existing highway network, with the signalized intersections continuing to operate at acceptable levels of service.

## **APPENDIX**

Synchro Reports

HCM Signalized Intersection Capacity Analysis  
2502: I-264 EB to US-60 EB/KY-146 & US-60

03/07/2022






















													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (vph)	900	1100	0	0	1925	75	0	0	1010	0	0	1050	
Future Volume (vph)	900	1100	0	0	1925	75	0	0	1010	0	0	1050	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)	6.6	7.3			7.3				7.3			6.6	
Lane Util. Factor	0.97	0.91			0.86				0.88			0.88	
Fr <sub>t</sub>	1.00	1.00			0.99				0.85			0.85	
Fl <sub>t</sub> Protected	0.95	1.00			1.00				1.00			1.00	
Satd. Flow (prot)	3433	5085			6372				2787			2787	
Fl <sub>t</sub> Permitted	0.95	1.00			1.00				1.00			1.00	
Satd. Flow (perm)	3433	5085			6372				2787			2787	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Adj. Flow (vph)	978	1196	0	0	2092	82	0	0	1098	0	0	1141	
RTOR Reduction (vph)	0	0	0	0	4	0	0	0	0	0	0	0	
Lane Group Flow (vph)	978	1196	0	0	2170	0	0	0	1098	0	0	1141	
Turn Type	Prot	NA			NA				Perm			Over	
Protected Phases	5	2			6							5	
Permitted Phases									2 5 6				
Actuated Green, G (s)	68.4	160.0			77.7				160.0			68.4	
Effective Green, g (s)	68.4	160.0			77.7				160.0			68.4	
Actuated g/C Ratio	0.43	1.00			0.49				1.00			0.43	
Clearance Time (s)	6.6	7.3			7.3							6.6	
Vehicle Extension (s)	5.0	3.0			3.0							5.0	
Lane Grp Cap (vph)	1467	5085			3094				2787			1191	
v/s Ratio Prot	0.28	0.24			c0.34							c0.41	
v/s Ratio Perm									0.39				
v/c Ratio	0.67	0.24			0.70				0.39			0.96	
Uniform Delay, d <sub>1</sub>	36.7	0.0			32.1				0.0			44.4	
Progression Factor	1.52	1.00			0.49				1.00			1.38	
Incremental Delay, d <sub>2</sub>	0.7	0.1			1.0				0.2			2.6	
Delay (s)	56.6	0.1			16.6				0.2			63.7	
Level of Service	E	A			B				A			E	
Approach Delay (s)		25.5			16.6			0.2			63.7		
Approach LOS		C			B			A			E		
<b>Intersection Summary</b>													
HCM 2000 Control Delay			25.0									HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio			0.82										
Actuated Cycle Length (s)			160.0									Sum of lost time (s)	13.9
Intersection Capacity Utilization			77.5%									ICU Level of Service	D
Analysis Period (min)			15										

c Critical Lane Group

Oxmoor Lot 5 Apartments  
Traffic Impact Study

HCM Signalized Intersection Capacity Analysis  
2503: Oxmoor Ln & US-60























03/07/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	100	1785	225	175	1825	50	175	5	100	25	25	25
Future Volume (vph)	100	1785	225	175	1825	50	175	5	100	25	25	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	7.0	7.0	7.0	7.0		6.6	6.6			6.6	6.6
Lane Util. Factor	1.00	0.81	0.81	1.00	0.91		0.91	0.91			1.00	1.00
Fr't	1.00	1.00	0.85	1.00	1.00		1.00	0.88			1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	0.99			0.98	1.00
Satd. Flow (prot)	1770	6024	1282	1770	5065		3221	1476			1817	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	0.99			0.98	1.00
Satd. Flow (perm)	1770	6024	1282	1770	5065		3221	1476			1817	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	109	1940	245	190	1984	54	190	5	109	27	27	27
RTOR Reduction (vph)	0	1	70	0	1	0	0	97	0	0	0	25
Lane Group Flow (vph)	109	1964	150	190	2037	0	171	36	0	0	54	2
Turn Type	Prot	NA	Perm	Prot	NA		Split	NA		Split	NA	Perm
Protected Phases	5	2		1	6		4	4		8	8	
Permitted Phases			2									8
Actuated Green, G (s)	17.0	83.3	83.3	23.0	89.3		16.9	16.9			9.6	9.6
Effective Green, g (s)	17.0	83.3	83.3	23.0	89.3		16.9	16.9			9.6	9.6
Actuated g/C Ratio	0.11	0.52	0.52	0.14	0.56		0.11	0.11			0.06	0.06
Clearance Time (s)	7.0	7.0	7.0	7.0	7.0		6.6	6.6			6.6	6.6
Vehicle Extension (s)	5.0	3.0	3.0	5.0	3.0		6.0	6.0			4.0	4.0
Lane Grp Cap (vph)	188	3136	667	254	2826		340	155			109	94
v/s Ratio Prot	0.06	c0.33		0.11	c0.40		c0.05	0.02			c0.03	
v/s Ratio Perm			0.12									0.00
v/c Ratio	0.58	0.63	0.22	0.75	0.72		0.50	0.23			0.50	0.02
Uniform Delay, d1	68.1	27.3	20.8	65.7	26.1		67.6	65.6			72.9	70.8
Progression Factor	1.02	1.25	1.64	0.73	0.41		1.07	1.44			1.00	1.00
Incremental Delay, d2	6.5	0.9	0.8	9.8	1.1		3.3	2.1			4.8	0.1
Delay (s)	75.9	35.1	34.9	57.7	11.9		75.8	96.3			77.6	70.9
Level of Service	E	D	C	E	B		E	F			E	E
Approach Delay (s)		37.0			15.8			84.8			75.4	
Approach LOS		D			B			F			E	
<b>Intersection Summary</b>												
HCM 2000 Control Delay			31.0				HCM 2000 Level of Service				C	
HCM 2000 Volume to Capacity ratio			0.69									
Actuated Cycle Length (s)			160.0				Sum of lost time (s)				27.2	
Intersection Capacity Utilization			72.2%				ICU Level of Service				C	
Analysis Period (min)			15									

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis  
2504: Christian Way & US-60

03/07/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	1750	100	50	1800	5	200	5	100	5	5	5
Future Volume (vph)	10	1750	100	50	1800	5	200	5	100	5	5	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	7.0	7.0	7.0	7.0		6.6	6.6	6.6		6.6	6.6
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95		0.95	0.95	1.00		1.00	1.00
Flt	1.00	1.00	0.85	1.00	1.00		1.00	1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	0.95	1.00		0.98	1.00
Satd. Flow (prot)	1770	3539	1583	3433	3538		1681	1689	1583		1817	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	0.95	1.00		0.98	1.00
Satd. Flow (perm)	1770	3539	1583	3433	3538		1681	1689	1583		1817	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	11	1902	109	54	1957	5	217	5	109	5	5	5
RTOR Reduction (vph)	0	0	38	0	0	0	0	0	98	0	0	5
Lane Group Flow (vph)	11	1902	71	54	1962	0	111	111	11	0	10	0
Turn Type	Prot	NA	Perm	Prot	NA		Split	NA	Perm	Split	NA	Perm
Protected Phases	5	2		1	6		4	4		8	8	
Permitted Phases			2						4			8
Actuated Green, G (s)	4.4	104.0	104.0	9.1	108.7		15.9	15.9	15.9		3.8	3.8
Effective Green, g (s)	4.4	104.0	104.0	9.1	108.7		15.9	15.9	15.9		3.8	3.8
Actuated g/C Ratio	0.03	0.65	0.65	0.06	0.68		0.10	0.10	0.10		0.02	0.02
Clearance Time (s)	7.0	7.0	7.0	7.0	7.0		6.6	6.6	6.6		6.6	6.6
Vehicle Extension (s)	4.0	3.0	3.0	6.0	3.0		3.0	3.0	3.0		5.0	5.0
Lane Grp Cap (vph)	48	2300	1028	195	2403		167	167	157		43	37
v/s Ratio Prot	0.01	c0.54		0.02	c0.55		c0.07	0.07			c0.01	
v/s Ratio Perm			0.04						0.01			0.00
v/c Ratio	0.23	0.83	0.07	0.28	0.82		0.66	0.66	0.07		0.23	0.00
Uniform Delay, d1	76.1	21.2	10.3	72.3	18.5		69.5	69.5	65.3		76.7	76.3
Progression Factor	0.50	1.05	0.00	1.34	0.30		1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	2.7	2.9	0.1	1.3	1.9		9.6	9.6	0.2		5.7	0.1
Delay (s)	40.5	25.1	0.1	98.1	7.4		79.0	79.0	65.5		82.4	76.3
Level of Service	D	C	A	F	A		E	E	E		F	E
Approach Delay (s)		23.8			9.8			74.6			80.4	
Approach LOS		C			A			E			F	
<b>Intersection Summary</b>												
HCM 2000 Control Delay			21.4				HCM 2000 Level of Service				C	
HCM 2000 Volume to Capacity ratio			0.82									
Actuated Cycle Length (s)			160.0				Sum of lost time (s)				27.2	
Intersection Capacity Utilization			77.6%				ICU Level of Service				D	
Analysis Period (min)			15									

c Critical Lane Group



Oxmoor Lot 5 Apartments  
Traffic Impact Study

HCM Signalized Intersection Capacity Analysis  
2505: Oxmoor Toyota & US-60

03/07/2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations	↖	↗		↖	↗			↕		↖	↗		
Traffic Volume (vph)	75	1765	15	5	1800	50	5	15	5	50	15	50	
Future Volume (vph)	75	1765	15	5	1800	50	5	15	5	50	15	50	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)	7.0	7.0		7.0	7.0			6.6		6.6	6.6		
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00		1.00	1.00		
Frt	1.00	1.00		1.00	1.00			0.97		1.00	0.88		
Flt Protected	0.95	1.00		0.95	1.00			0.99		0.95	1.00		
Satd. Flow (prot)	1770	3535		1770	3525			1797		1770	1647		
Flt Permitted	0.95	1.00		0.95	1.00			0.93		0.74	1.00		
Satd. Flow (perm)	1770	3535		1770	3525			1691		1379	1647		
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Adj. Flow (vph)	82	1918	16	5	1957	54	5	16	5	54	16	54	
RTOR Reduction (vph)	0	0	0	0	1	0	0	5	0	0	50	0	
Lane Group Flow (vph)	82	1934	0	5	2010	0	0	21	0	54	20	0	
Turn Type	Prot	NA		Prot	NA		Perm	NA		Perm	NA		
Protected Phases	5	2		1	6			4			8		
Permitted Phases							4			8			
Actuated Green, G (s)	20.6	125.1		1.6	106.1			12.7		12.7	12.7		
Effective Green, g (s)	20.6	125.1		1.6	106.1			12.7		12.7	12.7		
Actuated g/C Ratio	0.13	0.78		0.01	0.66			0.08		0.08	0.08		
Clearance Time (s)	7.0	7.0		7.0	7.0			6.6		6.6	6.6		
Vehicle Extension (s)	4.0	3.0		4.0	3.0			4.0		4.0	4.0		
Lane Grp Cap (vph)	227	2763		17	2337			134		109	130		
v/s Ratio Prot	0.05	c0.55		0.00	c0.57						0.01		
v/s Ratio Perm								0.01		c0.04			
v/c Ratio	0.36	0.70		0.29	0.86			0.16		0.50	0.16		
Uniform Delay, d1	63.7	8.4		78.6	21.1			68.7		70.6	68.7		
Progression Factor	0.58	0.27		1.29	0.54			1.00		1.00	1.00		
Incremental Delay, d2	0.9	1.0		9.0	3.2			0.8		4.8	0.8		
Delay (s)	37.6	3.2		110.4	14.5			69.4		75.3	69.4		
Level of Service	D	A		F	B			E		E	E		
Approach Delay (s)		4.6			14.8			69.4			72.0		
Approach LOS		A			B			E			E		
<b>Intersection Summary</b>													
HCM 2000 Control Delay			11.9									HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio			0.82										
Actuated Cycle Length (s)			160.0									Sum of lost time (s)	20.6
Intersection Capacity Utilization			82.1%									ICU Level of Service	E
Analysis Period (min)			15										

c Critical Lane Group

Oxmoor Lot 5 Apartments  
Traffic Impact Study

HCM Signalized Intersection Capacity Analysis  
2506: S Lyndon Ln/Lyndon Ln & US-60

03/07/2022



















Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕		↖	↕			↕	
Traffic Volume (vph)	125	1375	65	15	1450	105	150	35	25	175	35	25
Future Volume (vph)	125	1375	65	15	1450	105	150	35	25	175	35	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	7.0		7.0	7.0		6.6	6.6			6.6	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00			1.00	
Flt	1.00	0.99		1.00	0.99		1.00	0.94			0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00			0.96	
Satd. Flow (prot)	1770	3515		1770	3503		1770	1747			1770	
Flt Permitted	0.05	1.00		0.10	1.00		0.67	1.00			0.74	
Satd. Flow (perm)	85	3515		191	3503		1252	1747			1357	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	136	1495	71	16	1576	114	163	38	27	190	38	27
RTOR Reduction (vph)	0	2	0	0	3	0	0	16	0	0	3	0
Lane Group Flow (vph)	136	1564	0	16	1687	0	163	49	0	0	252	0
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	1	6		5	2			8			4	
Permitted Phases	6			2			8			4		
Actuated Green, G (s)	110.9	100.9		94.5	91.5		35.5	35.5			35.5	
Effective Green, g (s)	110.9	100.9		94.5	91.5		35.5	35.5			35.5	
Actuated g/C Ratio	0.69	0.63		0.59	0.57		0.22	0.22			0.22	
Clearance Time (s)	7.0	7.0		7.0	7.0		6.6	6.6			6.6	
Vehicle Extension (s)	4.0	3.0		4.0	3.0		6.0	6.0			6.0	
Lane Grp Cap (vph)	189	2216		142	2003		277	387			301	
v/s Ratio Prot	c0.06	c0.44		0.00	c0.48			0.03				
v/s Ratio Perm	0.44			0.06			0.13				c0.19	
v/c Ratio	0.72	0.71		0.11	0.84		0.59	0.13			0.84	
Uniform Delay, d1	44.9	19.7		17.2	28.3		55.7	49.8			59.5	
Progression Factor	1.12	1.32		0.44	0.25		1.00	1.00			1.00	
Incremental Delay, d2	10.2	1.5		0.3	3.1		6.0	0.4			20.5	
Delay (s)	60.3	27.4		8.0	10.3		61.7	50.2			80.0	
Level of Service	E	C		A	B		E	D			F	
Approach Delay (s)		30.0			10.3			58.5			80.0	
Approach LOS		C			B			E			F	
<b>Intersection Summary</b>												
HCM 2000 Control Delay			26.3				HCM 2000 Level of Service				C	
HCM 2000 Volume to Capacity ratio			0.84									
Actuated Cycle Length (s)			160.0				Sum of lost time (s)			20.6		
Intersection Capacity Utilization			87.2%				ICU Level of Service			E		
Analysis Period (min)			15									

c Critical Lane Group

Oxmoor Lot 5 Apartments  
Traffic Impact Study

HCM Signalized Intersection Capacity Analysis  
2502: I-264 EB to US-60 EB/KY-146 & US-60

