HANLEY PARK NORTH SUBDIVISION EAST OF HAIG ROAD BELLEVILLE, ONTARIO

TRAFFIC IMPACT STUDY (REVISED)

December 8, 2021

D. J. Halpenny & Associates Ltd. Consulting Transportation Engineers P. O. Box 774, Manotick, Ontario K4M 1A7

HANLEY PARK NORTH SUBDIVISION EAST OF HAIG ROAD BELLEVILLE, ONTARIO

TRAFFIC IMPACT STUDY (REVISED)

December 8, 2021

Prepared for:

Hanley Park Developments Inc. 1058A Albion Road, Suite 207 Etobicoke, ON M9V 1A7

729 TIS Report_3.doc

D. J. Halpenny & Associates Ltd.

CONSULTING TRANSPORTATION ENGINEERS P.D. Box 774, Manotick, DN K4M 1A7 - Tel (613) 692-8662 - Fax (613) 692-1945

TABLE OF CONTENTS

PAGE

1.	NTRODUCTION	
2.	ADJACENT ROADS AND INTERSECTIONS	;
3.	PROPOSED HANLEY PARK NORTH SUBDIVISION	,
4.	ITRAFFIC ANALYSIS 9 4.1 Trip Generation 9 4.2 Trip Distribution 10	,
5.	TRAFFIC IMPACT 10 5.1 Background and Total Traffic Volumes 10 5.2 Traffic Analysis 16 5.3 Subdivision Roads and Accesses 21)
6.	FINDINGS AND RECOMMENDATIONS)
APPEN	DIX	ļ

LIST OF FIGURES

1.1	SITE LOCATION PLAN	
2.1	2020 PEAK AM AND PM HOUR TRAFFIC	
3.1	CONCEPTUAL SITE PLAN	
4.1	PEAK AM AND PM HOUR SITE GENERATED TRIPS	11
5.1	2020 PEAK AM AND PM HOUR TRAFFIC COUNTS (Pre-COVID-19)	13
5.2	2029 PEAK AM AND PM HOUR BACKGROUND TRAFFIC	14
5.3	2034 PEAK AM AND PM HOUR BACKGROUND TRAFFIC	15
5.4	2029 PEAK AM AND PM HOUR TOTAL TRAFFIC	17
5.5	2034 PEAK AM AND PM HOUR TOTAL TRAFFIC	

LIST OF TABLES

4.1	TRIP GENERATION RATES	9
4.2	PEAK HOUR SITE TRIPS GENERATED	9
5.1	OAK RIDGE/HAIG INTERSECTION – LOS & Delay	19
5.2	VICTORIA/HAIG INTERSECTION – LOS & Delay	20

HANLEY PARK NORTH SUBDIVISION EAST OF HAIG ROAD BELLEVILLE, ONTARIO

TRAFFIC IMPACT STUDY (REVISED)

1. INTRODUCTION

A Site Plan has been prepared for a development of a 35.16 ha parcel of vacant land at the east end of the City of Belleville in the County of Hastings. The subdivision will be located east of Haig Road and north of Victoria Avenue. The subdivision will consist of 74 single-family homes and 29 townhouses for a total of 103 dwelling units. The subdivision will be constructed in phases which will be dependent on market demands. Completion is expected by 2029. Figure 1.1 shows the location of the subdivision.

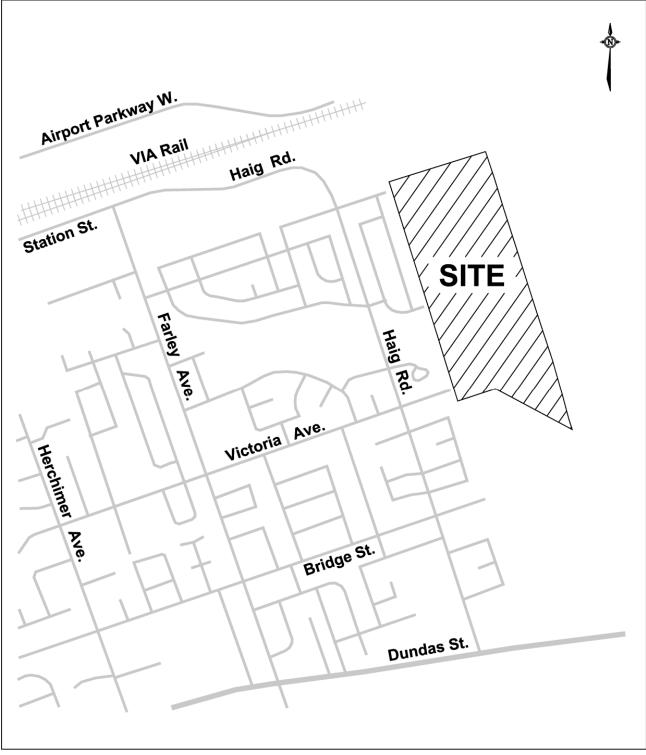
The subdivision will be known as Hanley Park North and will have two access points onto the municipal road network. The first access will be from Street A onto Haig Road by way of the local streets of Tessa Boulevard and Oak Ridge Boulevard which will serve 68 single-family homes and 29 townhouse units. The intersection of Oak Ridge Boulevard and Haig Road is controlled by all-way stop signs. The second access will be from Spruce Gardens onto Haig Road which is an all-way stop-controlled intersection which will serve 6 single-family subdivision homes.

The firm of D. J. Halpenny & Associates Ltd. has been retained by Hanley Park Developments Inc. to prepare a Traffic Impact Study report for the subdivision in support of the Draft Plan of Subdivision Application. The report will examine the impact that the site will have on the operation of the adjacent roads and intersections, and identify modifications to the road network which would be triggered by the subdivision.

1.1 Purpose and Scope of Work

The purpose of the Traffic Impact Study (TIS) will be to examine the major intersections within the study area which would be impacted by the expected trips from the proposed Hanley Park North Subdivision. The study will determine the operation of the accesses to the subdivision following development of the lands, and determine if the proposed accesses are sufficient for the development or if roadway modifications would be required. Following correspondence with staff of the City of Belleville, the study area will consist of the Oak Ridge/Haig intersection which will be the main access point to the subdivision, and the Victoria/Haig intersection which will be the first major intersection south of the site. The Spruce Gardens/Haig intersection will not be examined as the additional 6 future homes will have only a minor impact on the intersections in the area.

FIGURE 1.1 SITE LOCATION PLAN



The analysis will be conducted for the existing 2020 traffic, and traffic at both the completion of the subdivision in the year 2029 and at the year 2034 which represents five years beyond completion. The time period would be for the weekday peak AM and PM hours, which are expected to be the peak traffic periods for the residents of the subdivision and of the background traffic.

2. ADJACENT ROADS AND INTERSECTIONS

<u>Roadways</u>

Street A of the subdivision will connect to Haig Road by way of Tessa Boulevard and Oak Ridge Boulevard, which are both two lane urban local streets. Oak Ridge Boulevard is located approximately 390 m north of Victoria Avenue, connecting Haig Road with Tessa Boulevard. Tessa Boulevard connects to Oak Ridge Boulevard and terminates at a cul-de sac at the east end which will be the future access to the proposed subdivision. Both streets will have a pavement width of 8.0 m with a sidewalk along one side of the road. The speed limit is unposted with no parking restrictions along either road.

Haig Road is a north-south two lane collector road with a pavement width of 11.0 m. Haig Road has been extended in 2019 from Oak Ridge Boulevard to connect to Station Street at Farley Avenue. Sidewalks exist along both sides of the road and the speed limit is unposted at 50 km,/h. On-street parking is restricted along the west side of the road from Oak Ridge Boulevard south to Dundas Street. Along the east side parking is restricted between Oak Ridge Boulevard and Briarwood Crescent. Cycling lanes are provided along both sides of the road north from Oak Ridge Boulevard to Farley Avenue. Truck travel is prohibited north of Victoria Avenue to east of Farley Avenue.

Victoria Avenue is an east-west arterial road connecting to Front Street to the west and extends approximately 180 m east of Haig Road. Victoria Avenue is a two lane urban road with sidewalks along both sides of the road. On-street parking is permitted on both sides of the road. The speed limit is unposted at 50 km./h.

Intersections

The intersection of Oak Ridge Boulevard and Haig Road is an all-way stop-controlled intersection with Haig Road forming the northbound and southbound approaches, and Oak Ridge Boulevard the eastbound and westbound approaches. The following shows the lane configuration of the intersection:

Northbound Haig Road	One shared left/through/right lane (Stop Sign)
Southbound Haig Road	One shared left/through/right lane (Stop Sign)
Eastbound Oak Ridge Blvd.	One shared left/through/right lane (Stop Sign)
Westbound Oak Ridge Blvd.	One shared left/through/right lane (Stop Sign)



OAK RIDGE/HAIG INTERSECTION - Northbound Haig Rd. Approach

OAK RIDGE/HAIG INTERSECTION - Westbound Oak Ridge Blvd. Approach



The Victoria/Haig Intersection is a two-way stop-controlled intersection with Haig Road forming the north-south approaches and Victoria Avenue the east-west approaches. The following shows the lane configuration of the intersection:

Northbound Haig Road	One shared left/through/right lane
Southbound Haig Road	One shared left/through/right lane
Eastbound Victoria Avenue	One shared left/through/right lane (Stop Sign)
Westbound Victoria Avenue	One shared left/through/right lane (Stop Sign



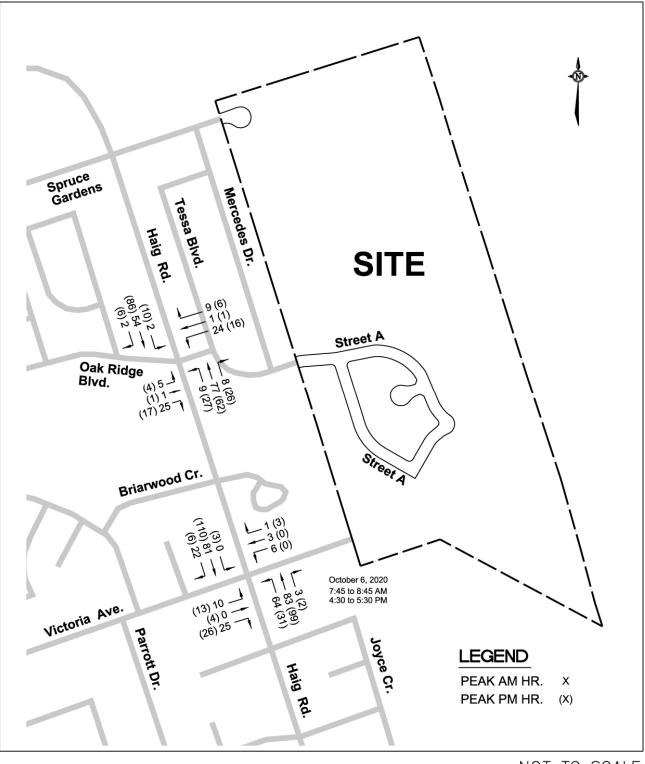
VICTORIA/HAIG INTERSECTION - Northbound Haig Rd. Approach

VICTORIA/HAIG INTERSECTION - Eastbound Victoria Ave. Approach



Figure 2.1 shows the peak AM hour traffic counts which occurred between 7:45 and 8:45 and peak PM hour traffic between 4:30 and 5:30 which were taken by the consultant on October 6, 2020. The 2020 counts are presented in the Appendix as Exhibit 1 for the Victoria/Haig intersection. The traffic for the Oak Ridge/Haig intersection was determined using a trip generation analysis of the development in the area assuming the completion of the homes along Tessa Boulevard and Mercedes

FIGURE 2.1 2020 PEAK AM AND PM HOUR TRAFFIC



NOT TO SCALE

Drive. The traffic volumes were then balanced with the counts taken at the Victoria/Haig intersection on October 6, 2020.

<u>Transit</u>

City of Belleville has a public transit system which provides two transit routes in close proximity to the site. Route 1 - Plaza, is a route which provides service downtown to City Hall/Terminal. The route travels southbound along Haig Road between Oak Ridge Boulevard and Victoria Avenue. Access from the subdivision to the bus stops along Haig Road would be from Oak Ridge Boulevard and the pedestrian walkway to Haig Road located 65 m south of Oak Ridge Boulevard. Route 2 - Parkwood Heights, is a route which travels northbound along Haig Road between Dundas Street and Victoria Avenue, providing service to the downtown and City Hall/Terminal.

3. PROPOSED HANLEY PARK NORTH SUBDIVISION

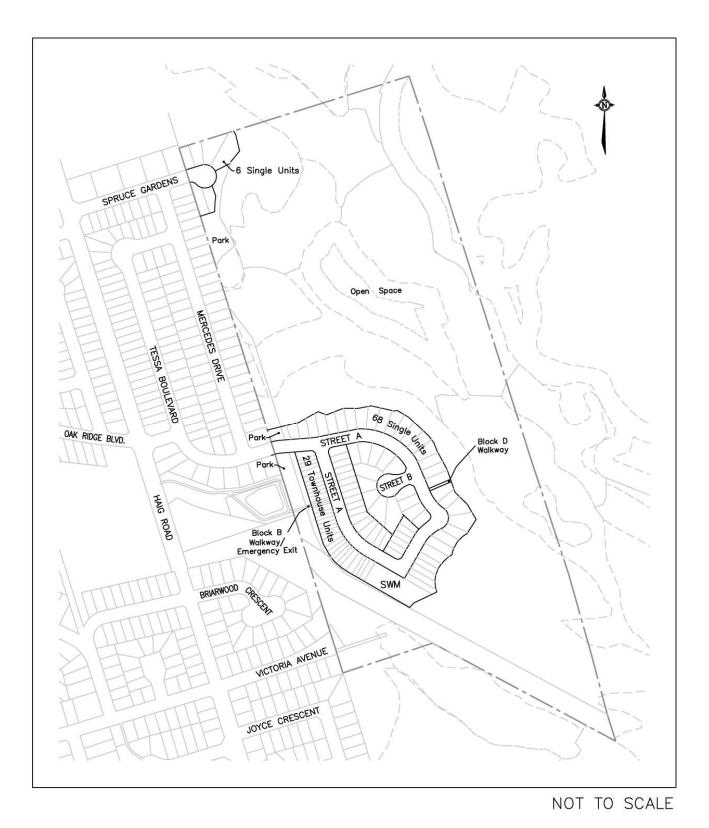
Hanley Park Developments Inc. has proposed the development of the Hanley Park North subdivision at the east limits of the City of Belleville. The subdivision will be located on 35.16 ha of vacant land just east of Haig Road and north of Victoria Avenue. Of the total parcel of land for the subdivision, 8.02 ha will be developable lands located in the south portion of the property, with 27.14 ha on the north portion and south property limit of the site which will be protected from development and retained in a natural state. The lands are current zoned Residential Holding zone (RH-1) and Environmental Control zone (E). The property will require a zoning by-law amendment application to rezone the property to support the proposed residential housing. The existing development surrounding the proposed subdivision consists of residential housing.

The subdivision will provide 103 homes which would consist of 74 single-family homes and 29 townhouse units. The subdivision will have one access point onto Haig Road from Oak Ridge Boulevard which will accommodate 97 dwelling units. Oak Ridge Boulevard connects to Tessa Boulevard which currently terminates at a cul-de-sac planned as a point of access for future development on the subject lands. A second access is provided along Spruce Gardens to Haig Road which will service 6 singlefamily homes. The subdivision will also provide an emergency access onto Haig Road through a recreational walkway along Block B which connects Street A to Haig Road approximately 65 m south of the Oak Ridge/Haig intersection. A second pedestrian walkway is provided along Block D at the east portion of the site which accesses the wetland and environmentally protected portion of the property.

All of the streets within the subdivision will be local streets with a sidewalk along one side of the road. On-street parking will be permitted within the subdivision.

The Hanley Park North subdivision will be constructed according to market demands with completion expected by the year 2029. A conceptual site plan for the subdivision is shown in Figure 3.1.

FIGURE 3.1 CONCEPTUAL SITE PLAN



4. TRAFFIC ANALYSIS

4.1 Trip Generation

The trip analysis for the subdivision was determined using the statistical data published in the Institute of Transportation Engineers (ITE) document, *Trip Generation*, 10th *Edition*. The analysis used the fitted curve equations for the housing, with the ITE Trip Graph for the "Single-Family Detached Housing (210)" provided as Exhibit 2 for the 74 single-family housing units, and the "Multifamily Housing (Low-Rise) (220)" land use provided as Exhibit 3 for the 29 townhouse units. Table 4.1 presents the trip generation rates which were derived from the ITE Trip Graph equations.

TABLE 4.1TRIP GENERATION RATES

RESIDENTIAL	ITE LAND USE	TRIP GENERATION RATE		
UNIT TYPE	TTE LAND USE	Peak AM Hr.	Peak PM Hr.	
74 Single Homes	Single-Family Detached Housing ITE Land Use Code 210	0.775 T/DU T = 0.71 (X) + 4.80	1.028 T/DU Ln(T) = 0.96 Ln(X) + 0.20	
29 Townhouse Units	Multifamily Housing (Low-Rise) ITE Land Use Code 220	0.507 T/DU Ln(T) = 0.95 Ln(X) - 0.51	0.677 T/DU Ln(T) = 0.89 Ln(X) - 0.02	

Table 4.2 shows the expected number of peak hour site generated trips for the site during the weekday peak AM and PM hour. The trip table has assumed a transit mode share of 5 percent of the trips. The reduction would account for public transit trips between the subdivision and the downtown core and bus terminal.

TABLE 4.2PEAK HOUR SITE TRIPS GENERATED

UNIT TYPE	WEEKDAY PEAK AM HR.			WEEKDAY PEAK PM HR.		
UNITITE	TOTAL	ENTER	EXIT	TOTAL	ENTER	EXIT
74 Single-Family Homes	57	14 (25%)	43 (75%)	76	48 (63%)	28 (37%)
29 Townhouse Units	15	3 (23%)	12 (77%)	20	13 (63%)	7 (37%)
5% Transit Reduction	<u>4</u>	<u>1</u>	<u>3</u>	<u>5</u>	<u>3</u>	<u>2</u>
TOTAL Site Trips	68	16	52	91	58	33

4.2 Trip Distribution

The distribution of expected site generated trips entering and exiting the Hanley Park North subdivision was determined from the examination of the 2020 peak hour traffic counts at the Victoria/Haig intersection which would show the traffic patterns in the area and would account for the extension of Haig Road to Station Street. These volumes would represent the weekday peak AM and PM hour commuter trips to/from the subdivision. The determination of trips also considered the shortest and most convenient routes to employment and retail areas. The site generated trips were distributed onto the adjacent roads to the following proportion:

To/From the North along Haig	55%	
To/From the South along Haig	$45\% \rightarrow$ To/From the East along Victoria	10%
	To/From the South along Haig	35%

Figure 4.1 shows the expected weekday peak AM and PM hour site generated trips for the Hanley Park North subdivision using the expected peak hour trips from Table 4.2.

5. TRAFFIC IMPACT

5.1 Background and Total Traffic Volumes

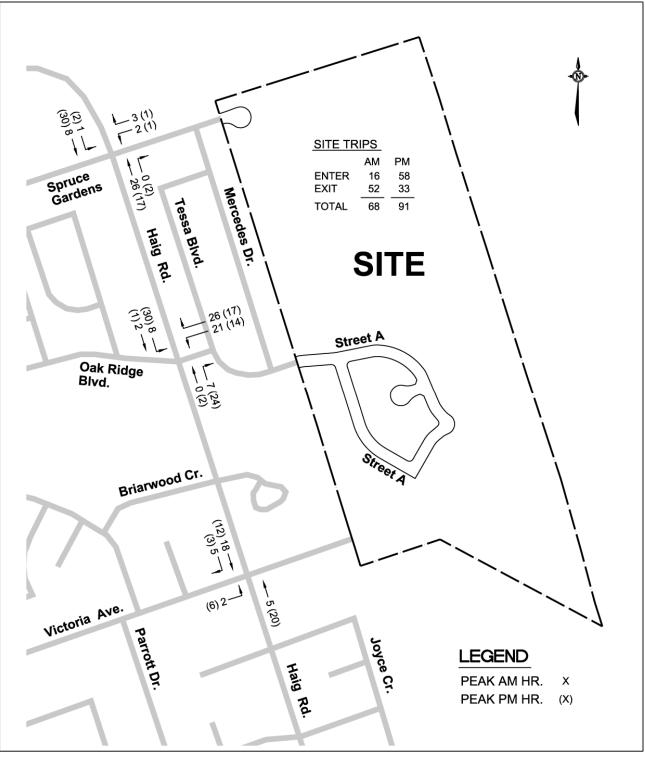
The background traffic would consist of the expected future traffic volumes which would include future development, but would not include the proposed Hanley Park North subdivision. The 2020 traffic counts taken at the intersection of Victoria Avenue and Haig Road were projected to the year 2029 when the total development is expected to be completed and the housing units substantially occupied.

