A Traffic Impact Assessment (TIA) Report

For

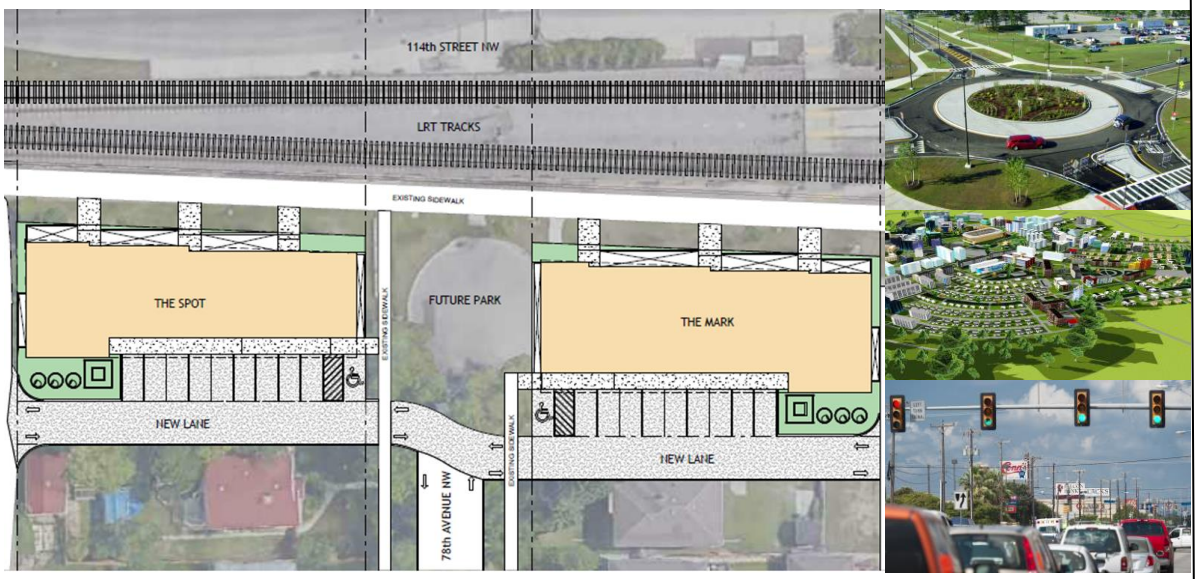
THE SPOT & THE MARK RESIDENCE DEVELOPMENT

Belgravia, Edmonton, Alberta

Prepared for

Pinto Properties Leasing

January 15, 2020



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1.0 INTRODUCTION

1.1 General

Pinto Properties Leasing retained Addoz Engineering Inc. to undertake a traffic impact assessment (TIA) in support of the proposed "The Spot & The Mark Residence Development" to be in the McKernan / Belgravia area in Edmonton, Alberta. The proposed development will be located along the northern and southern sides of 78 Avenue just west of the LRT right-of-way and will consist of two 4-Storey buildings with the following municipal addresses:

1. Northern Building: 11416 78 Avenue,
2. Southern Building: 11419 78 Avenue

The northern proposed building will be built on a 490 square metre lot and the southern building will be built on a 560 square metre lot. This traffic impact assessment is being prepared to assess potential transportation and parking impacts of the proposed development and to satisfy the City of Edmonton's requirements for such a study as a result of the proposed development.

Figure 1 presents a site map that shows the general location of the proposed development, and **Figure 2** presents a local context aerial map.

1.2 Planned Development

Each of the two proposed residential buildings in the development will consist of 53 units with a total of 106 units in the overall development. A green space is also planned between the two proposed buildings for the community. Each building of the two will be a 4-storey building built as European style micro suites. The proposed development is planned to be completed within the coming year. The proposed individual building site plans as well as the overall development plan are attached in **Appendix A** of this report.

1.3 Purpose of Study

The primary purposes of this traffic impact assessment study are:

- To investigate how the proposed development will tie-in with existing modes of travel within the project's vicinity
- To investigate and highlight how the proposed development would meet the goals of the ARP
- Discuss anticipation of high mode split to non-vehicle splits including investigating factors of the development that would lead to a higher rate than that of the surrounding neighbourhood. Additionally, to compare these local census data available on the City of Edmonton website.
- To identify suitable Transportation Demand Management (TDM) to employ in order to encourage active/transit modes of travel.

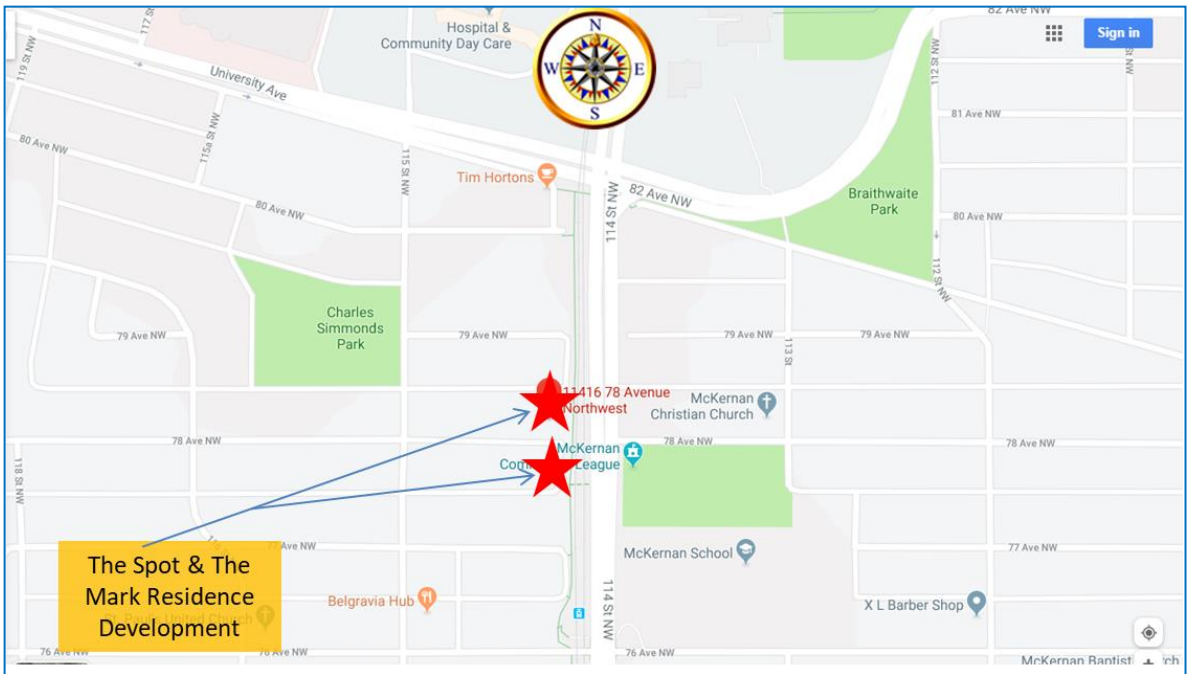


Figure 1: Site Location Map

Figure 2: Local Context Aerial Map

- Determine anticipated traffic generation of the development with recognition of all the above factors.
- Provide commentary on the network's ability, including the adjacent lane, to absorb the anticipated traffic generation based on existing traffic counts available on the City's website.
- Discussions related to potential vehicle-share arrangements
- Presentation of the parking supply / demand analysis including bylaw requirements. Also, discussion of the intended use of the provided on-site parking
- Discussion of how deficiencies in parking provision would be managed and why lower vehicle ownership might be anticipated. Also, to discuss how would the design and size of proposed residential units contribute to lower parking requirements.
- Presentation of how the existing parking program will or won't exacerbate any spillover parking, ability or not of the development to participate in this program.
- Presentation of the recommended changes to the parking program, both on 78 Avenue and beyond
- Presentation of the proposed bicycle parking (long-term secure) supply, which is expected to high.

1.4 Methodologies

This traffic impact assessment utilizes the following evaluation methodologies:

- Data collection including but not limited to existing roadway and intersection geometric characteristic, pavement markings, traffic control types, and on-street parking availability and program.
- Trip generation estimate for the proposed development based on appropriate ***Trip Generation*** land use categories and corresponding trip generation rates by the Institute of Transportation Engineers (ITE).
- Review of project area existing traffic volumes and visual determination of the ability of the existing lane configurations to accommodate increased volumes due to the proposed development.
- Site trip distribution will be based on the existing traffic patterns.
- Emergency vehicle access review and assessment as a result of the Cul De Sac removal and replacing it with green space.

- Selection of travel mode for site generated trips will be based on the 'McKernan Belgravia Station' Area Redevelopment Plan (ARP)
- Review of the City of Edmonton bylaw parking requirement and utilization of transportation demand management (TDM) to overcome any parking shortages.
- Presentation of the Pogo carshare program and the potential of development's residents joining it.

2.0 EXISTING CONDITIONS

2.1 Area Road Network

A field reconnaissance of the site and its surroundings was conducted to establish a database of the existing conditions. There are five roadways providing access to the site as described below. These roadways are 78 Avenue, 115 Street, University Avenue, 76 Avenue and 114 Street. A brief description of each of these roadways follows.

78 Avenue is a two-lane two-way local City road that runs in the east / west directions in the vicinity of the proposed development. This road will provide direct access to the proposed development and it has parking allowed on both sides with permit UA-3 program for the residents and their visitors. 78 Avenue is a dead-end road with a Cal de Sac near the project's site adjacent to the LRT right of way. The LRT runs on the north / south directions parallel to 114 Street.

115 Street is a two-lane two-way roadway that runs in the north / south directions and forms 4-leg unsignalized intersection with 78 Avenue. This intersection is controlled by Yield signs on the two 78 Avenue approaches with free flow operations on 115 Street approaches. Dedicated bicycle lanes exist on the two sides of this road, one for the northbound direction and the other is for the southbound direction. The speed limit is posted at 30 Km / hr. in the vicinity of 78 Avenue intersection.

University Avenue is a four-lane two-way major roadway that runs in the east / west directions in the vicinity of 115 Street. It forms 4-leg intersection with 115 Street, which is controlled by a traffic signal. The eastbound approach at this intersection has one exclusive left turn only lane, one through only lane and one through/right shared lane. The westbound approach has one left-turn only lane, two through only lanes and one right-turn only lane. The northbound has one left/through/right shared lane and the southbound has exclusive left-turn only lane, one through only lane and one right-turn only lane.

