JUNE 6, 2025

PROJECT NO: 2764-7251

SENT BY: EMAIL WESLEY@HIPDEVELOPMENTS.COM

HIP Investments Inc 74 Grand Avenue South, Suite 201 Cambridge, ON N1S 0B7

Attention: Wesley Hordyk, Vice President

RE: TRANSPORTATION IMPACT BRIEF 105 ELMIRA ROAD NORTH CITY OF GUELPH

Dear Wesley,

In support of the Zoning By-Law Amendment and Official Plan Amendment related to the proposed residential development at 105 Elmira Road Noth in the City of Guelph (City), C.F. Crozier & Associates Inc. (Crozier) has prepared the following Transportation Impact Brief (TIB).

The purpose of this letter is to analyze the following aspects of the proposed development from a transportation operations perspective:

- The existing road network and record information relating to road jurisdiction, road classification, posted speed limit, lane configuration, cross-section elements.
- Forecast the trip generation characteristics of the proposed development using the Institute of Transportation Engineers Manual (11th edition).
 - The trips generated from the proposed development are less than 100 new trips, therefore a Transportation Impact Study (TIS) is not required.
- Evaluate the proposed site access from a sight distance perspective.
- Review on site-circulation for passenger, loading, waste collection, and emergency vehicles.
- Review existing and future Transportation Demand Management (TDM) opportunities and site-specific measures to reduce single-occupancy (SOV) trips.
- Review the proposed on-site parking against the City of Guelph parking Zoning By-Law.

The previous submission of the Transportation Impact Brief (TIB) was prepared by Crozier in March 2025. This June 2025 2nd submission addresses comments from the City and Agency dated May 27, 2025.



The comments from the City and Agency have been included in this letter along with Crozier's corresponding responses directly below each comment in red. The TIB update, prepared to address the comments received, is also included herein.

City and Agency Comments (May 27, 2025)

1. Visitor Parking Rates

Staff have concerns about the reduced minimum visitor parking requirements that have been requested. It is recommended that the applicant increase the provided visitor parking to be more in line with the upper end of the visitor parking utilization rate provided in **Table 9** of the TIB.

After applying the parking utilization rates from the surrogate sites, the Site proposed minimum visitor parking rate has been increased from 0.06 to 0.08 in this submission. Therefore, the Site is now proposing 10 visitor parking spaces. Further, an average visitor parking rate of 0.08 spaces per unit was deemed appropriate because the development prioritizes the allocation of two-bedroom units, which is why the site plan does not reflect the full 13 visitor parking spaces requested by the City in its most recent comments.

2. The PMSP is missing a professional Engineer endorsement.

PMSP and updated TIB have professional endorsements.

3. Site Access Review

Willow Road fronting the development operates with a regulatory speed limit of 50 km/h and a flashing 40 km/h (school zone) during specific times. The sight distance assessment needs to be completed for a posted speed limit of 50 km/h.

The site access review in Section 3 has been updated to reflect a posted speed limit of 50 km/h. . The proposed site access along Willow Road meets all relevant TAC GDGCR requirements for the sight distance and stopping sight distance analysis.

4. Existing TDM Opportunities

Staff recommend updating section 5.1 of the TIB to describe the existing cycling network more accurately: there are existing painted bike lanes on both Willow Road and Elmira Road, however none of the bike lanes are 'protected' and the cycling spine network planned for Willow Road does not extend to this site under the current TMP.

Section 5.1 has been updated to accurately reflect the existing cycling network.

Introduction

C.F. Crozier & Associates Inc. (Crozier) was retained by HIP Investments to complete a TIB for a proposed residential apartment development situated at 105 Elmira Road North in the City of Guelph.

1.0 The purpose of this brief is to assess the impact of the proposed development on the surrounding road network and recommend transportation mitigation measures, based on existing and future TDM opportunities.

A Terms of Reference (ToR) encompassing the scope of the TIB was circulated to the City of Guelph on October 15, 2024, and comments were received from the City on October 22, 2024. Correspondence from the City of Guelph is included in **Appendix A**.

1.1 Development Lands

The subject lands cover an area of approximately 0.97 ha and currently consist of a greenfield. The property, located in a residential area, is bounded by Elmira Road North to the west, Willow Road to the south, and residential dwellings to the north and east.

1.2 Development Proposal

Per the most recent concept plan prepared by aba architects Inc. dated June 2, 2025, envisioned for the full buildout of this development include approximately:

- A 6-storey building with 126 residential units.
- 144 vehicle parking spaces.
- 126 indoor bicycle parking spaces and 13 outdoor bicycle parking spaces.
- Additional indoor bicycle parking spaces within the units' storage lockers

The most recent site plan is shown in **Figure 1**.



HIS DRAWING IS AN INSTRUMENT OF SERVICE & IS THE PROPERTY OF ABA ARCHITECTS INC. & CANNOT BE MODIFIED AND/OR REPRODUCED WITHOUT THE PERMISSION OF ABA ARCHITECTS INC.

THE CONTRACTOR MUST VERIFY ALL DIMENSIONS ON SITE AND REPORT ANY DISCREPANCIES TO THE ARCHITECT, BEFORE PROCEEDING WITH THE WORK. DRAWINGS ARE NOT TO BE SCALED.

REVISIONS

ZBA/OPA REVISIONS

DATE

2025.06.02

Residential Townhouse RM.6 Zone (Legal Description	: BLOCK 180 on PLAN 61M-68)	Zoning I	Bylaw 2023-2079	
Zoning Regulation RM.6 Zone	Required	Provided	Compliance	
Maximum Density (units/ha)	100	130	No	
Minimum Lot Frontage (m)	30	64.6	Yes	
Minimum Front Yard (Elmira Rd.)	6	4.3m	No	
Minimum Exterior Side Yard (Willow Rd.)	6	6.0m	Yes	
Minimum Interior Side Yard	7.5	19.0m	Yes	
Minimum Rear Yard	7.5	23.1m	Yes	
Maximum Building Height (# storeys)	6	6	Yes	
Minimum Common Amenity Area (20 sq.m./DU)	2,520.0	847.3		
Exterior Common Amenity Areas		384.6	No	
Interior Common Amenity Areas		462.7		
Minimum Landscaped Open Space	40%	35%	No	
Minimum Buffer Strips (m)	3	3	Yes	
Garbage, Refuse Storage and Composters	Within main building or any accessory building	Within Main Building	Yes	
Angular Plane from Front Lot Line (Elmira Road)	45 degrees	43 degrees	Yes	
Angular Plane from Exterior Side Lot Line (Willow Rd.)	45 degrees	46 degrees	No	
Angular Plane from Int. Side Yard (North)	45 degrees	49 degrees	No	
Angular Plane from Rear Yard (East)	45 degrees	41 degrees	Yes	
Parking Data	N	112		
Parking Dimensions	2.75m x 5.5m	2.75m x 5.5m	Yes	
Off-Street Parking - Residential	163	144	No	
Assessible Deditor	Type A - Accessible Spaces = 3	3	Yes	
Accessible Parking	Type B - Accessible Spaces = 3	3	Yes	
Bike Parking	139	139		
Short Term (Exterior)		13	Vac	
Long Term - Horizontal (Interior)		32	res	
Long Term - Stacked (Interior)		94		

KEY PLAN	
zba/opa submission	2025.01.31
SPA PRECONSULTATION	2024.11.18
CHRONOLOGY	DATE





105 ELM	IRA ROAD
105 ELMIRA ROAD NO	RTH, GUELPH, ON. N1K 1Z1

2024-069

SITE PLAN

1:300 EET SIZE SP-24X36 ROJECT NUMBER

on: BLOCK 180 on PLAN 61M-68)	Zoning	Bylaw 2023-20790
100	130	No
30	64.6	Yes
6	4.3m	No
6	6.0m	Yes
7.5	19.0m	Yes
7.5	23.1m	Yes
6	6	Yes
2,520.0	847.3	
	384.6	No
	462.7	
40%	35%	No
3	3	Yes
Within main building or any accessory building	Within Main Building	Yes
45 degrees	43 degrees	Yes

5 I

õ%

	F	Front End Bins (Yd3)		
Units	Grey	Blue	Total	Green
	126	20	30	50 50
6 Yd3 Bins		3.4 5	.0	8
4 Yd3 Bins		5 <mark>.1</mark> 7	.5	13

EX. BLDG.

