3025 RIVARD AVENUE RESIDENTIAL DEVELOPMENT WINDSOR, ON

PARKING STUDY

Prepared by:

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File No.: 25-1817 July 2025

3025 RIVARD AVENUE RESIDENTIAL DEVELOPMENT, WINDSOR, ON

PARKING STUDY (JULY 2025)

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INTRODUCTION AND BACKGROUND

A residential development is proposed for a vacant lot located at 3025 Rivard Avenue, in Windsor, Ontario. Rivard Avenue is a north / south local roadway which begins at Tecumseh Road East at the north and runs south to Queen Elizabeth Drive. The developer is proposing a two-storey townhouse building comprised of eight dwelling units. The development is to be supplemented by 9 parking spaces (including one accessible space), and two bicycle spaces. The site plan is provided in **Appendix A**. This development is proposed for construction in a single phase and is to be serviced via a single access at Rivard Avenue.

The City's zoning bylaw (*minimum 1.25 parking spaces per unit*) requires 10 spaces for the eight units. Accordingly, the site plan falls short of the required parking supply, so a variance is required for the deficiency in zoning-specific parking spaces.

ITE PARKING GENERATION MANUAL VS. WINDSOR BYLAW REQUIREMENTS

The Institute of Transportation Engineers (ITE) Parking Generation Manual reports parking demand studies and statistics from various land uses across North America. The applicable land use codes are referenced in **Appendix B**. Since the City of Windsor does not allow parking requirements to be calculated using a "per bedroom / per unit" base (as provided in the updated 6th Edition), the 5th Edition of the ITE manual was referenced (because it provides calculations "per unit" for a low-rise building). For Multi-family Housing (Low-Rise) – Land Use Code 220, peak parking demand is estimated at a rate of 1.21 spaces per unit. As noted, the developer is planning for eight residential units. Accordingly, the ITE's average rate suggests that a minimum of 9.7 on-site parking spaces will suffice for this land use.

As stated in the City's zoning bylaw, "*If the calculation of the number of required parking spaces results in a number containing a fraction, the number shall be rounded DOWN to the nearest whole number*". Applying this to the ITE calculations suggests that the subject development's peak parking demand should not exceed the proposed 9-space parking supply.

Although the proposed parking supply should sufficiently accommodate the peak parking demand on its own, on-street parking, transit, and active transportation options were also evaluated. An on-street parking inventory and evaluation was undertaken to determine the supply and peak parking demand within a 200m walking distance of the development. South of the development, signs are posted prohibiting vehicles from stopping during the hours of 8:30 a.m. – 9:30 a.m. and 3:00 p.m. – 4:00 p.m.; therefore, the parking study area only considered the parking supply for 200m north of the development. The parking study summary is provided in **Appendix C**.