76 Avenue is a two-lane two-way City road that runs in the east / west directions in the vicinity of 115 Street. It has a dedicated bicycle lane and one parking lane on the north side of the Avenue. The intersection of 76 Avenue and 115 Street is controlled by 4-way Stop Control signs on all intersection approaches. 115 Street north/south approaches at this intersection has one left/through/right shared lane on each approach.

114 Street is a four-lane two-way major roadway that runs in the north / south directions in the vicinity of 76 Avenue. It forms 4-leg intersection with 76 Avenue, which is controlled by a traffic signal. The southbound approach at this intersection has one exclusive left turn only lane, two through only lanes and one right-turn only lane. The northbound approach has one left-turn only lane, one through only lane and one shared through/right lane. The 76 Avenue east /west approaches have one shared through/left lane and one exclusive right-turn only lane. The 76 Avenue has bike shared-lane marking (Sharrow).

2.2 Existing Light Rail Transit (LRT) Line

The existing north / south LRT runs on the left side of 114 Street in a proximity of the proposed residential development. The McKernan Belgravia LRT Station is within 80 metres or less from the proposed project site. This is a very important factor that would make the proposed residential development a transit-oriented development (TOD).

2.3 Planned Roadway Improvements

The City of Edmonton official website was reviewed. Specifically, the Road Planning & Design webpage was reviewed thoroughly, and the results indicated that there are no plans available at this time for any improvements within the project's study area.

2.4 Selected Study Area Approach Traffic Volumes

The City of Edmonton's traffic count database available on City's official website was reviewed and the available traffic volume data for adjacent study area intersections were reviewed. The approach traffic volumes along 115 Street approaching University Avenue and 76 Avenue as well as 76 Avenue volumes approaching 114 Street were in interest for this study. The AM peak hour, PM peak hour and Daily volumes are presented on **Figure 3** for consideration. Refer to **Appendix B** for copies of the traffic count data details.

A review of **Figure 3** hourly and daily volumes and comparing these with standard roadway capacities indicates that there are ample capacities on these roadways to accommodate the proposed development's traffic volumes. Note that the projected site traffic generation and distribution is discussed in the following chapter of this report.

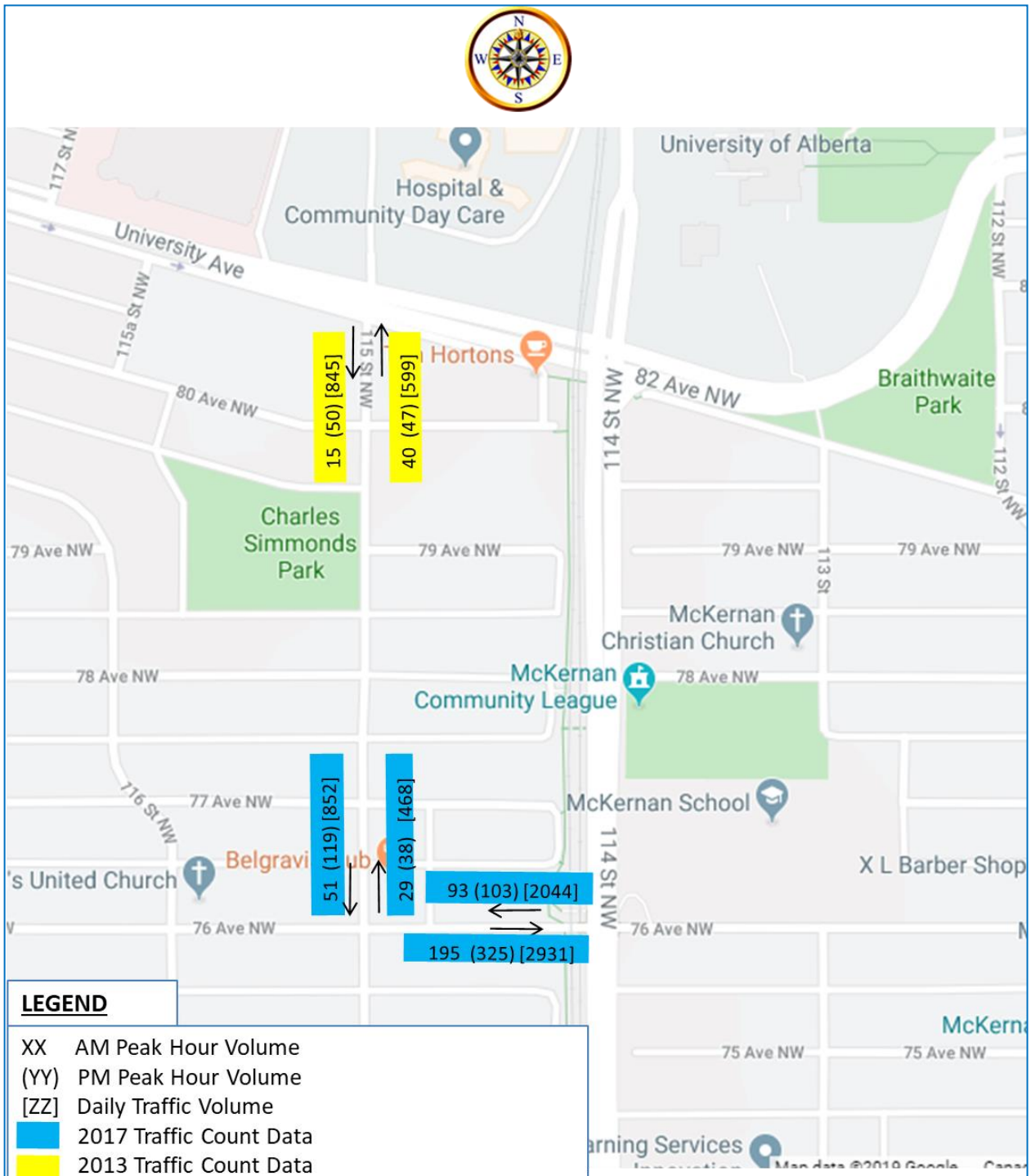


Figure 3: Selected Approach Traffic Volumes at Nearby Area Intersections

3.0 PROJECTED TRAFFIC VOLUMES

3.1 Site Generated Trips

To estimate the number of vehicle trips expected to be generated by a development, trip generation rates are applied based on the proposed land uses and intensity. The number of trips that would be generated by a proposed development are estimated based on the rates published in ***Trip Generation Manual, 10th Edition*** by the Institute of Transportation Engineers (ITE). The trip generation rates along with the proposed land uses and the corresponding ITE land use codes are presented in **Table 1**. The resulted development's generated trips are presented in **Table 2**. The Pass-by and internal capture trip generation are discussed in the following subsections.

Table 1: Trip Generation Rates ITE 10th Edition Trip Generation Manual

Land Use	ITE Code	Unit	AM Peak Hour			PM Peak Hour			Daily Trips
			In	out	total	in	out	total	total
Multifamily Housing (Mid-Rise)	221	Dwelling Units	26%	74%	0.36	61%	39%	0.44	5.44

Table 2: Projected Site-Generated Peak-Hour and Daily Traffic Volumes

Development	ITE Code	Density (# of Units)	AM Peak Hour			PM Peak Hour			Daily Trips total
			in	out	total	in	out	total	
Proposed 54 Unit Complex	221	106	10	28	38	29	18	47	577

A review of Table 2 indicates that the estimated trip generations from the proposed residential development are considered very low and would not be expected to severely impact nearby area intersections.

3.1.1 Pass-by Trips

Pass-by trips are not new trips, but they are the trips that are attracted from the traffic passing the site on adjacent roadways. While pass-by trips are new trips at the access points to the site, they are not new trips on the adjacent roadway systems. Since the proposed development will include a residential use, no pass-by trips are expected for such development. Therefore, no reduction for pass-by trips considered.

3.1.2 Internal Trips

An internal trip is a trip that has both its origin and destination within a multi-use development area under investigation, which should be deducted from the total number of trips departing and entering the study site. The appropriate internal trip reduction rates are based on the characteristics of the mixed land uses. Since the proposed development will include a residential use, no internal trips are expected for such development. Therefore, no reduction for internal trips considered.

3.2 Trip Distribution

The directions from which vehicles will approach and depart a site is a function of several variables, including the population and employment distribution within the development's area of influence, the operational characteristics of the road system, and the ease with which drivers can travel over various sections of the roadway network without encountering congestion. The directional distribution of new project trips by the proposed The Spot & The Mark Residence Development was estimated based on the consideration of all the pertinent factors above including existing traffic patterns. The resulting directional distributions are as follows:

- 60% of site generated trips will travel to and from the south on 115 Street; and
- 40% of site generated trips will travel to and from the north on 115 Street.

3.3 Trip Assignment

The projected peak-hour traffic volumes for The Spot & The Mark Residence Development were assigned to the adjacent roadways based on the estimated directional distribution as discussed above and the resulted site generated AM peak hour and PM peak hour trips are illustrated on **Figure 4.**

A review of Figure 4 site generated traffic volumes indicates that these projected volumes are very small and would not impact the area nearby intersections. When these traffic volumes are compared with the current traffic volumes shown on Figure 3, it can be easily concluded that the impact of the proposed site generated volumes would be minor.