 \mathbf{O}

SITE DATA - 105 Elmira Road, Guelph, ON					ZBL 2023-20	790; Zor	ne: RM.6
DENSITY		Minimum		Maximum		Р	rovided
Units / hectare		35		100			130
I otal Floor Space Index (FSI)		- Motric		- Imporial			1.3
Site Area		0.97	ha	2 4	acre		/0
		9,709.0	sq m	104,507.3	sq ft		100%
Building Footprint at grade		2,038.0	sq m	21,936.9	sq ft		21%
Asphalt Area		4,274.3	sq m	46,008.1	sq ft		44%
Concrete Curbs, retaining walls, etc.		19.2	sq m	206.5	sq ft		0%
Concrete Sidewalks, Amenity Terrace, and Private at-grade Terraces		1,154.2	sq m	12,424.0	sq ft		12%
Total Impervious Area		6,331.5	sq m	80,575.5	sq ft		77%
Landscaped/Sodded Area		2,223.3	sq m	23,931.8	sq ft		23%
Total Permeable Area		2,223.3	sq m	23,931.8	sq ft		23%
Eront Vard Setback (Elmira Rd.)		win. keq a	m	11 0	m	٢	1 2m
Rear Yard Setback		7.5	m	-	m		23.1m
Exterior Side Yard Setback (Willow Rd.)		6.0	m	11.0	m		6.0m
Interior Side Yard Setback		7.5	m	-	m		19.0m
FRONTAGE		Min Required		Provided			
Lot Frontage		30.0	m	64.6	m		
LOT DEPTH				Provided			
Lot Depth				126.1m	m		
LANDSCAPING		Min Required		Provided			
Landscaped Open Space (40% of Site Area)		3,883.6	sq m	3,377.56	sq m		35%
Permeable				2,223.34			240/
Landscaped Buffer Strip		3.0	m	1,104.23 2 N	m		54%
zanosopeu burrer serp		5.0		5.0			
BUILDING DATA							
BUILDING AREAS							
Above Grade	Area (sq.m.)	# of Floors	Metric		Imperial		
Level 1 (Ground Floor)	2038.0	1	2,038.0	sq m	21,936.9	sq ft	
Levels 2-5	2025.8	4	8,103.2	sq m	87,222.2	sq ft	
Level 6	2025.8	1	2,025.8	sq m	21,805.5	sq ft	
Mechanical Penthouse	178.7		178.7	sq m	1,923.5	sq ft	
Gross Floor Area (Above Grade)		6	12,345.7	sq m	132,888.1	sq ft	
BUILDING HEIGHT (Max. 6 storeys)	Height (m)	# of Floors	Metric		Imperial		
Level 1 (Ground Floor)	3.6	1	3.6	m	11.0	ft	
Levels 2-5	3.2	4	12.8	m	41.0	ft G	
Level 6	3.6	1	3.6	m	11.0	ft ft	
Falapet	0.6	E	20.6	m	1.0 67.0	1L 6+	
Mechanical Penthouse (not included in Building Height Calculation)		0	4.0	m	13.0	ft	
RESIDENTIAL			110		1010		
RESIDENTIAL UNITS	# of Floors	1 Bed	1 Bed + D	2 Bed	Units	Be	eds
Level 1 (Ground Floor)	1	1	6	4	11	1	14
Levels 2-5	4	0	15	8	23	3	31
Level 6	1	0	15	8	23		31
Total	6	1	81	44	126	1	69
Unit Mix		1%	64%	35%	100%	-	
STORAGE LOCKERS	# of Floors	Lockers/Floor				Loc	kers
Level 1 (Ground Floor)	1	0					0
Total	6	11					55
COMMON AMENITY	0		Metric		Imperial	-	,,
REQUIRED							
20 sq m / dwelling unit			2,520.0	sq m	27 125 1	on ft	
PROVIDED					27,125.1	sqii	
11 Interior Amenity (Lobby A. Lobby B. Social Lounge Fitness Room, Yoga St					27,125.1	sqii	
Li interior America (Lobby A, Lobby B, Social Lourige, Fitness Room, Foga St	udio, Party Room	, BBQ prep, etc)	462.7	sq m	4,980.5	sq ft	
Common Outdoor Amenity Terrace (facing Elmira Rd.)	udio, Party Room	, BBQ prep, etc)	462.7 384.6	sq m sq m	4,980.5 4,139.8	sq ft sq ft	
Common Outdoor Amenity Terrace (facing Elmira Rd.) Total	udio, Party Room	, BBQ prep, etc)	462.7 384.6 847.3	sq m sq m sq m	4,980.5 4,139.8 9,120.3	sq ft sq ft sq ft sq ft	
Common Outdoor Amenity Terrace (facing Elmira Rd.) Total	udio, Party Room	, BBQ prep, etc)	462.7 384.6 847.3 6.7	sq m sq m sq m sq m / unit	4,980.5 4,139.8 9,120.3	sq ft sq ft sq ft sq ft	
Common Outdoor Amenity Terrace (facing Elmira Rd.) Total	udio, Party Room	, BBQ prep, etc)	462.7 384.6 847.3 6.7	sq m sq m <mark>sq m</mark> sq m / unit	4,980.5 4,139.8 9,120.3	sq ft sq ft sq ft sq ft Spa	aces
Common Outdoor Amenity Terrace (facing Elmira Rd.) Total Parking Data VEHICLES	udio, Party Room	, BBQ prep, etc)	462.7 384.6 847.3 6.7	sq m sq m sq m sq m / unit	4,980.5 4,139.8 9,120.3	sq ft sq ft sq ft sq ft Spa	aces
Common Outdoor Amenity Terrace (facing Elmira Rd.) Total Parking Data VEHICLES REQUIRED Recidential Parking Required (1.5 spaces for the first 20 dwalling units 1.1.2)	udio, Party Room	, BBQ prep, etc)	462.7 384.6 847.3 6.7	sq m sq m sq m sq m / unit	4,980.5 4,139.8 9,120.3	sq ft sq ft sq ft Sq ft	aces
Common Outdoor Amenity Terrace (facing Elmira Rd.) Total Parking Data VEHICLES REQUIRED Residential Parking Required (1.5 spaces for the first 20 dwelling units + 1.25 Total Parking Required	udio, Party Room	, BBQ prep, etc) ing unit beyond 20	462.7 384.6 847.3 6.7 0 dwelling units)	sq m sq m sq m sq m / unit	4,980.5 4,139.8 9,120.3	sq ft sq ft sq ft sq ft	aces 163 163
Common Outdoor Amenity Terrace (facing Elmira Rd.) Total Parking Data VEHICLES REQUIRED Residential Parking Required (1.5 spaces for the first 20 dwelling units + 1.25 Total Parking Required Resulted Parking Includes:	udio, Party Room	, BBQ prep, etc) ing unit beyond 2(462.7 384.6 847.3 6.7 O dwelling units)	sq m sq m <mark>sq m</mark> sq m / unit	4,980.5 4,139.8 9,120.3	sq ft sq ft sq ft Sq ft	aces 163 163
Common Outdoor Amenity Terrace (facing Elmira Rd.) Total Parking Data VEHICLES REQUIRED Residential Parking Required (1.5 spaces for the first 20 dwelling units + 1.25 Total Parking Required Required Parking Includes: Visitor Parking Required (20% of the required residential parking)	udio, Party Room	, BBQ prep, etc) ing unit beyond 2(462.7 384.6 847.3 6.7	sq m sq m sq m sq m / unit	4,980.5 4,139.8 9,120.3	sq ft sq ft sq ft Spa	aces 163 163
Common Outdoor Amenity Terrace (facing Elmira Rd.) Total Parking Data VEHICLES REQUIRED Residential Parking Required (1.5 spaces for the first 20 dwelling units + 1.25 Total Parking Required Required Parking Includes: Visitor Parking Required (20% of the required residential parking) Barrier Free Parking Required (1+3% applies for 101-200 spaces reg'd)	udio, Party Room	, BBQ prep, etc) ing unit beyond 20	462.7 384.6 847.3 6.7	sq m sq m sq m sq m / unit	4,980.5 4,139.8 9,120.3	sq ft sq ft sq ft Spa 33 6	aces 163 163
Common Outdoor Amenity Terrace (facing Elmira Rd.) Total Parking Data VEHICLES REQUIRED Residential Parking Required (1.5 spaces for the first 20 dwelling units + 1.25 Total Parking Required Required Parking Includes: Visitor Parking Includes: Visitor Parking Includes: Visitor Parking Includes: Visitor Parking Required (2% of the required residential parking) Barrier Free Parking Required (1+3% applies for 101-200 spaces req'd) Type A Required	udio, Party Room	, BBQ prep, etc) ing unit beyond 20	462.7 384.6 847.3 6.7	sq m sq m sq m sq m / unit	4,980.5 4,139.8 9,120.3	sq ft sq ft sq ft Sq ft 33 6 3	aces 163 163
Common Outdoor Amenity Terrace (facing Elmira Rd.) Total Parking Data VEHICLES REQUIRED Residential Parking Required (1.5 spaces for the first 20 dwelling units + 1.25 Total Parking Required Required Parking Includes: Visitor Parking Required (20% of the required residential parking) Barrier Free Parking Required (1+3% applies for 101-200 spaces req'd) Type & Required Type B Required	udio, Party Room	, BBQ prep, etc) ing unit beyond 20	462.7 384.6 847.3 6.7	sq m sq m sq m sq m / unit	4,980.5 4,139.8 9,120.3	sq ft sq ft sq ft Sp Sp 33 6 3 3	aces 163 163
Common Outdoor Amenity Terrace (facing Elmira Rd.) Total Parking Data VEHICLES REQUIRED Residential Parking Required (1.5 spaces for the first 20 dwelling units + 1.25 Total Parking Required Required Parking Includes: Visitor Parking Required (20% of the required residential parking) Barrier Free Parking Required (1+3% applies for 101-200 spaces req'd) Type A Required Type B Required PROVIDED	udio, Party Room	, BBQ prep, etc) ing unit beyond 20 Type A	462.7 384.6 847.3 6.7) dwelling units)	sq m sq m sq m sq m / unit	4,980.5 4,139.8 9,120.3	sq ft sq ft sq ft Sq ft Sp: 33 6 3 3 3	aces 163 163 Total:
Common Outdoor Amenity Terrace (facing Elmira Rd.) Total Parking Data VEHICLES REQUIRED Residential Parking Required (1.5 spaces for the first 20 dwelling units + 1.25 Total Parking Required Required Parking Required (20% of the required residential parking) Barrier Free Parking Required (1+3% applies for 101-200 spaces req'd) Type A Required PROVIDED Surface Parking	udio, Party Room	, BBQ prep, etc) ing unit beyond 20 Type A 3	462.7 384.6 847.3 6.7 0 dwelling units)	sq m sq m sq m sq m / unit sq m / unit	4,980.5 4,139.8 9,120.3	sq ft sq ft sq ft Spa 33 6 3 3	163 163 163 Total: 144
Common Outdoor Amenity Terrace (facing Elmira Rd.) Total Parking Data VEHICLES REQUIRED Residential Parking Required (1.5 spaces for the first 20 dwelling units + 1.25 Total Parking Required Required Parking Includes: Visitor Parking Required (20% of the required residential parking) Barrier Free Parking Required (1+3% applies for 101-200 spaces req'd) Type A Required Type B Required PROVIDED Surface Parking Total Parking Provided	udio, Party Room	, BBQ prep, etc) ing unit beyond 20 Type A 3 3	462.7 384.6 847.3 6.7 0 dwelling units)	sq m sq m sq m sq m/unit sq m/unit sq m/unit 138	4,980.5 4,139.8 9,120.3	sq ft sq ft sq ft Spa 33 6 3 3	163 163 163 163 144 144
Common Outdoor Amenity Terrace (facing Elmira Rd.) Total Parking Data VEHICLES REQUIRED Residential Parking Required (1.5 spaces for the first 20 dwelling units + 1.25 Total Parking Required Required Parking Includes: Visitor Parking Required (20% of the required residential parking) Barrier Free Parking Required (1+3% applies for 101-200 spaces req'd) Type A Required Type B Required PROVIDED Surface Parking Total Parking Provided Provided Parking Includes:	udio, Party Room	, BBQ prep, etc) ing unit beyond 20 Type A 3 3	462.7 384.6 847.3 6.7 0 dwelling units) 0 dwelling units) Type B 3 3	sq m sq m sq m sq m / unit sq m / unit Standard 138	27,123.1 4,980.5 4,139.8 9,120.3 9,120.3	sq ft sq ft sq ft Sq ft Spa 6 3 3 3	163 163 Total: 144
Common Outdoor Amenity Terrace (facing Elmira Rd.) Total Parking Data VEHICLES REQUIRED Residential Parking Required (1.5 spaces for the first 20 dwelling units + 1.25 Total Parking Required Required Parking Includes: Visitor Parking Required (20% of the required residential parking) Barrier Free Parking Required (1+3% applies for 101-200 spaces req'd) Type A Required Type B Required PROVIDED Surface Parking Total Parking Provided Provided Parking Includes: Visitor Parking	udio, Party Room	, BBQ prep, etc) ing unit beyond 20 Type A 3 3 3	462.7 384.6 847.3 6.7 0 dwelling units) 0 dwelling units) Type B 3 3	sq m sq m sq m sq m / unit sq m / unit Standard 138	27,123.1 4,980.5 4,139.8 9,120.3 9,120.3	sq ft sq ft sq ft Spr 33 6 3 3 2	163 163 Total: 144
Common Outdoor Amenity Terrace (facing Elmira Rd.) Total Parking Data VEHICLES REQUIRED Residential Parking Required (1.5 spaces for the first 20 dwelling units + 1.25 Total Parking Required Required Parking Includes: Visitor Parking Required (1+3% applies for 101-200 spaces req'd) Type A Required PROVIDED Surface Parking Includes: Visitor Parking Total Parking Includes: Visitor Parking I	udio, Party Room	, BBQ prep, etc) ing unit beyond 20 Type A 3 3	462.7 384.6 847.3 6.7) dwelling units)) dwelling units) 3 3	sq m sq m sq m sq m / unit Standard 138 138	27,123.1 4,980.5 4,139.8 9,120.3 9,120.3 Compact	sq ft sq ft sq ft Sp: 33 6 3 3 6 3 3 2 10 30	aces 163 163 163 144 144
Common Outdoor Amenity Terrace (facing Elmira Rd.) Total Parking Data VEHICLES REQUIRED Residential Parking Required (1.5 spaces for the first 20 dwelling units + 1.25 Total Parking Required Required Parking Includes: Visitor Parking Required (1+3% applies for 101-200 spaces req'd) Type A Required PROVIDED Surface Parking Fotal Parking Includes: Visitor Parking Electric Vehicle Installed Parking (20% of total parking provided) Electric Vehicle Ready Parking (80% of total parking provided)	udio, Party Room	, BBQ prep, etc) ing unit beyond 20 Type A 3 3	462.7 384.6 847.3 6.7) dwelling units)) dwelling units) 3 3	sq m sq m sq m / unit sq m / unit Standard 138 138	27,123.1 4,980.5 4,139.8 9,120.3 9,120.3	sq ft sq ft sq ft Spr 33 6 3 3 10 30 114	163 163 164 144
Common Outdoor Amenity Terrace (facing Elmira Rd.) Total Parking Data VEHICLES REQUIRED Residential Parking Required (1.5 spaces for the first 20 dwelling units + 1.25 Total Parking Required Required Parking Includes: Visitor Parking Required (20% of the required residential parking) Barrier Free Parking Required (1+3% applies for 101-200 spaces req'd) Type A Required Type B Required PROVIDED Surface Parking Total Parking Includes: Visitor Parking Electric Vehicle Installed Parking (20% of total parking provided) Electric Vehicle Ready Parking (80% of total parking provided) BICYCLES	udio, Party Room	, BBQ prep, etc) ing unit beyond 20 Type A 3 3	462.7 384.6 847.3 6.7) dwelling units) Type B 3 3	sq m sq m sq m vunit sq m / unit Standard 138 138	27,123.1 4,980.5 4,139.8 9,120.3 9,120.3	sq ft sq ft sq ft Spr 33 6 3 3 3 10 30 114	aces 163 163 Totala 144 144
Common Outdoor Amenity Terrace (facing Elmira Rd.) Total Parking Data VEHICLES REQUIRED Residential Parking Required (1.5 spaces for the first 20 dwelling units + 1.25 Total Parking Required Required Parking Includes: Visitor Parking Required (1+3% applies for 101-200 spaces req'd) Type A Required Type A Required PROVIDED Surface Parking Total Parking Provided Provided Parking Electric Vehicle Installed Parking (20% of total parking provided) Electric Vehicle Ready Parking (20% of total parking provided) Electric Vehicle Ready Parking (20% of total parking provided) Electric Vehicle Ready Parking (80% of total parking parking Parking Parking Vehicle Parking Parkin	udio, Party Room	, BBQ prep, etc) ing unit beyond 20 Type A 3 3	462.7 384.6 847.3 6.7) dwelling units) Type B 3 3 3	sq m sq m sq m vunit sq m / unit Standard 138 138	27,123.1 4,980.5 4,139.8 9,120.3 9,120.3	sq ft sq ft sq ft Spr 33 6 3 3 3 10 30 114	aces 163 163 163 144 144 144
Common Outdoor Amenity Terrace (facing Elmira Rd.) Total Parking Data VEHICLES REQUIRED Residential Parking Required (1.5 spaces for the first 20 dwelling units + 1.25 Total Parking Required Required Parking Includes: Visitor Parking Required (1-3% applies for 101-200 spaces req'd) Type A Required PROVIDED Surface Parking Total Parking Provided Provided Provided Provided Provided Provided Parking Includes: Visitor Parking Electric Vehicle Installed Parking (20% of total parking provided) Electric Vehicle Ready Parking (20% of total parking provided) Electric Vehicle Ready Parking (20% of total parking provided) Electric Vehicle Ready Parking (0.1 spaces per dwelling unit, 2 space min.)	udio, Party Room	, BBQ prep, etc) ing unit beyond 20 Type A 3 3	462.7 384.6 847.3 6.7 0 dwelling units)	sq m sq m sq m sq m / unit Standard 138 138	27,123.1 4,980.5 4,139.8 9,120.3 9,120.3	sq ft sq ft sq ft sq ft Spr 33 6 3 3 114	aces 163 163 163 144 144 144 144
Common Outdoor Amenity Terrace (facing Elmira Rd.) Total Parking Data VEHICLES REQUIRED Residential Parking Required (1.5 spaces for the first 20 dwelling units + 1.25 Total Parking Required Required Parking Includes: Visitor Parking Required (20% of the required residential parking) Barrier Free Parking Required (1+3% applies for 101-200 spaces req'd) Type A Required PROVIDED Surface Parking Total Parking Provided Provided Parking Includes: Visitor Parking Electric Vehicle Installed Parking (20% of total parking provided) Electric Vehicle Ready Parking (80% of total parking provided) BICYCLES REQUIRED Short Term Bicycle Parking (0.1 spaces per dwelling unit, 2 space min.) Long Term Bicycle Parking (1 space per dwelling unit, 2 space min., 25% min Paiko Parking 1 space per dwelling unit, 2 space min.)	udio, Party Room	, BBQ prep, etc) ing unit beyond 20 Type A 3 3	462.7 384.6 847.3 6.7 0 dwelling units)	sq m sq m sq m sq m/unit Standard 138 138	27,123.1 4,980.5 4,139.8 9,120.3 9,120.3	sq ft sq ft sq ft sq ft Spe 33 6 3 3 10 30 114	aces 163 163 163 163 163 163 163 163
Common Outdoor Amenity Terrace (facing Elmira Rd.) Total Parking Data VEHICLES REQUIRED Residential Parking Required (1.5 spaces for the first 20 dwelling units + 1.25 Total Parking Required (1.5 spaces for the first 20 dwelling units + 1.25 Total Parking Required (20% of the required residential parking) Barrier Free Parking Required (1+3% applies for 101-200 spaces req'd) Type A Required Type B Required PROVIDED Surface Parking Total Parking Includes: Visitor Parking Includes: Visitor Parking Includes: Visitor Parking Required (1+3% applies for 101-200 spaces req'd) Type A Required PROVIDED Surface Parking Electric Vehicle Ready Parking (20% of total parking provided) Electric Vehicle Ready Parking (80% of total parking provided) Electric Vehicle Parking (0.1 spaces per dwelling unit, 2 space min.) Long Term Bicycle Parking (1 space per dwelling unit, 2 space min., 25% min Bike Parking Total PROVIDED	i spaces per dwell . horizontal)	, BBQ prep, etc) ing unit beyond 20 Type A 3 3	462.7 384.6 847.3 6.7 0 dwelling units) 0 dwelling units) 7 Type B 3 3	sq m sq m sq m sq m/unit Standard 138 138	27,123.1 4,980.5 4,139.8 9,120.3 9,120.3 Compact	sq ft sq ft sq ft sq ft Spc 33 6 3 3 10 30 114	aces 163 163 163 163 163 163 163 163
Common Auteonry (2009) A, 2009 G, 3004 (2009) G, 30	udio, Party Room	, BBQ prep, etc) ing unit beyond 20 Type A 3 3 Long T	462.7 384.6 847.3 6.7 0 dwelling units) 0 dwelling units) 7 Type B 3 3 3	sq m sq m sq m sq m / unit Standard 138 138	27,123.1 4,980.5 4,139.8 9,120.3 9,120.3 Compact 0 g Term (Stacked)	sq ft sq ft sq ft sq ft Spi 33 6 3 3 10 30 114	aces 163 163 163 163 163 163 163 163
Common Outdoor Amenity Terrace (facing Elmira Rd.) Total Parking Data VEHICLES REQUIRED Residential Parking Required (1.5 spaces for the first 20 dwelling units + 1.25 Total Parking Required Required Parking Includes: Visitor Parking Required (20% of the required residential parking) Barrier Free Parking Required (1+3% applies for 101-200 spaces req'd) Type A Required Type B Required PROVIDED Surface Parking Includes: Visitor Parking Total Parking Includes: Visitor Parking Includes: Visitor Parking Encludes: Visitor Parking Includes: Visitor Parking Includes: Vis	udio, Party Room	, BBQ prep, etc) ing unit beyond 20 Type A 3 3 Long T	462.7 384.6 847.3 6.7) dwelling units)) dwelling units) 3 3 3 erm (Horizontal) 0 0 20	sq m sq m sq m sq m / unit Standard 138 138	27,123.1 4,980.5 4,139.8 9,120.3 9,120.3 0 Compact 0 0 g Term (Stacked) 0 48	sq ft sq ft sq ft sq ft Spi 33 6 3 3 3 10 30 114	aces 163 163 163 163 163 163 163 163
Common Outdoor Amenity Terrace (facing Elmira Rd.) Total Parking Data VEHICLES REQUIRED Residential Parking Required (1.5 spaces for the first 20 dwelling units + 1.25 Total Parking Required Required Parking Includes: Visitor Parking Required (20% of the required residential parking) Barrier Free Parking Required (1+3% applies for 101-200 spaces req'd) Type A Required Type B Required PROVIDED Surface Parking Total Parking provided Provided Parking Includes: Visitor Parking Electric Vehicle Installed Parking (20% of total parking provided) Electric Vehicle Ready Parking (80% of total parking provided) Electric Vehicle Ready Parking (80% of total parking provided) Electric Vehicle Parking (1 space per dwelling unit, 2 space min., 25% min Bike Parking Total PROVIDED	udio, Party Room	, BBQ prep, etc) ing unit beyond 20 Type A 3 3 Long T	462.7 384.6 847.3 6.7) dwelling units)) dwelling units) 3 3 3 erm (Horizontal) 0 20 20 21	sq m sq m sq m sq m / unit Standard 138 138	27,123.1 4,980.5 4,139.8 9,120.3 9,120.3 0 Compact 0 3 5 Term (Stacked) 0 48 48 46	sq ft sq ft sq ft sq ft Spi 33 6 3 3 10 30 114	163 163 163 163 163 163 163 163 163 104 113 126 139 170tal: 13 68 85

