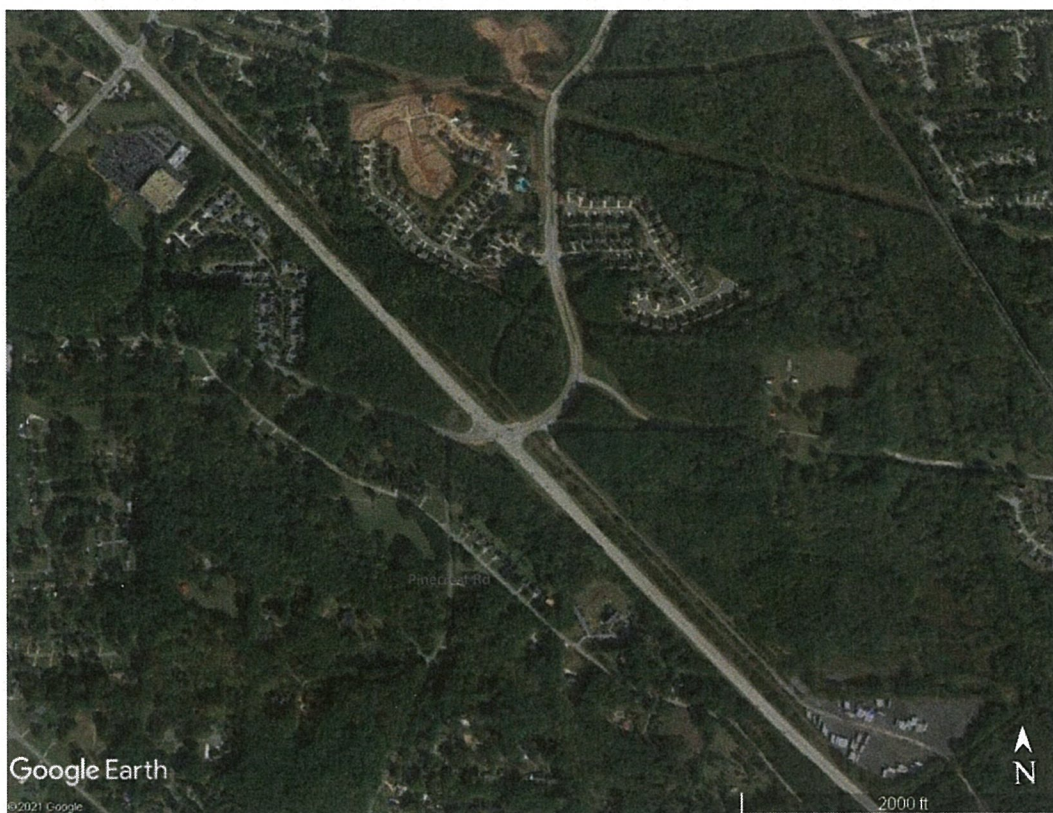


# TRAFFIC IMPACT STUDY

For  
20 West Business Center  
Powder Springs, Georgia



**Figure 1: Site Location**

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*Reviewed by:* David Fairlie

*Prepared for:* Native Development Group, LLC  
Alpharetta, Georgia



Report Date: October 2021

## EXECUTIVE SUMMARY

The project is located on approximately 150 acres between Burrow Trail Road (County Access Road) and Oglesby Road east of Lewis Road. The proposed development includes two primary parcels. A 346,175 square foot warehouse facility between Oglesby Road and Borrow Trail Road approximately 1000 feet east of Lewis Road. The second parcel will include a 55,500 square foot warehouse/business service building between the previous mentioned building and Lewis Road.

The proposed development will generate 1080 trips per day with 128 trips during the AM peak and 143 trips during the PM peak.

Lewis Road is not heavily traveled (2870 vehicles per day). As a result, the Oglesby at Lewis and Burrow Trail at Lewis intersections operate at Levels of Service A and B (free flowing and reasonably free flowing). These levels of service will not change when the proposed development is completed.

During peak hours, the Lewis/CH James intersection is currently experiencing heavy traffic. The proposed development will not appreciably change the conditions at Lewis/CH James intersection. Overall, peak hour delay will increase by 2–4 seconds.

Overall, distribution and warehousing land uses generate less traffic than many other development types. For example, a shopping center development could generate 5 to 10 times the trips, compared to the proposed Logistics Center.

"No right turn for trucks" signage and "No trucks" pavement markings are recommended at the Oglesby driveways and at Oglesby/Lewis to deter trucks from turning east on Oglesby and North on Lewis.

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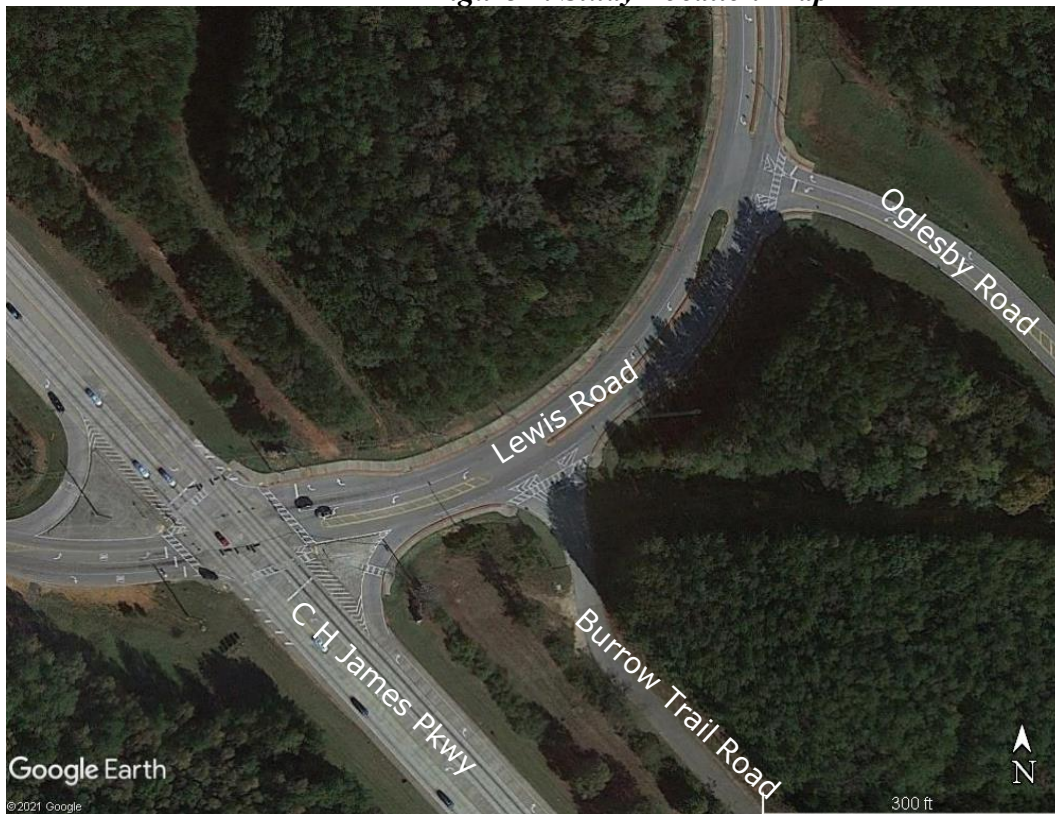
**Introduction:**

The following report was prepared by Atlas Technical Consultants to summarize the findings of a traffic impact study for a proposed development in Powder Springs, Georgia.

**Study Location:**

The project is located on approximately 150 acres between Burrow Trail Road (County Access Road) and Oglesby Road east of Lewis Road. Intersections included in the study include Oglesby Road at Lewis Road, Lewis Road at Burrow Trail Road, and Lewis Road at C.H. James Parkway.