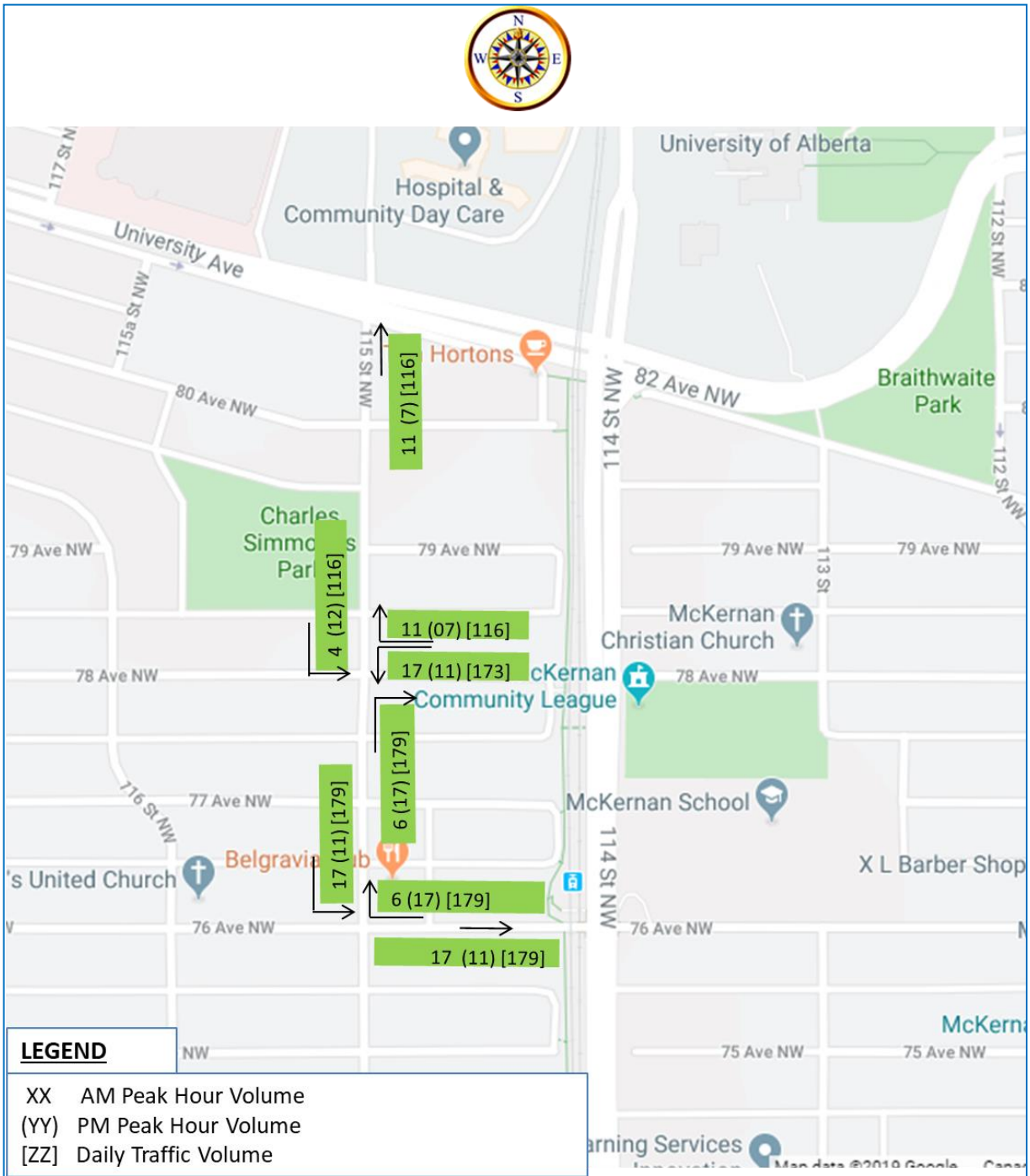


Figure 4: Site Generated Traffic Volumes Shown at Selected Nearby Intersections

3.4 Emergency Vehicle Access Evaluation

This project is proposing providing greenspace between the two proposed residential buildings, which would eventually remove the existing Cul De Sac. With this change, the client is also providing two-lane two-way roadway links that connect between 78 Avenue and the existing Lane to the north of the northern proposed building and the Lane to the south of the southern proposed building. This would form a T-intersection between 78 Avenue and these two new roadway links. These links would allow good traffic circulation especially for passenger vehicles as drivers would be able to utilize these connections for easy entry / exit of 78 Avenue areas and accessing the proposed residential development.

Regarding the emergency vehicles, the plan is that they would utilize these two 78 Avenue links to the north and to the south (T-intersection) to perform the turnaround operation and exit via 78 Avenue as well. In order to ensure this operation is actually feasible and could be performed by the typical City's emergency vehicles with the proposed T-intersection lane configuration layout, AutoTurn turning templates for City's emergency vehicle were prepared and are presented on **Figure 5**.

A review of **Figure 5** indicates that the emergency vehicles would be able to perform the turnaround within the proposed new T-intersection layout. Therefore, the removal of the Cul De Sac would not negatively impact emergency vehicles operations.

Figure 5: Emergency Vehicle AutoTurn Turning Template.

This Diagram will be submitted separately, it is being prepared today, January 15, 2020.

4.0 MOBILITY REVIEW AND EVALUATION

4.1 Development Tie-in with Existing Travel Modes

The proposed residential development would tie-in smoothly with all available modes of transportation in the project's vicinity. The project owner indicated that they will be targeting tenants who use the LRT, bicycle, or walking modes of travel. Since the McKernan Belgravia LRT Station is within 80 metres of the proposed development, this makes it easy to have most development tenants use LRT for their daily transportation needs.

Additionally, for bicycle users, dedicated bike lanes are already available along 115 Street, 76 Avenue and the other nearby roadway system, which would make it easy for bicycle users to utilize the available bike network and this would encourage them to live in the proposed development.

Finally, for people who loves to be active and utilize walking mode of travel, sidewalks are available along all nearby road network. Additionally, for people who like to mix between walking and transit, the availability of the McKernan Belgravia LRT Station in the project's vicinity would encourage them to live in the proposed development.

4.2 Meeting Area Redevelopment Plan (ARP) Goals

The proposed residential development meets the goals of the McKernan-Belgravia Station Area Redevelopment Plan. The main goal of this ARP is to enhance and strengthen the local character of the McKernan and Belgravia neighbourhoods, while capitalizing on the presence of the LRT station through transit-oriented development (TOD). It is stated in the ARP document that "within a TOD area, housing, shopping and employment are concentrated along a network of walkable and bikeable streets. There are numerous benefits to TOD which include greater transit ridership, a more efficient and sustainable use of land complete infrastructure, and more 'communities' created through an emphasis on a mix of uses providing increased housing and employment choices within a compact walkable area promoting, healthy lifestyles through alternative modes including walking and cycling." The proposed residential development meets all the goals and makes use of all the benefits stated in the ARP.

Additionally, the proposed residential development meets the following ARP goals:

- Contribute to integrate higher density development with transit
- Helps meet the goal of a minimum 25% housing unit growth as infill
- Prepare TOD plans around existing LRT stations
- Facilitate partnerships and collaborative efforts to develop TOD

4.3 Anticipation of High Mode Split to Non-Vehicle Splits

As stated earlier, the project owner indicated they will be targeting tenants who use the LRT, bicycle, or walking modes of travel. Therefore, this development anticipates high percentages of non-vehicle split compared to vehicle split. In fact, since the project owner plans to rent to those tenants who use non-vehicle travel modes, only visitors would be expected to approach the site with private vehicle. Therefore, the non-vehicle to vehicle split would be around 90% to 10% or so.

4.4 Travel Demand Management (TDM)

Travel demand management strategies were investigated as part of this study. The project owner is implementing the following transportation management initiatives:

- Provision of 30 secure indoor bicycle parking spaces and additional 12 exterior bicycle parking spaces for each of the proposed two buildings. The totals provided for the development are **60 secure indoor** bicycle parking spaces and additional **24 exterior** bicycle parking spaces.
- No vehicle parking stalls are available for tenants to encourage them to utilize transit, bicycle or other active modes of transportation.

4.5 Potential of Vehicle Sharing

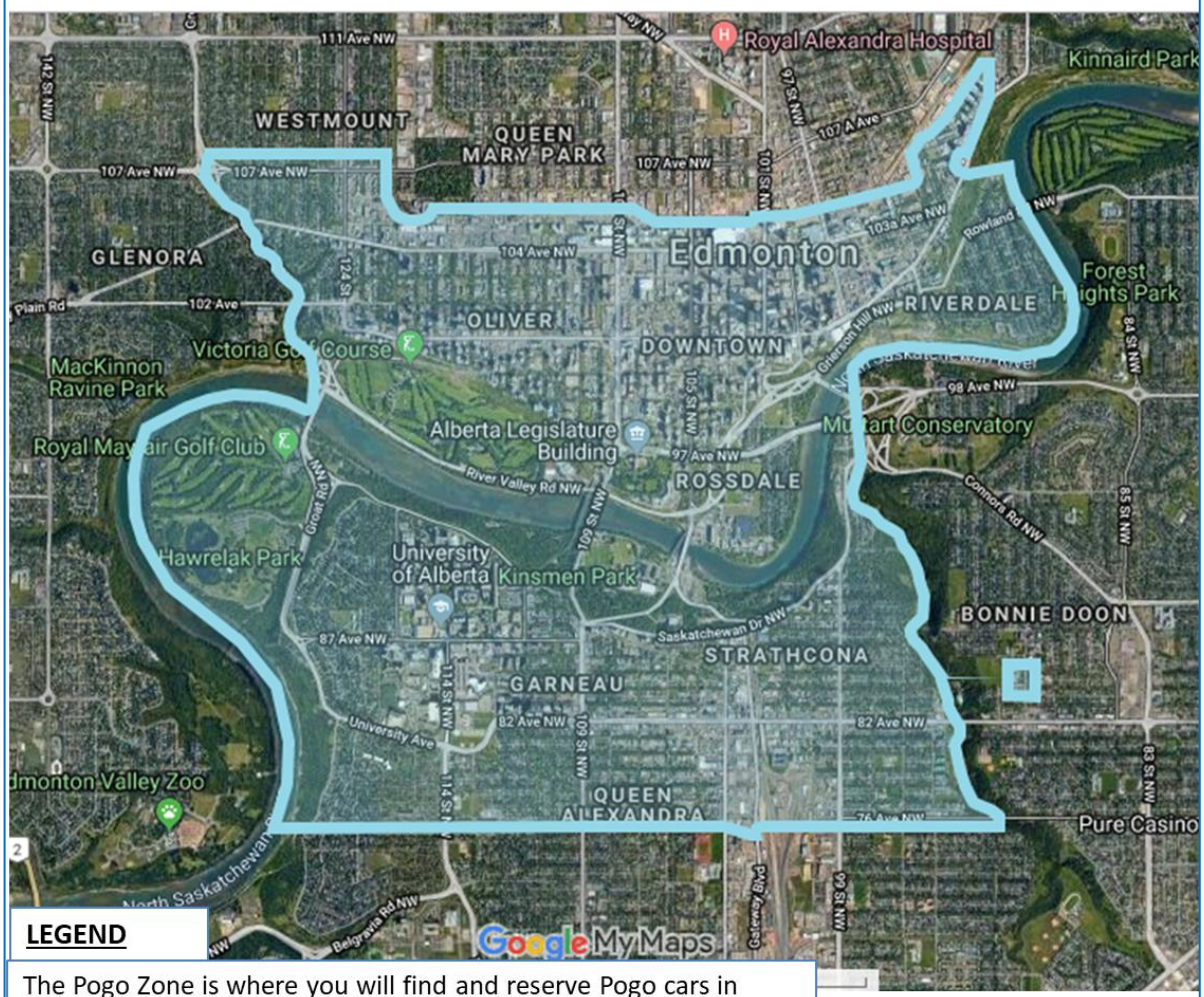
Since the project owner is planning to target transit, Bike users and other non-vehicle users, vehicle sharing would not be considered for tenants. However, it could be considered for the visitors who wish to visit any development's tenant. The project owner will consider encouraging the tenant to inform their visitors that parking spaces available for visitors are limited; hence they are encouraged to carpool when they are visiting them.

