



## **TRAFFIC IMPACT STATEMENT**

### **DAYTONA AVENUE APARTMENTS**

**2240 DAYTONA AVENUE  
WINDSOR, ONTARIO**

PROJECT NO. 22-048

DATE: DECEMBER 12, 2023

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- Appendix A Background Traffic Data and Other Related Information
- Appendix B Future Background Traffic, Development Traffic and Total Traffic Volumes
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## 1.0 INTRODUCTION

### 1.1 Background

Baird AE has been retained to prepare a Traffic Impact Statement in support of a proposed multi-unit residential apartment building at 2230-2240 Daytona Avenue in Windsor. The study was undertaken in support Applications for an Official Plan Amendment and Zoning By-law Amendment.

The property, which is 0.18 hectares in size, is zoned residential and is currently a vacant lot. The proposed development will include a 4-storey multi-unit apartment building, an asphalt parking lot, and entrance on Daytona Avenue.

The traffic flow from the development is predicted to produce 132 daily vehicles, 9 morning vehicles and 12 evening peak vehicles.



Exhibit 1 - Location Plan

### 1.2 Proposed Development

As illustrated in the site plan (Appendix A), the overall existing lot is 0.18ha. A 4-storey building will have 20 dwelling units and 25 parking spaces including visitor parking.

The proposed development is anticipated to be completed in 2027. Therefore, future horizon periods (conditions) are established as part of this study:

- 2027 Future Condition
- 2037 Future Condition – 10-year horizon

The statement considered the impacts of site-generated traffic at the intersection of Huron Church Road and Northwood Street.

### ***1.3 Analysis Methodology***

A transportation analysis was completed to determine the intersection's existing and future operating conditions and individual turning movements. The operational analyses were primarily based on procedures set out in the Highway Capacity Manual (2010) with the assistance of Synchro 10. Several performance measures are used in the analysis of signalized and unsignalized intersections, including:

- Level of Service (LOS) – a measure of the average vehicle delay experienced by the motorists attempting to travel through the intersection. LOS is measured from "A" to "F" with peak hour LOS in the "A" to "D" range being considered acceptable by most and a LOS of F representing unacceptable delays;
- Delay – the additional travel time experienced by a driver compared to free-flow conditions; and
- Queue Lengths – the Synchro Software measures both the 50th percentile and 95th percentile maximum queue lengths. The 50th percentile queue (the median) is the maximum back of queue length during a typical traffic cycle. The 95th percentile queue is the maximum back of queue length during a typical traffic cycle with 95th percentile traffic volumes. The 95th percentile queue measures the queue length that 95 percent of the sample lies below. The 95th percentile critical queue lengths were identified for movements where the queue surpassed the estimated length of the storage bay.

These measures provide an indication of delay and the number of vehicles that can be accommodated through an intersection.

## 2.0 EXISTING CONDITION

### 4.1 Road Network Characteristics

The existing road lane configuration and existing traffic controls for the study are described below.

**Huron Church Road** is designated as a Class 1 Arterial Road under the jurisdiction of the City of Windsor and maintains a posted speed limit of 60km/h. The road has a six-lane cross-section, running north-south.

**Northwood Street** is designated as a Class II Collector Road with a posted speed limit of 50km/h. It is signalized on its approach to the intersection with Huron Church Road.

**Daytona Avenue** is designated as a local two-way roadway with a posted speed limit of 50km/h. It is unsignalized on its approach to the intersection with Northwood Street.

### 4.2 Key Existing Intersections

The major intersection within the vicinity of the development is Huron Church Road and Northwood Street. The intersection is a 4-leg signalized intersection with exclusive left-turn lanes for northbound, southbound and westbound traffic. Exclusive right-turn lanes are provided for southbound traffic. The intersection of Huron Church Road and Northwood Street is signalized. Intersection layout photos are provided in Appendix D.

### 4.3 Existing Traffic Volumes

A recent traffic count was obtained from the City of Windsor for the intersection of Huron Church Road and Northwood Street. Counts were conducted in 2020.

Traffic counts and other relevant data are in Appendix A.

## 3.0 FUTURE CONDITION

### 3.1 Growth Rate

The growth rate information was obtained from the Windsor Area Long Range Transportation Study (WALTS) traffic growth chart. Based on the chart, 20-year traffic growth (2.17 traffic volume 1997 and 2.22 traffic volume 2017) is approximately 1.1%; hence, a conservative growth rate of 2% per year was assumed to reflect growth in background traffic volumes. The projected traffic volumes are provided in Appendix B.

### 3.2 Future Background Development

The development is generally located in a busy area surrounded by commercial, industrial and residential development. Based on communication with the City's Transportation Planning Department, the following new development planning applications have been submitted:

- Fred's Farms Mixed-Use Development: Multi-use development adjacent to Fred's Farm. The future the development area is approximately 0.71ha and will consist of a six-storey apartment building including a retail section.
- Westdell Residential and Commercial Development: 1 combined use building and 3 new apartment buildings contain 640 dwelling units and 2 stand-alone commercial buildings.
- 2080 Huron Church Road: 138-bed retirement home or a 93-unit residential with commercial space on main floor.

The Gordie Howe International Bridge project is under construction. The bridge will provide direct entry to the USA from Highway 401 without utilizing Huron Church Road. The bridge construction will be completed in 2025, causing a large traffic reduction for this portion of Huron Church Road.

## 4.0 DEVELOPMENT TRAFFIC

This section will describe development accesses, trip generation, trip distribution and ultimate peak hour traffic.

### 4.4 Description of Project

As shown in the site plan (Appendix A), the development area is approximately 0.18ha. A 4-storey building will have 20 dwelling units and 25 parking spaces including visitor parking.

The development will use the one new access from Daytona Avenue. The intersection is a T-leg intersection with "Stop" control on the access road. Access location is shown in Exhibit 2.

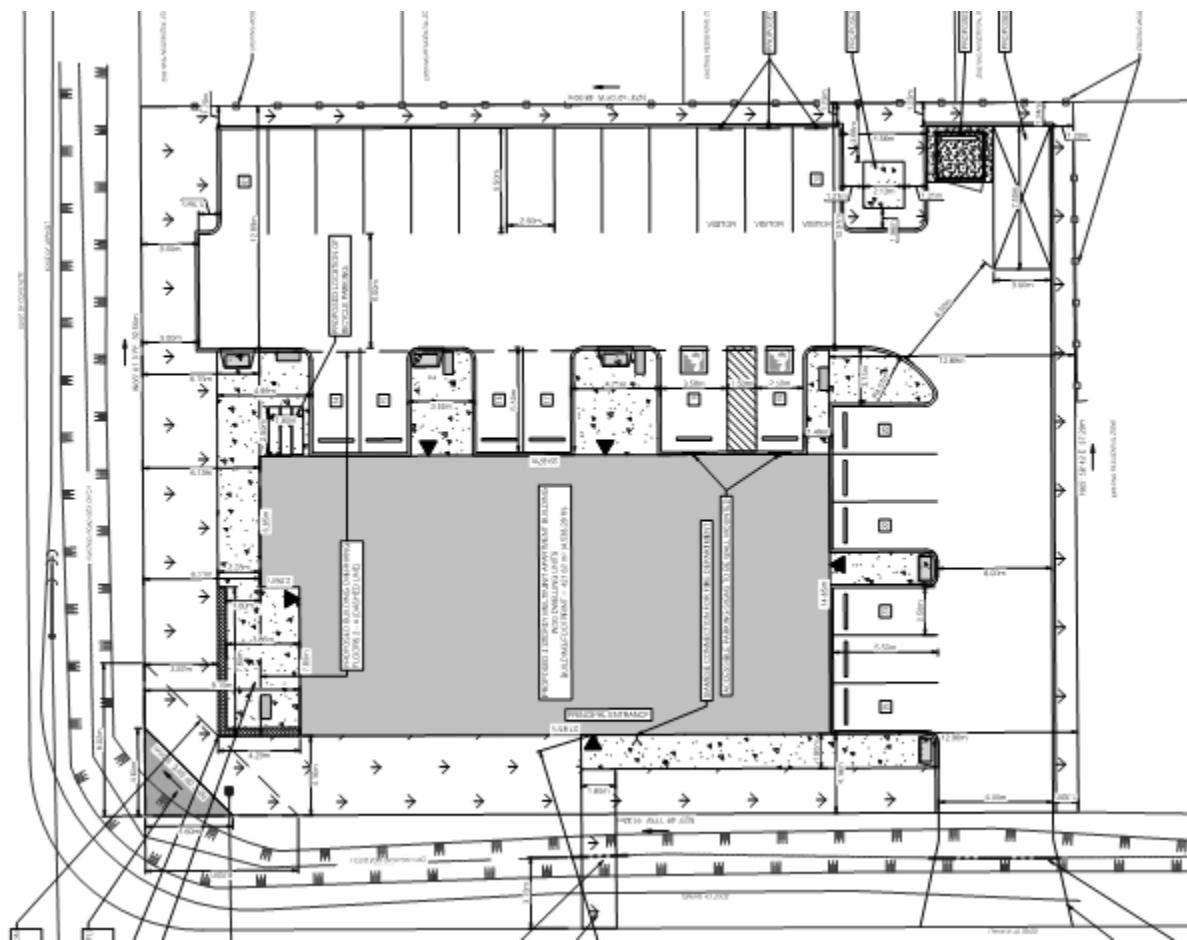


Exhibit 2 – Access Road Locations

All proposed approaches at the intersection will have one left-through-right shared lane for modelling purposes.

#### **4.5 Trip Generation**

The number of vehicle trips anticipated to be generated by the proposed development was calculated based on trip generation rates published by The Institution of Transportation Engineers (ITE) Trip Generation 9th Edition. For proposed building, ITE Code 221 (Mid- Rise Apartment) is used to calculate generated traffic.

Descriptions of land use, ITE codes, unit sizes, trip generation rates and trip generation for daily and peak hours are provided in Table 1. Appendix B provides detailed calculations and all relevant charts.

Table 1: Trip Generation

Use	ITE	Units /Area	AADT	Trip Generated			
				AM Hour		PM Hour	
				In	Out	In	Out
<b>Proposed Development</b>							
Apartment Building	221	20 units	132	2	7	8	4
Proposed Development			132	2	7	8	4
<b>Future Development</b>							
<u>Fred's Farm Development</u>							
Apartment Building	221	58 units	382	6	21	22	12
Convenient market	851	2.9k sq.ft	2173	38	38	31	29
<u>Westdell Residential Development</u>							
Mix - Apartment & Commercial Buildings	-	Note 1		143	331	316	201
<u>2800 Huron Church Road (Retirement Homes or residential plus Commercial)</u>							
Retirement Homes	254	138 beds	378	17	8	20	20

Restaurant	931	2.9k sq.ft	261	1	8	4	10
Total Future Development			3194	205	406	393	272

Note1: see traffic impact study prepared by Baird AE dated May 30, 2023

## 4.6 Trip Distribution and Assignment

Given that the site is in an urban location (proximity to a mix of residential, industrial, commercial, and employment uses), the trip distribution is based on the shortest route to reach the City Centre and E.C. Row Expressway. The development's traffic distribution is shown in Figures 1.2 and 2.2 within Appendix B.

## 4.7 Future Conditions

Development traffic volumes were added to the forecasted (2027 and 2037) background traffic volumes to obtain the corresponding total traffic volumes at intersections. The projected total future volumes are provided in figures 1.3 -1.4 and figures 2.3 - 2.4 within Appendix B.

## 5.0 INTERSECTION OPERATIONS

The forecasted 2027 and 2037 traffic volumes for the study intersections are evaluated using Synchro/Sim Traffic software version 10, which automates the procedures contained in the Highway Capacity Manual 2010.

The 2027 background conditions and future total conditions analysis results are included in Tables 2 and 3, and the corresponding worksheets are included in Appendix C.

Table 2: 2027 Background Conditions – Level of Service

Intersection	A.M. Peak Hour			P.M. Peak Hour		
	LOS	v/c	Delay (sec)	LOS	v/c	Delay (sec)
<b>Huron Church Road and Northwood Street</b>						
EB LT	C	0.12	33.8	C	0.16	34.4
EB R	A	0.23	6.1	A	0.56	9.2
WB L	D	0.54	40.9	D	0.36	35.9
WB TR	D	0.40	44.0	D	0.38	50.0
NB L	C	0.72	32.4	D	0.56	38.6
NB TR	E	1.02	68.1	D	0.81	40.9

SB L	B	0.11	16.2	B	0.18	17.8
SB T	D	0.74	48.0	F	<b>1.29</b>	<b>177.6</b>
SB R	A	0.11	0.4	A	0.07	0.3
<b>Overall LOS</b>		<b>D</b>			<b>F</b>	

Note: NB – Northbound SB – Southbound EB – Eastbound WB – Westbound; LTR – Left/Through/Right turn

Table 3: 2027 Total Conditions – Level of Service

Intersection	A.M. Peak Hour			P.M. Peak Hour		
	LOS	v/c	Delay (sec)	LOS	v/c	Delay (sec)
<b>Huron Church Road and Northwood Street</b>						
EB LT	C	0.12	33.8	C	0.15	34.3
EB R	A	0.22	6.1	A	0.55	9.2
WB L	D	0.64	45.0	D	0.43	37.6
WB TR	D	0.42	44.1	D	0.38	49.3
NB L	C	0.73	32.4	D	0.59	41.1
NB TR	E	<b>1.03</b>	69.3	D	0.87	44.2
SB L	B	0.17	17.3	C	0.32	21.1
SB T	D	0.81	48.0	F	<b>1.32</b>	<b>186.6</b>
SB R	A	0.10	0.4	A	0.07	0.3
<b>Overall LOS</b>		<b>E</b>			<b>F</b>	
<b>Daytona Avenue and Northwood Street</b>						
EB LTR	A	0.03	1.6	A	0.05	2.3
WB LTR	A	0.0	0.0	A	0.0	0.0
NB LTR	C	0.18	19.4	C	0.22	18.9
WB LTR	B	0.15	11.6	B	0.22	11.2
<b>Overall LOS</b>		<b>A</b>			<b>A</b>	

The results of the analyses from Tables 2 and 3 indicate the following:

- Huron Church Road and Northwood Street Intersection
  - During background conditions, all turning movements are expected to operate at an unacceptable level of service especially northbound and southbound traffic. The new bridge, Gordie Howe Bridge, is expected to be completed in 2025, which will take the heavy traffic load off of Huron Church Road. Heavy traffic accounts for 27 percent of overall northbound traffic. Intersection improvements are required such as extended phase timing. The current signal operates at 150 second cycle length.
  - With the development traffic, all turning movements are expected to operate at an acceptable level of service, except for northbound and southbound

traffic. Intersection improvements are required such as extended phase timing. The current signal operates at 150 second cycle length. It is noted that the proposed development is expected to have minimal impact on the conditions at the intersections.

- Daytona Avenue and Northwood Street Intersection
  - Intersection of Daytona Avenue with Northwood Street perform at acceptable level of service during post development condition.

The 2037 background conditions and future total conditions analysis results are included in Tables 4 and 5 and the corresponding worksheets are included in Appendix C.

Table 4: 2037 Background Conditions – Level of Service

Intersection	A.M. Peak Hour			P.M. Peak Hour		
	LOS	v/c	Delay (sec)	LOS	v/c	Delay (sec)
<b>Huron Church Road and Northwood Street</b>						
EB LT	C	0.14	34.1	C	0.19	34.8
EB R	A	0.27	9.4	A	0.61	9.4
WB L	D	0.64	44.7	D	0.43	37.4
WB TR	D	0.47	47.4	D	0.44	52.3
NB L	E	0.92	64.2	D	0.72	51.3
NB TR	<b>F</b>	<b>1.20</b>	<b>134.4</b>	D	0.95	53.1
SB L	B	0.13	16.5	C	0.26	21.4
SB T	D	0.87	54.8	<b>F</b>	<b>1.52</b>	<b>272.9</b>
SB R	A	0.13	1.7	A	0.09	0.4
<b>Overall LOS</b>	<b>D</b>			<b>F</b>		

Table 5: 2037 Total Conditions – Level of Service

Intersection	A.M. Peak Hour			P.M. Peak Hour		
	LOS	v/c	Delay (sec)	LOS	v/c	Delay (sec)
<b>Huron Church Road and Northwood Street</b>						
EB LT	C	0.14	34.1	C	0.19	34.8
EB R	A	0.27	9.4	A	0.61	9.4
WB L	D	0.75	51.2	D	0.52	39.8
WB TR	D	0.50	47.5	D	0.45	52.2
NB L	<b>F</b>	<b>0.98</b>	<b>84.7</b>	D	0.72	51.3
NB TR	<b>F</b>	<b>1.24</b>	<b>151.2</b>	<b>F</b>	<b>1.08</b>	<b>85.0</b>
SB L	B	0.19	17.7	C	0.36	27.8
SB T	<b>F</b>	<b>1.04</b>	<b>83.4</b>	<b>F</b>	<b>1.59</b>	<b>301.3</b>

SB R	A	0.13	1.7	A	0.09	0.4
<b>Overall LOS</b>		<b>F</b>			<b>F</b>	
<b>Daytona Avenue and Northwood Street</b>						
EB LTR	A	0.04	1.5	A	0.03	1.3
WB LTR	A	0.0	0.0	A	0.0	0.0
NB LTR	C	0.22	23.7	C	0.21	19.0
WB LTR	B	0.17	12.6	B	0.22	11.7
<b>Overall LOS</b>		<b>A</b>			<b>A</b>	

The results of the analysis from Tables 4 and 5 indicate the following:

- Huron Church Road and Northwood Street Intersection
  - During background conditions, all turning movements are expected to operate at an unacceptable level of service especially northbound and southbound traffic. The Gordie Howe Bridge is expected to be completed in 2025, which will take heavy traffic load off Huron Church Road. Heavy traffic accounts for 27 percent of overall northbound traffic. Intersection improvements are required such as extended phase timing. The current signal operates at 150 second cycle length.
  - With the development traffic, all turning movements are expected to operate at an acceptable level of service except northbound and southbound traffic. Intersection improvements are required such as extended phase timing. The current signal operates at 150 second cycle length. It is noted that the proposed development is expected to have minimal impact on the conditions at the intersections.
- Daytona Avenue and Northwood Street Intersection
  - Intersection of Daytona Avenue with Northwood Street perform at acceptable level of service during post development condition.

## 6.0 CONCLUSION AND RECOMMENDATION

Operating conditions were evaluated for 2027 and 2037 traffic conditions using morning and evening traffic data. The findings from these evaluations are summarized below:

- The development site is approximately 0.18ha and consists of a 4-storey residential building containing 20 dwelling units and 25 parking spaces.
- The development will generate 132 daily vehicles, 9 morning vehicles and 12 evening peak vehicles.
- It is assumed that the development will be completed by 2027.
- The background growth rate of 2 percent is considered in the analysis and represents the worst-case scenario.
- A new access road from Daytona Avenue will accommodate the proposed development's traffic. The intersection is a "T" intersection with a "Stop" control on access road.
- Under future background conditions;
  - The intersection of Huron Church Road and Northwood Street operates at an unacceptable level of service (i.e., 2027 and 2037), especially for northbound traffic. The intersection requires improvements in background forecasted conditions, such as extended signal timings. Signal timing can be adjusted after the completion of the new international bridge crossing in 2025, which will significantly reduce heavy vehicles from Huron Church Road.
- Under future total conditions;
  - During future conditions, all turning movements are expected to operate at an unacceptable level of service, especially northbound and southbound traffic. The Gordie Howe Bridge is expected to be completed in 2025, which will take heavy traffic load off from Huron Church Road. Heavy traffic accounts for 27 percent of overall northbound traffic. Signal timing can be

adjusted after the completion of the new international bridge crossing in 2025, which will significantly reduce heavy vehicles from Huron Church Road.

- An adequate sight line distance is provided for safe departure from the development.

Based on the evaluation and findings contained within this report, the proposed development is expected to have a minimal impact on the conditions at the intersections of Northwood Street with Huron Church Road and Daytona Avenue. It should be noted that the existing intersection of Huron Church Road and Northwood Street is not performing well under background traffic volumes. This condition is not the result of, nor is it made any worse by the proposed development.

## 7.0 CLOSURE

The information in this report is prepared for "Daytona Avenue Apartment Development" regarding potential traffic impact on Huron Church Road and Northwood Street and Daytona Avenue and Northwood Street intersections.

We trust that the above meets your purpose. Should you have any questions, please do not hesitate to contact the undersigned.

All of which is respectfully submitted.