03/07/2022

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (vph)	750	1450	0	0	2100	100	0	0	850	0	0	900	
Future Volume (vph)	750	1450	0	0	2100	100	0	0	850	0	0	900	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)	6.6	7.3			7.3				7.3			6.6	
Lane Util. Factor	0.97	0.91			0.86				0.88			0.88	
Fr't	1.00	1.00			0.99				0.85			0.85	
Flt Protected	0.95	1.00			1.00				1.00			1.00	
Satd. Flow (prot)	3433	5085			6364				2787			2787	
Flt Permitted	0.95	1.00			1.00				1.00			1.00	
Satd. Flow (perm)	3433	5085			6364				2787			2787	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Adj. Flow (vph)	815	1576	0	0	2283	109	0	0	924	0	0	978	
RTOR Reduction (vph)	0	0	0	0	4	0	0	0	0	0	0	0	
Lane Group Flow (vph)	815	1576	0	0	2388	0	0	0	924	0	0	978	
Turn Type	Prot	NA			NA				Perm			Over	
Protected Phases	5	2			6							5	
Permitted Phases									2 5 6				
Actuated Green, G (s)	68.4	180.0			97.7				180.0			68.4	
Effective Green, g (s)	68.4	180.0			97.7				180.0			68.4	
Actuated g/C Ratio	0.38	1.00			0.54				1.00			0.38	
Clearance Time (s)	6.6	7.3			7.3							6.6	
Vehicle Extension (s)	5.0	3.0			3.0							5.0	
Lane Grp Cap (vph)	1304	5085			3454				2787			1059	
v/s Ratio Prot	0.24	0.31			c0.38							c0.35	
v/s Ratio Perm									0.33				
v/c Ratio	0.62	0.31			0.69				0.33			0.92	
Uniform Delay, d1	45.4	0.0			30.1				0.0			53.3	
Progression Factor	0.54	1.00			0.30				1.00			1.00	
Incremental Delay, d2	1.0	0.1			0.8				0.1			13.5	
Delay (s)	25.6	0.1			9.9				0.1			66.8	
Level of Service	C	A			A				A			E	
Approach Delay (s)		8.8			9.9			0.1			66.8		
Approach LOS		A			A			A			E		
<b>Intersection Summary</b>													
HCM 2000 Control Delay			16.5									HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio			0.79										
Actuated Cycle Length (s)			180.0									Sum of lost time (s)	13.9
Intersection Capacity Utilization			75.2%									ICU Level of Service	D
Analysis Period (min)			15										

c Critical Lane Group

Oxmoor Lot 5 Apartments  
Traffic Impact Study

HCM Signalized Intersection Capacity Analysis  
2503: Oxmoor Ln & US-60























03/07/2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	75	1625	600	100	1575	25	550	25	125	50	35	75
Future Volume (vph)	75	1625	600	100	1575	25	550	25	125	50	35	75
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	7.0	7.0	7.0	7.0		6.6	6.6			6.6	6.6
Lane Util. Factor	1.00	0.81	0.81	1.00	0.91		0.91	0.91			1.00	1.00
Flt	1.00	0.98	0.85	1.00	1.00		1.00	0.92			1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	0.98			0.97	1.00
Satd. Flow (prot)	1770	5934	1282	1770	5073		3221	1527			1810	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	0.98			0.97	1.00
Satd. Flow (perm)	1770	5934	1282	1770	5073		3221	1527			1810	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	82	1766	652	109	1712	27	598	27	136	54	38	82
RTOR Reduction (vph)	0	10	215	0	1	0	0	27	0	0	0	75
Lane Group Flow (vph)	82	1978	215	109	1738	0	520	214	0	0	92	7
Turn Type	Prot	NA	Perm	Prot	NA		Split	NA		Split	NA	Perm
Protected Phases	5	2		1	6		4	4		8	8	
Permitted Phases			2									8
Actuated Green, G (s)	19.0	80.8	80.8	17.2	79.0		39.6	39.6			15.2	15.2
Effective Green, g (s)	19.0	80.8	80.8	17.2	79.0		39.6	39.6			15.2	15.2
Actuated g/C Ratio	0.11	0.45	0.45	0.10	0.44		0.22	0.22			0.08	0.08
Clearance Time (s)	7.0	7.0	7.0	7.0	7.0		6.6	6.6			6.6	6.6
Vehicle Extension (s)	5.0	3.0	3.0	5.0	3.0		6.0	6.0			4.0	4.0
Lane Grp Cap (vph)	186	2663	575	169	2226		708	335			152	133
v/s Ratio Prot	0.05	c0.33		0.06	c0.34		c0.16	0.14			c0.05	
v/s Ratio Perm			0.17									0.00
v/c Ratio	0.44	0.74	0.37	0.64	0.78		0.73	0.64			0.61	0.05
Uniform Delay, d1	75.5	41.0	32.8	78.5	43.1		65.3	63.7			79.5	75.8
Progression Factor	0.82	0.65	1.22	0.89	0.91		0.94	0.93			1.00	1.00
Incremental Delay, d2	3.3	1.9	1.8	9.6	2.4		5.3	6.4			7.7	0.2
Delay (s)	65.0	28.6	41.9	79.6	41.5		66.8	65.4			87.2	76.0
Level of Service	E	C	D	E	D		E	E			F	E
Approach Delay (s)		32.1			43.7			66.4			81.9	
Approach LOS		C			D			E			F	
<b>Intersection Summary</b>												
HCM 2000 Control Delay			42.7				HCM 2000 Level of Service				D	
HCM 2000 Volume to Capacity ratio			0.76									
Actuated Cycle Length (s)			180.0				Sum of lost time (s)			27.2		
Intersection Capacity Utilization			78.1%				ICU Level of Service			D		
Analysis Period (min)			15									

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis  
2504: Christian Way & US-60

03/07/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	1500	150	150	1350	5	225	5	125	5	5	25
Future Volume (vph)	10	1500	150	150	1350	5	225	5	125	5	5	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	7.0	7.0	7.0	7.0		6.6	6.6	6.6		6.6	6.6
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95		0.95	0.95	1.00		1.00	1.00
Flt	1.00	1.00	0.85	1.00	1.00		1.00	1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	0.95	1.00		0.98	1.00
Satd. Flow (prot)	1770	3539	1583	3433	3537		1681	1689	1583		1817	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	0.95	1.00		0.98	1.00
Satd. Flow (perm)	1770	3539	1583	3433	3537		1681	1689	1583		1817	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	11	1630	163	163	1467	5	245	5	136	5	5	27
RTOR Reduction (vph)	0	0	46	0	0	0	0	0	122	0	0	26
Lane Group Flow (vph)	11	1630	117	163	1472	0	125	125	14	0	10	1
Turn Type	Prot	NA	Perm	Prot	NA		Split	NA	Perm	Split	NA	Perm
Protected Phases	5	2		1	6		4	4		8	8	
Permitted Phases			2						4			8
Actuated Green, G (s)	3.5	99.8	99.8	27.2	123.5		18.7	18.7	18.7		7.1	7.1
Effective Green, g (s)	3.5	99.8	99.8	27.2	123.5		18.7	18.7	18.7		7.1	7.1
Actuated g/C Ratio	0.02	0.55	0.55	0.15	0.69		0.10	0.10	0.10		0.04	0.04
Clearance Time (s)	7.0	7.0	7.0	7.0	7.0		6.6	6.6	6.6		6.6	6.6
Vehicle Extension (s)	4.0	3.0	3.0	6.0	3.0		3.0	3.0	3.0		5.0	5.0
Lane Grp Cap (vph)	34	1962	877	518	2426		174	175	164		71	62
v/s Ratio Prot	0.01	c0.46		0.05	c0.42		c0.07	0.07			c0.01	
v/s Ratio Perm			0.07						0.01			0.00
v/c Ratio	0.32	0.83	0.13	0.31	0.61		0.72	0.71	0.09		0.14	0.02
Uniform Delay, d1	87.1	33.1	19.3	68.1	15.2		78.1	78.1	72.9		83.5	83.1
Progression Factor	1.57	0.41	0.00	0.66	0.29		1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	5.4	3.1	0.2	0.8	0.9		13.2	12.9	0.2		1.9	0.2
Delay (s)	141.8	16.8	0.2	45.7	5.3		91.3	91.0	73.2		85.4	83.3
Level of Service	F	B	A	D	A		F	F	E		F	F
Approach Delay (s)		16.0			9.3			84.8			83.9	
Approach LOS		B			A			F			F	
<b>Intersection Summary</b>												
HCM 2000 Control Delay			20.7									
HCM 2000 Volume to Capacity ratio			0.75									
Actuated Cycle Length (s)			180.0						27.2			
Intersection Capacity Utilization			78.3%									
Analysis Period (min)			15									
c Critical Lane Group												

Oxmoor Lot 5 Apartments  
Traffic Impact Study

HCM Signalized Intersection Capacity Analysis  
2505: Oxmoor Toyota & US-60

03/07/2022





















Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations	↖	↗		↖	↗			↕		↖	↗		
Traffic Volume (vph)	50	1575	5	5	1425	15	5	5	5	50	5	75	
Future Volume (vph)	50	1575	5	5	1425	15	5	5	5	50	5	75	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)	7.0	7.0		7.0	7.0			6.6		6.6	6.6		
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00		1.00	1.00		
Frt	1.00	1.00		1.00	1.00			0.95		1.00	0.86		
Flt Protected	0.95	1.00		0.95	1.00			0.98		0.95	1.00		
Satd. Flow (prot)	1770	3538		1770	3534			1750		1770	1599		
Flt Permitted	0.95	1.00		0.95	1.00			0.88		0.75	1.00		
Satd. Flow (perm)	1770	3538		1770	3534			1573		1393	1599		
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Adj. Flow (vph)	54	1712	5	5	1549	16	5	5	5	54	5	82	
RTOR Reduction (vph)	0	0	0	0	0	0	0	5	0	0	76	0	
Lane Group Flow (vph)	54	1717	0	5	1565	0	0	10	0	54	11	0	
Turn Type	Prot	NA		Prot	NA		Perm	NA		Perm	NA		
Protected Phases	5	2		1	6			4			8		
Permitted Phases							4			8			
Actuated Green, G (s)	10.3	144.5		1.6	135.8			13.3		13.3	13.3		
Effective Green, g (s)	10.3	144.5		1.6	135.8			13.3		13.3	13.3		
Actuated g/C Ratio	0.06	0.80		0.01	0.75			0.07		0.07	0.07		
Clearance Time (s)	7.0	7.0		7.0	7.0			6.6		6.6	6.6		
Vehicle Extension (s)	4.0	3.0		4.0	3.0			4.0		4.0	4.0		
Lane Grp Cap (vph)	101	2840		15	2666			116		102	118		
v/s Ratio Prot	c0.03	c0.49		0.00	0.44						0.01		
v/s Ratio Perm								0.01		c0.04			
v/c Ratio	0.53	0.60		0.33	0.59			0.09		0.53	0.09		
Uniform Delay, d1	82.5	6.8		88.7	9.7			77.7		80.3	77.7		
Progression Factor	1.31	0.08		0.82	0.76			1.00		1.00	1.00		
Incremental Delay, d2	4.4	0.6		12.2	0.7			0.5		6.3	0.5		
Delay (s)	112.5	1.2		84.5	8.0			78.2		86.7	78.2		
Level of Service	F	A		F	A			E		F	E		
Approach Delay (s)		4.6			8.3			78.2			81.4		
Approach LOS		A			A			E			F		
<b>Intersection Summary</b>													
HCM 2000 Control Delay			9.7									HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio			0.61										
Actuated Cycle Length (s)			180.0									Sum of lost time (s)	20.6
Intersection Capacity Utilization			62.0%									ICU Level of Service	B
Analysis Period (min)			15										

c Critical Lane Group

Oxmoor Lot 5 Apartments  
Traffic Impact Study

HCM Signalized Intersection Capacity Analysis  
2506: S Lyndon Ln/Lyndon Ln & US-60

03/07/2022



















												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	100	1275	75	25	1325	225	50	50	25	175	50	75
Future Volume (vph)	100	1275	75	25	1325	225	50	50	25	175	50	75
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	7.0		7.0	7.0		6.6	6.6			6.6	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00			1.00	
Flt	1.00	0.99		1.00	0.98		1.00	0.95			0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00			0.97	
Satd. Flow (prot)	1770	3510		1770	3462		1770	1770			1749	
Flt Permitted	0.04	1.00		0.11	1.00		0.57	1.00			0.77	
Satd. Flow (perm)	78	3510		200	3462		1069	1770			1394	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	109	1386	82	27	1440	245	54	54	27	190	54	82
RTOR Reduction (vph)	0	2	0	0	7	0	0	10	0	0	7	0
Lane Group Flow (vph)	109	1466	0	27	1678	0	54	71	0	0	319	0
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	1	6		5	2			8				4
Permitted Phases	6			2			8			4		
Actuated Green, G (s)	120.9	107.9		107.1	101.0		45.4	45.4			45.4	
Effective Green, g (s)	120.9	107.9		107.1	101.0		45.4	45.4			45.4	
Actuated g/C Ratio	0.67	0.60		0.59	0.56		0.25	0.25			0.25	
Clearance Time (s)	7.0	7.0		7.0	7.0		6.6	6.6			6.6	
Vehicle Extension (s)	4.0	3.0		4.0	3.0		6.0	6.0			6.0	
Lane Grp Cap (vph)	174	2104		172	1942		269	446			351	
v/s Ratio Prot	c0.05	c0.42		0.01	c0.48			0.04				
v/s Ratio Perm	0.38			0.09			0.05				c0.23	
v/c Ratio	0.63	0.70		0.16	0.86		0.20	0.16			0.91	
Uniform Delay, d1	47.1	24.8		19.9	33.7		53.0	52.4			65.3	
Progression Factor	1.78	0.26		0.69	0.90		1.00	1.00			1.00	
Incremental Delay, d2	6.6	1.6		0.3	3.2		1.0	0.5			28.5	
Delay (s)	90.3	8.2		14.2	33.3		54.0	52.9			93.8	
Level of Service	F	A		B	C		D	D			F	
Approach Delay (s)		13.8			33.0			53.4			93.8	
Approach LOS		B			C			D			F	
<b>Intersection Summary</b>												
HCM 2000 Control Delay			31.0			HCM 2000 Level of Service			C			
HCM 2000 Volume to Capacity ratio			0.87									
Actuated Cycle Length (s)			180.0			Sum of lost time (s)		20.6				
Intersection Capacity Utilization			90.1%			ICU Level of Service		E				
Analysis Period (min)			15									

c Critical Lane Group



HCM Signalized Intersection Capacity Analysis  
2502: I-264 EB to US-60 EB/KY-146 & US-60

03/07/2022






















												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	914	1117	0	0	1962	76	0	0	1052	0	0	1066
Future Volume (vph)	914	1117	0	0	1962	76	0	0	1052	0	0	1066
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.6	7.3			7.3				7.3			6.6
Lane Util. Factor	0.97	0.91			0.86				0.88			0.88
Fr't	1.00	1.00			0.99				0.85			0.85
Flt Protected	0.95	1.00			1.00				1.00			1.00
Satd. Flow (prot)	3433	5085			6372				2787			2787
Flt Permitted	0.95	1.00			1.00				1.00			1.00
Satd. Flow (perm)	3433	5085			6372				2787			2787
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	993	1214	0	0	2133	83	0	0	1143	0	0	1159
RTOR Reduction (vph)	0	0	0	0	3	0	0	0	0	0	0	0
Lane Group Flow (vph)	993	1214	0	0	2213	0	0	0	1143	0	0	1159
Turn Type	Prot	NA			NA				Perm			Over
Protected Phases	5	2			6							5
Permitted Phases									2 5 6			
Actuated Green, G (s)	68.4	160.0			77.7				160.0			68.4
Effective Green, g (s)	68.4	160.0			77.7				160.0			68.4
Actuated g/C Ratio	0.43	1.00			0.49				1.00			0.43
Clearance Time (s)	6.6	7.3			7.3							6.6
Vehicle Extension (s)	5.0	3.0			3.0							5.0
Lane Grp Cap (vph)	1467	5085			3094				2787			1191
v/s Ratio Prot	0.29	0.24			c0.35							c0.42
v/s Ratio Perm									0.41			
v/c Ratio	0.68	0.24			0.72				0.41			0.97
Uniform Delay, d1	36.9	0.0			32.4				0.0			44.9
Progression Factor	1.51	1.00			0.48				1.00			1.37
Incremental Delay, d2	0.8	0.1			1.1				0.2			3.7
Delay (s)	56.5	0.1			16.6				0.2			65.4
Level of Service	E	A			B				A			E
Approach Delay (s)		25.5			16.6			0.2			65.4	
Approach LOS		C			B			A			E	
<b>Intersection Summary</b>												
HCM 2000 Control Delay			25.1		HCM 2000 Level of Service				C			
HCM 2000 Volume to Capacity ratio			0.84									
Actuated Cycle Length (s)			160.0		Sum of lost time (s)				13.9			
Intersection Capacity Utilization			78.6%		ICU Level of Service				D			
Analysis Period (min)			15									