4.6 Pogo CarShare

Pogo CarShare is a local, membership-based service in Edmonton that offers members 24/7 access to a pool of vehicles located within a defined, central Zone in Edmonton. Participants can use these vehicles to commute, run errands, head out for a night with friends—they decide! Participants only pay for the exact amount of time they use the vehicle. Gas, insurance, and parking are all included, and one-way trips are allowed, as long as the car is returned within the Zone. Car sharing has been gaining popularity all over the world as people choose to forego the hassle and expense of traditional car ownership. It also opens up the opportunity for access to a vehicle that some people may not currently have.

The Pogo Zone is where participants will find and reserve Pogo cars in Edmonton, 24/7. Participants may exit the Zone at any point while driving and even make multiple stopovers outside the Zone, but their trip must always end within the Zone. **Figure 6** presents the current boundaries of Pogo Zone. Also the Pogo Zone keeps getting bigger; therefore, tenants will be encouraged to participate in Pogo Carshare for their transportation needs.

Reference: *Pogo Carshare information taken from this link: https://pogocarshare.com/*



LEGEND

The Pogo Zone is where you will find and reserve Pogo cars in #YEG, 24/7. You may exit the Zone at any point while driving and even make multiple stopovers outside the Zone, but your trip must always end within the Zone.

Figure 6: Current Pogo Carshare Zone Boundaries

5.0 PARKING REVIEW AND EVALUATION

5.1 Bylaw Parking Requirement

A summary of the parking supply / demand for the 106 Unit Residential Development, is presented in **Table 3**. The rates presented in the below were taken from the City of Edmonton's bylaw standards included in Section 54.2 Schedule 1 for Multi-Unit Housing.

Table 3: City of Edmonton's Parking Requirements (Supply / Demand)

Description	Number of Units	Parking Rate	Parking Requirement (Demand)	Supply
For Tenants	106	0.4 parking spaces per Dwelling plus 0.3 parking spaces per Sleeping Unit.	75	0
For Visitors	106	A minimum rate of 0 visitor parking spaces for the first 7 Dwellings, and 1 visitor parking space per 7 Dwellings thereafter.	15	20
Total			**90**	**20**

A review of **Table 3** indicates that the parking supply is short of 70 parking spaces. The shortage in parking provision is in fact an advantage as this would encourage tenants to utilize non-vehicle modes of travel such as bicycle or transit especially that the LRT station is within less than 80 metre distance from the proposed development.

The provided visitor parking will be readily available and located at the primary buildings' entrances; also, it will be clearly identified as visitor parking.

5.2 Intended Use of On-site Parking

The intended use of the on-site parking at the proposed residential development is for visitors only. It will be clearly identified as visitor parking; and all tenants will be informed that there are no on-site parking stalls available for the tenants. Therefore, tenants would depend on non-vehicle modes of travel.

5.3 Parking Deficiency Management

As noted earlier, the project owner will target transit, Bike users and other non-vehicle users. Therefore, the shortage of parking would not be an issue as all tenants would not utilize personal vehicles. Also, they understand that there are no tenant parking spaces available on-site. Therefore, tenants would be responsible for where they would park their vehicles if they in fact own personal vehicles.

5.4 Impact on the On-Street Parking Program

The Residential Parking Program ensures parking is available for residents in areas with high on-street parking demands, like a neighbourhood near a large sports facility or educational institution. This program allows residents within a residential parking program area to park their vehicles on the street. The field review of the adjacent street system indicated that a UA-3 parking program already operating along 78 Avenue and it allows parking for 2 hours except residents with valid permits; this applies to Monday thru Friday.

The proposed residential development meets all on-street parking program requirements including the following:

1. Multi-family up to four stories – **Yes, as the proposed development will have two 4-storey buildings.**
2. Residential area adjacent to L.R.T. station, **yes**.

Therefore, the project owner is encouraged to participate in the existing UA-3 parking program.

5.5 Recommended Changes to Parking Program

Addoz Engineering Inc. reviewed the existing parking program and believes it is a good program to discourage LRT users from parking on the local street, which would make these parking spaces available for the area residents and their visitors. AEI does not recommend any changes to the existing parking program along 78 Avenue and beyond.

5.6 Proposed Bicycle Parking

A summary of the bicycle parking supply / demand for the proposed 106 Unit Residential Development, is presented in **Table 4**. The rates presented in the below table were taken from the City of Edmonton's bylaw standards included in Section 54.3 Schedule 2 for areas where Section 54.2 Schedule 1 (A) applies.

Table 4: City of Edmonton's Bicycle Parking Requirements (Supply / Demand)

Description	Required Vehicular Parking	Parking Rate	Required Bicycle Parking (Bylaw)	Supply
Areas where Section 54.2 Schedule 1(A) applies	90	10% of the number of vehicular parking spaces required under Section 54.2 Schedule 1(A) with 5 Bicycle Parking spaces being the minimum to be provided. At least 10% of Bicycle Parking spaces shall be short term	9	60 secured and 24 exteriors
Total			**9**	**84**

A review of **Table 4** indicates that the proposed bicycle parking supply exceeds the bylaw requirement by more than 8 times. Additionally, 60 of the provided bicycle spaces are indoor secured parking spaces and the remaining 24 are exterior spaces. Therefore, no bicycle parking issues would be expected for the proposed development. Also, the availability of these extra bicycle parking spaces would encourage more tenants to utilize the bicycle for their daily transportation needs.

6.0 CONCLUSIONS AND RECOMMENDATIONS

This study analyzed the traffic impacts of the proposed "The Spot & The Mark Residence Development" to be in the McKernan / Belgravia area in Edmonton, Alberta. The municipal addresses of the proposed development are 11416 78 Avenue and 11419 78 Avenue, Edmonton, Alberta. The estimated number of total site generated trips entering and exiting the development would be 38 trips during the AM peak hour, 47 trips during the PM peak hour and 577 daily trips. The following conclusions have been reached by this traffic impact assessment study:

- Each of the two proposed residential buildings in the development will consist of 53 units with a total of 106 units in the overall development. A green space is also planned between the two proposed buildings for the community. Each building of the two will be a 4-storey building built in a European style micro suite.

- This development is also providing two-lane two-way roadway links that connect between 78 Avenue and the existing Lane to the north of the northern proposed building and the Lane to the south of the southern proposed building. A new T-intersection would be created between 78 Avenue and these two new roadway links, which would replace the removed Cul De Sac.

- Regarding the emergency vehicles, the plan is that they would utilize these two 78 Avenue links (the newly created T-intersection) to perform the turnaround operation and exit via 78 Avenue as well. AutoTurn turning templates for City's typical emergency vehicle were prepared and showed the turnaround with the proposed T-intersection layout is feasible.

- The proposed residential development is within 80 metres or less from the existing McKernan Belgravia LRT Station located along 114 Street. The existing LRT line runs in the north/south directions. This is a very important factor that makes the proposed residential development a transit-oriented development (TOD).

- The current study area intersections traffic volumes were obtained form the City of Edmonton's traffic count database and were presented on a traffic volume diagram. Selected approach traffic volumes were reviewed closely and determined to indicate the availability of ample traffic volume capacities that would easily accommodate future increases in traffic volumes.

- The proposed residential development's projected traffic generation and distribution were estimated and determined to be relatively small and would not negatively impact

the nearby area intersections. This applies to the AM peak hour, PM peak hour and daily traffic volumes.

- The proposed residential buildings will tie-in smoothly with all available modes of transportation in the project's vicinity. The proximity of the McKernan Belgravia LRT Station would encourage tenants to utilize the transit system. The dedicated bike lanes available along 115 Street as well as along 76 Avenue would encourage tenants to utilize the bicycle for their transportation needs. Additionally, the availability of sidewalks along all area roadways encourages tenants to utilize the walking mode of travel.

- The proposed residential development meets the goals of the McKernan-Belgravia Station Area Redevelopment Plan. the proposed residential development meets the following ARP goals:
  - Contribute to integrate higher density development with transit
  - Help meet the goal of a minimum 25% housing unit growth as infill
  - Prepare TOD plans around existing LRT stations
  - Facilitate partnerships and collaborative efforts to develop TOD

- This development anticipates high percentages of non-vehicle split compared to vehicle split. In fact, since the project owner plans to rent those tenants who use non-vehicle travel modes; therefore, only visitors would be expected to approach the site with passenger vehicle.

- Travel demand management strategies were investigated as part of this study. The project owner is implementing the following transportation management initiatives:
  - Provision of 60 secure indoor bicycle parking spaces and additional 24 exterior bicycle parking spaces.
  - No parking stalls are available for tenants to encourage them to utilize transit, bicycle or other active modes of transportation.

- Pogo CarShare was discussed and it is a local, membership-based service in Edmonton that offers members 24/7 access to a pool of vehicles located within a defined, central Zone in Edmonton. Participants can use these vehicles to commute, run errands, head out for a night with friends or whatever they decide! Participants only pay for the exact amount of time they use the vehicle. Therefore, tenants will be encouraged to participate in the Pogo Carshare program to meet their transportation needs.

- Vehicle parking supply demand analysis indicated the shortage of 70 parking spaces, as no parking is provided for the development's tenants. This shortage in parking provision is in fact an advantage as this would encourage tenants to utilize non-vehicle modes of travel such as bicycle or transit, etc.