Shurjeel Tunio, P.Eng.  
Senior Project Manager  
**Baird AE**



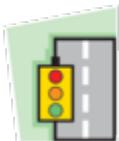
**BAIRD AE INC.**  
**1350 PROVINCIAL ROAD, UNIT 700**  
**WINDSOR, ONTARIO N8W 5W1**

## Appendix A

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### BACKGROUND TRAFFIC DATA AND OTHER RELATED INFORMATION





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## Project #20-035 - City of Windsor

### Intersection Count Report

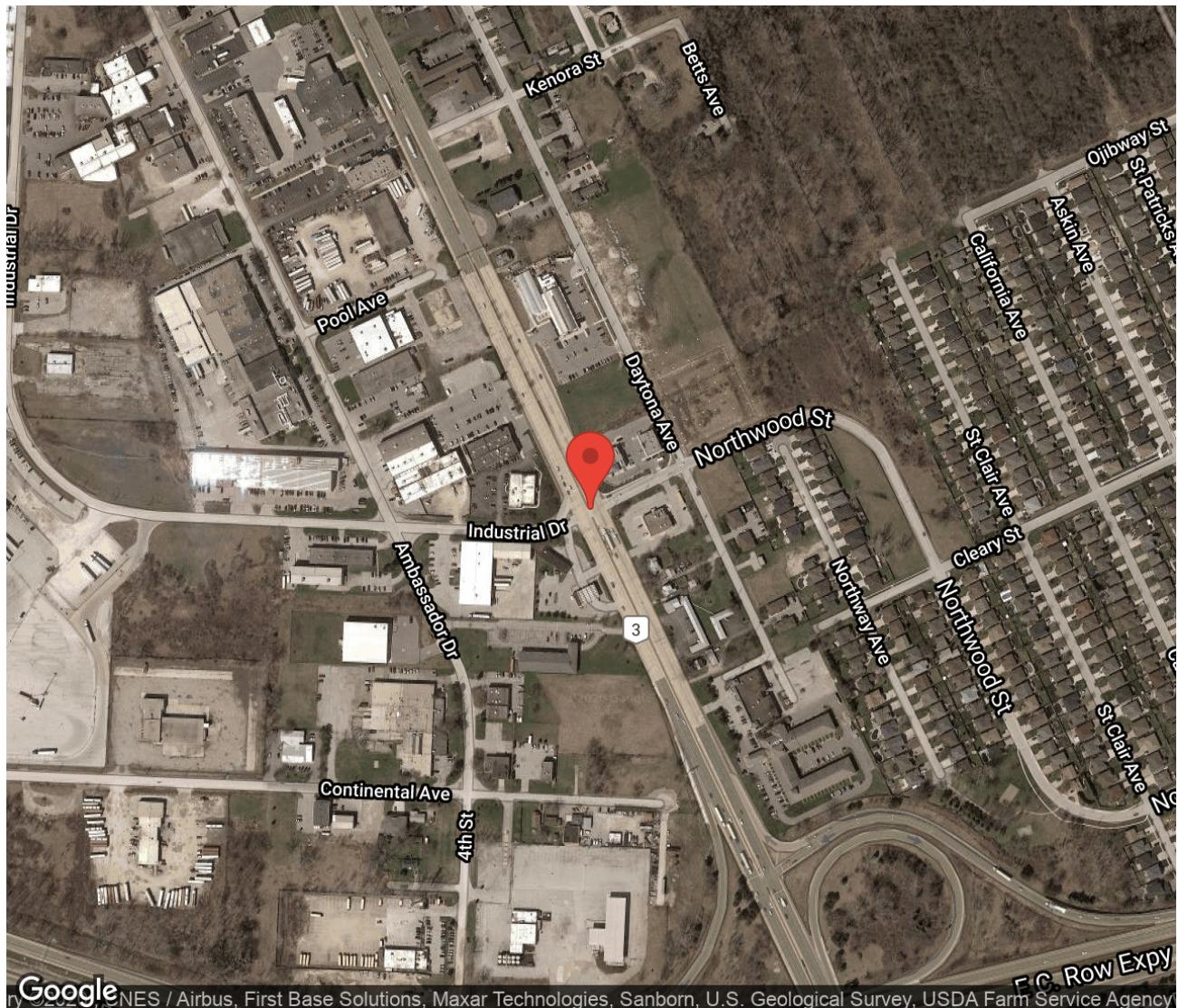
**Intersection:** Huron Church Rd & Northwood St-Industrial Dr  
**Municipality:** Windsor  
**Count Date:** Feb 20, 2020  
**Site Code:** 2003500003  
**Count Categories:** Cars, Medium Trucks, Heavy Trucks, Peds, Bicycles  
**Count Period:** 07:00-10:00, 11:00-14:00, 15:00-18:00  
**Weather:** Clear

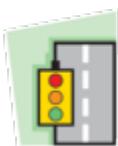


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## Traffic Count Map

Intersection: Huron Church Rd & Northwood St-Industrial Dr  
Municipality: Windsor  
Count Date: Feb 20, 2020





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## Traffic Count Summary

Intersection: Huron Church Rd & Northwood St-Industrial Dr  
Municipality: Windsor  
Count Date: Feb 20, 2020

### Huron Church Rd - Traffic Summary

#### North Approach Totals

#### South Approach Totals

Hour	Includes Cars, Medium Trucks, Heavy Trucks, Bicycles						Includes Cars, Medium Trucks, Heavy Trucks, Bicycles					
	Left	Thru	Right	U-Turn	Total	Peds	Left	Thru	Right	U-Turn	Total	Peds
<b>07:00 - 08:00</b>	5	673	56	0	734	0	227	1255	82	0	1564	1
<b>08:00 - 09:00</b>	23	779	45	0	847	0	245	1402	130	0	1777	4
<b>09:00 - 10:00</b>	11	723	48	0	782	0	151	928	64	0	1143	1
BREAK												
<b>11:00 - 12:00</b>	27	740	32	0	799	0	90	842	73	0	1005	0
<b>12:00 - 13:00</b>	7	824	52	0	883	0	145	897	92	0	1134	0
<b>13:00 - 14:00</b>	21	865	38	0	924	0	138	888	72	0	1098	1
BREAK												
<b>15:00 - 16:00</b>	37	1281	28	0	1346	2	160	1092	123	0	1375	6
<b>16:00 - 17:00</b>	33	1474	21	0	1528	1	140	1057	108	0	1305	2
<b>17:00 - 18:00</b>	35	1324	23	0	1382	1	109	1074	141	0	1324	1
<b>GRAND TOTAL</b>	<b>199</b>	<b>8683</b>	<b>343</b>	<b>0</b>	<b>9225</b>	<b>4</b>	<b>1405</b>	<b>9435</b>	<b>885</b>	<b>0</b>	<b>1172</b>	<b>16</b>



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## Traffic Count Summary

Intersection: Huron Church Rd & Northwood St-Industrial Dr  
Municipality: Windsor  
Count Date: Feb 20, 2020

### Northwood St - Traffic Summary

#### East Approach Totals

#### West Approach Totals

Hour	Includes Cars, Medium Trucks, Heavy Trucks, Bicycles						Includes Cars, Medium Trucks, Heavy Trucks, Bicycles					
	Left	Thru	Right	U-Turn	Total	Peds	Left	Thru	Right	U-Turn	Total	Peds
<b>07:00 - 08:00</b>	118	65	40	0	223	0	18	28	114	0	160	0
<b>08:00 - 09:00</b>	209	54	52	0	315	2	13	28	71	0	112	0
<b>09:00 - 10:00</b>	92	29	25	0	146	0	31	17	101	0	149	0
BREAK												
<b>11:00 - 12:00</b>	86	37	27	0	150	0	32	30	84	0	146	0
<b>12:00 - 13:00</b>	93	51	18	0	162	0	28	28	85	0	141	0
<b>13:00 - 14:00</b>	113	56	19	0	188	1	26	30	82	0	138	2
BREAK												
<b>15:00 - 16:00</b>	171	54	15	0	240	5	16	28	166	0	210	0
<b>16:00 - 17:00</b>	136	64	27	0	227	0	19	60	255	0	334	0
<b>17:00 - 18:00</b>	140	37	22	0	199	1	16	46	182	0	244	0
<b>GRAND TOTAL</b>	<b>1158</b>	<b>447</b>	<b>245</b>	<b>0</b>	<b>1850</b>	<b>9</b>	<b>199</b>	<b>295</b>	<b>1140</b>	<b>0</b>	<b>1634</b>	<b>2</b>



# **Ontario Traffic Inc.**

TRAFFIC MONITORING  SERVICES & PRODUCTS

## Traffic Count Data

Intersection: Huron Church Rd & Northwood St-Industrial Dr  
Municipality: Windsor  
Count Date: Feb 20, 2020

## **North Approach - Huron Church Rd**

Start Time	Cars					Medium Trucks					Heavy Trucks					Bicycles					Total Peds
	⬅	⬆	➡	⬇	Total	⬅	⬆	➡	⬇	Total	⬅	⬆	➡	⬇	Total	⬅	⬆	➡	⬇	Total	
07:00	1	92	10	0	103	0	4	0	0	4	0	33	2	0	35	0	0	0	0	0	0
07:15	4	111	11	0	126	0	3	0	0	3	0	55	0	0	55	0	0	0	0	0	0
07:30	0	137	11	0	148	0	2	0	0	2	0	30	1	0	31	0	0	0	0	0	0
07:45	0	162	21	0	183	0	3	0	0	3	0	41	0	0	41	0	0	0	0	0	0
08:00	6	151	7	0	164	0	2	1	0	3	0	32	1	0	33	0	0	0	0	0	0
08:15	7	140	9	0	156	0	0	0	0	0	0	56	0	0	56	0	0	0	0	0	0
08:30	7	152	9	0	168	0	2	1	0	3	0	56	1	0	57	0	0	0	0	0	0
08:45	3	111	11	0	125	0	6	3	0	9	0	71	2	0	73	0	0	0	0	0	0
09:00	4	101	14	0	119	0	2	3	0	5	0	54	1	0	55	0	0	0	0	0	0
09:15	3	102	10	0	115	0	3	0	0	3	0	82	1	0	83	0	0	0	0	0	0
09:30	1	105	3	0	109	0	5	1	0	6	0	70	0	0	70	0	0	0	0	0	0
09:45	3	125	10	0	138	0	1	0	0	1	0	73	5	0	78	0	0	0	0	0	0
<b>SUBTOTAL</b>	39	1489	126	0	1654	0	33	9	0	42	0	653	14	0	667	0	0	0	0	0	0



**Ontario Traffic Inc.**  
TRAFFIC MONITORING + SERVICES & PRODUCTS

## Traffic Count Data

Intersection: Huron Church Rd & Northwood St-Industrial Dr  
 Municipality: Windsor  
 Count Date: Feb 20, 2020

### North Approach - Huron Church Rd

Start Time	Cars					Medium Trucks					Heavy Trucks					Bicycles					Total Peds
	⬅	⬆	➡	⬇	Total	⬅	⬆	➡	⬇	Total	⬅	⬆	➡	⬇	Total	⬅	⬆	➡	⬇	Total	
11:00	2	94	5	0	101	0	3	0	0	3	0	51	0	0	51	0	0	0	0	0	0
11:15	9	111	6	0	126	1	3	0	0	4	0	97	1	0	98	0	1	0	0	1	0
11:30	7	127	10	0	144	0	6	1	0	7	0	65	2	0	67	0	0	0	0	0	0
11:45	8	109	5	0	122	0	2	0	0	2	0	71	2	0	73	0	0	0	0	0	0
12:00	0	101	10	0	111	1	1	0	0	2	0	42	4	0	46	0	0	0	0	0	0
12:15	0	134	9	0	143	0	3	1	0	4	0	101	0	0	101	0	0	0	0	0	0
12:30	2	128	12	0	142	0	1	3	0	4	0	85	2	0	87	0	0	0	0	0	0
12:45	4	122	7	0	133	0	4	1	0	5	0	102	3	0	105	0	0	0	0	0	0
13:00	6	134	9	0	149	0	1	0	0	1	0	61	1	0	62	0	0	0	0	0	0
13:15	2	128	8	0	138	0	6	0	0	6	1	93	2	0	96	0	0	0	0	0	0
13:30	4	131	5	0	140	2	3	1	0	6	0	71	0	0	71	0	0	0	0	0	0
13:45	6	151	12	0	169	0	3	0	0	3	0	83	0	0	83	0	0	0	0	0	0
<b>SUBTOTAL</b>	50	1470	98	0	1618	4	36	7	0	47	1	922	17	0	940	0	1	0	0	1	0



**Ontario Traffic Inc.**  
TRAFFIC MONITORING + SERVICES & PRODUCTS

## Traffic Count Data

Intersection: Huron Church Rd & Northwood St-Industrial Dr  
 Municipality: Windsor  
 Count Date: Feb 20, 2020

### North Approach - Huron Church Rd

Start Time	Cars					Medium Trucks					Heavy Trucks					Bicycles					Total Peds
	⬅	⬆	➡	⬇	Total	⬅	⬆	➡	⬇	Total	⬅	⬆	➡	⬇	Total	⬅	⬆	➡	⬇	Total	
15:00	7	205	4	0	216	0	1	0	0	1	0	45	0	0	45	0	0	0	0	0	0
15:15	14	238	10	0	262	1	6	1	0	8	0	86	1	0	87	0	0	0	0	0	2
15:30	5	242	4	0	251	2	2	0	0	4	0	92	1	0	93	0	0	0	0	0	0
15:45	6	264	5	0	275	2	1	0	0	3	0	99	2	0	101	0	0	0	0	0	0
16:00	6	283	6	0	295	0	7	1	0	8	0	78	3	0	81	0	0	0	0	0	0
16:15	6	265	2	0	273	5	4	0	0	9	0	102	3	0	105	0	0	0	0	0	0
16:30	4	287	0	0	291	3	5	0	0	8	0	79	3	0	82	0	0	0	0	0	1
16:45	6	284	2	0	292	3	3	0	0	6	0	77	1	0	78	0	0	0	0	0	0
17:00	8	237	2	0	247	0	0	0	0	0	1	46	0	0	47	0	0	0	0	0	0
17:15	16	294	3	0	313	0	5	0	0	5	0	104	0	0	104	0	0	0	0	0	0
17:30	3	234	3	0	240	0	2	0	0	2	0	82	0	0	82	0	0	0	0	0	0
17:45	7	231	10	0	248	0	3	0	0	3	0	86	5	0	91	0	0	0	0	0	1
<b>SUBTOTAL</b>	88	3064	51	0	3203	16	39	2	0	57	1	976	19	0	996	0	0	0	0	0	4
<b>GRAND TOTAL</b>	177	6023	275	0	6475	20	108	18	0	146	2	2551	50	0	2603	0	1	0	0	1	4



**Ontario Traffic Inc.**  
TRAFFIC MONITORING + SERVICES & PRODUCTS

## Traffic Count Data

Intersection: Huron Church Rd & Northwood St-Industrial Dr  
 Municipality: Windsor  
 Count Date: Feb 20, 2020

### South Approach - Huron Church Rd

Start Time	Cars					Medium Trucks					Heavy Trucks					Bicycles					Total Peds
	⬅	⬆	➡	⬇	Total	⬅	⬆	➡	⬇	Total	⬅	⬆	➡	⬇	Total	⬅	⬆	➡	⬇	Total	
<b>07:00</b>	38	179	8	0	225	0	2	1	0	3	3	66	0	0	69	0	0	0	0	0	0
<b>07:15</b>	39	235	20	0	294	1	1	1	0	3	2	77	2	0	81	0	0	0	0	0	0
<b>07:30</b>	52	228	17	0	297	1	4	1	0	6	1	62	0	0	63	0	0	0	0	0	0
<b>07:45</b>	87	319	32	0	438	1	3	0	0	4	2	79	0	0	81	0	0	0	0	0	1
<b>08:00</b>	66	284	45	0	395	1	2	0	0	3	3	81	0	0	84	0	0	0	0	0	0
<b>08:15</b>	66	298	24	0	388	0	10	2	0	12	4	56	1	0	61	0	0	0	0	0	3
<b>08:30</b>	46	251	26	0	323	2	5	0	0	7	3	80	2	0	85	0	0	0	0	0	0
<b>08:45</b>	44	259	30	0	333	1	4	0	0	5	9	72	0	0	81	0	0	0	0	0	1
<b>09:00</b>	27	156	15	0	198	6	4	0	0	10	16	64	0	0	80	0	0	0	0	0	1
<b>09:15</b>	32	176	17	0	225	1	3	0	0	4	8	79	0	0	87	0	0	0	0	0	0
<b>09:30</b>	20	136	17	0	173	2	8	0	0	10	4	66	0	0	70	0	0	0	0	0	0
<b>09:45</b>	32	140	14	0	186	0	0	0	0	0	3	96	1	0	100	0	0	0	0	0	0
<b>SUBTOTAL</b>	549	2661	265	0	3475	16	46	5	0	67	58	878	6	0	942	0	0	0	0	0	6



**Ontario Traffic Inc.**  
TRAFFIC MONITORING + SERVICES & PRODUCTS

## Traffic Count Data

Intersection: Huron Church Rd & Northwood St-Industrial Dr  
 Municipality: Windsor  
 Count Date: Feb 20, 2020

### South Approach - Huron Church Rd

Start Time	Cars					Medium Trucks					Heavy Trucks					Bicycles					Total Peds
	⬅	⬆	➡	⬇	Total	⬅	⬆	➡	⬇	Total	⬅	⬆	➡	⬇	Total	⬅	⬆	➡	⬇	Total	
<b>11:00</b>	12	138	10	0	160	2	5	0	0	7	2	53	0	0	55	0	0	0	0	0	0
<b>11:15</b>	18	130	16	0	164	0	5	0	0	5	3	64	0	0	67	0	0	0	0	0	0
<b>11:30</b>	23	139	17	0	179	0	4	0	0	4	1	82	0	0	83	0	0	0	0	0	0
<b>11:45</b>	25	153	30	0	208	2	4	0	0	6	2	65	0	0	67	0	0	0	0	0	0
<b>12:00</b>	22	149	15	0	186	3	2	0	0	5	5	72	0	0	77	0	0	0	0	0	0
<b>12:15</b>	31	169	30	0	230	1	3	0	0	4	5	62	0	0	67	0	0	0	0	0	0
<b>12:30</b>	21	145	30	0	196	2	3	0	0	5	11	70	0	0	81	0	0	0	0	0	0
<b>12:45</b>	37	149	17	0	203	2	3	0	0	5	5	70	0	0	75	0	0	0	0	0	0
<b>13:00</b>	30	137	23	0	190	3	3	0	0	6	4	72	0	0	76	0	0	0	0	0	1
<b>13:15</b>	24	153	18	0	195	1	2	0	0	3	5	69	0	0	74	0	0	0	0	0	0
<b>13:30</b>	28	152	16	0	196	1	2	0	0	3	3	68	0	0	71	0	0	0	0	0	0
<b>13:45</b>	31	140	15	0	186	1	3	0	0	4	7	87	0	0	94	0	0	0	0	0	0
<b>SUBTOTAL</b>	302	1754	237	0	2293	18	39	0	0	57	53	834	0	0	887	0	0	0	0	0	1



**Ontario Traffic Inc.**  
TRAFFIC MONITORING SERVICES & PRODUCTS

## Traffic Count Data

Intersection: Huron Church Rd & Northwood St-Industrial Dr  
 Municipality: Windsor  
 Count Date: Feb 20, 2020

### South Approach - Huron Church Rd

Start Time	Cars					Medium Trucks					Heavy Trucks					Bicycles					Total Peds
	⬅	⬆	➡	⬇	Total	⬅	⬆	➡	⬇	Total	⬅	⬆	➡	⬇	Total	⬅	⬆	➡	⬇	Total	
15:00	27	197	21	0	245	2	0	2	0	4	3	69	0	0	72	0	0	0	0	0	2
15:15	37	205	49	0	291	4	2	0	0	6	6	49	0	0	55	0	0	0	0	0	2
15:30	30	219	25	0	274	1	2	2	0	5	1	75	1	0	77	0	0	0	0	0	2
15:45	36	200	22	0	258	6	4	0	0	10	7	70	1	0	78	0	0	0	0	0	0
16:00	25	195	23	0	243	1	2	0	0	3	14	83	0	0	97	0	0	0	0	0	0
16:15	33	198	28	0	259	3	0	0	0	3	11	64	0	0	75	0	0	0	0	0	0
16:30	24	189	33	0	246	0	1	0	0	1	3	69	1	0	73	0	0	0	0	0	2
16:45	24	181	23	0	228	0	2	0	0	2	2	73	0	0	75	0	0	0	0	0	0
17:00	33	211	30	0	274	0	1	0	0	1	6	65	0	0	71	0	0	0	0	0	1
17:15	15	220	30	0	265	0	1	0	0	1	0	63	0	0	63	0	0	0	0	0	0
17:30	27	202	46	0	275	0	0	0	0	0	3	53	0	0	56	0	0	0	0	0	0
17:45	24	191	35	0	250	0	1	0	0	1	1	66	0	0	67	0	0	0	0	0	0
<b>SUBTOTAL</b>	335	2408	365	0	3108	17	16	4	0	37	57	799	3	0	859	0	0	0	0	0	9
<b>GRAND TOTAL</b>	1186	6823	867	0	8876	51	101	9	0	161	168	2511	9	0	2688	0	0	0	0	0	16