The future background traffic was determined by applying the following two factors which would increase the October 6, 2020 traffic counts to the peak AM and PM hour pre-COVID-19 traffic (normalize to typical peak hour traffic), and the future traffic resulting from development outside the study area (future background traffic). The following are the two factors:

1) <u>Typical Peak Hour Traffic (pre-COVID-19)</u>

The October 6, 2020 traffic counts would need to be increased to account for the decreased traffic due to the COVID-19 outbreak which resulted from both the temporary job loss of some of the work force, and allowing some workers to work remotely from home. To convert the 2020 counts to the expected pre-COVID-19 traffic volumes, a conversion factor was applied to the counts. Traffic counts were obtained from the United Counties of Prescott and Russell which were taken along Russell Road 1.5 km. east of the Drouin/Russell intersection which would be influenced by Ottawa federal government employees working remotely. The location is approximately 2.5 km. east of the September 2020 counts at the east approach to the Drouin/Russell intersection.

FIGURE 4.1 PEAK AM AND PM HOUR SITE GENERATED TRIPS



NOT TO SCALE

The counts showed that the 2020 counts were 11 percent lower during the peak AM hour and 15 percent lower during the peak PM hour. The counts are shown below:

Count Date	АМ	PM
July 2018	491	524
September 2020	<u>441</u>	<u>457</u>
	-11%	-15%

The study has therefore assumed a 15 percent COVID-19 adjustment factor which was applied to all approaches of the Victoria/Haig and Oak Ridge/Haig intersections which converted the 2020 counts to pre-COVID-19 traffic volumes. The typical 2020 peak AM and PM hour traffic following the application of the pre-COVID-19 factor is shown in Figure 5.1.

2) Future 2029 and 2034 Background Traffic

The second factor represents the increase in traffic due to future development outside the study area. The study has examined the growth in population for the City of Belleville over the five year period between 2011 and 2016 from statistical data obtained from Canada Census. The census has shown the population to increase from 49,454 in 2011 to 50,716 in 2016. This would translate to an annual average compounded increase 0.505 percent. Utilizing the growth statistics discussed above, the study has assumed an annual average compounded growth of 1.0 percent which was applied to the traffic counts at all approaches to the Victoria/Haig and Oak Ridge/Haig intersections. The growth rate translates to the factors below which were applied to the typical traffic (pre-COVID-19) shown in Figure 5.1.

1.0% Annual Increase

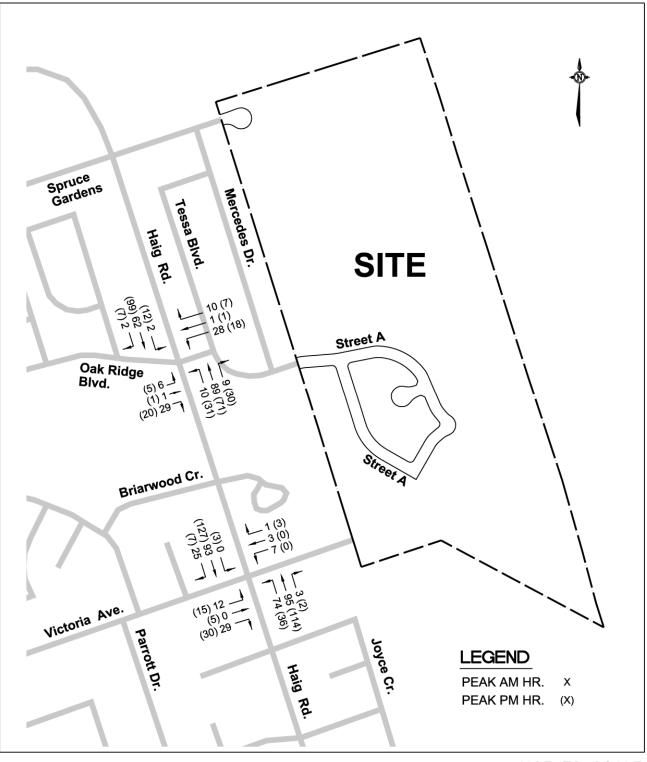
 $2020 \rightarrow 2029 \qquad 1.094$

 $2020 \rightarrow 2034 \qquad 1.149$

The subdivision is located at the east edge of the urban boundary of the City of Belleville. With the exception of the proposed Hanley Park South subdivision, which is now labeled the Parkville Greens Subdivision and is located between Janlyn Crescent and Bridge Street, the surrounding area is essentially built out with little growth in the next few years. The expected traffic following the development of the Hanley Park South subdivision was determined from the December 6, 2012 Traffic Impact Study Update report which was prepared by this firm. The future subdivision traffic was added to the background traffic.

Figure 5.2 shows the expected 2029 peak AM and PM hour background traffic utilizing the above growth factors (excluding site generated trips) plus the expected trips from the Hanley Park South subdivision. Figure 5.3 shows the 2034 peak hour background traffic.

FIGURE 5.1 2020 PEAK AM AND PM HOUR TRAFFIC COUNTS (Pre-COVID-19)



NOT TO SCALE

FIGURE 5.2 2029 PEAK AM AND PM HOUR BACKGROUND TRAFFIC

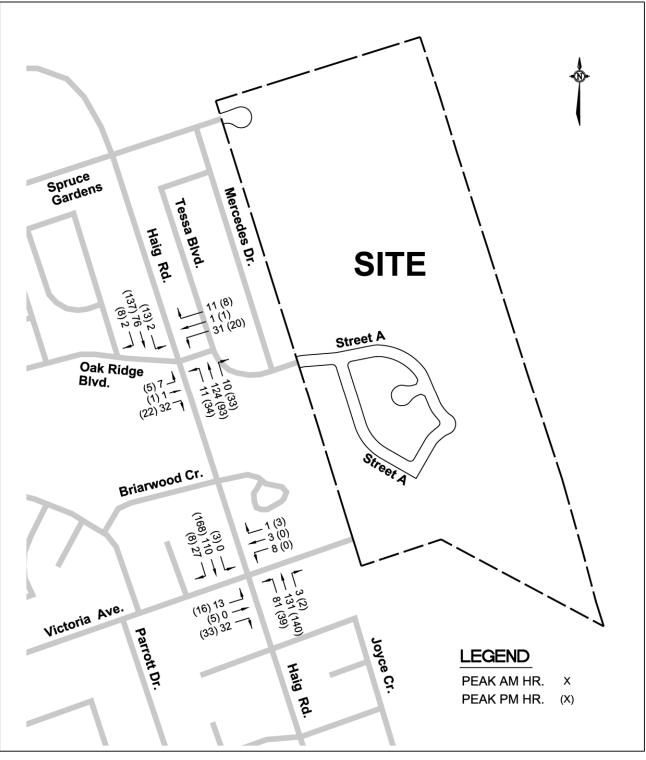
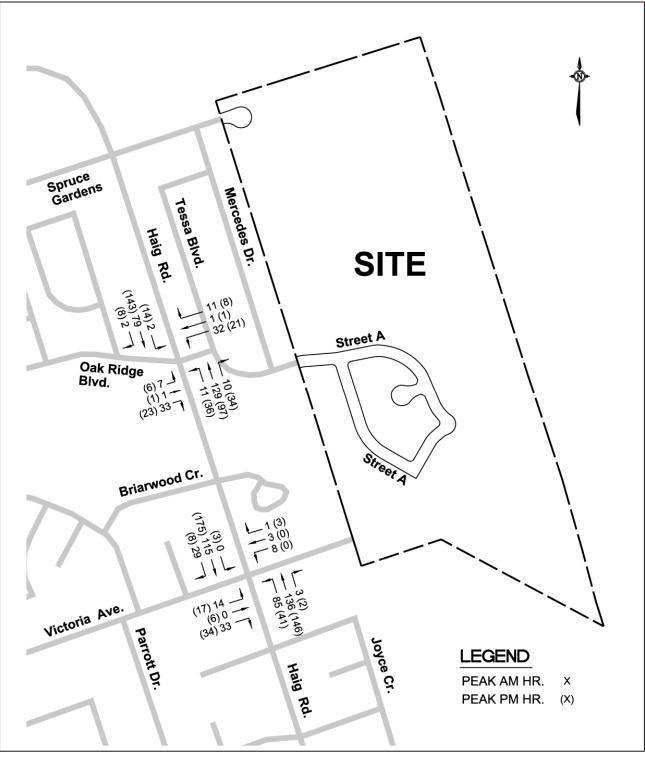


FIGURE 5.3 2034 PEAK AM AND PM HOUR BACKGROUND TRAFFIC



NOT TO SCALE

The total traffic volumes are the addition of the future background traffic and the expected site generated trips (Figure 4.1). Figure 5.4 shows the 2029 total volume of traffic and Figure 5.5 the 2034 total traffic.

5.2 Traffic Analysis

The Traffic Impact Study will examine the operation of the subdivision access onto Haig Road at the Oak Ridge/Haig intersection, and at the Victoria/Haig intersection located 390 m south of Oak Ridge Boulevard. The Spruce Gardens/Haig intersection was not examined as part of the study due to the low trips generated by the 6 single-family homes. The time period of the analysis would be the weekday peak AM and PM hour of the adjacent streets which was determined by the traffic counts. The study will examine the operation of the intersections for the traffic counts taken on October 6, 2020 which were adjusted to pre-COVID-19 volumes, at the year 2029 when the total subdivision is expected to be completed, and at the year 2034 which represents five years beyond completion. The analysis will utilize the *Highway Capacity Software, Version 7.9.5,* which uses the capacity analysis procedure as documented in the *Highway Capacity Manual (HCM) 2010 and HCM* 6th Edition.

For unsignalized intersections, the level of service of each lane movement and approach is determined as a function of the delay of vehicles at the approach. The following relates the level of service of each lane movement with the expected control delay at the approach.

LEVEL OF SERVICE DELAY

Level of Service A Level of Service B Level of Service C Level of Service D Level of Service E	0-10 sec./vehicle >10-15 sec./vehicle >15-25 sec./vehicle >25-35 sec./vehicle >35-50 sec./vehicle	Little or No Delay Short Traffic Delays Average Traffic Delays Long Traffic Delays Very Long Traffic Delays
		, ,
Level of Service F	>50 sec./vehicle	Extreme Delays – Demand Exceeds Capacity

The expected length of queue at the critical lane movements for an unsignalized intersection was determined by the calculation of the 95th percentile queue at the lane approach as shown on the analysis work sheets provided in the Appendix. The 95th percentile queue length is the calculated 95th greatest queue length out of 100 occurrences at a movement during a 15-minute peak period. The 95th percentile queue length is a function of the capacity of a movement and the total expected traffic, with the calculated value determining the magnitude of the queue by representing the queue length as fractions of vehicles.

The results of the analysis are discussed in detail in the following sections:

Oak Ridge Boulevard/Haig Road Intersection

The Hanley Park North subdivision will have one access onto the surrounding roadway network for the 97 dwelling units. The access will be from Street A which will connect to

FIGURE 5.4 2029 PEAK AM AND PM HOUR TOTAL TRAFFIC

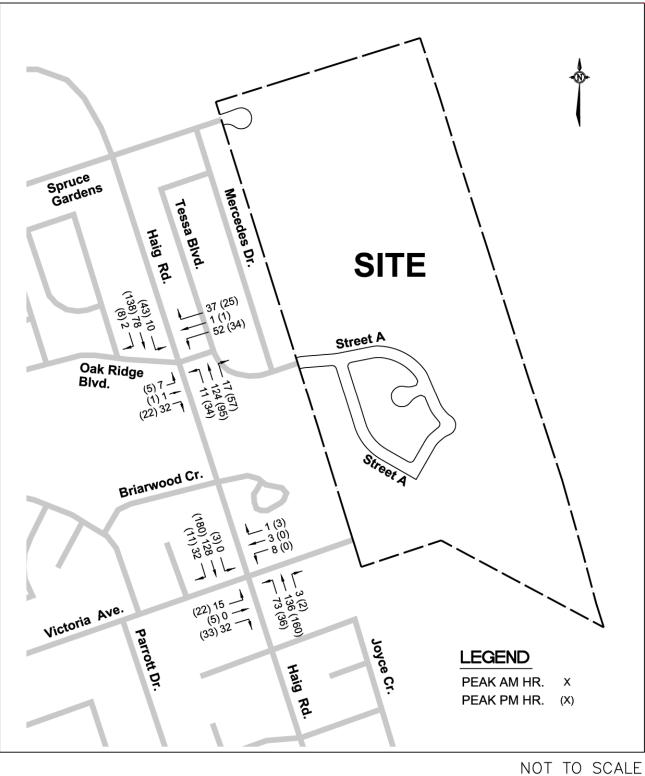
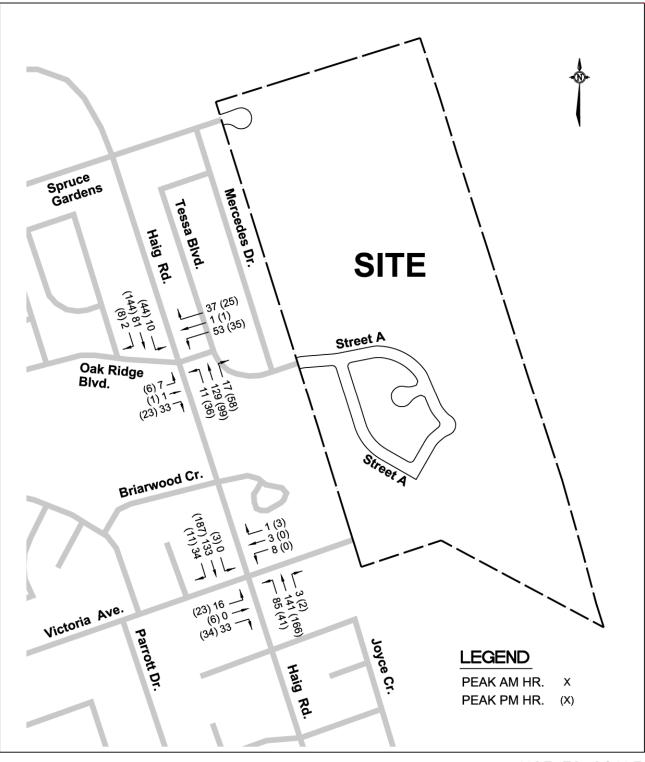


FIGURE 5.5 2034 PEAK AM AND PM HOUR TOTAL TRAFFIC



Tessa Boulevard, then to Haig Road by way of a 50 m section of Oak Ridge Boulevard linking Tessa Boulevard to Haig Road. All site generated traffic for the 97 units would access the site from the existing intersection of Oak Ridge Boulevard and Haig Road.

The Oak Ridge/Haig intersection is an all-way stop-controlled intersection with Haig Road forming the northbound and southbound approaches, and Oak Ridge Boulevard the eastbound and westbound approaches. All approaches will comprise of one lane having shared left/through/right vehicle movements.

An operational analysis was conducted for the 2020 typical traffic (pre-COVID-19) using the adjusted traffic of Figure 5.1. The analysis determined that all approaches to the intersection currently function at a Level of Service (LOS) "A" during both the peak AM and PM hour time periods. The operation of the all-way stop-controlled intersection is summarized in Table 5.1 with the analysis sheets provided in the Appendix as Exhibit 4 for the peak AM hour and Exhibit 5 for the peak PM hour.

TABLE 5.1OAK RIDGE/HAIG INTERSECTION – LOS & Delay

Intersection Approach	PEAK AM HOUR YEAR 2020 (2029) 2034		PEAK PM HOUR YEAR 2020 (2029) 2034	
	LOS	Delay (sec.)	LOS	Delay (sec.)
EB Left/Through/Right – Oak Ridge	A (A) A	7.1 (7.4) 7.4	A (A) A	7.2 (7.7) 7.7
WB Left/Through/Right – Oak Ridge	A (A) A	7.6 (8.0) 8.1	A (A) A	7.7 (8.2) 8.2
NB Left/Through/Right – Haig	A (A) A	7.8 (8.3) 8.4	A (A) A	7.9 (8.5) 8.6
SB Left/Through/Right – Haig	A (A) A	7.6 (8.0) 8.1	A (A) A	7.9 (8.8) 8.9

Following the completion of the subdivision in 2029, all approaches to the intersection would continue to function at a LOS "A" during both the peak AM and PM hours. A summary of the intersection is presented in Table 5.1 with the analysis sheets provided as Exhibit 6 and Exhibit 7.

The operation of the intersection using the expected 2034 traffic, which represents five years beyond completion of the subdivision, determined that all approaches continued to function at a LOS "A" during the peak AM and PM hours. Table 5.1 summarizes the 2034 operation of the intersection with the analysis sheets provided as Exhibits 8 and 9.

The 95th percentile queue at the intersection utilizing the expected 2034 traffic determined that the queue at the westbound Oak Ridge Boulevard approach would be 0.4 vehicles during the peak AM hour. The northbound and southbound Haig Road approaches determined a 95th percentile queue of 1.0 vehicle during the peak PM hour.

of the Hanley Park North subdivision, the intersection of Oak

Following the completion of the Hanley Park North subdivision, the intersection of Oak Ridge Boulevard and Haig Road would operate at an acceptable level of service with no roadway or intersection modifications triggered by the construction of the proposed subdivision.

Victoria Avenue and Haig Road Intersection

The intersection of Victoria Avenue and Haig Road is located 390 m south the intersection of Oak Ridge Boulevard and Haig Road. The Victoria/Haig intersection is a two-way stop-controlled intersection with stop signs placed at the eastbound and westbound Victoria Avenue approaches. All approaches to the intersection would be a single lane, each allowing shared left/through/right vehicular movements.

The operational analysis for the typical 2020 traffic (Figure 5.1) determined that during the peak AM hour the northbound and southbound Haig Road approaches and eastbound Victoria Avenue approach functioned at a LOS "A", and the westbound Victoria Avenue approach at a LOS "B". During the peak PM hour the northbound and southbound Haig Road approaches and westbound Victoria Avenue approach functioned at a LOS "A" and eastbound Victoria Avenue approach at a LOS "B". The 2020 operation of the intersection is summarized in Table 5.2 with the analysis sheets provided as Exhibit 10 for the peak AM hour and Exhibit 11 for the peak PM hour.

Intersection Approach	PEAK AM HOUR YEAR 2020 (2029) 2034		PEAK PM HOUR YEAR 2020 (2029) 2034	
	LOS	Delay (sec.)	LOS	Delay (sec.)
EB Left/Through/Right – Victoria	A (B) B	9.9 (10.5) 10.8	B (B) B	10.2 (11.3) 11.5
WB Left/Through/Right – Victoria	B (B) B	11.8 (12.8) 13.3	A (A) A	8.9 (9.1) 9.2
NB Left/Through/Right – Haig	A (A) A	3.6 (3.0) 3.3	A (A) A	2.9 (1.6) 1.8
SB Left/Through/Right – Haig	A (A) A	0.0 (0.0) 0.0	A (A) A	0.2 (0.1) 0.1

TABLE 5.2VICTORIA/HAIG INTERSECTION – LOS & Delay

For the expected 2029 traffic following the completion of the subdivision, the Haig Road approaches functioned at a LOS "A" and Victoria Avenue approaches at a LOS "B" during the peak AM hour. During the peak PM hour the northbound and southbound Haig Road approaches and westbound Victoria Avenue approach would function at a LOS "A", and the eastbound Victoria Avenue approach at a LOS "B". The 2029 operation of the intersection is summarized in Table 5.2 with the analysis sheets provided as Exhibit 12 and Exhibit 13.

At the year 2034 the intersection would continue to operate at the same level of service as the 2029 traffic. Table 5.2 summarizes the 2034 operation of the intersection with the analysis sheets provided as Exhibit 14 for the peak AM hour and Exhibit 15 for the peak PM hour.

Utilizing the 2034 traffic volumes, the 95th percentile queue at the eastbound Victoria Avenue approach was determined to be 0.4 vehicles during the peak PM hour.

Following the completion of the Hanley Park North subdivision, the intersection of Victoria Avenue and Haig Road would operate at an acceptable level of service with no roadway or intersection modifications triggered by the construction of the proposed subdivision.

5.3 Subdivision Roads and Accesses

The main access to the Hanley Park North subdivision will be from Street A connecting to Tessa Boulevard which currently ends at a cul-de-sac. The photo below shows the point of connection between Street A and Tessa Boulevard.

STREET A/TESSA CONNECTION - Eastbound Street A Approach



The photo was taken at the intersection of Tessa Boulevard and Mercedes Drive, looking east to the Street A connection. Roadway modifications due to the development of the subdivision would be the installation of a stop sign at the southbound Mercedes Drive approach to the Mercedes/Tessa intersection.

The main street through the subdivision will be Street A, with a 40 m minor street labeled Street B connecting to Street A. All streets within the subdivision will have a pavement width of 8.0 m.

Page 22

There is an emergency access onto Haig Road through a recreational walkway along Block B which connects Street A to Haig Road approximately 65 m south of the Oak Ridge/Haig intersection. The emergency access will be 9.0 m in width.

6. FINDINGS AND RECOMMENDATIONS

A site plan has been prepared for a 35.16 ha parcel of land at the east limit of the City of Belleville. The subdivision is called Hanley Park North and will contain 74 single-family homes and 29 townhouse units constructed on 8.02 ha of developable land. The subdivision is divided into two portions:

- a) The north portion will contain 6 single-family homes at the easterly extension of Spruce Gardens. Access to Haig Road will be from Spruce Gardens. The 6 homes will be isolated from the rest of the subdivision.
- b) The south portion will have one access point onto Haig Road from a connection to Tessa Boulevard. The connection to the subdivision will be along Street A onto Tessa Boulevard, then along a 50 m length of Oak Ridge Boulevard to Haig Road. The south portion will contain 68 single-family homes and 29 townhouses.