*Figure 2: Study Location Map*

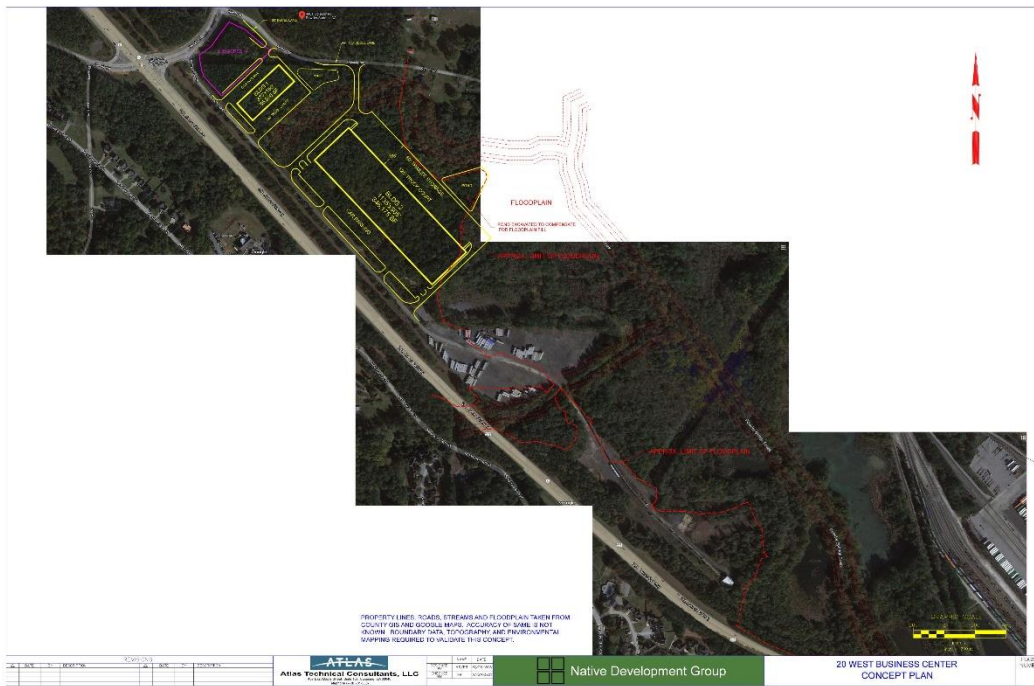


**Overview:**

Of the 150 acres approximately 35 will be developed. The proposed development includes two primary parcels. A 346,175 square foot warehouse facility between Oglesby Road and Borrow Trail Road approximately 1000 feet east of Lewis Road. The second parcel will include a 55,500 square foot warehouse/business service building between the previous mentioned building and Lewis Road. Each building will have driveways on both Oglesby Road and on Burrow Trail Road. Each driveway on Oglesby Road will have a deceleration lane for vehicles turning right into the property. There is also an existing trailer repair facility on Burrow Trail Road which will expand from 8 acres to 14 acres. This facility has very low volumes and is not expected to impact traffic. Oglesby Road is a two lane local road with a Speed Limit of 35 MPH. Lewis Road is a two lane minor arterial also with a Speed Limit of 35 MPH. Burrow Trail Road is a local road which only provides access to the trailer facility. It has an assumed Speed limit of 25 MPH. Figure 3 below shoes the layout of the proposed project.



**Figure 3 - Site Plan**



**Existing Traffic Data:**

GDOT has several count stations in the vicinity of the proposed development. Station 067-8819 is east of the project on Oglesby Road. Station 067-2328 is on C.H. James Parkway just west of Lewis Road. Recent volumes from these stations are listed below.

**Table 1: Existing Traffic Data**

Year	GDOT Station 067-2328 (AADT)	GDOT Station 067-8819 (AADT)
2020	30,000	870
2019	32,500	900
2018	33,000	900

Traffic counts were conducted on September 23, 2021 on Lewis Road north/east of Oglesby Road and on Burrow Trail Road east/south of Lewis Road. Daily volume on Lewis Road is approximately 2870 vehicles. Volume on Burrow Trail Road is approximately 40 vehicles. Copies of the counts are included in the Appendix.

Turning movement counts were conducted at the 3 intersections to be studied as a part of this project. Copies of the counts are included in the Appendix.

**Proposed Development Traffic:**

Vehicle trip generation was estimated for the proposed development. The trip generation rates published in the *Institute of Transportation Engineers (ITE) Trip Generation Manual, Tenth Edition* were used to determine the projected traffic. A summary of the trips generated by the proposed development is shown in Table 2. ITE Land Use Type 150 – Warehousing was used for the 346,175 square foot facility. Since the exact nature of the 55,500 Square foot facility is not know at this time a number of alternative land use types were considered. It was concluded to split the building into two land use types. Land use type 110 – General Light Industrial and Type 180- Specialty Trade Center were chosen as a representative sample of the many different type that could end up occupying the facility. A small number of trips were also added for the expansion of the trailer repair facility. The resulting trips forecast to be generated are indicated in the Table 2 below.

**Table 2: Generated Traffic**

LAND USE	ITE	SF (1000s)	WEEKDAY	DAILY TOTAL		AM PEAK		PM PEAK	
				ENTER	EXIT	ENTER	EXIT	ENTER	EXIT
Warehouse	160	346.175	602	301	301	45	14	18	48
General Light Industrial	110	27.75	138	69	69	16	3	2	16
Specialty Trade Contractor	180	27.75	284	142	142	34	12	18	37
Trailer Repair Expansion			56	28	28	2	2	2	2
<b>Total</b>			<b>1,080</b>	<b>540</b>	<b>540</b>	<b>97</b>	<b>31</b>	<b>40</b>	<b>103</b>

**Traffic Distribution and Assignment:**

The trips indicated above must be distributed to the roadway network. It was assumed that 5% would travel to and come from the east on Oglesby Road. 20% would come from and go to Powder Springs on Lewis Road. The remaining would use C H James Parkway via Lewis Road. The existing volumes, trip distribution and future traffic volumes are indicated in Tables 4, 5, and 6 below.

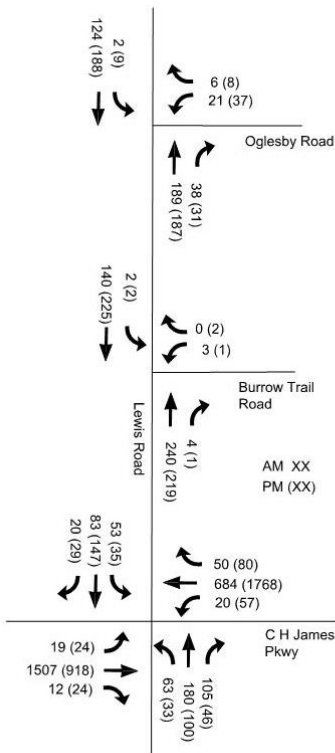


Figure 4 - Existing Volumes

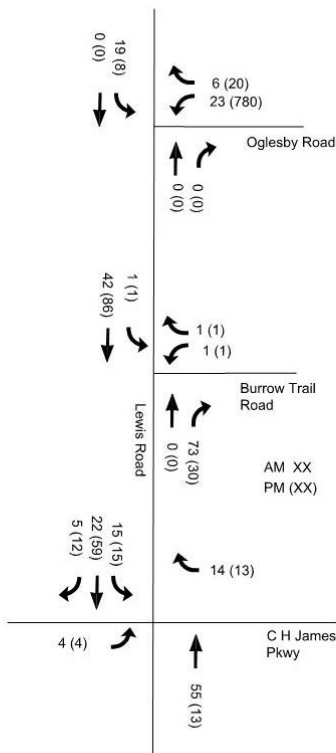


Figure 5 - Development Volumes

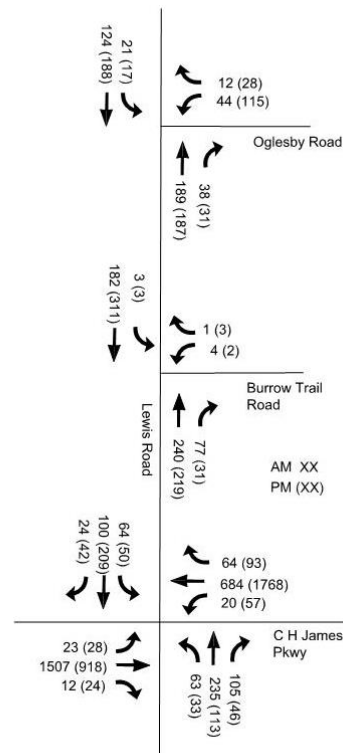


Figure 6 - Future Volumes

### Capacity Analysis:

Capacity Analysis was performed for the projected AM and PM peak traffic conditions for three intersections in the vicinity of the development. Both existing conditions and future conditions with the proposed development traffic were analyzed. These analyses were performed using the procedures of the Highway Capacity Manual Unsignalized Intersection Analysis and for the C H James intersection the HCM Signalized Intersection Analysis. Capacity is defined as the maximum number of vehicles that can pass over a particular road segment or through a particular intersection within a set time duration. Level-of-service (LOS) is used to describe the operating characteristics of a road segment or intersection in relation to its capacity. LOS is defined as a qualitative measure that describes operational conditions and motorists' perceptions within a traffic stream. The *Highway Capacity Manual* defines six levels of service, LOS A through LOS F, with A (free flowing conditions) being the best and F (extreme delays) the worst. Generally any Level of Service D or better is considered acceptable with Level of Service C or better desirable. The un-signalized intersection capacity analysis only provides a level of service for movements which experience delay which are main street left turns and the side street traffic.

A summary of levels of service and delay for each condition is provided below. The detailed Capacity Analysis printouts are provided in the Appendix.

