

4088 – 4096

SIXTH CONCESSION ROAD

RESIDENTIAL DEVELOPMENT

WINDSOR, ON

PARKING STUDY

Prepared by:



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**4088 – 4096 SIXTH CONCESSION ROAD RESIDENTIAL DEVELOPMENT, WINDSOR, ON
PARKING STUDY (FEBRUARY 2024)**

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INTRODUCTION AND BACKGROUND

A low-rise residential apartment building is proposed for vacant lands located at 4088 and 4096 Sixth Concession Road, in Windsor, Ontario. The subject property is located between Wallace Avenue to the north and Holburn Street to the south; it fronts and gains access to Sixth Concession Road. Sixth Concession Road is a north / south residential collector roadway which runs south from Cabana Road East to North Talbot Road.

The developer is proposing a three-storey residential building comprised of 21 dwelling units. The site plan is provided in Appendix A. The development will provide 24 parking spaces for the residential building (which includes two accessible spaces and three visitor spaces); the parking spaces are to be accessed from the proposed site access at Sixth Concession Road.

The City's zoning bylaw (minimum 1.25 parking spaces per unit) requires 26 parking spaces for the 21 units; accordingly, a variance is required for the shortfall of two parking spaces. Therefore, the purpose of this study is to evaluate the peak parking demand (generated by the subject development proposal) versus the proposed on-site parking supply.

ITE PARKING GENERATION MANUAL VS. WINDSOR BYLAW REQUIREMENTS

The ITE Parking Generation Manual (6th Edition) reports parking demand studies and statistics from various land uses across North America. According to Land Use Codes 217 and 220, for a multifamily low-rise residential development, parking demand can be estimated based on the number of bedrooms per dwelling unit.

As referenced in Appendix B, for a 21-unit low-rise apartment building consisting of four one-bedroom units and seventeen two-bedroom units, the ITE's average rate suggests that a minimum parking supply of 25 parking spaces should sufficiently accommodate the anticipated peak parking demand (which is one more than the parking supply proposed by the developer).

The developer is also providing three bicycle parking spaces, which may minimize the overall need for vehicle parking spaces. The City of Windsor is actively promoting active transportation; the developer is supporting this through the availability of bicycle parking spaces. Sidewalks are provided on both sides of Holburn Street, which is approximately 180m from the development. Although there are no sidewalks provided directly on the Sixth Concession, the surrounding area is a residential neighbourhood that is conducive to walking.

Theoretically, since the proposed parking supply may not accommodate the peak parking demand on its own, transit and active transportation options were also evaluated. Currently, Windsor Transit Route 8 provides two stops on Holburn Street: one is less than 250m from the development, and another stop is located approximately 400m from the site; additional transit routes are also provided within the surrounding area. Since these stops are within 200m - 400m of the site, some residents may rely on the City's transit system. The following figure shows the Windsor Transit stops located around the subject site (denoted in red):