**Ontario Traffic Inc.**  
TRAFFIC MONITORING + SERVICES & PRODUCTS

## Traffic Count Data

Intersection: Huron Church Rd & Northwood St-Industrial Dr  
 Municipality: Windsor  
 Count Date: Feb 20, 2020

### East Approach - Northwood St

Start Time	Cars				Medium Trucks				Heavy Trucks				Bicycles				Total Peds
	⬅	⬆	➡	⟲	⬅	⬆	➡	⟲	⬅	⬆	➡	⟲	⬅	⬆	➡	⟲	
<b>07:00</b>	20	11	5	0	36	3	1	0	0	4	1	0	0	0	0	0	0
<b>07:15</b>	19	14	12	0	45	0	0	0	0	0	0	0	0	0	0	0	0
<b>07:30</b>	34	15	10	0	59	0	1	0	0	1	2	1	1	0	4	0	0
<b>07:45</b>	39	21	12	0	72	0	0	0	0	0	0	1	0	0	1	0	0
<b>08:00</b>	49	14	13	0	76	0	0	0	0	0	0	0	0	0	0	0	0
<b>08:15</b>	66	13	20	0	99	0	0	0	0	0	0	1	0	0	1	0	2
<b>08:30</b>	56	8	14	0	78	0	1	0	0	1	1	1	0	0	2	0	0
<b>08:45</b>	34	9	5	0	48	2	3	0	0	5	1	4	0	0	5	0	0
<b>09:00</b>	22	5	5	0	32	0	3	0	0	3	0	2	0	0	2	0	0
<b>09:15</b>	23	4	7	0	34	1	3	1	0	5	0	2	0	0	2	0	0
<b>09:30</b>	28	4	6	0	38	0	0	0	0	0	0	0	0	0	0	0	0
<b>09:45</b>	18	5	6	0	29	0	0	0	0	0	0	1	0	0	1	0	0
<b>SUBTOTAL</b>	408	123	115	0	646	6	12	1	0	19	5	13	1	0	19	0	0



**Ontario Traffic Inc.**  
TRAFFIC MONITORING + SERVICES & PRODUCTS

## Traffic Count Data

Intersection: Huron Church Rd & Northwood St-Industrial Dr  
Municipality: Windsor  
Count Date: Feb 20, 2020

**East Approach - Northwood St**

Start Time	Cars					Medium Trucks					Heavy Trucks					Bicycles					Total Peds
	⬅	⬆	➡	⬇	Total	⬅	⬆	➡	⬇	Total	⬅	⬆	➡	⬇	Total	⬅	⬆	➡	⬇	Total	
11:00	14	4	9	0	27	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0
11:15	17	7	3	0	27	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0
11:30	33	9	6	0	48	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0
11:45	22	11	9	0	42	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0	0
12:00	19	11	3	0	33	1	0	0	0	1	1	1	0	0	2	0	0	0	0	0	0
12:15	21	10	3	0	34	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0
12:30	27	12	4	0	43	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45	24	16	8	0	48	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:00	34	15	6	0	55	1	0	0	0	1	0	1	0	0	1	0	0	0	0	0	0
13:15	32	13	5	0	50	1	1	1	0	3	0	0	0	0	0	0	0	0	0	0	1
13:30	30	11	3	0	44	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0
13:45	15	12	4	0	31	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0
<b>SUBTOTAL</b>	288	131	63	0	482	3	5	1	0	9	1	8	0	0	9	0	0	0	0	0	1



**Ontario Traffic Inc.**  
TRAFFIC MONITORING + SERVICES & PRODUCTS

## Traffic Count Data

Intersection: Huron Church Rd & Northwood St-Industrial Dr  
 Municipality: Windsor  
 Count Date: Feb 20, 2020

### East Approach - Northwood St

Start Time	Cars					Medium Trucks					Heavy Trucks					Bicycles					Total Peds
	⬅	⬆	➡	⬇	Total	⬅	⬆	➡	⬇	Total	⬅	⬆	➡	⬇	Total	⬅	⬆	➡	⬇	Total	
15:00	50	12	2	0	64	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
15:15	30	10	3	0	43	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	2
15:30	46	12	4	0	62	2	1	0	0	3	0	0	0	0	0	0	0	0	0	0	0
15:45	42	12	6	0	60	1	3	0	0	4	0	3	0	0	3	0	0	0	0	0	1
16:00	43	13	5	0	61	0	2	0	0	2	0	4	1	0	5	0	0	0	0	0	0
16:15	26	16	9	0	51	0	0	0	0	0	1	4	1	0	6	0	0	0	0	0	0
16:30	32	11	3	0	46	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0
16:45	34	10	8	0	52	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:00	40	8	3	0	51	0	1	0	0	1	0	0	1	0	1	0	0	0	0	0	0
17:15	38	8	5	0	51	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0
17:30	31	11	7	0	49	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
17:45	31	7	6	0	44	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0
<b>SUBTOTAL</b>	443	130	61	0	634	3	9	0	0	12	1	15	3	0	19	0	1	0	0	1	6
<b>GRAND TOTAL</b>	1139	384	239	0	1762	12	26	2	0	40	7	36	4	0	47	0	1	0	0	1	9



**Ontario Traffic Inc.**  
TRAFFIC MONITORING + SERVICES & PRODUCTS

## Traffic Count Data

Intersection: Huron Church Rd & Northwood St-Industrial Dr  
 Municipality: Windsor  
 Count Date: Feb 20, 2020

### West Approach - Industrial Dr

Start Time	Cars					Medium Trucks					Heavy Trucks					Bicycles					Total Peds
	⬅	⬆	➡	⬇	Total	⬅	⬆	➡	⬇	Total	⬅	⬆	➡	⬇	Total	⬅	⬆	➡	⬇	Total	
07:00	1	1	27	0	29	0	0	2	0	2	3	0	6	0	9	0	0	0	0	0	0
07:15	0	7	12	0	19	2	2	1	0	5	0	0	13	0	13	0	0	0	0	0	0
07:30	3	6	9	0	18	1	0	6	0	7	1	0	14	0	15	0	0	0	0	0	0
07:45	5	11	12	0	28	0	0	5	0	5	2	1	7	0	10	0	0	0	0	0	0
08:00	2	12	15	0	29	0	1	1	0	2	1	0	2	0	3	0	0	0	0	0	0
08:15	1	7	11	0	19	0	0	1	0	1	1	1	3	0	5	0	0	0	0	0	0
08:30	4	3	12	0	19	0	0	0	0	0	1	0	6	0	7	0	0	0	0	0	0
08:45	3	4	12	0	19	0	0	4	0	4	0	0	4	0	4	0	0	0	0	0	0
09:00	6	6	19	0	31	0	0	2	0	2	1	0	2	0	3	0	0	0	0	0	0
09:15	9	3	19	0	31	0	0	3	0	3	3	0	2	0	5	0	0	0	0	0	0
09:30	3	6	25	0	34	3	0	1	0	4	3	0	3	0	6	0	0	0	0	0	0
09:45	3	2	17	0	22	0	0	0	0	0	0	0	8	0	8	0	0	0	0	0	0
<b>SUBTOTAL</b>	40	68	190	0	298	6	3	26	0	35	16	2	70	0	88	0	0	0	0	0	0



**Ontario Traffic Inc.**  
TRAFFIC MONITORING + SERVICES & PRODUCTS

## Traffic Count Data

Intersection: Huron Church Rd & Northwood St-Industrial Dr  
 Municipality: Windsor  
 Count Date: Feb 20, 2020

### West Approach - Industrial Dr

Start Time	Cars					Medium Trucks					Heavy Trucks					Bicycles					Total Peds
	⬅	⬆	➡	⟲	Total	⬅	⬆	➡	⟲	Total	⬅	⬆	➡	⟲	Total	⬅	⬆	➡	⟲	Total	
11:00	9	3	14	0	26	1	1	1	0	3	0	1	5	0	6	0	0	0	0	0	0
11:15	3	3	16	0	22	0	1	0	0	1	0	0	6	0	6	0	0	0	0	0	0
11:30	12	12	20	0	44	0	0	2	0	2	0	0	3	0	3	0	0	0	0	0	0
11:45	6	8	15	0	29	0	1	0	0	1	1	0	2	0	3	0	0	0	0	0	0
12:00	13	12	20	0	45	0	0	3	0	3	0	0	3	0	3	0	0	0	0	0	0
12:15	6	5	9	0	20	0	0	0	0	0	0	0	5	0	5	0	0	0	0	0	0
12:30	6	5	17	0	28	0	1	2	0	3	0	0	8	0	8	0	0	0	0	0	0
12:45	3	4	12	0	19	0	0	1	0	1	0	1	5	0	6	0	0	0	0	0	0
13:00	2	9	13	0	24	0	0	0	0	0	4	0	7	0	11	0	0	0	0	0	0
13:15	7	9	11	0	27	0	1	2	0	3	1	0	2	0	3	0	0	0	0	0	1
13:30	2	6	18	0	26	0	0	1	0	1	2	0	4	0	6	0	0	0	0	0	1
13:45	8	5	18	0	31	0	0	4	0	4	0	0	2	0	2	0	0	0	0	0	0
<b>SUBTOTAL</b>	77	81	183	0	341	1	5	16	0	22	8	2	52	0	62	0	0	0	0	0	2



**Ontario Traffic Inc.**  
TRAFFIC MONITORING + SERVICES & PRODUCTS

## Traffic Count Data

Intersection: Huron Church Rd & Northwood St-Industrial Dr  
 Municipality: Windsor  
 Count Date: Feb 20, 2020

### West Approach - Industrial Dr

Start Time	Cars					Medium Trucks					Heavy Trucks					Bicycles					Total Peds
	⬅	⬆	➡	⬇	Total	⬅	⬆	➡	⬇	Total	⬅	⬆	➡	⬇	Total	⬅	⬆	➡	⬇	Total	
15:00	3	7	31	0	41	0	1	3	0	4	0	0	2	0	2	0	0	0	0	0	0
15:15	4	5	25	0	34	0	0	0	0	0	1	1	5	0	7	0	0	0	0	0	0
15:30	5	8	57	0	70	1	0	2	0	3	0	0	2	0	2	0	1	0	0	1	0
15:45	2	5	35	0	42	0	0	1	0	1	0	0	3	0	3	0	0	0	0	0	0
16:00	4	14	73	0	91	1	0	2	0	3	0	0	1	0	1	0	0	0	0	0	0
16:15	1	11	52	0	64	0	2	1	0	3	0	1	3	0	4	0	0	0	0	0	0
16:30	8	19	76	0	103	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0
16:45	4	13	39	0	56	0	0	2	0	2	1	0	4	0	5	0	0	0	0	0	0
17:00	4	17	71	0	92	0	0	1	0	1	1	0	3	0	4	0	0	0	0	0	0
17:15	2	14	36	0	52	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0
17:30	3	7	30	0	40	0	0	0	0	0	0	1	3	0	4	0	0	0	0	0	0
17:45	5	7	30	0	42	0	0	1	0	1	1	0	5	0	6	0	0	0	0	0	0
SUBTOTAL	45	127	555	0	727	2	3	13	0	18	4	3	35	0	42	0	1	0	0	1	0
GRAND TOTAL	162	276	928	0	1366	9	11	55	0	75	28	7	157	0	192	0	1	0	0	1	2



# Ontario Traffic Inc.

TRAFFIC MONITORING + SERVICES &amp; PRODUCTS

## Peak Hour Diagram

### Specified Period

From: 07:00:00  
To: 10:00:00

### One Hour Peak

From: 07:45:00  
To: 08:45:00

**Intersection:** Huron Church Rd & Northwood St-Industrial Dr  
**Site ID:** 2003500003  
**Count Date:** Feb 20, 2020

**Weather conditions:**

### \*\* Signalized Intersection \*\*

**Major Road:** Huron Church Rd runs N/S

#### North Approach

	Out	In	Total
🚗	671	1223	1894
MT	9	20	29
HT	187	301	488
🚲	0	0	0
	<b>867</b>	<b>1544</b>	<b>2411</b>

#### Huron Church Rd

	Out	In	Total
🚲	0	0	0
HT	2	185	0
MT	2	7	0
🚗	46	605	20
	<b>Totals</b>	<b>50</b>	<b>797</b>
		<b>20</b>	<b>0</b>

#### East Approach

	Out	In	Total
🚗	325	180	505
MT	1	3	4
HT	4	5	9
🚲	0	0	0
	<b>330</b>	<b>188</b>	<b>518</b>

#### Industrial Dr

🚲	HT	MT	🚗	Totals
0	0	0	0	<b>0</b>
0	5	0	12	<b>17</b>
0	2	1	33	<b>36</b>
0	18	7	50	<b>75</b>

Pads: 0

Peds: 0

Peds: 2

#### West Approach

	Out	In	Total
🚗	95	367	462
MT	8	7	15
HT	25	17	42
🚲	0	0	0
	<b>128</b>	<b>391</b>	<b>519</b>

	Out	In	Total
🚗	281	1468	132
MT	4	20	2
HT	12	296	3
🚲	0	0	0
	<b>Totals</b>		<b>0</b>

#### Huron Church Rd

#### South Approach

	Out	In	Total
🚗	1544	865	2409
MT	26	14	40
HT	311	204	515
🚲	0	0	0
	<b>1881</b>	<b>1083</b>	<b>2964</b>

🚗 - Cars

MT - Medium Trucks

HT - Heavy Trucks

🚲 - Bicycles

### Comments



**Ontario Traffic Inc.**  
TRAFFIC MONITORING SERVICES & PRODUCTS

## Peak Hour Summary

Intersection: Huron Church Rd & Northwood St-Industrial Dr  
 Count Date: Feb 20, 2020  
 Period: 07:00 - 10:00

### Peak Hour Data (07:45 - 08:45)

Start Time	North Approach Huron Church Rd						South Approach Huron Church Rd						East Approach Northwood St						West Approach Industrial Dr						Total Vehicles	
	↖	↑	↗	↘	Peds	Total	↖	↑	↗	↘	Peds	Total	↖	↑	↗	↘	Peds	Total	↖	↑	↗	↘	Peds	Total		
07:45	0	206	21	0	0	227	90	401	32	0	1	523	39	22	12	0	0	73	7	12	24	0	0	43	866	
08:00	6	185	9	0	0	200	70	367	45	0	0	482	49	14	13	0	0	76	3	13	18	0	0	34	792	
08:15	7	196	9	0	0	212	70	364	27	0	3	461	66	14	20	0	2	100	2	8	15	0	0	25	798	
08:30	7	210	11	0	0	228	51	336	28	0	0	415	57	10	14	0	0	81	5	3	18	0	0	26	750	
<b>Grand Total</b>	<b>20</b>	<b>797</b>	<b>50</b>	<b>0</b>	<b>0</b>	<b>867</b>	<b>281</b>	<b>1468</b>	<b>132</b>	<b>0</b>	<b>4</b>	<b>1881</b>	<b>211</b>	<b>60</b>	<b>59</b>	<b>0</b>	<b>2</b>	<b>330</b>	<b>17</b>	<b>36</b>	<b>75</b>	<b>0</b>	<b>0</b>	<b>128</b>	<b>3206</b>	
<b>Approach %</b>	2.3	91.9	5.8	0	-	-	14.9	78	7	0	-	-	63.9	18.2	17.9	0	-	-	13.3	28.1	58.6	0	-	-	-	
<b>Totals %</b>	0.6	24.9	1.6	0	27	8.8	45.8	4.1	0	58.7	6.6	1.9	1.8	0	10.3	0.5	1.1	2.3	0	4	0.51	0.69	0.78	0	0.74	0.93
<b>PHF</b>	<b>0.71</b>	<b>0.95</b>	<b>0.6</b>	<b>0</b>	<b>0.95</b>	<b>0.78</b>	<b>0.92</b>	<b>0.73</b>	<b>0</b>	<b>0.9</b>	<b>0.8</b>	<b>0.68</b>	<b>0.74</b>	<b>0</b>	<b>0.83</b>	<b>0.61</b>	<b>0.69</b>	<b>0.78</b>	<b>0</b>	<b>0.74</b>	<b>0.93</b>					
<b>Cars</b>	20	605	46	0	671	265	1152	127	0	1544	210	56	59	0	325	12	33	50	0	95	2635					
<b>% Cars</b>	100	75.9	92	0	77.4	94.3	78.5	96.2	0	82.1	99.5	93.3	100	0	98.5	70.6	91.7	66.7	0	74.2	82.2					
<b>Medium Trucks</b>	0	7	2	0	9	4	20	2	0	26	0	1	0	0	1	0	1	7	0	8	44					
<b>% Medium Trucks</b>	0	0.9	4	0	1	1.4	1.4	1.5	0	1.4	0	1.7	0	0	0.3	0	2.8	9.3	0	6.3	1.4					
<b>Heavy Trucks</b>	0	185	2	0	187	12	296	3	0	311	1	3	0	0	4	5	2	18	0	25	527					
<b>% Heavy Trucks</b>	0	23.2	4	0	21.6	4.3	20.2	2.3	0	16.5	0.5	5	0	0	1.2	29.4	5.6	24	0	19.5	16.4					
<b>Bicycles</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
<b>% Bicycles</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
<b>Peds</b>					0	-				4					2					0	-	6				
<b>% Peds</b>					0	-				66.7					33.3					0	-	0				



**Ontario Traffic Inc.**  
TRAFFIC MONITORING + SERVICES & PRODUCTS

## Peak Hour Diagram

### Specified Period

From: 11:00:00  
To: 14:00:00

### One Hour Peak

From: 12:15:00  
To: 13:15:00

**Intersection:** Huron Church Rd & Northwood St-Industrial Dr  
**Site ID:** 2003500003  
**Count Date:** Feb 20, 2020

**Weather conditions:**

**\*\* Signalized Intersection \*\***

**Major Road:** Huron Church Rd runs N/S

### North Approach

	Out	In	Total
🚗	567	638	1205
MT	14	12	26
HT	355	278	633
🚲	0	0	0
	<b>936</b>	<b>928</b>	<b>1864</b>

### Huron Church Rd

🚲	0	0	0	0
HT	6	349	0	0
MT	5	9	0	0
🚗	37	518	12	0
<b>Totals</b>	<b>48</b>	<b>876</b>	<b>12</b>	<b>0</b>

### East Approach

	Out	In	Total
🚗	180	135	315
MT	1	1	2
HT	2	1	3
🚲	0	0	0
	<b>183</b>	<b>137</b>	<b>320</b>

### Industrial Dr

🚲	HT	MT	🚗	Totals
0	0	0	0	<b>0</b>
0	4	0	17	<b>21</b>
0	1	1	23	<b>25</b>
0	25	3	51	<b>79</b>

Peds: 0



Peds: 0

### West Approach

	Out	In	Total
🚗	91	209	300
MT	4	13	17
HT	30	33	63
🚲	0	0	0
	<b>125</b>	<b>255</b>	<b>380</b>

Totals	152	886	100	0
🚗	119	600	100	0
MT	8	12	0	0
HT	25	274	0	0
🚲	0	0	0	0

### Huron Church Rd

### Northwood St

Totals	🚗	MT	HT	🚲
0	0	0	0	0
21	21	0	0	0
55	53	0	2	0
107	106	1	0	0

### South Approach

	Out	In	Total
🚗	819	675	1494
MT	20	13	33
HT	299	374	673
🚲	0	0	0
	<b>1138</b>	<b>1062</b>	<b>2200</b>

🚗 - Cars

MT - Medium Trucks

HT - Heavy Trucks

🚲 - Bicycles

### Comments



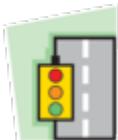
**Ontario Traffic Inc.**  
TRAFFIC MONITORING SERVICES & PRODUCTS