**Table 5: Existing and Future Level of Service and (Delay)**

<b>Oglesby Road at Lewis Road</b>				
<b>Movement</b>	<b>Existing Conditions</b>		<b>Future Conditions</b>	
	<b>AM Peak</b>	<b>PM Peak</b>	<b>AM Peak</b>	<b>PM Peak</b>
South Bound L	A (7.7)	A (7.7)	A (7.8)	A (7.7)
West Bound L	B (10.7)	B (11.7)	B (11.4)	B (13.2)
West Bound R	A (9.3)	A (9.3)	A (9.4)	A (9.5)
Overall Intersection	B (10.4)	B (11.3)	B (11.0)	B (12.5)

**Table 6: Existing and Future Level of Service and (Delay)**

<b>Lewis Road at Burrow Trail Road</b>				
<b>Movement</b>	<b>Existing Conditions</b>		<b>Future Conditions</b>	
	<b>AM Peak</b>	<b>PM Peak</b>	<b>AM Peak</b>	<b>PM Peak</b>
South Bound L	A (7.8)	A (7.7)	A (8.0)	A (7.8)
West Bound L	B (11.1)	B (11.6)	B (11.5)	B (12.6)
West Bound R	A (0.0)	A (9.5)	A (9.6)	B (9.5)
Overall Intersection	B (11.1)	B (10.2)	B (11.1)	B (10.7)

**Table 7: Existing and Future Level of Service and (Delay)**

<b>Lewis Road at C H James Pkwy</b>				
<b>Movement</b>	<b>Existing Conditions</b>		<b>Future Conditions</b>	
	<b>AM Peak</b>	<b>PM Peak</b>	<b>AM Peak</b>	<b>PM Peak</b>
South Bound	C (30.3)	D (41.0)	C (29.6)	D (46.0)
North Bound	C (34.3)	D (37.6)	D (37.3)	D (36.4)
East Bound	B (17.9)	B (10.4)	C (21.1)	B (12.5)
West Bound	B (10.1)	B (18.3)	B (11.7)	C (24.0)
Overall Intersection	B (18.7)	B (18.6)	C (21.6)	C (23.4)

**Conclusion:**

The proposed development will have minor impact on the existing traffic.



**Recommendations:**

"No right turn for trucks" signage and "No trucks" pavement markings are recommended at the Oglesby driveways and at Oglesby/Lewis to deter trucks from turning east on Oglesby and North on Lewis. See Figures 7 and 8 below.

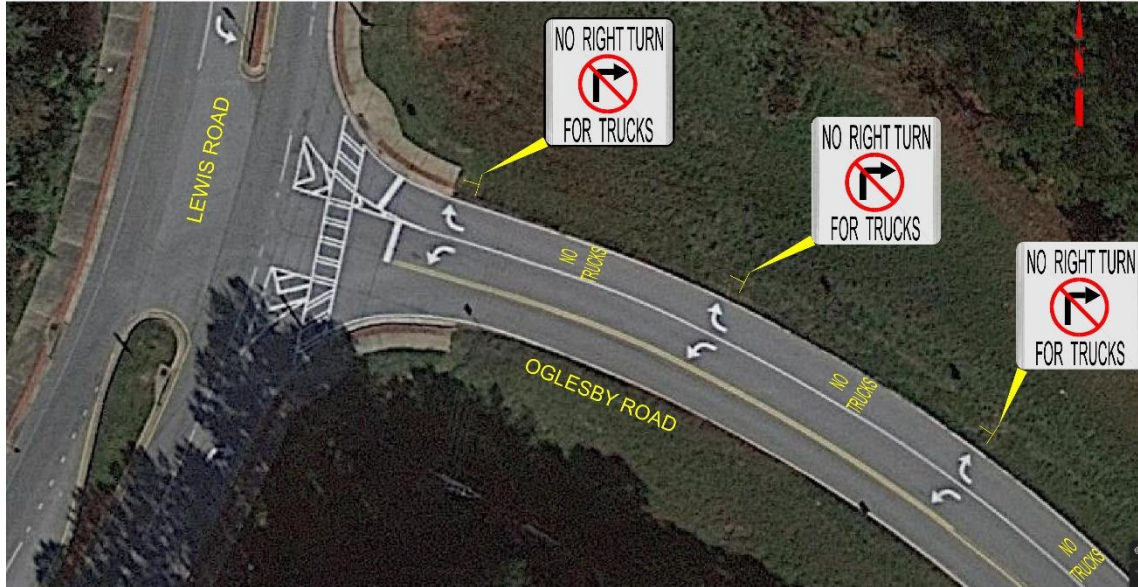


Figure 7

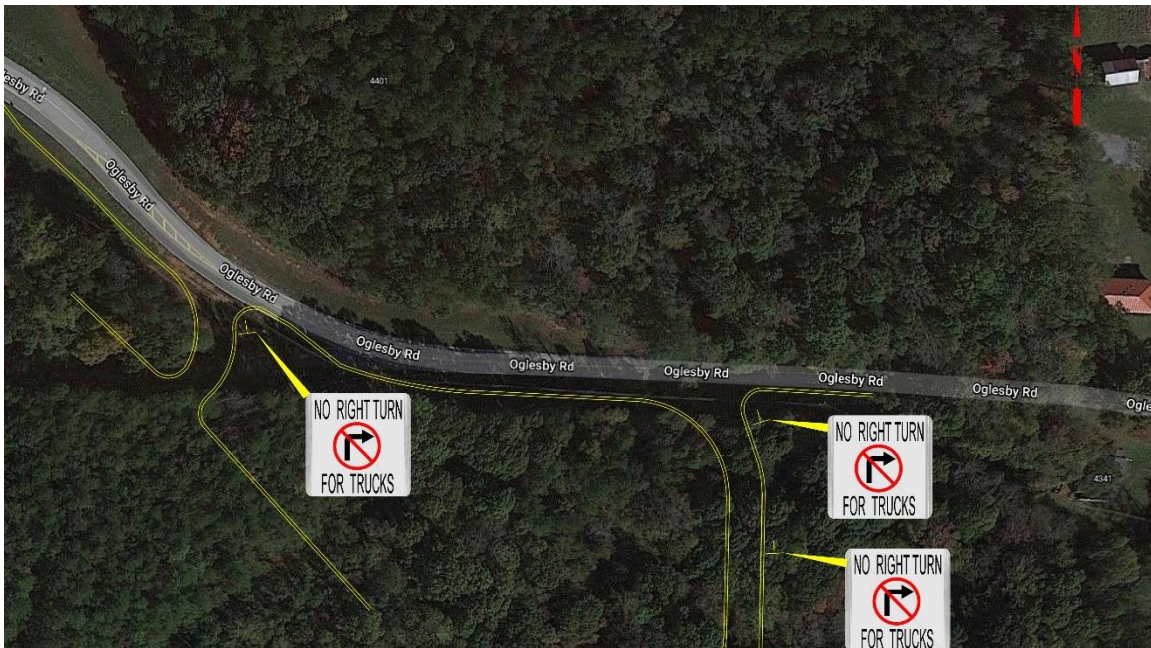


Figure 8

## APPENDIX

## TRAFFIC COUNTS

# All Traffic Data Services

[www.alltrafficdata.net](http://www.alltrafficdata.net)

Site Code: 1

Station ID: 1

COUNTY ACCESS ROAD SOUTH OF OGLESBY ROAD

Latitude: 0' 0.0000 Undefined

Longitude: 0' 0.0000 Undefined

Start Time	23-Sep-21 Thu	NB	SB	Total						
12:00 AM		0	0	0						
12:15		0	0	0						
12:30		0	0	0						
12:45		0	0	0						
01:00		0	0	0						
01:15		0	0	0						
01:30		0	0	0						
01:45		0	0	0						
02:00		0	0	0						
02:15		0	0	0						
02:30		0	0	0						
02:45		0	0	0						
03:00		0	0	0						
03:15		0	0	0						
03:30		0	0	0						
03:45		0	0	0						
04:00		0	0	0						
04:15		0	0	0						
04:30		0	0	0						
04:45		0	0	0						
05:00		0	0	0						
05:15		0	0	0						
05:30		0	0	0						
05:45		0	0	0						
06:00		0	0	0						
06:15		0	0	0						
06:30		0	0	0						
06:45		0	1	1						
07:00		0	4	4						
07:15		0	1	1						
07:30		2	1	3						
07:45		1	0	1						
08:00		0	1	1						
08:15		1	0	1						
08:30		0	2	2						
08:45		0	2	2						
09:00		0	1	1						
09:15		4	1	5						
09:30		2	0	2						
09:45		0	0	0						
10:00		0	0	0						
10:15		0	3	3						
10:30		3	0	3						
10:45		0	1	1						
11:00		1	0	1						
11:15		0	1	1						
11:30		3	2	5						
11:45		0	1	1						
Total		17	22	39						
Percent		43.6%	56.4%							
Peak	-	08:45	06:45	-	-	-	-	-	-	08:30
Vol.	-	6	7	-	-	-	-	-	-	10
P.H.F.		0.375	0.438							0.500