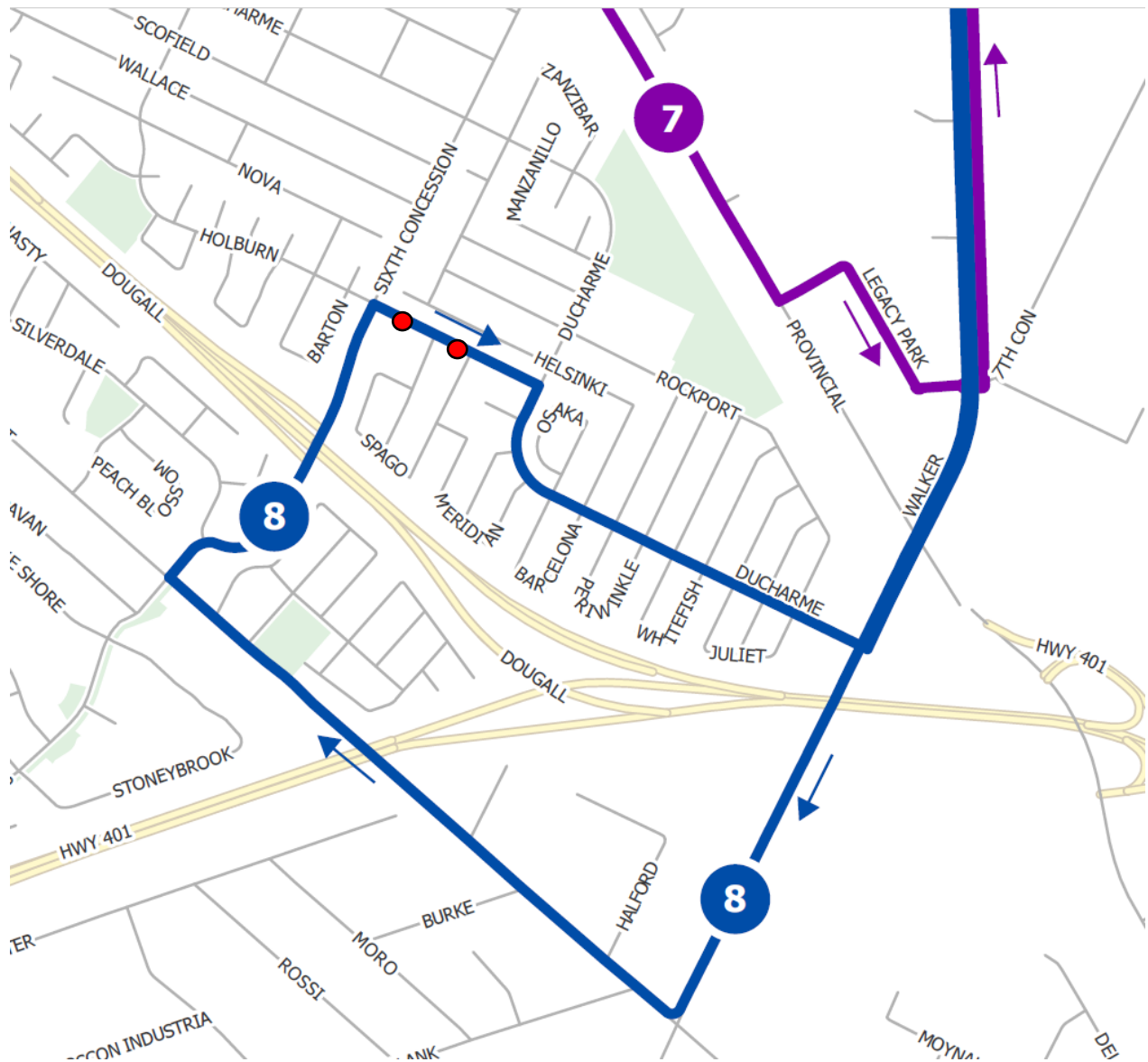


Figure 1: Windsor Transit Routes

Therefore, because of the existing modal split options, it is the engineers' opinion that the proposed on-site parking supply may accommodate the development's peak parking demand.

SUMMARY AND CONCLUSIONS

A low-rise residential apartment building is proposed for vacant lands located at 4088 and 4096 Sixth Concession Road, in Windsor, Ontario. The developer is proposing a three-storey residential building comprised of 21 dwelling units. A total of 24 parking spaces are proposed for the residential building (which includes two accessible spaces and three visitor spaces); the parking spaces are to be accessed from the proposed Sixth Concession Road site access. The City's zoning bylaw requires 26 spaces for the 21 units; accordingly, a variance is required for the parking shortfall.

The ITE Parking Generation Manual (6th Edition) suggests that a minimum parking supply of 25 spaces could accommodate the site's peak parking demand; the proposed development is close to existing active transportation facilities and transit routes, so the proposed development's modal split could further reduce the peak parking demand.

Upon review of industry references and existing conditions around the subject site, it is the engineers' opinion that the proposed on-site parking supply of 24 parking spaces may sufficiently accommodate the peak parking demand for the 21-unit apartment building.