c Critical Lane Group



HCM Signalized Intersection Capacity Analysis  
2503: Oxmoor Ln & US-60

03/07/2022























												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	102	1815	252	178	1853	51	186	5	102	25	25	25
Future Volume (vph)	102	1815	252	178	1853	51	186	5	102	25	25	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	7.0	7.0	7.0	7.0		6.6	6.6			6.6	6.6
Lane Util. Factor	1.00	0.81	0.81	1.00	0.91		0.91	0.91			1.00	1.00
Fr <sub>t</sub>	1.00	1.00	0.85	1.00	1.00		1.00	0.88			1.00	0.85
Fl <sub>t</sub> Protected	0.95	1.00	1.00	0.95	1.00		0.95	0.99			0.98	1.00
Satd. Flow (prot)	1770	6023	1282	1770	5065		3221	1477			1817	1583
Fl <sub>t</sub> Permitted	0.95	1.00	1.00	0.95	1.00		0.95	0.99			0.98	1.00
Satd. Flow (perm)	1770	6023	1282	1770	5065		3221	1477			1817	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	111	1973	274	193	2014	55	202	5	111	27	27	27
RTOR Reduction (vph)	0	1	79	0	1	0	0	99	0	0	0	25
Lane Group Flow (vph)	111	1999	168	193	2068	0	182	37	0	0	54	2
Turn Type	Prot	NA	Perm	Prot	NA		Split	NA		Split	NA	Perm
Protected Phases	5	2		1	6		4	4		8	8	
Permitted Phases			2									8
Actuated Green, G (s)	17.2	82.6	82.6	23.0	88.4		17.6	17.6			9.6	9.6
Effective Green, g (s)	17.2	82.6	82.6	23.0	88.4		17.6	17.6			9.6	9.6
Actuated g/C Ratio	0.11	0.52	0.52	0.14	0.55		0.11	0.11			0.06	0.06
Clearance Time (s)	7.0	7.0	7.0	7.0	7.0		6.6	6.6			6.6	6.6
Vehicle Extension (s)	5.0	3.0	3.0	5.0	3.0		6.0	6.0			4.0	4.0
Lane Grp Cap (vph)	190	3109	661	254	2798		354	162			109	94
v/s Ratio Prot	0.06	c0.33		0.11	c0.41		c0.06	0.03			c0.03	
v/s Ratio Perm			0.13									0.00
v/c Ratio	0.58	0.64	0.25	0.76	0.74		0.51	0.23			0.50	0.02
Uniform Delay, d <sub>1</sub>	68.0	28.0	21.6	65.8	27.1		67.2	65.0			72.9	70.8
Progression Factor	1.01	1.24	1.60	0.73	0.43		1.08	1.45			1.00	1.00
Incremental Delay, d <sub>2</sub>	6.7	1.0	0.9	10.5	1.3		3.3	2.0			4.8	0.1
Delay (s)	75.0	35.8	35.4	58.8	13.0		75.6	96.6			77.6	70.9
Level of Service	E	D	D	E	B		E	F			E	E
Approach Delay (s)		37.6			16.9			84.6			75.4	
Approach LOS		D			B			F			E	
<b>Intersection Summary</b>												
HCM 2000 Control Delay			31.9				HCM 2000 Level of Service				C	
HCM 2000 Volume to Capacity ratio			0.70									
Actuated Cycle Length (s)			160.0				Sum of lost time (s)			27.2		
Intersection Capacity Utilization			73.0%				ICU Level of Service			D		
Analysis Period (min)			15									

c Critical Lane Group

Oxmoor Lot 5 Apartments  
Traffic Impact Study

HCM Signalized Intersection Capacity Analysis  
2504: Christian Way & US-60

03/07/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	1777	102	59	1827	5	203	5	103	5	5	5
Future Volume (vph)	10	1777	102	59	1827	5	203	5	103	5	5	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	7.0	7.0	7.0	7.0		6.6	6.6	6.6		6.6	6.6
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95		0.95	0.95	1.00		1.00	1.00
Flt	1.00	1.00	0.85	1.00	1.00		1.00	1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	0.95	1.00		0.98	1.00
Satd. Flow (prot)	1770	3539	1583	3433	3538		1681	1689	1583		1817	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	0.95	1.00		0.98	1.00
Satd. Flow (perm)	1770	3539	1583	3433	3538		1681	1689	1583		1817	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	11	1932	111	64	1986	5	221	5	112	5	5	5
RTOR Reduction (vph)	0	0	39	0	0	0	0	0	101	0	0	5
Lane Group Flow (vph)	11	1932	72	64	1991	0	113	113	11	0	10	0
Turn Type	Prot	NA	Perm	Prot	NA		Split	NA	Perm	Split	NA	Perm
Protected Phases	5	2		1	6		4	4		8	8	
Permitted Phases			2						4			8
Actuated Green, G (s)	4.4	103.4	103.4	9.5	108.5		16.1	16.1	16.1		3.8	3.8
Effective Green, g (s)	4.4	103.4	103.4	9.5	108.5		16.1	16.1	16.1		3.8	3.8
Actuated g/C Ratio	0.03	0.65	0.65	0.06	0.68		0.10	0.10	0.10		0.02	0.02
Clearance Time (s)	7.0	7.0	7.0	7.0	7.0		6.6	6.6	6.6		6.6	6.6
Vehicle Extension (s)	4.0	3.0	3.0	6.0	3.0		3.0	3.0	3.0		5.0	5.0
Lane Grp Cap (vph)	48	2287	1023	203	2399		169	169	159		43	37
v/s Ratio Prot	0.01	c0.55		0.02	c0.56		c0.07	0.07			c0.01	
v/s Ratio Perm			0.05						0.01			0.00
v/c Ratio	0.23	0.84	0.07	0.32	0.83		0.67	0.67	0.07		0.23	0.00
Uniform Delay, d1	76.1	22.0	10.5	72.1	19.0		69.4	69.4	65.2		76.7	76.3
Progression Factor	0.50	1.04	0.00	1.33	0.31		1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	2.7	3.3	0.1	1.4	2.0		9.6	9.6	0.2		5.7	0.1
Delay (s)	40.5	26.2	0.1	97.7	7.9		79.0	79.0	65.4		82.4	76.3
Level of Service	D	C	A	F	A		E	E	E		F	E
Approach Delay (s)		24.8			10.7			74.5			80.4	
Approach LOS		C			B			E			F	
<b>Intersection Summary</b>												
HCM 2000 Control Delay			22.3			HCM 2000 Level of Service			C			
HCM 2000 Volume to Capacity ratio			0.83									
Actuated Cycle Length (s)			160.0			Sum of lost time (s)		27.2				
Intersection Capacity Utilization			78.3%			ICU Level of Service		D				
Analysis Period (min)			15									

c Critical Lane Group

Oxmoor Lot 5 Apartments  
Traffic Impact Study

HCM Signalized Intersection Capacity Analysis  
2505: Oxmoor Toyota & US-60





















03/07/2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕			↕		↖	↕	
Traffic Volume (vph)	76	1794	15	5	1835	50	5	15	5	50	15	50
Future Volume (vph)	76	1794	15	5	1835	50	5	15	5	50	15	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	7.0		7.0	7.0			6.6		6.6	6.6	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00		1.00	1.00	
Flt	1.00	1.00		1.00	1.00			0.97		1.00	0.88	
Flt Protected	0.95	1.00		0.95	1.00			0.99		0.95	1.00	
Satd. Flow (prot)	1770	3535		1770	3525			1797		1770	1647	
Flt Permitted	0.95	1.00		0.95	1.00			0.93		0.74	1.00	
Satd. Flow (perm)	1770	3535		1770	3525			1691		1379	1647	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	83	1950	16	5	1995	54	5	16	5	54	16	54
RTOR Reduction (vph)	0	0	0	0	1	0	0	5	0	0	50	0
Lane Group Flow (vph)	83	1966	0	5	2048	0	0	21	0	54	20	0
Turn Type	Prot	NA		Prot	NA		Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			4			8	
Permitted Phases							4			8		
Actuated Green, G (s)	20.6	125.1		1.6	106.1			12.7		12.7	12.7	
Effective Green, g (s)	20.6	125.1		1.6	106.1			12.7		12.7	12.7	
Actuated g/C Ratio	0.13	0.78		0.01	0.66			0.08		0.08	0.08	
Clearance Time (s)	7.0	7.0		7.0	7.0			6.6		6.6	6.6	
Vehicle Extension (s)	4.0	3.0		4.0	3.0			4.0		4.0	4.0	
Lane Grp Cap (vph)	227	2763		17	2337			134		109	130	
v/s Ratio Prot	0.05	c0.56		0.00	c0.58						0.01	
v/s Ratio Perm								0.01		c0.04		
v/c Ratio	0.37	0.71		0.29	0.88			0.16		0.50	0.16	
Uniform Delay, d1	63.7	8.6		78.6	21.7			68.7		70.6	68.7	
Progression Factor	0.58	0.32		1.27	0.58			1.00		1.00	1.00	
Incremental Delay, d2	0.8	1.0		9.0	3.6			0.8		4.8	0.8	
Delay (s)	37.9	3.7		109.2	16.0			69.4		75.3	69.4	
Level of Service	D	A		F	B			E		E	E	
Approach Delay (s)		5.1			16.3			69.4			72.0	
Approach LOS		A			B			E			E	
<b>Intersection Summary</b>												
HCM 2000 Control Delay			12.9									B
HCM 2000 Volume to Capacity ratio			0.83									
Actuated Cycle Length (s)			160.0							20.6		
Intersection Capacity Utilization			83.1%									E
Analysis Period (min)			15									

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis  
2506: S Lyndon Ln/Lyndon Ln & US-60

03/07/2022



















												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	127	1398	66	15	1480	107	152	26	25	178	36	25
Future Volume (vph)	127	1398	66	15	1480	107	152	26	25	178	36	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	7.0		7.0	7.0		6.6	6.6			6.6	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00			1.00	
Flt	1.00	0.99		1.00	0.99		1.00	0.93			0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00			0.96	
Satd. Flow (prot)	1770	3515		1770	3504		1770	1726			1771	
Flt Permitted	0.04	1.00		0.10	1.00		0.67	1.00			0.75	
Satd. Flow (perm)	76	3515		181	3504		1251	1726			1369	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	138	1520	72	16	1609	116	165	28	27	193	39	27
RTOR Reduction (vph)	0	2	0	0	3	0	0	21	0	0	3	0
Lane Group Flow (vph)	138	1590	0	16	1722	0	165	34	0	0	256	0
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	1	6		5	2			8				4
Permitted Phases	6			2			8			4		
Actuated Green, G (s)	110.7	100.7		94.1	91.1		35.7	35.7			35.7	
Effective Green, g (s)	110.7	100.7		94.1	91.1		35.7	35.7			35.7	
Actuated g/C Ratio	0.69	0.63		0.59	0.57		0.22	0.22			0.22	
Clearance Time (s)	7.0	7.0		7.0	7.0		6.6	6.6			6.6	
Vehicle Extension (s)	4.0	3.0		4.0	3.0		6.0	6.0			6.0	
Lane Grp Cap (vph)	185	2212		136	1995		279	385			305	
v/s Ratio Prot	c0.06	c0.45		0.00	c0.49			0.02				
v/s Ratio Perm	0.46			0.07			0.13				c0.19	
v/c Ratio	0.75	0.72		0.12	0.86		0.59	0.09			0.84	
Uniform Delay, d1	48.8	20.1		17.8	29.2		55.6	49.3			59.4	
Progression Factor	1.09	1.35		0.45	0.26		1.00	1.00			1.00	
Incremental Delay, d2	12.4	1.6		0.4	3.7		6.1	0.3			20.5	
Delay (s)	65.8	28.7		8.4	11.4		61.7	49.5			79.9	
Level of Service	E	C		A	B		E	D			E	
Approach Delay (s)		31.6			11.3			58.7			79.9	
Approach LOS		C			B			E			E	
<b>Intersection Summary</b>												
HCM 2000 Control Delay			27.4				HCM 2000 Level of Service				C	
HCM 2000 Volume to Capacity ratio			0.86									
Actuated Cycle Length (s)			160.0				Sum of lost time (s)			20.6		
Intersection Capacity Utilization			88.5%				ICU Level of Service			E		
Analysis Period (min)			15									

c Critical Lane Group

Oxmoor Lot 5 Apartments  
Traffic Impact Study

HCM Signalized Intersection Capacity Analysis  
2502: I-264 EB to US-60 EB/KY-146 & US-60






















03/07/2022

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (vph)	761	1580	0	0	2214	102	0	0	863	0	0	914	
Future Volume (vph)	761	1580	0	0	2214	102	0	0	863	0	0	914	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)	6.6	7.3			7.3				7.3			6.6	
Lane Util. Factor	0.97	0.91			0.86				0.88			0.88	
Fr't	1.00	1.00			0.99				0.85			0.85	
Flt Protected	0.95	1.00			1.00				1.00			1.00	
Satd. Flow (prot)	3433	5085			6365				2787			2787	
Flt Permitted	0.95	1.00			1.00				1.00			1.00	
Satd. Flow (perm)	3433	5085			6365				2787			2787	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Adj. Flow (vph)	827	1717	0	0	2407	111	0	0	938	0	0	993	
RTOR Reduction (vph)	0	0	0	0	4	0	0	0	0	0	0	0	
Lane Group Flow (vph)	827	1717	0	0	2514	0	0	0	938	0	0	993	
Turn Type	Prot	NA			NA				Perm			Over	
Protected Phases	5	2			6							5	
Permitted Phases									2 5 6				
Actuated Green, G (s)	68.4	180.0			97.7				180.0			68.4	
Effective Green, g (s)	68.4	180.0			97.7				180.0			68.4	
Actuated g/C Ratio	0.38	1.00			0.54				1.00			0.38	
Clearance Time (s)	6.6	7.3			7.3							6.6	
Vehicle Extension (s)	5.0	3.0			3.0							5.0	
Lane Grp Cap (vph)	1304	5085			3454				2787			1059	
v/s Ratio Prot	0.24	0.34			c0.39							c0.36	
v/s Ratio Perm									0.34				
v/c Ratio	0.63	0.34			0.73				0.34			0.94	
Uniform Delay, d1	45.6	0.0			31.1				0.0			53.7	
Progression Factor	0.54	1.00			0.30				1.00			1.00	
Incremental Delay, d2	1.0	0.2			0.8				0.2			15.4	
Delay (s)	25.7	0.2			10.2				0.2			69.1	
Level of Service	C	A			B				A			E	
Approach Delay (s)		8.5			10.2			0.2			69.1		
Approach LOS		A			B			A			E		
<b>Intersection Summary</b>													
HCM 2000 Control Delay			16.6									HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio			0.81										
Actuated Cycle Length (s)			180.0									Sum of lost time (s)	13.9
Intersection Capacity Utilization			77.3%									ICU Level of Service	D
Analysis Period (min)			15										

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis  
2503: Oxmoor Ln & US-60























03/07/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	76	1649	695	114	1610	25	640	25	127	50	36	76
Future Volume (vph)	76	1649	695	114	1610	25	640	25	127	50	36	76
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	7.0	7.0	7.0	7.0		6.6	6.6			6.6	6.6
Lane Util. Factor	1.00	0.81	0.81	1.00	0.91		0.91	0.91			1.00	1.00
Fr <sub>t</sub>	1.00	0.98	0.85	1.00	1.00		1.00	0.93			1.00	0.85
Fl <sub>t</sub> Protected	0.95	1.00	1.00	0.95	1.00		0.95	0.98			0.97	1.00
Satd. Flow (prot)	1770	5905	1282	1770	5074		3221	1537			1810	1583
Fl <sub>t</sub> Permitted	0.95	1.00	1.00	0.95	1.00		0.95	0.98			0.97	1.00
Satd. Flow (perm)	1770	5905	1282	1770	5074		3221	1537			1810	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	83	1792	755	124	1750	27	696	27	138	54	39	83
RTOR Reduction (vph)	0	15	258	0	1	0	0	21	0	0	0	76
Lane Group Flow (vph)	83	2079	195	124	1776	0	585	255	0	0	93	7
Turn Type	Prot	NA	Perm	Prot	NA		Split	NA		Split	NA	Perm
Protected Phases	5	2		1	6		4	4		8	8	
Permitted Phases			2									8
Actuated Green, G (s)	19.0	77.2	77.2	17.7	75.9		42.7	42.7			15.2	15.2
Effective Green, g (s)	19.0	77.2	77.2	17.7	75.9		42.7	42.7			15.2	15.2
Actuated g/C Ratio	0.11	0.43	0.43	0.10	0.42		0.24	0.24			0.08	0.08
Clearance Time (s)	7.0	7.0	7.0	7.0	7.0		6.6	6.6			6.6	6.6
Vehicle Extension (s)	5.0	3.0	3.0	5.0	3.0		6.0	6.0			4.0	4.0
Lane Grp Cap (vph)	186	2532	549	174	2139		764	364			152	133
v/s Ratio Prot	0.05	c0.35		0.07	c0.35		c0.18	0.17			c0.05	
v/s Ratio Perm			0.15									0.00
v/c Ratio	0.45	0.82	0.36	0.71	0.83		0.77	0.70			0.61	0.05
Uniform Delay, d <sub>1</sub>	75.6	45.3	34.6	78.7	46.3		64.0	62.8			79.6	75.8
Progression Factor	0.83	0.70	1.91	0.88	0.92		0.95	0.95			1.00	1.00
Incremental Delay, d <sub>2</sub>	3.4	3.0	1.7	13.8	3.4		5.8	8.6			8.1	0.2
Delay (s)	65.9	34.9	68.0	83.1	45.9		66.9	68.2			87.7	76.0
Level of Service	E	C	E	F	D		E	E			F	E
Approach Delay (s)		41.6			48.3			67.3			82.2	
Approach LOS		D			D			E			F	
<b>Intersection Summary</b>												
HCM 2000 Control Delay			49.2				HCM 2000 Level of Service				D	
HCM 2000 Volume to Capacity ratio			0.81									
Actuated Cycle Length (s)			180.0				Sum of lost time (s)			27.2		
Intersection Capacity Utilization			80.5%				ICU Level of Service			D		
Analysis Period (min)			15									