# All Traffic Data Services

[www.alltrafficdata.net](http://www.alltrafficdata.net)

Site Code: 1

Station ID: 1

COUNTY ACCESS ROAD SOUTH OF OGLESBY ROAD

Latitude: 0' 0.0000 Undefined

Longitude: 0' 0.0000 Undefined

Start Time	23-Sep-21 Thu	NB	SB	Total						
12:00 PM		3	1	4						
12:15		3	1	4						
12:30		0	3	3						
12:45		1	0	1						
01:00		0	1	1						
01:15		0	1	1						
01:30		2	2	4						
01:45		1	0	1						
02:00		0	0	0						
02:15		0	1	1						
02:30		1	1	2						
02:45		1	1	2						
03:00		2	0	2						
03:15		0	0	0						
03:30		0	0	0						
03:45		2	1	3						
04:00		0	0	0						
04:15		0	0	0						
04:30		0	0	0						
04:45		1	1	2						
05:00		0	0	0						
05:15		0	0	0						
05:30		0	0	0						
05:45		0	0	0						
06:00		0	0	0						
06:15		1	1	2						
06:30		0	0	0						
06:45		0	0	0						
07:00		0	0	0						
07:15		0	0	0						
07:30		0	0	0						
07:45		0	0	0						
08:00		2	0	2						
08:15		0	0	0						
08:30		0	0	0						
08:45		0	0	0						
09:00		0	0	0						
09:15		0	0	0						
09:30		0	0	0						
09:45		0	0	0						
10:00		0	0	0						
10:15		0	0	0						
10:30		0	0	0						
10:45		0	0	0						
11:00		0	0	0						
11:15		0	0	0						
11:30		0	0	0						
11:45		0	0	0						
Total		20	15	35						
Percent		57.1%	42.9%							
Peak	-	12:00	12:00	-	-	-	-	-	-	12:00
Vol.	-	7	5	-	-	-	-	-	-	12
P.H.F.		0.583	0.417							0.750
Grand Total		37	37							74
Percent		50.0%	50.0%							

ADT

ADT 74

AADT 74

# All Traffic Data Services

[www.alltrafficdata.net](http://www.alltrafficdata.net)

Site Code: 2  
Station ID: 2  
LEWIS RD NORTH OF OGLESBY RD

Latitude: 0' 0.0000 Undefined  
Longitude: 0' 0.0000 Undefined

Start Time	23-Sep-21 Thu	NB		Hour Totals		SB		Hour Totals		Combined Totals	
		Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		1	32			5	28				
12:15		5	39			4	18				
12:30		2	28			2	13				
12:45		4	35	12	134	1	33	12	92	24	226
01:00		2	39			3	27				
01:15		3	34			2	22				
01:30		1	32			3	22				
01:45		4	34	10	139	3	25	11	96	21	235
02:00		1	37			3	20				
02:15		3	24			0	34				
02:30		1	39			1	52				
02:45		1	45	6	145	1	27	5	133	11	278
03:00		0	43			3	27				
03:15		1	37			1	34				
03:30		1	36			2	25				
03:45		3	50	5	166	0	49	6	135	11	301
04:00		3	44			1	41				
04:15		0	39			4	34				
04:30		3	41			3	39				
04:45		6	54	12	178	3	52	11	166	23	344
05:00		5	41			5	51				
05:15		3	52			0	52				
05:30		14	48			7	42				
05:45		18	71	40	212	10	48	22	193	62	405
06:00		11	62			9	66				
06:15		22	64			13	32				
06:30		29	39			14	33				
06:45		31	36	93	201	18	35	54	166	147	367
07:00		59	39			22	24				
07:15		38	31			30	31				
07:30		42	24			35	38				
07:45		56	21	195	115	39	16	126	109	321	224
08:00		44	16			22	35				
08:15		40	22			34	46				
08:30		35	16			27	36				
08:45		53	14	172	68	23	25	106	142	278	210
09:00		47	21			25	19				
09:15		37	14			35	21				
09:30		37	15			23	16				
09:45		25	12	146	62	22	18	105	74	251	136
10:00		24	9			18	23				
10:15		18	14			18	15				
10:30		23	7			15	8				
10:45		29	9	94	39	25	7	76	53	170	92
11:00		20	6			16	5				
11:15		34	10			22	10				
11:30		28	8			19	4				
11:45		30	4	112	28	23	7	80	26	192	54
Total		897	1487			614	1385			1511	2872
Percent		37.6%	62.4%			30.7%	69.3%			34.5%	65.5%
Grand Total		897	1487			614	1385			1511	2872
Percent		37.6%	62.4%			30.7%	69.3%			34.5%	65.5%
ADT		ADT 4,383				AADT 4,383					



ALL TRAFFIC DATA SERVICES

(303) 216-2439

www.alltrafficdata.net

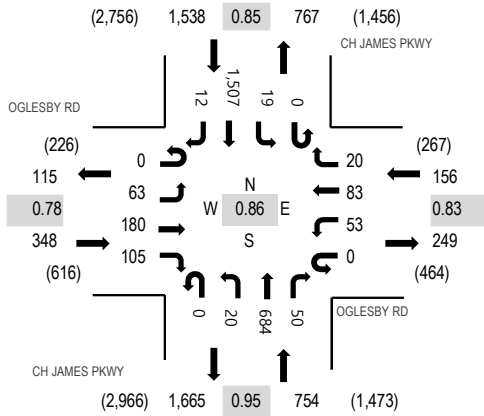
Location: #1 CH JAMES PKWY & OGLESBY RD AM

Date: Thursday, September 23, 2021

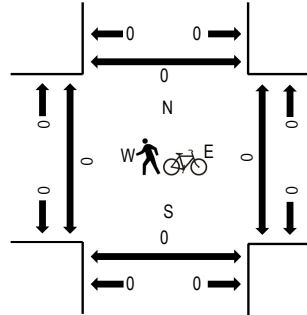
Peak Hour: 07:15 AM - 08:15 AM

Peak 15-Minutes: 07:30 AM - 07:45 AM

### Peak Hour - Motorized Vehicles



### Peak Hour - Pedestrians/Bicycles in Crosswalk



Note: Total study counts contained in parentheses.

### Traffic Counts - Motorized Vehicles

Interval Start Time	OGLESBY RD Eastbound				OGLESBY RD Westbound				CH JAMES PKWY Northbound				CH JAMES PKWY Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
7:00 AM	0	9	49	24	0	12	8	3	0	4	134	14	0	8	302	10	577	2,760	0	0	0	0
7:15 AM	0	12	34	22	0	12	15	4	0	4	160	6	0	8	389	2	668	2,796	0	0	0	0
7:30 AM	0	15	70	31	0	14	21	10	0	5	185	9	0	6	445	4	815	2,694	0	0	0	0
7:45 AM	0	24	41	32	0	17	27	4	0	6	160	16	0	5	362	6	700	2,481	0	0	0	0
8:00 AM	0	12	35	20	0	10	20	2	0	5	179	19	0	0	311	0	613	2,352	0	0	0	0
8:15 AM	0	9	29	25	0	15	17	2	0	7	174	5	0	3	277	3	566		0	0	0	0
8:30 AM	0	9	37	15	0	6	19	3	0	7	175	11	0	4	312	4	602		0	0	0	0
8:45 AM	0	10	33	19	0	9	12	5	0	14	156	18	0	4	285	6	571		0	0	0	0

### Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	4	0	0	0	0	52	1	0	0	48	0	105
Lights	0	63	175	105	0	48	81	17	0	20	623	49	0	18	1,445	12	2,656
Mediums	0	0	5	0	0	1	2	3	0	0	9	0	0	1	14	0	35
Total	0	63	180	105	0	53	83	20	0	20	684	50	0	19	1,507	12	2,796



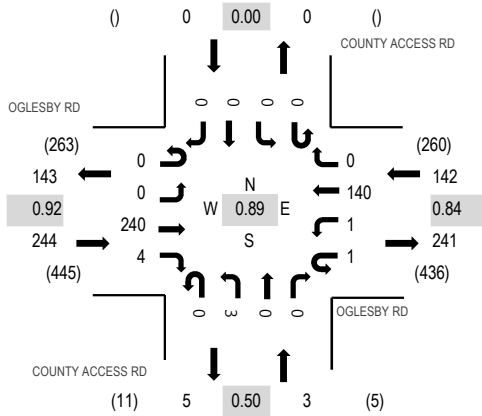
Location: #2 COUNTY ACCESS RD & OGLESBY RD AM

Date: Thursday, September 23, 2021

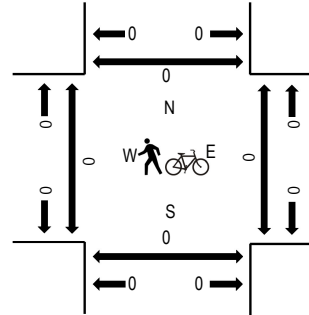
Peak Hour: 07:00 AM - 08:00 AM

Peak 15-Minutes: 07:30 AM - 07:45 AM

### Peak Hour - Motorized Vehicles



### Peak Hour - Pedestrians/Bicycles in Crosswalk



Note: Total study counts contained in parentheses.