The Traffic Impact Study report has examined the impact of the subdivision trips at the intersection of Oak Ridge Boulevard and Haig Road, and at the intersection of Victoria Avenue and Haig Road which is located 390 m south of Oak Ridge Boulevard. The analysis was conducted for the 2020 traffic, at the year 2029 which is when completion of the subdivision is expected, and at the year 2034 which represents five years beyond completion. The 2020 traffic counts were adjusted to account for the reduction of traffic due to the COVID-19 outbreak. The operation of the intersections was determined for the weekday peak AM and PM hours. The findings and recommendations of the study are summarized in the following:

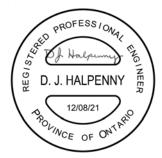
- 1. The trip generation analysis determined that the Hanley Park North subdivision would generate 16 vehicles entering and 52 vehicles exiting the site during the weekday peak AM hour for a total of 68 vehicle trips, and 58 vehicles entering and 33 vehicles exiting during the peak PM hour for a total of 91 vehicle trips.
- 2. The 2020 traffic counts were adjusted to account for the decrease in peak hour traffic due to the COVID-19 outbreak. The counts were increase by a factor of 15 percent at all approaches to the intersections examined. The adjustment factor was determined from a comparison of 2018 and 2020 peak hour traffic counts taken along an arterial road at the east limit of the City of Ottawa.
- The connection of Street A to Tessa Boulevard would be at the southeast leg of Tessa Boulevard. The existing cul-de-sac would be removed and replaced by the Street A connection. A stop sign is recommended at the southbound Mercedes Drive approach to the Mercedes/Tessa intersection.

- 4. An operational analysis for the Oak Ridge/Haig intersection determined that the intersection would operate at an acceptable level of service for the expected peak AM and PM hour traffic at the year 2034. There would be no modifications required to the intersection.
- 5. Following the development of the site, the intersection of Victoria/Haig which is located 390 south of Oak Ridge Boulevard, would operate at an acceptable level of service for the expected peak AM and PM hour traffic at the year 2034. There would be no modifications required to the intersection.
- The Site Plan provides an emergency access to/from the subdivision. The emergency access will connect Street A to Haig Road through a recreational walkway along Block B. The walkway is located approximately 65 m south of the Oak Ridge/Haig intersection.

Prepared by:

David J. Walsum

David J. Halpenny, M. Eng., P. Eng.



APPENDIX

TRAFFIC COUNTS

ITE TRIP GENERATION DATA SHEETS

OPERATIONAL ANALYSIS WORK SHEETS

EXHIBIT 1 PEAK AM AND PM HOUR TRAFFIC COUNTS (October 6, 2020) – Victoria/Haig

All Vehicles

Time Period	No	rthbou	nd	So	uthbou	nd	E	astbou	nd	W	estbou	nd	
AM	LT	ST	RT	Total									
07:00 - 07:15	3	12	1	0	12	0	0	0	0	0	0	0	28
07:15 - 07:30	6	12	0	1	13	1	0	0	1	0	0	0	34
07:30 - 07:45	9	20	0	0	12	1	0	0	5	2	0	0	49
07:45 - 08:00	24	20	0	0	17	3	1	0	5	1	1	0	72
08:00 - 08:15	21	18	1	0	27	12	5	0	5	1	1	0	91
08:15 - 08:30	15	22	1	0	25	3	4	0	11	2	1	0	84
08:30 - 08:45	4	23	1	0	12	4	0	0	4	2	0	1	51
08:45 - 09:00	2	21	1	0	24	3	1	0	5	1	0	1	59
PM													
03:30 - 03:45	6	19	1	0	17	3	4	0	5	0	0	1	56
03:45 - 04:00	8	34	1	0	30	5	2	1	11	1	1	0	94
04:00 - 04:15	4	19	0	1	29	9	4	0	8	1	0	0	75
04:15 - 04:30	4	24	1	0	19	2	6	1	6	1	0	0	64
04:30 - 04:45	7	23	0	0	21	2	2	0	4	0	0	1	60
04:45 - 05:00	9	21	1	1	35	1	2	1	8	0	0	0	79
05:00 - 05:15	7	29	1	1	36	3	6	1	6	0	0	0	90
05:15 - 05:30	8	26	0	1	18	0	3	2	8	0	0	2	68

Truck & Bus Traffic

Time Period	No	rthbou	nd	So	uthbou	nd	E	astbou	nd	W	estbou	nd	
AM	LT	ST	RT	Total									
07:00 - 07:15	1	0	0	0	0	0	0	0	0	0	0	0	1
07:15 - 07:30	0	0	0	0	1	0	0	0	0	0	0	0	1
07:30 - 07:45	1	0	0	0	0	1	0	0	0	0	0	0	2
07:45 - 08:00	4	1	0	0	1	0	0	0	1	0	0	0	7
08:00 - 08:15	2	0	0	0	1	1	0	0	0	0	0	0	4
08:15 - 08:30	1	1	0	0	1	0	0	0	0	0	0	0	3
08:30 - 08:45	1	1	0	0	1	0	0	0	0	0	0	0	3
08:45 - 09:00	0	1	0	0	1	0	0	0	0	0	0	0	2
PM													
03:30 - 03:45	2	0	0	0	0	0	2	0	0	0	0	0	4
03:45 - 04:00	0	0	0	0	1	0	1	0	1	0	0	0	3
04:00 - 04:15	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 - 04:30	1	0	0	0	1	0	0	0	0	0	0	0	2
04:30 - 04:45	1	0	0	0	0	0	0	0	0	0	0	0	1
04:45 - 05:00	0	0	0	0	1	0	0	0	0	0	0	0	1
05:00 - 05:15	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 - 05:30	0	1	0	0	1	0	0	0	0	0	0	0	2

EXHIBIT 2 ITE TRIP GENERATION MANUAL 10th Ed. – Single-Family Detached Housing (210)

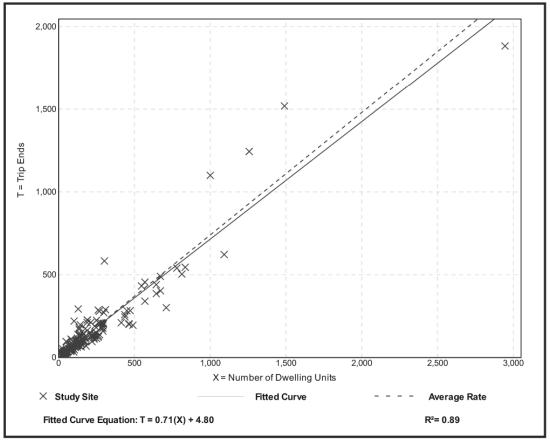
Single-Family Detached Housing (210)

· · · · · · · · · · · · · · · · · · ·	/
Vehicle Trip Ends vs:	Dwelling Units
On a:	Weekday,
	Peak Hour of Adjacent Street Traffic,
	One Hour Between 7 and 9 a.m.
Setting/Location:	General Urban/Suburban
Number of Studies:	173
Avg. Num. of Dwelling Units:	219
Directional Distribution:	25% entering, 75% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.74	0.33 - 2.27	0.27

Data Plot and Equation



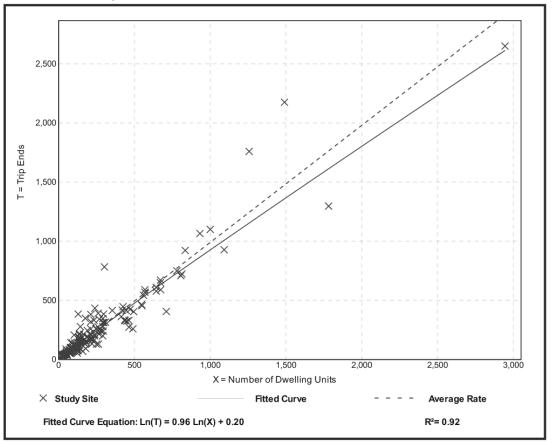
Single-Family Detached Housing (210)

Vehicle Trip Ends vs: On a:	Dwelling Units Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m.
Setting/Location:	General Urban/Suburban
Number of Studies:	190
Avg. Num. of Dwelling Units: Directional Distribution:	242 63% entering, 37% exiting
	se ve enternig, er ve extang

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.99	0.44 - 2.98	0.31

Data Plot and Equation



Trip Generation Manual 10th Edition • Volume 2: Data • Residential (Land Uses 200-299)



EXHIBIT 3 ITE TRIP GENERATION MANUAL 10th Edition – Multifamily Housing (Low-Rise) (220)

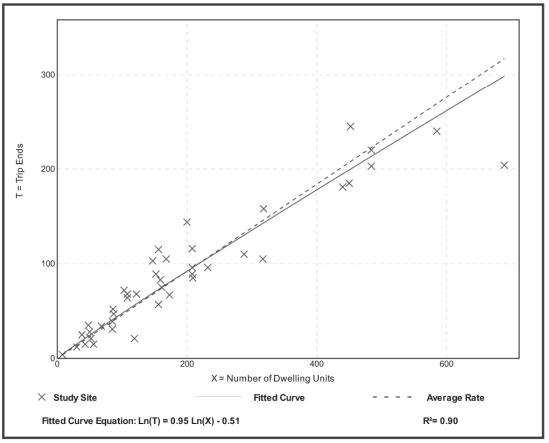
Multifamily Housing (Low-Rise) (220)

(
Vehicle Trip Ends vs:	Dwelling Units
On a:	Weekday,
	Peak Hour of Adjacent Street Traffic,
	One Hour Between 7 and 9 a.m.
Setting/Location:	General Urban/Suburban
Number of Studies:	42
Avg. Num. of Dwelling Units:	199
Directional Distribution:	23% entering, 77% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.46	0.18 - 0.74	0.12

Data Plot and Equation





Multifamily Housing (Low-Rise) (220)

Vehicle Trip Ends vs: On a:	Dwelling Units Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m.
Setting/Location:	General Urban/Suburban
Number of Studies:	50
Avg. Num. of Dwelling Units:	
Directional Distribution:	63% entering, 37% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.56	0.18 - 1.25	0.16

Data Plot and Equation

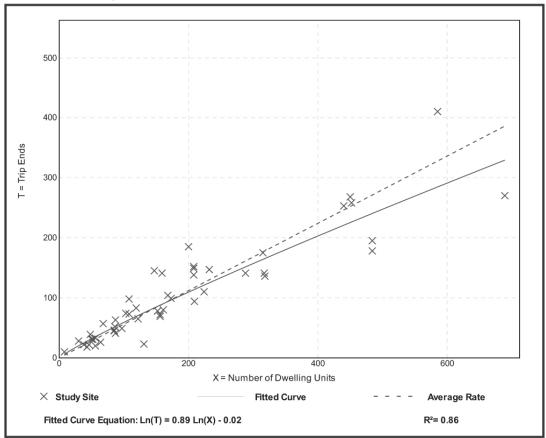




EXHIBIT 4 2020 WEEKDAY PEAK AM HOUR ANALYSIS (Pre-COVID-19) – Oak Ridge/Haig

General Information					Site In	format	ion					
Analyst					Intersec	tion			Oak Rid	ge/Haig		
Agency/Co.					Jurisdict	tion				Belleville		
Date Performed	11/19/2	020			East/We	est Street			Oak Rid	ge Bouleva	rd	
Analysis Year	2020				North/S	outh Stree	t		Haig Ro	ad		
Analysis Time Period (hrs)	0.25				Peak Ho	our Factor			0.92			_
Time Analyzed	Peak AM	/ Hour Pre	-COVID-19)								
Project Description	Hanley	Park North	Subdivisio	n								_
Lanes												
			1417471 4	<u>ነ ተ ቀ</u> ነ	₽ Y ↑ ₽ 1	* * * *						
Vehicle Volume and Adjus	tments											
Approach		Eastbound			Westbound		<u> </u>	Northboun		<u> </u>	outhboun	
Movement	L	Т	R	L	Т	R	L	Т	R	L	Т	R
Volume	6	T 1	R 29	L 28	T 1	R 10	L 10	T 89	R 9	L 2	т 62	
Volume % Thrus in Shared Lane	6	1	29	28	1	10	10	89	9	2	62	2
Volume % Thrus in Shared Lane Lane	6 L1			28 L1			10 L1			2 		R 2 L3
Volume % Thrus in Shared Lane Lane Configuration	6 L1 LTR	1	29	28 L1 LTR	1	10	10 L1 LTR	89	9	2 L1 LTR	62	2
Volume % Thrus in Shared Lane Lane Configuration Flow Rate, v (veh/h)	6 L1 LTR 39	1	29	28 L1 LTR 42	1	10	10 L1 LTR 117	89	9	2 L1 LTR 72	62	2
Volume % Thrus in Shared Lane Lane Configuration Flow Rate, v (veh/h) Percent Heavy Vehicles	6 L1 LTR 39 1	1 L2	29	28 L1 LTR	1	10	10 L1 LTR	89	9	2 L1 LTR	62	2
Volume % Thrus in Shared Lane Lane Configuration Flow Rate, v (veh/h) Percent Heavy Vehicles	6 L1 LTR 39 1	1 L2	29	28 L1 LTR 42	1	10	10 L1 LTR 117	89	9	2 L1 LTR 72	62	2
Volume % Thrus in Shared Lane Lane Configuration Flow Rate, v (veh/h) Percent Heavy Vehicles	6 L1 LTR 39 1	1 L2	29	28 L1 LTR 42	1	10	10 L1 LTR 117	89	9	2 L1 LTR 72	62	2
Volume % Thrus in Shared Lane Lane Configuration Flow Rate, v (veh/h) Percent Heavy Vehicles Departure Headway and S	6 L1 LTR 39 1 Eervice Ti	1 L2	29	28 L1 LTR 42 1	1	10	10 L1 LTR 117 1	89	9	2 L1 LTR 72 1	62	2
Volume % Thrus in Shared Lane Lane Configuration Flow Rate, v (veh/h) Percent Heavy Vehicles Departure Headway and S Initial Departure Headway, hd (s)	6 L1 LTR 39 1 Eervice Ti 3.20	1 L2	29	28 L1 LTR 42 1 3.20	1	10	10 L1 LTR 117 1 3.20	89	9	2 L1 LTR 72 1 3.20	62	2
Volume % Thrus in Shared Lane Lane Configuration Flow Rate, v (veh/h) Percent Heavy Vehicles Departure Headway and S Initial Departure Headway, hd (s) Initial Departure Headway, hd (s) Final Depare of Utilization, x	6 L1 LTR 39 1 Service Ti 3.20 0.035 3.92 0.043	1 L2	29	28 L1 LTR 42 1 3.20 0.038 4.36 0.051	1	10	10 L1 LTR 117 1 3.20 0.104 4.13 0.135	89	9	2 L1 LTR 72 1 3.20 0.064 4.20 0.084	62	2
Volume Volume % Thrus in Shared Lane Lane Configuration Flow Rate, v (veh/h) Percent Heavy Vehicles Departure Headway, hd (s) Initial Degree of Utilization, x Final Departure Headway, hd (s)	6 L1 LTR 39 1 6 6 7 7 7 7 7 7 7 7 7 7 7 7 7	1 L2	29	28 L1 LTR 42 1 3.20 0.038 4.36	1	10	10 L1 LTR 117 1 3.20 0.104 4.13	89	9	2 L1 LTR 72 1 3.20 0.064 4.20	62	2
Volume Volume % Thrus in Shared Lane Lane Configuration Flow Rate, v (veh/h) Percent Heavy Vehicles Departure Headway, hd (s) Initial Degree of Utilization, x Final Departure Headway, hd (s) Final Degree of Utilization, x Move-Up Time, m (s) Service Time, ts (s)	6 L1 L1 39 1 CETTCE Ti 3.20 0.035 3.92 0.043 2.0 1.92	1 L2	29	28 L1 LTR 42 1 3.20 0.038 4.36 0.051	1	10	10 L1 LTR 117 1 3.20 0.104 4.13 0.135	89	9	2 L1 LTR 72 1 3.20 0.064 4.20 0.084	62	2
Volume Volume % Thrus in Shared Lane Lane Configuration Flow Rate, v (veh/h) Percent Heavy Vehicles Departure Headway, hd (s) Initial Degree of Utilization, x Final Degree of Utilization, x Move-Up Time, m (s)	6 L1 L1 39 1 CETTCE Ti 3.20 0.035 3.92 0.043 2.0 1.92	1 L2	29	28 L1 LTR 42 1 3.20 0.038 4.36 0.051 2.0	1	10	10 L1 LTR 1177 1 3.20 0.104 4.13 0.135 2.0	89	9	2 L1 LTR 72 1 3.20 0.064 4.20 0.084 2.0	62	2
Volume % Thrus in Shared Lane Lane Configuration Flow Rate, v (veh/h) Percent Heavy Vehicles Departure Headway, hd (s) Initial Degree of Utilization, x Final Departure Headway, hd (s) Final Degree of Utilization, x Move-Up Time, m (s) Service Time, ts (s)	6 L1 L1 39 1 CETTCE Ti 3.20 0.035 3.92 0.043 2.0 1.92	1 L2	29	28 L1 LTR 42 1 3.20 0.038 4.36 0.051 2.0	1	10	10 L1 LTR 1177 1 3.20 0.104 4.13 0.135 2.0	89	9	2 L1 LTR 72 1 3.20 0.064 4.20 0.084 2.0	62	2
Volume % Thrus in Shared Lane Lane Configuration Flow Rate, v (veh/h) Percent Heavy Vehicles Departure Headway and S Initial Departure Headway, hd (s) Initial Degree of Utilization, x Final Departure Headway, hd (s) Final Departure Headway, hd (s) Final Departure Headway, hd (s) Service Time, m (s) Service Time, ts (s)	6 L1 LTR 39 1 32 3.20 3.20 0.035 3.92 0.043 2.0 1.92 5.95	1 L2	29	28 L1 LTR 42 1 3.20 0.038 4.36 0.051 2.0 2.36	1	10	10 L1 LTR 117 1 3.20 0.104 4.13 0.135 2.0 2.13	89	9	2 L1 LTR 72 1 3.20 0.064 4.20 0.084 2.0 2.20	62	2
Volume % Thrus in Shared Lane Lane Configuration Flow Rate, v (veh/h) Percent Heavy Vehicles Departure Headway, hd (s) Initial Degree of Utilization, x Final Degreture Headway, hd (s) Final Degree of Utilization, x Move-Up Time, m (s) Service Time, ts (s) Capacity, Delay and Level Flow Rate, v (veh/h)	6 ↓	1 L2	29	28 L1 LTR 42 1 3.20 0.038 4.36 0.051 2.0 2.36	1	10	10 L1 LTR 1177 1 3.20 0.104 4.13 0.135 2.0 2.13	89	9	2 L1 LTR 72 1 3.20 0.064 4.20 0.084 2.0 2.20	62	2
Volume Vo	6 ↓	1 L2	29	28 L1 LTR 42 1 3.20 0.038 4.36 0.051 2.0 2.36 42 827	1	10	10 L1 LTR 117 1 3.20 0.104 4.13 0.135 2.0 2.13 2.13 117 871	89	9	2 L1 LTR 72 1 3.20 0.064 4.20 0.084 2.0 2.20 72 858	62	2
Volume Vo	6 ↓	1 L2	29	28 28 L1 LTR 42 1 3.20 0.038 4.36 0.051 2.0 2.36 42 827 0.2	1	10	10 L1 LTR 117 3.20 0.104 4.13 0.135 2.0 2.13 2.13 2.117 871 117 871 0.5	89	9	2 L1 LTR 72 1 3.20 0.064 4.20 0.084 2.0 2.20 72 858 0.3	62	2
Volume Vo	6 ↓	1 L2	29	28 L1 LTR 42 1 3.20 0.038 4.36 0.051 2.0 2.36 2.36 42 827 0.2 827 0.2	1	10	10 L1 LTR 117 3.20 0.104 4.13 0.135 2.0 2.13 2.13 117 871 871 0.5 7.8	89	9	2 L1 LTR 72 1 3.20 0.064 4.20 0.084 2.0 2.20 72 858 0.3 7.6	62	2

Copyright © 2021 University of Florida. All Rights Reserved.