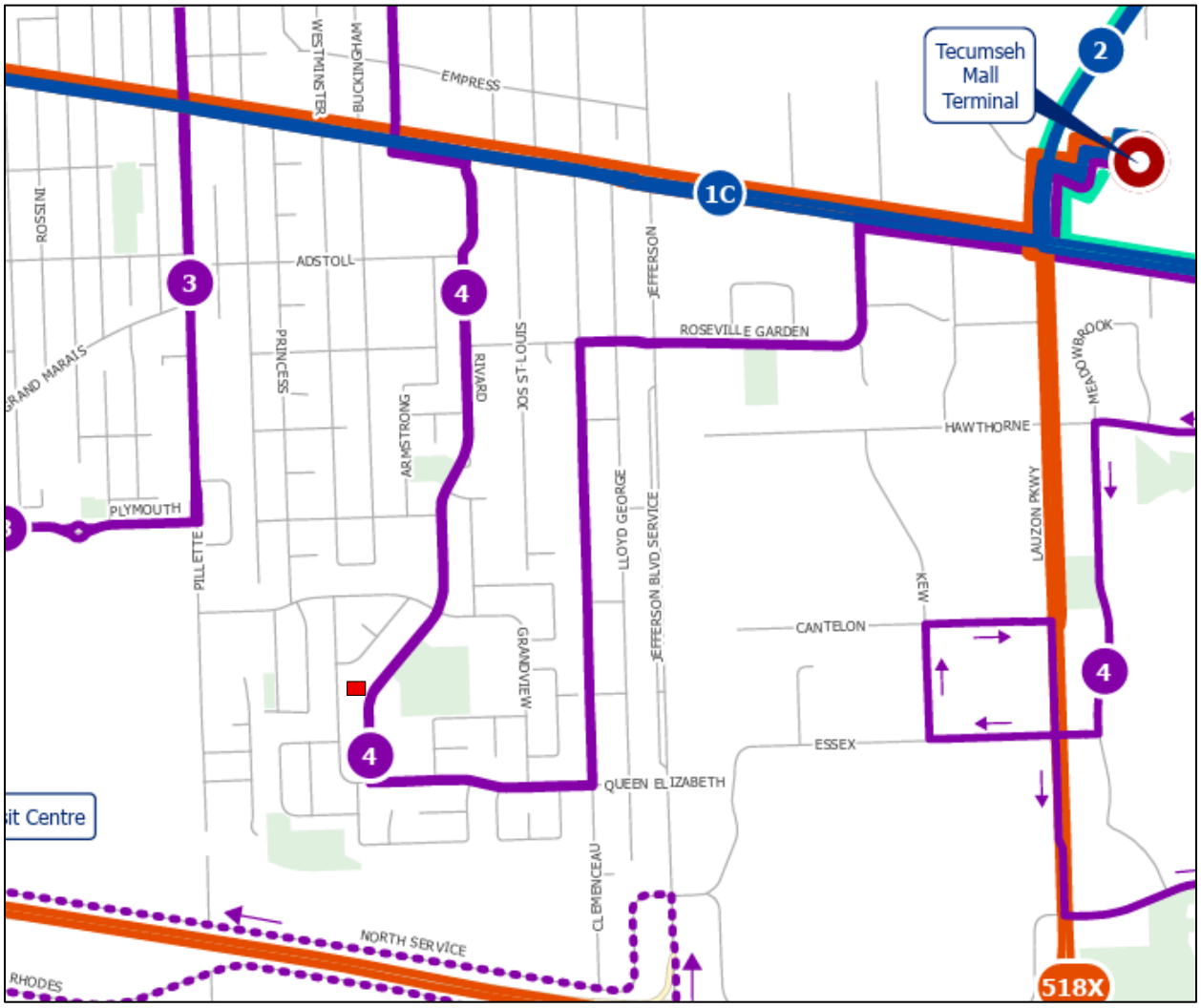
The following table summarizes the current supply and demand:

Scenario		Total Parking Utilization: 15 JULY 2025				
		Total Parking Spaces: 13				
		General (G): 13				
		6:00 p.m.	7:00 p.m.	8:00 p.m.	9:00 p.m.	10:00 p.m.
Street Parking	**Cap.**	G	G	G	G	G
Rivard Ave. (100m Radius from 3025 Rivard Ave.)	5	2	1	1	0	0
Rivard Ave. (200m Radius from 3025 Rivard Ave.)	13	2	4	3	2	2
Total Utilized:		**4**	**5**	**4**	**2**	**2**
Utilization Rate:		**(31%)**	**(38%)**	**(31%)**	**(15%)**	**(15%)**

The highest parking demand was at 7:00 p.m.; 38% of the available spaces were utilized. Therefore, 62% (8 parking spaces) of the available spaces were free during the busiest observed time; 4 spaces were available within 100m of the site. Therefore, it is the engineers' opinion that the 8 unutilized spaces (within a 200m walking distance) should be more than sufficient to address any potential "overflow parking" from the subject development.

A sidewalk is also provided on the east side of Rivard Avenue. Although commercial / retail establishments within walking distance are limited (with IDA Pharmacy®, a walk-in clinic, and a convenience store / grocery, located approximately 300m to the north, being the closest commercial land use), destinations such as the Fontainebleau Public Library, Fontainebleau Park, and two elementary schools are less than 500m from the site.

Currently, Windsor Transit provides multiple Route 4 stops along Rivard Avenue (including one directly across the road from the proposed site access); another stop is currently located less than 100m from the site. Other transit routes are also provided within the surrounding area. The following Windsor Transit map depicts the routes available around the site; the site is identified with a red box:



Realistically, the proposed parking supply is in keeping with current sustainability policies aimed at encouraging non-auto modes of travel, particularly within built out and mature neighbourhoods. Furthermore, by limiting the availability of on-site vehicle parking and by providing alternative bicycle parking spaces, the developer is being proactive in encouraging an increased modal split for the subject area.

Therefore, based on the provided metrics and area characteristics, it is the engineers' opinion that the nine proposed on-site parking spaces should sufficiently accommodate the peak parking demand generated by the proposed eight-unit townhouse building.