### Traffic Counts - Motorized Vehicles

Interval Start Time	OGLESBY RD Eastbound				OGLESBY RD Westbound				COUNTY ACCESS RD Northbound				COUNTY ACCESS RD Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
7:00 AM	0	0	60	3	1	1	20	0	0	0	0	0	0	0	0	0	85	389	0	0	0	0
7:15 AM	0	0	55	0	0	0	33	0	0	0	0	0	0	0	0	0	88	387	0	0	0	0
7:30 AM	0	0	65	1	0	0	41	0	0	2	0	0	0	0	0	0	109	380	0	0	0	0
7:45 AM	0	0	60	0	0	0	46	0	0	1	0	0	0	0	0	0	107	351	0	0	0	0
8:00 AM	0	0	49	1	0	0	33	0	0	0	0	0	0	0	0	0	83	321	0	0	0	0
8:15 AM	0	0	46	0	0	0	34	0	0	1	0	0	0	0	0	0	81		0	0	0	0
8:30 AM	1	0	47	4	0	0	27	0	0	0	0	1	0	0	0	0	80		0	0	0	0
8:45 AM	0	0	52	1	0	0	24	0	0	0	0	0	0	0	0	0	77		0	2	0	0

### Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	2	0	0	2	0	0	3	0	0	0	0	0	0	7
Lights	0	0	234	2	0	1	135	0	0	0	0	0	0	0	0	0	372
Mediums	0	0	6	0	1	0	3	0	0	0	0	0	0	0	0	0	10
Total	0	0	240	4	1	1	140	0	0	3	0	0	0	0	0	0	389



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Location: #3 OGLESBY RD & OGLESBY RD AM

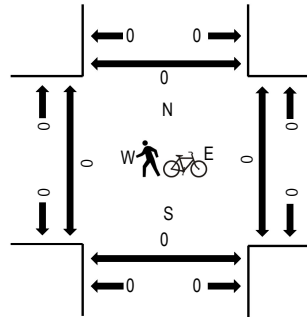
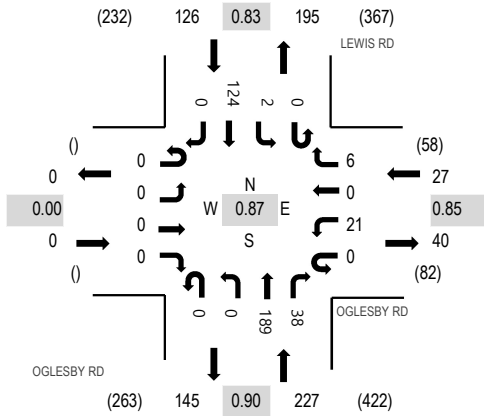
Date: Thursday, September 23, 2021

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

Peak 15-Minutes: 07:45 AM - 08:00 AM

**Peak Hour - Motorized Vehicles**

**Peak Hour - Pedestrians/Bicycles in Crosswalk**



Note: Total study counts contained in parentheses.

**Traffic Counts - Motorized Vehicles**

Interval Start Time	OGLESBY RD Eastbound				OGLESBY RD Westbound				OGLESBY RD Northbound				LEWIS RD Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
7:00 AM	0	0	0	0	0	2	0	1	0	0	58	5	0	1	21	0	88	380	0	0	0	0
7:15 AM	0	0	0	0	0	4	0	1	0	0	37	10	0	0	30	0	82	373	0	0	0	0
7:30 AM	0	0	0	0	0	7	0	2	0	0	40	17	0	0	35	0	101	374	0	0	0	0
7:45 AM	0	0	0	0	0	8	0	2	0	0	54	6	0	1	38	0	109	355	0	0	0	0
8:00 AM	0	0	0	0	0	10	0	0	0	0	44	5	0	0	22	0	81	332	0	0	0	0
8:15 AM	0	0	0	0	0	3	0	0	0	0	40	6	0	2	32	0	83		0	0	0	0
8:30 AM	0	0	0	0	0	6	0	1	0	0	33	15	1	4	22	0	82		0	0	0	0
8:45 AM	0	0	0	0	0	2	0	9	0	0	44	8	0	2	21	0	86		0	0	0	0

**Peak Rolling Hour Flow Rates**

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2
Lights	0	0	0	0	0	21	0	5	0	0	183	37	0	2	116	0	364
Mediums	0	0	0	0	0	0	0	1	0	0	6	1	0	0	6	0	14
Total	0	0	0	0	0	21	0	6	0	0	189	38	0	2	124	0	380



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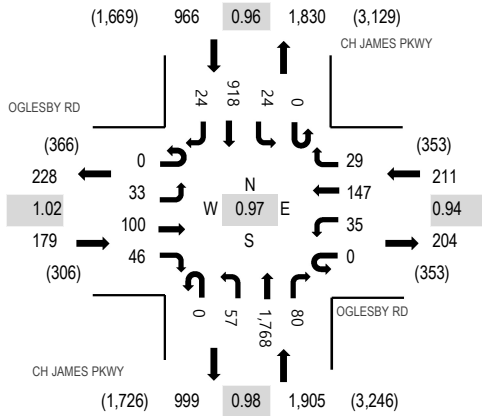
Location: #1 CH JAMES PKWY & OGLESBY RD PM

Date: Thursday, September 23, 2021

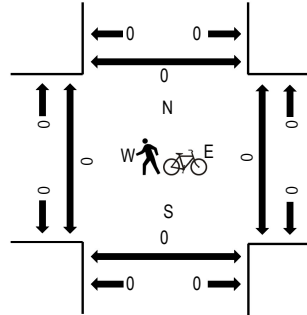
Peak Hour: 04:30 PM - 05:30 PM

Peak 15-Minutes: 05:15 PM - 05:30 PM

**Peak Hour - Motorized Vehicles**



**Peak Hour - Pedestrians/Bicycles in Crosswalk**



Note: Total study counts contained in parentheses.

**Traffic Counts - Motorized Vehicles**

Interval Start Time	OGLESBY RD Eastbound				OGLESBY RD Westbound				CH JAMES PKWY Northbound				CH JAMES PKWY Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
4:00 PM	0	9	23	6	0	7	30	6	0	14	401	25	0	5	225	11	762	3,097	0	0	0	0
4:15 PM	0	4	21	17	0	18	25	6	0	9	433	16	0	5	190	4	748	3,171	0	0	0	0
4:30 PM	0	9	21	10	0	7	28	6	0	10	457	18	0	3	242	5	816	3,261	0	0	0	0
4:45 PM	0	9	22	13	0	6	36	11	0	15	415	24	0	10	201	9	771	3,248	0	0	0	0
5:00 PM	0	5	26	14	0	9	42	7	0	17	451	17	0	4	238	6	836		0	0	0	0
5:15 PM	0	10	31	9	0	13	41	5	0	15	445	21	0	7	237	4	838		0	0	0	0
5:30 PM	0	9	29	9	0	8	27	15	0	12	416	15	0	10	247	6	803		0	0	0	0

**Peak Rolling Hour Flow Rates**

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	1	0	1	0	0	34	1	0	0	63	0	100
Lights	0	32	98	46	0	34	143	28	0	56	1,722	78	0	23	854	24	3,138
Mediums	0	1	2	0	0	0	4	0	0	1	12	1	0	1	1	0	23
Total	0	33	100	46	0	35	147	29	0	57	1,768	80	0	24	918	24	3,261

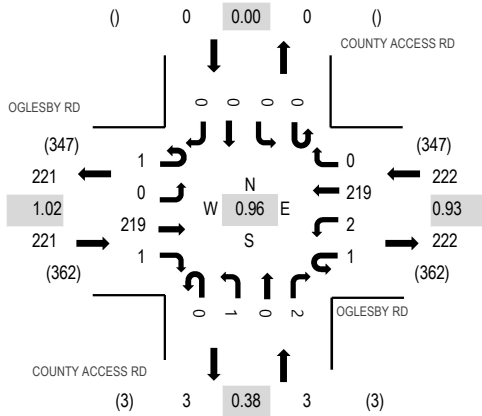
Location: #2 COUNTY ACCESS RD & OGLESBY RD PM

Date: Thursday, September 23, 2021

Peak Hour: 04:45 PM - 05:45 PM

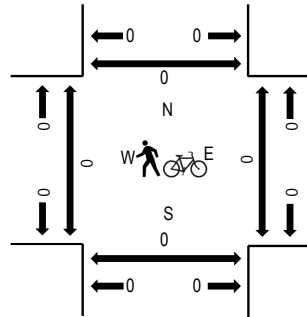
Peak 15-Minutes: 04:45 PM - 05:00 PM

### Peak Hour - Motorized Vehicles



Note: Total study counts contained in parentheses.

