

WINDSOR, ONTARIO

PROJECT NO. 24-065

DATE: DECEMBER 18, 2024



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1. INTRODUCTION

1.1 Background

Baird AE has been retained to prepare a Parking Justification Study in support of an Official Plan Application, Zoning By-law Amendment and Site Plan Application for the proposed residential development on Byng Road in the City of Windsor.

The land is currently zoned as Residential District (RD1.1). Current conditions of site include detached residential lot, driveway and landscape open space area, as can be seen in Exhibit 1, below.



Exhibit 1 - Location Plan

1.2 Development Proposal

The overall subject land is approximately 0.655 hectares and will consist of a 6-unit residential apartment, asphalt driveway and 5 regular spaces plus 1 accessible parking. Access to the development will be provided from Lappan Avenue.



LAPPAN AVE.

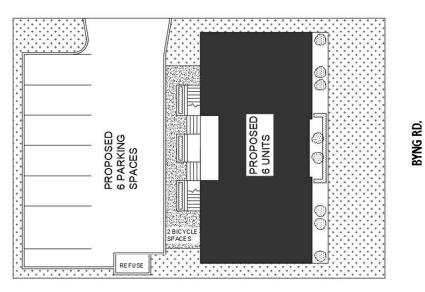


Exhibit 2 - Development Map

2.0 EXISTING CONDITIONS

The existing road network and lane configuration are described in Table 1, below.

Table 1: Roadway

Component	Byng Road	Lappan Avenue
Direction	North-South	East-West
Speed limits	50 km/h	50 km/h
Cycling Facilities	No	No
On-Street Parking	Yes	Yes

The subject development is located in the residential part of the city, and there is transit service (bus stop) 200m east of the study area on Walker Road.

As shown in City of Windsor Parking Map (Appendix A), a substantial amount of existing on-street parking is located on Byng Road and Lappan Avenue.

3.0 PARKING REQUIREMENTS

3.1 City of Windsor By-law Section 8600-RD 1.1

The proposed development falls within the City of Windsor Zoning By-Law 8600-RD1.1 (Zone Map 12) Residential District per the City of Windsor. The owner is applying for a zone change of the existing property to RD 2.2 into multi-unit building. The proposed development will include 0.248ha of hard surface including and 0.407 grass area.

The development will have total of 6 parking stalls to serve both residents and visitors. Based on zoning regulations for parking, and in order to facilitate the proposed development, 7 spaces are required. This results in a deficit of 1 parking space.

Number of Units = 6 units

Average Parking Rate = 1.25

Required Parking = 6 x 1.25 = 7 spaces

The number of required parking spaces are 7 and the current provided parking stalls are 6 spaces. Therefore, there is a deficit of 1 space.

3.2 Parking Demand Rate Based on ITE

The development has been investigated using the Institution of Transportation Engineering (ITE) Parking Generation, 5th Edition. The number of parking spots required for the development is calculated using the ITE Manual land use types ITE 220 (Multifamily-Low Rise).

Based on ITE Manual, the required parking is:

Required Parking = Average Rate x Number of Units = 1.31 x 6 = 8 spaces

The number of required parking spaces are 8 and the current provided parking stalls are 6 spaces. Therefore, there is a deficit of 2 spaces.

4.0 ADDITIONAL PARKING AND BUS ROUTE

Based on our analysis, there is a shortfall of parking spaces for the proposed development. However, there are existing parking spaces within the immediate vicinity that are available at all times. Specifically, at least three spaces are consistently available, and numerous additional empty stalls exist within the roadway. These are detailed below.

4.1 On-Street parking

There is on-street parking on Byng Road and Lappan Avenue. The approx. 120m section of on-street parking adjacent the development could be used to supplement parking for the development.