## Peak Hour Summary

Intersection: Huron Church Rd & Northwood St-Industrial Dr  
 Count Date: Feb 20, 2020  
 Period: 11:00 - 14:00

### Peak Hour Data (12:15 - 13:15)

Start Time	North Approach Huron Church Rd						South Approach Huron Church Rd						East Approach Northwood St						West Approach Industrial Dr						Total Vehicles	
	↖	↑	↗	↘	Peds	Total	↖	↑	↗	↘	Peds	Total	↖	↑	↗	↘	Peds	Total	↖	↑	↗	↘	Peds	Total		
12:15	0	238	10	0	0	248	37	234	30	0	0	301	21	11	3	0	0	35	6	5	14	0	0	25	609	
12:30	2	214	17	0	0	233	34	218	30	0	0	282	27	12	4	0	0	43	6	6	27	0	0	39	597	
12:45	4	228	11	0	0	243	44	222	17	0	0	283	24	16	8	0	0	48	3	5	18	0	0	26	600	
13:00	6	196	10	0	0	212	37	212	23	0	1	272	35	16	6	0	0	57	6	9	20	0	0	35	576	
<b>Grand Total</b>	<b>12</b>	<b>876</b>	<b>48</b>	<b>0</b>	<b>0</b>	<b>936</b>	<b>152</b>	<b>886</b>	<b>100</b>	<b>0</b>	<b>1</b>	<b>1138</b>	<b>107</b>	<b>55</b>	<b>21</b>	<b>0</b>	<b>0</b>	<b>183</b>	<b>21</b>	<b>25</b>	<b>79</b>	<b>0</b>	<b>0</b>	<b>125</b>	<b>2382</b>	
<b>Approach %</b>	1.3	93.6	5.1	0	-	-	13.4	77.9	8.8	0	-	-	58.5	30.1	11.5	0	-	-	16.8	20	63.2	0	-	-	-	
<b>Totals %</b>	0.5	36.8	2	0	39.3	6.4	37.2	4.2	0	47.8	4.5	2.3	0.9	0	7.7	0.9	1	3.3	0	5.2	0.88	0.69	0.73	0	0.8	0.98
<b>PHF</b>	<b>0.5</b>	<b>0.92</b>	<b>0.71</b>	<b>0</b>	<b>0.94</b>	<b>0.86</b>	<b>0.95</b>	<b>0.83</b>	<b>0</b>	<b>0.95</b>	<b>0.76</b>	<b>0.86</b>	<b>0.66</b>	<b>0</b>	<b>0.8</b>	<b>0.88</b>	<b>0.69</b>	<b>0.73</b>	<b>0</b>	<b>0.8</b>	<b>0.98</b>					
<b>Cars</b>	12	518	37	0	567	119	600	100	0	819	106	53	21	0	180	17	23	51	0	91	1657					
<b>% Cars</b>	100	59.1	77.1	0	60.6	78.3	67.7	100	0	72	99.1	96.4	100	0	98.4	81	92	64.6	0	72.8	69.6					
<b>Medium Trucks</b>	0	9	5	0	14	8	12	0	0	20	1	0	0	0	1	0	1	3	0	4	39					
<b>% Medium Trucks</b>	0	1	10.4	0	1.5	5.3	1.4	0	0	1.8	0.9	0	0	0	0.5	0	4	3.8	0	3.2	1.6					
<b>Heavy Trucks</b>	0	349	6	0	355	25	274	0	0	299	0	2	0	0	2	4	1	25	0	30	686					
<b>% Heavy Trucks</b>	0	39.8	12.5	0	37.9	16.4	30.9	0	0	26.3	0	3.6	0	0	1.1	19	4	31.6	0	24	28.8					
<b>Bicycles</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
<b>% Bicycles</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
<b>Peds</b>					0	-				1	-				0	-				0	-	1				
<b>% Peds</b>					0	-				100	-				0	-				0	-	0				



**Ontario Traffic Inc.**  
TRAFFIC MONITORING + SERVICES & PRODUCTS

## Peak Hour Diagram

### Specified Period

From: 15:00:00  
To: 18:00:00

### One Hour Peak

From: 15:45:00  
To: 16:45:00

**Intersection:** Huron Church Rd & Northwood St-Industrial Dr  
**Site ID:** 2003500003  
**Count Date:** Feb 20, 2020

**Weather conditions:**

**\*\* Signalized Intersection \*\***

**Major Road:** Huron Church Rd runs N/S

### North Approach

	Out	In	Total
Cars	1134	820	1954
MT	28	8	36
HT	369	288	657
Bicycles	0	0	0
<b>Totals</b>	<b>1531</b>	<b>1116</b>	<b>2647</b>

### Huron Church Rd

	0	0	0	0
HT	11	358	0	0
MT	1	17	10	0
Cars	13	1099	22	0
<b>Totals</b>	<b>25</b>	<b>1474</b>	<b>32</b>	<b>0</b>

### East Approach

	Out	In	Total
Cars	218	177	395
MT	6	12	18
HT	18	3	21
Bicycles	0	0	0
<b>Totals</b>	<b>242</b>	<b>192</b>	<b>434</b>

### Industrial Dr

	Cars	HT	MT	Cars	<b>Totals</b>
Bicycles	0	0	0	0	0
	0	0	1	15	16
	0	1	2	49	52
	0	9	4	236	249

Peds: 1



Peds: 1

### West Approach

	Out	In	Total
Cars	300	183	483
MT	7	16	23
HT	10	61	71
Bicycles	0	0	0
<b>Totals</b>	<b>317</b>	<b>260</b>	<b>577</b>

### Huron Church Rd

	0	163	1075	108	0
Cars	118	782	106	0	0
MT	10	7	0	0	0
HT	35	286	2	0	0
Bicycles	0	0	0	0	0
<b>Totals</b>	<b>163</b>	<b>1075</b>	<b>108</b>	<b>0</b>	

### South Approach

	Out	In	Total
Cars	1006	1478	2484
MT	17	22	39
HT	323	368	691
Bicycles	0	0	0
<b>Totals</b>	<b>1346</b>	<b>1868</b>	<b>3214</b>

- Cars

MT - Medium Trucks

HT - Heavy Trucks

- Bicycles

### Comments



## Peak Hour Summary

Intersection: Huron Church Rd & Northwood St-Industrial Dr  
 Count Date: Feb 20, 2020  
 Period: 15:00 - 18:00

### Peak Hour Data (15:45 - 16:45)

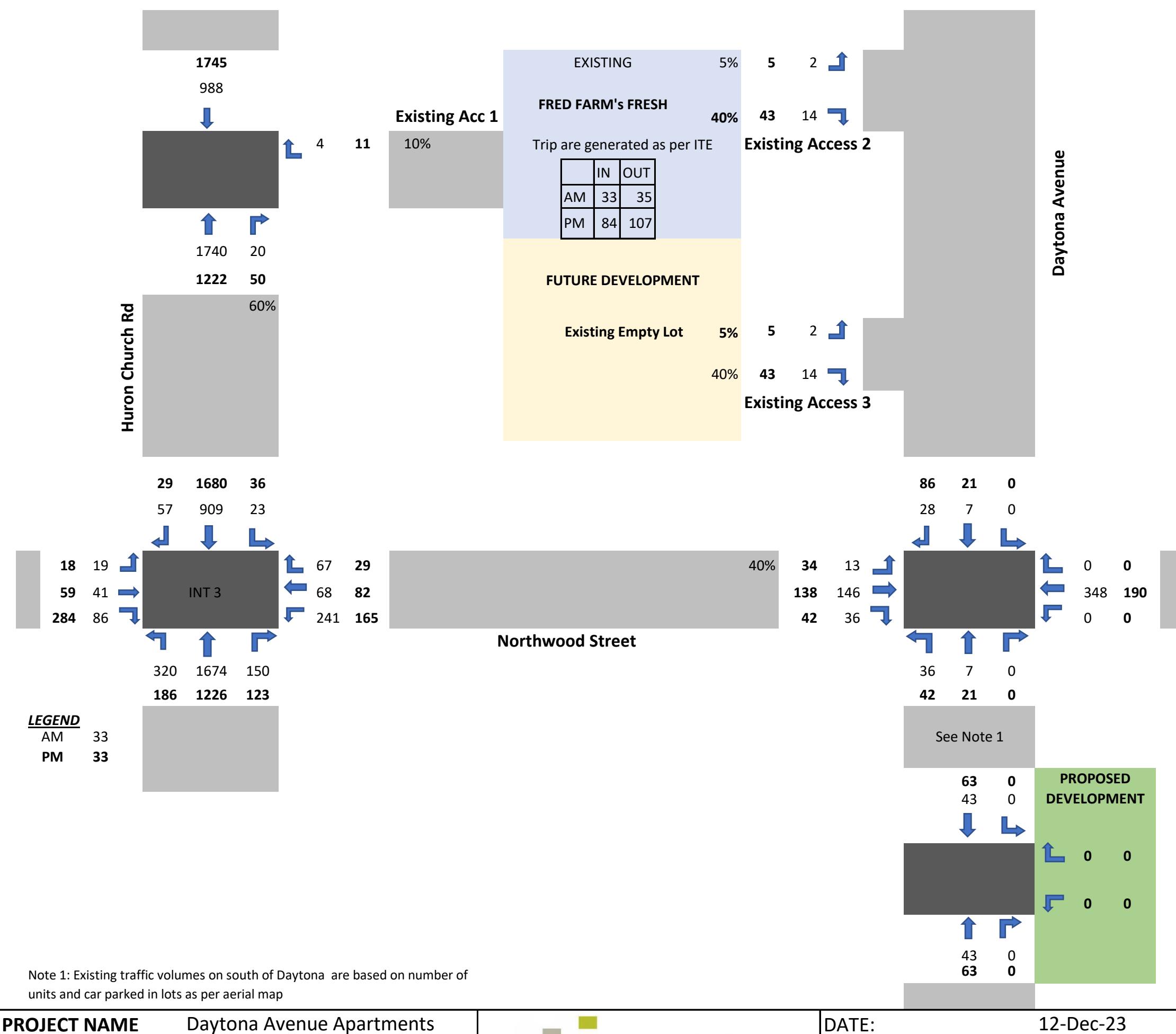
Start Time	North Approach Huron Church Rd						South Approach Huron Church Rd						East Approach Northwood St						West Approach Industrial Dr						Total Vehicles
	↖	↑	↗	↘	Peds	Total	↖	↑	↗	↘	Peds	Total	↖	↑	↗	↘	Peds	Total	↖	↑	↗	↘	Peds	Total	
15:45	8	364	7	0	0	379	49	274	23	0	0	346	43	18	6	0	1	67	2	5	39	0	0	46	838
16:00	6	368	10	0	0	384	40	280	23	0	0	343	43	19	6	0	0	68	5	14	76	0	0	95	890
16:15	11	371	5	0	0	387	47	262	28	0	0	337	27	20	10	0	0	57	1	14	56	0	0	71	852
16:30	7	371	3	0	1	381	27	259	34	0	2	320	32	15	3	0	0	50	8	19	78	0	0	105	856
<b>Grand Total</b>	<b>32</b>	<b>1474</b>	<b>25</b>	<b>0</b>	<b>1</b>	<b>1531</b>	<b>163</b>	<b>1075</b>	<b>108</b>	<b>0</b>	<b>2</b>	<b>1346</b>	<b>145</b>	<b>72</b>	<b>25</b>	<b>0</b>	<b>1</b>	<b>242</b>	<b>16</b>	<b>52</b>	<b>249</b>	<b>0</b>	<b>0</b>	<b>317</b>	<b>3436</b>
<b>Approach %</b>	2.1	96.3	1.6	0	-	-	12.1	79.9	8	0	-	-	59.9	29.8	10.3	0	-	-	5	16.4	78.5	0	-	-	-
<b>Totals %</b>	0.9	42.9	0.7	0	44.6	4.7	31.3	3.1	0	39.2	4.2	2.1	0.7	0	-	7	0.5	1.5	7.2	0	9.2	-	-	-	
<b>PHF</b>	<b>0.73</b>	<b>0.99</b>	<b>0.63</b>	<b>0</b>	<b>0.99</b>	<b>0.83</b>	<b>0.96</b>	<b>0.79</b>	<b>0</b>	<b>0.97</b>	<b>0.84</b>	<b>0.9</b>	<b>0.63</b>	<b>0</b>	<b>0.89</b>	<b>0.5</b>	<b>0.68</b>	<b>0.8</b>	<b>0</b>	<b>0.75</b>	<b>0.97</b>	-	-		
<b>Cars</b>	22	1099	13	0	1134	118	782	106	0	1006	143	52	23	0	-	218	15	49	236	0	300	2658	-	-	
<b>% Cars</b>	68.8	74.6	52	0	74.1	72.4	72.7	98.1	0	74.7	98.6	72.2	92	0	-	90.1	93.8	94.2	94.8	0	94.6	77.4	-	-	
<b>Medium Trucks</b>	10	17	1	0	28	10	7	0	0	17	1	5	0	0	-	6	1	2	4	0	7	58	-	-	
<b>% Medium Trucks</b>	31.3	1.2	4	0	1.8	6.1	0.7	0	0	1.3	0.7	6.9	0	0	-	2.5	6.3	3.8	1.6	0	2.2	1.7	-	-	
<b>Heavy Trucks</b>	0	358	11	0	369	35	286	2	0	323	1	15	2	0	-	18	0	1	9	0	10	720	-	-	
<b>% Heavy Trucks</b>	0	24.3	44	0	24.1	21.5	26.6	1.9	0	24	0.7	20.8	8	0	-	7.4	0	1.9	3.6	0	3.2	21	-	-	
<b>Bicycles</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0	0	-	
<b>% Bicycles</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0	0	-	
<b>Peds</b>					1	-				2	-				-	1				0	-	4			
<b>% Peds</b>					25	-				50	-				-	25				0	-	0			

## Appendix B

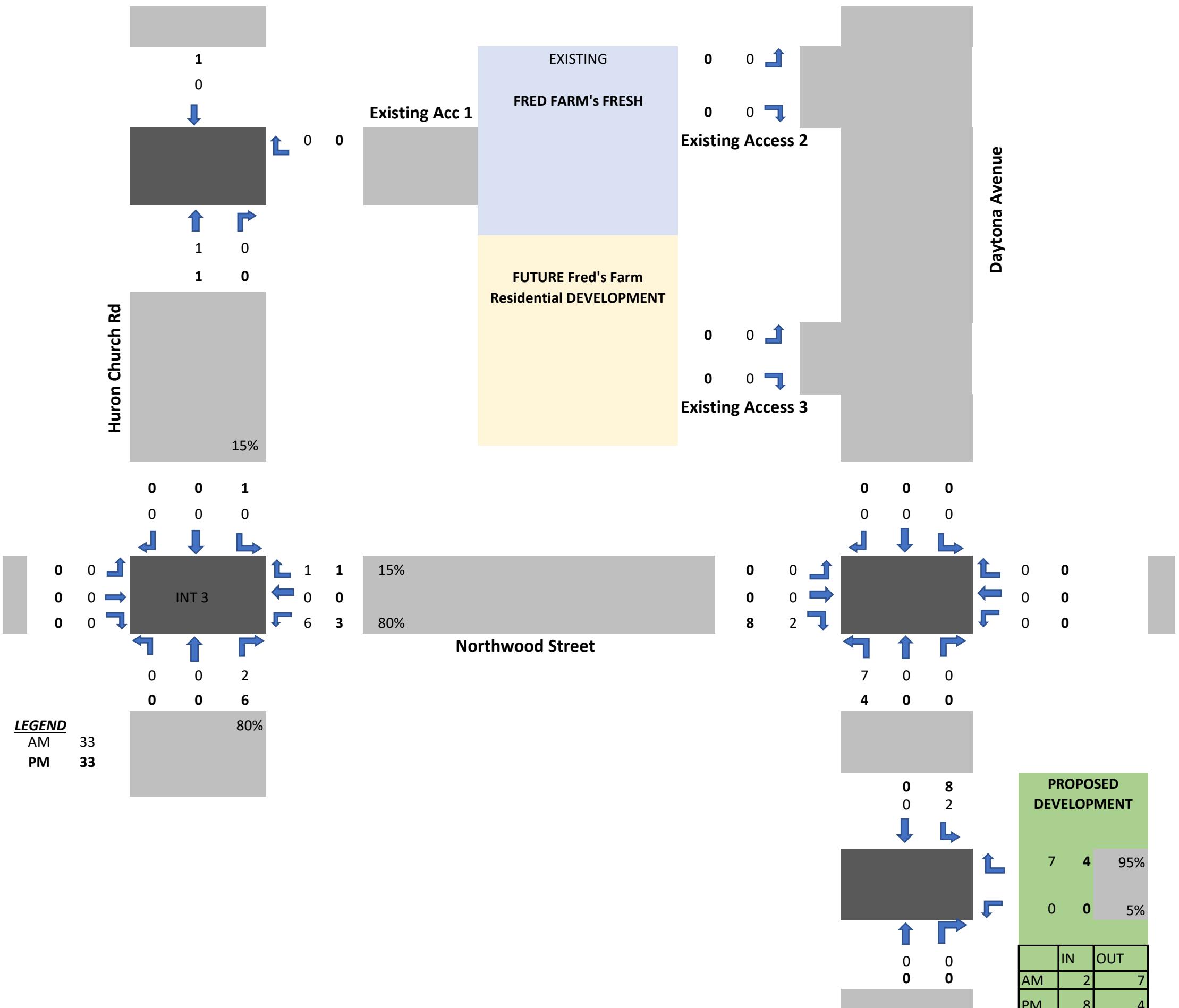
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### FUTURE TRAFFIC, DEVELOPMENT TRAFFIC AND TOTAL TRAFFIC VOLUMES