2.0 Site Generated Traffic

The proposed development will result in additional turning movements at the nearby intersections. Therefore, this section describes the trip forecasting methodology and results of this forecast for the development proposal.

2.1 ITE Trip Generation

The trip generation of the proposed residential dwelling was forecasted using published data from the Institute of Transportation Engineers (ITE) Trip Generation Manual, 11th Edition.

The applicable fitted curve equation for Land Use Category (LUC) 221 "Multifamily Housing (Mid-Rise)" was applied to the proposed residential dwelling units. Relevant excerpts from the ITE Trip Generation Manual, 11th Edition have been included in **Appendix B**. The forecasted trip generation of the proposed residential development is summarized in **Table 1**.

			Trip Generation				
Land Use (ITE LUC)	Units	Equation	Week	day A.M.	Weeko	lay P.M.	
			Inbound	Outbound	Inbound	Outbound	
LUC 221: Multifamily Housing (Mid-Rise)	126 Units	Equation A.M. T = 0.44 X - 11.61 P.M. T = 0.39 X + 0.34	10	34	30	19	
	Total			44		49	

Table	1: Site	Generated	Trips
-------	---------	-----------	-------

The proposed development is expected to generate 44 two-way (10 inbound and 34 outbound) trips during the weekday a.m. peak hour, and 49 two-way (30 inbound and 19 outbound) trips during the weekday p.m. peak hour

3.0 Site Access Review

It is important to check the site access for safety concerns for corner clearance, access spacing and sightlines. These were checked using the standards set out in the Geometric Design Guide for Canadian Roads (GDGCR) June 2017.

3.1 Intersection Sight Distance

A review of the available sight distance at the proposed site accesses was undertaken based on Transportation Association of Canada (TAC) Geometric Design Guide for Canadian Roads (GDGCR) (June 2017). Sight distance was measured from the site access using the following assumptions:

- A standard driver eye height of 1.08 metres for a passenger car.
- A 4.4 metre setback from the approximate extension of the outer curb to represent a passenger vehicle waiting to exit the site.

Intersection sight distance is calculated using Equation 9.9.1 from the GDGCR as outlined below:

ISD = 0.278 * V major * tg

Where:

ISD = Intersection Sight Distance

V major = design speed of roadway (km/h)

tg = assumed time gap for vehicles to turn from stop onto roadway (s)

A design speed 10 km/h higher than the posted or assumed speeds of each road of study was assumed for the sight distance analysis. **Table 2** summarizes the sight distance analysis.

Feature	Site Access and Willow Road
Access Type	Full-Movement
Posted Speed Limit of Roadway	50 km/h
Assumed Design Speed	60 km/h
Base Time Gap	6.5 s (right) 7.5 s (left)
Grade of Roadway	Less than 3%
Horizontal Alignment of Roadway ¹	Slight curve to the right north of Flaherty Drive
Required Sight Distance (right turn)	110 m
Available Sight Distance (right turn)	150 m
Required Sight Distance (left turn)	130 m
Available Sight Distance (left turn) ²	195 m
Minimum Sight Distances Satisfied?	Yes

Table 2: Site Access Sight Distance Calculations

Note 1: Willow Road between Elmira Road North and Imperial Road North.

Note 2: Middle of the intersection to the location of the driveway is 110 meters,

can see beyond the intersection.

Utilizing equation 9.9.1 as well as tables 9.9.6 and 9.9.4 provided by the TAC guideline, the required sight distance of a passenger vehicle making a right-turn and a left-turn from stop are approximately 110 metres and 130 metres, respectively, for the design speed of 60 km/h. The proposed site access along Willow Road meets all relevant TAC GDGCR requirements for the sight distance analysis.

3.2 Stopping Sight Distance

Willow Road has a posted speed limit of 50 km/h accordingly, a design speed of 60 km/h was selected. Willow Road is relatively straight in the study area but has slight curvature to the right when heading north past Flaherty Drive. For level roadways, the stopping sight distance requirements are tabulated in TAC GDGCR Table 2.5.2.

Intersection	Willow Road and Site Access Posted Speed = 50 km/h Design Speed = 60 km/h
Formula (TAC GDGCR 2.5.2)	SSD = 0.278 * V * † + 0.039 * (V ² /a)
Design Speed (V)	50 km/h
Brake Reaction Time (t)	2.5 s
Deceleration Rate (a)	3.4 m/s ²
Required Stopping Sight Distance	85 m
Available Sight Distance	> 110 m (looking south)

Table 3: Stopping Sight Distance Assessment

According to Table 3, clear visibility in excess of 110 meters is available to the north and south of the proposed site accesses on Willow Road. Accordingly, there is sufficient stopping sight distance for vehicles approaching from the north and south of the site accesses respectively. Thus, there is sufficient clear sight distance for outgoing vehicles to exit the site access safely, and clear sight distance for vehicles approaching the site to stop safely. Appendix C contains relevant TAC GDGCR excerpts.

3.3 **Corner Clearance**

Corner clearance is the distance between the site access and nearby intersections. The required spacing per Figure 8.8.2 in TAC GDGCR is summarized in **Table 4. Appendix C** contains relevant TAC GDGCR excerpts.

Feature	Site Access and Flaherty Drive Site Access and Elmira Road Nor			
Minimum Spacing Requirement	15 m			
Available Spacing	~42 m ~106 m			
Minimum Spacing Satisfied?	Yes	Yes		

Table A. Corner Clearance

The spacing between the access and the crossroad satisfies the requirements outlined in TAC.

4.0 **Parking Review**

The following section reviews the adequacy of the parking supply of the proposed development. The parking review includes an assessment of the proposed parking supply of the development against the requirements outlined in the City of Guelph's Zoning By-Law (2023)-20790 requirements.

Appendix D contains relevant Zoning By-Law (2023)-20790 excerpts.

4.1 Vehicle Parking Assessment

The site is currently zoned NCC (Neighborhood Commercial Center), designated as a Mixed-Use zone. The City does not consider this site to be a PA (parking adjustment) area, therefore the parking rate without the PA was used to calculate the parking requirements. The City of Guelph Zoning By-Law (2023)-20790 Part C: General Provisions and Parking and Table 5.3 row 12 was used to determine the adequacy of the residential parking supply for the Site. The Zoning By-Law excerpts can be found in Appendix D.

Use	Statistic	Parking Rate	Total Parking Required	Proposed Parking	Surplus/ Deficit	
Mixed-use Building	126 Units	In addition to the non-residential parking rate, 1 space per dwelling unit plus 0.15 visitor spaces per dwelling unit	Resident: 126 Visitor: 19	Resident: 138 Visitor: 10	Resident: +12 Visitor: -9	

The site has allocated 144 parking spaces for the development. Per the Zoning By-law, the site is required to have a minimum of 126 resident parking spaces which leads to a surplus of 12 residential parking spaces. The site is also required to provide 19 visitor spaces, the site proposes 10 therefore is deficient by 9 visitor parking spaces.

Although the site does not propose any commercial space, adding commercial uses to the site would not reduce the residential parking demand. Therefore, the site would essentially provide enough parking spaces for the development as the parking for the development would be unbundled.

While the site is in a mixed-use zone, the intended use of the proposed development is purely residential which has a different parking requirement rate than the site's current zoning requirements. **Table 6** summarizes the Zoning By-Law requirements applied to the proposed development.