Based on aerial images, within a 100-meter radius, 7 out of 9 off-street parking spaces are available on Byng Road and 1 out of 8 parking spaces are available on Lappan Avenue. Hence, on-street parking could be used to supplement parking for the proposed development. This will provide the proposed development with a total of 9 parking spaces (6 spaces within site plus 3-spaces on-street parking).

4.2 Transit Route

The development falls within a transit route. The city bus on Route-8 runs along Walker Road providing easy travel to and from downtown; hence, promoting the usage of transit and reducing dependency on vehicles.

5.0 CONCLUSION

In conclusion, the provided and available parking spaces for development are more than the required spaces based on the City's by-law and ITE Trip generation parking requirements.

Additionally, a transit route is within 100m of the development promoting the usage of transit and reducing the dependency of vehicles.

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

All of which is respectfully submitted.

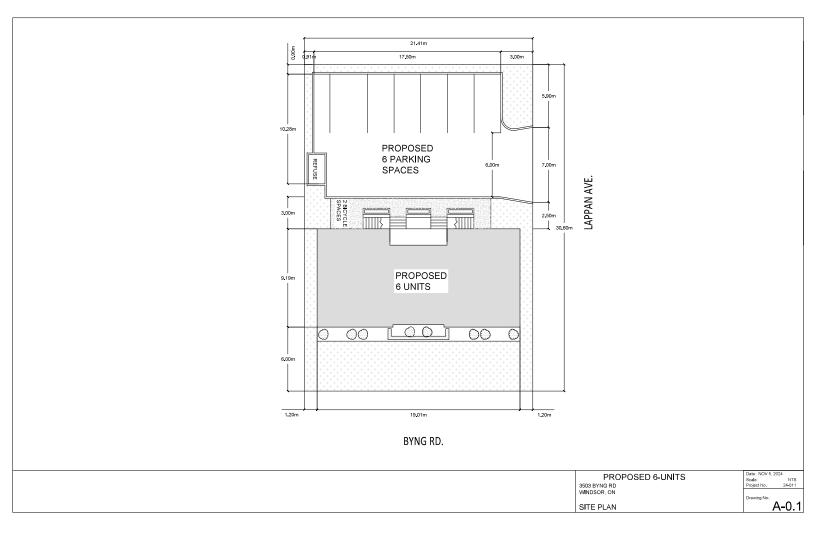
BAIRD AE INC. 27 PRINCESS STREET, UNIT 102 LEAMINGTON, ONTARIO N8H 2X8

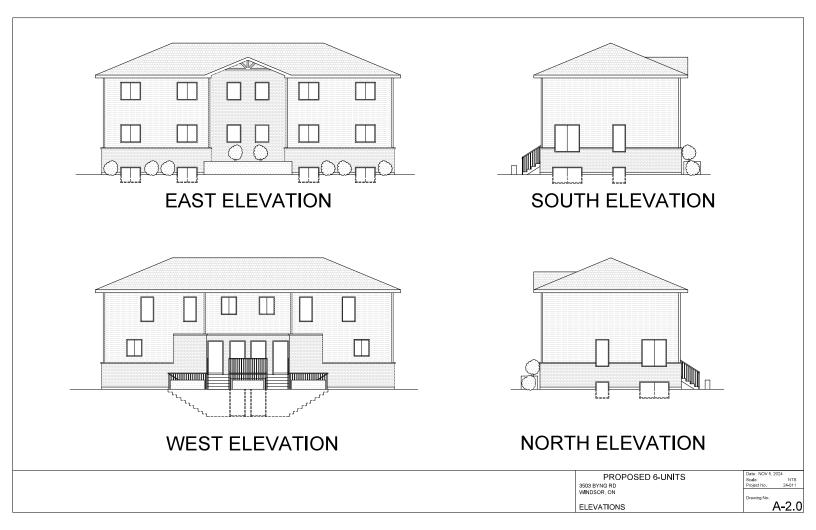
Shurjeel Tunio, P.Eng. Senior Project Manager **Baird AE**