SUMMARY AND CONCLUSIONS

An eight-unit stacked townhouse development is proposed for a vacant lot located at 3025 Rivard Avenue, in Windsor, Ontario; the development is to be serviced via a single access at Rivard Street. The development is to be supplemented by nine parking spaces (including one accessible space), and two bicycle spaces. The City's zoning bylaw (minimum 1.25 parking spaces per unit) requires 10 spaces for the eight units; however, the ITE Parking Generation Manual (5th Edition) references suggest that a minimum parking supply of nine spaces could sufficiently accommodate the subject development's eight units.

Sidewalks are provided on the east side, and on-street parking is permitted on the west side of Rivard Avenue. Finally, the proposed development is close to existing active transportation facilities and reliable transit options; therefore, it is anticipated that the site's modal split could further reduce the peak parking demand.

Accordingly, based on the provided metrics and area characteristics (as well as the observed minimum on-street parking surplus of eight spaces during the critical peak parking period), it is the engineers' opinion that the proposed on-site parking supply of nine parking spaces should adequately accommodate the peak parking demand generated by the subject low-rise residential development proposal.

All of which is respectfully submitted,

RC Spencer Associates Inc.

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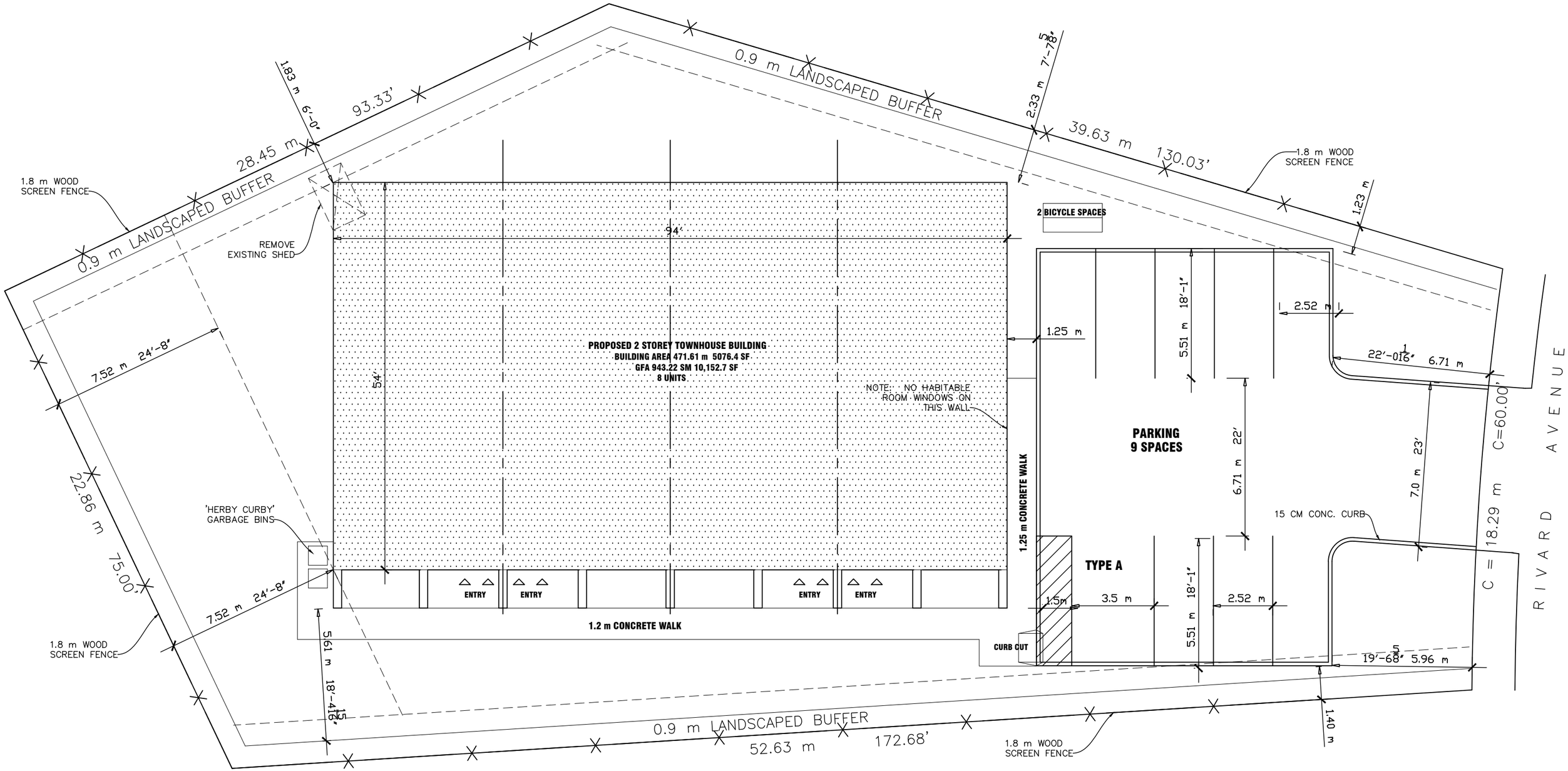
President / Windsor Office Manager