All of which is respectfully submitted,

RC Spencer Associates Inc.



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Consulting Engineer &
Professional Traffic Operations Engineer
Associate / Leamington Office Manager

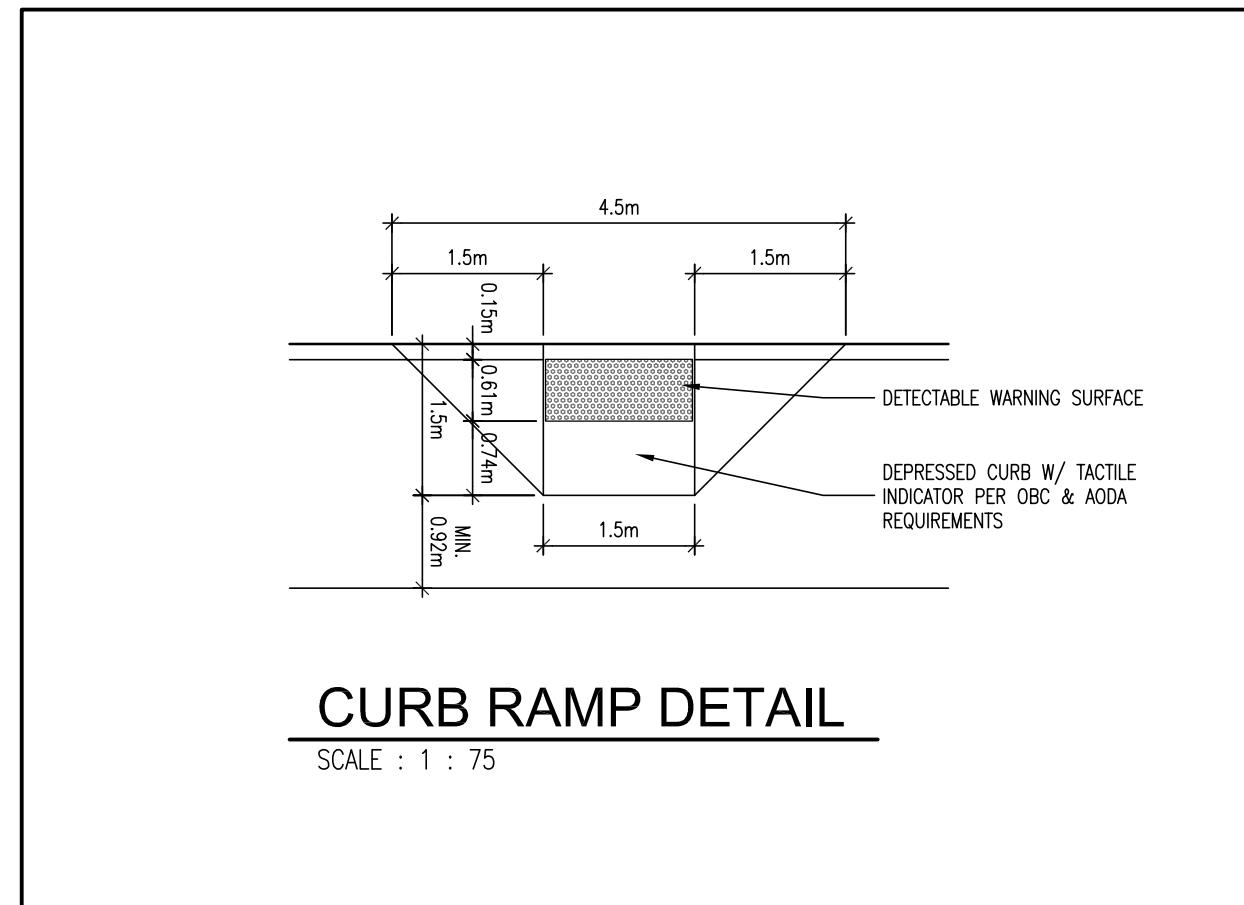


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Consulting Engineer &
Fellow ITE Member
President / Windsor Office Manager