### Peak Hour - Pedestrians/Bicycles in Crosswalk



### Traffic Counts - Motorized Vehicles

Interval Start Time	OGLESBY RD Eastbound				OGLESBY RD Westbound				COUNTY ACCESS RD Northbound				COUNTY ACCESS RD Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
4:00 PM	1	0	54	0	0	0	50	0	0	0	0	0	0	0	0	0	105	382	0	0	0	0
4:15 PM	0	0	45	0	0	0	36	0	0	0	0	0	0	0	0	0	81	385	0	0	0	0
4:30 PM	0	0	41	0	0	0	39	0	0	0	0	0	0	0	0	0	80	420	0	0	0	0
4:45 PM	0	0	62	1	0	0	52	0	0	1	0	0	0	0	0	0	116	446	0	0	0	0
5:00 PM	0	0	48	0	0	0	60	0	0	0	0	0	0	0	0	0	108		0	0	0	0
5:15 PM	1	0	58	0	0	1	56	0	0	0	0	0	0	0	0	0	116		0	0	0	0
5:30 PM	0	0	51	0	1	1	51	0	0	0	0	2	0	0	0	0	106		0	0	0	0

### Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	1	1	0	0	0	0	0	1	0	0	0	0	0	0	3
Lights	1	0	212	0	1	2	215	0	0	0	0	2	0	0	0	0	433
Mediums	0	0	6	0	0	0	4	0	0	0	0	0	0	0	0	0	10
Total	1	0	219	1	1	2	219	0	0	1	0	2	0	0	0	0	446





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Location: #3 OGLESBY RD & OGLESBY RD PM

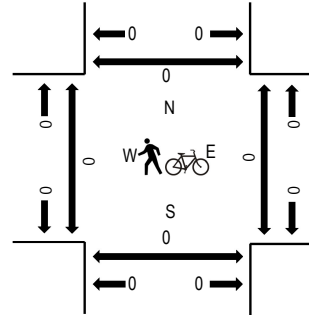
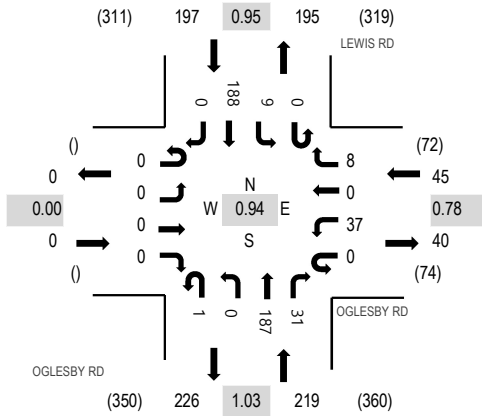
Date: Thursday, September 23, 2021

Peak Hour: 04:45 PM - 05:45 PM

Peak 15-Minutes: 05:15 PM - 05:30 PM

### Peak Hour - Motorized Vehicles

### Peak Hour - Pedestrians/Bicycles in Crosswalk



Note: Total study counts contained in parentheses.

### Traffic Counts - Motorized Vehicles

Interval Start Time	OGLESBY RD Eastbound				OGLESBY RD Westbound				OGLESBY RD Northbound				LEWIS RD Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
4:00 PM	0	0	0	0	0	10	0	0	0	0	44	11	0	2	39	0	106	401	0	0	0	0
4:15 PM	0	0	0	0	0	6	0	4	0	0	35	10	0	4	30	0	89	405	0	0	0	0
4:30 PM	0	0	0	0	0	2	0	5	0	0	36	5	0	2	37	0	87	438	0	0	0	0
4:45 PM	0	0	0	0	0	5	0	3	0	0	51	8	0	1	51	0	119	461	0	0	0	0
5:00 PM	0	0	0	0	0	11	0	0	0	0	41	7	0	2	49	0	110		0	0	0	0
5:15 PM	0	0	0	0	0	9	0	2	0	0	50	9	0	3	49	0	122		0	0	0	0
5:30 PM	0	0	0	0	0	12	0	3	1	0	45	7	0	3	39	0	110		0	0	0	0

### Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
Lights	0	0	0	0	0	36	0	8	1	0	182	30	0	9	187	0	453
Mediums	0	0	0	0	0	1	0	0	0	0	4	1	0	0	1	0	7
Total	0	0	0	0	0	37	0	8	1	0	187	31	0	9	188	0	461

## CAPACITY ANALYSIS REPORTS

Intersection						
Int Delay, s/veh	0.8					
Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations	↘	↗	↕	↗	↘	↕
Traffic Vol, veh/h	21	6	189	38	2	124
Future Vol, veh/h	21	6	189	38	2	124
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	400	0	-	400	150	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	23	7	205	41	2	135

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	344	205	0	0	246
Stage 1	205	-	-	-	-
Stage 2	139	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218
Pot Cap-1 Maneuver	652	836	-	-	1320
Stage 1	829	-	-	-	-
Stage 2	888	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	651	836	-	-	1320
Mov Cap-2 Maneuver	651	-	-	-	-
Stage 1	829	-	-	-	-
Stage 2	886	-	-	-	-

Approach	NW	NE	SW
HCM Control Delay, s	10.4	0	0.1
HCM LOS	B		

Minor Lane/Major Mvmt	NET	NER	NWLn1	NWLn2	SWL	SWT
Capacity (veh/h)	-	-	651	836	1320	-
HCM Lane V/C Ratio	-	-	0.035	0.008	0.002	-
HCM Control Delay (s)	-	-	10.7	9.3	7.7	-
HCM Lane LOS	-	-	B	A	A	-
HCM 95th %tile Q(veh)	-	-	0.1	0	0	-

**Intersection**

Int Delay, s/veh 0.1

Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations	↘	↗	↑	↗	↘	↑
Traffic Vol, veh/h	3	0	240	4	2	140
Future Vol, veh/h	3	0	240	4	2	140
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	250	-	300	220	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	0	261	4	2	152

**Major/Minor**

	Minor1	Major1	Major2		
Conflicting Flow All	417	261	0	0	265
Stage 1	261	-	-	-	-
Stage 2	156	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218
Pot Cap-1 Maneuver	592	778	-	-	1299
Stage 1	783	-	-	-	-
Stage 2	872	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	591	778	-	-	1299
Mov Cap-2 Maneuver	591	-	-	-	-
Stage 1	783	-	-	-	-
Stage 2	870	-	-	-	-

**Approach**

























	NW	NE	SW
HCM Control Delay, s	11.1	0	0.1
HCM LOS	B		

**Minor Lane/Major Mvmt**

	NET	NER	NWLn1	NWLn2	SWL	SWT
Capacity (veh/h)	-	-	591	-	1299	-
HCM Lane V/C Ratio	-	-	0.006	-	0.002	-
HCM Control Delay (s)	-	-	11.1	0	7.8	-
HCM Lane LOS	-	-	B	A	A	-
HCM 95th %tile Q(veh)	-	-	0	-	0	-

HCM 2010 Signalized Intersection Summary  
 3: C H James Pkwy/CH James Pkwy & Lewis Rd

Existing  
 10/25/2021

												
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	19	1507	12	20	684	50	63	180	105	53	83	20
Future Volume (veh/h)	19	1507	12	20	684	50	63	180	105	53	83	20
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	21	1638	0	22	743	0	68	196	114	58	90	22
Adj No. of Lanes	1	2	1	1	2	1	1	1	1	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	452	1989	890	191	1992	891	295	257	219	212	250	213
Arrive On Green	0.02	0.56	0.00	0.02	0.56	0.00	0.05	0.14	0.14	0.05	0.13	0.13
Sat Flow, veh/h	1774	3539	1583	1774	3539	1583	1774	1863	1583	1774	1863	1583
Grp Volume(v), veh/h	21	1638	0	22	743	0	68	196	114	58	90	22
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1583	1774	1863	1583	1774	1863	1583
Q Serve(g_s), s	0.4	29.5	0.0	0.4	9.1	0.0	2.5	7.9	5.2	2.2	3.4	1.0
Cycle Q Clear(g_c), s	0.4	29.5	0.0	0.4	9.1	0.0	2.5	7.9	5.2	2.2	3.4	1.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	452	1989	890	191	1992	891	295	257	219	212	250	213
V/C Ratio(X)	0.05	0.82	0.00	0.11	0.37	0.00	0.23	0.76	0.52	0.27	0.36	0.10
Avail Cap(c_a), veh/h	524	1989	890	262	1992	891	321	428	364	244	428	364
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	7.3	14.0	0.0	12.8	9.5	0.0	27.2	32.5	31.3	27.6	30.8	29.7
Incr Delay (d2), s/veh	0.0	4.0	0.0	0.3	0.5	0.0	0.4	4.7	1.9	0.7	0.9	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	15.2	0.0	0.2	4.6	0.0	1.3	4.4	2.4	1.1	1.8	0.4
LnGrp Delay(d),s/veh	7.4	18.0	0.0	13.1	10.0	0.0	27.6	37.2	33.3	28.3	31.7	29.9
LnGrp LOS	A	B		B	B		C	D	C	C	C	C
Approach Vol, veh/h		1659			765			378			170	
Approach Delay, s/veh		17.9			10.1			34.3			30.3	
Approach LOS		B			B			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	6.3	48.6	8.1	15.3	6.4	48.5	8.4	15.0				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	5.0	44.0	5.0	18.0	5.0	44.0	5.0	18.0				
Max Q Clear Time (g_c+I1), s	2.4	11.1	4.2	9.9	2.4	31.5	4.5	5.4				
Green Ext Time (p_c), s	0.0	4.8	0.0	0.9	0.0	8.1	0.0	0.3				
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			18.7									
HCM 2010 LOS			B									