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis  
2504: Christian Way & US-60

03/07/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	1528	152	177	1370	5	243	5	147	5	5	25
Future Volume (vph)	10	1528	152	177	1370	5	243	5	147	5	5	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	7.0	7.0	7.0	7.0		6.6	6.6	6.6		6.6	6.6
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95		0.95	0.95	1.00		1.00	1.00
Fr <sub>t</sub>	1.00	1.00	0.85	1.00	1.00		1.00	1.00	0.85		1.00	0.85
Fl <sub>t</sub> Protected	0.95	1.00	1.00	0.95	1.00		0.95	0.95	1.00		0.98	1.00
Satd. Flow (prot)	1770	3539	1583	3433	3537		1681	1688	1583		1817	1583
Fl <sub>t</sub> Permitted	0.95	1.00	1.00	0.95	1.00		0.95	0.95	1.00		0.98	1.00
Satd. Flow (perm)	1770	3539	1583	3433	3537		1681	1688	1583		1817	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	11	1661	165	192	1489	5	264	5	160	5	5	27
RTOR Reduction (vph)	0	0	47	0	0	0	0	0	142	0	0	26
Lane Group Flow (vph)	11	1661	118	192	1494	0	135	134	18	0	10	1
Turn Type	Prot	NA	Perm	Prot	NA		Split	NA	Perm	Split	NA	Perm
Protected Phases	5	2		1	6		4	4		8	8	
Permitted Phases			2						4			8
Actuated Green, G (s)	3.5	98.8	98.8	27.1	122.4		19.8	19.8	19.8		7.1	7.1
Effective Green, g (s)	3.5	98.8	98.8	27.1	122.4		19.8	19.8	19.8		7.1	7.1
Actuated g/C Ratio	0.02	0.55	0.55	0.15	0.68		0.11	0.11	0.11		0.04	0.04
Clearance Time (s)	7.0	7.0	7.0	7.0	7.0		6.6	6.6	6.6		6.6	6.6
Vehicle Extension (s)	4.0	3.0	3.0	6.0	3.0		3.0	3.0	3.0		5.0	5.0
Lane Grp Cap (vph)	34	1942	868	516	2405		184	185	174		71	62
v/s Ratio Prot	0.01	c0.47		0.06	c0.42		c0.08	0.08			c0.01	
v/s Ratio Perm			0.07						0.01			0.00
v/c Ratio	0.32	0.86	0.14	0.37	0.62		0.73	0.72	0.10		0.14	0.02
Uniform Delay, d <sub>1</sub>	87.1	34.5	19.8	68.8	16.0		77.5	77.5	72.1		83.5	83.1
Progression Factor	1.53	0.36	0.00	0.67	0.30		1.00	1.00	1.00		1.00	1.00
Incremental Delay, d <sub>2</sub>	4.9	3.4	0.2	1.1	1.0		14.0	13.1	0.3		1.9	0.2
Delay (s)	138.4	15.8	0.2	47.2	5.8		91.6	90.6	72.3		85.4	83.3
Level of Service	F	B	A	D	A		F	F	E		F	F
Approach Delay (s)		15.1			10.5			84.1			83.9	
Approach LOS		B			B			F			F	
<b>Intersection Summary</b>												
HCM 2000 Control Delay			21.2				HCM 2000 Level of Service				C	
HCM 2000 Volume to Capacity ratio			0.77									
Actuated Cycle Length (s)			180.0				Sum of lost time (s)				27.2	
Intersection Capacity Utilization			79.6%				ICU Level of Service				D	
Analysis Period (min)			15									

c Critical Lane Group



HCM Signalized Intersection Capacity Analysis  
2505: Oxmoor Toyota & US-60

03/07/2022





















Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations	↖	↗		↖	↗			↕		↖	↗		
Traffic Volume (vph)	51	1599	5	5	1446	15	5	5	5	51	5	76	
Future Volume (vph)	51	1599	5	5	1446	15	5	5	5	51	5	76	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)	7.0	7.0		7.0	7.0			6.6		6.6	6.6		
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00		1.00	1.00		
Fr't	1.00	1.00		1.00	1.00			0.95		1.00	0.86		
Flt Protected	0.95	1.00		0.95	1.00			0.98		0.95	1.00		
Satd. Flow (prot)	1770	3538		1770	3534			1750		1770	1599		
Flt Permitted	0.95	1.00		0.95	1.00			0.88		0.75	1.00		
Satd. Flow (perm)	1770	3538		1770	3534			1573		1393	1599		
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Adj. Flow (vph)	55	1738	5	5	1572	16	5	5	5	55	5	83	
RTOR Reduction (vph)	0	0	0	0	0	0	0	5	0	0	77	0	
Lane Group Flow (vph)	55	1743	0	5	1588	0	0	10	0	55	11	0	
Turn Type	Prot	NA		Prot	NA		Perm	NA		Perm	NA		
Protected Phases	5	2		1	6			4			8		
Permitted Phases							4			8			
Actuated Green, G (s)	10.4	144.4		1.6	135.6			13.4		13.4	13.4		
Effective Green, g (s)	10.4	144.4		1.6	135.6			13.4		13.4	13.4		
Actuated g/C Ratio	0.06	0.80		0.01	0.75			0.07		0.07	0.07		
Clearance Time (s)	7.0	7.0		7.0	7.0			6.6		6.6	6.6		
Vehicle Extension (s)	4.0	3.0		4.0	3.0			4.0		4.0	4.0		
Lane Grp Cap (vph)	102	2838		15	2662			117		103	119		
v/s Ratio Prot	c0.03	c0.49		0.00	0.45						0.01		
v/s Ratio Perm								0.01		c0.04			
v/c Ratio	0.54	0.61		0.33	0.60			0.09		0.53	0.09		
Uniform Delay, d1	82.5	6.9		88.7	9.9			77.6		80.3	77.6		
Progression Factor	1.29	0.09		0.81	0.79			1.00		1.00	1.00		
Incremental Delay, d2	4.3	0.6		12.1	0.7			0.4		6.6	0.5		
Delay (s)	110.5	1.2		83.6	8.5			78.1		86.9	78.1		
Level of Service	F	A		F	A			E		F	E		
Approach Delay (s)		4.6			8.7			78.1			81.5		
Approach LOS		A			A			E			F		
<b>Intersection Summary</b>													
HCM 2000 Control Delay			9.9									HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio			0.62										
Actuated Cycle Length (s)			180.0									Sum of lost time (s)	20.6
Intersection Capacity Utilization			62.8%									ICU Level of Service	B
Analysis Period (min)			15										

c Critical Lane Group



HCM Signalized Intersection Capacity Analysis  
2506: S Lyndon Ln/Lyndon Ln & US-60



















03/07/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	102	1294	76	25	1345	228	51	51	25	178	51	76
Future Volume (vph)	102	1294	76	25	1345	228	51	51	25	178	51	76
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	7.0		7.0	7.0		6.6	6.6			6.6	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00			1.00	
Flt	1.00	0.99		1.00	0.98		1.00	0.95			0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00			0.97	
Satd. Flow (prot)	1770	3510		1770	3462		1770	1771			1749	
Flt Permitted	0.04	1.00		0.10	1.00		0.57	1.00			0.77	
Satd. Flow (perm)	69	3510		190	3462		1067	1771			1393	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	111	1407	83	27	1462	248	55	55	27	193	55	83
RTOR Reduction (vph)	0	2	0	0	7	0	0	10	0	0	7	0
Lane Group Flow (vph)	111	1488	0	27	1703	0	55	72	0	0	324	0
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	1	6		5	2			8				4
Permitted Phases	6			2			8			4		
Actuated Green, G (s)	120.6	107.5		106.5	100.4		45.8	45.8			45.8	
Effective Green, g (s)	120.6	107.5		106.5	100.4		45.8	45.8			45.8	
Actuated g/C Ratio	0.67	0.60		0.59	0.56		0.25	0.25			0.25	
Clearance Time (s)	7.0	7.0		7.0	7.0		6.6	6.6			6.6	
Vehicle Extension (s)	4.0	3.0		4.0	3.0		6.0	6.0			6.0	
Lane Grp Cap (vph)	170	2096		165	1931		271	450			354	
v/s Ratio Prot	c0.05	c0.42		0.01	c0.49			0.04				
v/s Ratio Perm	0.39			0.09			0.05				c0.23	
v/c Ratio	0.65	0.71		0.16	0.88		0.20	0.16			0.92	
Uniform Delay, d1	51.8	25.3		20.5	34.6		52.8	52.2			65.2	
Progression Factor	1.63	0.30		0.70	0.90		1.00	1.00			1.00	
Incremental Delay, d2	8.1	1.7		0.4	3.7		1.0	0.5			29.5	
Delay (s)	92.8	9.3		14.8	35.0		53.8	52.6			94.7	
Level of Service	F	A		B	D		D	D			F	
Approach Delay (s)		15.1			34.7			53.1			94.7	
Approach LOS		B			C			D			F	
<b>Intersection Summary</b>												
HCM 2000 Control Delay			32.3			HCM 2000 Level of Service			C			
HCM 2000 Volume to Capacity ratio			0.88									
Actuated Cycle Length (s)			180.0			Sum of lost time (s)		20.6				
Intersection Capacity Utilization			91.1%			ICU Level of Service		F				
Analysis Period (min)			15									

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis  
2502: I-264 EB to US-60 EB/KY-146 & US-60






















03/07/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	914	1131	0	0	2007	76	0	0	1052	0	0	1066
Future Volume (vph)	914	1131	0	0	2007	76	0	0	1052	0	0	1066
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.6	7.3			7.3				7.3			6.6
Lane Util. Factor	0.97	0.91			0.86				0.88			0.88
Fr't	1.00	1.00			0.99				0.85			0.85
Flt Protected	0.95	1.00			1.00				1.00			1.00
Satd. Flow (prot)	3433	5085			6373				2787			2787
Flt Permitted	0.95	1.00			1.00				1.00			1.00
Satd. Flow (perm)	3433	5085			6373				2787			2787
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	993	1229	0	0	2182	83	0	0	1143	0	0	1159
RTOR Reduction (vph)	0	0	0	0	3	0	0	0	0	0	0	0
Lane Group Flow (vph)	993	1229	0	0	2262	0	0	0	1143	0	0	1159
Turn Type	Prot	NA			NA				Perm			Over
Protected Phases	5	2			6							5
Permitted Phases									2 5 6			
Actuated Green, G (s)	68.4	160.0			77.7				160.0			68.4
Effective Green, g (s)	68.4	160.0			77.7				160.0			68.4
Actuated g/C Ratio	0.43	1.00			0.49				1.00			0.43
Clearance Time (s)	6.6	7.3			7.3							6.6
Vehicle Extension (s)	5.0	3.0			3.0							5.0
Lane Grp Cap (vph)	1467	5085			3094				2787			1191
v/s Ratio Prot	0.29	0.24			c0.35							c0.42
v/s Ratio Perm									0.41			
v/c Ratio	0.68	0.24			0.73				0.41			0.97
Uniform Delay, d1	36.9	0.0			32.8				0.0			44.9
Progression Factor	1.51	1.00			0.48				1.00			1.37
Incremental Delay, d2	0.8	0.1			1.1				0.2			3.7
Delay (s)	56.5	0.1			16.8				0.2			65.4
Level of Service	E	A			B				A			E
Approach Delay (s)		25.3			16.8			0.2			65.4	
Approach LOS		C			B			A			E	
<b>Intersection Summary</b>												
HCM 2000 Control Delay			25.1		HCM 2000 Level of Service				C			
HCM 2000 Volume to Capacity ratio			0.84									
Actuated Cycle Length (s)			160.0		Sum of lost time (s)				13.9			
Intersection Capacity Utilization			79.2%		ICU Level of Service				D			
Analysis Period (min)			15									

c Critical Lane Group























HCM Signalized Intersection Capacity Analysis  
2503: Oxmoor Ln & US-60

03/07/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	102	1829	252	178	1898	51	186	5	102	25	25	25
Future Volume (vph)	102	1829	252	178	1898	51	186	5	102	25	25	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	7.0	7.0	7.0	7.0		6.6	6.6			6.6	6.6
Lane Util. Factor	1.00	0.81	0.81	1.00	0.91		0.91	0.91			1.00	1.00
Fr <sub>t</sub>	1.00	1.00	0.85	1.00	1.00		1.00	0.88			1.00	0.85
Fl <sub>t</sub> Protected	0.95	1.00	1.00	0.95	1.00		0.95	0.99			0.98	1.00
Satd. Flow (prot)	1770	6023	1282	1770	5065		3221	1477			1817	1583
Fl <sub>t</sub> Permitted	0.95	1.00	1.00	0.95	1.00		0.95	0.99			0.98	1.00
Satd. Flow (perm)	1770	6023	1282	1770	5065		3221	1477			1817	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	111	1988	274	193	2063	55	202	5	111	27	27	27
RTOR Reduction (vph)	0	1	78	0	1	0	0	99	0	0	0	25
Lane Group Flow (vph)	111	2014	169	193	2117	0	182	37	0	0	54	2
Turn Type	Prot	NA	Perm	Prot	NA		Split	NA		Split	NA	Perm
Protected Phases	5	2		1	6		4	4		8	8	
Permitted Phases			2									8
Actuated Green, G (s)	17.2	82.6	82.6	23.0	88.4		17.6	17.6			9.6	9.6
Effective Green, g (s)	17.2	82.6	82.6	23.0	88.4		17.6	17.6			9.6	9.6
Actuated g/C Ratio	0.11	0.52	0.52	0.14	0.55		0.11	0.11			0.06	0.06
Clearance Time (s)	7.0	7.0	7.0	7.0	7.0		6.6	6.6			6.6	6.6
Vehicle Extension (s)	5.0	3.0	3.0	5.0	3.0		6.0	6.0			4.0	4.0
Lane Grp Cap (vph)	190	3109	661	254	2798		354	162			109	94
v/s Ratio Prot	0.06	c0.33		0.11	c0.42		c0.06	0.03			c0.03	
v/s Ratio Perm			0.13									0.00
v/c Ratio	0.58	0.65	0.26	0.76	0.76		0.51	0.23			0.50	0.02
Uniform Delay, d <sub>1</sub>	68.0	28.1	21.6	65.8	27.5		67.2	65.0			72.9	70.8
Progression Factor	1.00	1.24	1.58	0.74	0.46		1.08	1.45			1.00	1.00
Incremental Delay, d <sub>2</sub>	6.7	1.0	0.9	10.5	1.4		3.3	2.0			4.8	0.1
Delay (s)	74.9	35.9	35.0	59.5	14.1		75.6	96.6			77.6	70.9
Level of Service	E	D	D	E	B		E	F			E	E
Approach Delay (s)		37.7			17.9			84.6			75.4	
Approach LOS		D			B			F			E	
<b>Intersection Summary</b>												
HCM 2000 Control Delay			32.2									
HCM 2000 Volume to Capacity ratio			0.71									
Actuated Cycle Length (s)			160.0									
Intersection Capacity Utilization			73.9%									
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis  
2504: Christian Way & US-60