Use	Statistic	Parking Rate	Total Parking Required	Proposed Parking	Surplus/ Deficit
Apartment Building	126 Units	Min: First 20 units 1.5 spaces/unit, for each unit in excess of 20, 1.25 spaces / unit. 20% of the required spaces shall be for visitor parking Max: 1.5 spaces per unit plus 0.25 visitor spaces per unit	Min: 163 Max: 221	144	-19

Table 6: City of Guelph Zoning By-Law Parking Requirements

IBI Group prepared a review of the Guelph Parking Standards in cooperation with the City of Guelph as part of its comprehensive Zoning By-Law review. This review was submitted in September 2019 and recommended generally lower parking rates across the city. For this type of development in a mixed-use area of the City, the review by the City's external consultant, IBI Group, recommended a rate of 1.0 space per unit plus 0.15 visitor parking spaces after concluding that in all cases the parking demand for Apartment Buildings throughout the City was lower than the required parking rate.

Excerpts from the IBI report can be found in **Appendix E. Table 7** outlines the parking requirements for the site if the rates from the IBI report are applied.

Use	Statistic	Parking Rate	Total Parking Required	Proposed Parking	Surplus/ Deficit
Apartment Building	126 Units	1 space per unit plus 0.15 spaces per unit for visitor parking	145	144	-1

Talala 7, IDI Cassar Dasa as al Daulda a Datas

This deficit can be justified when applying the combined rate of 1.15 spaces per unit to the site, resulting in 145 required parking spaces. The site is proposing 144 spaces in total, which would essentially meet the proposed rates in the report when the spaces are unbundled as the IBI Group report notes that unbundled parking in residential buildings has been shown to result in a reduction of car ownership when compared to buildings with bundled parking.

Following the IBI report, City of Guelph staff prepared their own report, dated April 2023, that included the IBI report's findings as well as other information and the results of public meetings regarding parking rates. In that report, City staff proposed the same rate as the rate seen in Table 7.

4.2 **Surrogate Sites**

To support the visitor parking deficiency, two (2) surrogate sites with similar uses and TDM measures to the proposed development were selected.

The following table summarizes the visitor parking space utilization for the surrogate sites.

Address	Units	Visitor Spaces Provided	Visitor Spaces Utilized	Visitor Spaces - Utilization Rate per Unit
680 Saginaw Parkway, Cambridge	93	24	6 - 10	0.06 – 0.10
100 Eagle Street North, Cambridge	225	26	16 – 18	0.07 - 0.08

Table 8: Surrogate Site

The visitor parking spaces at 680 Saginaw Parkway have an average visitor parking space utilization of 6-10 spaces under normal conditions, i.e., non-holidays. The visitor parking at 100 Eagle Street North is split between the ground level and 3rd level of the parking structure. The ground level visitor parking is busier due to PSW's and delivery vehicles utilizing these spaces. The utilization presented in Table 8 represents the total utilization across both levels.

4.3 105 Elmira Road North Visitor Parking Utilization

Based on Table 8, the visitor parking utilization rates have been applied to the proposed development to determine the visitor parking demand.

Surrogate Site	Visitor Parking Utilization Rate	105 Elmira Road Proposed Visitor Parking Spaces	105 Elmira Road North - Visitor Space Demand based on per Unit Utilization
680 Saginaw Parkway, Cambridge	0.06 - 0.10	10 spaces (0.08 spaces	8 – 13 spaces
100 Eagle Street North, Cambridge	0.07 - 0.08	per unit)	9 – 10 spaces

Table 9: Visitor Parking Demand

After applying the parking utilization rates from the surrogate sites, the proposed development is expected to have a maximum visitor parking demand of eight (8) spaces to 13 spaces. After averaging the utilization rates from both the surrogate sites, the development has proposed a visitor parking rate of 0.08 spaces per unit. The development has proposed 10 spaces; therefore, the site should have sufficient visitor parking spaces.

Further, an average visitor parking rate of 0.08 spaces per unit was deemed appropriate because the development prioritizes the allocation of two-bedroom units, which is why the site plan does not reflect the full 13 visitor parking spaces requested by the City in its most recent comments.

4.4 Barrer-Free Parking Assessment

The City of Guelph Zoning By-Law (2023)-20790 Part C: General Provisions and Parking and Table 5.5 was used to determine the adequacy of the accessible parking supply for the site. The Zoning By-Law excerpts can be found in **Appendix D**.

Required Parking Spaces	Accessible Parking Rate	Required Accessible Parking	Proposed Accessible Parking	Surplus/ Deficit
163	1 accessible parking spaces plus an additional 3% of total spaces with an equal number of Type A and Type B accessible parking spaces.	6	6	0

Table 10: City of Guelph Accessible Parking Requirements

The Site has provided sufficient accessible parking spaces per the Zoning By-Law.

4.5 Bicycle Parking Assessment

The City of Guelph Zoning By-Law (2023)-20790 Part C: General Provisions and Parking and Table 5.7 were used to determine the required bicycle parking. The Zoning By-Law excerpts can be found in **Appendix D**.

Use Statistic		Parking Rate	Total Parking Required
Apartment Building	126 Units	Short Term: 0.1 spaces per unit Long Term: 1 space per unit	ST: 13 LT: 126
Total Bicycle Parking Provided			ST: 14 LT: 126

Table 11: City of Guelph Bicycle Parking Requirements

The Site has proposed to supply 14 short term parking spaces and 126 long-term bicycle parking spaces. The site has provided sufficient bicycle parking spaces.

5.0 Transportation Demand Management

Transportation Demand Management (TDM) is the practice of influencing or maximizing the travel choices for users through infrastructure improvements, strategic services and programs, or public outreach, with the purpose of shifting travel demands away from the auto travel mode to make more efficient use of the transportation system.

5.1 Existing Pedestrian and Cyclist Facilities

The current pedestrian facilities around the site include 1.5 m sidewalks on the surrounding road network, connecting to the proposed site through the proposed accesses. These paths should be well-lit to be safe and appealing to residents and visitors. Furthermore, pedestrian refuges, such as benches or fixtures, may be provided for additional aesthetic value and refuge for walking residents.

Willow Road and Elmira Road currently has existing painted bike lanes along both sides of the roadway in the study area.

To accommodate these bicycle trips, safe and secure bicycle parking spaces are being considered in the proposed development. The provision of bicycle parking will provide cyclists with a safe space to store their bikes and encourage cycling as another mode of transportation to reduce automobile trips.

5.1.1 Proximity to Commercial Centers

The site is conveniently located within a 10-minute walk to Costco and 13 minutes from a Zehrs grocery store. These major commercial retailers are in close proximity to the site, this encourages a reduction in vehicle trips.

5.2 Existing Transit Services

The site is currently serviced by three (3) bus routes located within 200 meters (3 minutes walking) of the site.

Route	Direction	Span	Days of Operation	Peak Hour Headway	Bus Stops in Study Area	Walk Time to Bus Stop
17 - Woodlawn Watson	North - South	Imperial to Woodlawn Smart Centres to University Centre (loop)	Monday – Sunday	30 minutes	Willow Road and Flaherty (eastbound)	3 minutes (190 metres)
18 – Watson Woodlawn	North - South	Eastview to Woodlawn Smart Centres to University Centre (loop)	Monday – Sunday	30 minutes	Willow Road and Flaherty (westbound)	3 minutes (200 metres)
20 – Northwest Industrial	North - South	Guelph Central Station Platform 1 to Guelph Central Station Platform 6 (loop)	Monday – Sunday	30 minutes	Willow Road and Flaherty (westbound)	3 minutes (190 metres)

Table 12: Transit Stops in the Study Area

As shown, the subject development is located in an area with multiple transit services that connect the site to the rest of the City, as well as to/from Guelph Central Station. Via a short 3-minute walk from the subject development, residents and visitors can connect to Guelph Central Station where a number of other local and regional transit services can be accessed. As such, the site is located in a convenient transit area with a multitude of transit options available.

5.3 Future Transit Services

The Guelph Transportation Master Plan (TMP) outlines several objectives to improve the public transit network. Some of these objectives and their actions include, developing policy to connect all bus stops to active transportation networks, frequent service to more employment hubs as part of the TMP update, and reduce transit travel time to make it competitive with car trave times. Elmira Road South is part of the Quality Transit Network, where these changes will occur. The City of Gulph is on track to improve transit networks in order to meet the needs of the growing City.

5.4 Site-Specific TDM Opportunities

There are several opportunities for the development to promote TDM measures to support reduced automobile use. As the tenants of the residential building have not been confirmed, these site specific TDM measures are only recommended at this time and should be finalized upon occupancy of the buildings. The recommendations outlined are expected to reduce SOV trips and increase sustainable mode share.

5.4.1 <u>Bicycle Parking Spaces</u>

It is recommended that the provided bicycle parking spaces are secure and equipped with overhead weather protection. Access to safe and secure bicycle parking will increase the confidence of prospective cyclists to cycle as their mode of transportation. Overhead weather protection encourages people to cycle as parked bicycles are protected from poor weather conditions, such as rain and snow.

5.4.2 <u>TDM Information Package for New Tenants</u>

Upon occupancy, a TDM information package could be provided to residents. Promotional material could also be readily available (and continuously updated) in the building's lobby to increase awareness of available alternate travel modes and reduce the barriers to adopting more sustainable travel behavior. Such marketing allows prospective tenants to be aware of sustainable travel options, as well as updates in the transit and cycling infrastructures improvements of the area.

The TDM Information Package can comprise of:

- Active transportation network maps
- Transit maps and schedules

Local commercial, retail, and institutional facilities should also be included in the marketing package to support local businesses and to promote a walkable mixed-use community.

Periodic transit and TDM information updates can also be provided to residents via mailbox.

5.4.3 <u>Pre-Loaded Transit Passes</u>

Public transit can be promoted by subsidizing a monthly transit pass for occupants for their first month of occupancy at one (1) pass per unit.

5.4.4 <u>Unbundled Parking</u>

It is noted that parking for the development will be unbundled. IBI Group prepared a review of the Guelph Parking Standards in cooperation with the City of Guelph as part of its comprehensive Zoning By-Law review. This review was submitted in September 2019 and their report notes that unbundled parking in residential buildings has been shown to result in a reduction of car ownership when compared to buildings with bundled parking.

6.0 Conclusion

This study has analyzed potential traffic impact on the boundary road network in relation to the proposed residential apartment development at 105 Elmira Road South in the City of Guelph. The conclusion in this report may be summarized with the following key findings:

- The proposed development is expected to generate 44 two-way (10 inbound and 34 outbound) trips during the weekday a.m. peak hour, and 49 two-way (30 inbound and 19 outbound) trips during the weekday p.m. peak hour.
- Analysis of site access safety components associated with the proposed development indicate the following:
 - The available sight distance, stopping sight distance, and corner clearance at the proposed site access exceeds the minimum sight distance requirements set out in the Transportation Association of Canada (TAC) Geometric Design Guide for Canadian Roads (GDGCR), June 2017.
 - There are no expected vehicle maneuverability constraints within the subject site for passenger vehicles, fire trucks, waste collection vehicles or loading vehicles.
- The proposed residential parking meets the parking requirements outlined in the City's Zoning By-Law. The visitor parking supply for the site is deficient nine (9) spaces for the mixed-use requirements and overall deficient per the Apartment building requirements. After applying the parking utilization from the surrogate sites, the visitor parking spaces have been met.
- IBI Group's report, as part of the City of Guelph's staff report, concluded that in all cases the parking demand for Apartment Buildings throughout the City was lower than the required parking rate.
- The existence of local transit, planned cycling facilities, combined with the provision of pedestrian infrastructure at the Site and the availability of several TDM options for the development are expected to reduce auto trips on the study road network.

The analysis undertaken herein was prepared using the most recent concept plan available at the time of writing this report. Any minor changes to the plan are not expected to materially affect the conclusions contained within this report. In conclusion, the proposed residential development can be supported from a traffic operations and safety perspective.

Respectfully submitted,

C.F. CROZIER & ASSOCIATES INC.