Generated: 10/18/2021 4:30:30 PM

EXHIBIT 5 2020 WEEKDAY PEAK PM HOUR ANALYSIS (Pre-COVID-19) – Oak Ridge/Haig

General Information						format	leport					
									O al a Di d			
Analyst					Intersec				<u> </u>	ge/Haig		
Agency/Co.	11/10/2	020			Jurisdict					Belleville	rd	
Date Performed	2020	020				est Street			<u> </u>	ge Bouleva	ra	
Analysis Year Analysis Time Period (hrs)	0.25					outh Stree	t		Haig Ro 0.92	au		
Time Analyzed	_	1 Hour Pre-	-COVID-19		Feak HC				0.92			
Project Description		Park North										
Lanes	Hamey		Subulvisio									
			14 1 1 4 P 1		Þ.	* 74*71 P C						
Vehicle Volume and Adjus	tments			ግ ተ ቀ "	TTTT							
Area waa ah		Eastbound			Ale at la a conse				a		outhbound	4
Approach		EastDouliu			Westbound	1 	r	Northbound	u		outhoouth	u
Movement	L	T	R	L	T	R	L	T	R	L	T	R
	L 5			<u> </u>			<u> </u>			<u> </u>		
Movement	_	Т	R	L	Т	R	L	Т	R	L	Т	R
Movement Volume	_	Т	R	L	Т	R	L	Т	R	L	Т	R
Movement Volume % Thrus in Shared Lane	5	T 1	R 20	L 18	T 1	R 7	L 31	T 71	R 30	L 12	T 99	R 7
Movement Volume % Thrus in Shared Lane Lane	5 L1	T 1	R 20	L 18 L1	T 1	R 7	L 31 L1	T 71	R 30	L 12 L1	T 99	R 7
Movement Volume % Thrus in Shared Lane Lane Configuration	5 L1 LTR	T 1	R 20	L 18 L1 LTR	T 1	R 7	L 31 L1 LTR	T 71	R 30	L 12 L1 LTR	T 99	R 7
Movement Volume % Thrus in Shared Lane Lane Configuration Flow Rate, v (veh/h) Percent Heavy Vehicles	5 L1 LTR 28 1	T 1 L2	R 20	L 18 L1 LTR 28	T 1	R 7	L 31 L1 LTR 143	T 71	R 30	L 12 L1 LTR 128	T 99	R 7
Movement Volume % Thrus in Shared Lane Lane Configuration Flow Rate, v (veh/h) Percent Heavy Vehicles	5 L1 LTR 28 1	T 1 L2	R 20	L 18 L1 LTR 28	T 1	R 7	L 31 L1 LTR 143	T 71	R 30	L 12 L1 LTR 128	T 99	R 7
Movement Volume % Thrus in Shared Lane Lane Configuration Flow Rate, v (veh/h) Percent Heavy Vehicles Departure Headway and S	5 L1 LTR 28 1 ervice Ti	T 1 L2	R 20	L 18 L1 LTR 28 1	T 1	R 7	L 31 L1 LTR 143 1	T 71	R 30	L 12 L1 LTR 128 1	T 99	R 7
Movement Volume % Thrus in Shared Lane Lane Configuration Flow Rate, v (veh/h) Percent Heavy Vehicles Departure Headway and S Initial Departure Headway, hd (s)	5 L1 L1 28 1 ervice Ti 3.20	T 1 L2	R 20	L 18 L1 LTR 28 1 3.20	T 1	R 7	L 31 L1 LTR 143 1 3.20	T 71	R 30	L 12 L1 LTR 128 1 3.20	T 99	R 7
Movement Volume % Thrus in Shared Lane Lane Configuration Flow Rate, v (veh/h) Percent Heavy Vehicles Departure Headway and S Initial Departure Headway, hd (s) Initial Degree of Utilization, x	 5 L1 LTR 28 1 3.20 0.025 	T 1 L2	R 20	L 18 L1 LTR 28 1 	T 1	R 7	L 31 L1 LTR 143 1 3.20 0.128	T 71	R 30	L 12 L1 LTR 128 1 1 3.20 0.114	T 99	R 7
Movement Volume % Thrus in Shared Lane Lane Configuration Flow Rate, v (veh/h) Percent Heavy Vehicles Departure Headway and S Initial Departure Headway, hd (s) Initial Departure Headway, hd (s)	5 L1 LTR 28 1 Ervice Til 3.20 0.025 4.11	T 1 L2	R 20	L 18 L1 LTR 28 1 1 3.20 0.025 4.50	T 1	R 7	L 31 L1 LTR 143 1 3.20 0.128 4.08	T 71	R 30	L 12 L1 LTR 128 1 3.20 0.114 4.17	T 99	R 7
Movement Volume % Thrus in Shared Lane Lane Configuration Flow Rate, v (veh/h) Percent Heavy Vehicles Departure Headway, hd (s) Initial Degree of Utilization, x Final Departure Headway, hd (s) Final Degree of Utilization, x Move-Up Time, m (s) Service Time, ts (s)	5 L1 LTR 28 1 3.20 0.025 4.11 0.032 2.0 2.11	T 1 1 L2	R 20	L 18 L1 LTR 28 1 3.20 0.025 4.50 0.035	T 1	R 7	L 31 L1 LTR 143 1 3.20 0.128 4.08 0.163	T 71	R 30	L 12 L1 LTR 128 1 3.20 0.114 4.17 0.149	T 99	R 7
Movement Volume Volume % Thrus in Shared Lane Lane Configuration Flow Rate, v (veh/h) Percent Heavy Vehicles Departure Headway, hd (s) Initial Departure Headway, hd (s) Initial Departure Headway, hd (s) Final Departure Headway, hd (s) Final Degree of Utilization, x Final Degree of Utilization, x Move-Up Time, m (s)	5 L1 LTR 28 1 3.20 0.025 4.11 0.032 2.0 2.11	T 1 1 L2	R 20	L 18 L1 LTR 28 1 3.20 0.025 4.50 0.035 2.0	T 1	R 7	L 31 L1 LTR 143 1 3.20 0.128 4.08 0.163 2.0	T 71	R 30	L 12 L1 LTR 128 1 3.20 0.114 4.17 0.149 2.0	T 99	R 7
Movement Volume Volume % Thrus in Shared Lane Lane Configuration Flow Rate, v (veh/h) Percent Heavy Vehicles Departure Headway, hd (s) Initial Degree of Utilization, x Final Departure Headway, hd (s) Final Degree of Utilization, x Move-Up Time, m (s) Service Time, ts (s)	5 L1 LTR 28 1 3.20 0.025 4.11 0.032 2.0 2.11	T 1 1 L2	R 20	L 18 L1 LTR 28 1 3.20 0.025 4.50 0.035 2.0	T 1	R 7	L 31 L1 LTR 143 1 3.20 0.128 4.08 0.163 2.0	T 71	R 30	L 12 L1 LTR 128 1 3.20 0.114 4.17 0.149 2.0	T 99	R 7
Movement Volume % Thrus in Shared Lane Lane Configuration Flow Rate, v (veh/h) Percent Heavy Vehicles Departure Headway and S Initial Departure Headway, hd (s) Initial Departure Headway, hd (s) Final Headway, hd (s) Final Headway, hd (s) Final Headway, hd (s) Final Headway, hd (s) F	5 L1 LTR 28 1 3.20 0.025 4.11 0.032 2.0 2.11	T 1 1 L2	R 20	L 18 L1 LTR 28 1 3.20 0.025 4.50 0.035 2.0 2.50	T 1	R 7	L 31 L1 LTR 143 1 3.20 0.128 4.08 0.163 2.0 2.08	T 71	R 30	L 12 L1 LTR 128 1 3.20 0.114 4.17 0.149 2.0 2.17	T 99	R 7
Movement Volume % Thrus in Shared Lane Lane Configuration Flow Rate, v (veh/h) Percent Heavy Vehicles Departure Headway, hd (s) Initial Degree of Utilization, x Final Departure Headway, hd (s) Final Degree of Utilization, x Move-Up Time, m (s) Service Time, ts (s) Capacity, Delay and Level Flow Rate, v (veh/h)	5 L1 LTR 28 1 3.20 0.025 4.11 0.032 2.0 2.11	T 1 1 L2	R 20	L 18 L1 28 1 3.20 0.025 4.50 0.035 2.0 2.50	T 1	R 7	L 31 L1 LTR 143 1 3.20 0.128 4.08 0.163 2.0 2.08	T 71	R 30	L 12 L1 LTR 128 1 1 3.20 0.114 4.17 0.149 2.0 2.17	T 99	R 7
Movement Volume % Thrus in Shared Lane Lane Configuration Flow Rate, v (veh/h) Percent Heavy Vehicles Departure Headway, hd (s) Initial Degree of Utilization, x Final Departure Headway, hd (s) Final Degree of Utilization, x Move-Up Time, m (s) Service Time, ts (s) Capacity, Delay and Level Flow Rate, v (veh/h) Capacity	5 ↓ <	T 1 1 L2	R 20	L 18 L1 28 1 28 1 3.20 0.025 4.50 0.035 2.0 0.035 2.0 2.50	T 1	R 7	L 31 L1 LTR 143 1 3.20 0.128 4.08 0.163 2.0 2.08 2.08	T 71	R 30	L 12 L1 LTR 128 1 128 3.20 0.114 4.17 0.149 2.0 0.149 2.0 2.17	T 99	R 7
Movement Volume % Thrus in Shared Lane Lane Configuration Flow Rate, v (veh/h) Percent Heavy Vehicles Departure Headway and S Initial Departure Headway, hd (s) Initial Degree of Utilization, x Final Departure Headway, hd (s) Final Degree of Utilization, x Move-Up Time, m (s) Service Time, ts (s) Capacity, Delay and Level Flow Rate, v (veh/h) Capacity 95% Queue Length, Q ₉₅ (veh)	5 ↓ <	T 1 1 L2	R 20	L 18 L1 LTR 28 1 3.20 0.025 4.50 0.035 2.0 2.50 2.50 2.50	T 1	R 7	L 31 L1 LTR 143 1 3.20 0.128 4.08 0.163 2.0 2.08 2.08 2.08	T 71	R 30	L 12 L1 LTR 128 1 3.20 0.114 4.17 0.149 2.0 2.17 2.17 2.17 2.128 864 864 0.5	T 99	R 7
Movement Volume % Thrus in Shared Lane Lane Configuration Flow Rate, v (veh/h) Percent Heavy Vehicles Departure Headway, hd (s) Initial Departure Headway, hd (s) Initial Degree of Utilization, x Final Departure Headway, hd (s) Final Degree of Utilization, x Move-Up Time, m (s) Service Time, ts (s) Eapacity, Delay and Level Flow Rate, v (veh/h) Capacity 95% Queue Length, Q ₉₅ (veh) Control Delay (s/veh)	5 L1 LTR 28 1 3.20 4.11 0.025 4.11 2.0 2.11 2.11 2.11 2.11 0.032 2.0 2.11 0.11 7.2	T 1 1 L2	R 20	L 18 L1 L1 28 1 3.20 0.025 4.50 0.035 2.0 2.50 2.50 2.50 2.50 2.50 2.50 2.50	T 1	R 7	L 31 L1 L1 143 1 3.20 0.128 4.08 0.163 2.0 2.08 2.08 2.08 2.08 2.08 2.08 2.08	T 71	R 30	L 12 L1 LTR 128 1 1 3.20 0.114 4.17 0.149 2.0 2.17 2.17 128 864 864 0.5 7.9	T 99	R 7

Copyright © 2021 University of Florida. All Rights Reserved.

EXHIBIT 6 2029 WEEKDAY PEAK AM HOUR ANALYSIS – Oak Ridge/Haig

General Information					Site In	format	ion					
Analyst	1				Intersec				Oak Rid	ge/Haig		
Agency/Co.					Jurisdict				City of E			
Date Performed	11/19/2	020				est Street				ge Bouleva	rd	
Analysis Year	2029	020				outh Stree	t		Haig Ro	-		
Analysis Time Period (hrs)	0.25					our Factor			0.92			
Time Analyzed	Peak AN	/ Hour			- cult no				0101			
Project Description			Subdivisio	n								
Lanes												
			14 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	י זי ן לי י	4 1 1 1 1	****						
	tments	Easthound	1		Worthour	4		lorthbour	4		outhbour	d
Vehicle Volume and Adjus Approach Movement		Eastbound			Westbound			Northbound			Southboun	-
Approach Movement	L	Т	R	L	Т	R	L	Т	R	L	Т	R
Approach Movement Volume												R
Approach Movement Volume % Thrus in Shared Lane	L 5	T 1	R 32	L 52	T 1	R 37	L 11	T 124	R 17	L 10	T 78	R 2
Approach Movement Volume % Thrus in Shared Lane Lane	L 5 L L1	Т	R	L 52 L1	Т	R	L 11 L1	Т	R	L 10 L1	Т	R
Approach Movement Volume % Thrus in Shared Lane Lane Configuration	L 5 L1 LTR	T 1	R 32	L 52 L1 LTR	T 1	R 37	L 11 L1 LTR	T 124	R 17	L 10 L1 LTR	T 78	R 2
Approach Movement Volume % Thrus in Shared Lane Lane Configuration Flow Rate, v (veh/h)	L 5 L1 L1 LTR 41	T 1	R 32	L 52 L1 LTR 98	T 1	R 37	L 11 L1 LTR 165	T 124	R 17	L 10 L1 LTR 98	T 78	2
Approach Movement Volume % Thrus in Shared Lane Lane Configuration Flow Rate, v (veh/h) Percent Heavy Vehicles	L1 L1 L1 LTR 41 1	T 1 L2	R 32	L 52 L1 LTR	T 1	R 37	L 11 L1 LTR	T 124	R 17	L 10 L1 LTR	T 78	2
Approach Movement Volume % Thrus in Shared Lane Lane Configuration Flow Rate, v (veh/h) Percent Heavy Vehicles Departure Headway and S	L1 L1 LTR 41 1 ervice Ti	T 1 L2	R 32	L 52 L1 LTR 98 1	T 1	R 37	L 11 L1 LTR 165 1	T 124	R 17	L 10 L1 LTR 98 1	T 78	2
Approach Movement Volume % Thrus in Shared Lane Lane Configuration Flow Rate, v (veh/h) Percent Heavy Vehicles Departure Headway and S Initial Departure Headway, hd (s)	L1 L1 LTR L17 41 1 EVVICE TI 3.20	T 1 L2	R 32	L 52 L1 LTR 98 1 3.20	T 1	R 37	L 11 L1 LTR 165 1 3.20	T 124	R 17	L 10 L1 LTR 98 1 3.20	T 78	2
Approach Movement Volume % Thrus in Shared Lane Lane Configuration Flow Rate, v (veh/h) Percent Heavy Vehicles Departure Headway and S Initial Departure Headway, hd (s) Initial Degree of Utilization, x	LL1 LTR LL1 LTR 41 1 ETVICE TI 3.20 0.037	T 1 L2	R 32	L 52 L1 LTR 98 1	T 1	R 37	L 11 L1 LTR 165 1 3.20 0.147	T 124	R 17	L 10 L1 LTR 98 1	T 78	R 2
Approach Movement Volume % Thrus in Shared Lane Lane Configuration Flow Rate, v (veh/h) Percent Heavy Vehicles Departure Headway and S Initial Departure Headway, hd (s)	L1 L1 LTR L17 41 1 EVVICE TI 3.20	T 1 L2	R 32	L 52 L1 LTR 98 1 3.20	T 1	R 37	L 11 L1 LTR 165 1 3.20	T 124	R 17	L 10 L1 LTR 98 1 3.20	T 78	2
Approach Movement Volume % Thrus in Shared Lane Lane Configuration Flow Rate, v (veh/h) Percent Heavy Vehicles Departure Headway and S Initial Departure Headway, hd (s)	LL 5 LL LTR 41 1 Ervice Ti 3.20 0.037 4.15	T 1 L2	R 32	L 52 L1 LTR 98 1	T 1	R 37	L 11 L1 LTR 165 1 3.20 0.147 4.29	T 124	R 17	L 10 L1 UTR 98 1 3.20 0.087 4.42	T 78	R 2
Approach Movement Volume % Thrus in Shared Lane Lane Configuration Flow Rate, v (veh/h) Percent Heavy Vehicles Departure Headway and S Initial Departure Headway, hd (s) Initial Departure Headway, hd (s) Final Depare of Utilization, x	LL 5 LL LTR LTR 41 1 E U CC TI 3.20 0.037 4.15 0.048	T 1 L2	R 32	L 52 L1 LTR 98 1 3.20 0.087 4.43 0.120	T 1	R 37	L 11 L1 LTR 165 1 3.20 0.147 4.29 0.197	T 124	R 17	L 10 L1 LTR 98 1 3.20 0.087 4.42 0.120	T 78	R 2
Approach Movement Volume % Thrus in Shared Lane Lane Configuration Flow Rate, v (veh/h) Percent Heavy Vehicles Departure Headway and S Initial Departure Headway, hd (s) Initial Departure Headway, hd (s) Final Departure Headway, hd (s)	LL1 LL1 LTR 41 1 EVVICE TI 3.20 0.037 4.15 0.048 2.0 2.15	T 1 1 L2	R 32	L 52 L1 LTR 98 1 3.20 0.087 4.43 0.120 2.0	T 1	R 37	L 11 L1 LTR 165 1 3.20 0.147 4.29 0.197 2.0	T 124	R 17	L 10 L1 LTR 98 1 3.20 0.087 4.42 0.120 2.0	T 78	2
Approach Movement Volume % Thrus in Shared Lane Lane Configuration Flow Rate, v (veh/h) Percent Heavy Vehicles Departure Headway and S Initial Departure Headway, hd (s) Initial Departure Headway, hd (s) Final Departure Headway, hd (s)	LL1 LL1 LTR 41 1 EVVICE TI 3.20 0.037 4.15 0.048 2.0 2.15	T 1 1 L2	R 32	L 52 L1 LTR 98 1 3.20 0.087 4.43 0.120 2.0	T 1	R 37	L 11 L1 LTR 165 1 3.20 0.147 4.29 0.197 2.0	T 124	R 17	L 10 L1 LTR 98 1 3.20 0.087 4.42 0.120 2.0	T 78	2
Approach Movement Volume % Thrus in Shared Lane Lane Configuration Flow Rate, v (veh/h) Percent Heavy Vehicles Departure Headway and S Initial Departure Headway, hd (s) Initial Departure Headway, hd (s) Final Departure Headway, hd (s) Final Departure Headway, hd (s) Final Departure Headway, hd (s) Service Time, m (s) Service Time, ts (s)	L L1 L1 L1 L1 3.20 0.037 4.15 0.048 2.0 2.15	T 1 1 L2	R 32	L 52 L1 LTR 98 1 3.20 0.087 4.43 0.120 2.0 2.43	T 1	R 37	L 11 L1 LTR 165 1 3.20 0.147 4.29 0.197 2.0 2.29	T 124	R 17	L 10 L1 98 1 3.20 0.087 4.42 0.120 2.0 2.42	T 78	R 2
Approach Movement Volume % Thrus in Shared Lane Lane Configuration Flow Rate, v (veh/h) Percent Heavy Vehicles Departure Headway and S Initial Departure Headway, hd (s) Initial Departure Headway, hd (s) Final Headway, hd (s) Final Headway, hd (s) Fi	L L L L L L L L L L L L L L L L L L L	T 1 1 L2	R 32	L 52 L1 98 1 3.20 0.087 4.43 0.120 2.0 2.43	T 1	R 37	L 11 L1 L1 165 1 3.20 0.147 4.29 0.197 2.0 2.29	T 124	R 17	L 10 L1 98 1 3.20 0.087 4.42 0.020 2.0 2.42	T 78	2
Approach Movement Volume % Thrus in Shared Lane Lane Configuration Flow Rate, v (veh/h) Percent Heavy Vehicles Departure Headway and S Initial Departure Headway, hd (s) Initial Degree of Utilization, x Final Departure Headway, hd (s) Final Departure Head	L L S L1 L1 3.20 3.20 4.15 0.037 4.15 0.048 2.0 2.15 Structure 41 867	T 1 1 L2	R 32	L 52 L1 98 1 3.20 0.087 4.43 0.120 2.0 2.43 2.43	T 1	R 37	L 11 L1 LTR 165 1 3.20 0.147 4.29 0.147 4.29 0.197 2.0 2.29	T 124	R 17	L 10 L1 98 1 3.20 0.087 4.42 0.087 4.42 0.120 2.0 2.0 2.42	T 78	2
Approach Movement Volume % Thrus in Shared Lane Lane Configuration Flow Rate, v (veh/h) Percent Heavy Vehicles Departure Headway and S Initial Departure Headway, hd (s) Initial Degree of Utilization, x Final Departure Headway, hd (s) Service Time, m (s) Service Time, ts (s) Capacity, Delay and Level Flow Rate, v (veh/h) Capacity 95% Queue Length, Qas (veh)	L L1 L1 L1 L1 3.20 3.20 4.15 0.037 4.15 2.0 2.15 2.15 41 0.048 2.0 2.15 0.1	T 1 1 L2	R 32	L 52 4 98 1 3.20 0.087 4.43 0.120 2.0 2.43 2.43 98 813 0.4	T 1	R 37	L 11 L1 LTR 165 1 3.20 0.147 4.29 0.197 2.0 2.29 2.29 165 839 0.7	T 124	R 17	L 10 L1 LTR 98 1 3.20 0.087 4.42 0.120 2.0 2.0 2.2 2.0 2.42 98 814 0.4	T 78	R 2
Approach Movement Volume % Thrus in Shared Lane Lane Configuration Flow Rate, v (veh/h) Percent Heavy Vehicles Departure Headway and S Initial Departure Headway, hd (s) Initial Departure Headway, hd (s) Initial Departure Headway, hd (s) Final Headway, hd (s) Final Headway, hd (s) Fin	L L1 L1 L1 L1 1 1 2 3.20 0.037 4.15 0.048 2.0 2.15 Servic 41 867 0.1 7.4	T 1 1 L2	R 32	L 52 L1 4 98 1 3.20 0.087 4.43 0.087 4.43 0.20 2.0 2.0 2.43 8 13 0.120 2.0 2.43 2.0 2.43 2.0 2.43 2.0 4.43 0.120 2.0 4.43 2.0 4.43 0.120 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.	T 1	R 37	L 11 L1 L1 165 1 3.20 0.147 4.29 0.147 2.0 2.29 2.29 165 839 0.7 4.33	T 124	R 17	L 10 L1 S 98 1 3.20 0.087 4.42 0.087 2.0 2.0 2.0 2.42 3.42 98 814 98 814 0.4 8.0	T 78	F 2

Copyright © 2021 University of Florida. All Rights Reserved.