Appendix A

SITE PLAN

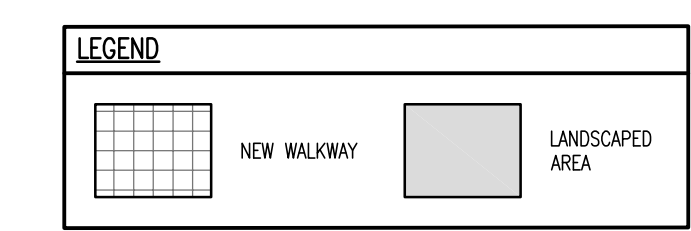
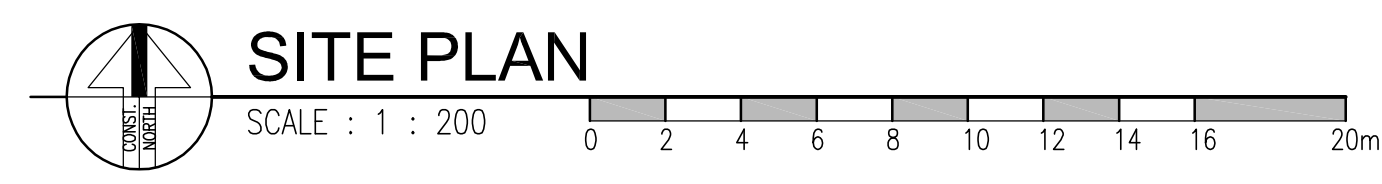
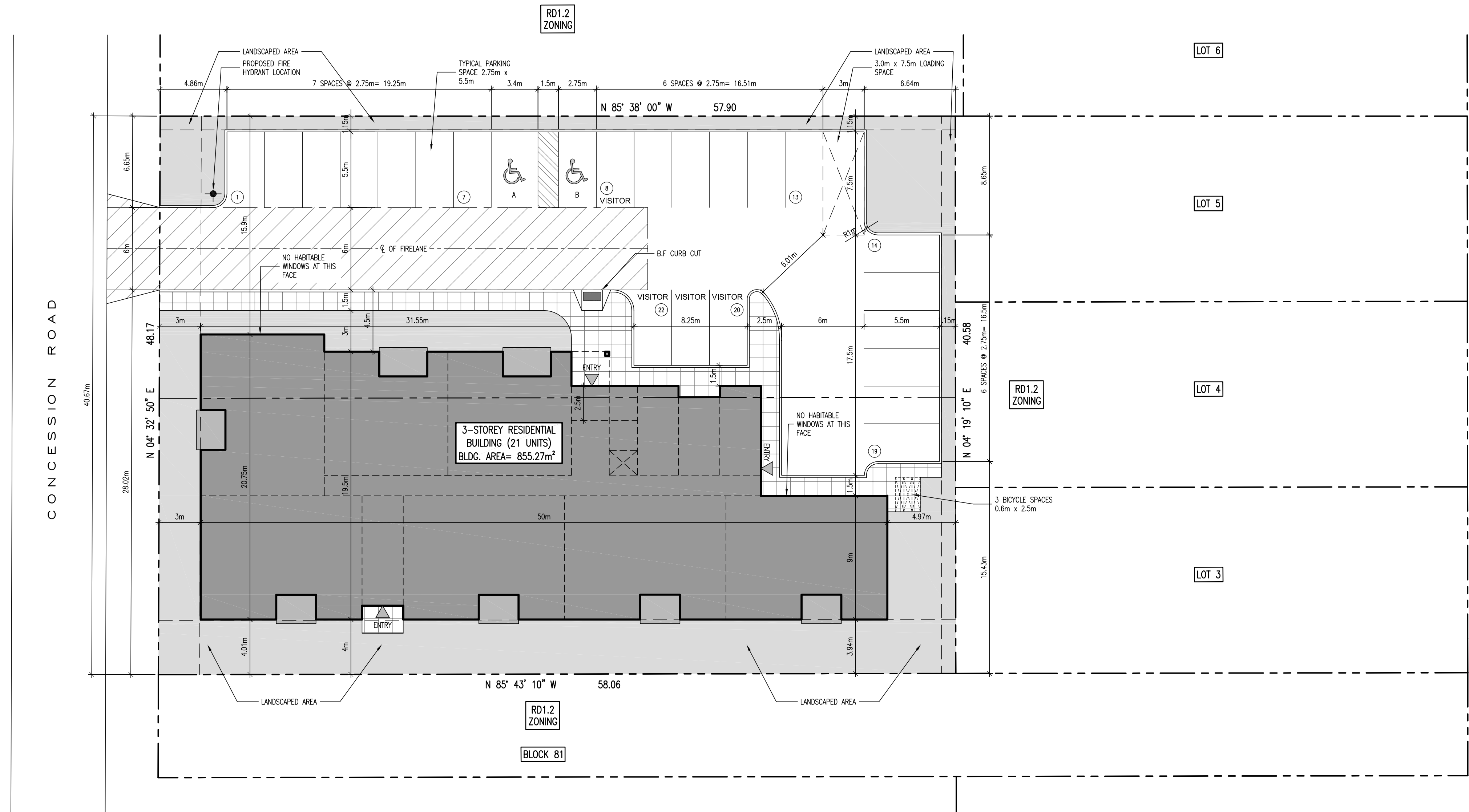