03/07/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	1777	116	71	1827	5	248	5	142	5	5	5
Future Volume (vph)	10	1777	116	71	1827	5	248	5	142	5	5	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	7.0	7.0	7.0	7.0		6.6	6.6	6.6		6.6	6.6
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95		0.95	0.95	1.00		1.00	1.00
Fr <sub>t</sub>	1.00	1.00	0.85	1.00	1.00		1.00	1.00	0.85		1.00	0.85
Fl <sub>t</sub> Protected	0.95	1.00	1.00	0.95	1.00		0.95	0.95	1.00		0.98	1.00
Satd. Flow (prot)	1770	3539	1583	3433	3538		1681	1688	1583		1817	1583
Fl <sub>t</sub> Permitted	0.95	1.00	1.00	0.95	1.00		0.95	0.95	1.00		0.98	1.00
Satd. Flow (perm)	1770	3539	1583	3433	3538		1681	1688	1583		1817	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	11	1932	126	77	1986	5	270	5	154	5	5	5
RTOR Reduction (vph)	0	0	45	0	0	0	0	0	136	0	0	5
Lane Group Flow (vph)	11	1932	81	77	1991	0	138	137	18	0	10	0
Turn Type	Prot	NA	Perm	Prot	NA		Split	NA	Perm	Split	NA	Perm
Protected Phases	5	2		1	6		4	4		8	8	
Permitted Phases			2						4			8
Actuated Green, G (s)	4.4	98.7	98.7	11.9	106.2		18.4	18.4	18.4		3.8	3.8
Effective Green, g (s)	4.4	98.7	98.7	11.9	106.2		18.4	18.4	18.4		3.8	3.8
Actuated g/C Ratio	0.03	0.62	0.62	0.07	0.66		0.11	0.11	0.11		0.02	0.02
Clearance Time (s)	7.0	7.0	7.0	7.0	7.0		6.6	6.6	6.6		6.6	6.6
Vehicle Extension (s)	4.0	3.0	3.0	6.0	3.0		3.0	3.0	3.0		5.0	5.0
Lane Grp Cap (vph)	48	2183	976	255	2348		193	194	182		43	37
v/s Ratio Prot	0.01	c0.55		0.02	c0.56		c0.08	0.08			c0.01	
v/s Ratio Perm			0.05						0.01			0.00
v/c Ratio	0.23	0.89	0.08	0.30	0.85		0.72	0.71	0.10		0.23	0.00
Uniform Delay, d <sub>1</sub>	76.1	25.9	12.4	70.1	20.7		68.3	68.2	63.4		76.7	76.3
Progression Factor	0.49	0.88	0.00	1.32	0.33		1.00	1.00	1.00		1.00	1.00
Incremental Delay, d <sub>2</sub>	2.7	4.7	0.1	1.0	2.3		11.9	11.1	0.2		5.7	0.1
Delay (s)	40.3	27.4	0.1	93.9	9.0		80.1	79.3	63.6		82.4	76.3
Level of Service	D	C	A	F	A		F	E	E		F	E
Approach Delay (s)		25.8			12.2			73.9			80.4	
Approach LOS		C			B			E			F	
<b>Intersection Summary</b>												
HCM 2000 Control Delay			24.3				HCM 2000 Level of Service		C			
HCM 2000 Volume to Capacity ratio			0.87									
Actuated Cycle Length (s)			160.0				Sum of lost time (s)		27.2			
Intersection Capacity Utilization			78.9%				ICU Level of Service		D			
Analysis Period (min)			15									

c Critical Lane Group

Oxmoor Lot 5 Apartments  
Traffic Impact Study

HCM Signalized Intersection Capacity Analysis  
2505: Oxmoor Toyota & US-60

03/07/2022





















Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations	↖	↗		↖	↗			↕		↖	↗		
Traffic Volume (vph)	76	1833	15	5	1847	50	5	15	5	50	15	50	
Future Volume (vph)	76	1833	15	5	1847	50	5	15	5	50	15	50	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)	7.0	7.0		7.0	7.0			6.6		6.6	6.6		
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00		1.00	1.00		
Flt	1.00	1.00		1.00	1.00			0.97		1.00	0.88		
Flt Protected	0.95	1.00		0.95	1.00			0.99		0.95	1.00		
Satd. Flow (prot)	1770	3535		1770	3525			1797		1770	1647		
Flt Permitted	0.95	1.00		0.95	1.00			0.93		0.74	1.00		
Satd. Flow (perm)	1770	3535		1770	3525			1691		1379	1647		
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Adj. Flow (vph)	83	1992	16	5	2008	54	5	16	5	54	16	54	
RTOR Reduction (vph)	0	0	0	0	1	0	0	5	0	0	50	0	
Lane Group Flow (vph)	83	2008	0	5	2061	0	0	21	0	54	20	0	
Turn Type	Prot	NA		Prot	NA		Perm	NA		Perm	NA		
Protected Phases	5	2		1	6			4			8		
Permitted Phases							4			8			
Actuated Green, G (s)	20.6	125.1		1.6	106.1			12.7		12.7	12.7		
Effective Green, g (s)	20.6	125.1		1.6	106.1			12.7		12.7	12.7		
Actuated g/C Ratio	0.13	0.78		0.01	0.66			0.08		0.08	0.08		
Clearance Time (s)	7.0	7.0		7.0	7.0			6.6		6.6	6.6		
Vehicle Extension (s)	4.0	3.0		4.0	3.0			4.0		4.0	4.0		
Lane Grp Cap (vph)	227	2763		17	2337			134		109	130		
v/s Ratio Prot	0.05	c0.57		0.00	c0.58						0.01		
v/s Ratio Perm								0.01		c0.04			
v/c Ratio	0.37	0.73		0.29	0.88			0.16		0.50	0.16		
Uniform Delay, d1	63.7	8.8		78.6	21.9			68.7		70.6	68.7		
Progression Factor	0.58	0.48		1.28	0.59			1.00		1.00	1.00		
Incremental Delay, d2	0.8	1.0		9.0	3.7			0.8		4.8	0.8		
Delay (s)	37.6	5.2		109.5	16.6			69.4		75.3	69.4		
Level of Service	D	A		F	B			E		E	E		
Approach Delay (s)		6.5			16.8			69.4			72.0		
Approach LOS		A			B			E			E		
<b>Intersection Summary</b>													
HCM 2000 Control Delay			13.7									HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio			0.84										
Actuated Cycle Length (s)			160.0									Sum of lost time (s)	20.6
Intersection Capacity Utilization			83.5%									ICU Level of Service	E
Analysis Period (min)			15										

c Critical Lane Group

Oxmoor Lot 5 Apartments  
Traffic Impact Study

HCM Signalized Intersection Capacity Analysis  
2506: S Lyndon Ln/Lyndon Ln & US-60

03/07/2022



















												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	127	1437	66	15	1492	107	152	26	25	178	36	25
Future Volume (vph)	127	1437	66	15	1492	107	152	26	25	178	36	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	7.0		7.0	7.0		6.6	6.6			6.6	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00			1.00	
Flt	1.00	0.99		1.00	0.99		1.00	0.93			0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00			0.96	
Satd. Flow (prot)	1770	3516		1770	3504		1770	1726			1771	
Flt Permitted	0.04	1.00		0.09	1.00		0.67	1.00			0.75	
Satd. Flow (perm)	76	3516		165	3504		1251	1726			1369	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	138	1562	72	16	1622	116	165	28	27	193	39	27
RTOR Reduction (vph)	0	1	0	0	3	0	0	21	0	0	3	0
Lane Group Flow (vph)	138	1633	0	16	1735	0	165	34	0	0	256	0
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	1	6		5	2			8				4
Permitted Phases	6			2			8			4		
Actuated Green, G (s)	110.7	100.7		94.1	91.1		35.7	35.7			35.7	
Effective Green, g (s)	110.7	100.7		94.1	91.1		35.7	35.7			35.7	
Actuated g/C Ratio	0.69	0.63		0.59	0.57		0.22	0.22			0.22	
Clearance Time (s)	7.0	7.0		7.0	7.0		6.6	6.6			6.6	
Vehicle Extension (s)	4.0	3.0		4.0	3.0		6.0	6.0			6.0	
Lane Grp Cap (vph)	185	2212		127	1995		279	385			305	
v/s Ratio Prot	c0.06	c0.46		0.00	c0.50			0.02				
v/s Ratio Perm	0.46			0.07			0.13				c0.19	
v/c Ratio	0.75	0.74		0.13	0.87		0.59	0.09			0.84	
Uniform Delay, d1	49.0	20.5		18.4	29.4		55.6	49.3			59.4	
Progression Factor	1.10	1.36		0.46	0.27		1.00	1.00			1.00	
Incremental Delay, d2	12.4	1.7		0.4	3.9		6.1	0.3			20.5	
Delay (s)	66.3	29.6		8.8	11.7		61.7	49.5			79.9	
Level of Service	E	C		A	B		E	D			E	
Approach Delay (s)		32.5			11.7			58.7			79.9	
Approach LOS		C			B			E			E	
<b>Intersection Summary</b>												
HCM 2000 Control Delay			27.9				HCM 2000 Level of Service				C	
HCM 2000 Volume to Capacity ratio			0.86									
Actuated Cycle Length (s)			160.0				Sum of lost time (s)			20.6		
Intersection Capacity Utilization			88.8%				ICU Level of Service			E		
Analysis Period (min)			15									

c Critical Lane Group

Oxmoor Lot 5 Apartments  
Traffic Impact Study

HCM Signalized Intersection Capacity Analysis  
2502: I-264 EB to US-60 EB/KY-146 & US-60

03/08/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	761	1729	0	0	2242	102	0	0	863	0	0	914
Future Volume (vph)	761	1729	0	0	2242	102	0	0	863	0	0	914
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.6	7.3			7.3				7.3			6.6
Lane Util. Factor	0.97	0.91			0.86				0.88			0.88
Fr't	1.00	1.00			0.99				0.85			0.85
Flt Protected	0.95	1.00			1.00				1.00			1.00
Satd. Flow (prot)	3433	5085			6366				2787			2787
Flt Permitted	0.95	1.00			1.00				1.00			1.00
Satd. Flow (perm)	3433	5085			6366				2787			2787
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	827	1879	0	0	2437	111	0	0	938	0	0	993
RTOR Reduction (vph)	0	0	0	0	4	0	0	0	0	0	0	0
Lane Group Flow (vph)	827	1879	0	0	2544	0	0	0	938	0	0	993
Turn Type	Prot	NA			NA				Perm			Over
Protected Phases	5	2			6							5
Permitted Phases									2 5 6			
Actuated Green, G (s)	68.4	180.0			97.7				180.0			68.4
Effective Green, g (s)	68.4	180.0			97.7				180.0			68.4
Actuated g/C Ratio	0.38	1.00			0.54				1.00			0.38
Clearance Time (s)	6.6	7.3			7.3							6.6
Vehicle Extension (s)	5.0	3.0			3.0							5.0
Lane Grp Cap (vph)	1304	5085			3455				2787			1059
v/s Ratio Prot	0.24	0.37			c0.40							c0.36
v/s Ratio Perm									0.34			
v/c Ratio	0.63	0.37			0.74				0.34			0.94
Uniform Delay, d1	45.6	0.0			31.3				0.0			53.7
Progression Factor	0.53	1.00			0.29				1.00			1.00
Incremental Delay, d2	1.1	0.2			0.9				0.2			15.4
Delay (s)	25.1	0.2			10.1				0.2			69.1
Level of Service	C	A			B				A			E
Approach Delay (s)		7.8			10.1			0.2			69.1	
Approach LOS		A			B			A			E	
<b>Intersection Summary</b>												
HCM 2000 Control Delay			16.1		HCM 2000 Level of Service				B			
HCM 2000 Volume to Capacity ratio			0.82									
Actuated Cycle Length (s)			180.0		Sum of lost time (s)				13.9			
Intersection Capacity Utilization			77.7%		ICU Level of Service				D			
Analysis Period (min)			15									






















c Critical Lane Group



Oxmoor Lot 5 Apartments  
Traffic Impact Study

HCM Signalized Intersection Capacity Analysis  
2503: Oxmoor Ln & US-60

03/08/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	76	1697	695	114	1638	25	640	25	127	50	36	76
Future Volume (vph)	76	1697	695	114	1638	25	640	25	127	50	36	76
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	7.0	7.0	7.0	7.0		6.6	6.6			6.6	6.6
Lane Util. Factor	1.00	0.81	0.81	1.00	0.91		0.91	0.91			1.00	1.00
Flt	1.00	0.98	0.85	1.00	1.00		1.00	0.93			1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	0.98			0.97	1.00
Satd. Flow (prot)	1770	5913	1282	1770	5074		3221	1537			1810	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	0.98			0.97	1.00
Satd. Flow (perm)	1770	5913	1282	1770	5074		3221	1537			1810	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	83	1845	755	124	1780	27	696	27	138	54	39	83
RTOR Reduction (vph)	0	14	257	0	1	0	0	21	0	0	0	76
Lane Group Flow (vph)	83	2118	211	124	1806	0	585	255	0	0	93	7
Turn Type	Prot	NA	Perm	Prot	NA		Split	NA		Split	NA	Perm
Protected Phases	5	2		1	6		4	4		8	8	
Permitted Phases			2									8
Actuated Green, G (s)	19.0	77.2	77.2	17.7	75.9		42.7	42.7			15.2	15.2
Effective Green, g (s)	19.0	77.2	77.2	17.7	75.9		42.7	42.7			15.2	15.2
Actuated g/C Ratio	0.11	0.43	0.43	0.10	0.42		0.24	0.24			0.08	0.08
Clearance Time (s)	7.0	7.0	7.0	7.0	7.0		6.6	6.6			6.6	6.6
Vehicle Extension (s)	5.0	3.0	3.0	5.0	3.0		6.0	6.0			4.0	4.0
Lane Grp Cap (vph)	186	2536	549	174	2139		764	364			152	133
v/s Ratio Prot	0.05	c0.36		0.07	c0.36		c0.18	0.17			c0.05	
v/s Ratio Perm			0.16									0.00
v/c Ratio	0.45	0.84	0.38	0.71	0.84		0.77	0.70			0.61	0.05
Uniform Delay, d1	75.6	45.7	35.1	78.7	46.8		64.0	62.8			79.6	75.8
Progression Factor	0.84	0.73	1.48	0.89	0.92		0.95	0.95			1.00	1.00
Incremental Delay, d2	3.4	3.3	1.9	13.7	3.7		5.8	8.6			8.1	0.2
Delay (s)	66.7	36.6	53.8	83.8	46.9		66.9	68.2			87.7	76.0
Level of Service	E	D	D	F	D		E	E			F	E
Approach Delay (s)		40.5			49.2			67.3			82.2	
Approach LOS		D			D			E			F	
<b>Intersection Summary</b>												
HCM 2000 Control Delay			48.9			HCM 2000 Level of Service				D		
HCM 2000 Volume to Capacity ratio			0.82									
Actuated Cycle Length (s)			180.0			Sum of lost time (s)		27.2				
Intersection Capacity Utilization			81.0%			ICU Level of Service		D				
Analysis Period (min)			15									

c Critical Lane Group



HCM Signalized Intersection Capacity Analysis  
2504: Christian Way & US-60

03/08/2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	1528	200	219	1370	5	271	5	173	5	5	25
Future Volume (vph)	10	1528	200	219	1370	5	271	5	173	5	5	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	7.0	7.0	7.0	7.0		6.6	6.6	6.6		6.6	6.6
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95		0.95	0.95	1.00		1.00	1.00
Fr <sub>t</sub>	1.00	1.00	0.85	1.00	1.00		1.00	1.00	0.85		1.00	0.85
Fl <sub>t</sub> Protected	0.95	1.00	1.00	0.95	1.00		0.95	0.95	1.00		0.98	1.00
Satd. Flow (prot)	1770	3539	1583	3433	3537		1681	1688	1583		1817	1583
Fl <sub>t</sub> Permitted	0.95	1.00	1.00	0.95	1.00		0.95	0.95	1.00		0.98	1.00
Satd. Flow (perm)	1770	3539	1583	3433	3537		1681	1688	1583		1817	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	11	1661	217	238	1489	5	295	5	188	5	5	27
RTOR Reduction (vph)	0	0	48	0	0	0	0	0	166	0	0	26
Lane Group Flow (vph)	11	1661	169	238	1494	0	150	150	22	0	10	1
Turn Type	Prot	NA	Perm	Prot	NA		Split	NA	Perm	Split	NA	Perm
Protected Phases	5	2		1	6		4	4		8	8	
Permitted Phases			2						4			8
Actuated Green, G (s)	3.5	97.0	97.0	27.2	120.7		21.5	21.5	21.5		7.1	7.1
Effective Green, g (s)	3.5	97.0	97.0	27.2	120.7		21.5	21.5	21.5		7.1	7.1
Actuated g/C Ratio	0.02	0.54	0.54	0.15	0.67		0.12	0.12	0.12		0.04	0.04
Clearance Time (s)	7.0	7.0	7.0	7.0	7.0		6.6	6.6	6.6		6.6	6.6
Vehicle Extension (s)	4.0	3.0	3.0	6.0	3.0		3.0	3.0	3.0		5.0	5.0
Lane Grp Cap (vph)	34	1907	853	518	2371		200	201	189		71	62
v/s Ratio Prot	0.01	c0.47		0.07	c0.42		c0.09	0.09			c0.01	
v/s Ratio Perm			0.11						0.01			0.00
v/c Ratio	0.32	0.87	0.20	0.46	0.63		0.75	0.75	0.12		0.14	0.02
Uniform Delay, d <sub>1</sub>	87.1	36.1	21.4	69.7	16.9		76.7	76.6	70.8		83.5	83.1
Progression Factor	1.53	0.39	0.00	0.68	0.31		1.00	1.00	1.00		1.00	1.00
Incremental Delay, d <sub>2</sub>	5.0	4.0	0.3	1.5	1.1		14.6	14.0	0.3		1.9	0.2
Delay (s)	138.0	17.9	0.4	49.1	6.3		91.2	90.6	71.1		85.4	83.3
Level of Service	F	B	A	D	A		F	F	E		F	F
Approach Delay (s)		16.6			12.2			83.3			83.9	
Approach LOS		B			B			F			F	
<b>Intersection Summary</b>												
HCM 2000 Control Delay			23.2				HCM 2000 Level of Service				C	
HCM 2000 Volume to Capacity ratio			0.79									
Actuated Cycle Length (s)			180.0				Sum of lost time (s)				27.2	
Intersection Capacity Utilization			80.4%				ICU Level of Service				D	
Analysis Period (min)			15									