Appendix A

SITE PLAN



NOTE: ALL LIGHTING SHALL BE FULL CUT-OFF TYPE

ZONING DATA		
MULTI-RESIDENTIAL		
ZONING ---		
EXISTING USES ON SITE	VACANT	

ITEM	REQUIRED/ALLOWED	PROPOSED/PROVIDED
LOT FRONTAGE	--	18.29 m
BUILDING AREA		471.61 sm
LOT AREA	--	1493.34 sm
REAR YARD		7.52m (24'-8 1/2")
BUILDING HEIGHT		7.53 m (2 STOREYS)
BUILDING COVERAGE	--	518.15 sm
LOT COVERAGE	--	34.70 %
SIDE YARD		1.83 m
LOADING SPACES	NOT REQUIRED	N/A
PARKING SPACES	10 SPACES	9 SPACES
ACCESSIBLE SPACES	1 SPACE	1 SPACE
BICYCLE SPACES	0	2

CONCEPT SITE PLAN - E

RIVARD 8 UNIT TOWNHOUSE DEVELOPMENT
3025 RIVARD AVENUE

JULY 7, 2025

Appendix B

ITE PARKING GENERATION MANUAL – 5th EDITION REFERENCES

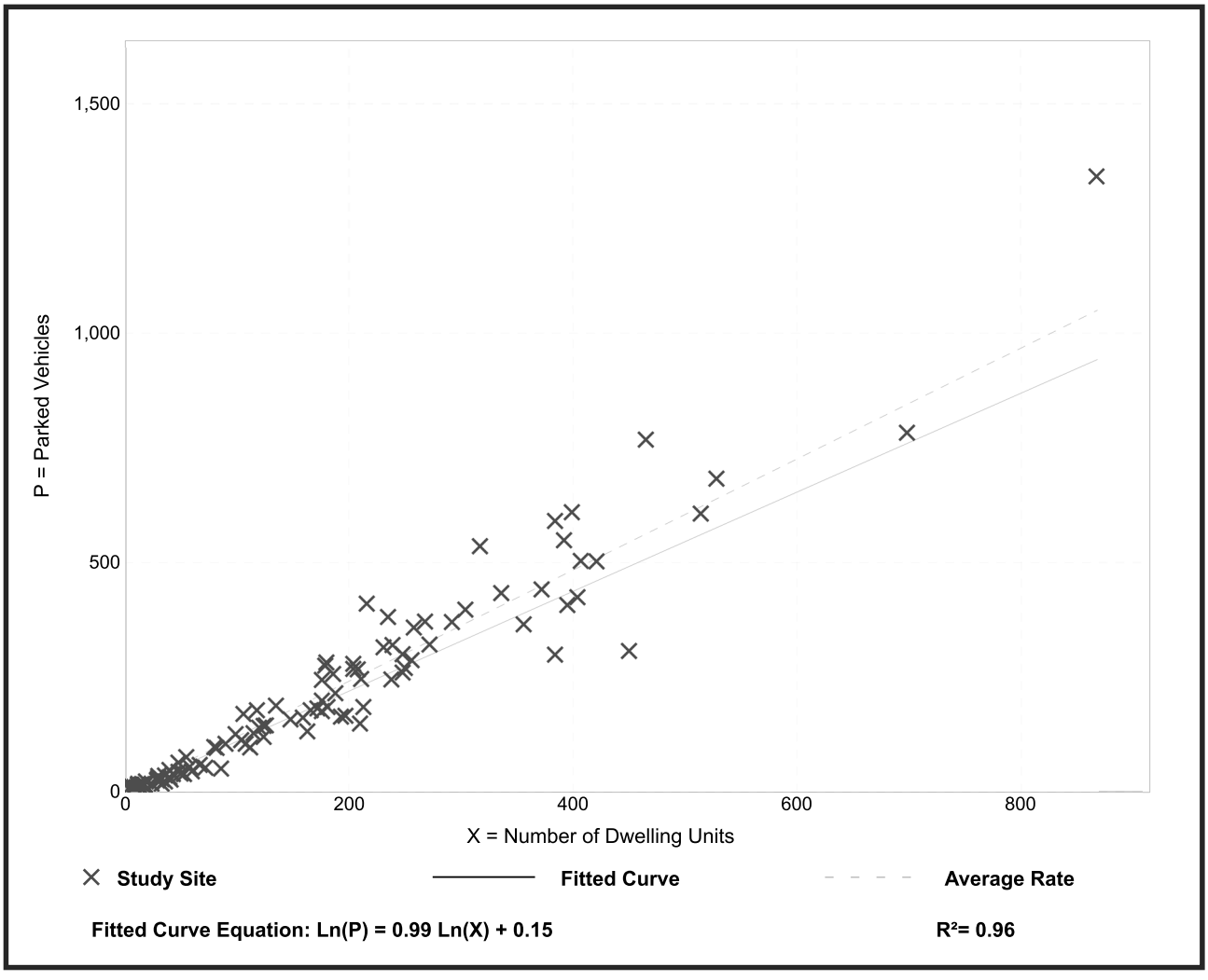
Multifamily Housing (Low-Rise)
(220)