Shaira Ahmed, EIT Engineering Intern, Transportation

C.F. CROZIER & ASSOCIATES

Project Engineer, Transporta



IL/cj

J:\2700\2764 - HIP Developments\7251 - 105 Elmira Road North\Reports\Transportation\June 2025 Submission\2025.06.05 _(2764-7251) _105 Elmira Rd TIB _Final.docx



Terms of Reference Correspondence



Zoning By-law Amendment Application submitted for 105 Elmira Road N – (January 2025) Consolidated Staff and Agency Comments

The following information was submitted in support of the applications:

- Planning Justification Report, prepared by GSP Group, dated January 2025
- Urban Design Brief, prepared by GSP Group, dated January 2025
- Pedestrian Wind Letter of Opinion, prepared by Gnobi Consulting Inc., dated January 2025
- Stamped Transportation Impact Brief, prepared by C.F. Crozier & Associates Inc., dated March 2025
- Feasibility Noise Study, prepared by GHD, dated March 2025
- Phase One Environmental Site Assessment, prepared by Chung & Vander Doelen Engineering, dated December 2024
- Functional Servicing and Stormwater Management Report, prepared by MTE Consultants, dated March 2025
- Geotechnical Investigation, prepared by Chung & Vander Doelen Engineering, dated January 2025
- Groundwater Level Monitoring Program, prepared by Chung & Vander Doelen
- Engineering, dated January 2025
- Hydrogeological Investigation Preliminary Summary, prepared by Chung & Vander Doelen Engineering, dated March 2025
- Commercial Function Study, prepared by Tate Research, dated October 2024
- CFS Peer Review response, Prepared by Tate Research, dated February 2025
- Property Survey 61M-68, dated August 2002
- Existing Conditions Plan, prepared by MTE Consultants, dated March 2024
- Site Plan, prepared by ABA Architects, dated January 2025
- Functional Site Grading and Servicing Plan, prepared by MTE Consultants, dated January 2025
- Truck Turning Garbage, prepared by MTE Consultants, dated January 2025
- Truck Turning Fire, prepared by MTE Consultants, dated January 2025
- Floor Plans, prepared by ABA Architects, dated January 2025

- Elevations, prepared by ABA Architects, dated January 2025
- Angular Planes, prepared by ABA Architects, dated January 2025
- Renderings, prepared by ABA Architects, dated January 2025
- Amenity Diagram, prepared by ABA Architects, dated January 2025
- Shadow Analysis, prepared by ABA Architects, dated January 2025
- Tree management Plan, prepared by GSP Group, dated January 2025
- Preliminary Landscape Plan, prepared by GSP Group, dated January 2025
- Stamped Conceptual Design, prepared by C.F. Crozier & Associates Inc., dated March 2025
- Pavement Markings and Signage Plan, prepared by C.F. Crozier & Associates Inc., dated January 2025

Development Planning, Eric Rempel, Planner II, Development

Planning Justification Report

GSP Group prepared a Planning Justification Report (PJR), dated January 2025, as part of a complete application to amend the Zoning By-law and Official Plan. The PJR includes an analysis of the application in light of the existing policy framework and local context. The PJR provides a summary of the site and surrounding context in terms of existing land uses, built form, neighbourhood amenities, and the transportation network.

Staff have reviewed the site-specific requests and have notes about the following site-specific regulations:

Minimum Common Amenity Area

- Staff have concerns about the proposed rate of 9.12 square metres of Common Amenity Space per unit, whereas Table 6.30 of the Zoning By-law requires a minimum Common Amenity Area of 20 square metres per unit.
- Planning staff recognize that a reduced Common Amenity Area rate is appropriate for the site, but are not satisfied that the proposed rate of 9.12 square metres per unit achieves the intent of the provision.
- Staff recommend reducing the unit count without reducing the overall residential GFA by creating more 2 or 3 bedroom units. This would reduce the overall Common Amenity requirement, and would allow for some additional parking spaces to be converted to Common Amenity space without further reducing the parking rate.
- Staff also recommend considering rooftop amenity space as a way to achieve additional amenity space on the site.

Reduced Minimum Parking and Visitor Parking

- Staff have reviewed the Parking Review in Section 4 of the Traffic Impact Brief prepared by C.F. Crozier & Associates Inc, dated March 2025, and are generally supportive of the total number of parking spaces provided on the site.
- Staff have concerns about the reduced minimum visitor parking requirements that are requested. It is recommend that the applicant increase the provided visitor parking to be more in line with the upper end of the visitor parking utilization rate identified in Table 9 of the Traffic Impact Brief (0.10 visitor spaces per unit).

Commercial Function Study

A Commercial Function Study, dated October, 2024 was prepared by Tate Research and peer reviewed by Watson and Associates Ltd. Tate Research provided a response to the peer review dated February 2025. The findings support the redesignation of the lands to medium density residential. Planning staff accept the findings of Tate Research's response to the peer review and have no further comments on the Commercial Function Study.

Urban Design, Prerit Kaji, Planner II, Development and Urban Design

Urban Design Brief Comments

Within the UD Brief please consider and expand upon some of the following themes that may help inform the site design:

- Include justification of reduced CA spaces within Section 4.1 or 4.4 with appropriate uses of maps or diagrams.
- Include reasoning on how garbage pick up, loading bay, visitor/resident drop off bay and amenity area are expected to behave coherently in the same designated space within Section 4.5.

Concept Plan

• On preliminary review of the site plan, staff finds the overall submitted concept plan displays signs of excessive densification without adequately addressing the requisites like common amenity spaces, parking, angular plane requirements, setbacks, etc.

Common Amenity areas

- Staff generally have concerns with the lack of CAS and the proposed areas of CAS at-grade. Staff don't believe the intent of the definition of Common Amenity Space (CAS) in the Zoning Bylaw is being achieved, nor the intent of the City's Mid-rise and Townhouse Built Form Standards (MTBFS). For reference:
 - CAS should be located away from building servicing, parking and

loading functions.

- CAS should have barrier free connections to the building and public right of way and host site furnishings that meet AODA standards.
- The location, size and design of CAS should be appropriate given the building types, unit mix, and adjacent land uses and amenities, as well as any surface or structured parking.
- CAS should provide comfortable, universally inclusive, and safe spaces for pedestrians with a range of active and passive programming. Please include designs of these spaces on the LA Plans.
- A minimum of 50% of the required CAS shall be accessible at-grade outside, in one contiguous area.
- To ensure spaces are usable and appropriately scaled, the width to depth proportion of a Common Outdoor Amenity Area should not exceed 4:1.
- Staff would like to note that the 3m buffer strip is not to be included under calculations of CA space.
- Moreover, the 246sqm space designated as common amenity north of building entrance, does not meet the required definition of CAS, especially when the function of such space is shared with garbage pickup, loading space, pick-up/drop-off bay for residents.
- Considering the above notes, the resulting CAS at-grade is less then 400sqm. Staff strongly suggests the applicant look at opportunities on extending the CAS to facilitate more programmable functions for residents.
- Staff would encourage the applicant to consider proposing additional CAS on the roof top to help compensate the required amount of CAS. Rooftop CAS should have a minimum setback of 2 metres from the roof edge.
- Staff encourage the use of green roofs and white roofs to reduce energy consumption. Green roofs are strongly encouraged on mid-rise buildings. A green roof allows vegetation to grow on top of a structure and may act as a Common Amenity Space while also providing a stormwater function and other environmental benefits

Apartment block

- Zoning requires a minimum of 6m setback of the building facing Elmira Road north to maintain sufficient space for landscaping (eg: street trees). Staff note the proposed reduction of 4.3m could be considered if appropriate clearances to overhead hydro, property line and building face can be achieved for large/medium sized deciduous canopy trees. Refer to the City's Tree Technical Manual.
- Staff would like to refer to the Midrise and Townhouse Built Form Standards, Section 7.1.6, where a 1.5m setback is recommended between the 4th and 5th floor to ensure appropriate scale and transition. This would also help with achieving the angular plane from the north side of the subject property.

- Staff would request the applicant not use spandrel glazing at-grade and reorganise the interior functions requiring spandrel elsewhere to help increase transparency along Elmira Road N.
- Staff recommends incorporating texture into the surface treatment of Material Palette 3 – Precast Concrete in Dark Grey. This addition would help avoid the appearance of a monotonous dark concrete wall with only fenestrations, ensuring a more visually engaging and welcoming main entrance

Shadow Study

- Staff requires the Sun-Shadow study re-submitted following the terms of reference available on the City website. Please ensure the shading analysis performed through a series of diagrams is based on requirements specified under the terms of reference for additional clarity. Refer to points 6,7,8 under the section- Materials to be submitted with Sun and Shadow study.
- In addition to the comments submitted for CA spaces, based on the submitted shadow analysis, staff observe that the demarcated amenity area at the north end of the building remains shaded through the months of April-Sep- December, which makes the proposed space less desirable to be considered as a CA space.

Landscape

- As part of a formal Site Plan Application, please ensure to submit an Arborist Report along with the TIPP plans. This report should include information/inventory regarding site trees (health, condition, species, etc.), as well as specifying measures required for protection, mitigation of tree injury and monitoring efforts, as per the City's Tree Technical Manual.
- Please note the trees to be protected are neighbouring trees, so extreme care is to be provided to mitigate any impacts to them. Please ensure to include mitigation measure notes and details such as root sensitive excavation, finish grading within TPZ, use of air spading, and oversight by the consulting Arborist, etc.
- Staff support the proposed removal of existing trees within the development site, located along the east property line that consist of Poplar, Black Willow and Siberian Elm. The majority of these trees are in poor health or structure and will be exempt from requiring compensation. Of the 16 trees proposed for removal, there are 10 that will be exempt. The remaining 6 trees have a total DBH of 465.5cm. Using the Aggregate Caliper Formula of the Tree Technical Manual that is equal to 78 new trees to be planted on site. Please consider this when designing the Landscape Plan as part of a formal application. Staff will consider a combination of new trees on site and cash in lieu as the development application evolves. Please refer to the Built Form Standards for Mid Rise and Townhouses, noting the following:

- Please provide a Landscape Plan prepared and stamped by a full member of the OALA as part of a formal application.
- Medium stature trees should have access to a minimum soil volume of 18m3. Larger stature trees may require soil volumes up to 30m3 per tree. Best practices for securing long term tree health should be applied and adhered to.
- 60mm caliper tree should be planted for every 8 parking spaces within the parking field or within 5 metres of the vehicle use area to help break uphard surfaces and minimize the heat sink effect (in addition to other on-site Landscaped Open Space tree planting requirements). For front yard tree planting on sites containing mid-rise buildings, 1 medium or large stature front yard tree is required for every 10 metres of property frontage. Strategically locate shade trees in key areas, such as near play areas, walkways, within Common Outdoor Amenity Spaces and amongst surface parking areas. These notes will help determine what proposed trees are considered as part of the compensation calculation and what are considered part of standard landscaping on site.
- Please provide a completed Sustainable Development Checklist as part of a formal application.
- The use of native species is strongly encouraged.
- The implementation of low impact development (LID) measures is encouraged (OP Policy 8.1.1).
- Site and Building design that reduces energy and water consumption, improves air quality, water quality and waste management is encouraged (OP Policy 8.1.1)
- The location of servicing from the ROW should avoid open soft areas that could impact efforts to increase tree canopy coverage on the site. In reference: along the north property line is a STM line shown through the buffer, yet the landscape concept plan shows the preference for trees.
- Please refer to the City's Urban Forest Management Plan and OP policies regarding urban forest protection, maintenance and growth objectives. Consultants are encouraged to look for all opportunities to plant trees as part of this proposed development – providing large canopy trees that provide benefit to the environment, human health and economy. Please refer the City's Tree Technical Manual of direction on soil volumes, quality, plant spacing, etc.

General impression of the submitted concept plan is an over-development of the site, resulting in constraints to common amenity space requirements. Staff would encourage the applicant to revisit the density and layout of site and achieve a site plan which has more synergy between all the urban design elements.

Development Engineering, Jamie Menchenton, Engineering Technologist:

Municipal Services

The servicing capacity analysis was completed January 15, 2025 prior to the submission of the application. The results were as follows:

Water Capacity

The model results indicate that the water distribution system at the proposed development location provides pressures that are within the City's acceptable operating range and the required fire flow has been met.

Sanitary Capacity

The applicant's consultant has satisfactorily worked through the requirements of the wastewater capacity analysis framework in the Development Engineering Manual therefore the sanitary system can accommodate flows from the proposed development.

Functional Site Grading and Servicing Plan:

Based on review of the Functional Site Grading and Servicing Plans, the design appears to demonstrate that the site can be graded as per DEM requirements. More detail will be required at the time of site plan, where the grading plan will be reviewed in greater detail.

Additional detail to be included at site plan shall include, but not be limited to:

Site Grading Plan

- Site grading plan to be designed in accordance with section 6.2.1 of the DEM.
- Site grading and servicing plans are required to be separate drawings
- Show maximum ponding elevations.
- Show all road restoration works within the public right of way.
- The construction of the services in the right of way may require the full closure of Elmira Road to complete the works.

Servicing Plan

- Site servicing plan to be designed in accordance with section 6.2.2 of the DEM.
- Site grading and servicing plans are required to be separate drawings

May 27, 2025 OZS25-003 – City and Agency Comments

- Provide invert information for all existing and proposed infrastructure.
- LID shall be designed in accordance with acceptable standards. SWM report, cross sections & details on civil drawings should all reference applicable design guidelines."

Functional Servicing and Stormwater Management Report

Staff has reviewed the submitted Functional Servicing and Stormwater Management Report and provide the following comments:

Water Quantity

Based on the review of the water quantity information, the design appears to demonstrate that the site can meet the DEM requirements. Additional detail to be included at site plan shall include, but not be limited to:

- Catch basin DI7 is located in a low spot where stormwater will pond on neighbouring properties before spilling onto the proposed site plan parking lot and out letting overland to Willow Road. to ensure the ponding area does not impact neighbouring properties the catch basin shall the sized to accommodate a 100-year storm assuming 50% blockage. Provide the following calculation to demonstrate the sizing.
- Weighted runoff coefficient will be required for the development to demonstrate that the development meets the 0.75 runoff coefficient as identified in the report. If the weighted runoff coefficient is higher than the designed 0.75 runoff coefficient than the weighted runoff coefficient shall be used.

Water Quality

The water quality criteria is to provide enhanced level of water quality treatment. Staff have reviewed the proposed stormwater management strategy with respect to quality control and have no concerns at this time.