**Intersection**

Int Delay, s/veh 1.3

Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations	↘	↗	↑	↗	↘	↑
Traffic Vol, veh/h	37	8	187	31	9	188
Future Vol, veh/h	37	8	187	31	9	188
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	400	0	-	400	150	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	40	9	203	34	10	204

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	427	203	0
Stage 1	203	-	-
Stage 2	224	-	-
Critical Hdwy	6.42	6.22	-
Critical Hdwy Stg 1	5.42	-	-
Critical Hdwy Stg 2	5.42	-	-
Follow-up Hdwy	3.518	3.318	-
Pot Cap-1 Maneuver	584	838	-
Stage 1	831	-	-
Stage 2	813	-	-
Platoon blocked, %			
Mov Cap-1 Maneuver	579	838	-
Mov Cap-2 Maneuver	579	-	-
Stage 1	831	-	-
Stage 2	806	-	-

Approach	NW	NE	SW
HCM Control Delay, s	11.3	0	0.4
HCM LOS	B		

Minor Lane/Major Mvmt	NET	NER	NWL	N2	SWL	SWT
Capacity (veh/h)	-	-	579	838	1330	-
HCM Lane V/C Ratio	-	-	0.069	0.01	0.007	-
HCM Control Delay (s)	-	-	11.7	9.3	7.7	-
HCM Lane LOS	-	-	B	A	A	-
HCM 95th %tile Q(veh)	-	-	0.2	0	0	-

Intersection						
Int Delay, s/veh	0.1					
Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations	↘	↗	↕	↗	↘	↕
Traffic Vol, veh/h	1	2	219	1	2	219
Future Vol, veh/h	1	2	219	1	2	219
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	250	-	300	220	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	2	238	1	2	238

























Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	480	238	0	0	239
Stage 1	238	-	-	-	-
Stage 2	242	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218
Pot Cap-1 Maneuver	545	801	-	-	1328
Stage 1	802	-	-	-	-
Stage 2	798	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	544	801	-	-	1328
Mov Cap-2 Maneuver	544	-	-	-	-
Stage 1	802	-	-	-	-
Stage 2	796	-	-	-	-

Approach	NW	NE	SW
HCM Control Delay, s	10.2	0	0.1
HCM LOS	B		

Minor Lane/Major Mvmt	NET	NER	NWLn1	NWLn2	SWL	SWT
Capacity (veh/h)	-	-	544	801	1328	-
HCM Lane V/C Ratio	-	-	0.002	0.003	0.002	-
HCM Control Delay (s)	-	-	11.6	9.5	7.7	-
HCM Lane LOS	-	-	B	A	A	-
HCM 95th %tile Q(veh)	-	-	0	0	0	-

HCM 2010 Signalized Intersection Summary  
 3: C H James Pkwy & Lewis Rd

PM Existing  
 10/25/2021

												
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	24	918	24	57	1768	80	33	100	46	35	147	29
Future Volume (veh/h)	24	918	24	57	1768	80	33	100	46	35	147	29
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	26	998	0	62	1922	0	36	109	50	38	160	32
Adj No. of Lanes	1	2	1	1	2	1	1	1	1	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	170	2146	960	414	2208	988	175	207	176	211	209	178
Arrive On Green	0.03	0.61	0.00	0.04	0.62	0.00	0.03	0.11	0.11	0.03	0.11	0.11
Sat Flow, veh/h	1774	3539	1583	1774	3539	1583	1774	1863	1583	1774	1863	1583
Grp Volume(v), veh/h	26	998	0	62	1922	0	36	109	50	38	160	32
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1583	1774	1863	1583	1774	1863	1583
Q Serve(g_s), s	0.5	13.6	0.0	1.1	39.4	0.0	1.6	4.9	2.6	1.7	7.4	1.6
Cycle Q Clear(g_c), s	0.5	13.6	0.0	1.1	39.4	0.0	1.6	4.9	2.6	1.7	7.4	1.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	170	2146	960	414	2208	988	175	207	176	211	209	178
V/C Ratio(X)	0.15	0.47	0.00	0.15	0.87	0.00	0.21	0.53	0.28	0.18	0.77	0.18
Avail Cap(c_a), veh/h	223	2146	960	446	2208	988	216	380	323	250	380	323
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	15.2	9.5	0.0	6.8	13.7	0.0	33.3	37.0	36.0	33.1	38.0	35.5
Incr Delay (d2), s/veh	0.4	0.7	0.0	0.2	5.0	0.0	0.6	2.1	0.9	0.4	5.8	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	6.9	0.0	0.6	20.5	0.0	0.8	2.6	1.2	0.8	4.1	0.7
LnGrp Delay(d),s/veh	15.6	10.2	0.0	6.9	18.7	0.0	33.9	39.1	36.9	33.5	43.8	36.0
LnGrp LOS	B	B		A	B		C	D	D	C	D	D
Approach Vol, veh/h		1024			1984			195			230	
Approach Delay, s/veh		10.4			18.3			37.6			41.0	
Approach LOS		B			B			D			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	6.9	59.5	7.5	14.3	8.4	58.0	7.4	14.4				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	5.0	54.0	5.0	18.0	5.5	53.5	5.0	18.0				
Max Q Clear Time (g_c+I1), s	2.5	41.4	3.7	6.9	3.1	15.6	3.6	9.4				
Green Ext Time (p_c), s	0.0	9.4	0.0	0.5	0.0	7.2	0.0	0.5				
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			18.6									
HCM 2010 LOS			B									



Intersection						
Int Delay, s/veh	1.8					
Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations	↘	↗	↑	↗	↘	↑
Traffic Vol, veh/h	44	12	189	38	21	124
Future Vol, veh/h	44	12	189	38	21	124
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	400	0	-	400	150	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	48	13	205	41	23	135

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	386	205	0	0	246
Stage 1	205	-	-	-	-
Stage 2	181	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218
Pot Cap-1 Maneuver	617	836	-	-	1320
Stage 1	829	-	-	-	-
Stage 2	850	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	607	836	-	-	1320
Mov Cap-2 Maneuver	607	-	-	-	-
Stage 1	829	-	-	-	-
Stage 2	836	-	-	-	-

Approach	NW	NE	SW
HCM Control Delay, s	11	0	1.1
HCM LOS	B		

Minor Lane/Major Mvmt	NET	NER	NWL	N1	NWL	N2	SWL	SWT
Capacity (veh/h)	-	-	607	836	1320	-	-	-
HCM Lane V/C Ratio	-	-	0.079	0.016	0.017	-	-	-
HCM Control Delay (s)	-	-	11.4	9.4	7.8	-	-	-
HCM Lane LOS	-	-	B	A	A	-	-	-
HCM 95th %tile Q(veh)	-	-	0.3	0	0.1	-	-	-

**Intersection**

Int Delay, s/veh 0.1

Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations	↘	↗	↑	↗	↘	↑
Traffic Vol, veh/h	4	1	240	77	3	182
Future Vol, veh/h	4	1	240	77	3	182
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	250	-	300	220	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	1	261	84	3	198

























Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	465	261	0
Stage 1	261	-	-
Stage 2	204	-	-
Critical Hdwy	6.42	6.22	-
Critical Hdwy Stg 1	5.42	-	-
Critical Hdwy Stg 2	5.42	-	-
Follow-up Hdwy	3.518	3.318	-
Pot Cap-1 Maneuver	556	778	-
Stage 1	783	-	-
Stage 2	830	-	-
Platoon blocked, %			
Mov Cap-1 Maneuver	555	778	-
Mov Cap-2 Maneuver	555	-	-
Stage 1	783	-	-
Stage 2	828	-	-