Peak Period Parking Demand vs: **Dwelling Units**
On a: **Weekday (Monday - Friday)**
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: 119
Avg. Num. of Dwelling Units: 156

Peak Period Parking Demand per Dwelling Unit

Average Rate	Range of Rates	33rd / 85th Percentile	95% Confidence Interval	Standard Deviation (Coeff. of Variation)
1.21	0.58 - 2.50	1.03 / 1.52	1.16 - 1.26	0.27 (22%)

Data Plot and Equation



Proposed Site Development Parking Generation

Project: 3025 Rivard Avenue

Site: Windsor, Ontario

Assumed Land Use: Multifamily Housing (Low-Rise) - ITE No. 220

Peak Period Parking Demand vs: Dwelling Units

ITE Parking Generation Data collected on a: Weekday

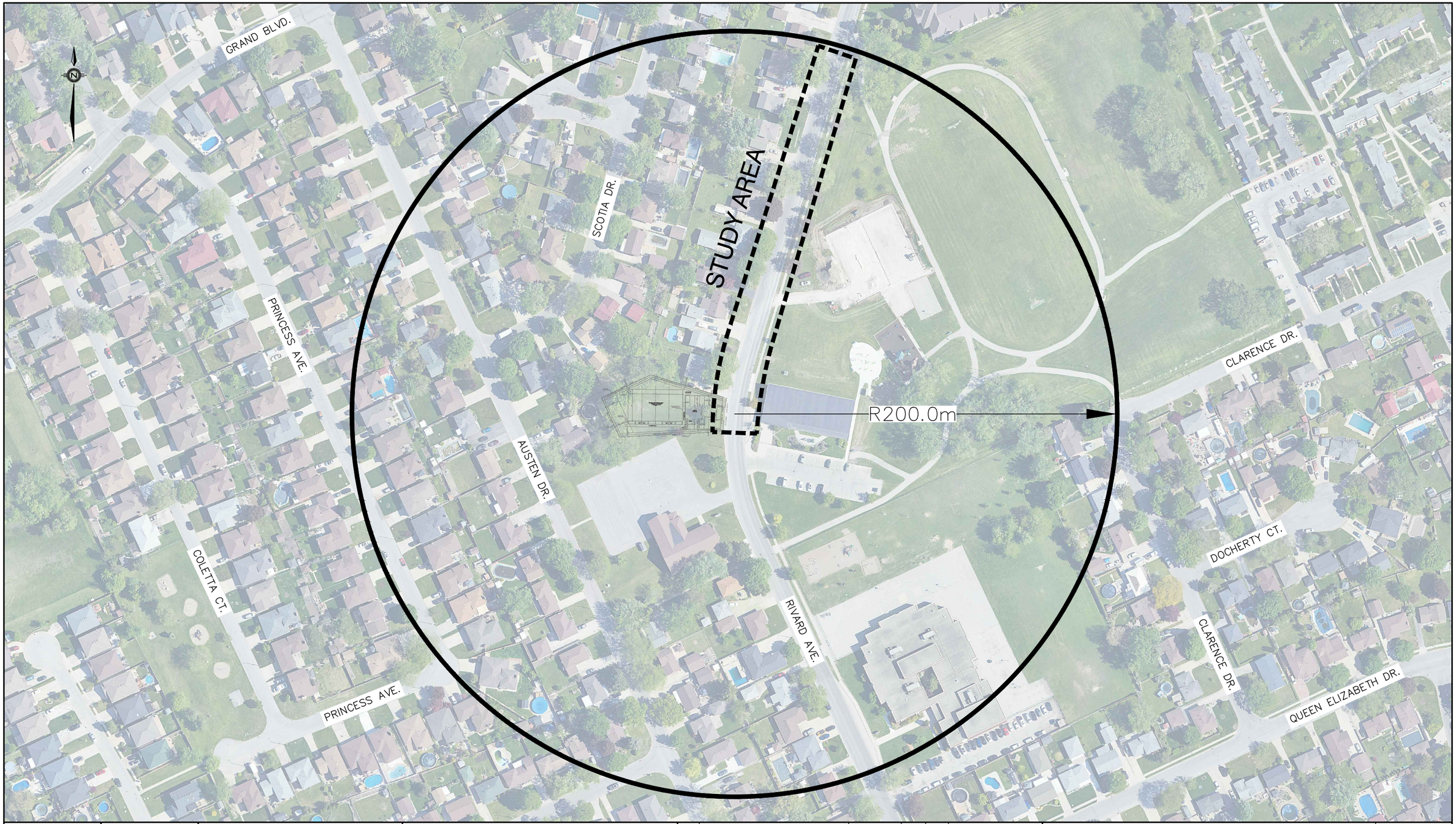
AM Peak Hour: 1.21 = Average Rate

Assumed Land Use: Multifamily Housing (Low-Rise) - ITE No. 220		
	Dwelling Units	**Peak Parking Required**
Weekday	8	9.7

Appendix C

STUDY AREA

PARKING COUNTS



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Professional Engineers Ontario

NO.	REVISION	DATE	BY	APP
1.	SENT STUDY AREA TO CITY	24 JULY 2025	N.M.	A.D.B.

DESIGN A.D.B.
CHECKED A.D.B.
DRAWN N.M.
CHECKED A.D.B.
DATE JULY 2025
SCALE N.T.S.