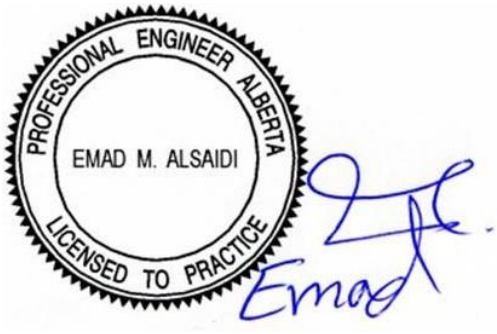
- The intended use of the on-site parking at the proposed residential development is for visitors only. They will be clearly identified as visitor parking and all tenants will be informed that there are no on-site parking stalls available for tenants.
- This study encourages the project owner to participate in the existing parking program along 78 Avenue and beyond.
- Addoz Engineering Inc. does not recommend any changes to the existing parking program along 78 Avenue and beyond as it meets its goal of discouraging LRT users from parking on the local street, which would make these parking spaces available for the area residents and their visitors.
- The proposed bicycle parking supply exceeds the bylaw requirement by more than 8 times. Additionally, 60 of the provided bicycle spaces are indoor secured parking spaces and 24 are exterior spaces. Therefore, no bicycle parking issues would be expected for the proposed development.

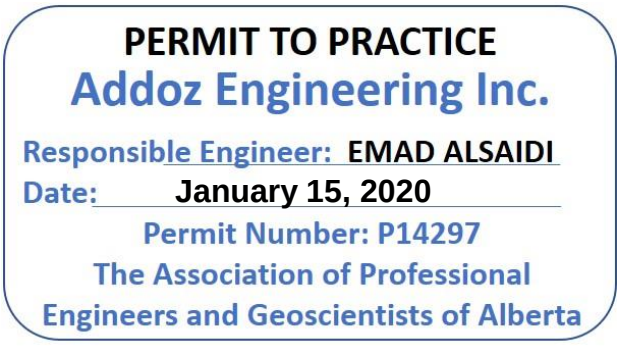
In summary, this traffic impact assessment concludes that the proposed "The Spot & The Mark Residence Development" will have some impact on the traffic operations of the future road network. However, this impact will not reach the levels of negatively impacting the operations of the study area intersections or adjacent roadway system. Additionally, this development encourages the utilization of active modes of travel as well as transit system.

Yours truly,

ADDOZ ENGINEERING INC

Prepared by:





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E-mail: ealsaidi@addozeng.ca
Web: www.addozeng.ca

Appendix A

Project Development Site Plans

Appendix B

Historical Intersection Traffic Count Data

Traffic Impact Assessment

APPENDICES

For

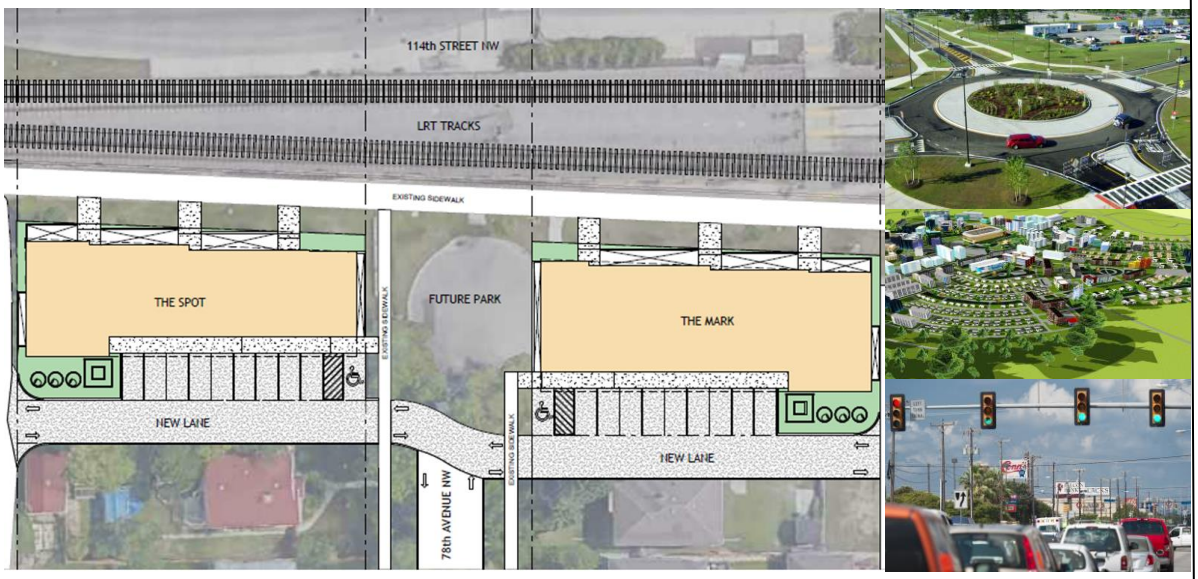
THE SPOT & THE MARK RESIDENCE DEVELOPMENT

Belgravia, Edmonton, Alberta

Prepared for

Pinto Properties Leasing

December 2, 2019



ADDOZ ENGINEERING INC

ADDOZ ENGINEERING INC
Clients are Our First Priority

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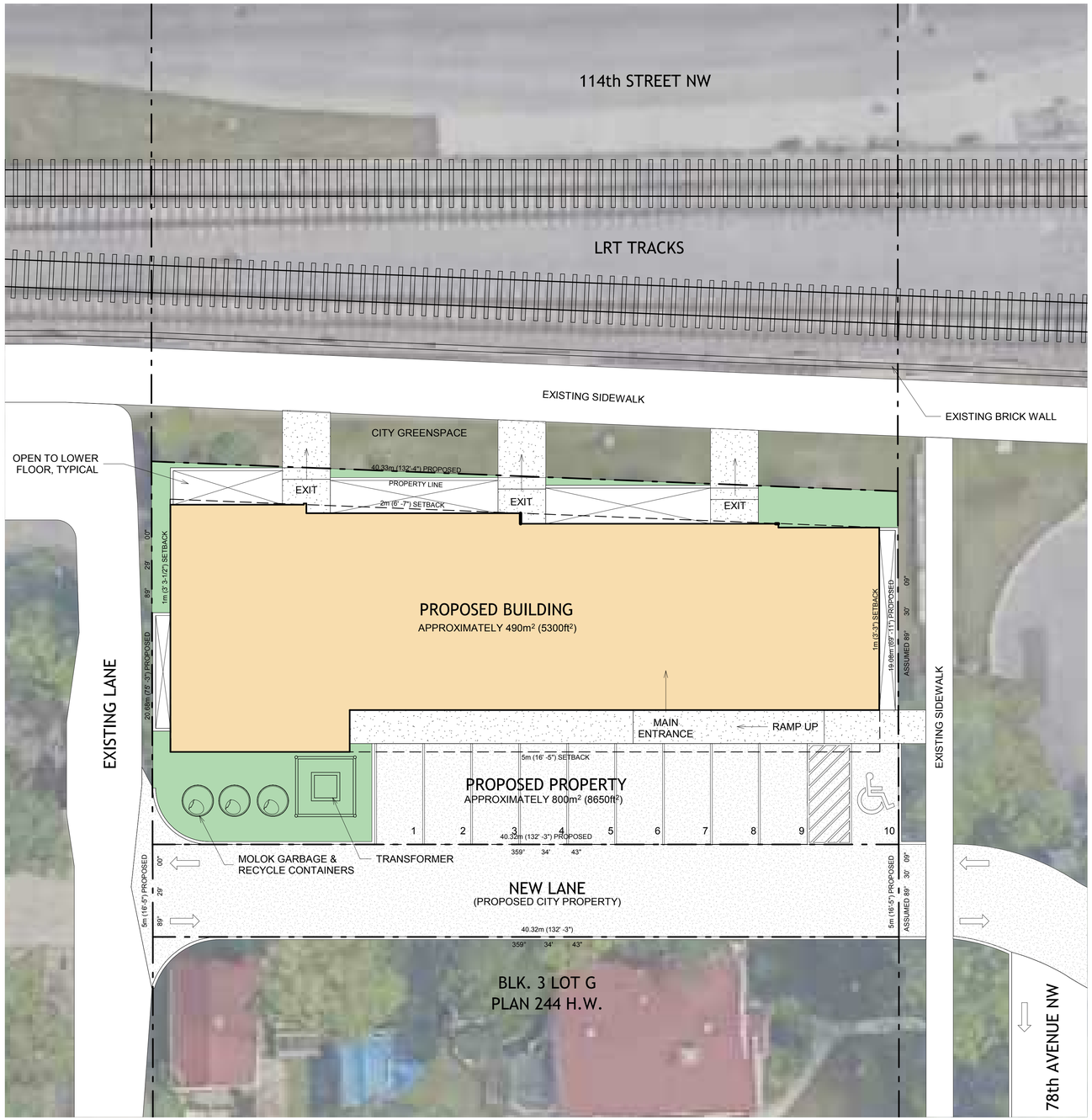
Appendix A

Project Development Site Plans



1 A 1.1A THE SPOT PROPOSED SITE PLAN 3/32" = 1'-0"

THE MARK F.A.R.
(#'s ONLY USED TO CALCULATE FLOOR AREA RATIO)

SITE -	8627.71
LOWER FLOOR -	3370.69
MAIN FLOOR -	2700.07
FLOORS 2-4 -	4531.14
F.A.R. =	2.28

Frank HILBICH architect inc.
3711A - 98 STREET
EDMONTON, AB
T: (780) 485-5060

DO NOT SCALE THIS DRAWING

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REVISIONS

ISSUED FOR REVIEW	NOV. 14, 2019

PROJECT

THE SPOT & THE MARK RESIDENCE (BELGRAVIA)