Generated: 10/18/2021 1:54:03 PM

EXHIBIT 7 2029 WEEKDAY PEAK PM HOUR ANALYSIS – Oak Ridge/Haig

Complete the state of the state					C:4 7	c	eport					
General Information					Site In	format	ion					
Analyst					Intersec	tion			Oak Rid	ge/Haig		
Agency/Co.					Jurisdict	ion			City of E	Belleville		
Date Performed	11/19/2	020			East/We	st Street			Oak Rid	ge Bouleva	rd	
Analysis Year	2029				North/S	outh Stree	t		Haig Ro	ad		
Analysis Time Period (hrs)	0.25				Peak Ho	ur Factor			0.92			
Time Analyzed	Peak PN	1 Hour										
Project Description	Hanley	Park North	Subdivisio	n								
Lanes												
Vehicle Volume and Adjus	tments		14 1 4 4 4 b) (†) (÷						
venicie volume and Aujus	unents											
A reserve a sh		E a stille a sure of						Le attele le avoir	a .		a contra la concentra	-
Approach		Eastbound			Westbound		<u> </u>	Northboun			outhboun	
Movement	L	Т	R	L	T	R	L	Т	R	L	Т	R
Movement Volume	L 5						<u> </u>					R
Movement Volume % Thrus in Shared Lane	5	T 1	R 22	L 34	T 1	R 25	L 34	T 95	R 57	L 43	T 138	R 8
Movement Volume % Thrus in Shared Lane Lane	5 L1	Т	R	L 34 L1	T	R	L 34 L1	Т	R	L 43 L1	Т	
Movement Volume % Thrus in Shared Lane Lane Configuration	5 L1 LTR	T 1	R 22	L 34 L1 LTR	T 1	R 25	L 34 L1 LTR	T 95	R 57	L 43 L1 LTR	T 138	R 8
Movement Volume % Thrus in Shared Lane Lane Configuration Flow Rate, v (veh/h)	5 L1 LTR 30	T 1	R 22	L 34 L1 LTR 65	T 1	R 25	L 34 L1 LTR 202	T 95	R 57	L 43 L1 LTR 205	T 138	R 8
Movement Volume % Thrus in Shared Lane Lane Configuration Flow Rate, v (veh/h) Percent Heavy Vehicles	5 L1 LTR 30 1	T 1 L2	R 22	L 34 L1 LTR	T 1	R 25	L 34 L1 LTR	T 95	R 57	L 43 L1 LTR	T 138	8
Movement Volume % Thrus in Shared Lane Lane Configuration Flow Rate, v (veh/h) Percent Heavy Vehicles Departure Headway and S	5 L1 LTR 30 1 ervice Ti	T 1 L2	R 22	L 34 L1 LTR 65 1	T 1	R 25	L 34 L1 LTR 202 1	T 95	R 57	L 43 L1 LTR 205 1	T 138	8
Movement Volume % Thrus in Shared Lane Lane Configuration Flow Rate, v (veh/h) Percent Heavy Vehicles Departure Headway and S Initial Departure Headway, hd (s)	5 L1 LTR 30 1 Ervice Til 3.20	T 1 L2	R 22	L 34 L1 LTR 65 1 3.20	T 1	R 25	L 34 L1 LTR 202 1 3.20	T 95	R 57	L 43 L1 LTR 205 1 3.20	T 138	8
Movement Volume % Thrus in Shared Lane Lane Configuration Flow Rate, v (veh/h) Percent Heavy Vehicles Departure Headway and S Initial Departure Headway, hd (s) Initial Degree of Utilization, x	 5 L1 LTR 30 1 3.20 0.027 	T 1 L2	R 22	L 34 L1 LTR 65 1 3.20 0.058	T 1	R 25	L 34 L1 202 1 3.20 0.180	T 95	R 57	L 43 L1 LTR 205 1 	T 138	8
Movement Volume % Thrus in Shared Lane Lane Configuration Flow Rate, v (veh/h) Percent Heavy Vehicles Departure Headway and S Initial Departure Headway, hd (s) Initial Degree of Utilization, x Final Departure Headway, hd (s)	5 L1 LTR 30 1 30 3.20 0.027 4.47	T 1 L2	R 22	L 34 L1 LTR 65 1 3.20 0.058 4.72	T 1	R 25	L 34 L1 202 1 3.20 0.180 4.23	T 95	R 57	L 43 L1 205 1 3.20 0.183 4.38	T 138	8
Movement Volume % Thrus in Shared Lane Lane Configuration Flow Rate, v (veh/h) Percent Heavy Vehicles Departure Headway and S Initial Departure Headway, hd (s) Initial Departure Headway, hd (s) Final Departure Headway, hd (s) Final Degree of Utilization, x	5 L1 LTR 30 1 30 1. 3.20 0.027 4.47 0.038	T 1 L2	R 22	L 34 L1 LTR 65 1 3.20 0.058 4.72 0.086	T 1	R 25	L 34 L1 LTR 202 1 3.20 0.180 4.23 0.237	T 95	R 57	L 43 L1 LTR 205 1 3.20 0.183 4.38 0.250	T 138	8
Movement Volume % Thrus in Shared Lane Lane Configuration Flow Rate, v (veh/h) Percent Heavy Vehicles Departure Headway, hd (s) Initial Departure Headway, hd (s) Initial Departure Headway, hd (s) Final Departure Headway, hd (s) Final Degree of Utilization, x Move-Up Time, m (s)	5 L1 LTR 30 1 30 1.1 3.20 0.027 4.47 0.038 2.0	T 1 L2	R 22	L 34 L1 65 1 3.20 0.058 4.72 0.086 2.0	T 1	R 25	L 34 L1 202 1 3.20 0.180 4.23 0.237 2.0	T 95	R 57	L 43 L1 205 1 3.20 0.183 4.38 0.250 2.0	T 138	R 8
Movement Volume Volume Thrus in Shared Lane Lane Configuration Flow Rate, v (veh/h) Percent Heavy Vehicles Departure Headway and S Initial Degret of Utilization, x Final Degreture Headway, hd (s) Final Degree of Utilization, x Move-Up Time, m (s) Service Time, ts (s)	5 L1 LTR 30 1 30 3.20 3.20 4.47 0.038 2.0 2.47	T 1 1 L2	R 22	L 34 L1 LTR 65 1 3.20 0.058 4.72 0.086	T 1	R 25	L 34 L1 LTR 202 1 3.20 0.180 4.23 0.237	T 95	R 57	L 43 L1 LTR 205 1 3.20 0.183 4.38 0.250	T 138	R 8
Movement Volume % Thrus in Shared Lane Lane Configuration Flow Rate, v (veh/h) Percent Heavy Vehicles Departure Headway and S Initial Departure Headway, hd (s) Initial Degree of Utilization, x Final Departure Headway, hd (s) Final Degree of Utilization, x Move-Up Time, m (s)	5 L1 LTR 30 1 30 3.20 3.20 4.47 0.038 2.0 2.47	T 1 1 L2	R 22	L 34 L1 65 1 3.20 0.058 4.72 0.086 2.0	T 1	R 25	L 34 L1 202 1 3.20 0.180 4.23 0.237 2.0	T 95	R 57	L 43 L1 205 1 3.20 0.183 4.38 0.250 2.0	T 138	R 8
Movement Movement Volume % Thrus in Shared Lane Lane Configuration Flow Rate, v (veh/h) Percent Heavy Vehicles Departure Headway and S Initial Departure Headway, hd (s) Initial Degree of Utilization, x Final Departure Headway, hd (s) Final Degree of Utilization, x Move-Up Time, m (s) Service Time, ts (s)	5 L1 LTR 30 1 30 3.20 3.20 4.47 0.038 2.0 2.47	T 1 1 L2	R 22	L 34 L1 65 1 3.20 0.058 4.72 0.086 2.0	T 1	R 25	L 34 L1 202 1 3.20 0.180 4.23 0.237 2.0	T 95	R 57	L 43 L1 205 1 3.20 0.183 4.38 0.250 2.0	T 138	8
Movement Volume % Thrus in Shared Lane Lane Configuration Flow Rate, v (veh/h) Percent Heavy Vehicles Departure Headway and S Initial Departure Headway, hd (s) Initial Departure Headway, hd (s) Final Departure Headway, hd (s) Final Departure Headway, hd (s) Final Departure Headway, hd (s) Service Time, ts (s) Capacity, Delay and Level of	5 L1 LTR 30 1 30 1. 3.20 0.027 4.47 0.038 2.0 2.47 Service	T 1 1 L2	R 22	L 34 L1 65 1 3.20 0.058 4.72 0.086 2.0 2.72	T 1	R 25	L 34 L1 202 1 3.20 0.180 4.23 0.237 2.0 2.23	T 95	R 57	L 43 L1 205 1 3.20 0.183 4.38 0.250 2.0 2.38	T 138	8
Movement Volume % Thrus in Shared Lane Lane Configuration Flow Rate, v (veh/h) Percent Heavy Vehicles Departure Headway and S Initial Departure Headway, hd (s) Initial Degree of Utilization, x Final Departure Headway, hd (s) Final Degree of Utilization, x Move-Up Time, m (s) Service Time, ts (s) Capacity, Delay and Level of Flow Rate, v (veh/h)	5 L1 LTR 30 1	T 1 1 L2	R 22	L 34 L1 65 1 3.20 0.058 4.72 0.086 2.0 2.72	T 1	R 25	L 34 L1 202 1 3.20 0.180 4.23 0.237 2.0 2.23	T 95	R 57	L 43 L1 205 1 3.20 0.183 4.38 0.250 2.0 2.38	T 138	8
Movement Volume % Thrus in Shared Lane Lane Configuration Flow Rate, v (veh/h) Percent Heavy Vehicles Departure Headway and S Initial Departure Headway, hd (s) Initial Degree of Utilization, x Final Departure Headway, hd (s) Final Degree of Utilization, x Move-Up Time, m (s) Service Time, ts (s) Capacity, Delay and Level of Flow Rate, v (veh/h) Capacity	5 L1 LTR 30 1	T 1 1 L2	R 22	L 34 L1 65 1 3.20 0.058 4.72 0.086 2.0 2.72	T 1	R 25	L 34 L1 202 1 3.20 0.180 4.23 0.237 2.0 2.23	T 95	R 57	L 43 L1 205 1 205 3.20 0.183 4.38 0.250 2.0 2.38 2.238	T 138	8
Movement Movement Volume % Thrus in Shared Lane Lane Configuration Flow Rate, v (veh/h) Percent Heavy Vehicles Departure Headway and S Initial Departure Headway, hd (s) Initial Degree of Utilization, x Final Departure Headway, hd (s) Final Degree of Utilization, x Move-Up Time, m (s) Service Time, ts (s) Capacity, Delay and Level Flow Rate, v (veh/h) Capacity 95% Queue Length, Q ₉₅ (veh)	5 L1 LTR 30 1	T 1 1 L2	R 22	L 34 L1 LTR 65 1 3.20 0.058 4.72 0.086 2.0 2.72 2.72 65 65 762 0.3	T 1	R 25	L 34 L1 LTR 202 1 3.20 0.180 4.23 0.237 2.0 2.23 2.0 2.23	T 95	R 57	L 43 L1 LTR 205 1 3.20 0.183 4.38 0.250 2.0 2.0 2.38 2.38 2.05 2.05 2.05 2.05 2.05 2.05 2.05 2.05	T 138	8
Movement Volume % Thrus in Shared Lane Lane Configuration Flow Rate, v (veh/h) Percent Heavy Vehicles Departure Headway and S Initial Departure Headway, hd (s) Initial Degree of Utilization, x Final Departure Headway, hd (s) Final Degree of Utilization, x Move-Up Time, m (s) Service Time, ts (s) Eapacity, Delay and Level Flow Rate, v (veh/h) Capacity 95% Queue Length, Q ₉₅ (veh) Control Delay (s/veh)	5 L1 LTR 30 1 30 1 30 2 30 2 300 300 300 300 2 300 2.0 2.0 2.0 2.0 2.0 3.20 3.20 3.20 3.20 3.20 3.20 3.20 3.20 3.20 3.20 3.20 3.20 3.20 3.20 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 <tr< td=""><td>T 1 1 L2</td><td>R 22</td><td>L 34 L1 65 1 3.20 0.058 4.72 0.086 2.0 2.72 65 762 0.3 65 762 0.3</td><td>T 1</td><td>R 25</td><td>L 34 L1 202 1 3.20 0.180 4.23 0.237 2.0 2.23 2.23 2.23 2.23 2.23</td><td>T 95</td><td>R 57</td><td>L 43 L1 205 1 3.20 0.183 4.38 0.250 2.0 2.38 2.38 205 822 1.0 8.88</td><td>T 138</td><td>F 8</td></tr<>	T 1 1 L2	R 22	L 34 L1 65 1 3.20 0.058 4.72 0.086 2.0 2.72 65 762 0.3 65 762 0.3	T 1	R 25	L 34 L1 202 1 3.20 0.180 4.23 0.237 2.0 2.23 2.23 2.23 2.23 2.23	T 95	R 57	L 43 L1 205 1 3.20 0.183 4.38 0.250 2.0 2.38 2.38 205 822 1.0 8.88	T 138	F 8

Generated: 10/18/2021 1:54:39 PM

EXHIBIT 8 2034 WEEKDAY PEAK AM HOUR ANALYSIS – Oak Ridge/Haig

General Information					Site In	format	ion					
Analyst					Intersec				Oak Rid	ge/Haig		
Agency/Co.	_				Jurisdict				City of E			
Date Performed	11/19/2	020				est Street				ge Bouleva	ırd	
Analysis Year	2034	020				outh Stree	t		Haig Ro	-		
Analysis Time Period (hrs)	0.25					our Factor			0.92			
Time Analyzed	Peak AN	/ Hour			- call ris				0101			
Project Description			Subdivisio	n								
Lanes												
			74 4 4 4 4 4		₽ ſ↑₽1	*						
Vehicle Volume and Adjus	stments	Eastbound	4	1	Westbound	4		Northbound	4		Southboun	d
Movement	L	T	R	L	Т	R	L	Т	R	L	T	R
Volume	7	1	33	53	1	37	11	129	17	10	81	2
% Thrus in Shared Lane	,	-			-	11	- 11	125	17	10	01	2
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
	LTR											
Contiguration				I 11K						I TR		
Configuration	_			LTR 99			LTR 171			LTR		
Flow Rate, v (veh/h)	45			99			171			101		
Flow Rate, v (veh/h) Percent Heavy Vehicles	45											
Flow Rate, v (veh/h) Percent Heavy Vehicles Departure Headway and S	45 1 Service Ti	me		99 1			171			101		
Flow Rate, v (veh/h) Percent Heavy Vehicles Departure Headway and S Initial Departure Headway, hd (s)	45 1 Service Ti 3.20	me		99 1 3.20			171 1 3.20			101 1 3.20		
Flow Rate, v (veh/h) Percent Heavy Vehicles Departure Headway and S Initial Departure Headway, hd (s) Initial Degree of Utilization, x	45 1 Service Ti 3.20 0.040	me		99 1 3.20 0.088			171 1 3.20 0.152			101 1 3.20 0.090		
Flow Rate, v (veh/h) Percent Heavy Vehicles Departure Headway and S Initial Departure Headway, hd (s) Initial Degree of Utilization, x Final Departure Headway, hd (s)	45 1 Service Ti 3.20	me		99 1 3.20 0.088 4.46			171 1 3.20 0.152 4.31			101 1 3.20 0.090 4.44		
Flow Rate, v (veh/h) Percent Heavy Vehicles Departure Headway and S Initial Departure Headway, hd (s) Initial Degree of Utilization, x Final Departure Headway, hd (s) Final Degree of Utilization, x	45 1 3.20 0.040 4.21	me		99 1 3.20 0.088			171 1 3.20 0.152 4.31 0.204			101 1 3.20 0.090		
Flow Rate, v (veh/h) Percent Heavy Vehicles Departure Headway and S Initial Departure Headway, hd (s) Initial Degree of Utilization, x Final Departure Headway, hd (s)	45 1 3.20 0.040 4.21 0.052	me		99 1 3.20 0.088 4.46 0.123			171 1 3.20 0.152 4.31			101 1 3.20 0.090 4.44 0.125		
Flow Rate, v (veh/h) Percent Heavy Vehicles Departure Headway and S Initial Departure Headway, hd (s) Initial Degree of Utilization, x Final Departure Headway, hd (s) Final Degree of Utilization, x Move-Up Time, m (s) Service Time, ts (s)	45 1 3.20 0.040 4.21 0.052 2.0 2.21			99 1 3.20 0.088 4.46 0.123 2.0			171 1 3.20 0.152 4.31 0.204 2.0			101 1 3.20 0.090 4.44 0.125 2.0		
Flow Rate, v (veh/h) Percent Heavy Vehicles Departure Headway and S Initial Departure Headway, hd (s) Initial Degree of Utilization, x Final Departure Headway, hd (s) Final Degree of Utilization, x Move-Up Time, m (s) Service Time, ts (s)	45 1 3.20 0.040 4.21 0.052 2.0 2.21			99 1 3.20 0.088 4.46 0.123 2.0			171 1 3.20 0.152 4.31 0.204 2.0			101 1 3.20 0.090 4.44 0.125 2.0		
Flow Rate, v (veh/h) Percent Heavy Vehicles Departure Headway and S Initial Departure Headway, hd (s) Initial Degree of Utilization, x Final Departure Headway, hd (s) Final Degree of Utilization, x Move-Up Time, m (s) Service Time, ts (s) Capacity, Delay and Level	45 1 3.20 0.040 4.21 0.052 2.0 2.21			99 1 3.20 0.088 4.46 0.123 2.0 2.46			171 1 3.20 0.152 4.31 0.204 2.0 2.31			101 1 3.20 0.090 4.44 0.125 2.0 2.44		
Flow Rate, v (veh/h) Percent Heavy Vehicles Departure Headway and S Initial Departure Headway, hd (s) Initial Degree of Utilization, x Final Departure Headway, hd (s) Final Degree of Utilization, x Move-Up Time, m (s) Service Time, ts (s) Capacity, Delay and Level Flow Rate, v (veh/h)	45 1 3.20 0.040 4.21 0.052 2.0 2.21			99 1 3.20 0.088 4.46 0.123 2.0 2.46			171 1 3.20 0.152 4.31 0.204 2.0 2.31 171			101 1 3.20 0.090 4.44 0.125 2.0 2.44 101		
Flow Rate, v (veh/h) Percent Heavy Vehicles Departure Headway and S Initial Departure Headway, hd (s) Initial Degree of Utilization, x Final Departure Headway, hd (s) Final Degree of Utilization, x Move-Up Time, m (s) Service Time, ts (s) Capacity, Delay and Level Flow Rate, v (veh/h) Capacity	45 1 3.20 0.040 4.21 0.052 2.0 2.21 of Servic 45 45			99 1 3.20 0.088 4.46 0.123 2.0 2.46 2.46			171 1 3.20 0.152 4.31 0.204 2.0 2.31 2.31 171 835			101 1 3.20 0.090 4.44 0.125 2.0 2.44 2.44 101 810		
Flow Rate, v (veh/h) Percent Heavy Vehicles Departure Headway and S Initial Departure Headway, hd (s) Initial Degree of Utilization, x Final Departure Headway, hd (s) Final Degree of Utilization, x Move-Up Time, m (s) Service Time, ts (s) Capacity, Delay and Level Flow Rate, v (veh/h) Capacity 95% Queue Length, Q ₉₅ (veh)	45 1 3.20 0.040 4.21 0.052 2.0 2.21 OF Servic 45 45 0.2			99 1 3.20 0.088 4.46 0.123 2.0 2.46 2.46 99 807 0.4			171 1 3.20 0.152 4.31 0.204 2.0 2.31 2.31 171 835 0.8			101 1 3.20 0.090 4.44 0.125 2.0 2.44 2.44 2.44 101 810 0.4		
Flow Rate, v (veh/h) Percent Heavy Vehicles Departure Headway and S Initial Departure Headway, hd (s) Initial Degree of Utilization, x Final Departure Headway, hd (s) Final Degree of Utilization, x Move-Up Time, m (s) Service Time, ts (s) Capacity, Delay and Level Flow Rate, v (veh/h) Capacity 95% Queue Length, Q ₉₅ (veh) Control Delay (s/veh)	45 1 3.20 0.040 4.21 0.052 2.0 2.21 5 Servic 45 0.052			99 1 3.20 0.088 4.46 0.123 2.0 2.46 2.46 999 807 0.4 8.1	8.1		171 1 3.20 0.152 4.31 0.204 2.0 2.31 2.31 171 835 0.8 8.84			101 1 3.20 0.090 4.44 0.125 2.0 2.44 2.44 2.44 2.44 2.44 2.44 2.44	8.1	
Flow Rate, v (veh/h) Percent Heavy Vehicles Departure Headway and S Initial Departure Headway, hd (s) Initial Degree of Utilization, x Final Departure Headway, hd (s) Final Degree of Utilization, x Move-Up Time, m (s) Service Time, ts (s) Capacity, Delay and Level Flow Rate, v (veh/h) Capacity 95% Queue Length, Q ₉₅ (veh) Control Delay (s/veh) Level of Service, LOS	45 1 3.20 0.040 4.21 0.052 2.0 2.21 5 Servic 45 0.052	e 		99 1 3.20 0.088 4.46 0.123 2.0 2.46 2.46 999 807 0.4 8.1	8.1 A		171 1 3.20 0.152 4.31 0.204 2.0 2.31 2.31 171 835 0.8 8.84	8.4 A		101 1 3.20 0.090 4.44 0.125 2.0 2.44 2.44 2.44 2.44 2.44 2.44 2.44	8.1 A	

Copyright © 2021 University of Florida. All Rights Reserved.