c Critical Lane Group

Oxmoor Lot 5 Apartments  
Traffic Impact Study

HCM Signalized Intersection Capacity Analysis  
2505: Oxmoor Toyota & US-60

03/08/2022





















Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations	↖	↗		↖	↗			↕		↖	↗		
Traffic Volume (vph)	51	1625	5	5	1488	15	5	5	5	51	5	76	
Future Volume (vph)	51	1625	5	5	1488	15	5	5	5	51	5	76	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)	7.0	7.0		7.0	7.0			6.6		6.6	6.6		
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00		1.00	1.00		
Frt	1.00	1.00		1.00	1.00			0.95		1.00	0.86		
Flt Protected	0.95	1.00		0.95	1.00			0.98		0.95	1.00		
Satd. Flow (prot)	1770	3538		1770	3534			1750		1770	1599		
Flt Permitted	0.95	1.00		0.95	1.00			0.88		0.75	1.00		
Satd. Flow (perm)	1770	3538		1770	3534			1573		1393	1599		
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Adj. Flow (vph)	55	1766	5	5	1617	16	5	5	5	55	5	83	
RTOR Reduction (vph)	0	0	0	0	0	0	0	5	0	0	77	0	
Lane Group Flow (vph)	55	1771	0	5	1633	0	0	10	0	55	11	0	
Turn Type	Prot	NA		Prot	NA		Perm	NA		Perm	NA		
Protected Phases	5	2		1	6			4			8		
Permitted Phases							4			8			
Actuated Green, G (s)	10.4	144.4		1.6	135.6			13.4		13.4	13.4		
Effective Green, g (s)	10.4	144.4		1.6	135.6			13.4		13.4	13.4		
Actuated g/C Ratio	0.06	0.80		0.01	0.75			0.07		0.07	0.07		
Clearance Time (s)	7.0	7.0		7.0	7.0			6.6		6.6	6.6		
Vehicle Extension (s)	4.0	3.0		4.0	3.0			4.0		4.0	4.0		
Lane Grp Cap (vph)	102	2838		15	2662			117		103	119		
v/s Ratio Prot	c0.03	c0.50		0.00	0.46						0.01		
v/s Ratio Perm								0.01		c0.04			
v/c Ratio	0.54	0.62		0.33	0.61			0.09		0.53	0.09		
Uniform Delay, d1	82.5	7.0		88.7	10.2			77.6		80.3	77.6		
Progression Factor	1.26	0.16		0.82	0.81			1.00		1.00	1.00		
Incremental Delay, d2	4.2	0.6		12.1	0.7			0.4		6.6	0.5		
Delay (s)	108.4	1.8		84.6	9.0			78.1		86.9	78.1		
Level of Service	F	A		F	A			E		F	E		
Approach Delay (s)		5.0			9.3			78.1			81.5		
Approach LOS		A			A			E			F		
<b>Intersection Summary</b>													
HCM 2000 Control Delay			10.3									HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio			0.63										
Actuated Cycle Length (s)			180.0									Sum of lost time (s)	20.6
Intersection Capacity Utilization			63.5%									ICU Level of Service	B
Analysis Period (min)			15										

c Critical Lane Group

Oxmoor Lot 5 Apartments  
Traffic Impact Study

HCM Signalized Intersection Capacity Analysis  
2506: S Lyndon Ln/Lyndon Ln & US-60

03/08/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	102	1320	76	25	1387	228	51	51	25	178	51	76
Future Volume (vph)	102	1320	76	25	1387	228	51	51	25	178	51	76
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	7.0		7.0	7.0		6.6	6.6			6.6	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00			1.00	
Flt	1.00	0.99		1.00	0.98		1.00	0.95			0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00			0.97	
Satd. Flow (prot)	1770	3510		1770	3464		1770	1771			1749	
Flt Permitted	0.04	1.00		0.10	1.00		0.57	1.00			0.77	
Satd. Flow (perm)	69	3510		179	3464		1067	1771			1393	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	111	1435	83	27	1508	248	55	55	27	193	55	83
RTOR Reduction (vph)	0	2	0	0	7	0	0	10	0	0	7	0
Lane Group Flow (vph)	111	1516	0	27	1749	0	55	72	0	0	324	0
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	1	6		5	2			8				4
Permitted Phases	6			2			8			4		
Actuated Green, G (s)	120.6	107.5		106.5	100.4		45.8	45.8			45.8	
Effective Green, g (s)	120.6	107.5		106.5	100.4		45.8	45.8			45.8	
Actuated g/C Ratio	0.67	0.60		0.59	0.56		0.25	0.25			0.25	
Clearance Time (s)	7.0	7.0		7.0	7.0		6.6	6.6			6.6	
Vehicle Extension (s)	4.0	3.0		4.0	3.0		6.0	6.0			6.0	
Lane Grp Cap (vph)	170	2096		159	1932		271	450			354	
v/s Ratio Prot	c0.05	c0.43		0.01	c0.50			0.04				
v/s Ratio Perm	0.39			0.09			0.05				c0.23	
v/c Ratio	0.65	0.72		0.17	0.91		0.20	0.16			0.92	
Uniform Delay, d1	52.6	25.7		21.1	35.6		52.8	52.2			65.2	
Progression Factor	1.59	0.34		0.71	0.91		1.00	1.00			1.00	
Incremental Delay, d2	8.1	1.9		0.4	4.6		1.0	0.5			29.5	
Delay (s)	91.6	10.5		15.3	37.0		53.8	52.6			94.7	
Level of Service	F	B		B	D		D	D			F	
Approach Delay (s)		16.1			36.7			53.1			94.7	
Approach LOS		B			D			D			F	
<b>Intersection Summary</b>												
HCM 2000 Control Delay			33.6			HCM 2000 Level of Service			C			
HCM 2000 Volume to Capacity ratio			0.90									
Actuated Cycle Length (s)			180.0			Sum of lost time (s)		20.6				
Intersection Capacity Utilization			92.3%			ICU Level of Service		F				
Analysis Period (min)			15									

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis  
3018: KY-1747 & Linn Station Rd

























03/07/2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (vph)	75	75	175	375	100	75	150	1525	500	150	755	75	
Future Volume (vph)	75	75	175	375	100	75	150	1525	500	150	755	75	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)	6.6	6.6	6.6	6.6	6.6	6.6	7.3	7.3	7.3	7.3	7.3	7.3	
Lane Util. Factor	0.95	0.95	1.00	0.91	0.91	1.00	0.97	0.91	1.00	0.97	0.91	0.91	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	0.99	
Flt Protected	0.95	1.00	1.00	0.95	0.98	1.00	0.95	1.00	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1681	1762	1583	3221	1664	1583	3433	5085	1583	3433	5016	5016	
Flt Permitted	0.95	1.00	1.00	0.95	0.98	1.00	0.95	1.00	1.00	0.95	1.00	1.00	
Satd. Flow (perm)	1681	1762	1583	3221	1664	1583	3433	5085	1583	3433	5016	5016	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Adj. Flow (vph)	82	82	190	408	109	82	163	1658	543	163	821	82	
RTOR Reduction (vph)	0	0	174	0	0	70	0	0	272	0	6	0	
Lane Group Flow (vph)	74	90	16	343	174	12	163	1658	272	163	897	0	
Turn Type	Split	NA	Perm	Split	NA	Perm	Prot	NA	Perm	Prot	NA	NA	
Protected Phases	4	4		8	8		5	2		1	6		
Permitted Phases			4			8			2				
Actuated Green, G (s)	13.5	13.5	13.5	23.0	23.0	23.0	12.9	80.0	80.0	15.7	82.8		
Effective Green, g (s)	13.5	13.5	13.5	23.0	23.0	23.0	12.9	80.0	80.0	15.7	82.8		
Actuated g/C Ratio	0.08	0.08	0.08	0.14	0.14	0.14	0.08	0.50	0.50	0.10	0.52		
Clearance Time (s)	6.6	6.6	6.6	6.6	6.6	6.6	7.3	7.3	7.3	7.3	7.3		
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		
Lane Grp Cap (vph)	141	148	133	463	239	227	276	2542	791	336	2595		
v/s Ratio Prot	0.04	c0.05		c0.11	0.10		0.05	c0.33		c0.05	0.18		
v/s Ratio Perm			0.01			0.01			0.17				
v/c Ratio	0.52	0.61	0.12	0.74	0.73	0.05	0.59	0.65	0.34	0.49	0.35		
Uniform Delay, d1	70.2	70.7	67.8	65.6	65.5	59.1	71.0	29.7	24.1	68.3	22.7		
Progression Factor	1.00	1.00	1.00	0.48	0.48	1.00	1.10	0.63	0.76	0.88	0.51		
Incremental Delay, d2	3.5	6.9	0.4	5.7	9.5	0.1	3.0	1.2	1.1	1.1	0.4		
Delay (s)	73.7	77.6	68.2	37.2	41.0	59.2	81.1	19.9	19.3	61.3	12.0		
Level of Service	E	E	E	D	D	E	F	B	B	E	B		
Approach Delay (s)		71.7			41.3			24.0			19.5		
Approach LOS		E			D			C			B		
<b>Intersection Summary</b>													
HCM 2000 Control Delay			29.1		HCM 2000 Level of Service					C			
HCM 2000 Volume to Capacity ratio			0.64										
Actuated Cycle Length (s)			160.0		Sum of lost time (s)				27.8				
Intersection Capacity Utilization			66.8%		ICU Level of Service				C				
Analysis Period (min)			15										

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis  
3018: KY-1747 & Linn Station Rd

03/07/2022

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (vph)	76	76	178	381	102	76	152	1548	508	152	761	76	
Future Volume (vph)	76	76	178	381	102	76	152	1548	508	152	761	76	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)	6.6	6.6	6.6	6.6	6.6	6.6	7.3	7.3	7.3	7.3	7.3	7.3	
Lane Util. Factor	0.95	0.95	1.00	0.91	0.91	1.00	0.97	0.91	1.00	0.97	0.91	0.91	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	0.99	
Flt Protected	0.95	1.00	1.00	0.95	0.98	1.00	0.95	1.00	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1681	1762	1583	3221	1664	1583	3433	5085	1583	3433	5016	5016	
Flt Permitted	0.95	1.00	1.00	0.95	0.98	1.00	0.95	1.00	1.00	0.95	1.00	1.00	
Satd. Flow (perm)	1681	1762	1583	3221	1664	1583	3433	5085	1583	3433	5016	5016	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Adj. Flow (vph)	83	83	193	414	111	83	165	1683	552	165	827	83	
RTOR Reduction (vph)	0	0	177	0	0	71	0	0	277	0	6	0	
Lane Group Flow (vph)	75	91	16	348	177	12	165	1683	275	165	904	0	
Turn Type	Split	NA	Perm	Split	NA	Perm	Prot	NA	Perm	Prot	NA	NA	
Protected Phases	4	4		8	8		5	2		1	6		
Permitted Phases			4			8			2				
Actuated Green, G (s)	13.6	13.6	13.6	23.3	23.3	23.3	12.9	79.6	79.6	15.7	82.4		
Effective Green, g (s)	13.6	13.6	13.6	23.3	23.3	23.3	12.9	79.6	79.6	15.7	82.4		
Actuated g/C Ratio	0.08	0.08	0.08	0.15	0.15	0.15	0.08	0.50	0.50	0.10	0.52		
Clearance Time (s)	6.6	6.6	6.6	6.6	6.6	6.6	7.3	7.3	7.3	7.3	7.3		
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		
Lane Grp Cap (vph)	142	149	134	469	242	230	276	2529	787	336	2583		
v/s Ratio Prot	0.04	c0.05		c0.11	0.11		0.05	c0.33		c0.05	0.18		
v/s Ratio Perm			0.01			0.01			0.17				
v/c Ratio	0.53	0.61	0.12	0.74	0.73	0.05	0.60	0.67	0.35	0.49	0.35		
Uniform Delay, d1	70.1	70.6	67.7	65.5	65.4	58.8	71.0	30.2	24.4	68.4	23.0		
Progression Factor	1.00	1.00	1.00	0.49	0.49	1.00	1.10	0.63	0.77	0.88	0.52		
Incremental Delay, d2	3.5	7.2	0.4	5.7	9.8	0.1	3.1	1.2	1.1	1.1	0.4		
Delay (s)	73.6	77.9	68.1	37.6	41.8	58.9	80.9	20.4	19.9	61.4	12.3		
Level of Service	E	E	E	D	D	E	F	C	B	E	B		
Approach Delay (s)		71.7			41.7			24.4			19.9		
Approach LOS		E			D			C			B		
<b>Intersection Summary</b>													
HCM 2000 Control Delay			29.5									HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio			0.65										
Actuated Cycle Length (s)			160.0									Sum of lost time (s)	27.8
Intersection Capacity Utilization			67.4%									ICU Level of Service	C
Analysis Period (min)			15										

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis  
3018: KY-1747 & Linn Station Rd