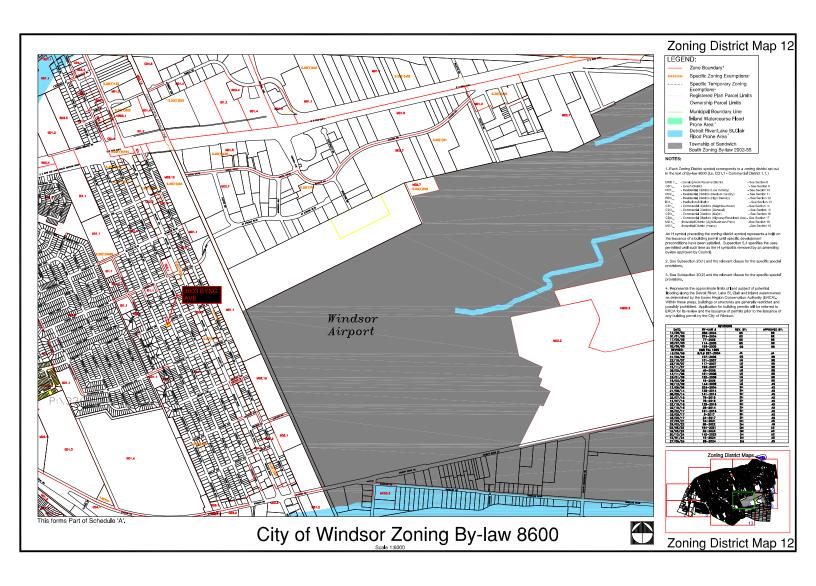


Appendix A	

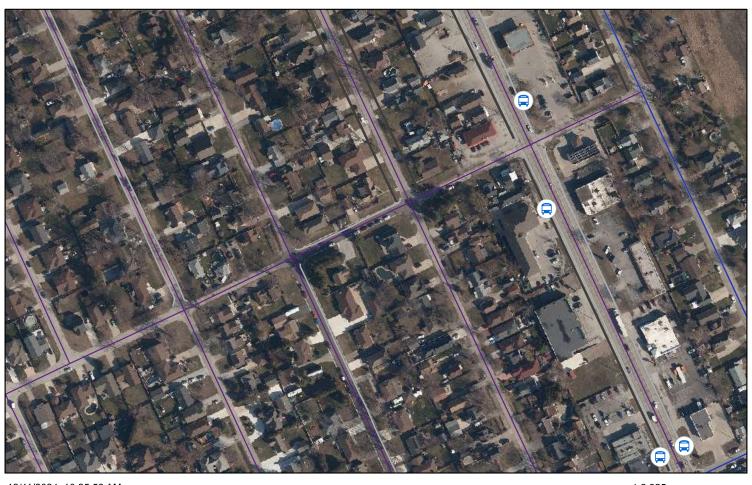
SITE PLAN AND BACKGROUND INFORMATION

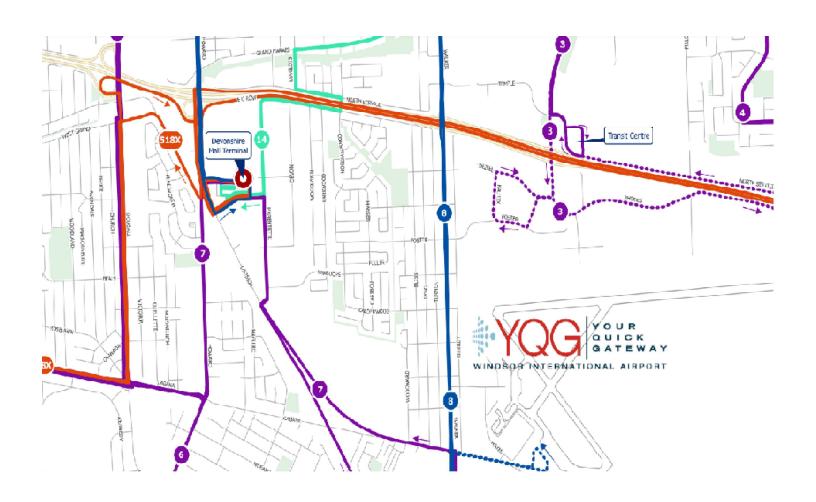






ArcGIS Web Map







Appendix B

BY-LAW AND ITE PARKING GENERATION

Multifamily Housing (Low-Rise)