SITE DATA MATRIX : SITE ZONING : RD1.2 (TO BE AMENDED)

	REQUIRED	PROPOSED
a. LOT AREA		2,355.53 m ²
b. BUILDING AREA		855.27 m ²
c. BUILDING LOT COVERAGE (%)		36.33%
d. BUILDING GROSS FLOOR AREA (G.F.A.)		2,565.91 m ²
e. BUILDING HEIGHT		10.00 m
f. BUILDING SETBACKS		
SIDE - NORTH		15.90 m
SIDE - SOUTH		3.94 m
REAR - EAST		4.97 m
FRONT - WEST		3.00 m
g. NO. OF PARKING SPACES (INCLUDES ACCESSIBLE & VISITOR PARKING SPACES)		
TOTAL		22 SPACES
PROPOSED 1.14 SPACES PER UNIT = 1.14 X 21		24 SPACES
h. NO. OF ACCESSIBLE PARKING SPACES		2 SPACES
i. NO. OF VISITOR PARKING SPACES - 15% OF PROVIDED PARKING		4 SPACES
j. NO. OF LOADING SPACES		1 SPACES
k. PAVED AREA		782.93 m ²
COVERAGE		33.23 %
l. LANDSCAPED AREA		
HARD		130.84 m ²
SOFT		554.92 m ²
TOTAL		685.76 m ²
COVERAGE		29.11 %
m. LINEAR CONCRETE CURB		165.25 m
n. NO. OF BICYCLE PARKING SPACES	3 SPACES	3 SPACES

SUITE COUNT

FLOOR	1 BED	2 BED
1ST	2	5
2ND	1	6
3RD	1	6
TOTAL	4	17

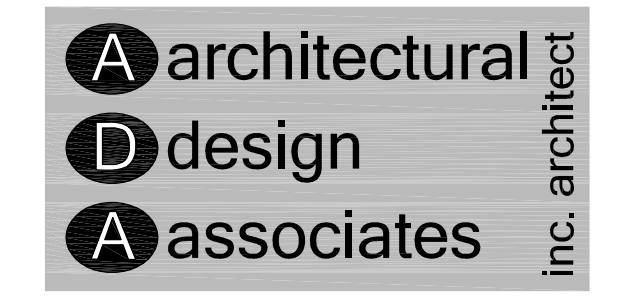


2023/10/19 ZBA REVIEW

date (yyyy/mm/dd): issued for:

- general notes:
- THIS PRINT IS AN INSTRUMENT OF SERVICE ONLY AND IS THE PROPERTY OF THE ARCHITECT.
 - DRAWINGS SHALL NOT BE SCALED.
 - CONTRACTORS SHALL VERIFY AND BE RESPONSIBLE FOR ALL DIMENSIONS AND CONDITIONS ON THE JOB AND THIS OFFICE MUST BE NOTIFIED OF ANY VARIATIONS FROM THE DIMENSIONS AND CONDITIONS SHOWN BY THESE DRAWINGS.
 - ATTENTION IS DIRECTED TO PROVISIONS IN THE GENERAL CONDITIONS REGARDING CONTRACTOR'S RESPONSIBILITIES IN REGARD TO SUBMISSION OF SHOP DRAWINGS.
 - IN THE EVENT THE ARCHITECT IS RETAINED TO REVIEW SHOP DRAWINGS, SUCH REVIEW IS ONLY TO CHECK FOR CONFORMANCE WITH DESIGN CONCEPT AND WITH THE INFORMATION GIVEN IN THE CONTRACT DOCUMENTS.
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 - THE ARCHITECT IS NOT RESPONSIBLE FOR THE CONTRACTOR'S MEANS, METHODS AND OR TECHNIQUES IN THE CONSTRUCTION OF THIS FACILITY.

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project:
PROPOSED RESIDENTIAL DEVELOPMENT,
SIXTH CONCESSION ROAD,
WINDSOR, ON

client:
HD DEVELOPMENTS

title:
SITE PLAN

scale:
AS SHOWN

drawn by:
DM

checked by:
SMB

date:
OCTOBER 2023

comm. no.:
2023-087

sheet no.:

SPC1.0

Appendix B

ITE PARKING GENERATION MANUAL – 6TH EDITION REFERENCES

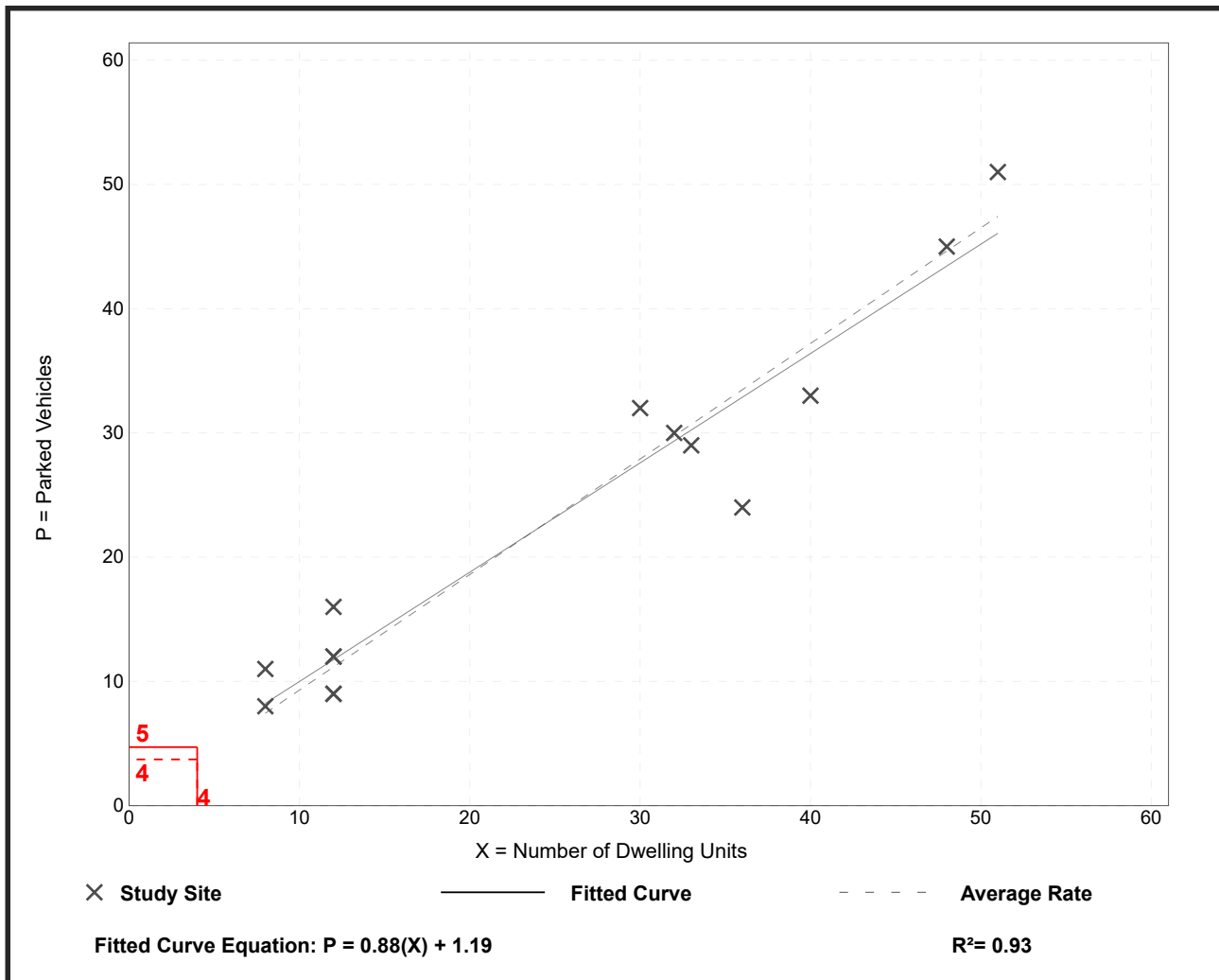
Multifamily Housing - 1 BR (Low-Rise) - Not Close to Rail Transit (217)