## DAYTONA AVENUE APARTMENTS - RESIDENTIAL DEVELOPMENT

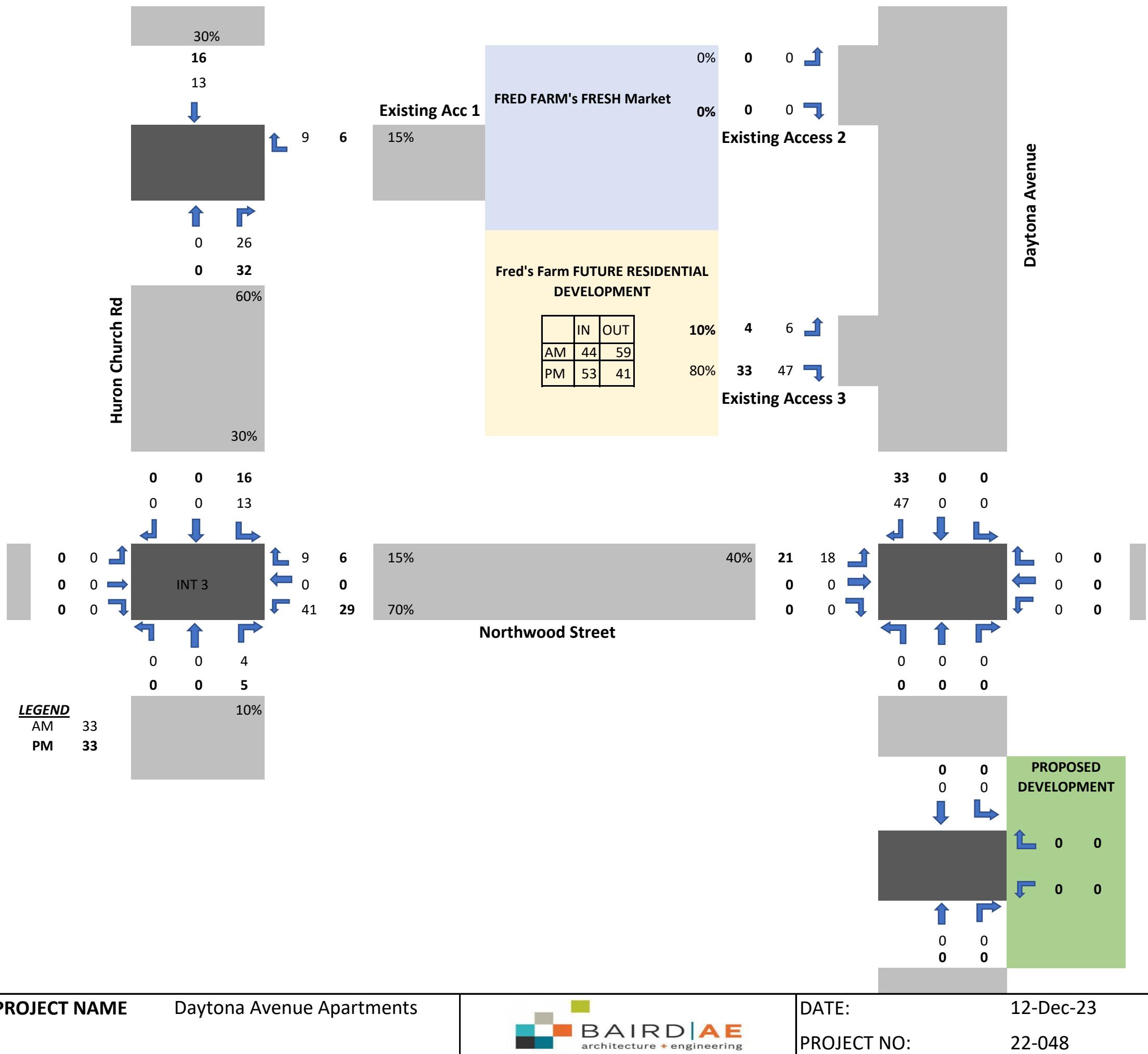


## DAYTONA AVENUE APARTMENTS - RESIDENTIAL DEVELOPMENT

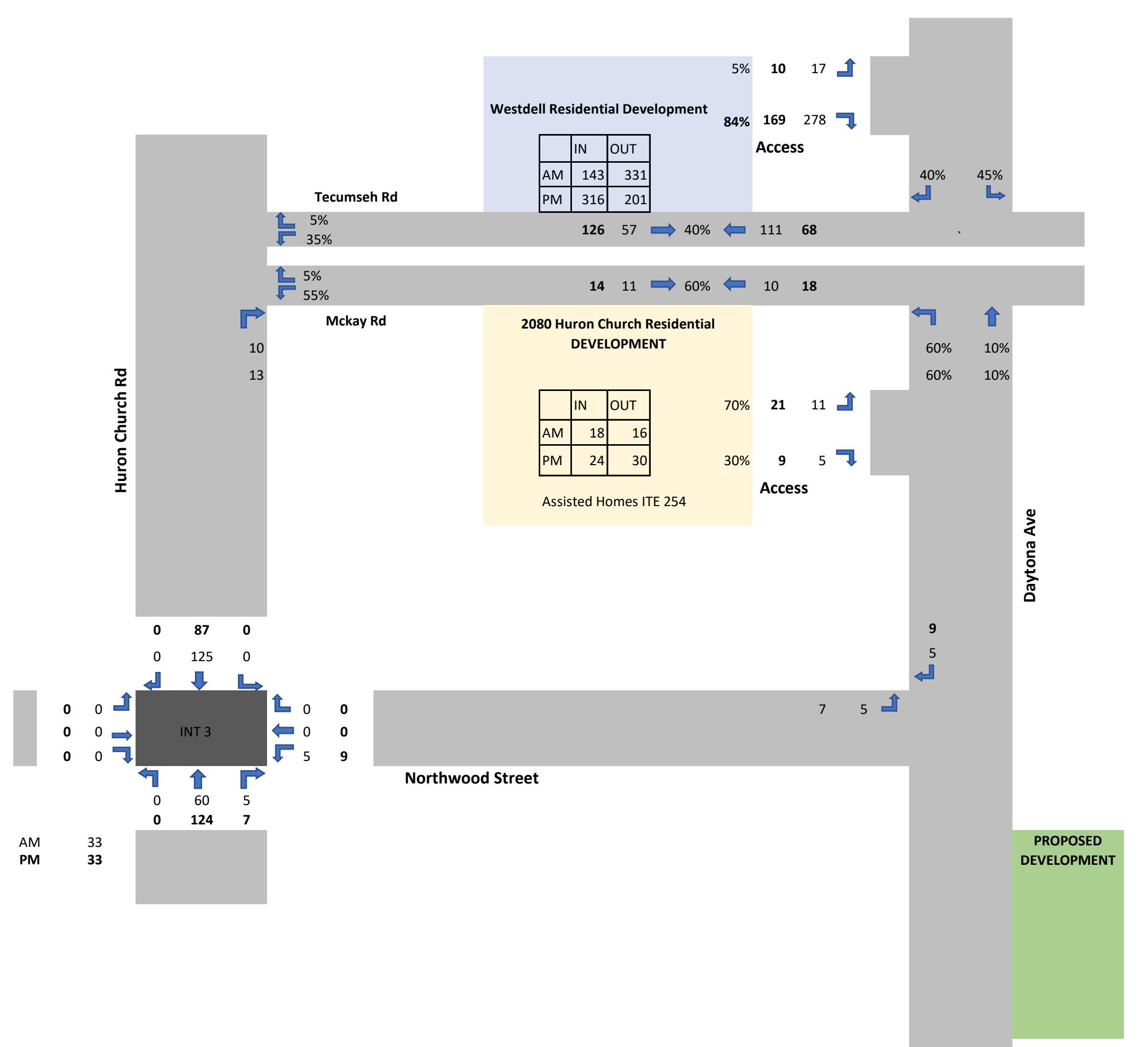


PROJECT NAME	Daytona Avenue Apartments	DATE:	12-Dec-23
SHEET TITLE	2027 DEVELOPMENT TRAFFIC	PROJECT NO:	22-048

## DAYTONA AVENUE APARTMENTS - RESIDENTIAL DEVELOPMENT

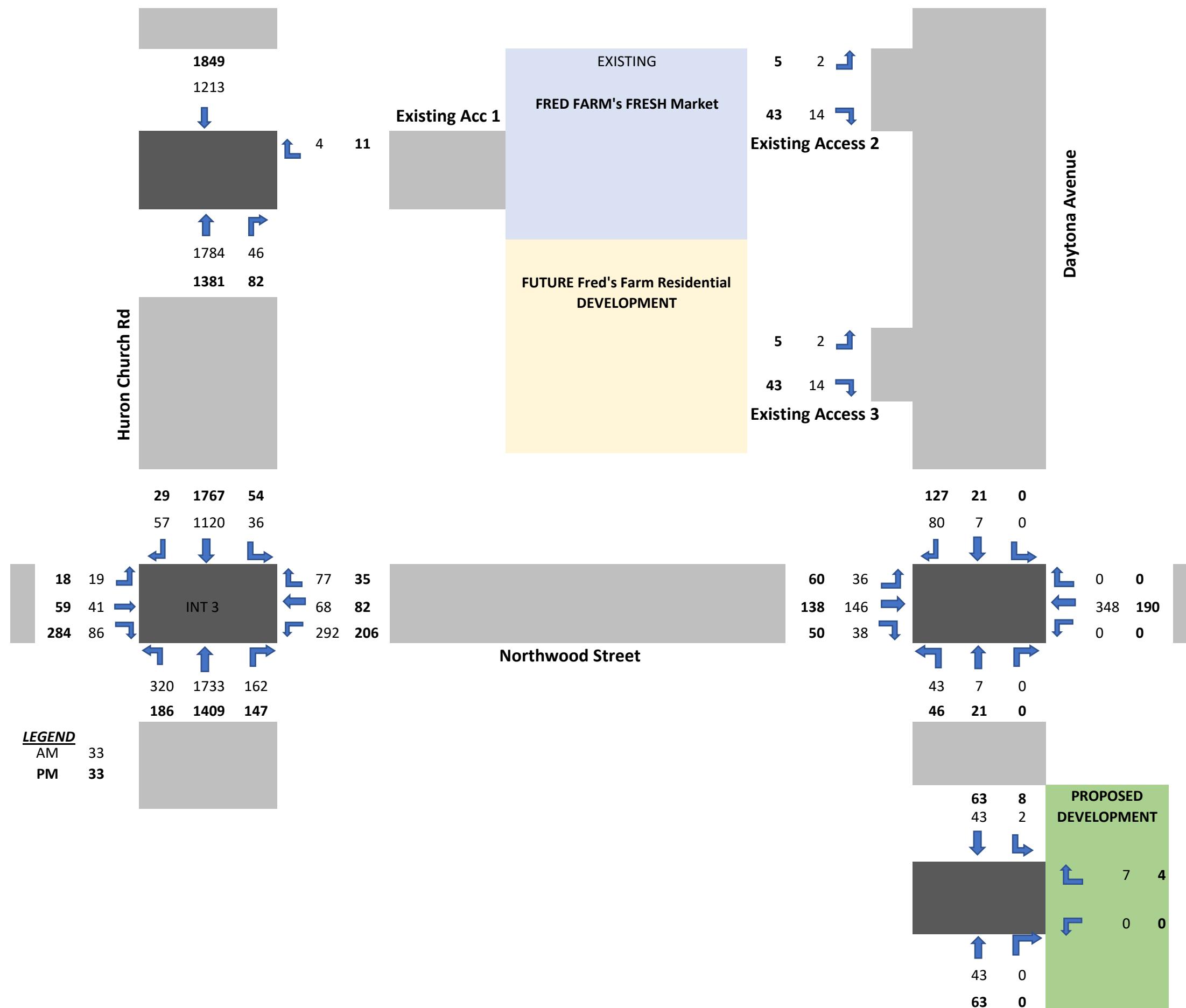


DAYTONA AVENUE APARTMENTS - RESIDENTIAL DEVELOPMENT



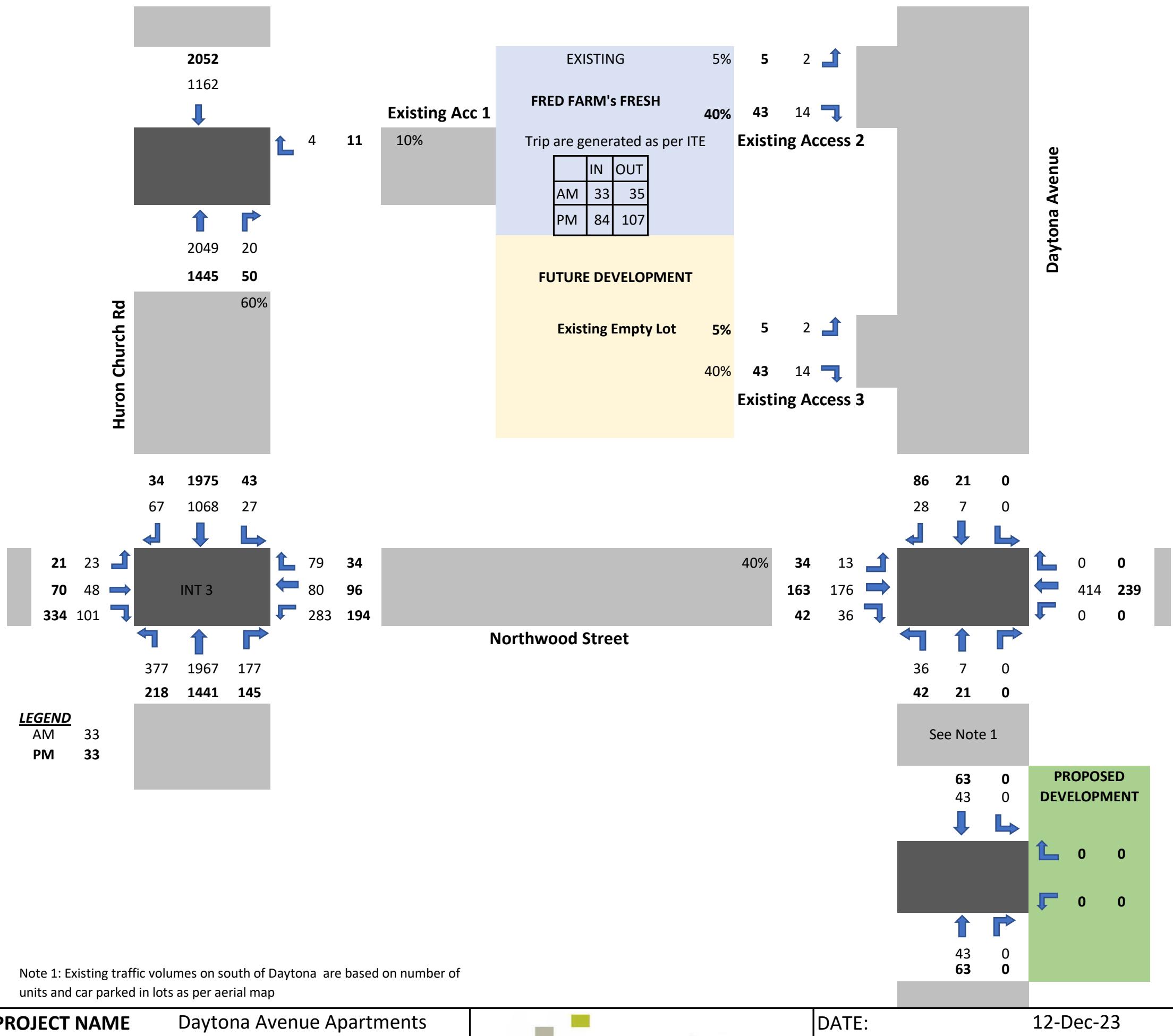
<b>PROJECT NAME</b>	Daytona Avenue Apartments	 BAIRD   AE architecture + engineering	<b>DATE:</b>	12-Dec-23
<b>SHEET TITLE</b>	2027 FUTURE TRAFFIC - 2	27 Princess Street, Unit 102 Leamington ON N8H 2X8 1350 Provincial Road, Unit 700 Windsor ON N8W 5W1 519-326-6161 <a href="http://www.bairdae.ca">www.bairdae.ca</a> <a href="mailto:info@bairdae.ca">info@bairdae.ca</a>	<b>PROJECT NO:</b>	22-048

## DAYTONA AVENUE APARTMENTS - RESIDENTIAL DEVELOPMENT



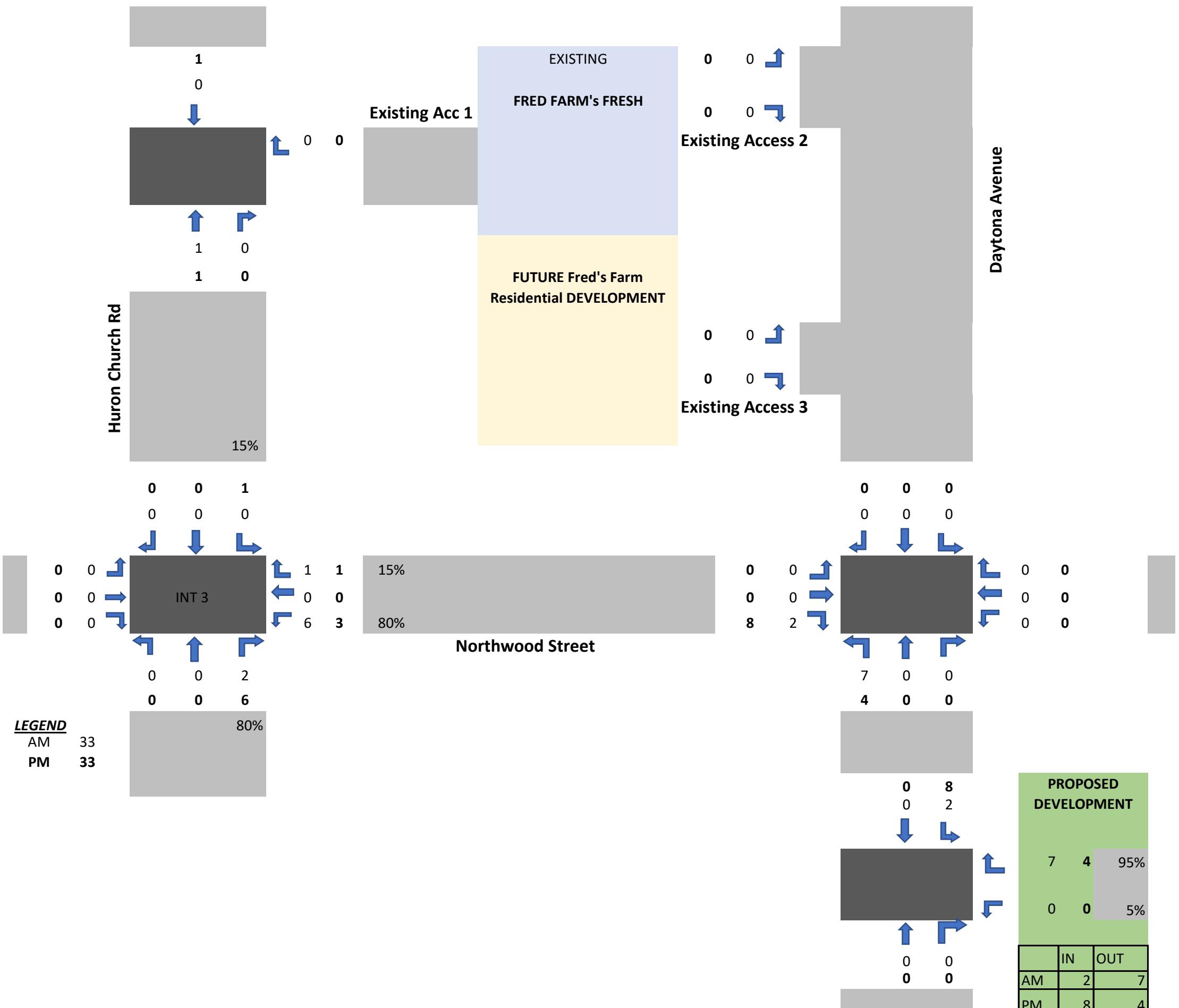
PROJECT NAME	Daytona Avenue Apartments
SHEET TITLE	2027 TOTAL TRAFFIC

## DAYTONA AVENUE APARTMENTS - RESIDENTIAL DEVELOPMENT



<b>PROJECT NAME</b>	Daytona Avenue Apartments	 BAIRD AE architecture + engineering <small>27 Princess Street, Unit 102 Leamington ON N8H 2X8          1350 Provincial Road, Unit 700 Windsor ON N8W 5W1          519-326-6161 www.bairdae.ca info@bairdae.ca</small>	<b>DATE:</b>	12-Dec-23
<b>SHEET TITLE</b>	2037 BACKGROUND TRAFFIC		<b>PROJECT NO:</b>	22-048
			<b>FIGURE NO:</b>	Figure 2.1

## DAYTONA AVENUE APARTMENTS - RESIDENTIAL DEVELOPMENT



PROJECT NAME Daytona Avenue Apartments

SHEET TITLE 2037 DEVELOPMENT TRAFFIC

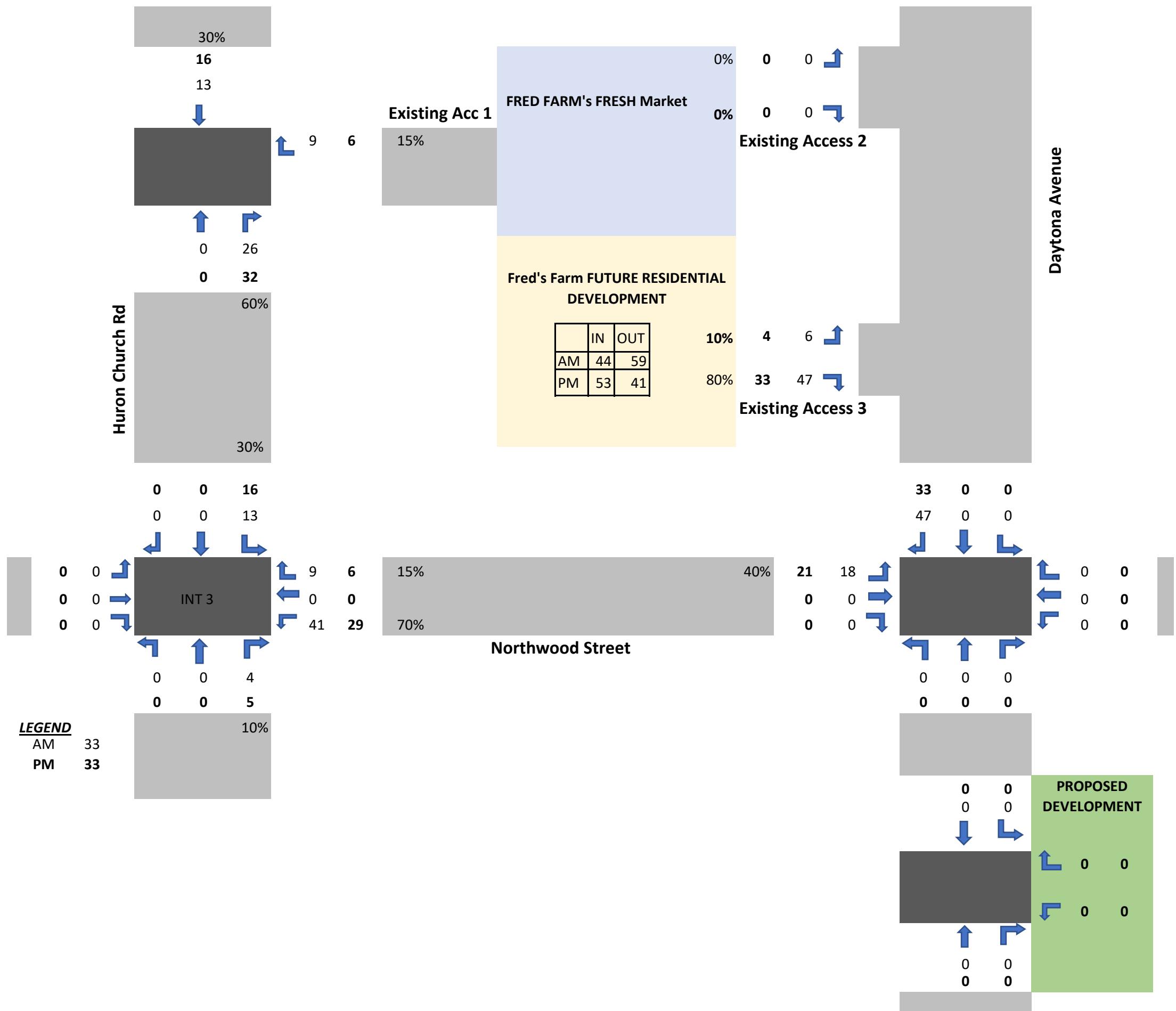
**BAIRD AE**  
 architecture + engineering  
 27 Princess Street, Unit 102 Leamington ON N8H 2X8  
 1350 Provincial Road, Unit 700 Windsor ON N8W 5W1  
 519-326-6161 www.bairdae.ca info@bairdae.ca