03/07/2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (vph)	102	127	306	711	152	152	204	1497	533	102	1320	76	
Future Volume (vph)	102	127	306	711	152	152	204	1497	533	102	1320	76	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)	6.4	6.4	6.4	6.4	6.4	6.4	6.1	5.9	5.9	6.1	5.9		
Lane Util. Factor	0.95	0.95	1.00	0.91	0.91	1.00	0.97	0.91	1.00	0.97	0.91		
Flt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99		
Flt Protected	0.95	1.00	1.00	0.95	0.98	1.00	0.95	1.00	1.00	0.95	1.00		
Satd. Flow (prot)	1681	1763	1583	3221	1655	1583	3433	5085	1583	3433	5044		
Flt Permitted	0.95	1.00	1.00	0.95	0.98	1.00	0.95	1.00	1.00	0.95	1.00		
Satd. Flow (perm)	1681	1763	1583	3221	1655	1583	3433	5085	1583	3433	5044		
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Adj. Flow (vph)	111	138	333	773	165	165	222	1627	579	111	1435	83	
RTOR Reduction (vph)	0	0	163	0	0	113	0	0	311	0	3	0	
Lane Group Flow (vph)	100	149	170	618	320	52	222	1627	268	111	1515	0	
Turn Type	Split	NA	Perm	Split	NA	Perm	Prot	NA	Perm	Prot	NA		
Protected Phases	4	4		8	8		5	2		1	6		
Permitted Phases			4			8			2				
Actuated Green, G (s)	25.6	25.6	25.6	36.6	36.6	36.6	16.8	76.1	76.1	16.9	76.2		
Effective Green, g (s)	25.6	25.6	25.6	36.6	36.6	36.6	16.8	76.1	76.1	16.9	76.2		
Actuated g/C Ratio	0.14	0.14	0.14	0.20	0.20	0.20	0.09	0.42	0.42	0.09	0.42		
Clearance Time (s)	6.4	6.4	6.4	6.4	6.4	6.4	6.1	5.9	5.9	6.1	5.9		
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		
Lane Grp Cap (vph)	239	250	225	654	336	321	320	2149	669	322	2135		
v/s Ratio Prot	0.06	0.08		0.19	c0.19		0.06	c0.32		0.03	c0.30		
v/s Ratio Perm			c0.11			0.03			0.17				
v/c Ratio	0.42	0.60	0.76	0.94	0.95	0.16	0.69	0.76	0.40	0.34	0.71		
Uniform Delay, d1	70.4	72.4	74.2	70.7	70.8	59.1	79.1	44.1	36.1	76.4	42.8		
Progression Factor	1.00	1.00	1.00	1.23	1.23	2.41	0.97	0.80	1.33	0.84	0.72		
Incremental Delay, d2	5.3	10.1	20.8	23.9	38.2	1.1	5.8	2.3	1.6	0.6	1.8		
Delay (s)	75.7	82.4	95.0	111.0	125.4	143.2	82.6	37.7	49.7	64.7	32.6		
Level of Service	E	F	F	F	F	F	F	D	D	E	C		
Approach Delay (s)		88.5			120.0			44.7			34.8		
Approach LOS		F			F			D			C		
<b>Intersection Summary</b>													
HCM 2000 Control Delay			60.8									HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio			0.81										
Actuated Cycle Length (s)			180.0									Sum of lost time (s)	24.8
Intersection Capacity Utilization			77.5%									ICU Level of Service	D
Analysis Period (min)			15										

c Critical Lane Group



HCM Signalized Intersection Capacity Analysis  
3018: KY-1747 & Linn Station Rd

03/07/2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	76	76	193	381	102	76	157	1548	508	152	761	76
Future Volume (vph)	76	76	193	381	102	76	157	1548	508	152	761	76
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.6	6.6	6.6	6.6	6.6	6.6	7.3	7.3	7.3	7.3	7.3	7.3
Lane Util. Factor	0.95	0.95	1.00	0.91	0.91	1.00	0.97	0.91	1.00	0.97	0.91	0.91
Fr <sub>t</sub>	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	0.99
Fl <sub>t</sub> Protected	0.95	1.00	1.00	0.95	0.98	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1681	1762	1583	3221	1664	1583	3433	5085	1583	3433	5016	5016
Fl <sub>t</sub> Permitted	0.95	1.00	1.00	0.95	0.98	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1681	1762	1583	3221	1664	1583	3433	5085	1583	3433	5016	5016
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	83	83	210	414	111	83	171	1683	552	165	827	83
RTOR Reduction (vph)	0	0	192	0	0	71	0	0	277	0	6	0
Lane Group Flow (vph)	75	91	18	348	177	12	171	1683	275	165	904	0
Turn Type	Split	NA	Perm	Split	NA	Perm	Prot	NA	Perm	Prot	NA	NA
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases			4			8			2			
Actuated Green, G (s)	13.6	13.6	13.6	23.3	23.3	23.3	13.1	79.6	79.6	15.7	82.2	
Effective Green, g (s)	13.6	13.6	13.6	23.3	23.3	23.3	13.1	79.6	79.6	15.7	82.2	
Actuated g/C Ratio	0.08	0.08	0.08	0.15	0.15	0.15	0.08	0.50	0.50	0.10	0.51	
Clearance Time (s)	6.6	6.6	6.6	6.6	6.6	6.6	7.3	7.3	7.3	7.3	7.3	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	142	149	134	469	242	230	281	2529	787	336	2576	
v/s Ratio Prot	0.04	c0.05		c0.11	0.11		0.05	c0.33		c0.05	0.18	
v/s Ratio Perm			0.01			0.01			0.17			
v/c Ratio	0.53	0.61	0.13	0.74	0.73	0.05	0.61	0.67	0.35	0.49	0.35	
Uniform Delay, d <sub>1</sub>	70.1	70.6	67.7	65.5	65.4	58.8	71.0	30.2	24.4	68.4	23.1	
Progression Factor	1.00	1.00	1.00	0.49	0.49	1.00	1.10	0.63	0.77	0.88	0.52	
Incremental Delay, d <sub>2</sub>	3.5	7.2	0.5	5.7	9.8	0.1	3.3	1.2	1.1	1.1	0.4	
Delay (s)	73.6	77.9	68.2	37.6	41.8	58.9	81.2	20.4	19.9	61.4	12.5	
Level of Service	E	E	E	D	D	E	F	C	B	E	B	
Approach Delay (s)		71.6			41.7			24.6			20.0	
Approach LOS		E			D			C			B	
<b>Intersection Summary</b>												
HCM 2000 Control Delay			29.8									
HCM 2000 Volume to Capacity ratio			0.65									
Actuated Cycle Length (s)			160.0									
Intersection Capacity Utilization			67.4%									
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis  
3018: KY-1747 & Linn Station Rd

03/07/2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (vph)	102	127	315	711	152	152	220	1497	533	102	1320	76	
Future Volume (vph)	102	127	315	711	152	152	220	1497	533	102	1320	76	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)	6.4	6.4	6.4	6.4	6.4	6.4	6.1	5.9	5.9	6.1	5.9		
Lane Util. Factor	0.95	0.95	1.00	0.91	0.91	1.00	0.97	0.91	1.00	0.97	0.91		
Fr <sub>t</sub>	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99		
Fl <sub>t</sub> Protected	0.95	1.00	1.00	0.95	0.98	1.00	0.95	1.00	1.00	0.95	1.00		
Satd. Flow (prot)	1681	1763	1583	3221	1655	1583	3433	5085	1583	3433	5044		
Fl <sub>t</sub> Permitted	0.95	1.00	1.00	0.95	0.98	1.00	0.95	1.00	1.00	0.95	1.00		
Satd. Flow (perm)	1681	1763	1583	3221	1655	1583	3433	5085	1583	3433	5044		
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Adj. Flow (vph)	111	138	342	773	165	165	239	1627	579	111	1435	83	
RTOR Reduction (vph)	0	0	163	0	0	113	0	0	311	0	3	0	
Lane Group Flow (vph)	100	149	179	618	320	52	239	1627	268	111	1515	0	
Turn Type	Split	NA	Perm	Split	NA	Perm	Prot	NA	Perm	Prot	NA		
Protected Phases	4	4		8	8		5	2		1	6		
Permitted Phases			4			8			2				
Actuated Green, G (s)	25.6	25.6	25.6	36.6	36.6	36.6	17.5	76.1	76.1	16.9	75.5		
Effective Green, g (s)	25.6	25.6	25.6	36.6	36.6	36.6	17.5	76.1	76.1	16.9	75.5		
Actuated g/C Ratio	0.14	0.14	0.14	0.20	0.20	0.20	0.10	0.42	0.42	0.09	0.42		
Clearance Time (s)	6.4	6.4	6.4	6.4	6.4	6.4	6.1	5.9	5.9	6.1	5.9		
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		
Lane Grp Cap (vph)	239	250	225	654	336	321	333	2149	669	322	2115		
v/s Ratio Prot	0.06	0.08		0.19	c0.19		0.07	c0.32		0.03	c0.30		
v/s Ratio Perm			c0.11			0.03			0.17				
v/c Ratio	0.42	0.60	0.80	0.94	0.95	0.16	0.72	0.76	0.40	0.34	0.72		
Uniform Delay, d <sub>1</sub>	70.4	72.4	74.7	70.7	70.8	59.1	78.9	44.1	36.1	76.4	43.4		
Progression Factor	1.00	1.00	1.00	1.23	1.23	2.41	0.97	0.80	1.32	0.84	0.72		
Incremental Delay, d <sub>2</sub>	5.3	10.1	24.6	23.9	38.2	1.1	6.5	2.3	1.6	0.6	1.9		
Delay (s)	75.7	82.4	99.2	111.0	125.4	143.2	83.0	37.8	49.3	64.7	33.3		
Level of Service	E	F	F	F	F	F	F	D	D	E	C		
Approach Delay (s)		91.0			120.0			44.9			35.4		
Approach LOS		F			F			D			D		
<b>Intersection Summary</b>													
HCM 2000 Control Delay			61.3		HCM 2000 Level of Service					E			
HCM 2000 Volume to Capacity ratio			0.82										
Actuated Cycle Length (s)			180.0		Sum of lost time (s)				24.8				
Intersection Capacity Utilization			78.1%		ICU Level of Service				D				
Analysis Period (min)			15										

c Critical Lane Group



Oxmoor Lot 5 Apartments  
Traffic Impact Study

HCS7 All-Way Stop Control Report												
General Information						Site Information						
Analyst	Diane Zimmerman					Intersection	Lyndon Ln at Oxmoor Woods					
Agency/Co.	Diane B. Zimmerman Traffic Engineeri...					Jurisdiction						
Date Performed	6/14/2018					East/West Street	Oxmoor Woods Pkwy					
Analysis Year	2018					North/South Street	Lyndon Lane					
Analysis Time Period (hrs)	0.25					Peak Hour Factor	0.67					
Time Analyzed	AM Peak											
Project Description	Lot 5											
Lanes												
Vehicle Volume and Adjustments												
Approach	Eastbound			Westbound			Northbound			Southbound		
Movement	L	T	R	L	T	R	L	T	R	L	T	R
Volume	68	42			61	14				5		128
% Thrus in Shared Lane												
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	L	T		TR						LR		
Flow Rate, v (veh/h)	101	63		112						199		
Percent Heavy Vehicles	2	5		4						1		
Departure Headway and Service Time												
Initial Departure Headway, hd (s)	3.20	3.20		3.20						3.20		
Initial Degree of Utilization, x	0.090	0.056		0.100						0.176		
Final Departure Headway, hd (s)	5.57	5.12		4.61						4.03		
Final Degree of Utilization, x	0.157	0.089		0.143						0.222		
Move-Up Time, m (s)	2.3	2.3		2.0						2.0		
Service Time, ts (s)	3.27	2.82		2.61						2.03		
Capacity, Delay and Level of Service												
Flow Rate, v (veh/h)	101	63		112						199		
Capacity	646	703		781						894		
95% Queue Length, Q <sub>95</sub> (veh)	0.6	0.3		0.5						0.8		
Control Delay (s/veh)	9.3	8.3		8.4						8.2		
Level of Service, LOS	A	A		A						A		
Approach Delay (s/veh)	8.9			8.4						8.2		
Approach LOS	A			A						A		
Intersection Delay, s/veh   LOS	8.5						A					

Oxmoor Lot 5 Apartments  
Traffic Impact Study

HCS7 All-Way Stop Control Report												
General Information						Site Information						
Analyst	Diane Zimmerman					Intersection	Lyndon Ln at Oxmoor Woods					
Agency/Co.	Diane B. Zimmerman Traffic Engineeri...					Jurisdiction						
Date Performed	3/7/2022					East/West Street	Oxmoor Woods Pkwy					
Analysis Year	2024					North/South Street	Lyndon Lane					
Analysis Time Period (hrs)	0.25					Peak Hour Factor	0.67					
Time Analyzed	AM Peak No Build											
Project Description	Lot 5											
Lanes												
Vehicle Volume and Adjustments												
Approach	Eastbound			Westbound			Northbound			Southbound		
Movement	L	T	R	L	T	R	L	T	R	L	T	R
Volume	69	43			62	14				5		131
% Thrus in Shared Lane												
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	L	T		TR						LR		
Flow Rate, v (veh/h)	103	64		113						203		
Percent Heavy Vehicles	2	5		4						1		
Departure Headway and Service Time												
Initial Departure Headway, hd (s)	3.20	3.20		3.20						3.20		
Initial Degree of Utilization, x	0.092	0.057		0.101						0.180		
Final Departure Headway, hd (s)	5.59	5.13		4.62						4.04		
Final Degree of Utilization, x	0.160	0.092		0.146						0.228		
Move-Up Time, m (s)	2.3	2.3		2.0						2.0		
Service Time, ts (s)	3.29	2.83		2.62						2.04		
Capacity, Delay and Level of Service												
Flow Rate, v (veh/h)	103	64		113						203		
Capacity	644	701		779						891		
95% Queue Length, Q <sub>95</sub> (veh)	0.6	0.3		0.5						0.9		
Control Delay (s/veh)	9.3	8.4		8.4						8.2		
Level of Service, LOS	A	A		A						A		
Approach Delay (s/veh)	9.0			8.4						8.2		
Approach LOS	A			A						A		
Intersection Delay, s/veh   LOS	8.5						A					

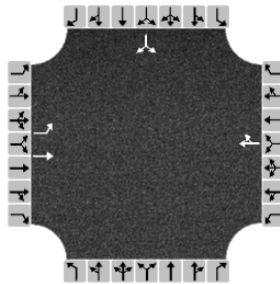
Oxmoor Lot 5 Apartments  
Traffic Impact Study

HCS7 All-Way Stop Control Report												
General Information						Site Information						
Analyst	Diane Zimmerman					Intersection	Lyndon Ln at Oxmoor Woods					
Agency/Co.	Diane B. Zimmerman Traffic Engineeri...					Jurisdiction						
Date Performed	3/7/2022					East/West Street	Oxmoor Woods Pkwy					
Analysis Year	2024					North/South Street	Lyndon Lane					
Analysis Time Period (hrs)	0.25					Peak Hour Factor	0.67					
Time Analyzed	AM Peak Build											
Project Description	Lot 5											
Lanes												
Vehicle Volume and Adjustments												
Approach	Eastbound			Westbound			Northbound			Southbound		
Movement	L	T	R	L	T	R	L	T	R	L	T	R
Volume	69	58			67	14				5		131
% Thrus in Shared Lane												
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	L	T		TR						LR		
Flow Rate, v (veh/h)	103	87		121						203		
Percent Heavy Vehicles	2	5		4						1		
Departure Headway and Service Time												
Initial Departure Headway, hd (s)	3.20	3.20		3.20						3.20		
Initial Degree of Utilization, x	0.092	0.077		0.107						0.180		
Final Departure Headway, hd (s)	5.60	5.15		4.66						4.11		
Final Degree of Utilization, x	0.160	0.124		0.157						0.232		
Move-Up Time, m (s)	2.3	2.3		2.0						2.0		
Service Time, ts (s)	3.30	2.85		2.66						2.11		
Capacity, Delay and Level of Service												
Flow Rate, v (veh/h)	103	87		121						203		
Capacity	643	699		772						877		
95% Queue Length, Q <sub>95</sub> (veh)	0.6	0.4		0.6						0.9		
Control Delay (s/veh)	9.4	8.6		8.5						8.3		
Level of Service, LOS	A	A		A						A		
Approach Delay (s/veh)	9.0			8.5						8.3		
Approach LOS	A			A						A		
Intersection Delay, s/veh   LOS	8.6						A					

Oxmoor Lot 5 Apartments  
Traffic Impact Study

HCS7 All-Way Stop Control Report			
General Information		Site Information	
Analyst	Diane Zimmerman	Intersection	Lyndon Ln at Oxmoor Woods
Agency/Co.	Diane B. Zimmerman Traffic Engineeri...	Jurisdiction	
Date Performed	6/14/2018	East/West Street	Oxmoor Woods Pkwy
Analysis Year	2018	North/South Street	Lyndon Lane
Analysis Time Period (hrs)	0.25	Peak Hour Factor	0.93
Time Analyzed	PM Peak		
Project Description	Lot 5		

**Lanes**



**Vehicle Volume and Adjustments**

Approach	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Movement												
Volume	150	126			149	19				26		184
% Thrus in Shared Lane												
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	L	T		TR						LR		
Flow Rate, v (veh/h)	161	135		181						226		
Percent Heavy Vehicles	0	0		2						1		

**Departure Headway and Service Time**

Initial Departure Headway, hd (s)	3.20	3.20		3.20						3.20		
Initial Degree of Utilization, x	0.143	0.120		0.161						0.201		
Final Departure Headway, hd (s)	5.74	5.24		4.90						4.56		
Final Degree of Utilization, x	0.257	0.197		0.246						0.286		
Move-Up Time, m (s)	2.3	2.3		2.0						2.0		
Service Time, ts (s)	3.44	2.94		2.90						2.56		

**Capacity, Delay and Level of Service**

Flow Rate, v (veh/h)	161	135		181						226		
Capacity	627	687		734						789		
95% Queue Length, Q <sub>95</sub> (veh)	1.0	0.7		1.0						1.2		
Control Delay (s/veh)	10.4	9.2		9.5						9.4		
Level of Service, LOS	B	A		A						A		
Approach Delay (s/veh)	9.9			9.5						9.4		
Approach LOS	A			A						A		
Intersection Delay, s/veh   LOS	9.6						A					