Generated: 10/18/2021 1:56:58 PM

EXHIBIT 9 2034 WEEKDAY PEAK PM HOUR ANALYSIS – Oak Ridge/Haig

							eport					
General Information					Site In	format	ion					
Analyst					Intersec	tion			Oak Rid	ge/Haig		
Agency/Co.					Jurisdict	ion			City of E	Belleville		
Date Performed	11/19/2	020			East/We	st Street			Oak Rid	ge Bouleva	rd	
Analysis Year	2034				North/S	outh Stree	t		Haig Ro	ad		
Analysis Time Period (hrs)	0.25				Peak Ho	our Factor			0.92			
Time Analyzed	Peak PN	1 Hour										
Project Description	Hanley	Park North	Subdivisio	n								
Lanes												
Vehicle Volume and Adjus	tments		14 1 4 4 4 b		ዮ የተኑሰ	* F C						
											outhboun	-1
A service a selection of the second sec												
Approach	<u> </u>	Eastbound			Westbound		<u> </u>	Northboun				
Movement	L	Т	R	L	Т	R	L	Т	R	L	Т	R
Movement Volume	L 6						<u> </u>					R
Movement Volume % Thrus in Shared Lane	6	T 1	R 23	L 35	T 1	R 25	L 36	T 99	R 58	L 44	T 144	R 8
Movement Volume % Thrus in Shared Lane Lane	6 	Т	R	L 35 L1	Т	R	L 36 L1	Т	R	L 44 L1	Т	
Movement Volume % Thrus in Shared Lane Lane Configuration	6 L1 LTR	T 1	R 23	L 35 L1 LTR	T 1	R 25	L 36 L1 LTR	T 99	R 58	L 44 L1 LTR	T 144	R 8
Movement Volume % Thrus in Shared Lane Lane Configuration Flow Rate, v (veh/h)	6 L1 LTR 33	T 1	R 23	L 35 L1 LTR 66	T 1	R 25	L 36 L1 LTR 210	T 99	R 58	L 44 L1 LTR 213	T 144	R 8
Movement Volume % Thrus in Shared Lane Lane Configuration Flow Rate, v (veh/h) Percent Heavy Vehicles	6 L1 LTR 33 1	T 1 L2	R 23	L 35 L1 LTR	T 1	R 25	L 36 L1 LTR	T 99	R 58	L 44 L1 LTR	T 144	R 8
Movement Volume % Thrus in Shared Lane Lane Configuration Flow Rate, v (veh/h) Percent Heavy Vehicles Departure Headway and S	6 L1 LTR 33 1 Ervice Ti	T 1 L2	R 23	L 35 L1 LTR 66 1	T 1	R 25	L 36 L1 LTR 210 1	T 99	R 58	L 44 L1 LTR 213 1	T 144	8
Movement Volume % Thrus in Shared Lane Lane Configuration Flow Rate, v (veh/h) Percent Heavy Vehicles Departure Headway and S Initial Departure Headway, hd (s)	6 L1 LTR 33 1 Ervice Ti 3.20	T 1 L2	R 23	L 35 L1 LTR 66 1 3.20	T 1	R 25	L 36 L1 LTR 210 1 3.20	T 99	R 58	L 44 L1 LTR 213 1 3.20	T 144	8
Movement Volume % Thrus in Shared Lane Lane Configuration Flow Rate, v (veh/h) Percent Heavy Vehicles Departure Headway and S Initial Departure Headway, hd (s) Initial Degree of Utilization, x	6 L1 LTR 33 1 E E E E E E E E	T 1 L2	R 23	L 35 L1 LTR 66 1 	T 1	R 25	L 36 L1 LTR 210 1 3.20 0.186	T 99	R 58	L 44 L1 213 1 3.20 0.189	T 144	8
Movement Volume % Thrus in Shared Lane Lane Configuration Flow Rate, v (veh/h) Percent Heavy Vehicles Departure Headway and S Initial Departure Headway, hd (s) Initial Degree of Utilization, x Final Departure Headway, hd (s)	6 L1 LTR 33 1 EVUCE TI 3.20 0.029 4.53	T 1 L2	R 23	L 35 L1 LTR 66 1 	T 1	R 25	L 36 L1 LTR 210 1 3.20 0.186 4.25	T 99	R 58	L 44 L1 213 1 3.20 0.189 4.40	T 144	8
Movement Volume % Thrus in Shared Lane Lane Configuration Flow Rate, v (veh/h) Percent Heavy Vehicles Departure Headway and S Initial Departure Headway, hd (s) Initial Departure Headway, hd (s) Final Departure Headway, hd (s)	6 L1 LTR 33 1 SZ20 0.029 4.53 0.041	T 1 L2	R 23	L 35 L1 LTR 66 1 3.20 0.059 4.77 0.088	T 1	R 25	L 36 L1 LTR 210 1 3.20 0.186 4.25 0.248	T 99	R 58	L 44 L1 LTR 213 1 3.20 0.189 4.40 0.260	T 144	8
Movement Volume % Thrus in Shared Lane Lane Configuration Flow Rate, v (veh/h) Percent Heavy Vehicles Departure Headway, hd (s) Initial Departure Headway, hd (s) Initial Departure Headway, hd (s) Final Departure Headway, hd (s) Final Degree of Utilization, x Hove-Up Time, m (s)	6 L1 LTR 33 1	T 1 L2	R 23	L 35 L1 LTR 66 1 3.20 0.059 4.77 0.088 2.0	T 1	R 25	L 36 L1 LTR 210 1 3.20 0.186 4.25 0.248 2.0	T 99	R 58	L 44 L1 LTR 213 1 3.20 0.189 4.40 0.260 2.0	T 144	R 8
Movement Volume Volume Thrus in Shared Lane Lane Configuration Flow Rate, v (veh/h) Percent Heavy Vehicles Departure Headway and S Initial Degret of Utilization, x Final Degreture Headway, hd (s) Final Degree of Utilization, x Move-Up Time, m (s) Service Time, ts (s)	6 L1 LTR 33 1	T 1 1 L2	R 23	L 35 L1 LTR 66 1 3.20 0.059 4.77 0.088	T 1	R 25	L 36 L1 LTR 210 1 3.20 0.186 4.25 0.248	T 99	R 58	L 44 L1 LTR 213 1 3.20 0.189 4.40 0.260	T 144	R 8
Movement Volume % Thrus in Shared Lane Lane Configuration Flow Rate, v (veh/h) Percent Heavy Vehicles Departure Headway, hd (s) Initial Departure Headway, hd (s) Initial Departure Headway, hd (s) Final Departure Headway, hd (s) Final Degree of Utilization, x Hove-Up Time, m (s)	6 L1 LTR 33 1	T 1 1 L2	R 23	L 35 L1 LTR 66 1 3.20 0.059 4.77 0.088 2.0	T 1	R 25	L 36 L1 LTR 210 1 3.20 0.186 4.25 0.248 2.0	T 99	R 58	L 44 L1 LTR 213 1 3.20 0.189 4.40 0.260 2.0	T 144	8
Movement Movement Volume % Thrus in Shared Lane Lane Configuration Flow Rate, v (veh/h) Percent Heavy Vehicles Departure Headway and S Initial Degree of Utilization, x Final Degreture Headway, hd (s) Final Degree of Utilization, x Move-Up Time, m (s) Service Time, ts (s)	6 L1 LTR 33 1	T 1 1 L2	R 23	L 35 L1 LTR 66 1 3.20 0.059 4.77 0.088 2.0	T 1	R 25	L 36 L1 LTR 210 1 3.20 0.186 4.25 0.248 2.0	T 99	R 58	L 44 L1 LTR 213 1 3.20 0.189 4.40 0.260 2.0	T 144	8
Movement Volume % Thrus in Shared Lane Lane Configuration Flow Rate, v (veh/h) Percent Heavy Vehicles Departure Headway and S Initial Departure Headway, hd (s) Initial Departure Headway, hd (s) Final Departure Headway, hd (s) Final Departure Headway, hd (s) Final Departure Headway, hd (s) Service Time, ts (s) Capacity, Delay and Level of	6 L1 LTR 33 1 33 1 0.029 4.53 0.041 2.0 2.53	T 1 1 L2	R 23	L 35 L1 LTR 66 1 3.20 0.059 4.77 0.088 2.0 2.77	T 1	R 25	L 36 L1 LTR 210 1 3.20 0.186 4.25 0.248 2.0 2.25	T 99	R 58	L 44 L1 213 1 3.20 0.189 4.40 0.260 2.0 2.40	T 144	8
Movement Volume % Thrus in Shared Lane Lane Configuration Flow Rate, v (veh/h) Percent Heavy Vehicles Departure Headway and S Initial Departure Headway, hd (s) Initial Degree of Utilization, x Final Departure Headway, hd (s) Final Degree of Utilization, x Move-Up Time, m (s) Service Time, ts (s) Capacity, Delay and Level of Flow Rate, v (veh/h)	6 L1 LTR 33 1	T 1 1 L2	R 23	L 35 L1 LTR 66 1 3.20 0.059 4.77 0.088 2.0 2.77	T 1	R 25	L 36 L1 210 1 3.20 0.186 4.25 0.248 2.0 2.25	T 99	R 58	L 44 213 1 3.20 0.189 4.40 0.260 2.0 2.40	T 144	8
Movement Volume % Thrus in Shared Lane Lane Configuration Flow Rate, v (veh/h) Percent Heavy Vehicles Departure Headway and S Initial Departure Headway, hd (s) Initial Degree of Utilization, x Final Departure Headway, hd (s) Final Degree of Utilization, x Final Degree of Utilization, x Move-Up Time, m (s) Service Time, ts (s) Capacity, Delay and Level of Flow Rate, v (veh/h) Capacity	6 L1 LTR 33 1	T 1 1 L2	R 23	L 35 L1 LTR 66 1	T 1	R 25	L 36 L1 210 1 3.20 0.186 4.25 0.248 2.0 2.25	T 99	R 58	L 44 213 1 213 3.20 0.189 4.40 0.260 2.0 2.40 2.40	T 144	8
Movement Movement Volume % Thrus in Shared Lane Lane Configuration Flow Rate, v (veh/h) Percent Heavy Vehicles Departure Headway and S Initial Departure Headway, hd (s) Initial Degree of Utilization, x Final Departure Headway, hd (s) Final Degree of Utilization, x Move-Up Time, m (s) Service Time, ts (s) Capacity, Delay and Level Flow Rate, v (veh/h) Capacity 95% Queue Length, Q ₉₅ (veh)	6 L1 LTR 33 1	T 1 1 L2	R 23	L 35 L1 LTR 66 1 3.20 0.059 4.77 0.088 2.0 2.77 2.77 666 755 0.3	T 1	R 25	L 36 L1 LTR 210 1 3.20 0.186 4.25 0.248 2.0 2.25 2.25 2.25	T 99	R 58	L 44 213 1 213 1 3.20 0.189 4.40 0.260 2.0 2.0 2.40 2.13 818 818 1.0	T 144	8
Movement Movement Volume % Thrus in Shared Lane Lane Configuration Flow Rate, v (veh/h) Percent Heavy Vehicles Departure Headway and S Initial Departure Headway, hd (s) Initial Departure Headway, hd (s) Final Departure Headway, hd (s) Final Departure Headway, hd (s) Final Degree of Utilization, x final Degree of Utilization, x Move-Up Time, m (s) Service Time, ts (s) Capacity, Delay and Level Flow Rate, v (veh/h) Capacity 95% Queue Length, Q ₉₅ (veh) Control Delay (s/veh)	6 L1 LTR 33 1 33 1 2 3.20 4.53 0.029 4.53 0.041 2.0 2.53 2.53 33 795 0.1 7.7	T 1 1 L2	R 23	L 35 L1 LTR 66 1 3.20 0.059 4.77 0.088 2.0 2.77 6.0 8 2.0 2.77 0.03 8.2	T 1	R 25	L 36 L1 210 1 3.20 0.186 4.25 0.248 2.0 2.25 2.25 2.25 2.20 2.25	T 99	R 58	L 44 213 1 3.20 0.189 4.40 0.260 2.0 2.0 2.40 2.40 2.13 818 1.0 8.9	T 144	F 8

EXHIBIT 10 2020 WEEKDAY PEAK AM HOUR ANALYSIS (Pre-COVID-19) – Victoria/Haig

General Information							Site	Inforr	natio	n						
Analyst	T						Inters	ection			Victo	ria/Haig				
Agency/Co.	-						Jurisd					of Bellevi	lle			
Date Performed	11/19	9/2020					East/	Nest Str	eet			ria Aveni				
Analysis Year	2020	,						/South S			Haig					
Time Analyzed		AM Hou	r Pre-CC	VID-19				Hour Fac			0.92					
Intersection Orientation	North	n-South						sis Time		hrs)	0.25					
Project Description		ey Park N	lorth Sul	odivisior												
Lanes	-	,														
				J 4 1 7 4 4 1		** * * * * * *		* 74**1								
Vehicle Volumes and Adj	ustme	ents														
Approach		Eastb	ound			West	bound			North	bound			South	bound	
Mayamant	U	ι.	Т	R	U		T	R	U	ι.	T	R	U	ι.	- T	
Movement	0	L L	'	ĸ	0	L	<u>'</u>	ĸ	0	L L	'	<u> </u>	0	<u> </u>	T	R
Priority		10	11	к 12	0	L 7	8	9	10	1	2	3	4U	4	5	R 6
Priority Number of Lanes												<u> </u>				6
Priority		10	11	12		7	8	9	10	1	2	3	4U	4	5	6
Priority Number of Lanes		10	11 1	12		7	8 1	9	10	1	2 1	3	4U	4	5	6
Priority Number of Lanes Configuration		10 0	11 1 LTR	12 0		7	8 1 LTR	9	10	1 0	2 1 LTR	3 0	4U	4	5 1 LTR	6
Priority Number of Lanes Configuration Volume (veh/h)		10 0 12	11 1 LTR 0	12 0 29		7 0 7	8 1 LTR 3	9 0 1	10	1 0 74	2 1 LTR	3 0	4U	4 0 0	5 1 LTR	6
Priority Number of Lanes Configuration Volume (veh/h) Percent Heavy Vehicles (%)		10 0 12 0	11 1 LTR 0	12 0 29		7 0 7 0	8 1 LTR 3	9 0 1	10	1 0 74	2 1 LTR	3 0	4U	4 0 0	5 1 LTR	6
Priority Number of Lanes Configuration Volume (veh/h) Percent Heavy Vehicles (%) Proportion Time Blocked		10 0 12 0	11 1 LTR 0 0	12 0 29		7 0 7 0	8 1 LTR 3 0	9 0 1	10	1 0 74	2 1 LTR	3 0	4U	4 0 0	5 1 LTR	6
Priority Number of Lanes Configuration Volume (veh/h) Percent Heavy Vehicles (%) Proportion Time Blocked Percent Grade (%)		10 0 12 0	11 1 LTR 0 0	12 0 29 0	vided	7 0 7 0	8 1 LTR 3 0	9 0 1	10	1 0 74	2 1 LTR	3 0	4U	4 0 0	5 1 LTR	
Priority Number of Lanes Configuration Volume (veh/h) Percent Heavy Vehicles (%) Proportion Time Blocked Percent Grade (%) Right Turn Channelized		10 0 12 0	11 1 LTR 0 0	12 0 29 0		7 0 7 0	8 1 LTR 3 0	9 0 1	10	1 0 74	2 1 LTR	3 0	4U	4 0 0	5 1 LTR	6
Priority Number of Lanes Configuration Volume (veh/h) Percent Heavy Vehicles (%) Proportion Time Blocked Percent Grade (%) Right Turn Channelized Median Type Storage		10 0 12 0	11 1 LTR 0 0	12 0 29 0		7 0 7 0	8 1 LTR 3 0	9 0 1	10	1 0 74	2 1 LTR	3 0	4U	4 0 0	5 1 LTR	6
Priority Number of Lanes Configuration Volume (veh/h) Percent Heavy Vehicles (%) Proportion Time Blocked Percent Grade (%) Right Turn Channelized Median Type Storage Critical and Follow-up Heave		10 0 12 0	11 1 LTR 0 0	12 0 29 0 Undi		7 0 7 0	8 1 LTR 3 0	9 0 1 0	10	1 0 74 5	2 1 LTR	3 0	4U	4 0 0 0	5 1 LTR	6
Priority Number of Lanes Configuration Volume (veh/h) Percent Heavy Vehicles (%) Proportion Time Blocked Percent Grade (%) Right Turn Channelized Median Type Storage Critical and Follow-up Ho Base Critical Headway (sec)		10 0 12 0 7.1	11 1 LTR 0 0	12 0 29 0 Undi		7 0 7 0 7 0 7 0 7 7 0 7 7 7 7 7 7 7 7 7	8 1 LTR 3 0	9 0 1 0	10	1 0 74 5	2 1 LTR	3 0	4U	4 0 0 0	5 1 LTR	6
Priority Number of Lanes Configuration Volume (veh/h) Percent Heavy Vehicles (%) Proportion Time Blocked Percent Grade (%) Right Turn Channelized Median Type Storage Critical and Follow-up He Base Critical Headway (sec) Critical Headway (sec)		10 0 12 0 	11 1 LTR 0 0 	12 0 29 0 Undi		7 0 7 0	8 1 LTR 3 0 	9 0 1 0 6.2 6.20	10	1 0 74 5 	2 1 LTR	3 0	4U	4 0 0 0	5 1 LTR	6
Priority Priority Number of Lanes Configuration Volume (veh/h) Percent Heavy Vehicles (%) Proportion Time Blocked Percent Grade (%) Right Turn Channelized Median Type Storage Critical and Follow-up He Base Critical Headway (sec) Base Follow-Up Headway (sec)	eadwa	10 0 12 0	11 1 LTR 0 0 	12 0 29 0 Undi 6.2 6.20 3.3 3.30		7 0 7 0	8 1 LTR 3 0 	9 0 1 0 6.2 6.20 3.3	10	1 0 74 5	2 1 LTR	3 0	4U	4 0 0 0 0 4.1 4.10 2.2	5 1 LTR	6
Priority Number of Lanes Configuration Volume (veh/h) Percent Heavy Vehicles (%) Proportion Time Blocked Percent Grade (%) Right Turn Channelized Median Type Storage Critical and Follow-up He Base Critical Headway (sec) Critical Headway (sec) Base Follow-Up Headway (sec) Follow-Up Headway (sec)	eadwa	10 0 12 0	11 1 LTR 0 0 - - - - - - - - - - - - -	12 0 29 0 Undi 6.2 6.20 3.3 3.30		7 0 7 0	8 1 LTR 3 0 	9 0 1 0 6.2 6.20 3.3	10	1 0 74 5	2 1 LTR	3 0	4U	4 0 0 0	5 1 LTR	6
Priority Number of Lanes Configuration Volume (veh/h) Percent Heavy Vehicles (%) Proportion Time Blocked Percent Grade (%) Right Turn Channelized Median Type Storage Critical and Follow-up Hea Base Critical Headway (sec) Critical Headway (sec) Base Follow-Up Headway (sec) Follow-Up Headway (sec) Delay, Queue Length, and	eadwa	10 0 12 0	11 1 LTR 0 0 	12 0 29 0 Undi 6.2 6.20 3.3 3.30		7 0 7 0	8 1 LTR 3 0 	9 0 1 0 6.2 6.20 3.3	10	1 0 74 5	2 1 LTR	3 0	4U	4 0 0 0	5 1 LTR	6
Priority Number of Lanes Configuration Volume (veh/h) Percent Heavy Vehicles (%) Proportion Time Blocked Percent Grade (%) Right Turn Channelized Median Type Storage Critical and Follow-up He Base Critical Headway (sec) Base Follow-Up Headway (sec)	eadwa	10 0 12 0	11 1 LTR 0 0 	12 0 29 0 Undi 6.2 6.20 3.3 3.30		7 0 7 0	8 1 LTR 3 0	9 0 1 0 6.2 6.20 3.3	10	1 0 74 5	2 1 LTR	3 0	4U	4 0 0 0 0 4.1 4.10 2.2 2.20	5 1 LTR	6
Priority Number of Lanes Configuration Volume (veh/h) Percent Heavy Vehicles (%) Proportion Time Blocked Percent Grade (%) Right Turn Channelized Median Type Storage Critical and Follow-up He Base Critical Headway (sec) Critical Headway (sec) Critical Headway (sec) Follow-Up Headway (sec) Follow-Up Headway (sec) Follow-Up Headway (sec) Follow-Up Headway (sec) Follow-Up Headway (sec)	eadwa	10 0 12 0	11 1 LTR 0 0 	12 0 29 0 Undi 6.2 6.20 3.3 3.30		7 0 7 0	8 1 LTR 3 0	9 0 1 0 6.2 6.20 3.3	10	1 0 74 5	2 1 LTR	3 0	4U	4 0 0 0 0 0 4.1 4.10 2.2 2.20 2.20	5 1 LTR	6
Priority Number of Lanes Configuration Volume (veh/h) Percent Heavy Vehicles (%) Proportion Time Blocked Percent Grade (%) Right Turn Channelized Median Type Storage Critical and Follow-up He Base Critical Headway (sec) Critical Headway (sec) Base Follow-Up Headway (sec) Follow-Up Headway (sec) Follow-Up Headway (sec) Follow-Up Headway (sec) Follow-Up Kate, v (veh/h) Capacity, c (veh/h) v/c Ratio	eadwa	10 0 12 0	11 1 LTR 0 0 0 	12 0 29 0 Undi 6.2 6.20 3.3 3.30		7 0 7 0	8 1 LTR 3 0 	9 0 1 0 6.2 6.20 3.3	10	1 0 74 5	2 1 LTR	3 0	4U	4 0 0 0 0 0 4.1 4.1 4.10 2.2 2.20 2.20 1497 0.00	5 1 LTR	6
Priority Number of Lanes Configuration Volume (veh/h) Percent Heavy Vehicles (%) Proportion Time Blocked Percent Grade (%) Right Turn Channelized Median Type Storage Critical and Follow-up He Base Critical Headway (sec) Gritical Headway (sec) Base Follow-Up Headway (sec) Follow-Up Headway (sec) Follow-Up Headway (sec) Follow-Up Headway (sec) Follow-Up Keadway (s	eadwa	10 0 12 0	11 1 LTR 0 0 	12 0 29 0 Undi 6.2 6.20 3.3 3.30		7 0 7 0	8 1 LTR 3 0 0 6.5 6.5 6.50 4.0 4.00 4.00 12 543 0.02 0.1	9 0 1 0 6.2 6.20 3.3	10	1 0 74 5 4.1 4.15 2.2 2.25 80 1439 0.06 0.2	2 1 LTR	3 0	4U	4 0 0 0 0 0 0 0 2.2 2.20 2.20 0 1497 0.00 0.00	5 1 LTR	e C

Copyright © 2021 University of Florida. All Rights Reserved.