Peak Period Parking Demand vs: Dwelling Units
On a: Weekday (Monday - Friday)
Setting/Location: General Urban/Suburban
 Number of Studies: 14
 Avg. Num. of Dwelling Units: 25

Peak Period Parking Demand per Dwelling Unit

Average Rate	Range of Rates	33rd / 85th Percentile	95% Confidence Interval	Standard Deviation (Coeff. of Variation)
0.93	0.67 - 1.38	0.88 / 1.27	***	0.16 (17%)

Data Plot and Equation



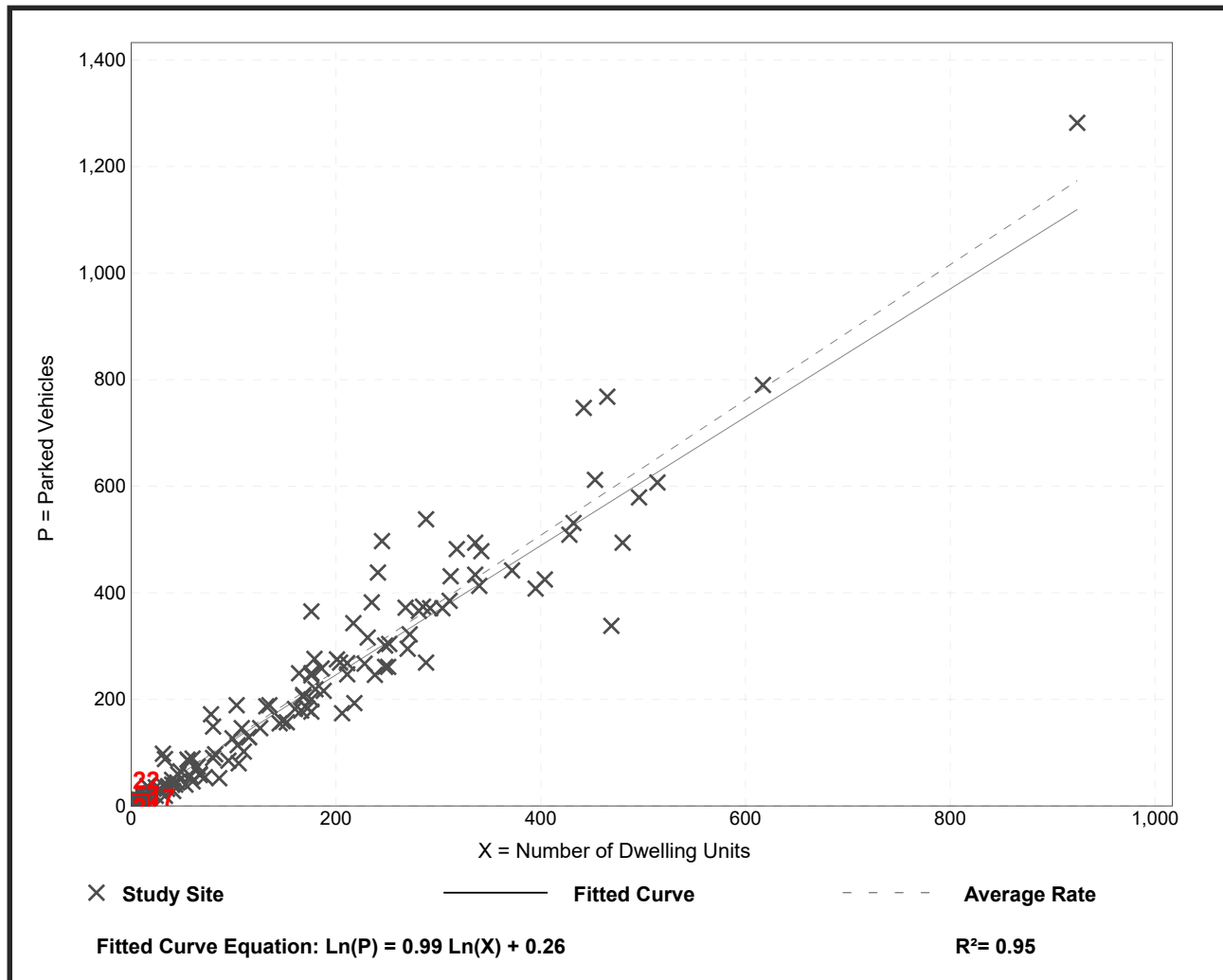
Multifamily Housing - 2+ BR (Low-Rise) - Not Close to Rail Transit (220)

Peak Period Parking Demand vs: Dwelling Units
On a: Weekday (Monday - Friday)
Setting/Location: General Urban/Suburban
 Number of Studies: 143
 Avg. Num. of Dwelling Units: 154

Peak Period Parking Demand per Dwelling Unit

Average Rate	Range of Rates	33rd / 85th Percentile	95% Confidence Interval	Standard Deviation (Coeff. of Variation)
1.27	0.58 - 3.16	1.07 / 1.59	1.22 - 1.32	0.29 (23%)

Data Plot and Equation



Proposed Site Development Parking Generation

Project: 4088 - 4096 Sixth Concession Road Apartments

Site: Windsor, Ontario

Assumed Land Use (1): Multifamily Housing - 1 BR (Low-Rise) - ITE No. 217

Average Parked Vehicles vs.: 1 Bedroom Dwelling Units

ITE Parking Generation Data collected on a: Weekday

Peak Period: = Average Rate

Assumed Land Use (1): Multifamily Housing - 1 BR (Low-Rise) - ITE No. 217		
	1 Bedroom Dwelling Units	Parking Required
Peak Period	4	3.72

Assumed Land Use (1): Multifamily Housing - 2+ BR (Low-Rise) - ITE No. 220

Average Parked Vehicles vs.: 2+ Bedroom Dwelling Units

ITE Parking Generation Data collected on a: Weekday

Peak Period: = Average Rate

Assumed Land Use (1): Multifamily Housing - 2+ BR (Low-Rise) - ITE No. 220		
	2+ Bedroom Dwelling Units	Parking Required
Peak Period	17	21.59

Total Parking Required		
	Dwelling Units	Parking Required
Peak Period	21	25