3025 RIVARD AVENUE PARKING STUDY, WINDSOR

STUDY AREA

PROJECT NO. 25–1817
FIGURE NO. 1
OF 1

3025 Rivard Avenue Parking Utilization

Scenario	RIVARD AVE. (100m RADIUS FROM 3025 RIVARD AVE.)										
	Parking Type										Total
	General (G): (5) Accessible (A): 0										5
	6:00 p.m.		7:00 p.m.		8:00 p.m.		9:00 p.m.		10:00 p.m.		Max % Usage
	G	A	G	A	G	A	G	A	G	A	
Tuesday (15 July 2025)	2	-	1	-	1	-	-	-	-	-	40%
Utilization Rate:	40%		20%		20%		0%		0%		

Scenario	RIVARD AVE. (100m – 200m RADIUS FROM 3025 RIVARD AVE.)										
	Parking Type										Total
	General (G): (8) Accessible (A): 0										8
	6:00 p.m.		7:00 p.m.		8:00 p.m.		9:00 p.m.		10:00 p.m.		Max % Usage
	G	A	G	A	G	A	G	A	G	A	
Tuesday (15 July 2025)	2	-	4	-	3	-	2	-	2	-	50%
Utilization Rate:	25.0%		50.0%		37.5%		25.0%		25.0%		

Totals

Scenario		Total Parking Utilization: 15 JULY 2025				
		Total Parking Spaces: 13				
		General (G): 13				
		6:00 p.m.	7:00 p.m.	8:00 p.m.	9:00 p.m.	10:00 p.m.
Street Parking	**Cap.**	G	G	G	G	G
RIVARD AVE. *(200 METER RADIUS FROM 3025 RIVARD AVE.)*	13	4	5	4	2	2
Total Utilized:		**4**	**5**	**4**	**2**	**2**
Utilization Rate:		**31%**	**38%**	**31%**	**15%**	**15%**