Water Balance

The water balance criteria is to maintain the pre-development recharge rate under post-development conditions and to provide a minimum of 5mm volume control.

The water balance component of the Functional Servicing and Stormwater Management Report has been reviewed by staff and it has not been completed in accordance with City requirements. The Stormwater Management Report indicates that the water balance can be achieved through an infiltration gallery proposed beneath the parking lot. The invert elevation of the proposed gallery is 321.09 m, however, this does not meet the minimum 1.0 m separation required above the seasonal high groundwater elevation currently identified in the provided groundwater monitoring program report at 320.30 m.

In-situ permeameter testing was completed at an elevation of 321.03 m within the proposed infiltration trench area and approximately at the invert elevation of the

infiltration trench. While this testing was conducted approximately 2 m below existing grade, it does not satisfy the required 1.0 m vertical separation from the high groundwater table. As such, the infiltration design must be revised to meet the requirements of the City's Development Engineering Manual (DEM) standards.

The test pit logs indicate a change in soil lithology at 321.13 m, transitioning from compact mottled brown-grey silt to loose-to-compact medium to coarse sand with trace gravel and silt. The Stormwater Management Report must evaluate how this change in subsurface conditions will affect the permeameter testing results and the associated factor of safety calculations. If the intention is to raise the invert of the infiltration gallery to maintain 1 meter of separation, the invert of the gallery may be in different soil strata and additional permeameter testing would be required as per DEM standards.

The water balance assessment and infiltration system sizing calculations shall be updated accordingly.

Groundwater Level Monitoring Program:

A Groundwater Level Monitoring Program Report was submitted as part of the formal application dated April 29, 2025. Six boreholes were installed on the subject site and have been recording continuous groundwater level data from September 2024 to April 2025. Based on the monitoring results, the owner has identified the seasonal high groundwater level as 320.3 m. We will require that monitoring continue to capture data for a complete 12-month period covering all four seasons to support the site plan application. If the additional data demonstrates that the seasonal high groundwater table is greater than what is proposed now, revision to the site plan design shall be required. This additional monitoring data will be required prior to site plan approval.

However, the Groundwater Level Monitoring Program Report has been reviewed by City staff and it has not been completed in accordance with City requirements. We have seen a number of different reports and iterations of the groundwater level monitoring program and geotechnical reports, with different levels of information and recommendations for determining the seasonal high groundwater table. A revised report shall take all the information and considerations of the previous reports and provide a professional opinion from a qualified person to determine a conservative estimate for the seasonal high groundwater elevation. This professional opinion is required prior to zoning approval and this conservative estimate may be revised as additional groundwater data is collected during the site plan review process.

Transportation

Transportation Services staff are generally supportive of the proposed Zoning bylaw Amendment and offer the following transportation comments:

 Conceptual Plan (drawing FD) dated 01/08/2025 by Crozier Consulting Engineers is generally acceptable. Additional details related to revised backto-back left turn lane west of Flaherty Drive will be further reviewed at site plan approval process.

- Signages details (i.e. fire route, EV parking signs etc.) that are identified in Pavement Markings and Signage Plan (drawing PMSP) dated 01/10/2025 by Crozier Consulting Engineers to be revised at site plan approval process.
- Transportation plans (Drawings FD & PMSP) and Transportation Impact Brief (TIB) are missing professional Engineer endorsements. All Transportation plans and study must be stamped and signed by a professional Engineer.
- Transportation Impact Brief (TIB)
 - Section 3 of the TIB in correctly identifies Willow Road fronting the proposed development with a posted speed limit of 40 km/h. However, Willow Road fronting the development operates with a regulatory speed limit of 50 km/h and flashing 40 km/h (school zone) during specific times. Therefore the sight distance analysis must be completed for posted speed limit of 50 km/h.
 - Parking review will be reviewed by City's Planning staff.
- This development is situated in a walkable, bikeable, transit-friendly area, making it well-suited for Transportation Demand Management (TDM) measures. The site is located adjacent to the existing cycling network and adjacent to the future planned quality transit network, as indicated in the 2022 Transportation Master Plan.
- Sustainable Transportation staff are generally supportive of the proposal; the submitted Transportation Impact Brief (TIB) identifies TDM measures that will support residents and visitors to choose sustainable modes of transport. Detailed design of sustainable transportation features, such as bike parking and the connections to sidewalks and cycling facilities within the Right of Way (ROW), can be discussed at the site plan stage.
- Staff recommend updating section 5.1 of the TIB to describe the existing cycling network more accurately: there are existing painted bike lanes on both Willow Road and Elmira Road, however none of the bike lanes are 'protected' and the cycling spine network planned for Willow Road does not extend to this site under the current TMP.

Environmental:

No further comments at this time.

Feasibility Noise Study:

The Feasibility Noise Study has been reviewed by staff and it has not been completed in accordance with MECP and City requirements. Comments on the Feasibility Noise Study are attached.

Source Water Protection

No further comments at this time.

Staff Recommendations:

Engineering and Transportation Services supports approval of the Official Plan and Zoning By-law Amendment subject to the application of a Holding Provision as detailed below:

'H' – applied to 105 Elmira Road North

Purpose: To ensure that development of the subject lands does not proceed until the following condition has been met to the satisfaction of the City:

• The Owner shall prepare an updated water balance design to the satisfaction of the City and an updated feasibility noise study to the satisfaction of the City.

Environmental Planning, Karen Reis, Environmental Planner:

• During Site Plan, bird-friendly design will be required to mitigate bird collisions with glass and reflective surfaces. The Bird-friendly Design Guideline can be found at: <u>https://guelph.ca/wp-content/uploads/Attachment-1Bird-friendlyDesignGuideline.pdf</u>

Parks Planning, Tiffany Hanna, Park Planner:

Zoning Bylaw Amendment and Official Plan Amendment:

The purpose of the Zoning By-law Amendment application is redesignate the subject lands from "Neighbourhood Commercial Centre" (NCC) to a specialized "Medium Density Residential" (RM.6-XX) designation to facilitate the proposed development.

Park and Trail Development has no objection to the proposed Zoning By-Law and Official Plan Amendment to permit a six (6) storey 126-unit purpose-built rental apartment building.

Parkland Dedication

Previous parkland dedication

As part of Draft Plan of Subdivision 23T-88008, Earl Brimblecombe Park was conveyed to the City as a condition of development. Park Block 232 represented 3.8 ha of the 40.365ha subdivision area—or 9.41% of the development area.

As additional dwelling units are proposed on this lot, a top-up of parkland dedication is required for this application in in accordance with the Planning Act s.42 and the City of Guelph Parkland Dedication By-law (2022) 20717 or any successor thereof. CIL of parkland dedication will be required prior the issuance of building permit.

Rate of parkland dedication

The rate of payment in lieu of parkland conveyance will be the greater of 5% of the equivalent of Market Value of the land, or 1 hectare per 1000 dwelling units; up to a maximum of 10% of the equivalent market value of the land; less the previously contributed 9.41%.

For this development the 1 hectare per 1000 dwelling unit rate will apply. The payment in lieu of parkland dedication amount is calculated at the equivalent market value of 0.59% of the land (10%-9.41% = 0.59%) of market value).

Reduction of CIL for affordable housing

The Planning Justification report indicates that the Owners intend to offer affordable units as required by financing through the Canada Mortgage and Housing Corporation's (CMHC) Apartment Construction Loan Program for Standard Rental Housing.

Should the applicant offer affordable residential units or attainable residential units, as defined in subsection 4.1 (1) of the *Development Charges Act, 1997*, or residential units described in subsection 4.3 (2) of that Act, these units will be deducted from the CIL of parkland dedication calculation.

Calculating Market Value of the Land

A narrative appraisal report of the subject property will be required to determine the Payment in lieu of Parkland amount, prior to submission of any building permit applications. As per Section 21 of Bylaw (2022) 20717 as amended (2024)–20860, the appraisal is only considered valid for one (1) year. The appraisal report shall be prepared by a qualified appraiser who is a member in good standing of the Appraisal Institute of Canada. The property owner is responsible for the cost and to arrange for the appraisal. We recommend submitting the appraisal two months ahead of the building permit application to avoid delays.

The amount of cash in lieu of parkland dedication will depend on the details of the approved development, parkland dedication rate in effect at the time of the issuance of the first building permit and the estimated market value of the land a day before issuance of the first building permit.

Conditions of development

I recommend the following development approval conditions:

- The Owner shall be responsible for payment in lieu of conveyance of parkland to the City to the satisfaction of the Deputy CAO of Public Services or their designate, pursuant to s. 42 of the Planning Act and in accordance with the City's Parkland dedication By-law (2022) 20717 or any successor thereof, prior to issuance of any building permits.
- Prior to the issuance of the first building permit, the Owner shall provide to the Deputy CAO of Public Services or their designate, a satisfactory narrative appraisal report prepared for The Corporation of the City of Guelph for the

purposes of calculating the amount for payment in lieu of conveyance of parkland pursuant to s.42 of the Planning Act. The value of the land shall be determined as of the day before the day the first building permit is issued. The narrative appraisal report shall be prepared by a qualified appraiser who is a member in good standing of the Appraisal Institute of Canada, and shall be subject to the review and approval of the Deputy CAO of Public Services or their designate.

3. Notwithstanding the foregoing, if the narrative appraisal provided by the applicant is not satisfactory to the Deputy CAO of Public Services or their designate, the City, acting reasonably, reserves the right to obtain an independent narrative appraisal for the purposes of calculating the amount for payment in lieu of conveyance of parkland.

Agency Comments

The following agency comments were received and have been sent to the applicant by email:

- Upper Grand District School Board
- Canada Post

Comments from Council and the Public:

A Statutory Public Meeting was held on May 13, 2025. Comments raised by Council members are summarized below. Please ensure your next submission includes a public meeting comment summary which includes what comments were received and if/how the comment was responded to in a revised submission.

- Questions and concerns were raised about the proposed reduced minimum parking requirement and the reduced minimum common amenity area requirement.
- Concerns were raised about the proposed unit sizes, with a request that more 3 bedroom units be included.
- Concerns were raised about the proposed access. It was suggested that access off Elmira Road North may be more appropriate.

From:	Munshif Muccaram <munshif.muccaram@guelph.ca></munshif.muccaram@guelph.ca>
Sent:	October 22, 2024 1:19 PM
То:	Shaira Ahmed
Cc:	Aaron Wignall; Ian Lindley; Gwen Zhang
Subject:	RE: 105 Elmira Road North Terms of Reference (CFCA#2764-7251)

Good afternoon Shaira,

Thank you for reaching out to us and sharing the TOR. Please see below for Transportation staff comments in Red.

Please let us know if you have any questions.

Thank you,

Munshif Muccaram

Development Engineering Transportation Technologist II Engineering and Transportation Services **City of Guelph** 519-822-1260 extension 2043 TTY 519-826-9771 <u>munshif.muccaram@guelph.ca</u>

From: Shaira Ahmed <<u>sahmed@cfcrozier.ca</u>>
Sent: Tuesday, October 22, 2024 10:59 AM
To: Gwen Zhang <<u>Gwen.Zhang@guelph.ca</u>>
Cc: Aaron Wignall <<u>awignall@cfcrozier.ca</u>>; Munshif Muccaram <<u>Munshif.Muccaram@guelph.ca</u>>; Ian
Lindley <<u>ilindley@cfcrozier.ca</u>>
Subject: RE: 105 Elmira Road North Terms of Reference (CFCA#2764-7251)

[EXTERNAL EMAIL] This email originates outside the City of Guelph. Do not click links or attachments unless you recognize the sender and know the content is safe.

Hi Gwen,

I hope you are doing well.

We are looking to follow up on the terms of reference sent below for this project. If you have any questions or concerns, please let us know.

Thanks, Shaira Shaira Ahmed Engineering Intern, Transportation Office: 905.693.4706 Collingwood | Milton | Toronto | Bradford | Guelph

Celebrating 20 years and another year as one of Canada's Top Growing Companies.



This email was sent on behalf of C.F. Crozier & Associates Inc. and may contain confidential and/or privileged information for the sole use of the intended recipient. If you have received this email in error, please contact the sender and delete all copies. Any review or distribution by anyone other than the intended recipient is strictly prohibited.

From: Gwen Zhang <<u>Gwen.Zhang@guelph.ca</u>>
Sent: October 16, 2024 9:05 AM
To: Shaira Ahmed <<u>sahmed@cfcrozier.ca</u>>
Cc: Aaron Wignall <<u>awignall@cfcrozier.ca</u>>; Munshif Muccaram <<u>Munshif.Muccaram@guelph.ca</u>>
Subject: RE: 105 Elmira Road North Terms of Reference (CFCA#2764-7251)

Hi Shaira,

This is to acknowledge that we have received your email. Thank you for reaching out. We will review your message and respond as soon as possible.

Regards,

Gwen Zhang, M.Sc., P.Eng (she/her), Transportation Planning Engineer **Engineering and Transportation Services** T 519-822-1260 x 2638 E gwen.zhang@guelph.ca

From: Shaira Ahmed <<u>sahmed@cfcrozier.ca</u>>
Sent: Tuesday, October 15, 2024 4:48 PM
To: Gwen Zhang <<u>Gwen.Zhang@guelph.ca</u>>
Cc: Aaron Wignall <<u>awignall@cfcrozier.ca</u>>; Munshif Muccaram <<u>Munshif.Muccaram@guelph.ca</u>>
Subject: 105 Elmira Road North Terms of Reference (CFCA#2764-7251)

[EXTERNAL EMAIL] This email originates outside the City of Guelph. Do not click links or attachments unless you recognize the sender and know the content is safe.