DATE: 12-Dec-23

PROJECT NO: 22-048

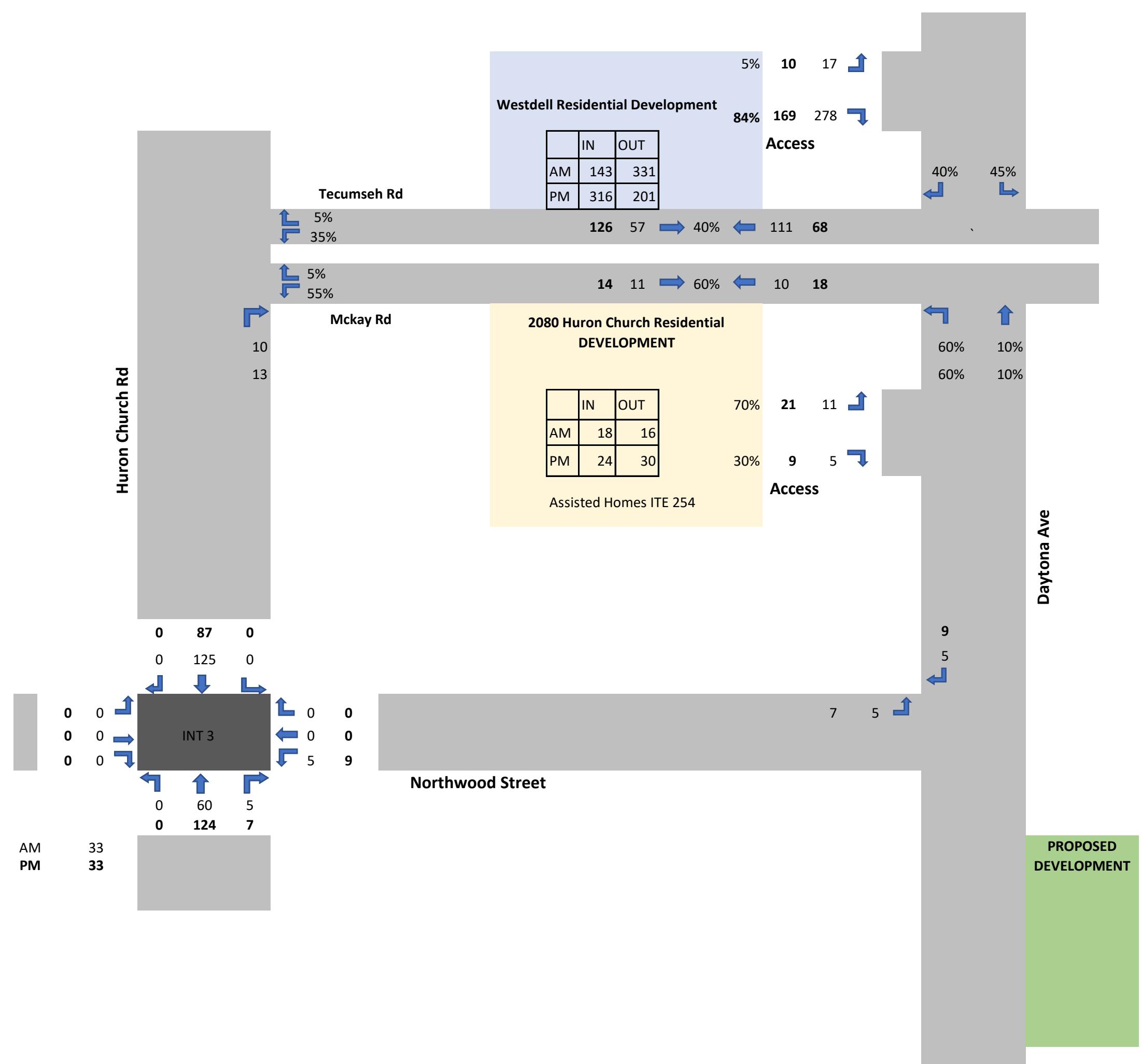
FIGURE NO: Figure 2.2

## DAYTONA AVENUE APARTMENTS - RESIDENTIAL DEVELOPMENT



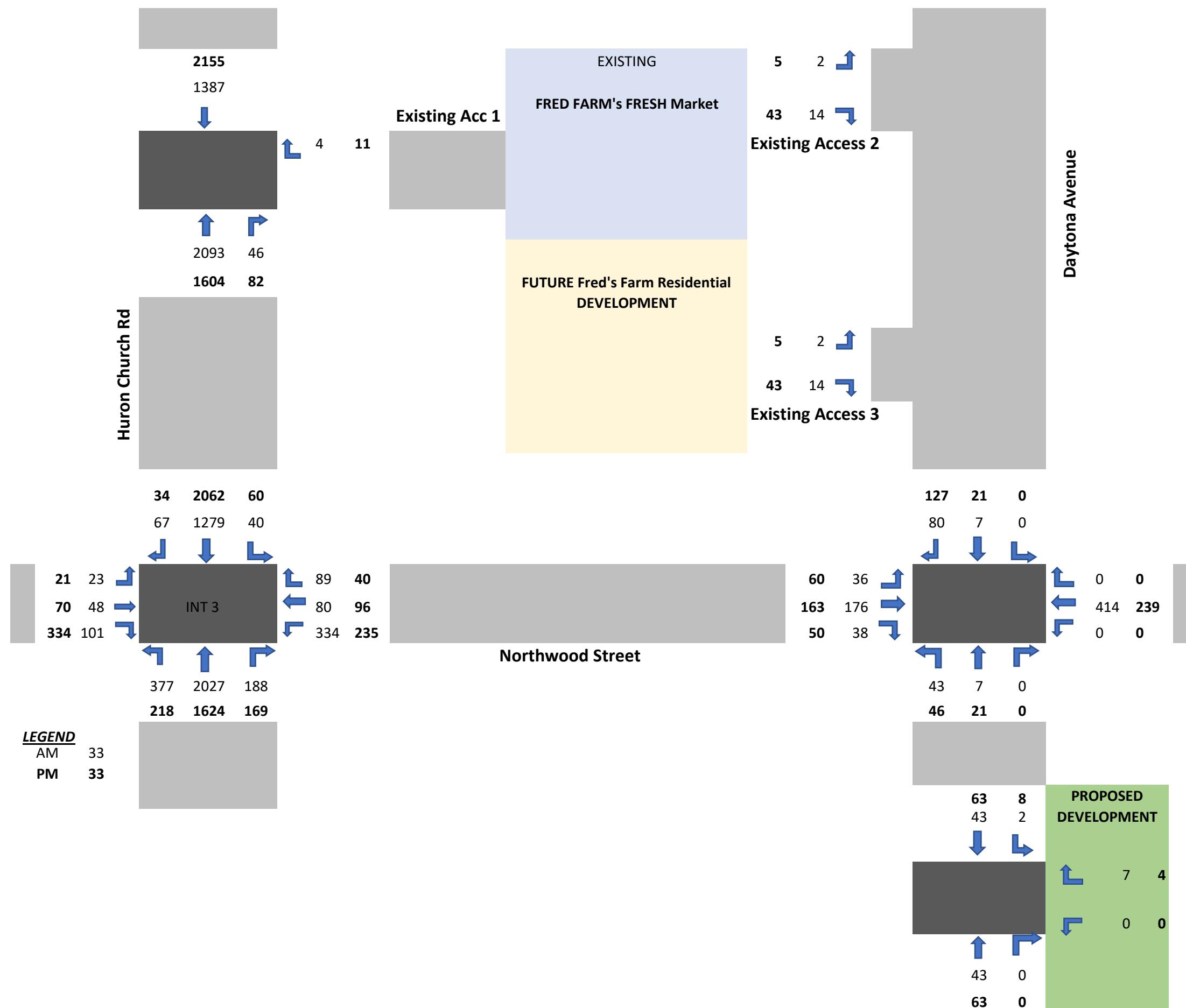
PROJECT NAME	Daytona Avenue Apartments
SHEET TITLE	2037 FUTURE TRAFFIC - 1

## DAYTONA AVENUE APARTMENTS - RESIDENTIAL DEVELOPMENT



PROJECT NAME	Daytona Avenue Apartments
SHEET TITLE	2037 FUTURE TRAFFIC - 2

## DAYTONA AVENUE APARTMENTS - RESIDENTIAL DEVELOPMENT



PROJECT NAME	Daytona Avenue Apartments
SHEET TITLE	2037 TOTAL TRAFFIC



DATE: 12-Dec-23  
PROJECT NO: 22-048  
FIGURE NO: Figure 2.5

## Appendix C

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### CAPACITY ANALYSIS

HCM Unsignalized Intersection Capacity Analysis  
18: Northwood St & Daytona Ave

2027 BKGD AM TRAFFIC VOLUME  
11-17-2023

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	13	146	36	0	348	0	36	7	0	0	7	28
Future Volume (Veh/h)	13	146	36	0	348	0	36	7	0	0	7	28
Sign Control	Free				Free			Stop			Stop	
Grade	0%				0%			0%			0%	
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
Hourly flow rate (vph)	14	159	39	0	378	0	39	8	0	0	8	30
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type	None				None							
Median storage veh)												
Upstream signal (m)	280											
pX, platoon unblocked												
vC, conflicting volume	378			198			618	584	178	588	604	378
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	378			198			618	584	178	588	604	378
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			100			90	98	100	100	98	96
cM capacity (veh/h)	1180			1375			374	418	864	410	408	669
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	212	378	47	38								
Volume Left	14	0	39	0								
Volume Right	39	0	0	30								
cSH	1180	1375	381	589								
Volume to Capacity	0.01	0.00	0.12	0.06								
Queue Length 95th (m)	0.3	0.0	3.3	1.6								
Control Delay (s)	0.6	0.0	15.8	11.5								
Lane LOS	A		C	B								
Approach Delay (s)	0.6	0.0	15.8	11.5								
Approach LOS			C	B								
Intersection Summary												
Average Delay			1.9									
Intersection Capacity Utilization	36.5%				ICU Level of Service					A		
Analysis Period (min)			15									

Lanes, Volumes, Timings  
4: Northwood St & Huron Church

2027 BKGD AM TRAFFIC VOLUME

11-17-2023

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	19	41	86	241	68	67	320	1674	150	23	909	57
Future Volume (vph)	19	41	86	241	68	67	320	1674	150	23	909	57
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	34.0			70.0			80.0			105.0		135.0
Storage Lanes	0			1			1			0	1	1
Taper Length (m)	10.0				15.0			15.0			20.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	1.00	0.91	1.00
Ped Bike Factor		1.00	0.97	0.98	0.98		0.99	1.00				0.96
Fr <sub>t</sub>			0.850		0.926			0.988				0.850
Flt Protected			0.984		0.950			0.950			0.950	
Satd. Flow (prot)	0	1853	1601	1722	1648	0	1825	4418	0	1772	3973	1555
Flt Permitted		0.920		0.714			0.163			0.079		
Satd. Flow (perm)	0	1727	1561	1265	1648	0	311	4418	0	147	3973	1496
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			113		30			12				113
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		186.9			279.6			226.1			251.1	
Travel Time (s)		13.5			20.1			16.3			18.1	
Confl. Peds. (#/hr)	8		8	15		15	15		15	8		8
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
Heavy Vehicles (%)	2%	2%	2%	6%	6%	6%	0%	18%	3%	3%	32%	5%
Adj. Flow (vph)	21	45	93	262	74	73	348	1820	163	25	988	62
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	66	93	262	147	0	348	1983	0	25	988	62
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		3.0			3.0			3.0			3.0	
Two way Left Turn Lane										Yes		
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Turn Type	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6		6	2			4			8		8
Minimum Split (s)	22.0	37.0	37.0	22.0	37.0		19.0	38.5		19.0	38.5	38.5
Total Split (s)	22.0	37.0	37.0	22.0	37.0		34.0	72.0		19.0	57.0	57.0
Total Split (%)	14.7%	24.7%	24.7%	14.7%	24.7%		22.7%	48.0%		12.7%	38.0%	38.0%
Maximum Green (s)	18.0	30.5	30.5	18.0	31.5		30.0	65.5		15.0	50.5	50.5
Yellow Time (s)	3.0	4.0	4.0	3.0	3.0		3.0	4.0		3.0	4.0	4.0
All-Red Time (s)	1.0	2.5	2.5	1.0	2.5		1.0	2.5		1.0	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	6.5	6.5	4.0	5.5		4.0	6.5		4.0	6.5	6.5	
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes		Yes	Yes	Yes
Walk Time (s)	10.0	10.0			10.0			14.0			14.0	14.0
Flash Dont Walk (s)	17.0	17.0		17.0			18.0			18.0	18.0	18.0
Pedestrian Calls (#/hr)	0	0		0			0			0	0	0



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Act Effct Green (s)	46.0	30.5	51.0	31.5			87.0	65.5		68.0	50.5	50.5
Actuated g/C Ratio	0.31	0.20	0.34	0.21			0.58	0.44		0.45	0.34	0.34
v/c Ratio	0.12	0.23	0.54	0.40			0.72	1.02		0.11	0.74	0.11
Control Delay	33.8	6.1	40.9	44.0			32.4	68.1		16.2	48.0	0.4
Queue Delay	0.0	0.0	0.0	0.0			0.0	0.0		0.0	0.0	0.0
Total Delay	33.8	6.1	40.9	44.0			32.4	68.1		16.2	48.0	0.4
LOS	C	A	D	D			C	E		B	D	A
Approach Delay	17.6				42.0			62.8			44.5	
Approach LOS		B			D			E			D	

#### Intersection Summary

Area Type: Other

Cycle Length: 150

Actuated Cycle Length: 150

Offset: 0 (0%), Referenced to phase 3:SBL and 7:NBL, Start of Green

Natural Cycle: 150

Control Type: Pretimed

Maximum v/c Ratio: 1.02

Intersection Signal Delay: 53.9

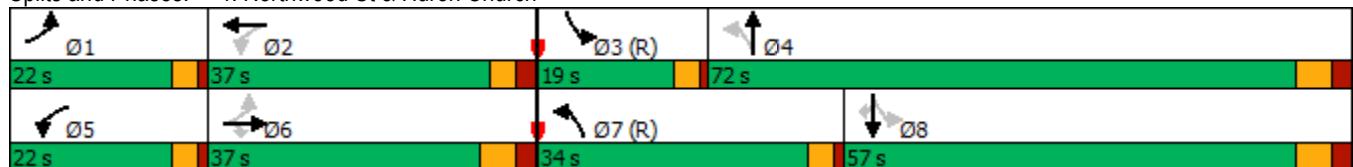
Intersection LOS: D

Intersection Capacity Utilization 92.1%

ICU Level of Service F

Analysis Period (min) 15

Splits and Phases: 4: Northwood St & Huron Church



Lanes, Volumes, Timings  
4: Northwood St & Huron Church

2027 TOTAL AM TRAFFIC VOLUME

12-12-2023

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	19	40	83	284	66	75	309	1675	157	36	1001	55
Future Volume (vph)	19	40	83	284	66	75	309	1675	157	36	1001	55
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	34.0			70.0			80.0			105.0		135.0
Storage Lanes	0			1			1			0		1
Taper Length (m)	10.0				15.0			15.0			20.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	1.00	0.91	1.00
Ped Bike Factor		1.00	0.97	0.98	0.98			1.00	1.00			0.96
Fr <sub>t</sub>			0.850		0.920			0.987				0.850
Flt Protected		0.984			0.950			0.950			0.950	
Satd. Flow (prot)	0	1853	1601	1722	1635	0	1825	4414	0	1772	3973	1555
Flt Permitted		0.917			0.715			0.132			0.079	
Satd. Flow (perm)	0	1722	1561	1266	1635	0	252	4414	0	147	3973	1496
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		113			35			13				113
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		186.9			279.6			226.1			251.1	
Travel Time (s)		13.5			20.1			16.3			18.1	
Confl. Peds. (#/hr)	8		8	15		15	15		15	8		8
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
Heavy Vehicles (%)	2%	2%	2%	6%	6%	6%	0%	18%	3%	3%	32%	5%
Adj. Flow (vph)	21	43	90	309	72	82	336	1821	171	39	1088	60
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	64	90	309	154	0	336	1992	0	39	1088	60
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		3.0			3.0			3.0			3.0	
Two way Left Turn Lane										Yes		
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Turn Type	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6		6	2			4			8		8
Minimum Split (s)	22.0	37.0	37.0	22.0	37.0		19.0	38.5		19.0	38.5	38.5
Total Split (s)	22.0	37.0	37.0	22.0	37.0		34.0	72.0		19.0	57.0	57.0
Total Split (%)	14.7%	24.7%	24.7%	14.7%	24.7%		22.7%	48.0%		12.7%	38.0%	38.0%
Maximum Green (s)	18.0	30.5	30.5	18.0	31.5		30.0	65.5		15.0	50.5	50.5
Yellow Time (s)	3.0	4.0	4.0	3.0	3.0		3.0	4.0		3.0	4.0	4.0
All-Red Time (s)	1.0	2.5	2.5	1.0	2.5		1.0	2.5		1.0	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	6.5	6.5	4.0	5.5			4.0	6.5		4.0	6.5	6.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes		Yes	Yes	Yes
Walk Time (s)	10.0	10.0			10.0			14.0			14.0	14.0
Flash Dont Walk (s)	17.0	17.0			17.0			18.0			18.0	18.0
Pedestrian Calls (#/hr)	0	0		0			0			0	0	0



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Act Effct Green (s)	46.0	30.5	51.0	31.5			87.0	65.5		68.0	50.5	50.5
Actuated g/C Ratio	0.31	0.20	0.34	0.21			0.58	0.44		0.45	0.34	0.34
v/c Ratio	0.12	0.22	0.64	0.42			0.73	1.03		0.17	0.81	0.10
Control Delay	33.7	5.4	44.6	43.1			37.7	69.5		17.3	51.4	0.4
Queue Delay	0.0	0.0	0.0	0.0			0.0	0.0		0.0	0.0	0.0
Total Delay	33.7	5.4	44.6	43.1			37.7	69.5		17.3	51.4	0.4
LOS	C	A	D	D			D	E		B	D	A
Approach Delay	17.2				44.1			65.0			47.7	
Approach LOS		B			D			E			D	