11416-78 AVENUE
EDMONTON, ALBERTA, T6G 0N3

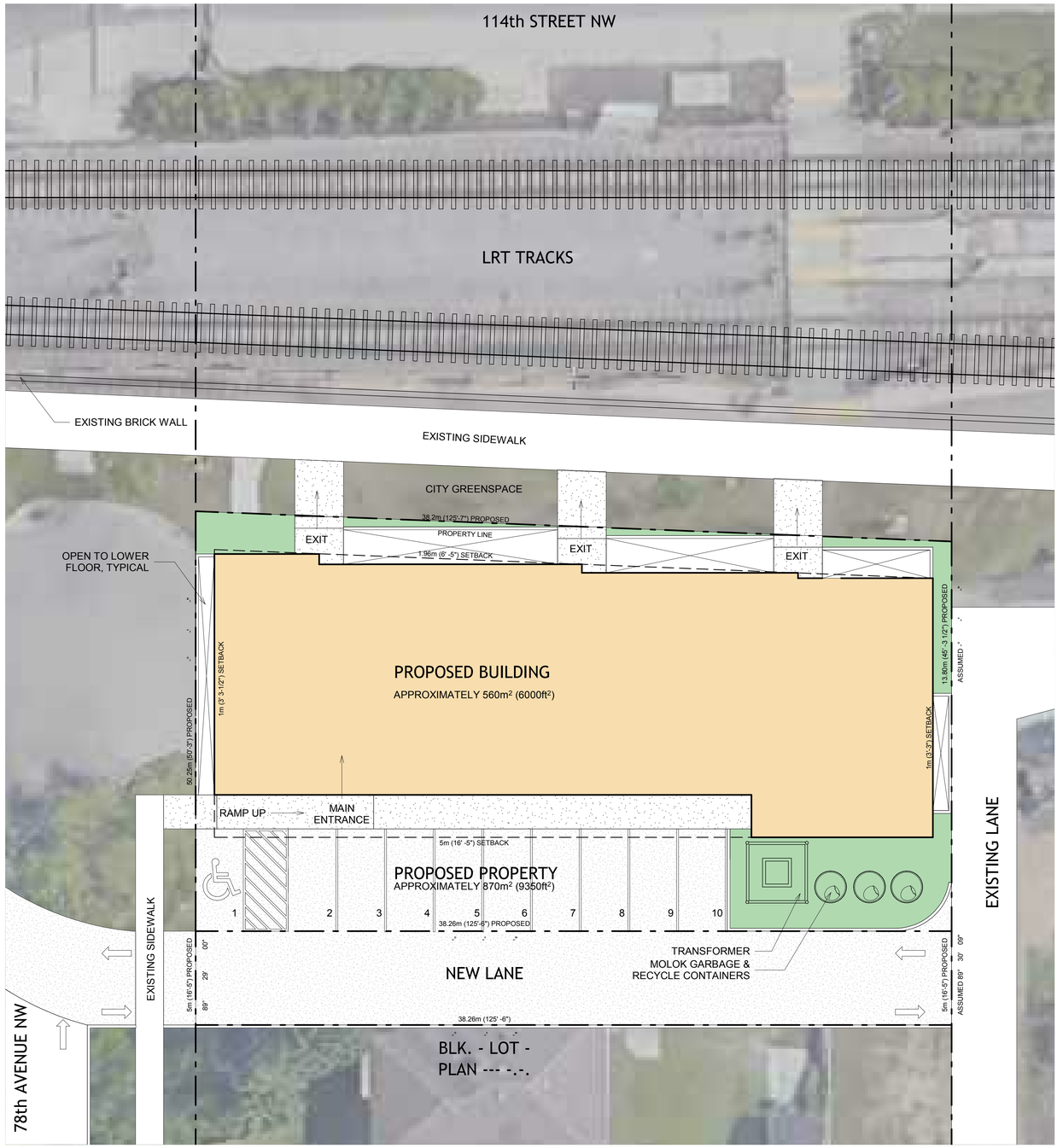
DRAWING TITLE

THE SPOT PROPOSED SITE PLAN

SCALE:	3/32" = 1'-0"
DATE:	NOVEMBER 14, 2019
PROJ. No.:	19-12

DWG. #

A 1.1A



1 A 1.1B THE MARK PROPOSED SITE PLAN
3/32" = 1'-0"

THE MARK F.A.R.
(#'s ONLY USED TO CALCULATE FLOOR AREA RATIO)

SITE -	9344.95
LOWER FLOOR -	3385.87
MAIN FLOOR -	3124.37
FLOORS 2-4 -	5123.51
F.A.R. =	2.29

Frank HILBICH architect inc.
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REVISIONS

ISSUED FOR REVIEW	NOV. 14, 2019

PROJECT

THE SPOT & THE MARK RESIDENCE (BELGRAVIA)

11416-78 AVENUE
EDMONTON, ALBERTA, T6G 0N3

DRAWING TITLE

THE MARK PROPOSED SITE PLAN

SCALE:	3/32" = 1'-0"
DATE:	NOVEMBER 14, 2019
PROJ. No.:	19-12

DWG. #

A 1.1B

Frank HILBICH architect inc.
3711A - 98 STREET
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REVISIONS

ISSUED FOR REVIEW	NOV. 14, 2019

1 / A 1.1C OVERALL SITE PLAN
1/16" = 1'-0"

PROJECT

THE SPOT & THE MARK RESIDENCE (BELGRAVIA)

11416-78 AVENUE
EDMONTON, ALBERTA, T6G 0N3

DRAWING TITLE

OVERALL SITE PLAN

SCALE:	1/16" = 1'-0"
DATE:	NOVEMBER 14, 2019
PROJ. No.:	19-12

DWG. #

A 1.1C

Appendix B

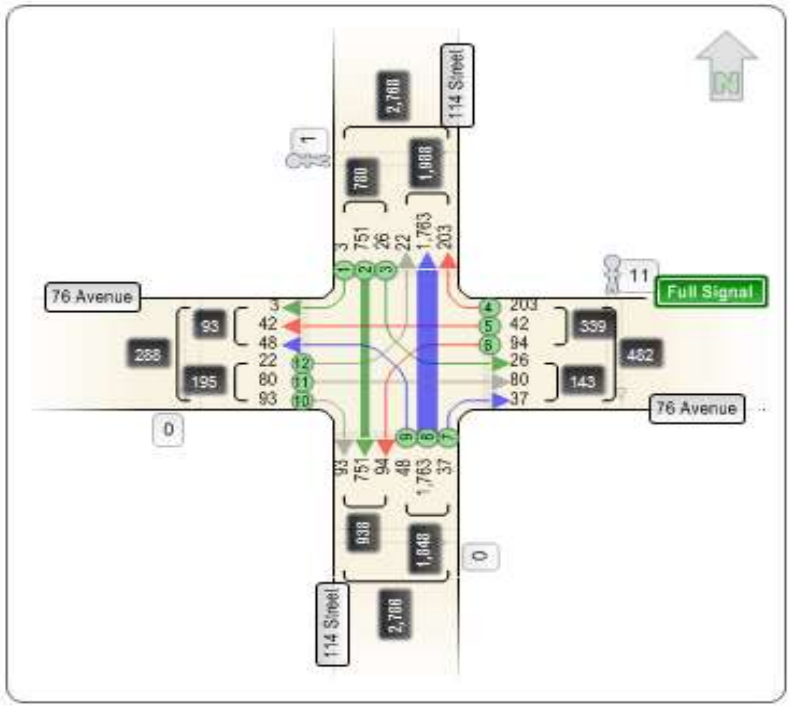
Historical Intersection Traffic Count Data

Turning Movement Count

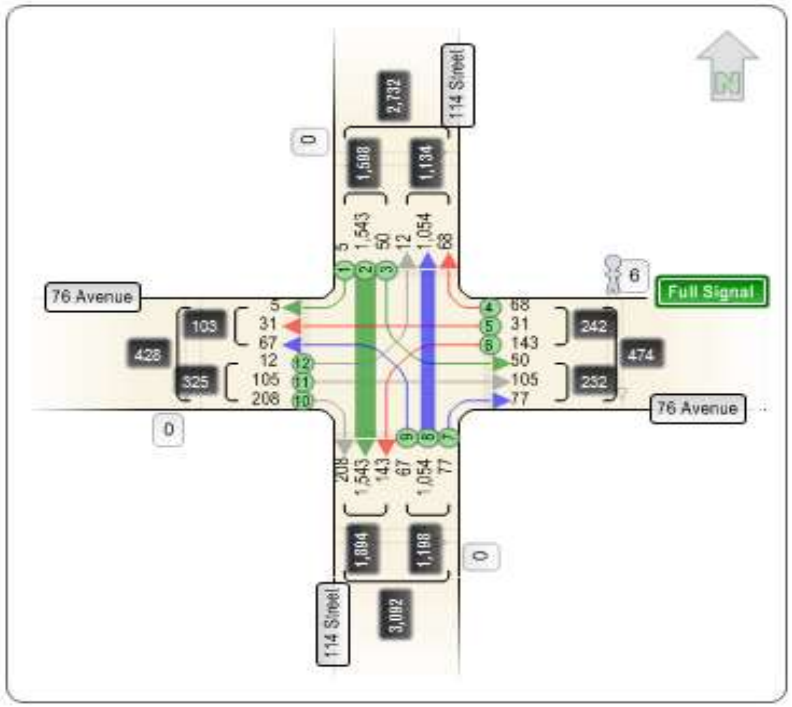
Location	**76 Avenue and 114 Street**
Site Number	**235870**
Date	**2017/May/25 12:00:00 AM-2017/May/26 12:00:00 AM**
Vehicle Type	**-**
Weather	**Rain**
County	**South West**