Hello,

I hope you are doing well. We are working with our Client to complete a Transportation Brief for the proposed apartment development at 105 Elmira Road North in the City of Guelph. The development concept proposes 6-storey residential building totaling 130 residential units, 144 vehicle parking spaces, and 140 bicycle parking spaces.

To facilitate the development, access to the building is proposed by one (1) full-moves access along Willow Road.

The study will be prepared in accordance with the City of Guelph Transportation Impact Study Guidelines (October 2023). On this basis, we propose the following Terms of Reference for the Transportation Brief:

Trip Generation

The City of Guelph TIS guidelines states that a TIS is triggered when at least 100 additional new net trips are added to the adjacent roadways. The site is expected to generate 48 and 51 new net a.m. and p.m. peak hour trips. Based on the low trip generation we do not anticipate operational analysis to be required. **Please confirm if this is acceptable.**

- Trip Distribution will be based on the 2016 Transportation Tomorrow Survey (TTS) data and/or existing travel patterns.
- Trip Generation will be based on ITE Trip Generation Manual, 11th edition using the following Land Use Category's (LUC):
 - LUC 221 Multifamily Housing (Mid-Rise)
 - Trip generation will be forecasted for passenger vehicles.

Traffic Safety

- The available sight distance at the proposed site access will be compared to standards set out by the Transportation Associates of Canada (TAC) Geometric Design Guide for Canadian Roads (GDGCR) and Guelph's Development Engineering Manual (DEM).
- The supportability of the site access location and restrictions will be reviewed and the access width, access radii, throat width, throat length, centerline radius, drive aisle, with be assessed. Access to the development must be designed in accordance with the City's Development Engineering Manual (DEM). Please refer to section 6.3.5.4.
- •
- Should the site access not meet the TAC GDGCR guidelines or other applicable guidelines, recommendations will be made to improve the safety at the site access. Site access must review any operational impacts of offset intersection (to the east).
- Conflicts will be reviewed between vehicles, pedestrians, cyclists, and recommendations made to maintain multimodal safety.

Truck Turning Analysis

- We will use AutoTurn to review on-site circulation for passenger, loading (HSU), waste collection (11.4m Front loading) and fire trucks (full size). Please refer to City's <u>Waste Collection Guidelines</u> for Multi Residential Development in the City of Guelph for waste pick up requirements including any turn around design.
- Provide design recommendations for the Site Plan where needed to ensure sufficient space for vehicle turning radii, pedestrian connections, and site circulation.

Transportation Demand Management (TDM) Review

TDM opportunities will be assessed, and site-specific measures for the development will be
recommended to reduce single-occupancy vehicle (SOV) trips and promote sustainable
transportation. This development is situated in a walkable, bikeable, transit-friendly area,
making it well-suited for Transportation Demand Management (TDM) measures. The site is
located adjacent to the existing cycling network and adjacent to the future planned quality
transit network, as indicated in the 2022 Transportation Master Plan.

- TDM will also include the Multi-modal Level of Service analysis that the City of Guelph is known to be exploring. Unless the City provides its recommendations for this analysis, the analysis will be based on other similar municipalities' guidelines.
- Please confirm if this is acceptable. Yes, this is acceptable.

Parking Justification Study

Per the City's zoning by-law parking requirements, 1.5 spaces plus 0.25 visitor parking spaces per dwelling unit are required. Loading space, electric vehicle, barrier free, and bicycle parking requirements will also be analyzed. **Please confirm if this methodology is acceptable or what requirements are needed for the PJS.**

Functional Design Plan

Per the DRC Pre-Consultation summary and checklist, a functional design plan was requested for a new left turn storage lane along Willow Road into the proposed site access.

Based on the existing cross-section of Willow Road there is an existing single lane in the eastbound and westbound direction, with a two way left turning lane (TWLTL) through the median. The existing eastbound left turn lane along Willow Road roughly contains 22 metres of storage length that can utilized to access the site. What would the City be looking for in terms of a functional design for the access based on the existing TWLTL? Existing TWLT is provided on Willow Road between Flaherty Drive and approximately a point 75m west thereof. Within this area, a full movement access to the residential development is located on the south side of Willow Road opposite (slightly to east) to the proposed development access. Concept plan must demonstrate improvements to pavement markings to facilitate the left turn lanes for both the residential accesses and at the intersection.

I hope the contents outlined in this email are acceptable.

If you have any questions or would like to discuss further, please do not hesitate to reach out.

Regards,

Shaira Ahmed Engineering Intern, Transportation Office: 905.693.4706 Collingwood | Milton | Toronto | Bradford | Guelph

Celebrating 20 years and another year as one of <u>Canada's Top Growing Companies</u>.



This email was sent on behalf of C.F. Crozier & Associates Inc. and may contain confidential and/or privileged information for the sole use of the intended recipient. If you have received this email in error, please contact the sender and delete all copies. Any review or distribution by anyone other than the intended recipient is strictly prohibited.

Disclaimer

This e-mail message (including attachments, if any) is intended for the use of the individual to whom it is addressed and may contain information that is privileged and confidential. If you are not the intended recipient, you are notified that any dissemination, distribution or copying of this communication is strictly prohibited. If you have received this communication in error, please notify the sender and erase this e-mail message immediately.

Appendix B

ITE 11th Edition Excerpts

Multifamily Housing (Mid-Rise)

Not Close to Rail Transit (221)	
---------------------------------	--

Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m.	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	Setting/Location: (General Urban/Suburban
Number of Studies: 31	Number of Studies: 3	31
Avg. Num. of Dwelling Units: 169	Avg. Num. of Dwelling Units:	169
Directional Distribution: 61% entering, 39% exiting	Directional Distribution: 6	61% entering, 39% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.39	0.19 - 0.57	0.08

Data Plot and Equation



Trip Gen Manual, 11th Edition

• Institute of Transportation Engineers

Multifamily Housing (Mid-Rise)

Not Close to Rail Transit (221)	
--------------------------------	---	--

Vehicle Trip Ends vs: On a:	Dwelling Units Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m.
Setting/Location:	General Urban/Suburban
Number of Studies:	30
Avg. Num. of Dwelling Units:	173
Directional Distribution:	23% entering, 77% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.37	0.15 - 0.53	0.09

Data Plot and Equation



Trip Gen Manual, 11th Edition

• Institute of Transportation Engineers

Appendix C

TAC Excerpts

TAL

Stopping sight distance is the sum of the distance travelled during the perception and reaction time and the braking distance.

SSD = 0.278Vt + 0.039
$$\frac{V^2}{a}$$
 (2.5.2)

Where:

SSD = Stopping sight distance (m)

t = Brake reaction time, 2.5 s

- V = Design speed (km/h)
- a = Deceleration rate (m/s²)

Table 2.5.2 gives the minimum stopping sight distances on level grade, on wet pavement, for a range of design speeds. These values are used for vertical curve design, intersection geometry and the placement of traffic control devices. The stopping sight distances quoted in **Table 2.5.2** may need to be increased for a variety of reasons related to grade and vehicle type as noted below.

Table 2.5.2: Stopping Sight Distance on level roadways for Automobiles⁵⁴

Design speed	Brake reaction	Braking distance	Stopping sig	ht distance
(km/h)	distance (m)	on level (m)	Calculated (m)	Design (m)
20	13.9	4.6	18.5	20
30	20.9	10.3	31.2	35
40	27.8	18.4	46.2	50
50	34.8	28.7	63.5	65
60	41.7	41.3	83.0	85
70	48.7	56. 2	104.9	105
80	55.6	73.4	129.0	130
90	62.6	92.9	155.5	160
100	69.5	114.7	184.2	185
110	76.5	138.8	215.3	220
120	83.4	165.2	248.6	250
130	90.4	193.8	284.2	285

Note: Brake reaction distance predicated on a time of 2.5 s; deceleration rate of 3.4 m/s² used to determine calculated sight distance.

Design Vehicle	Time Gap (t _g)(s) at Design Speed of Major Road	
Passenger car	7.5	
Single-unit truck	9.5	
Combination truck (WB 19 and WB 20)	11.5	
Longer truck	To be established by road authority	

Table 9.9.3: Time Gap for Case B1, Left Turn from Stop

Notes: Time gaps are for a stopped vehicle to turn left onto a two-lane highway with no median and with grades of 3% or less. The table values should be adjusted as follows:

- For multi-lane highways: For left turns onto two-lane highways with more than two lanes, add 0.5 s for passenger cars and 0.7 s for trucks for each additional lane, from the left, in excess of one, to be crossed by the turning vehicle.
- For minor approach grades: If the approach grade is an upgrade that exceeds 3%, add 0.2 s for each percent grade for left turns.
- Some road authorities use higher values for certain specialized vehicles (e.g., Alberta uses 22 s for very long log trucks).

(0.0.1)

The intersection sight distance along the major road (distance b in Figure 9.9.2) is determined by:

	$15D = 0.276 V_{major} t_g$	(3.3.1)
Where:		
ISD =	intersection sight distance (len	gth of the leg
	of sight triangle along the majo	or road) (m)
V _{major} =	design speed of the major road	d (km/h)
$t_{g} =$	time gap for minor road vehicl	e to enter the
	major road (s)	

For example, a passenger car turning left onto a two-lane major road should be provided sight distance equivalent to a time gap of 7.5 s in major-road traffic. If the design speed of the major road is 100 km/h, this corresponds to a sight distance of 0.278(100)(7.5) = 208.5 or 210 m, rounded for design.

A passenger car turning left onto a four-lane undivided roadway will need to cross two near lanes, rather than one. This increases the recommended gap in major-road traffic from 7.5 to 8.0 s. The corresponding value of sight distance for this example would be 223 m. If the minor-road approach to such an intersection is located on a 4% upgrade, then the time gap selected for intersection sight distance design for left turns should be increased from 8.0 to 8.8 s, equivalent to an increase of 0.2 s for each percent grade.

The design values for intersection sight distance for passenger cars are shown in **Table 9.9.4**. Figure **9.9.4** includes design values, based on the time gaps for the design vehicles included in **Table 9.9.3**.

No adjustment of the recommended sight distance values for the major-road grade is generally needed because both the major- and minor-road vehicle will be on the same grade when departing from the intersection. However, if the minor-road design vehicle is a heavy truck and the intersection is located near a sag vertical curve with grades over 3%, then an adjustment to extend the recommended sight distance based on the major-road grade should be considered.

Design Speed	Stopping Sight	Intersection Sight Distance for Passenger Cars	
(km/h)	Distance (m)	Calculated (m)	Design (m)
20	20	41.7	45
30	35	62.6	65
40	50	83.4	85
50	65	104.3	105
60	85	125.1	130
70	105	146.0	150
80	130	166.8	170
90	160	187.7	190
100	185	208.5	210
110	220	229.4	230
120	250	250.2	255
130	285	271.1	275

Table 9.9.4: Design Intersection Sight Distance – Case B1, Left Turn From Stop

Note: Intersection sight distance shown is for a stopped passenger car to turn left onto a two-lane highway with no median and grades 3% or less. For other conditions, the time gap should be adjusted and the sight distance recalculated.

Sight distance design for left turns at divided-highway intersections should consider multiple design vehicles and median width. If the design vehicle used to determine sight distance for a divided-highway intersection is larger than a passenger car, then sight distance for left turns will need to be checked for that selected design vehicle and for smaller design vehicles as well. If the divided-highway median is wide enough to store the design vehicle with a clearance to the through lanes of approximately 1 m at both ends of the vehicle, no separate analysis for the departure sight triangle for left turns is needed on the minor-road approach for the near roadway to the left. In most cases, the departure sight triangle for right turns (case B2) will provide sufficient sight distance for a passenger car to cross the near roadway to reach the median. Possible exceptions are addressed in the discussion of case B3.

The time gaps in **Table 9.9.3** can be decreased by 1.0 s for right-turn maneuvers without undue interference with major-road traffic. These adjusted time gaps for the right turn from the minor road are shown in **Table 9.9.5**. Design values based on these adjusted time gaps are shown in **Table 9.9.6** for passenger cars. **Figure 9.9.5** includes the design values for the design vehicles for each of the time gaps in **Table 9.9.5**.

Design Vehicle	Time Gap (t _g)(s) at Design Speed of Major Road
Passenger car	6.5
Single-unit truck	8.5
Combination truck (WB 19 and WB 20)	10.5

Table 9.9.5: Time Gap	for Case B2—Right Turr	from Stop and Case B3-	-Crossing Maneuver
-----------------------	------------------------	------------------------	--------------------

Note: Time gaps are for a stopped vehicle to turn left onto a two-lane highway with no median and with grades of 3% or less. The table values should be adjusted as follows:

- For multi-lane highways: For left turns onto two-lane highways with more than two lanes, add 0.5 s for passenger cars and 0.7 s for trucks for each additional lane, from the left, in excess of one, to be crossed by the turning vehicle.
- For minor approach grades: If the approach grade is an upgrade that exceeds 3%, add 0.1 s for each percent grade for left turns.