Generated: 10/18/2021 3:35:06 PM

EXHIBIT 11 2020 WEEKDAY PEAK PM HOUR ANALYSIS (Pre-COVID-19) – Victoria/Haig

General Information							Site	Inform	natio	n						
Analyst	T						Inters	ection			Victor	ria/Haig				
Agency/Co.	-						Jurisd	liction			<u> </u>	of Bellevi	lle			
Date Performed	11/19	/2020					East/\	Nest Stre	eet		Victor	ria Aveni	ue			
Analysis Year	2020						North	/South S	Street		Haig	Road				
Time Analyzed	Peak	PM Hou	r Pre-CO	VID-19			Peak	Hour Fac	ctor		0.92					_
Intersection Orientation	North	-South					Analy	sis Time	Period (hrs)	0.25					
Project Description	Hanle	y Park N	lorth Sul	odivisior	1											_
Lanes																
				J 4 1 X 4 4 4	ח ה Maire	T Street: Nor	the South	* 14471								
Vehicle Volumes and Ad	ustme	nts			Wajo	Street. Not										
Approach		Eastb	ound			West	oound			North	bound			South	bound	
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R
Priority		10	11	12		7	8	9	10	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	1	0	0	0	1	0	0	0	1	0
							1.70								LTR	
Configuration			LTR				LTR				LTR				LIK	
Configuration Volume (veh/h)		15	5	30		0	0	3		36	LTR 114	2		3	127	7
-		15 0		30 0		0		3 0		36 3		2		3 0		7
Volume (veh/h)			5				0					2				7
Volume (veh/h) Percent Heavy Vehicles (%)		0	5			0	0					2				7
Volume (veh/h) Percent Heavy Vehicles (%) Proportion Time Blocked		0	5 0			0	0					2				7
Volume (veh/h) Percent Heavy Vehicles (%) Proportion Time Blocked Percent Grade (%)		0	5 0	0	vided	0	0					2				7
Volume (veh/h) Percent Heavy Vehicles (%) Proportion Time Blocked Percent Grade (%) Right Turn Channelized Median Type Storage	eadwa	0	5 0	0	vided	0	0					2				7
Volume (veh/h) Percent Heavy Vehicles (%) Proportion Time Blocked Percent Grade (%) Right Turn Channelized Median Type Storage	eadwa	0	5 0	0	vided	0	0					2				7
Volume (veh/h) Percent Heavy Vehicles (%) Proportion Time Blocked Percent Grade (%) Right Turn Channelized Median Type Storage Critical and Follow-up He	eadwa	o ys	5	0 Undi	vided	0	0	0		3		2		0		7
Volume (veh/h) Percent Heavy Vehicles (%) Proportion Time Blocked Percent Grade (%) Right Turn Channelized Median Type Storage Critical and Follow-up He Base Critical Headway (sec)	eadwa	0 () () () () () () () () () () () () ()	5 0 	0 Undi	vided	7.1	0 0 6.5	6.2		3		2		0		7
Volume (veh/h) Percent Heavy Vehicles (%) Proportion Time Blocked Percent Grade (%) Right Turn Channelized Median Type Storage Critical and Follow-up Ho Base Critical Headway (sec) Critical Headway (sec)	eadwa	0 () () () () () () () () () () () () ()	5 0	0 Undi	vided	7.1	0 0 6.5 6.50	0 6.2 6.20		4.1		2		0 4.1 4.10		7
Volume (veh/h) Percent Heavy Vehicles (%) Proportion Time Blocked Percent Grade (%) Right Turn Channelized Median Type Storage Critical and Follow-up He Base Critical Headway (sec) Critical Headway (sec) Base Follow-Up Headway (sec)		0 ys 7.1 7.10 3.5 3.50	5 0 6.5 6.50 4.0 4.00	0 Undi 6.2 6.20 3.3 3.30	vided	0 7.1 7.10 3.5	0 0 6.5 6.50 4.0	0 6.2 6.20 3.3		3 4.1 4.13 2.2		2		0 4.1 4.10 2.2		7
Volume (veh/h) Percent Heavy Vehicles (%) Proportion Time Blocked Percent Grade (%) Right Turn Channelized Median Type Storage Critical and Follow-up He Base Critical Headway (sec) Critical Headway (sec) Base Follow-Up Headway (sec) Follow-Up Headway (sec)		0 ys 7.1 7.10 3.5 3.50	5 0 6.5 6.50 4.0 4.00	0 Undi 6.2 6.20 3.3 3.30	vided	0 7.1 7.10 3.5	0 0 6.5 6.50 4.0	0 6.2 6.20 3.3		3 4.1 4.13 2.2		2		0 4.1 4.10 2.2		7
Volume (veh/h) Percent Heavy Vehicles (%) Proportion Time Blocked Percent Grade (%) Right Turn Channelized Median Type Storage Critical and Follow-up Headway (sec) Critical Headway (sec) Base Follow-Up Headway (sec) Follow-Up Headway (sec) Delay, Queue Length, an		0 ys 7.1 7.10 3.5 3.50	5 0 6.5 6.50 4.0 4.00	0 Undi 6.2 6.20 3.3 3.30	vided	0 7.1 7.10 3.5	0 0 6.5 6.50 4.0 4.00	0 6.2 6.20 3.3		3 4.1 4.13 2.2 2.23		2		0 4.1 4.10 2.2 2.20		7
Volume (veh/h) Percent Heavy Vehicles (%) Proportion Time Blocked Percent Grade (%) Right Turn Channelized Median Type Storage Critical and Follow-up Headway (sec) Critical Headway (sec) Base Follow-Up Headway (sec) Follow-Up Headway (sec) Follow-Up Headway (sec) Delay, Queue Length, an Flow Rate, v (veh/h)		0 ys 7.1 7.10 3.5 3.50	5 0 6.5 6.50 4.0 4.00 ervice 54	0 Undi 6.2 6.20 3.3 3.30	vided	0 7.1 7.10 3.5	0 0 6.5 6.50 4.0 4.00	0 6.2 6.20 3.3		3 4.1 4.13 2.2 2.23 39		2		0 4.1 4.10 2.2 2.20 3		
Volume (veh/h) Percent Heavy Vehicles (%) Proportion Time Blocked Percent Grade (%) Right Turn Channelized Median Type Storage Critical and Follow-up Head Base Critical Headway (sec) Critical Headway (sec) Base Follow-Up Headway (sec) Follow-Up Headway (sec) Follow-Up Headway (sec) Delay, Queue Length, an Flow Rate, v (veh/h) Capacity, c (veh/h)		0 ys 7.1 7.10 3.5 3.50	5 0 6.5 6.50 4.0 4.00 ervice 54 742	0 Undi 6.2 6.20 3.3 3.30	vided	0 7.1 7.10 3.5	0 0 6.5 6.50 4.0 4.00 3 931	0 6.2 6.20 3.3		3 4.1 4.13 2.2 2.23 39 1430		2		0 4.1 4.10 2.2 2.20 3 1473		
Volume (veh/h) Percent Heavy Vehicles (%) Proportion Time Blocked Percent Grade (%) Right Turn Channelized Median Type Storage Critical and Follow-up Head Base Critical Headway (sec) Critical Headway (sec) Base Follow-Up Headway (sec) Follow-Up Headway (sec) Delay, Queue Length, an Flow Rate, v (veh/h) Capacity, c (veh/h) v/c Ratio		0 ys 7.1 7.10 3.5 3.50	5 0 6.5 6.50 4.0 4.00 Ervice 54 742 0.07	0 Undi 6.2 6.20 3.3 3.30	vided	0 7.1 7.10 3.5	0 0 6.5 6.50 4.0 4.00 3 931 0.00	0 6.2 6.20 3.3		3 4.1 4.13 2.2 2.23 39 1430 0.03		2		0 4.1 4.10 2.2 2.20 3 1473 0.00		
Volume (veh/h) Percent Heavy Vehicles (%) Proportion Time Blocked Percent Grade (%) Right Turn Channelized Median Type Storage Critical and Follow-up Headway (sec) Critical Headway (sec) Base Follow-Up Headway (sec) Follow-Up Headway (0 ys 7.1 7.10 3.5 3.50	5 0 6.5 6.50 4.0 4.00 4.00 54 742 0.07 0.2	0 Undi 6.2 6.20 3.3 3.30	vided	0 7.1 7.10 3.5	0 0 6.5 6.50 4.0 4.00 931 0.00 0.0	0 6.2 6.20 3.3		3 4.1 4.13 2.2 2.23 39 1430 0.03 0.1		2		0 4.1 4.10 2.2 2.20 3 1473 0.00 0.0		

Copyright © 2021 University of Florida. All Rights Reserved.

Generated: 10/18/2021 3:37:32 PM

EXHIBIT 12 2029 WEEKDAY PEAK AM HOUR ANALYSIS – Victoria/Haig

General Information							Site	Inforn	natio	า						
Analyst	T						Inters	ection			Victor	ria/Haig				
Agency/Co.	-						Jurisd	liction			<u> </u>	f Bellevi	lle			
Date Performed	11/19	9/2020					East/\	Nest Stre	eet			ria Aveni				
Analysis Year	2029						North	/South S	Street		Haig	Road				
Time Analyzed	Peak	AM Hou	r					Hour Fac			0.92					
Intersection Orientation	North	n-South					Analy	sis Time	Period (hrs)	0.25					
Project Description	Hanle	ey Park N	lorth Sul	odivision	1											
Lanes																
				J 4 1 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	กา	* * *	1 7 6	* 14471								
Vehicle Volumes and Ad	justme	ents			Major	Street: Nor	th-South									
Approach		Eastb	ound			West	oound			North	bound			South	bound	
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	1	0	0	0	1	0	0	0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		15	0	32		8	3	1		73	136	3		0	128	32
		0	0	0		0	0	0		5				0		
Percent Heavy Vehicles (%)		U U	0	Ū		0	0	Ů						0		
Percent Heavy Vehicles (%) Proportion Time Blocked		0	0	Ū		0	0							0		
-)				0							0		
Proportion Time Blocked														0		
Proportion Time Blocked Percent Grade (%)					vided									0		
Proportion Time Blocked Percent Grade (%) Right Turn Channelized	eadwa				vided									0		
Proportion Time Blocked Percent Grade (%) Right Turn Channelized Median Type Storage	eadwa				vided			6.2		4.1				4.1		
Proportion Time Blocked Percent Grade (%) Right Turn Channelized Median Type Storage Critical and Follow-up He	eadwa	ys)	Undi	vided		0									
Proportion Time Blocked Percent Grade (%) Right Turn Channelized Median Type Storage Critical and Follow-up He Base Critical Headway (sec)	eadwa	ys 7.1	6.5	Undi 6.2	vided	7.1	6.5	6.2		4.1				4.1		
Proportion Time Blocked Percent Grade (%) Right Turn Channelized Median Type Storage Critical and Follow-up He Base Critical Headway (sec) Critical Headway (sec)	eadwa	ys 7.1 7.10	6.5	Undi 6.2 6.20	vided	7.1 7.10	6.5	6.2		4.1 4.15				4.1 4.10		
Proportion Time Blocked Percent Grade (%) Right Turn Channelized Median Type Storage Critical and Follow-up He Base Critical Headway (sec) Critical Headway (sec) Base Follow-Up Headway (sec)		ys 7.1 7.10 3.5 3.50	6.5 6.50 4.0 4.00	Undi 6.2 6.20 3.3 3.30	vided	7.1 7.10 3.5	6.5 6.50 4.0	6.2 6.20 3.3		4.1 4.15 2.2				4.1 4.10 2.2		
Proportion Time Blocked Percent Grade (%) Right Turn Channelized Median Type Storage Critical and Follow-up He Base Critical Headway (sec) Critical Headway (sec) Base Follow-Up Headway (sec) Follow-Up Headway (sec) Delay, Queue Length, an		ys 7.1 7.10 3.5 3.50	6.5 6.50 4.0 4.00	Undi 6.2 6.20 3.3 3.30	vided	7.1 7.10 3.5	6.5 6.50 4.0	6.2 6.20 3.3		4.1 4.15 2.2				4.1 4.10 2.2		
Proportion Time Blocked Percent Grade (%) Right Turn Channelized Median Type Storage Critical and Follow-up He Base Critical Headway (sec) Critical Headway (sec) Base Follow-Up Headway (sec) Follow-Up Headway (sec)		ys 7.1 7.10 3.5 3.50	6.5 6.50 4.0 4.00 ervice	Undi 6.2 6.20 3.3 3.30	vided	7.1 7.10 3.5	6.5 6.50 4.0 4.00	6.2 6.20 3.3		4.1 4.15 2.2 2.25				4.1 4.10 2.2 2.20		
Proportion Time Blocked Percent Grade (%) Right Turn Channelized Median Type Storage Critical and Follow-up He Base Critical Headway (sec) Critical Headway (sec) Base Follow-Up Headway (sec) Follow-Up Headway (sec) Delay, Queue Length, an Flow Rate, v (veh/h)		ys 7.1 7.10 3.5 3.50	6.5 6.50 4.0 4.00 ervice 51	Undi 6.2 6.20 3.3 3.30	vided	7.1 7.10 3.5	6.5 6.50 4.0 4.00	6.2 6.20 3.3		4.1 4.15 2.2 2.25 79				4.1 4.10 2.2 2.20		
Proportion Time Blocked Percent Grade (%) Right Turn Channelized Median Type Storage Critical and Follow-up He Base Critical Headway (sec) Critical Headway (sec) Base Follow-Up Headway (sec) Follow-Up Headway (sec) Delay, Queue Length, an Flow Rate, v (veh/h) Capacity, c (veh/h)		ys 7.1 7.10 3.5 3.50	6.5 6.50 4.0 4.00 Ervice 51 703	Undi 6.2 6.20 3.3 3.30	vided	7.1 7.10 3.5	6.5 6.50 4.0 4.00 13 475	6.2 6.20 3.3		4.1 4.15 2.2 2.25 79 1385				4.1 4.10 2.2 2.20 0 1442		
Proportion Time Blocked Percent Grade (%) Right Turn Channelized Median Type Storage Critical and Follow-up He Base Critical Headway (sec) Critical Headway (sec) Base Follow-Up Headway (sec) Follow-Up Headway (sec) Delay, Queue Length, an Flow Rate, v (veh/h) Capacity, c (veh/h) v/c Ratio		ys 7.1 7.10 3.5 3.50	6.5 6.50 4.0 4.00 Ervice 51 703 0.07	Undi 6.2 6.20 3.3 3.30	Vided	7.1 7.10 3.5	6.5 6.50 4.0 4.00 13 475 0.03	6.2 6.20 3.3		4.1 4.15 2.2 2.25 79 1385 0.06				4.1 4.10 2.2 2.20 1442 0.00		
Proportion Time Blocked Percent Grade (%) Right Turn Channelized Median Type Storage Critical and Follow-up He Base Critical Headway (sec) Critical Headway (sec) Base Follow-Up Headway (sec) Follow-Up Headway (sec) Delay, Queue Length, an Flow Rate, v (veh/h) Capacity, c (veh/h) v/c Ratio 95% Queue Length, Q ₉₅ (veh)		ys 7.1 7.10 3.5 3.50	6.5 6.50 4.0 4.00 Ervice 51 703 0.07 0.2	Undi 6.2 6.20 3.3 3.30	vided	7.1 7.10 3.5	6.5 6.50 4.0 4.00 13 475 0.03 0.1	6.2 6.20 3.3		4.1 4.15 2.2 2.25 79 1385 0.06 0.2				4.1 4.10 2.2 2.20 0 1442 0.00 0.0		

Copyright © 2021 University of Florida. All Rights Reserved.