24 hour count

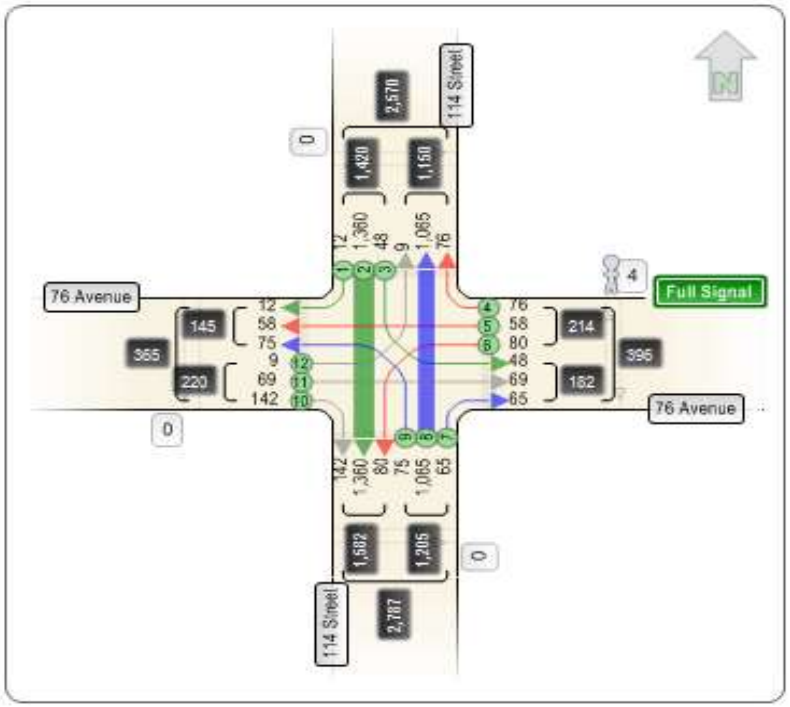
Peak Hour AM
7:45 AM - 8:45 AM



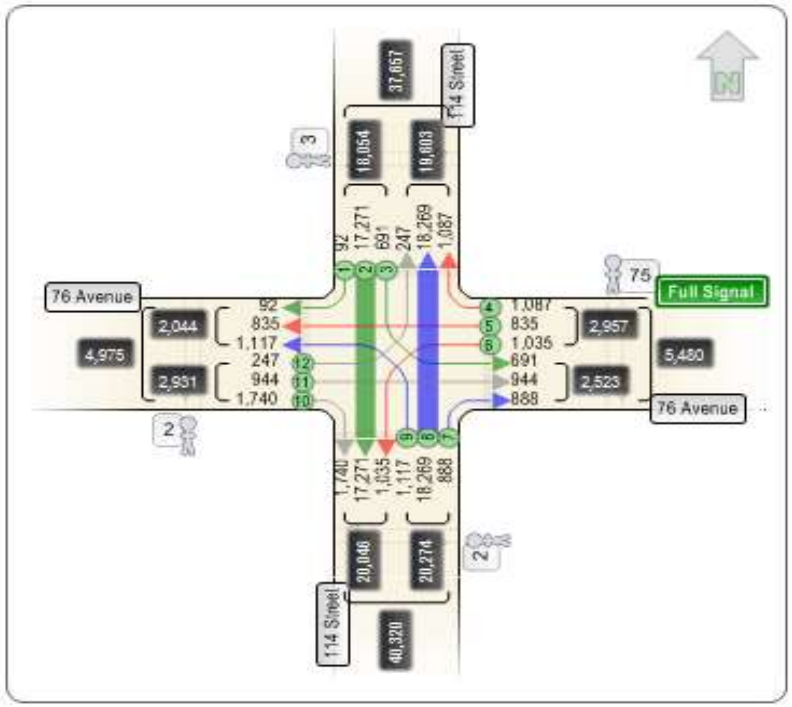
Peak Hour PM
4:55 PM - 5:55 PM



Off Peak Hour
2:30 PM - 3:30 PM



Estimated 24 Hour



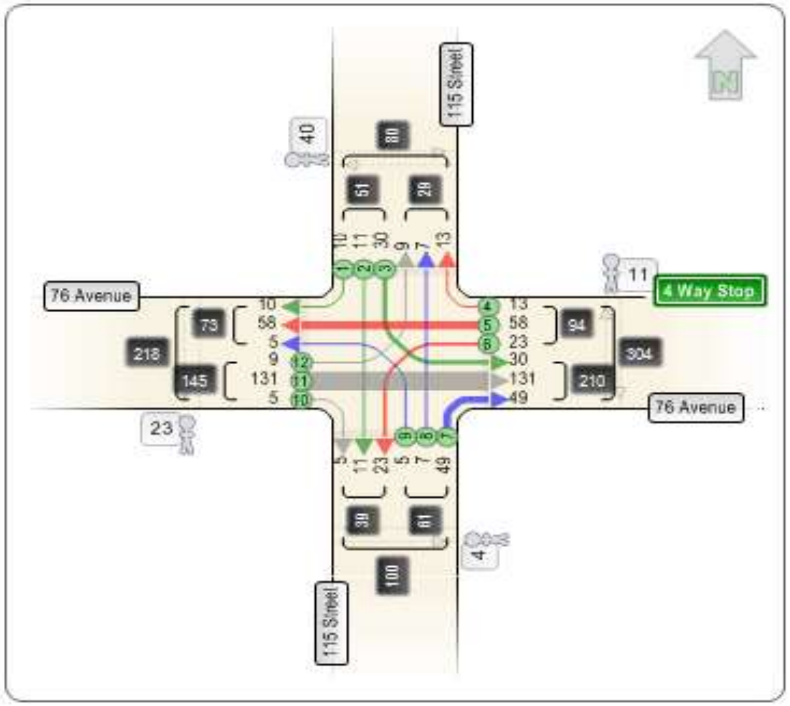
	Approach: West (EBD)			Approach: East (WBD)			Approach: South (NBD)			Approach: North (SBD)			
	L	T	R	L	T	R	L	T	R	L	T	R	**Sum**
Peak Hour AM 7:45 AM-8:45 AM	22	80	93	94	42	203	48	1763	37	26	751	3	3162
Peak Hour PM 4:55 PM-5:55 PM	12	105	208	143	31	68	67	1054	77	50	1543	5	3363
Off Peak Hour 2:30 PM-3:30 PM	9	69	142	80	58	76	75	1065	65	48	1360	12	3059
Estimated 24 Hour	247	944	1740	1035	835	1087	1117	18269	888	691	17271	92	44216
Sum Whole Traffic Count	247	944	1740	1035	835	1087	1117	18269	888	691	17271	92	44216
Peak Hour AM	27	80	98	99	52	207	61	1763	53	31	765	6	3242

Turning Movement Count

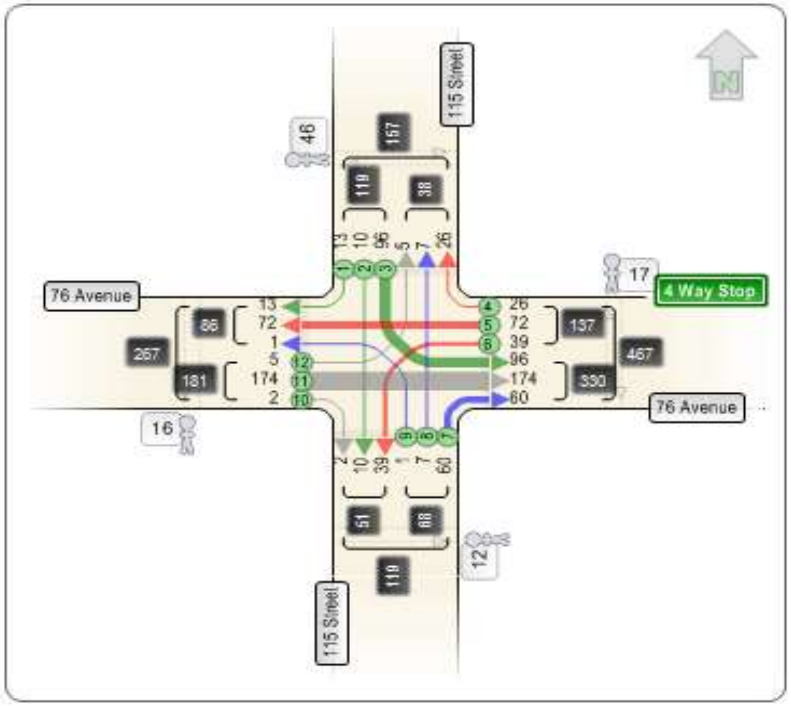
Location	**76 Avenue and 115 Street**
Site Number	**235882**
Date	**2017/Apr/12 12:00:00 AM-2017/Apr/13 12:00:00 AM**
Vehicle Type	**-**
Weather	**Cloudy**
County	**South West**