#### Intersection Summary

Area Type: Other

Cycle Length: 150

Actuated Cycle Length: 150

Offset: 0 (0%), Referenced to phase 3:SBL and 7:NBL, Start of Green

Natural Cycle: 150

Control Type: Pretimed

Maximum v/c Ratio: 1.03

Intersection Signal Delay: 55.9

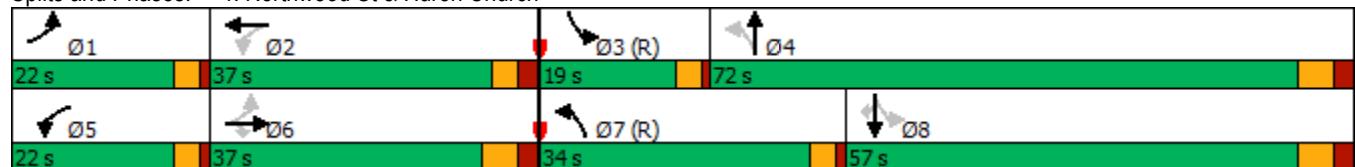
Intersection LOS: E

Intersection Capacity Utilization 92.1%

ICU Level of Service F

Analysis Period (min) 15

Splits and Phases: 4: Northwood St & Huron Church



HCM Unsignalized Intersection Capacity Analysis  
18: Northwood St & Daytona Ave

2027 TOTAL AM TRAFFIC VOLUME  
12-12-2023

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	36	140	38	0	335	0	43	7	0	0	7	80
Future Volume (Veh/h)	36	140	38	0	335	0	43	7	0	0	7	80
Sign Control	Free				Free			Stop			Stop	
Grade	0%				0%			0%			0%	
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
Hourly flow rate (vph)	39	152	41	0	364	0	47	8	0	0	8	87
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type	None				None							
Median storage veh)												
Upstream signal (m)	280											
pX, platoon unblocked												
vC, conflicting volume	364			193			706	614	172	618	635	364
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	364			193			706	614	172	618	635	364
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	97			100			84	98	100	100	98	87
cM capacity (veh/h)	1195			1380			294	394	871	385	383	681
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	232	364	55	95								
Volume Left	39	0	47	0								
Volume Right	41	0	0	87								
cSH	1195	1380	305	639								
Volume to Capacity	0.03	0.00	0.18	0.15								
Queue Length 95th (m)	0.8	0.0	5.2	4.2								
Control Delay (s)	1.6	0.0	19.4	11.6								
Lane LOS	A		C	B								
Approach Delay (s)	1.6	0.0	19.4	11.6								
Approach LOS			C	B								
Intersection Summary												
Average Delay		3.4										
Intersection Capacity Utilization		48.7%			ICU Level of Service					A		
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis  
18: Northwood St & Daytona Ave

2027 BKGD PM TRAFFIC VOLUME  
11-17-2023

	↗	→	↘	↙	←	↖	↑	↗	↘	↓	↙	
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	34	138	42	0	190	0	42	21	0	0	21	86
Future Volume (Veh/h)	34	138	42	0	190	0	42	21	0	0	21	86
Sign Control	Free				Free			Stop			Stop	
Grade	0%				0%			0%			0%	
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
Hourly flow rate (vph)	37	150	46	0	207	0	46	23	0	0	23	93
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type	None				None							
Median storage veh)												
Upstream signal (m)	280											
pX, platoon unblocked												
vC, conflicting volume	207			196			558	454	173	466	477	207
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	207			196			558	454	173	466	477	207
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	97			100			88	95	100	100	95	89
cM capacity (veh/h)	1364			1377			369	488	871	479	474	833
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	233	207	69	116								
Volume Left	37	0	46	0								
Volume Right	46	0	0	93								
cSH	1364	1377	401	724								
Volume to Capacity	0.03	0.00	0.17	0.16								
Queue Length 95th (m)	0.7	0.0	4.9	4.5								
Control Delay (s)	1.4	0.0	15.8	10.9								
Lane LOS	A		C	B								
Approach Delay (s)	1.4	0.0	15.8	10.9								
Approach LOS			C	B								
Intersection Summary												
Average Delay			4.3									
Intersection Capacity Utilization		41.8%			ICU Level of Service					A		
Analysis Period (min)			15									

Lanes, Volumes, Timings  
4: Northwood St & Huron Church

2027 BKGD PM TRAFFIC VOLUME

11-17-2023

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	18	59	284	165	82	29	168	1226	123	36	1680	29
Future Volume (vph)	18	59	284	165	82	29	168	1226	123	36	1680	29
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	34.0		0.0	70.0		0.0	80.0		0.0	105.0		135.0
Storage Lanes	0		1	1		0	1		0	1		1
Taper Length (m)	10.0			15.0			15.0			20.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	1.00	0.91	1.00
Ped Bike Factor		1.00	0.97	0.98	0.99			1.00		1.00		0.96
Fr <sub>t</sub>			0.850		0.960			0.986				0.850
Flt Protected		0.988		0.950			0.950			0.950		
Satd. Flow (prot)	0	1791	1555	1789	1497	0	1437	4126	0	1393	4196	1103
Flt Permitted		0.944		0.702			0.073			0.120		
Satd. Flow (perm)	0	1707	1516	1293	1497	0	110	4126	0	176	4196	1061
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			309		11			14				113
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		186.9			279.6			226.1			251.1	
Travel Time (s)		13.5			20.1			16.3			18.1	
Confl. Peds. (#/hr)	8		8	15		15	15		15	8		8
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
Heavy Vehicles (%)	6%	6%	5%	2%	27%	8%	27%	27%	2%	31%	25%	48%
Adj. Flow (vph)	20	64	309	179	89	32	183	1333	134	39	1826	32
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	84	309	179	121	0	183	1467	0	39	1826	32
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		3.0			3.0			3.0			3.0	
Two way Left Turn Lane										Yes		
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Turn Type	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6		6	2			4			8		8
Minimum Split (s)	22.0	37.0	37.0	22.0	37.0		19.0	38.5		19.0	38.5	38.5
Total Split (s)	22.0	37.0	37.0	22.0	37.0		34.0	72.0		19.0	57.0	57.0
Total Split (%)	14.7%	24.7%	24.7%	14.7%	24.7%		22.7%	48.0%		12.7%	38.0%	38.0%
Maximum Green (s)	18.0	30.5	30.5	18.0	31.5		30.0	65.5		15.0	50.5	50.5
Yellow Time (s)	3.0	4.0	4.0	3.0	3.0		3.0	4.0		3.0	4.0	4.0
All-Red Time (s)	1.0	2.5	2.5	1.0	2.5		1.0	2.5		1.0	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	6.5	6.5	4.0	5.5		4.0	6.5		4.0	6.5	6.5	
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes		Yes	Yes	Yes
Walk Time (s)	10.0	10.0			10.0			14.0			14.0	14.0
Flash Dont Walk (s)	17.0	17.0		17.0			18.0			18.0	18.0	
Pedestrian Calls (#/hr)	0	0		0			0			0	0	



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Act Effct Green (s)	46.0	30.5	51.0	31.5			87.0	65.5		68.0	50.5	50.5
Actuated g/C Ratio	0.31	0.20	0.34	0.21			0.58	0.44		0.45	0.34	0.34
v/c Ratio	0.16	0.56	0.36	0.37			0.56	0.81		0.19	1.29	0.07
Control Delay	34.4	9.2	35.9	50.0			38.6	40.9		17.8	177.6	0.3
Queue Delay	0.0	0.0	0.0	0.0			0.0	0.0		0.0	0.0	0.0
Total Delay	34.4	9.2	35.9	50.0			38.6	40.9		17.8	177.6	0.3
LOS	C	A	D	D			D	D		B	F	A
Approach Delay	14.6			41.6				40.7			171.3	
Approach LOS	B			D				D			F	

#### Intersection Summary

Area Type: Other

Cycle Length: 150

Actuated Cycle Length: 150

Offset: 0 (0%), Referenced to phase 3:SBL and 7:NBL, Start of Green

Natural Cycle: 150

Control Type: Pretimed

Maximum v/c Ratio: 1.29

Intersection Signal Delay: 96.8

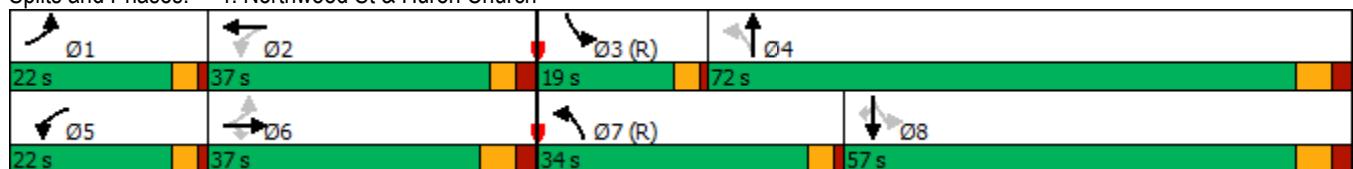
Intersection LOS: F

Intersection Capacity Utilization 97.9%

ICU Level of Service F

Analysis Period (min) 15

Splits and Phases: 4: Northwood St & Huron Church



Lanes, Volumes, Timings  
4: Northwood St & Huron Church

2027 TOTAL PM TRAFFIC VOLUME

12-12-2023

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	18	57	274	200	79	34	179	1306	138	52	1708	28
Future Volume (vph)	18	57	274	200	79	34	179	1306	138	52	1708	28
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	34.0		0.0	70.0		0.0	80.0		0.0	105.0		135.0
Storage Lanes	0		1	1		0	1		0	1		1
Taper Length (m)	10.0			15.0			15.0			20.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	1.00	0.91	1.00	
Ped Bike Factor		1.00	0.97	0.98	0.99		0.99		1.00		0.96	
Fr <sub>t</sub>			0.850		0.955		0.986				0.850	
Flt Protected		0.988		0.950			0.950			0.950		
Satd. Flow (prot)	0	1791	1555	1789	1496	0	1437	4128	0	1393	4196	1103
Flt Permitted		0.942		0.704			0.073			0.096		
Satd. Flow (perm)	0	1703	1516	1296	1496	0	110	4128	0	141	4196	1061
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		298		13			15					113
Link Speed (k/h)		50		50			50			50		
Link Distance (m)		186.9		279.6			226.1			251.1		
Travel Time (s)		13.5		20.1			16.3			18.1		
Confl. Peds. (#/hr)	8		8	15		15	15		15	8		8
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
Heavy Vehicles (%)	6%	6%	5%	2%	27%	8%	27%	27%	2%	31%	25%	48%
Adj. Flow (vph)	20	62	298	217	86	37	195	1420	150	57	1857	30
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	82	298	217	123	0	195	1570	0	57	1857	30
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(m)		3.7		3.7			3.7			3.7		
Link Offset(m)		0.0		0.0			0.0			0.0		
Crosswalk Width(m)		3.0		3.0			3.0			3.0		
Two way Left Turn Lane										Yes		
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Turn Type	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6		6	2			4			8		8
Minimum Split (s)	22.0	37.0	37.0	22.0	37.0		19.0	38.5		19.0	38.5	38.5
Total Split (s)	22.0	37.0	37.0	22.0	37.0		34.0	72.0		19.0	57.0	57.0
Total Split (%)	14.7%	24.7%	24.7%	14.7%	24.7%		22.7%	48.0%		12.7%	38.0%	38.0%
Maximum Green (s)	18.0	30.5	30.5	18.0	31.5		30.0	65.5		15.0	50.5	50.5
Yellow Time (s)	3.0	4.0	4.0	3.0	3.0		3.0	4.0		3.0	4.0	4.0
All-Red Time (s)	1.0	2.5	2.5	1.0	2.5		1.0	2.5		1.0	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	6.5	6.5	4.0	5.5		4.0	6.5		4.0	6.5	6.5	
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes		Yes	Yes	Yes
Walk Time (s)		10.0	10.0		10.0			14.0			14.0	14.0
Flash Dont Walk (s)		17.0	17.0		17.0			18.0			18.0	18.0
Pedestrian Calls (#/hr)	0	0		0			0			0	0	



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Act Effct Green (s)	46.0	30.5	51.0	31.5			87.0	65.5		68.0	50.5	50.5
Actuated g/C Ratio	0.31	0.20	0.34	0.21			0.58	0.44		0.45	0.34	0.34
v/c Ratio	0.15	0.55	0.43	0.38			0.59	0.87		0.30	1.32	0.07
Control Delay	34.3	9.2	37.6	49.3			41.1	44.2		21.1	186.6	0.3
Queue Delay	0.0	0.0	0.0	0.0			0.0	0.0		0.0	0.0	0.0
Total Delay	34.3	9.2	37.6	49.3			41.1	44.2		21.1	186.6	0.3
LOS	C	A	D	D			D	D		C	F	A
Approach Delay	14.6				41.8			43.9			178.9	
Approach LOS	B				D			D			F	

#### Intersection Summary

Area Type: Other

Cycle Length: 150

Actuated Cycle Length: 150

Offset: 0 (0%), Referenced to phase 3:SBL and 7:NBL, Start of Green

Natural Cycle: 150

Control Type: Pretimed

Maximum v/c Ratio: 1.32

Intersection Signal Delay: 100.5

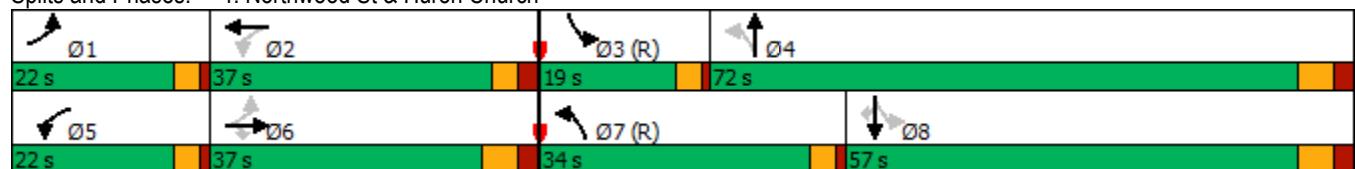
Intersection LOS: F

Intersection Capacity Utilization 98.4%

ICU Level of Service F

Analysis Period (min) 15

Splits and Phases: 4: Northwood St & Huron Church



HCM Unsignalized Intersection Capacity Analysis  
18: Northwood St & Daytona Ave

2027 TOTAL PM TRAFFIC VOLUME  
12-12-2023

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	62	132	50	0	181	0	46	21	0	0	21	127
Future Volume (Veh/h)	62	132	50	0	181	0	46	21	0	0	21	127
Sign Control	Free				Free			Stop			Stop	
Grade	0%				0%			0%			0%	
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
Hourly flow rate (vph)	67	143	54	0	197	0	50	23	0	0	23	138
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type	None				None							
Median storage veh)												
Upstream signal (m)	280											
pX, platoon unblocked												
vC, conflicting volume	197			197			650	501	170	512	528	197
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	197			197			650	501	170	512	528	197
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	95			100			83	95	100	100	95	84
cM capacity (veh/h)	1376			1376			295	449	874	437	434	844
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	264	197	73	161								
Volume Left	67	0	50	0								
Volume Right	54	0	0	138								
cSH	1376	1376	331	744								
Volume to Capacity	0.05	0.00	0.22	0.22								
Queue Length 95th (m)	1.2	0.0	6.6	6.6								
Control Delay (s)	2.3	0.0	18.9	11.2								
Lane LOS	A		C	B								
Approach Delay (s)	2.3	0.0	18.9	11.2								
Approach LOS			C	B								
Intersection Summary												
Average Delay		5.4										
Intersection Capacity Utilization		48.9%			ICU Level of Service					A		
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis  
18: Northwood St & Daytona Ave

2037 BKGD AM TRAFFIC VOLUME  
11-17-2023

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	31	176	38	0	414	0	43	7	0	0	7	75
Future Volume (Veh/h)	31	176	38	0	414	0	43	7	0	0	7	75
Sign Control	Free				Free			Stop			Stop	
Grade	0%				0%			0%			0%	
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
Hourly flow rate (vph)	34	191	41	0	450	0	47	8	0	0	8	82
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type	None				None							
Median storage veh)												
Upstream signal (m)	280											
pX, platoon unblocked												
vC, conflicting volume	450			232			816	730	212	734	750	450
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	450			232			816	730	212	734	750	450
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	97			100			81	98	100	100	98	87
cM capacity (veh/h)	1110			1336			245	339	829	322	330	609
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	266	450	55	90								
Volume Left	34	0	47	0								
Volume Right	41	0	0	82								
cSH	1110	1336	256	566								
Volume to Capacity	0.03	0.00	0.22	0.16								
Queue Length 95th (m)	0.8	0.0	6.4	4.5								
Control Delay (s)	1.3	0.0	22.9	12.6								
Lane LOS	A		C	B								
Approach Delay (s)	1.3	0.0	22.9	12.6								
Approach LOS			C	B								
Intersection Summary												
Average Delay		3.2										
Intersection Capacity Utilization		54.4%			ICU Level of Service					A		
Analysis Period (min)			15									

Lanes, Volumes, Timings  
4: Northwood St & Huron Church

2037 BKGD AM TRAFFIC VOLUME

11-17-2023

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	23	48	101	283	80	79	377	1967	177	27	1068	67
Future Volume (vph)	23	48	101	283	80	79	377	1967	177	27	1068	67
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	34.0		0.0	70.0		0.0	80.0		0.0	105.0		135.0
Storage Lanes	0		1	1		0	1		0	1		1
Taper Length (m)	10.0			15.0			15.0			20.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	1.00	0.91	1.00
Ped Bike Factor		1.00	0.97	0.98	0.98		1.00	1.00				0.96
Fr <sub>t</sub>			0.850		0.925			0.988				0.850
Flt Protected		0.984		0.950			0.950			0.950		
Satd. Flow (prot)	0	1853	1601	1722	1646	0	1825	4418	0	1772	3973	1555
Flt Permitted		0.903		0.707			0.112			0.079		
Satd. Flow (perm)	0	1696	1561	1253	1646	0	214	4418	0	147	3973	1496
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		113			30			12				113
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		186.9			279.6			226.1			251.1	
Travel Time (s)		13.5			20.1			16.3			18.1	
Confl. Peds. (#/hr)	8		8	15		15	15		15	8		8
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
Heavy Vehicles (%)	2%	2%	2%	6%	6%	6%	0%	18%	3%	3%	32%	5%
Adj. Flow (vph)	25	52	110	308	87	86	410	2138	192	29	1161	73
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	77	110	308	173	0	410	2330	0	29	1161	73
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		3.0			3.0			3.0			3.0	
Two way Left Turn Lane										Yes		
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)		25		15	25		15	25		15	25	15
Turn Type	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases	1	6			5	2		7	4		3	8
Permitted Phases	6		6	2			4			8		8
Minimum Split (s)	22.0	37.0	37.0	22.0	37.0		19.0	38.5		19.0	38.5	38.5
Total Split (s)	22.0	37.0	37.0	22.0	37.0		34.0	72.0		19.0	57.0	57.0
Total Split (%)	14.7%	24.7%	24.7%	14.7%	24.7%		22.7%	48.0%		12.7%	38.0%	38.0%
Maximum Green (s)	18.0	30.5	30.5	18.0	31.5		30.0	65.5		15.0	50.5	50.5
Yellow Time (s)	3.0	4.0	4.0	3.0	3.0		3.0	4.0		3.0	4.0	4.0
All-Red Time (s)	1.0	2.5	2.5	1.0	2.5		1.0	2.5		1.0	2.5	2.5
Lost Time Adjust (s)		0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)		6.5	6.5	4.0	5.5		4.0	6.5		4.0	6.5	6.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes		Yes	Yes	Yes
Walk Time (s)		10.0	10.0		10.0			14.0			14.0	14.0
Flash Dont Walk (s)		17.0	17.0		17.0			18.0			18.0	18.0
Pedestrian Calls (#/hr)		0	0		0			0			0	0



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Act Effct Green (s)	46.0	30.5	51.0	31.5			87.0	65.5		68.0	50.5	50.5
Actuated g/C Ratio	0.31	0.20	0.34	0.21			0.58	0.44		0.45	0.34	0.34
v/c Ratio	0.14	0.27	0.64	0.47			0.92	1.20		0.13	0.87	0.13
Control Delay	34.1	9.4	44.7	47.4			64.2	134.4		16.5	54.8	1.7
Queue Delay	0.0	0.0	0.0	0.0			0.0	0.0		0.0	0.0	0.0
Total Delay	34.1	9.4	44.7	47.4			64.2	134.4		16.5	54.8	1.7
LOS	C	A	D	D			E	F		B	D	A
Approach Delay	19.6				45.7			123.9			50.8	
Approach LOS		B			D			F			D	