(220)

Peak Period Parking Demand vs: **Occupied Dwelling Units**

> Weekday (Monday - Friday) On a:

Setting/Location: General Urban/Suburban (no nearby rail transit)

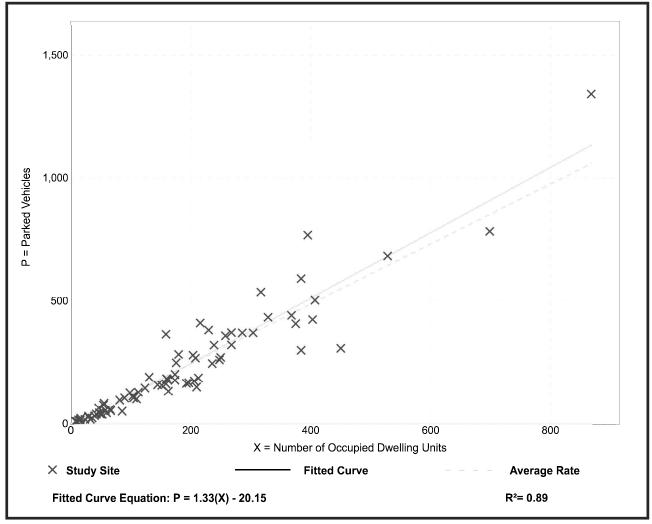
Peak Period of Parking Demand: 11:00 p.m. - 6:00 a.m.

Number of Studies: 77 Avg. Num. of Occupied Dwelling Units: 182

Peak Period Parking Demand per Occupied Dwelling Unit

Average Rate	Range of Rates	33rd / 85th Percentile	95% Confidence Interval	Standard Deviation (Coeff. of Variation)
1.22	0.58 - 2.30	1.02 / 1.41	1.15 - 1.29	0.32 (26%)

Data Plot and Equation



Parking Generation Manual, 5th Edition • Institute of Transportation Engineers

City of Windsor Zoning By-law 8600

TABLE 24.20.5.1 – REQUIRED PARKING SPACES		
USE	PARKING RATE – MINIMUM	
Day Nursery	1.5 for each classroom or teaching area	
Double-duplex Dwelling	4	
Drive-through Food Outlet	1 for each 22.5 m ² GFA	
Drive-through Restaurant	1 for each 7.5 m ² GFA	
Duplex Dwelling	2	
Elementary School	1.5 for each classroom or teaching area	
Entertainment Lounge	1 for each 7.5 m ² GFA	
Exhibition Hall	1 for each 36 m ² GFA	
Financial Office	1 for each 45 m ² GFA	
Food Convenience Store	1 for each 22.5 m ² GFA	
Fraternity or Sorority House	1 for each 4 beds	
Funeral Home	1 for each 5.5 m ² GFA used for a chapel, sanctuary or reposing room	
Games Arcade	1 for each 22.5 m² GFA	
Garden Centre	1 for each 22.5 m ² GFA	
Gas Bar	1 for each 45 m ² GFA	
General Salvage Operation	1 for each 45 m ² GFA for the first 2,700 m ² GFA AND 1 for each additional 180 m ²	
Group Home	1	
Health Studio	1 for each 36 m² GFA	
Heavy Repair Shop	1 for each 45 m ² GFA for the first 2,700 m ² GFA AND 1 for each additional 180 m ²	
Hospital	1 for each bed	
Hotel	1 for each guest room AND 1 for each 22.5 m² GFA used for a restaurant, convention hall, meeting room and other places of assembly.	
Library	1 for each 45 m ² GFA	
Light Repair Shop	1 for each 45 m² GFA	
Lodging House	1 for each 6 beds	
Major Commercial Centre (exclusive of a hotel or motel)	1 for each 22.5 m² GFA	