Approach	NW	NE	SW
HCM Control Delay, s	11.1	0	0.1
HCM LOS	B		

Minor Lane/Major Mvmt	NET	NER	NWL	N1	NWL	N2	SWL	SWT
Capacity (veh/h)	-	-	555	778	1214	-	-	-
HCM Lane V/C Ratio	-	-	0.008	0.001	0.003	-	-	-
HCM Control Delay (s)	-	-	11.5	9.6	8	-	-	-
HCM Lane LOS	-	-	B	A	A	-	-	-
HCM 95th %tile Q(veh)	-	-	0	0	0	-	-	-

HCM 2010 Signalized Intersection Summary  
3: C H James Pkwy & Lewis Rd

AM W Development  
10/25/2021

												
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	23	1507	12	20	684	64	63	235	105	64	100	24
Future Volume (veh/h)	23	1507	12	20	684	64	63	235	105	64	100	24
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	25	1638	0	22	743	0	68	255	114	70	109	26
Adj No. of Lanes	1	2	1	1	2	1	1	1	1	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	432	1913	856	175	1904	852	318	310	264	209	311	265
Arrive On Green	0.03	0.54	0.00	0.02	0.54	0.00	0.05	0.17	0.17	0.05	0.17	0.17
Sat Flow, veh/h	1774	3539	1583	1774	3539	1583	1774	1863	1583	1774	1863	1583
Grp Volume(v), veh/h	25	1638	0	22	743	0	68	255	114	70	109	26
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1583	1774	1863	1583	1774	1863	1583
Q Serve(g_s), s	0.5	32.4	0.0	0.4	10.0	0.0	2.6	10.8	5.3	2.6	4.2	1.1
Cycle Q Clear(g_c), s	0.5	32.4	0.0	0.4	10.0	0.0	2.6	10.8	5.3	2.6	4.2	1.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	432	1913	856	175	1904	852	318	310	264	209	311	265
V/C Ratio(X)	0.06	0.86	0.00	0.13	0.39	0.00	0.21	0.82	0.43	0.33	0.35	0.10
Avail Cap(c_a), veh/h	493	1913	856	241	1904	852	341	410	349	231	410	349
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	8.5	16.1	0.0	14.8	11.0	0.0	26.3	32.9	30.6	27.0	30.1	28.8
Incr Delay (d2), s/veh	0.1	5.2	0.0	0.3	0.6	0.0	0.3	9.7	1.1	0.9	0.7	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	17.1	0.0	0.2	5.0	0.0	1.3	6.4	2.4	1.3	2.2	0.5
LnGrp Delay(d),s/veh	8.6	21.3	0.0	15.1	11.6	0.0	26.7	42.6	31.7	27.9	30.8	29.0
LnGrp LOS	A	C		B	B		C	D	C	C	C	C
Approach Vol, veh/h		1663			765			437			205	
Approach Delay, s/veh		21.1			11.7			37.3			29.6	
Approach LOS		C			B			D			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	6.7	48.5	8.5	18.1	6.5	48.7	8.4	18.2				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	5.0	44.0	5.0	18.0	5.0	44.0	5.0	18.0				
Max Q Clear Time (g_c+I1), s	2.5	12.0	4.6	12.8	2.4	34.4	4.6	6.2				
Green Ext Time (p_c), s	0.0	4.8	0.0	0.8	0.0	6.7	0.0	0.4				
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			21.6									
HCM 2010 LOS			C									

**Intersection**

Int Delay, s/veh 3.4

Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations	↘	↗	↑	↗	↘	↑
Traffic Vol, veh/h	115	28	187	31	17	188
Future Vol, veh/h	115	28	187	31	17	188
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	400	0	-	400	150	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	125	30	203	34	18	204

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	443	203	0
Stage 1	203	-	-
Stage 2	240	-	-
Critical Hdwy	6.42	6.22	-
Critical Hdwy Stg 1	5.42	-	-
Critical Hdwy Stg 2	5.42	-	-
Follow-up Hdwy	3.518	3.318	-
Pot Cap-1 Maneuver	572	838	-
Stage 1	831	-	-
Stage 2	800	-	-
Platoon blocked, %			
Mov Cap-1 Maneuver	564	838	-
Mov Cap-2 Maneuver	564	-	-
Stage 1	831	-	-
Stage 2	789	-	-

Approach	NW	NE	SW
HCM Control Delay, s	12.5	0	0.6
HCM LOS	B		

Minor Lane/Major Mvmt	NET	NER	NWL	N1	NWL	N2	SWL	SWT
Capacity (veh/h)	-	-	564	838	1330	-	-	-
HCM Lane V/C Ratio	-	-	0.222	0.036	0.014	-	-	-
HCM Control Delay (s)	-	-	13.2	9.5	7.7	-	-	-
HCM Lane LOS	-	-	B	A	A	-	-	-
HCM 95th %tile Q(veh)	-	-	0.8	0.1	0	-	-	-

**Intersection**

Int Delay, s/veh 0.1

Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations	↘	↗	↑	↗	↘	↑
Traffic Vol, veh/h	2	3	219	31	3	311
Future Vol, veh/h	2	3	219	31	3	311
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	250	-	300	220	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	3	238	34	3	338

**Major/Minor**

	Minor1	Major1	Major2		
Conflicting Flow All	582	238	0	0	272
Stage 1	238	-	-	-	-
Stage 2	344	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218
Pot Cap-1 Maneuver	475	801	-	-	1291
Stage 1	802	-	-	-	-
Stage 2	718	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	474	801	-	-	1291
Mov Cap-2 Maneuver	474	-	-	-	-
Stage 1	802	-	-	-	-
Stage 2	717	-	-	-	-

**Approach**

























	NW	NE	SW
HCM Control Delay, s	10.7	0	0.1
HCM LOS	B		

**Minor Lane/Major Mvmt**

	NET	NER	NWLn1	NWLn2	SWL	SWT
Capacity (veh/h)	-	-	474	801	1291	-
HCM Lane V/C Ratio	-	-	0.005	0.004	0.003	-
HCM Control Delay (s)	-	-	12.6	9.5	7.8	-
HCM Lane LOS	-	-	B	A	A	-
HCM 95th %tile Q(veh)	-	-	0	0	0	-

HCM 2010 Signalized Intersection Summary  
 3: C H James Pkwy & Lewis Rd

PM W/ Development  
 10/25/2021

												
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	28	918	24	57	1768	93	33	113	46	50	209	42
Future Volume (veh/h)	28	918	24	57	1768	93	33	113	46	50	209	42
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1792	1792	1792
Adj Flow Rate, veh/h	30	998	0	62	1922	0	36	123	50	54	227	46
Adj No. of Lanes	1	2	1	1	2	1	1	1	1	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	6	6	6
Cap, veh/h	155	2049	917	387	2098	939	166	266	226	243	270	230
Arrive On Green	0.03	0.58	0.00	0.04	0.59	0.00	0.03	0.14	0.14	0.04	0.15	0.15
Sat Flow, veh/h	1774	3539	1583	1774	3539	1583	1774	1863	1583	1707	1792	1524
Grp Volume(v), veh/h	30	998	0	62	1922	0	36	123	50	54	227	46
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1583	1774	1863	1583	1707	1792	1524
Q Serve(g_s), s	0.6	15.3	0.0	1.3	44.7	0.0	1.6	5.6	2.6	2.5	11.4	2.4
Cycle Q Clear(g_c), s	0.6	15.3	0.0	1.3	44.7	0.0	1.6	5.6	2.6	2.5	11.4	2.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	155	2049	917	387	2098	939	166	266	226	243	270	230
V/C Ratio(X)	0.19	0.49	0.00	0.16	0.92	0.00	0.22	0.46	0.22	0.22	0.84	0.20
Avail Cap(c_a), veh/h	199	2049	917	416	2098	939	204	363	308	266	349	297
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	18.9	11.4	0.0	8.3	16.8	0.0	32.7	36.4	35.1	32.0	38.2	34.4
Incr Delay (d2), s/veh	0.6	0.8	0.0	0.2	7.8	0.0	0.6	1.3	0.5	0.5	13.4	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	7.6	0.0	0.6	23.9	0.0	0.8	3.0	1.2	1.2	6.6	1.1
LnGrp Delay(d),s/veh	19.5	12.2	0.0	8.5	24.5	0.0	33.4	37.6	35.6	32.5	51.5	34.8
LnGrp LOS	B	B		A	C		C	D	D	C	D	C
Approach Vol, veh/h		1028			1984			209			327	
Approach Delay, s/veh		12.5			24.0			36.4			46.0	
Approach LOS		B			C			D			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.2	59.3	8.3	17.7	8.5	58.0	7.5	18.4				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	5.0	54.0	5.0	18.0	5.5	53.5	5.0	18.0				
Max Q Clear Time (g_c+I1), s	2.6	46.7	4.5	7.6	3.3	17.3	3.6	13.4				
Green Ext Time (p_c), s	0.0	5.9	0.0	0.5	0.0	7.1	0.0	0.5				
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			23.4									
HCM 2010 LOS			C									