#### Intersection Summary

Area Type: Other

Cycle Length: 150

Actuated Cycle Length: 150

Offset: 0 (0%), Referenced to phase 3:SBL and 7:NBL, Start of Green

Natural Cycle: 150

Control Type: Pretimed

Maximum v/c Ratio: 1.20

Intersection Signal Delay: 91.9

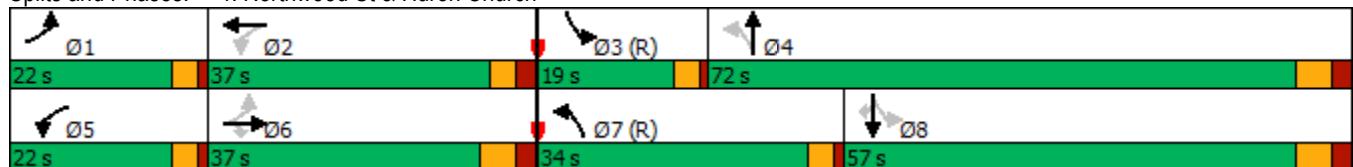
Intersection LOS: F

Intersection Capacity Utilization 92.1%

ICU Level of Service F

Analysis Period (min) 15

Splits and Phases: 4: Northwood St & Huron Church



Lanes, Volumes, Timings  
4: Northwood St & Huron Church

2037 TOTAL AM TRAFFIC VOLUME

12-12-2023

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	23	48	101	334	80	89	377	2027	188	40	1279	67
Future Volume (vph)	23	48	101	334	80	89	377	2027	188	40	1279	67
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	34.0			70.0		0.0	80.0		0.0	105.0		135.0
Storage Lanes	0			1		0	1		0	1		1
Taper Length (m)	10.0				15.0			15.0			20.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	1.00	0.91	1.00
Ped Bike Factor		1.00	0.97	0.98	0.98			1.00				0.96
Fr <sub>t</sub>			0.850		0.921			0.987				0.850
Flt Protected		0.984		0.950			0.950				0.950	
Satd. Flow (prot)	0	1853	1601	1722	1637	0	1825	4414	0	1772	3973	1555
Flt Permitted		0.901		0.707			0.073			0.079		
Satd. Flow (perm)	0	1692	1561	1253	1637	0	140	4414	0	147	3973	1496
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		113			34			13				113
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		186.9			279.6			226.1			251.1	
Travel Time (s)		13.5			20.1			16.3			18.1	
Confl. Peds. (#/hr)	8		8	15		15	15		15	8		8
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
Heavy Vehicles (%)	2%	2%	2%	6%	6%	6%	0%	18%	3%	3%	32%	5%
Adj. Flow (vph)	25	52	110	363	87	97	410	2203	204	43	1390	73
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	77	110	363	184	0	410	2407	0	43	1390	73
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		3.0			3.0			3.0			3.0	
Two way Left Turn Lane										Yes		
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)		25		15	25		15	25		15	25	15
Turn Type	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases	1	6			5	2		7	4		3	8
Permitted Phases	6		6	2			4			8		8
Minimum Split (s)	22.0	37.0	37.0	22.0	37.0		19.0	38.5		19.0	38.5	38.5
Total Split (s)	22.0	37.0	37.0	22.0	37.0		34.0	72.0		19.0	57.0	57.0
Total Split (%)	14.7%	24.7%	24.7%	14.7%	24.7%		22.7%	48.0%		12.7%	38.0%	38.0%
Maximum Green (s)	18.0	30.5	30.5	18.0	31.5		30.0	65.5		15.0	50.5	50.5
Yellow Time (s)	3.0	4.0	4.0	3.0	3.0		3.0	4.0		3.0	4.0	4.0
All-Red Time (s)	1.0	2.5	2.5	1.0	2.5		1.0	2.5		1.0	2.5	2.5
Lost Time Adjust (s)		0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)		6.5	6.5	4.0	5.5		4.0	6.5		4.0	6.5	6.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes		Yes	Yes	Yes
Walk Time (s)		10.0	10.0		10.0			14.0			14.0	14.0
Flash Dont Walk (s)		17.0	17.0		17.0			18.0			18.0	18.0
Pedestrian Calls (#/hr)	0	0		0			0			0	0	0



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Act Effct Green (s)	46.0	30.5	51.0	31.5			87.0	65.5		68.0	50.5	50.5
Actuated g/C Ratio	0.31	0.20	0.34	0.21			0.58	0.44		0.45	0.34	0.34
v/c Ratio	0.14	0.27	0.75	0.50			0.98	1.24		0.19	1.04	0.13
Control Delay	34.1	9.4	51.2	47.5			84.7	151.2		17.7	83.4	1.7
Queue Delay	0.0	0.0	0.0	0.0			0.0	0.0		0.0	0.0	0.0
Total Delay	34.1	9.4	51.2	47.5			84.7	151.2		17.7	83.4	1.7
LOS	C	A	D	D			F	F		B	F	A
Approach Delay	19.6				50.0				141.5			77.6
Approach LOS		B			D				F			E

#### Intersection Summary

Area Type: Other

Cycle Length: 150

Actuated Cycle Length: 150

Offset: 0 (0%), Referenced to phase 3:SBL and 7:NBL, Start of Green

Natural Cycle: 150

Control Type: Pretimed

Maximum v/c Ratio: 1.24

Intersection Signal Delay: 108.0

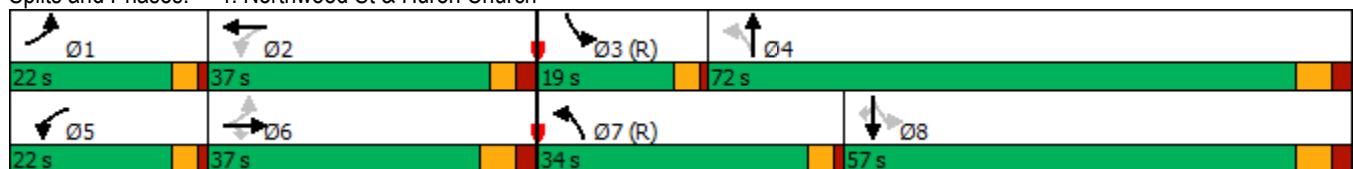
Intersection LOS: F

Intersection Capacity Utilization 92.6%

ICU Level of Service F

Analysis Period (min) 15

Splits and Phases: 4: Northwood St & Huron Church



HCM Unsignalized Intersection Capacity Analysis  
18: Northwood St & Daytona Ave

2037 TOTAL AM TRAFFIC VOLUME  
12-12-2023

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	36	176	38	0	414	0	43	7	0	0	7	80
Future Volume (Veh/h)	36	176	38	0	414	0	43	7	0	0	7	80
Sign Control	Free				Free			Stop			Stop	
Grade	0%				0%			0%			0%	
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
Hourly flow rate (vph)	39	191	41	0	450	0	47	8	0	0	8	87
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type	None				None							
Median storage veh)												
Upstream signal (m)	280											
pX, platoon unblocked												
vC, conflicting volume	450			232			830	740	212	744	760	450
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	450			232			830	740	212	744	760	450
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	96			100			80	98	100	100	98	86
cM capacity (veh/h)	1110			1336			237	333	829	316	324	609
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	271	450	55	95								
Volume Left	39	0	47	0								
Volume Right	41	0	0	87								
cSH	1110	1336	247	567								
Volume to Capacity	0.04	0.00	0.22	0.17								
Queue Length 95th (m)	0.9	0.0	6.6	4.8								
Control Delay (s)	1.5	0.0	23.7	12.6								
Lane LOS	A		C	B								
Approach Delay (s)	1.5	0.0	23.7	12.6								
Approach LOS			C	B								
Intersection Summary												
Average Delay		3.3										
Intersection Capacity Utilization		54.8%			ICU Level of Service					A		
Analysis Period (min)		15										

HCM Unsignalized Intersection Capacity Analysis  
18: Northwood St & Daytona Ave

2037 BKGD PM TRAFFIC VOLUME  
11-17-2023

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	34	163	42	0	239	0	42	21	0	0	21	86
Future Volume (Veh/h)	34	163	42	0	239	0	42	21	0	0	21	86
Sign Control	Free				Free			Stop			Stop	
Grade	0%				0%			0%			0%	
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
Hourly flow rate (vph)	37	177	46	0	260	0	46	23	0	0	23	93
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type	None				None							
Median storage veh)												
Upstream signal (m)	280											
pX, platoon unblocked												
vC, conflicting volume	260			223			638	534	200	546	557	260
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	260			223			638	534	200	546	557	260
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	97			100			86	95	100	100	95	88
cM capacity (veh/h)	1304			1346			321	439	841	422	426	779
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	260	260	69	116								
Volume Left	37	0	46	0								
Volume Right	46	0	0	93								
cSH	1304	1346	353	669								
Volume to Capacity	0.03	0.00	0.20	0.17								
Queue Length 95th (m)	0.7	0.0	5.7	5.0								
Control Delay (s)	1.3	0.0	17.7	11.5								
Lane LOS	A		C	B								
Approach Delay (s)	1.3	0.0	17.7	11.5								
Approach LOS			C	B								
Intersection Summary												
Average Delay			4.1									
Intersection Capacity Utilization		45.7%			ICU Level of Service				A			
Analysis Period (min)			15									

Lanes, Volumes, Timings  
4: Northwood St & Huron Church

2037 BKGD PM TRAFFIC VOLUME  
11-17-2023

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	21	70	334	194	96	34	218	1441	145	43	1975	34
Future Volume (vph)	21	70	334	194	96	34	218	1441	145	43	1975	34
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	34.0		0.0	70.0		0.0	80.0		0.0	105.0		135.0
Storage Lanes	0		1	1		0	1		0	1		1
Taper Length (m)	10.0			15.0			15.0			20.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	1.00	0.91	1.00
Ped Bike Factor		1.00	0.97	0.98	0.99			1.00		1.00		0.96
Fr <sub>t</sub>			0.850		0.961			0.986				0.850
Flt Protected		0.989		0.950			0.950			0.950		
Satd. Flow (prot)	0	1792	1555	1789	1499	0	1437	4126	0	1393	4196	1103
Flt Permitted		0.936		0.693			0.073			0.079		
Satd. Flow (perm)	0	1692	1516	1277	1499	0	110	4126	0	116	4196	1061
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			363		11			14				113
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		186.9			279.6			226.1			251.1	
Travel Time (s)		13.5			20.1			16.3			18.1	
Confl. Peds. (#/hr)	8		8	15		15	15		15	8		8
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
Heavy Vehicles (%)	6%	6%	5%	2%	27%	8%	27%	27%	2%	31%	25%	48%
Adj. Flow (vph)	23	76	363	211	104	37	237	1566	158	47	2147	37
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	99	363	211	141	0	237	1724	0	47	2147	37
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		3.0			3.0			3.0			3.0	
Two way Left Turn Lane										Yes		
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)		25		15	25		15	25		15	25	15
Turn Type	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6		6	2			4			8		8
Minimum Split (s)	22.0	37.0	37.0	22.0	37.0		19.0	38.5		19.0	38.5	38.5
Total Split (s)	22.0	37.0	37.0	22.0	37.0		34.0	72.0		19.0	57.0	57.0
Total Split (%)	14.7%	24.7%	24.7%	14.7%	24.7%		22.7%	48.0%		12.7%	38.0%	38.0%
Maximum Green (s)	18.0	30.5	30.5	18.0	31.5		30.0	65.5		15.0	50.5	50.5
Yellow Time (s)	3.0	4.0	4.0	3.0	3.0		3.0	4.0		3.0	4.0	4.0
All-Red Time (s)	1.0	2.5	2.5	1.0	2.5		1.0	2.5		1.0	2.5	2.5
Lost Time Adjust (s)		0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)		6.5	6.5	4.0	5.5		4.0	6.5		4.0	6.5	6.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes		Yes	Yes	Yes
Walk Time (s)		10.0	10.0		10.0			14.0			14.0	14.0
Flash Dont Walk (s)		17.0	17.0		17.0			18.0			18.0	18.0
Pedestrian Calls (#/hr)		0	0		0			0			0	0



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Act Effct Green (s)	46.0	30.5	51.0	31.5			87.0	65.5		68.0	50.5	50.5
Actuated g/C Ratio	0.31	0.20	0.34	0.21			0.58	0.44		0.45	0.34	0.34
v/c Ratio	0.19	0.61	0.43	0.44			0.72	0.95		0.26	1.52	0.09
Control Delay	34.8	9.4	37.4	52.3			51.3	53.1		21.4	272.9	0.4
Queue Delay	0.0	0.0	0.0	0.0			0.0	0.0		0.0	0.0	0.0
Total Delay	34.8	9.4	37.4	52.3			51.3	53.1		21.4	272.9	0.4
LOS	C	A	D	D			D	D		C	F	A
Approach Delay	14.9				43.3				52.9			263.1
Approach LOS	B				D				D			F

#### Intersection Summary

Area Type: Other

Cycle Length: 150

Actuated Cycle Length: 150

Offset: 0 (0%), Referenced to phase 3:SBL and 7:NBL, Start of Green

Natural Cycle: 150

Control Type: Pretimed

Maximum v/c Ratio: 1.52

Intersection Signal Delay: 142.4

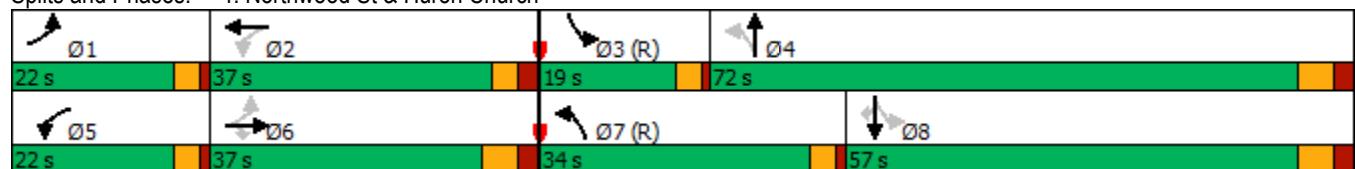
Intersection LOS: F

Intersection Capacity Utilization 103.6%

ICU Level of Service G

Analysis Period (min) 15

Splits and Phases: 4: Northwood St & Huron Church



Lanes, Volumes, Timings  
4: Northwood St & Huron Church

2037 TOTAL PM TRAFFIC VOLUME

12-12-2023

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	21	70	334	235	96	40	218	1624	169	60	2062	34
Future Volume (vph)	21	70	334	235	96	40	218	1624	169	60	2062	34
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	34.0		0.0	70.0		0.0	80.0		0.0	105.0		135.0
Storage Lanes	0		1	1		0	1		0	1		1
Taper Length (m)	10.0			15.0			15.0			20.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	1.00	0.91	1.00
Ped Bike Factor		1.00	0.97	0.98	0.99			0.99				0.96
Fr <sub>t</sub>			0.850		0.956			0.986				0.850
Flt Protected		0.989		0.950			0.950			0.950		
Satd. Flow (prot)	0	1792	1555	1789	1496	0	1437	4128	0	1393	4196	1103
Flt Permitted		0.935		0.693			0.073			0.079		
Satd. Flow (perm)	0	1691	1516	1277	1496	0	110	4128	0	116	4196	1061
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			363		13			15				113
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		186.9			279.6			226.1			251.1	
Travel Time (s)		13.5			20.1			16.3			18.1	
Confl. Peds. (#/hr)	8		8	15		15	15		15	8		8
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
Heavy Vehicles (%)	6%	6%	5%	2%	27%	8%	27%	27%	2%	31%	25%	48%
Adj. Flow (vph)	23	76	363	255	104	43	237	1765	184	65	2241	37
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	99	363	255	147	0	237	1949	0	65	2241	37
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		3.0			3.0			3.0			3.0	
Two way Left Turn Lane										Yes		
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)		25		15	25		15	25		15	25	15
Turn Type	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6		6	2			4			8		8
Minimum Split (s)	22.0	37.0	37.0	22.0	37.0		19.0	38.5		19.0	38.5	38.5
Total Split (s)	22.0	37.0	37.0	22.0	37.0		34.0	72.0		19.0	57.0	57.0
Total Split (%)	14.7%	24.7%	24.7%	14.7%	24.7%		22.7%	48.0%		12.7%	38.0%	38.0%
Maximum Green (s)	18.0	30.5	30.5	18.0	31.5		30.0	65.5		15.0	50.5	50.5
Yellow Time (s)	3.0	4.0	4.0	3.0	3.0		3.0	4.0		3.0	4.0	4.0
All-Red Time (s)	1.0	2.5	2.5	1.0	2.5		1.0	2.5		1.0	2.5	2.5
Lost Time Adjust (s)		0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)		6.5	6.5	4.0	5.5		4.0	6.5		4.0	6.5	6.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes		Yes	Yes	Yes
Walk Time (s)		10.0	10.0		10.0			14.0			14.0	14.0
Flash Dont Walk (s)		17.0	17.0		17.0			18.0			18.0	18.0
Pedestrian Calls (#/hr)	0	0		0			0			0	0	0



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Act Effct Green (s)	46.0	30.5	51.0	31.5			87.0	65.5		68.0	50.5	50.5
Actuated g/C Ratio	0.31	0.20	0.34	0.21			0.58	0.44		0.45	0.34	0.34
v/c Ratio	0.19	0.61	0.52	0.45			0.72	1.08		0.36	1.59	0.09
Control Delay	34.8	9.4	39.8	52.2			51.3	85.0		27.8	301.3	0.4
Queue Delay	0.0	0.0	0.0	0.0			0.0	0.0		0.0	0.0	0.0
Total Delay	34.8	9.4	39.8	52.2			51.3	85.0		27.8	301.3	0.4
LOS	C	A	D	D			D	F		C	F	A
Approach Delay	14.9				44.3			81.3			289.0	
Approach LOS	B				D			F			F	

#### Intersection Summary

Area Type: Other

Cycle Length: 150

Actuated Cycle Length: 150

Offset: 0 (0%), Referenced to phase 3:SBL and 7:NBL, Start of Green

Natural Cycle: 150

Control Type: Pretimed

Maximum v/c Ratio: 1.59

Intersection Signal Delay: 163.1

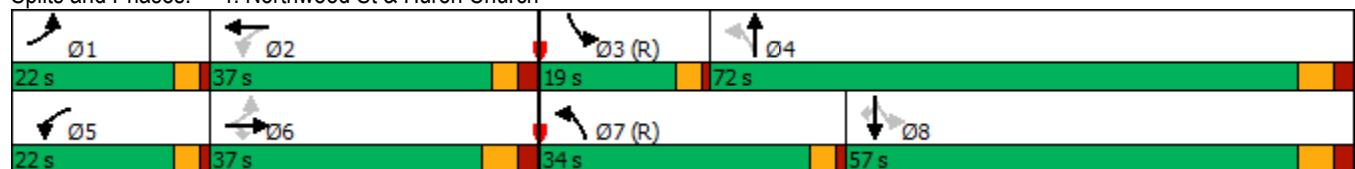
Intersection LOS: F

Intersection Capacity Utilization 105.3%

ICU Level of Service G

Analysis Period (min) 15

Splits and Phases: 4: Northwood St & Huron Church



Lanes, Volumes, Timings  
18: Northwood St & Daytona Ave

2037 TOTAL PM TRAFFIC VOLUME

12-12-2023



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	60	163	50	0	239	0	46	21	0	0	21	127
Future Volume (vph)	60	163	50	0	239	0	46	21	0	0	21	127
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	10.0		0.0	0.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (m)	7.5			7.5			7.5			7.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.975									0.884	
Flt Protected		0.989					0.967					
Satd. Flow (prot)	0	1816	0	0	1883	0	0	1821	0	0	1665	0
Flt Permitted		0.989					0.967					
Satd. Flow (perm)	0	1816	0	0	1883	0	0	1821	0	0	1665	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		279.6			194.7			55.0			102.2	
Travel Time (s)		20.1			14.0			4.0			7.4	
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
Adj. Flow (vph)	65	177	54	0	260	0	50	23	0	0	23	138
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	296	0	0	260	0	0	73	0	0	161	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		3.0			3.0			3.0			3.0	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Sign Control		Free			Free			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization	53.4%				ICU Level of Service A							
Analysis Period (min)	15											

## Appendix D

### PHOTOS



**Exhibit 3:** Looking north on Huron Church Road Toward Northwood Street



**Exhibit 4:** Looking south on Huron Church Road Toward Northwood Street



**Exhibit 5:** Looking west on Northwood Street toward Huron Church Road



**Exhibit 6:** Looking north on Daytona Ave toward Access Road



**Exhibit 7:** Looking north on Daytona Ave toward Northwood St



**Exhibit 8:** Looking north on Daytona Road toward Existing Access Road