City of Windsor Zoning By-law 8600

TABLE 24.20.5.1 – REQUIRED PARKING SPACES			
USE	PARKING RATE – MINIMUM		
Minor Commercial Centre	1 for each 22.5 m² GFA and when the combined GFA of all restaurants and entertainment lounges Exceeds 30% of the GFA of the Centre, 1 for each 7.5 m² GFA of all restaurants and entertainment lounges in excess thereof		
Mobile Home	1		
Motel	1 for each guest room AND 1 for each 22.5 ² GFA used for a restaurant, convention hall, meeting room and other places of assembly		
Motor Vehicle Dealership	1 for each 45 m ² GFA		
Motor Vehicle Salvage Operation	1 for each 45 m ² GFA for the first 2,700 m ² GFA AND 1 for each additional 180 m ²		
Multiple Dwelling containing a maximum of 4 Dwelling units	1 for each dwelling unit		
Multiple Dwelling containing a minimum of 5 Dwelling units	1.25 for each dwelling unit		
Museum	1 for each 45 m ² GFA		
Outdoor Market	0		
Pawnshop	1 for each 22.5 m ² GFA		
Personal Service Shop	1 for each 22.5 m ² GFA		
Pharmacy	1 for each 22.5 m ² GFA		
Place of Entertainment and Recreation	1 for each 36 m² GFA		
Power Generation Plant	1 for each 200 m ² GFA		
Professional Studio	1 for each 45 m ² GFA		
Public Hall	1 for each 7.5 m² GFA		
Residential Care Facility	1 for each 4 beds		
Restaurant	1 for each 7.5 m ² GFA		
Retail Store	1 for each 22.5 m ² GFA		
Secondary School	1.5 for each classroom or teaching area AND 1 For each 22.5 m² of GFA of cafeteria, auditorium, gymnasium and other area of assembly		

City of Windsor Zoning By-law 8600

TABLE 24.20.5.1 – REQUIRED PARKING SPACES			
USE	PARKING RATE – MINIMUM		
Take-Out Food Outlet	1 for each 22.5 m ² GFA		
Temporary Outdoor Vendor's Site	0		
Theatre	1 for each 6 seats		
Tourist Home	1 for each guest room AND 1 for each 22.5 m² GFA used for a restaurant, convention hall, meeting room and other places of assembly		
Townhome Dwelling having an attached garage or carport	1 for each dwelling unit		
Townhome Dwelling without an attached garage or carport	1.25 for each dwelling unit		
Transport Terminal	5 parking spaces, or 1 for each 45.0 m² GFA, whichever is greater		
University Student Residence	1 for each 4 beds		
Veterinary Clinic	1 for each 13.5 m ² GFA		
Veterinary Office	1 for each 13.5 m ² GFA		
Warehouse	1 for each 200 m ² GFA		
Wholesale Store	1 for each 45 m ² GFA		
Workshop	1 for each 45 m ² GFA for the first 2,700 m ² GFA AND 1 for each additional 180 m ²		
All other commercial uses not specifically listed	1 for each 36 m ² GFA		
All other industrial uses not specifically listed	1 for each 45 m ² GFA for the first 2,700 m ² GFA AND 1 for each additional 180 m ² GFA		

(B/L 144-2015 Nov 6/2015; B/L 169-2018 Dec 19/2018)



PARKING STUDY

Appendix C

PHOTOS



Figure 1: Looking North on Byng Road toward Lappan Avenue



Figure 2: Looking East on Lappan Avenue toward Byng Road