Oxmoor Lot 5 Apartments  
Traffic Impact Study

HCS7 All-Way Stop Control Report												
General Information						Site Information						
Analyst	Diane Zimmerman					Intersection	Lyndon Ln at Oxmoor Woods					
Agency/Co.	Diane B. Zimmerman Traffic Engineeri...					Jurisdiction						
Date Performed	3/7/2022					East/West Street	Oxmoor Woods Pkwy					
Analysis Year	2024					North/South Street	Lyndon Lane					
Analysis Time Period (hrs)	0.25					Peak Hour Factor	0.93					
Time Analyzed	PM Peak No Build											
Project Description	Lot 5											
Lanes												
Vehicle Volume and Adjustments												
Approach	Eastbound			Westbound			Northbound			Southbound		
Movement	L	T	R	L	T	R	L	T	R	L	T	R
Volume	155	129			153	19				26		190
% Thrus in Shared Lane												
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	L	T		TR						LR		
Flow Rate, v (veh/h)	167	139		185						232		
Percent Heavy Vehicles	0	0		2						1		
Departure Headway and Service Time												
Initial Departure Headway, hd (s)	3.20	3.20		3.20						3.20		
Initial Degree of Utilization, x	0.148	0.123		0.164						0.206		
Final Departure Headway, hd (s)	5.77	5.27		4.94						4.59		
Final Degree of Utilization, x	0.267	0.203		0.254						0.296		
Move-Up Time, m (s)	2.3	2.3		2.0						2.0		
Service Time, ts (s)	3.47	2.97		2.94						2.59		
Capacity, Delay and Level of Service												
Flow Rate, v (veh/h)	167	139		185						232		
Capacity	624	683		729						784		
95% Queue Length, Q <sub>95</sub> (veh)	1.1	0.8		1.0						1.2		
Control Delay (s/veh)	10.6	9.3		9.6						9.5		
Level of Service, LOS	B	A		A						A		
Approach Delay (s/veh)	10.0			9.6						9.5		
Approach LOS	A			A						A		
Intersection Delay, s/veh   LOS	9.7						A					

Oxmoor Lot 5 Apartments  
Traffic Impact Study

HCS7 All-Way Stop Control Report												
General Information						Site Information						
Analyst	Diane Zimmerman					Intersection	Lyndon Ln at Oxmoor Woods					
Agency/Co.	Diane B. Zimmerman Traffic Engineeri...					Jurisdiction						
Date Performed	3/7/2022					East/West Street	Oxmoor Woods Pkwy					
Analysis Year	2024					North/South Street	Lyndon Lane					
Analysis Time Period (hrs)	0.25					Peak Hour Factor	0.93					
Time Analyzed	PM Peak Build											
Project Description	Lot 5											
Lanes												
Vehicle Volume and Adjustments												
Approach	Eastbound			Westbound			Northbound			Southbound		
Movement	L	T	R	L	T	R	L	T	R	L	T	R
Volume	155	138			169	19				26		190
% Thrus in Shared Lane												
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	L	T		TR						LR		
Flow Rate, v (veh/h)	167	148		202						232		
Percent Heavy Vehicles	0	0		2						1		
Departure Headway and Service Time												
Initial Departure Headway, hd (s)	3.20	3.20		3.20						3.20		
Initial Degree of Utilization, x	0.148	0.132		0.180						0.206		
Final Departure Headway, hd (s)	5.80	5.29		4.96						4.65		
Final Degree of Utilization, x	0.268	0.218		0.279						0.300		
Move-Up Time, m (s)	2.3	2.3		2.0						2.0		
Service Time, ts (s)	3.50	2.99		2.96						2.65		
Capacity, Delay and Level of Service												
Flow Rate, v (veh/h)	167	148		202						232		
Capacity	621	680		725						774		
95% Queue Length, Q <sub>95</sub> (veh)	1.1	0.8		1.1						1.3		
Control Delay (s/veh)	10.6	9.5		9.9						9.6		
Level of Service, LOS	B	A		A						A		
Approach Delay (s/veh)	10.1			9.9						9.6		
Approach LOS	B			A						A		
Intersection Delay, s/veh   LOS	9.9						A					

Oxmoor Lot 5 Apartments  
Traffic Impact Study

HCS7 Two-Way Stop-Control Report																
General Information								Site Information								
Analyst	DBZ							Intersection	Christian Way at Sears Ro							
Agency/Co.	Diane B Zimmerman Traffic Engineering							Jurisdiction								
Date Performed	3/7/2022							East/West Street	Sears Road							
Analysis Year	2018							North/South Street	Christian Way							
Time Analyzed	AM Peak							Peak Hour Factor	0.63							
Intersection Orientation	North-South							Analysis Time Period (hrs)	0.25							
Project Description	Lot 5															
Lanes																
<p>Major Street: North-South</p>																
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		1	0	1		0	0	0	0	1	2	0	0	0	2	0
Configuration		L		R						L	T	TR			T	TR
Volume (veh/h)		22		25					0	41	161	0			74	11
Percent Heavy Vehicles (%)		5		12					0	2						
Proportion Time Blocked																
Percent Grade (%)		0														
Right Turn Channelized		No														
Median Type   Storage		Left Only											1			
Critical and Follow-up Headways																
Base Critical Headway (sec)		7.5		6.9						4.1						
Critical Headway (sec)		7.60		7.14						4.14						
Base Follow-Up Headway (sec)		3.5		3.3						2.2						
Follow-Up Headway (sec)		3.55		3.42						2.22						
Delay, Queue Length, and Level of Service																
Flow Rate, v (veh/h)		35		40						65						
Capacity, c (veh/h)		576		951						1447						
v/c Ratio		0.06		0.04						0.04						
95% Queue Length, Q <sub>95</sub> (veh)		0.2		0.1						0.1						
Control Delay (s/veh)		11.7		9.0						7.6						
Level of Service (LOS)		B		A						A						
Approach Delay (s/veh)		10.2								1.5						
Approach LOS		B														

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HCS7 Two-Way Stop-Control Report																
General Information								Site Information								
Analyst	DBZ							Intersection	Christian Way at Sears Ro							
Agency/Co.	Diane B Zimmerman Traffic Engineering							Jurisdiction								
Date Performed	3/7/2022							East/West Street	Sears Road							
Analysis Year	2024							North/South Street	Christian Way							
Time Analyzed	AM Peak No Build							Peak Hour Factor	0.63							
Intersection Orientation	North-South							Analysis Time Period (hrs)	0.25							
Project Description	Lot 5															
Lanes																
<p>Major Street: North-South</p>																
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		1	0	1		0	0	0	0	1	2	0	0	0	2	0
Configuration		L		R						L	T	TR			T	TR
Volume (veh/h)		23		25					0	43	163	0			75	17
Percent Heavy Vehicles (%)		5		12					0	2						
Proportion Time Blocked																
Percent Grade (%)		0														
Right Turn Channelized		No														
Median Type   Storage		Left Only											1			
Critical and Follow-up Headways																
Base Critical Headway (sec)		7.5		6.9						4.1						
Critical Headway (sec)		7.60		7.14						4.14						
Base Follow-Up Headway (sec)		3.5		3.3						2.2						
Follow-Up Headway (sec)		3.55		3.42						2.22						
Delay, Queue Length, and Level of Service																
Flow Rate, v (veh/h)		37		40						68						
Capacity, c (veh/h)		566		943						1434						
v/c Ratio		0.06		0.04						0.05						
95% Queue Length, Q <sub>95</sub> (veh)		0.2		0.1						0.1						
Control Delay (s/veh)		11.8		9.0						7.6						
Level of Service (LOS)		B		A						A						
Approach Delay (s/veh)		10.3								1.6						
Approach LOS		B														



Oxmoor Lot 5 Apartments  
Traffic Impact Study

HCS7 Two-Way Stop-Control Report																	
General Information								Site Information									
Analyst	DBZ							Intersection	Christian Way at Sears Ro								
Agency/Co.	Diane B Zimmerman Traffic Engineering							Jurisdiction									
Date Performed	3/7/2022							East/West Street	Sears Road								
Analysis Year	2024							North/South Street	Christian Way								
Time Analyzed	AM Peak Build							Peak Hour Factor	0.63								
Intersection Orientation	North-South							Analysis Time Period (hrs)	0.25								
Project Description	Lot 5																
Lanes																	
<p>Major Street: North-South</p>																	
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		1	0	1		0	1	0	0	1	2	0	0	1	2	0	
Configuration		L		R			LR			L	T	TR		L	T	TR	
Volume (veh/h)		23		25		15		84	0	43	163	5	0	26	75	17	
Percent Heavy Vehicles (%)		5		12		0		0	0	2			3	0			
Proportion Time Blocked																	
Percent Grade (%)		0				0											
Right Turn Channelized		No															
Median Type   Storage		Left Only											1				
Critical and Follow-up Headways																	
Base Critical Headway (sec)		7.5		6.9		7.5		6.9		4.1				4.1			
Critical Headway (sec)		7.60		7.14		7.50		6.90		4.14				4.10			
Base Follow-Up Headway (sec)		3.5		3.3		3.5		3.3		2.2				2.2			
Follow-Up Headway (sec)		3.55		3.42		3.50		3.30		2.22				2.20			
Delay, Queue Length, and Level of Service																	
Flow Rate, v (veh/h)		37		40		157				68				41			
Capacity, c (veh/h)		440		943		786				1434				1309			
v/c Ratio		0.08		0.04		0.20				0.05				0.03			
95% Queue Length, Q <sub>95</sub> (veh)		0.3		0.1		0.7				0.1				0.1			
Control Delay (s/veh)		13.9		9.0		10.7				7.6				7.8			
Level of Service (LOS)		B		A		B				A				A			
Approach Delay (s/veh)		11.3				10.7				1.6				1.7			
Approach LOS		B				B											

Oxmoor Lot 5 Apartments  
Traffic Impact Study

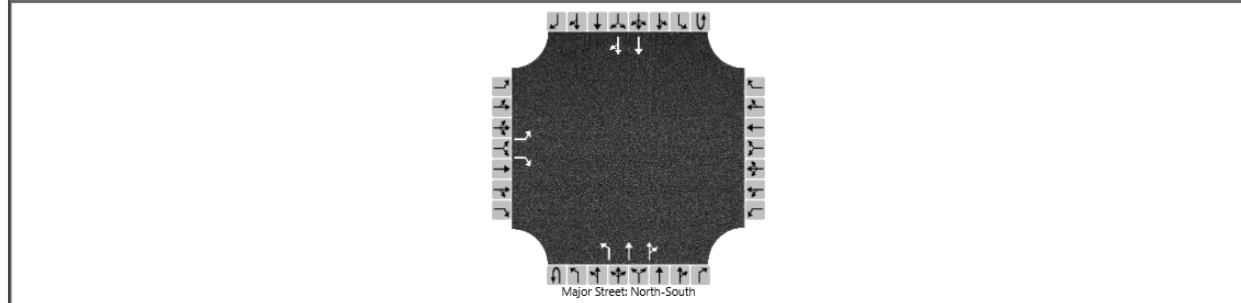
HCS7 Two-Way Stop-Control Report																
General Information								Site Information								
Analyst	DBZ							Intersection	Christian Way at Sears Ro							
Agency/Co.	Diane B Zimmerman Traffic Engineering							Jurisdiction								
Date Performed	3/7/2022							East/West Street	Sears Road							
Analysis Year	2018							North/South Street	Christian Way							
Time Analyzed	PM Peak							Peak Hour Factor	0.73							
Intersection Orientation	North-South							Analysis Time Period (hrs)	0.25							
Project Description	Lot 5															
Lanes																
<p>Major Street: North-South</p>																
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		1	0	1		0	0	0	0	1	2	0	0	0	2	0
Configuration		L		R						L	T	TR			T	TR
Volume (veh/h)		40		69					0	93	244	0			205	67
Percent Heavy Vehicles (%)		8		0					0	1						
Proportion Time Blocked																
Percent Grade (%)		0														
Right Turn Channelized		No														
Median Type   Storage		Left Only											1			
Critical and Follow-up Headways																
Base Critical Headway (sec)		7.5		6.9						4.1						
Critical Headway (sec)		7.65		6.90						4.12						
Base Follow-Up Headway (sec)		3.5		3.3						2.2						
Follow-Up Headway (sec)		3.58		3.30						2.21						
Delay, Queue Length, and Level of Service																
Flow Rate, v (veh/h)		55		95						127						
Capacity, c (veh/h)		377		830						1190						
v/c Ratio		0.15		0.11						0.11						
95% Queue Length, Q <sub>95</sub> (veh)		0.5		0.4						0.4						
Control Delay (s/veh)		16.2		9.9						8.4						
Level of Service (LOS)		C		A						A						
Approach Delay (s/veh)		12.2								2.3						
Approach LOS		B														

Oxmoor Lot 5 Apartments  
Traffic Impact Study

### HCS7 Two-Way Stop-Control Report

General Information				Site Information			
Analyst	DBZ			Intersection	Christian Way at Sears Ro		
Agency/Co.	Diane B Zimmerman Traffic Engineering			Jurisdiction			
Date Performed	3/7/2022			East/West Street	Sears Road		
Analysis Year	2024			North/South Street	Christian Way		
Time Analyzed	PM Peak No Build			Peak Hour Factor	0.73		
Intersection Orientation	North-South			Analysis Time Period (hrs)	0.25		
Project Description	Lot 5						

#### Lanes



#### Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	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		1	0	1		0	0	0	0	1	2	0	0	0	2	0
Configuration		L		R						L	T	TR			T	TR
Volume (veh/h)		61		73					0	97	250	0			209	88
Percent Heavy Vehicles (%)		8		0					0	1						
Proportion Time Blocked																
Percent Grade (%)		0														
Right Turn Channelized		No														
Median Type   Storage		Left Only											1			

#### Critical and Follow-up Headways

Base Critical Headway (sec)		7.5		6.9						4.1						
Critical Headway (sec)		7.65		6.90						4.12						
Base Follow-Up Headway (sec)		3.5		3.3						2.2						
Follow-Up Headway (sec)		3.58		3.30						2.21						

#### Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		84		100						133						
Capacity, c (veh/h)		362		810						1156						
v/c Ratio		0.23		0.12						0.11						
95% Queue Length, Q <sub>95</sub> (veh)		0.9		0.4						0.4						
Control Delay (s/veh)		17.9		10.1						8.5						
Level of Service (LOS)		C		B						A						
Approach Delay (s/veh)		13.6								2.4						
Approach LOS		B								A						

Oxmoor Lot 5 Apartments  
Traffic Impact Study

HCS7 Two-Way Stop-Control Report																	
General Information								Site Information									
Analyst	DBZ							Intersection	Christian Way at Sears Ro								
Agency/Co.	Diane B Zimmerman Traffic Engineering							Jurisdiction									
Date Performed	3/7/2022							East/West Street	Sears Road								
Analysis Year	2024							North/South Street	Christian Way								
Time Analyzed	PM Peak Build							Peak Hour Factor	0.73								
Intersection Orientation	North-South							Analysis Time Period (hrs)	0.25								
Project Description	Lot 5																
Lanes																	
<p>Major Street: North-South</p>																	
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		1	0	1		0	1	0	0	1	2	0	0	1	2	0	
Configuration		L		R			LR			L	T	TR		L	T	TR	
Volume (veh/h)		61		73		9		54	0	97	250	16	0	90	209	88	
Percent Heavy Vehicles (%)		8		0		0		0	0	1			3	0			
Proportion Time Blocked																	
Percent Grade (%)		0				0											
Right Turn Channelized		No															
Median Type   Storage		Left Only											1				
Critical and Follow-up Headways																	
Base Critical Headway (sec)		7.5		6.9		7.5		6.9		4.1				4.1			
Critical Headway (sec)		7.65		6.90		7.50		6.90		4.12				4.10			
Base Follow-Up Headway (sec)		3.5		3.3		3.5		3.3		2.2				2.2			
Follow-Up Headway (sec)		3.58		3.30		3.50		3.30		2.21				2.20			
Delay, Queue Length, and Level of Service																	
Flow Rate, v (veh/h)		84		100		86				133				123			
Capacity, c (veh/h)		225		810		612				1156				1205			
v/c Ratio		0.37		0.12		0.14				0.11				0.10			
95% Queue Length, Q <sub>95</sub> (veh)		1.6		0.4		0.5				0.4				0.3			
Control Delay (s/veh)		30.1		10.1		11.8				8.5				8.3			
Level of Service (LOS)		D		B		B				A				A			
Approach Delay (s/veh)		19.2				11.8				2.3				1.9			
Approach LOS		C				B											

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