HCS™ TWSC Version 7.9.5 729_2029_tot_AM.xtw Generated: 10/18/2021 3:40:39 PM

EXHIBIT 13 2029 WEEKDAY PEAK PM HOUR ANALYSIS – Victoria/Haig

General Information							Site	Inforn	natio	n						
Analyst	T						Inters	ection			Victor	ria/Haig				
Agency/Co.							Jurisd	liction				of Bellevil	lle			
Date Performed	11/19	9/2020					East/\	Nest Stre	eet		Victor	ria Avenu	Je			_
Analysis Year	2029						North	/South S	Street		Haig	Road				
Time Analyzed	Peak	PM Hou	r				Peak	Hour Fac	tor		0.92					_
Intersection Orientation	North	n-South					Analy	sis Time	Period (hrs)	0.25					
Project Description	Hanle	ey Park N	Iorth Sul	odivisior	1											
Lanes																
				J 4 1 X 4 1 L	ት በ ገ Major	T T Street: Nor	↑ ጉ ሾ th-South	• •								
Vehicle Volumes and Adj	ustme	ents			-											
Approach		Eastb	ound			West	ound			North	bound			South	bound	
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R
Priority		10	11	12		7	8	9	10	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	1	0	0	0	1	0	0	0	1	0
		1	LTR				1.70			I						
Configuration			LIK				LTR				LTR				LTR	
Configuration Volume (veh/h)		22	5	33		0	0	3		36	LTR 160	2		3	LTR 180	11
-		22 0		33 0		0		3 0		36 3		2		3 0		11
Volume (veh/h)			5				0					2				11
Volume (veh/h) Percent Heavy Vehicles (%)		0	5			0	0					2			<u> </u>	11
Volume (veh/h) Percent Heavy Vehicles (%) Proportion Time Blocked		0	5			0	0					2			<u> </u>	11
Volume (veh/h) Percent Heavy Vehicles (%) Proportion Time Blocked Percent Grade (%)		0	5	0	vided	0	0					2				11
Volume (veh/h) Percent Heavy Vehicles (%) Proportion Time Blocked Percent Grade (%) Right Turn Channelized	eadwa	0	5	0	vided	0	0					2				11
Volume (veh/h) Percent Heavy Vehicles (%) Proportion Time Blocked Percent Grade (%) Right Turn Channelized Median Type Storage	eadwa	0	5	0	vided	0	0					2				
Volume (veh/h) Percent Heavy Vehicles (%) Proportion Time Blocked Percent Grade (%) Right Turn Channelized Median Type Storage Critical and Follow-up He	eadwa	o ys	5	0 Undi	vided	0	0	0		3		2		0		
Volume (veh/h) Percent Heavy Vehicles (%) Proportion Time Blocked Percent Grade (%) Right Turn Channelized Median Type Storage Critical and Follow-up He Base Critical Headway (sec)	eadwa	0 ys 7.1	5 0 	0 Undi	vided	7.1	0 0 6.5	6.2		3		2		0		
Volume (veh/h) Percent Heavy Vehicles (%) Proportion Time Blocked Percent Grade (%) Right Turn Channelized Median Type Storage Critical and Follow-up He Base Critical Headway (sec) Critical Headway (sec)	eadwa	0 ys 7.1 7.10	5 0 	0 Undi	vided	0 7.1 7.10	0 0 6.5 6.50	0 6.2 6.20		3 4.1 4.13		2		0 4.1 4.10	<u> </u>	
Volume (veh/h) Percent Heavy Vehicles (%) Proportion Time Blocked Percent Grade (%) Right Turn Channelized Median Type Storage Critical and Follow-up He Base Critical Headway (sec) Critical Headway (sec) Base Follow-Up Headway (sec) Follow-Up Headway (sec)		0 ys 7.1 7.10 3.5 3.50	5 0 6.5 6.50 4.00	0 Undi 6.2 6.20 3.3 3.30	vided	0 7.1 7.10 3.5	0 0 6.5 6.50 4.0	0 6.2 6.20 3.3		3 4.1 4.13 2.2		2		0 4.1 4.10 2.2	<u> </u>	
Volume (veh/h) Percent Heavy Vehicles (%) Proportion Time Blocked Percent Grade (%) Right Turn Channelized Median Type Storage Critical and Follow-up Headway (sec) Critical Headway (sec) Base Follow-Up Headway (sec) Follow-Up Headway (sec) Delay, Queue Length, and		0 ys 7.1 7.10 3.5 3.50	5 0 6.5 6.50 4.00	0 Undi 6.2 6.20 3.3 3.30	vided	0 7.1 7.10 3.5	0 0 6.5 6.50 4.0	0 6.2 6.20 3.3		3 4.1 4.13 2.2		2		0 4.1 4.10 2.2	<u> </u>	
Volume (veh/h) Percent Heavy Vehicles (%) Proportion Time Blocked Percent Grade (%) Right Turn Channelized Median Type Storage Critical and Follow-up He Base Critical Headway (sec) Critical Headway (sec) Base Follow-Up Headway (sec)		0 ys 7.1 7.10 3.5 3.50	5 0 6.5 6.50 4.0 4.00	0 Undi 6.2 6.20 3.3 3.30	vided	0 7.1 7.10 3.5	0 0 6.5 6.50 4.0 4.00	0 6.2 6.20 3.3		3 4.1 4.13 2.2 2.23		2		0 4.1 4.10 2.2 2.20	<u> </u>	
Volume (veh/h) Percent Heavy Vehicles (%) Proportion Time Blocked Percent Grade (%) Right Turn Channelized Median Type Storage Critical and Follow-up Headway (sec) Critical Headway (sec) Base Follow-Up Headway (sec) Follow-Up Headway (sec) Follow-Up Headway (sec) Delay, Queue Length, an Flow Rate, v (veh/h)		0 ys 7.1 7.10 3.5 3.50	5 0 6.5 6.50 4.0 4.00 ervice 65	0 Undi 6.2 6.20 3.3 3.30		0 7.1 7.10 3.5	0 0 6.5 6.50 4.0 4.00	0 6.2 6.20 3.3		3 4.1 4.13 2.2 2.23 39				0 4.1 4.10 2.2 2.20 3	<u> </u>	
Volume (veh/h) Percent Heavy Vehicles (%) Proportion Time Blocked Percent Grade (%) Right Turn Channelized Median Type Storage Critical and Follow-up Head Base Critical Headway (sec) Critical Headway (sec) Base Follow-Up Headway (sec) Follow-Up Headway (sec) Pelay, Queue Length, and Flow Rate, v (veh/h) Capacity, c (veh/h)		0 ys 7.1 7.10 3.5 3.50	5 0 6.5 6.50 4.0 4.00 ervice 65 640	0 Undi 6.2 6.20 3.3 3.30	vided	0 7.1 7.10 3.5	0 0 6.5 6.50 4.0 4.00 3 874	0 6.2 6.20 3.3		3 4.1 4.13 2.2 2.23 39 1357				0 4.1 4.10 2.2 2.20 3 1412	<u> </u>	
Volume (veh/h) Percent Heavy Vehicles (%) Proportion Time Blocked Percent Grade (%) Right Turn Channelized Median Type Storage Critical and Follow-up Head Base Critical Headway (sec) Critical Headway (sec) Base Follow-Up Headway (sec) Follow-Up Headway (sec) Delay, Queue Length, and Flow Rate, v (veh/h) Capacity, c (veh/h) v/c Ratio		0 ys 7.1 7.10 3.5 3.50	5 0 6.5 6.50 4.0 4.00 4.00 65 640 0.10	0 Undi 6.2 6.20 3.3 3.30		0 7.1 7.10 3.5	0 0 6.5 6.50 4.0 4.00 3 874 0.00	0 6.2 6.20 3.3		3 4.1 4.13 2.2 2.23 39 1357 0.03				0 4.1 4.10 2.2 2.20 3 1412 0.00	<u> </u>	
Volume (veh/h) Percent Heavy Vehicles (%) Proportion Time Blocked Percent Grade (%) Right Turn Channelized Median Type Storage Critical and Follow-up Headway (sec) Critical Headway (sec) Base Follow-Up Headway (sec) Follow-Up Headway (0 ys 7.1 7.10 3.5 3.50	5 0 6.5 6.50 4.0 4.00 4.00 4.00 65 640 0.10 0.3	0 Undi 6.2 6.20 3.3 3.30		0 7.1 7.10 3.5	0 0 6.5 6.50 4.0 4.00 3 874 0.00 0.0	0 6.2 6.20 3.3		3 4.1 4.13 2.2 2.23 39 1357 0.03 0.1				0 4.1 4.10 2.2 2.20 3 1412 0.00 0.0	<u> </u>	

Generated: 10/18/2021 3:43:33 PM

EXHIBIT 14 2034 WEEKDAY PEAK AM HOUR ANALYSIS – Victoria/Haig

General Information							Site	Inforn	natio	า						
Analyst	T						Inters	ection			Victor	ria/Haig				
Agency/Co.	+						Jurisd	liction			<u> </u>	f Bellevi	lle			
Date Performed	11/19	9/2020					East/\	Nest Stre	eet			ria Aveni				
Analysis Year	2034						North	/South S	Street		Haig	Road				
Time Analyzed	Peak	AM Hou	r					Hour Fac			0.92					
Intersection Orientation	North	n-South					Analy	sis Time	Period (hrs)	0.25					
Project Description	Hanle	ey Park N	lorth Sul	odivision	1											
Lanes	-															
				J 4 1 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4		* *		* 14471								
Vehicle Volumes and Ad	justme	ents			Major	Street: Nor	th-South									
Approach		Eastb	ound			West	oound			North	bound			South	bound	
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R
Priority		10	11	12		7	8	9	10	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	1	0	0	0	1	0	0	0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		16	0	33		8	3	1		85	141	3		0	133	34
Percent Heavy Vehicles (%)		0	0	0		0	0	0		5				0		
	_															
Proportion Time Blocked																
Proportion Time Blocked Percent Grade (%))				0									
)				D									
Percent Grade (%))	Undi	vided		0									
Percent Grade (%) Right Turn Channelized Median Type Storage	eadway)	Undi	vided		0									
Percent Grade (%) Right Turn Channelized Median Type Storage	eadwa		6.5	Undi 6.2	vided	7.1	6.5	6.2		4.1				4.1		
Percent Grade (%) Right Turn Channelized Median Type Storage Critical and Follow-up He	eadwa	ys			vided			6.2		4.1 4.15				4.1		
Percent Grade (%) Right Turn Channelized Median Type Storage Critical and Follow-up He Base Critical Headway (sec)	eadwa	ys 7.1	6.5	6.2	vided	7.1	6.5									
Percent Grade (%) Right Turn Channelized Median Type Storage Critical and Follow-up He Base Critical Headway (sec) Critical Headway (sec)	eadwa	ys 7.1 7.10	6.5 6.50	6.2 6.20	vided	7.1 7.10	6.5 6.50	6.20		4.15				4.10		
Percent Grade (%) Right Turn Channelized Median Type Storage Critical and Follow-up He Base Critical Headway (sec) Critical Headway (sec) Base Follow-Up Headway (sec)		7.1 7.10 3.50	6.5 6.50 4.0 4.00	6.2 6.20 3.3 3.30	vided	7.1 7.10 3.5	6.5 6.50 4.0	6.20 3.3		4.15 2.2				4.10 2.2		
Percent Grade (%) Right Turn Channelized Median Type Storage Critical and Follow-up He Base Critical Headway (sec) Critical Headway (sec) Base Follow-Up Headway (sec) Follow-Up Headway (sec)		7.1 7.10 3.50	6.5 6.50 4.0 4.00	6.2 6.20 3.3 3.30	vided	7.1 7.10 3.5	6.5 6.50 4.0	6.20 3.3		4.15 2.2				4.10 2.2		
Percent Grade (%) Right Turn Channelized Median Type Storage Critical and Follow-up He Base Critical Headway (sec) Critical Headway (sec) Base Follow-Up Headway (sec) Follow-Up Headway (sec) Delay, Queue Length, an		7.1 7.10 3.50	6.5 6.50 4.0 4.00	6.2 6.20 3.3 3.30	vided	7.1 7.10 3.5	6.5 6.50 4.0 4.00	6.20 3.3		4.15 2.2 2.25				4.10 2.2 2.20		
Percent Grade (%) Right Turn Channelized Median Type Storage Critical and Follow-up He Base Critical Headway (sec) Critical Headway (sec) Base Follow-Up Headway (sec) Follow-Up Headway (sec) Delay, Queue Length, an Flow Rate, v (veh/h)		7.1 7.10 3.50	6.5 6.50 4.0 4.00 ervice	6.2 6.20 3.3 3.30	vided	7.1 7.10 3.5	6.5 6.50 4.0 4.00	6.20 3.3		4.15 2.2 2.25 92				4.10 2.2 2.20		
Percent Grade (%) Right Turn Channelized Median Type Storage Critical and Follow-up He Base Critical Headway (sec) Critical Headway (sec) Base Follow-Up Headway (sec) Follow-Up Headway (sec) Delay, Queue Length, an Flow Rate, v (veh/h) Capacity, c (veh/h)		7.1 7.10 3.50	6.5 6.50 4.0 4.00 ervice 53 674	6.2 6.20 3.3 3.30	vided	7.1 7.10 3.5	6.5 6.50 4.0 4.00 13 446	6.20 3.3		4.15 2.2 2.25 92 1376				4.10 2.2 2.20 0 1436		
Percent Grade (%) Right Turn Channelized Median Type Storage Critical and Follow-up He Base Critical Headway (sec) Critical Headway (sec) Base Follow-Up Headway (sec) Follow-Up Headway (sec) Delay, Queue Length, an Flow Rate, v (veh/h) Capacity, c (veh/h) v/c Ratio		7.1 7.10 3.50	6.5 6.50 4.0 4.00 ervice 53 674 0.08	6.2 6.20 3.3 3.30		7.1 7.10 3.5	6.5 6.50 4.0 4.00 13 446 0.03	6.20 3.3		4.15 2.2 2.25 92 1376 0.07				4.10 2.2 2.20 0 1436 0.00		
Percent Grade (%) Right Turn Channelized Median Type Storage Critical and Follow-up He Base Critical Headway (sec) Critical Headway (sec) Base Follow-Up Headway (sec) Follow-Up Headway (sec) Delay, Queue Length, an Flow Rate, v (veh/h) Capacity, c (veh/h) v/c Ratio 95% Queue Length, Q ₉₅ (veh)		7.1 7.10 3.50	6.5 6.50 4.0 4.00 ervice 53 674 0.08 0.3	6.2 6.20 3.3 3.30	vided	7.1 7.10 3.5	6.5 6.50 4.0 4.00 13 446 0.03 0.1	6.20 3.3		4.15 2.2 2.25 92 1376 0.07 0.2				4.10 2.2 2.20 0 1436 0.00 0.0		

Copyright © 2021 University of Florida. All Rights Reserved.

HCS™ TWSC Version 7.9.5 729_2034_tot_AM.xtw Generated: 10/18/2021 3:47:39 PM

EXHIBIT 15 2034 WEEKDAY PEAK PM HOUR ANALYSIS – Victoria/Haig

General Information							Site	Inform	natio	า						
Analyst	T						Inters	ection			Victor	ria/Haig				
Agency/Co.	-						Jurisd	liction				of Bellevi	lle			
Date Performed	11/19	9/2020					East/	Nest Stre	eet		Victor	ria Aveni	ue			
Analysis Year	2034						North	/South S	Street		Haig	Road				
Time Analyzed	Peak	PM Hou	r				Peak	Hour Fac	tor		0.92					_
Intersection Orientation	North	n-South					Analy	sis Time	Period (hrs)	0.25					
Project Description	Hanle	ey Park N	Iorth Sul	odivisior	1											
Lanes		-														
				J 4 1 7 4 5 1	ብ ጉ _{Major}	۲ ۲ Street: Nor	<mark>ት ዮ</mark> ሰ th-South	1 Y 4 Y 1								
Vehicle Volumes and Adj	justme	ents														
Approach		Eastb	ound			West	oound			North	bound			South	bound	
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
		0	1	0		0	1	0	0	0	1	0			1	
Number of Lanes		0	1	0		- v	-	Ľ.		0	1	0	0	0	-	0
Number of Lanes Configuration			LTR	0			LTR				LTR	0	0	0	LTR	0
		23		34		0		3		41		2	0	3		
Configuration			LTR				LTR				LTR				LTR	
Configuration Volume (veh/h)		23	LTR 6	34		0	LTR 0	3		41	LTR			3	LTR	
Configuration Volume (veh/h) Percent Heavy Vehicles (%)		23 0	LTR 6	34		0	LTR 0	3		41	LTR			3	LTR	11
Configuration Volume (veh/h) Percent Heavy Vehicles (%) Proportion Time Blocked		23 0	LTR 6 0	34		0	LTR 0 0	3		41	LTR			3	LTR	
Configuration Volume (veh/h) Percent Heavy Vehicles (%) Proportion Time Blocked Percent Grade (%)		23 0	LTR 6 0	34 0	vided	0	LTR 0 0	3		41	LTR			3	LTR	
Configuration Volume (veh/h) Percent Heavy Vehicles (%) Proportion Time Blocked Percent Grade (%) Right Turn Channelized	eadwa	23	LTR 6 0	34 0	vided	0	LTR 0 0	3		41	LTR			3	LTR	
Configuration Volume (veh/h) Percent Heavy Vehicles (%) Proportion Time Blocked Percent Grade (%) Right Turn Channelized Median Type Storage	eadwa	23	LTR 6 0	34 0	vided	0	LTR 0 0	3		41	LTR			3	LTR	
Configuration Volume (veh/h) Percent Heavy Vehicles (%) Proportion Time Blocked Percent Grade (%) Right Turn Channelized Median Type Storage Critical and Follow-up He	eadwa	23 0	LTR 6 0	34 0 Undi	vided	0	LTR 0	3 0		41 3	LTR			3	LTR	
Configuration Volume (veh/h) Percent Heavy Vehicles (%) Proportion Time Blocked Percent Grade (%) Right Turn Channelized Median Type Storage Critical and Follow-up He Base Critical Headway (sec)	eadwa	23 0 ys 7.1	LTR 6 0	34 0 Undi	vided	0	LTR 0 0 6.5	3 0 6.2		41 3 41	LTR			3 0 4.1	LTR	
Configuration Volume (veh/h) Percent Heavy Vehicles (%) Proportion Time Blocked Percent Grade (%) Right Turn Channelized Median Type Storage Critical and Follow-up He Base Critical Headway (sec) Critical Headway (sec)	eadwa	23 0 ys 7.1 7.10	LTR 6 0 6.5	34 0 Undi	vided	0 0 7.1 7.10	LTR 0 0 6.5	6.2 6.20		41 3 4.1 4.13	LTR			3 0 4.1 4.10	LTR	
Configuration Volume (veh/h) Percent Heavy Vehicles (%) Proportion Time Blocked Percent Grade (%) Right Turn Channelized Median Type Storage Critical and Follow-up He Base Critical Headway (sec) Critical Headway (sec) Base Follow-Up Headway (sec) Follow-Up Headway (sec)		23 0 7.1 7.10 3.5 3.50	LTR 6 0 6.5 6.5 6.50 4.0 4.00	34 0 Undi 6.2 6.20 3.3 3.30	vided	0 0 7.1 7.10 3.5	LTR 0 0 6.5 6.50 4.0	3 0 6.2 6.20 3.3		41 3 4.1 4.13 2.2	LTR			3 0 4.1 4.10 2.2	LTR	
Configuration Volume (veh/h) Percent Heavy Vehicles (%) Proportion Time Blocked Percent Grade (%) Right Turn Channelized Median Type Storage Critical and Follow-up He Base Critical Headway (sec) Critical Headway (sec) Base Follow-Up Headway (sec) Follow-Up Headway (sec) Delay, Queue Length, and		23 0 7.1 7.10 3.5 3.50	LTR 6 0 6.5 6.50 4.0 4.00	34 0 Undi 6.2 6.20 3.3 3.30	vided	0 0 7.1 7.10 3.5	LTR 0 0 6.5 6.50 4.0	3 0 6.2 6.20 3.3		41 3 4.1 4.13 2.2 2.23	LTR			3 0 4.1 4.10 2.2 2.20	LTR	
Configuration Volume (veh/h) Percent Heavy Vehicles (%) Proportion Time Blocked Percent Grade (%) Right Turn Channelized Median Type Storage Critical and Follow-up He Base Critical Headway (sec) Critical Headway (sec) Base Follow-Up Headway (sec)		23 0 7.1 7.10 3.5 3.50	LTR 6 0 6.5 6.5 6.50 4.0 4.00	34 0 Undi 6.2 6.20 3.3 3.30	vided	0 0 7.1 7.10 3.5	LTR 0 0 6.5 6.50 4.0 4.00	3 0 6.2 6.20 3.3		41 3 4.1 4.13 2.2	LTR			3 0 4.1 4.10 2.2	LTR	
Configuration Volume (veh/h) Percent Heavy Vehicles (%) Proportion Time Blocked Percent Grade (%) Right Turn Channelized Median Type Storage Critical and Follow-up Headway (sec) Critical Headway (sec) Base Follow-Up Headway (sec) Follow-Up Headway (sec) Follow-Up Headway (sec) Follow-Up Headway (sec) Delay, Queue Length, an Flow Rate, v (veh/h)		23 0 7.1 7.10 3.5 3.50	LTR 6 0 6.5 6.50 4.0 4.00 4.00	34 0 Undi 6.2 6.20 3.3 3.30	vided	0 0 7.1 7.10 3.5	LTR 0 0 6.5 6.50 4.0 4.00	3 0 6.2 6.20 3.3		41 3 4.1 4.13 2.2 2.23 45	LTR			3 0 4.1 4.10 2.2 2.20 3	LTR	
Configuration Volume (veh/h) Percent Heavy Vehicles (%) Proportion Time Blocked Percent Grade (%) Right Turn Channelized Median Type Storage Critical and Follow-up He Base Critical Headway (sec) Critical Headway (sec) Base Follow-Up Headway (sec) Follow-Up Headway (sec) Delay, Queue Length, and Flow Rate, v (veh/h) Capacity, c (veh/h)		23 0 7.1 7.10 3.5 3.50	LTR 6 0 6.5 6.50 4.0 4.00 ervice 68 619	34 0 Undi 6.2 6.20 3.3 3.30	vided	0 0 7.1 7.10 3.5	LTR 0 0 6.5 6.50 4.0 4.00 3 866	3 0 6.2 6.20 3.3		41 3 4.1 4.13 2.2 2.23 45 1349	LTR			3 0 4.1 4.10 2.2 2.20 3 1405	LTR	
Configuration Volume (veh/h) Percent Heavy Vehicles (%) Proportion Time Blocked Percent Grade (%) Right Turn Channelized Median Type Storage Critical and Follow-up Hea Base Critical Headway (sec) Critical Headway (sec) Base Follow-Up Headway (sec) Follow-Up Headway (sec) Follow-Up Headway (sec) Follow-Up Headway (sec) Follow-Up Headway (sec) Follow-Up Headway (sec) Critical Action		23 0 7.1 7.10 3.5 3.50	LTR 6 0 6.5 6.5 4.0 4.00 4.00 68 619 0.11	34 0 Undi 6.2 6.20 3.3 3.30		0 0 7.1 7.10 3.5	LTR 0 0 6.5 6.5 4.0 4.00 3 866 0.00	3 0 6.2 6.20 3.3		41 3 41 3 2 2 2.23 45 1349 0.03	LTR			3 0 4.1 4.10 2.2 2.20 3 1405 0.00	LTR	
Configuration Volume (veh/h) Percent Heavy Vehicles (%) Proportion Time Blocked Percent Grade (%) Right Turn Channelized Median Type Storage Critical and Follow-up Hea Base Critical Headway (sec) Critical Headway (sec) Base Follow-Up Headway (sec) Follow-Up Headway (s		23 0 7.1 7.10 3.5 3.50	LTR 6 0 6.5 6.50 4.0 4.00 4.00 4.00 68 619 0.11 0.4	34 0 Undi 6.2 6.20 3.3 3.30		0 0 7.1 7.10 3.5	LTR 0 0 6.5 6.5 4.0 4.00 3 866 0.00 0.0	3 0 6.2 6.20 3.3		41 3 4.1 4.13 2.2 2.23 45 1349 0.03 0.1	LTR			4.1 4.1 4.10 2.2 2.20 3 1405 0.00 0.0	LTR	

Copyright © 2021 University of Florida. All Rights Reserved.

Generated: 10/18/2021 3:49:27 PM