24 Hour Count

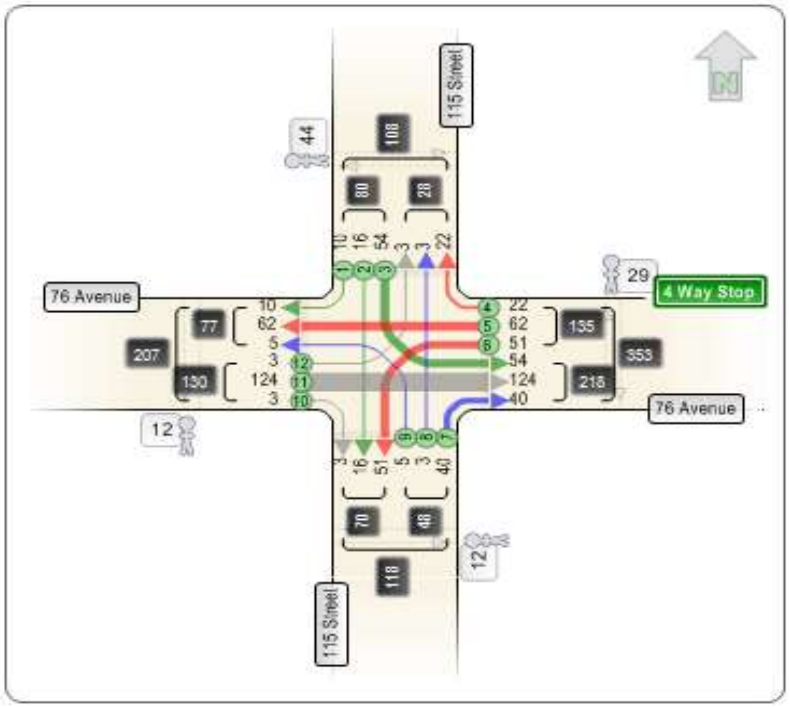
Peak Hour AM
7:50 AM - 8:50 AM



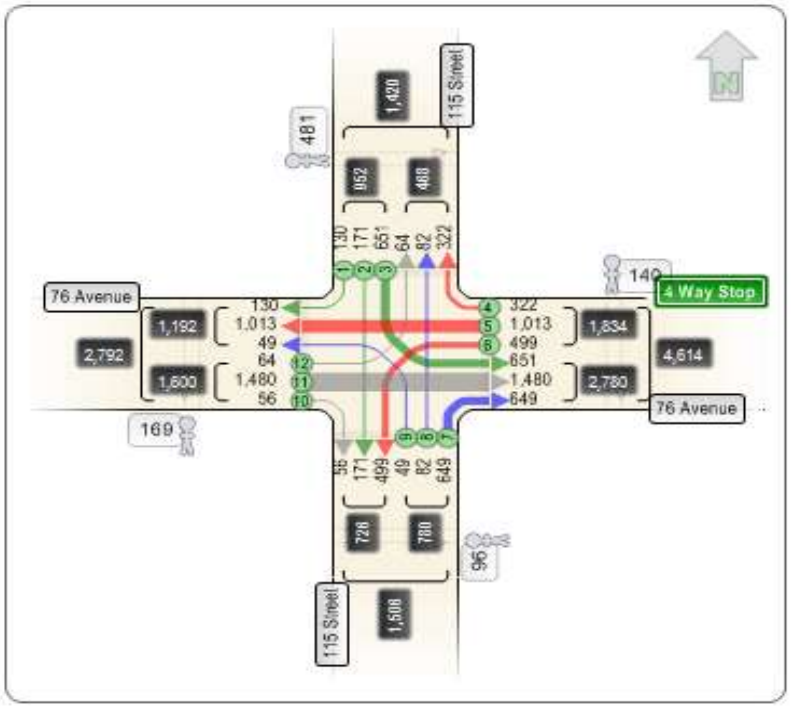
Peak Hour PM
3:40 PM - 4:40 PM



Off Peak Hour
2:30 PM - 3:30 PM



Estimated 24 Hour

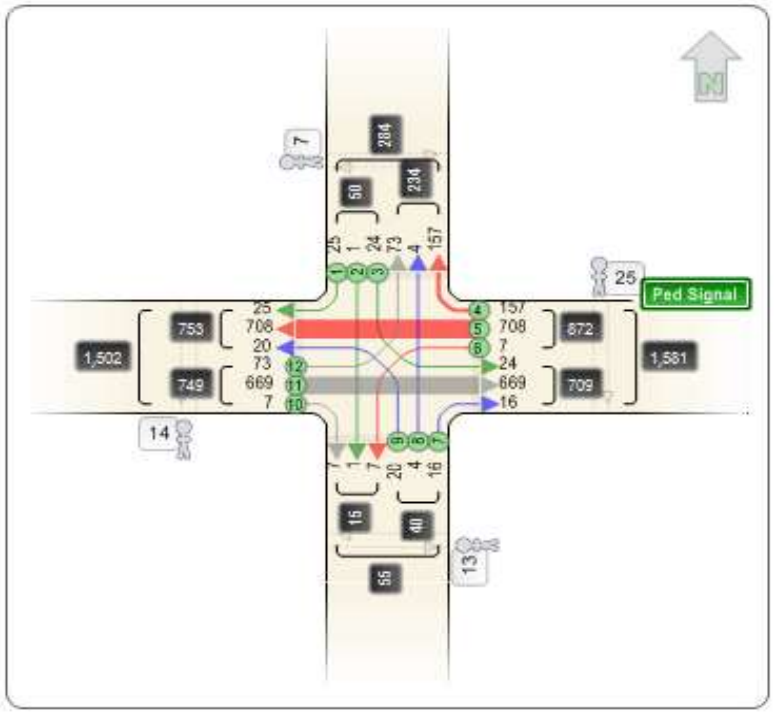


	Approach: West (EBD)			Approach: East (WBD)			Approach: South (NBD)			Approach: North (SBD)			
	L	T	R	L	T	R	L	T	R	L	T	R	Sum
Peak Hour AM 7:50 AM-8:50 AM	9	131	5	23	58	13	5	7	49	30	11	10	351
Peak Hour PM 3:40 PM-4:40 PM	5	174	2	39	72	26	1	7	60	96	10	13	505
Off Peak Hour 2:30 PM-3:30 PM	3	124	3	51	62	22	5	3	40	54	16	10	393
Estimated 24 Hour	64	1480	56	499	1013	322	49	82	649	651	171	130	5166
Sum Whole Traffic Count	64	1480	56	499	1013	322	49	82	649	651	171	130	5166
Peak Hour AM	9	131	5	28	65	26	6	10	55	33	12	11	391

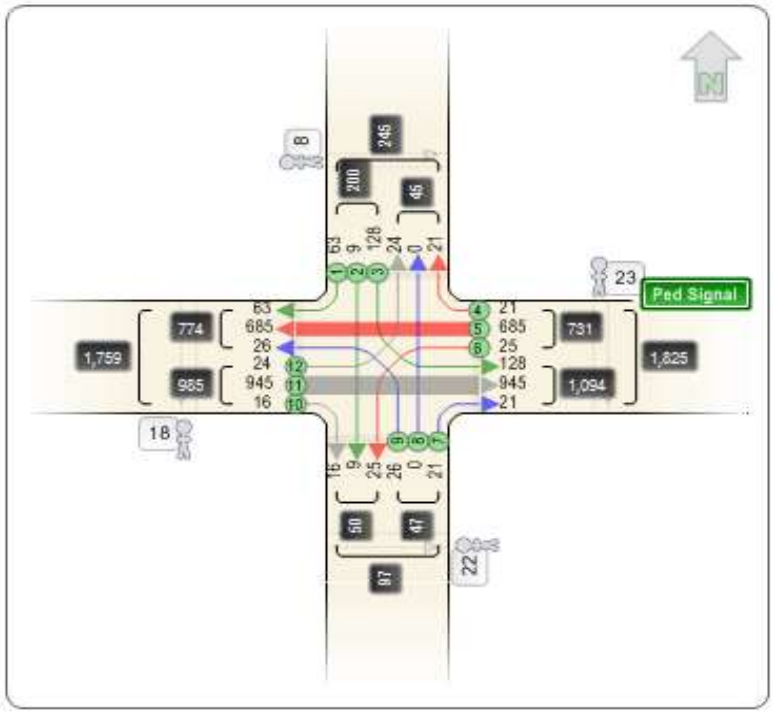
Turning Movement Count

Location	**University Avenue and 115 Street**
Site Number	**237838**
Date	**2013/Mar/26 6:30:00 AM-2013/Mar/26 6:30:00 PM**
Vehicle Type	**-**
Weather	**Clear**
County	**South West**

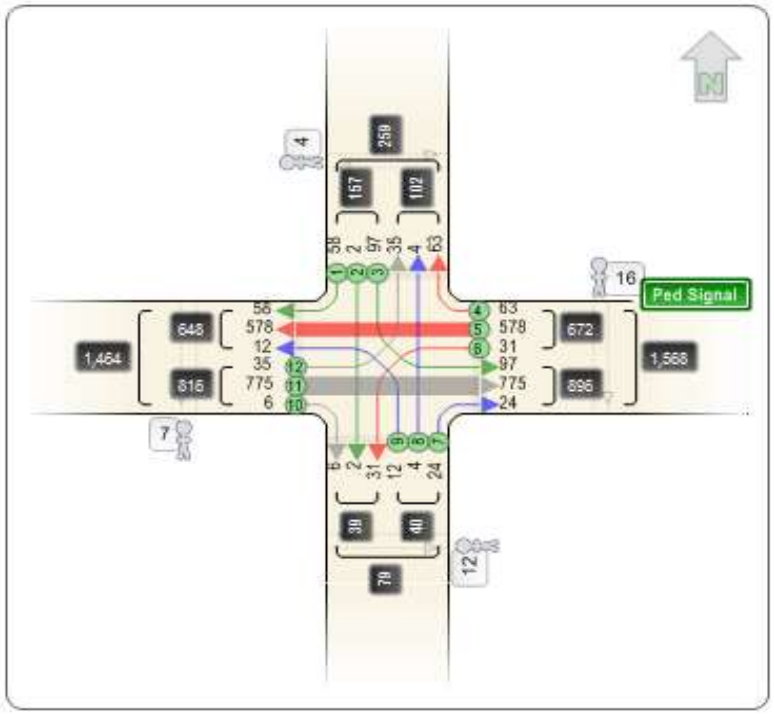
Peak Hour AM
7:30 AM - 8:30 AM



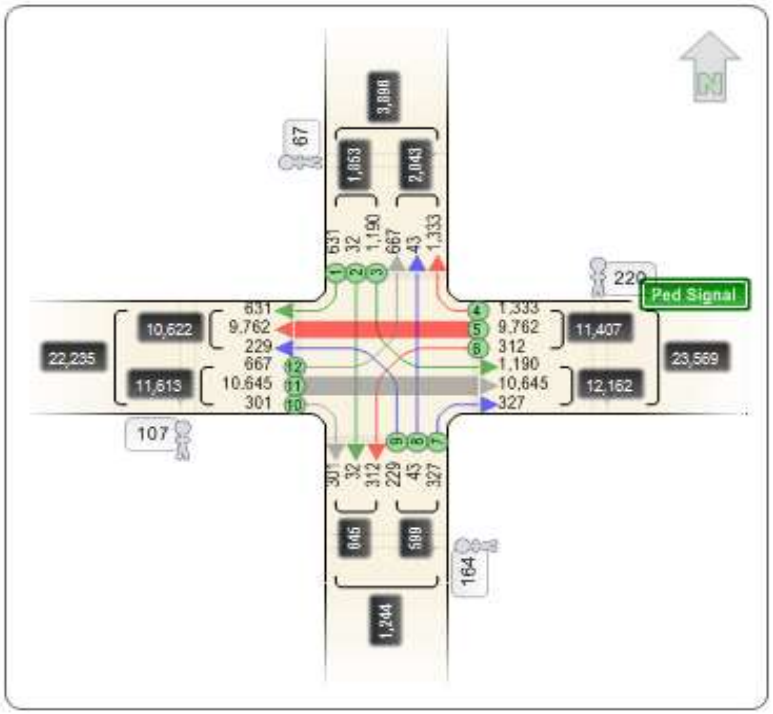
Peak Hour PM
4:20 PM - 5:20 PM



Off Peak Hour
2:30 PM - 3:30 PM



Estimated 24 Hour



	Approach: West (EBD)			Approach: East (WBD)			Approach: South (NBD)			Approach: North (SBD)			
	L	T	R	L	T	R	L	T	R	L	T	R	**Sum**
Peak Hour AM 7:30 AM-8:30 AM	73	669	7	7	708	157	20	4	16	24	1	25	1711
Peak Hour PM 4:20 PM-5:20 PM	24	945	16	25	685	21	26	0	21	128	9	63	1963
Off Peak Hour 2:30 PM-3:30 PM	35	775	6	31	578	63	12	4	24	97	2	58	1685
Estimated 24 Hour	667	10645	301	312	9762	1333	229	43	327	1190	32	631	25472