Design Speed	Stopping Sight	Intersection Sight Distance for Passenger Ca	
(km/h)	Distance (m)	Calculated (m)	Design (m)
20	20	36.1	40
30	35	54.2	55
40	50	72.3	75
50	65	90.4	95
60	85	108.4	110
70	105	126.5	130
80	130	144.6	145
90	160	162.6	165
100	185	180.7	185
110	220	198.8	200
120	250	216.8	220
130	285	234.9	235

Table 9.9.6: Design Intersection Sight Distance – Case B2, Right Turn from Stop, and Case B3, Crossing Maneuver

Note: Intersection sight distance shown is for a stopped passenger car to turn right onto or to cross a two-lane highway with no median and with grades of 3% or less. For other conditions, the time gap should be adjusted and the sight distance recalculated.



Figure 9.9.5: Intersection Sight Distance – Case B2, Right Turn from Stop, and Case B3, Crossing Maneuver (Calculated and Design Values Plotted)





Case F - Left Turns from the Major Road

All locations along a major highway from which vehicles are permitted to turn left across opposing traffic, including intersections and driveways, should have sufficient sight distance to accommodate the left-turn maneuver. Left-turning drivers need sufficient sight distance to decide when to turn left across the lane(s) used by opposing traffic. Sight distance design should be based on a left turn by a stopped vehicle, since a vehicle that turns left without stopping would need less sight distance. The sight distance along the major road to accommodate left turns is the distance traversed at the design speed of the major road in the travel time for the design vehicle given in **Table 9.9.11**.

Design Vehicle	Time Gap (t _g)(s) at Design Speed of Major Road
Passenger car	5.5
Single-unit truck	6.5
Combination truck (WB 19 and WB 20)	7.5

Table 9.9.11: Time Gap for Case F, Left Turns from the Major Road

Note: Adjustment for multi-lane highways: For turning vehicles that cross more than one opposing lane, add 0.5 s for passenger cars and 0.7 s for trucks for each additional lane to be crossed.

The table also contains appropriate adjustment factors for the number of major-road lanes to be crossed by the turning vehicle. The unadjusted time gap in **Table 9.9.11** for passenger cars was used to develop the sight distances in **Table 9.9.12** and is illustrated in **Figure 9.9.8**.

	Stopping Sight	Intersection Sight Distance	
Design Speed		Passer	Passenger Cars
(KIII/II)	Distance (m)	Calculated (m)	Design (m)
20	20	30.6	35
30	35	45.9	50
40	50	61.2	65
50	65	76.5	80
60	85	91.7	95
70	105	107.0	110
80	130	122.3	125
90	160	137.6	140
100	185	152.9	155
110	220	168.2	170
120	250	183.5	185
130	285	198.8	200

Table 9.9.12: Intersection Sight Distance – Case F, Left Turn from the Major Road

Note: Intersection sight distance shown is for a passenger car making a left turn from an undivided highway. For other conditions and design vehicles, the time gap should be adjusted and the sight distance recalculated.



Figure 9.9.8: Intersection Sight Distance – Case F, Left Turn from the Major Road





Figure 8.8.2: Suggested Minimum Corner Clearances to Accesses or Public Lanes at Major Intersections

Inadequate corner clearance between accesses and signalized intersections along a major road, such as a major arterial, can create serious operational problems including:

Appendix D

Town of Guelph Zoning By-Law

Table 5.3 Continued_ Required	l narking rates in all	zones excent downtown zones
Table 3.3 Continued Required	i parking rates in an	Zones except downtown zones

		Lots identified with par suffix	Lots without parking adjustment (PA) suffix Minimum required			
Row	w Use Minimum required N				Maximum permitted	
12.	Mixed-use building ⁽⁶⁾	In addition to the non- residential parking rate, 1 space per dwelling unit plus 0.1 visitor spaces per dwelling unit	In addition to the non- residential parking rate, 1.5 spaces per dwelling unit plus 0.25 visitor spaces per dwelling unit	In addition to the non- residential parking rate, 1 space per dwelling unit plus 0.15 visitor spaces per dwelling unit		
13.	Retirement residential facility	1 space per 3 beds	Not applicable	1 space per 3 beds		
14.	Single detached dwelling	1 space per dwelling unit	Not applicable	1 space per dwelling unit		
15.	Semi-detached dwelling	1 space per dwelling unit	Not applicable	1 space per dwelling unit		
16.	Supportive housing	1 space per 4 beds	Not applicable	1 space per 4 beds		
17.	Townhouse– back-to-back, cluster, stacked, and stacked back-to-back	1 space per dwelling unit , plus 0.2 visitor spaces per dwelling unit	1.5 spaces per dwelling unit , plus 0.5 visitor spaces per dwelling unit	1 space per dwelling unit , plus 0.2 visitor spaces per dwelling unit		
18.	Townhouse– on- street	1 space per dwelling unit	Not applicable	1 space per dwelling unit		
19.	Townhouse- rear access on-street	1 space per dwelling unit	Not applicable	1 space per dwelling unit		
20.	Triplex ⁽⁶⁾⁽⁷⁾	1 space per dwelling unit	Not applicable	1 space per dwelling unit		
Comn	Commercial, service, retail and related land uses					
21.	Animal boarding establishment	2 spaces per 100 m ² of GFA	3 spaces per 100 m ² of GFA	4 spaces per 100 m ² of GFA		
22.	Animal care establishment	2 spaces per 100 m ² of GFA	3 spaces per 100 m ² of GFA	4 spaces per 100 m ² of GFA		
23.	Artisan studio	1.5 spaces per 100 m ² of GFA	3 spaces per 100 m ² of GFA	3 spaces per 100 m ² of GFA		
24.	Auction centre	3.5 spaces per 100 m ² of GFA	6 spaces per 100 m ² of GFA	4 spaces per 100 m ² of GFA		
25.	Building supply	1.5 spaces per 100 m ² of GFA	3 spaces per 100 m ² of GFA	3 spaces per 100 m ² of GFA		

5. Parking

No land shall be **used**, and no **building** or **structure** shall be **used** or erected in any **zone** unless off-street **parking spaces**, **parking areas**, **driveways**, **loading spaces**, or any other applicable requirement specified within this section, are provided and maintained in accordance with all applicable provisions, unless explicitly stated otherwise.

5.1 Calculation

(a) If the calculation of the required **parking spaces** or **bicycle parking spaces** results in a fraction, the required **parking spaces** or **bicycle parking spaces** shall be rounded up to the next higher whole number.

5.2 Location

- (a) Every off-street parking area shall be located on the same lot as the use requiring the parking and shall not infringe on or obstruct any required loading spaces, walkways, or other site elements required pursuant to this by-law.
- (b) Despite any yard provisions of this bylaw to the contrary, parking spaces and parking areas are permitted in accordance with the following provisions:
- 5.2.1 Residential uses
 - (a) For every single detached dwelling, semi-detached dwelling, on-street townhouse, rear access on-street townhouse, duplex dwelling, and multi-unit buildings with 3 dwelling units or less, the following provisions apply:

- (i) One required **parking space** for the **uses** specified in 5.2.1 (a) shall be located a minimum distance of 6 metres from the **street line** and to the rear of the front wall of the **main building**.
- (ii) Where an off-street parking space does not exist and where such space cannot be provided to the rear of the front wall of the main building of an existing dwelling unit, 1 off-street parking space may be wholly or partially located within the required front yard provided such parking space is setback a minimum of 0.5 metres from the side lot line.
- (iii) Despite 5.2.1 (a) (i), in the case of a through lot, parking spaces may be wholly located within one of the front yards, behind the front wall of the main building and be setback a minimum of 0.5 metres from the side lot line.
- (iv) When situated in the rear yard, an exterior parking area shall be setback 0.5 metre from any lot line and is to be screened from adjacent properties with a minimum 1.5 metre high solid fence or suitable landscaping consisting of sod, trees, shrubbery or berms.
- (v) In a D.1 or D.2 zone, where an enclosed parking area is located within 1 metre of any lot line adjacent to a single detached dwelling, semi-detached dwelling, duplex dwelling, or on-street townhouse, it is to be screened along those lot lines with a minimum 1.5 metre high solid fence.

Table 5.3 Required parking rates in all zones except downtown zones

		Lots identified with parl suffix	Lots without parking adjustment (PA) suffix				
Row	Use	Minimum required	Maximum permitted	Minimum required			
Reside	Residential uses						
1.	Additional residential dwelling unit ⁽²⁾⁽⁵⁾	1 space per dwelling unit	Not applicable	1 space per dwelling unit			
2.	Apartment building ⁽⁶⁾⁽⁷⁾	For the first 20 dwelling units: 1.5 spaces per dwelling unit, and for each dwelling unit in excess of 20: 1.25 spaces per dwelling unit. A minimum of 20% of the required parking spaces shall be for the use of visitor parking	1.5 spaces per dwelling unit plus, 0.25 visitor spaces per dwelling unit	For the first 20 dwelling units: 1.5 spaces per dwelling unit, and for each dwelling unit in excess of 20: 1.25 spaces per dwelling unit. A minimum of 20% of the required parking spaces shall be for the use of visitor parking			
3.	Bed and breakfast	1 space per building , plus 1 space for owner	Not applicable	1 space per building , plus 1 space for owner			
4.	Duplex dwelling	1 space per dwelling unit	Not applicable	1 space per dwelling unit			
5.	Emergency shelter	1 space per 4 beds	Not applicable	1 space per 4 beds			
6.	Group home (4)	1 space per building , plus 1 space per staff	Not applicable	1 space per building , plus 1 space per staff			
7.	Home occupation	In accordance with Section 4.15.2	Not applicable	In accordance with Section 4.15.2			
8.	Hospice	1 space per 3 beds	Not applicable	1 space per 3 beds			
9.	Live-work unit	In addition to the non- residential parking rate, 1 space per dwelling unit	In addition to the non- residential parking rate, 1.5 spaces per dwelling unit	In addition to the non- residential parking rate, 1 space per dwelling unit			
10.	Lodging house type 1 ⁽³⁾⁽⁴⁾	1 space per building , plus 1 per 3 lodging units	Not applicable	1 space per building , plus 1 per 3 lodging units			
11.	Long term care facility	1 space per 3 beds	Not applicable	1 space per 3 beds			

Table 5.5 – Accessible parking rates

Row	Number of required parking spaces	Type A accessible parking spaces (min)	Type B accessible parking spaces (min)	
1.	12 or fewer	1	0	
2.	13 to 100	4% of total spaces ⁽¹⁾ with an equal number of Type A and Type B accessible parking spaces ⁽²⁾⁽³⁾		
3.	101 to 200	1 accessible parking space plus an additional 3% of total spaces ⁽¹⁾ with an equal number of Type A and Type B accessible parking spaces ⁽²⁾		
4.	201 to 1,000	2 accessible parking spaces plus an an equal number of Type A and Type	additional 2% of total spaces ⁽¹⁾ with B accessible parking spaces ⁽²⁾	
5.	Over 1,000	11 accessible parking spaces plus an equal number of Type A and Type B a	n additional 1% of spaces ⁽¹⁾ with an ccessible parking spaces ⁽²⁾	

Additional regulations for Table 5.5:

- 1. Rounded up to the nearest whole number
- 2. If an odd number of **accessible parking spaces** is required, the additional space may be a Type B **accessible parking space**
- 3. If only one accessible parking space is required, the space must be a Type A accessible parking space.

Table 5.6 – Accessible parking space dimensions

Row	Row Element Dimensions - minimum requ	
1.	Type A accessible parking space ⁽¹⁾⁽²⁾	3.4 metre width x 5.5 metre length
2.	Type B accessible parking space ⁽²⁾	2.4 metre width x 5.5 metre length

Additional regulations for Table 5.6:

- 1. Type A accessible parking spaces shall be identified with signage indicating spaces are van accessible
- 2. Access aisles shall be provided directly adjacent to all off-street **accessible parking spaces** in accordance with the following specifications:
 - i. Access aisles shall be a minimum of 2 metres wide.
 - ii. Access aisles shall extend along the entire length of the **accessible parking space**, with a minimum length of 5.5 metres.
 - iii. When located on asphalt, concrete, or other hard surface, access aisles shall be marked with high tonal contrast diagonal lines.

Parking

5.8 **Bicycle parking rates**

- Bicycle parking spaces, long term and (a) bicycle parking spaces, short term shall be provided in accordance with Table 5.7 and Table 5.8.
- (b) Where a lot contains more than one use, not within a **multi-unit building**, the required number of **bicycle parking** spaces is the sum of all bicycle parking spaces required for each use.

Row	Use	Bicycle parking spaces, short term – minimum required	Bicycle parking spaces, long term – minimum required
1.	 Residential Apartment building ⁽¹⁾ Townhouse – back-to-back, cluster, stacked, stacked back-to- back (where individual garages are not provided) ⁽¹⁾ 	0.1 spaces per dwelling unit , 2 spaces minimum	1 space per dwelling unit , 2 spaces minimum
2.	Supportive housing	0.1 spaces per dwelling unit or suite, 2 spaces minimum	1 space per dwelling unit or suite, 2 spaces minimum
3.	Live-work unit, mixed-use building ⁽¹⁾	In addition to the non- residential parking requirement, 0.1 spaces per dwelling unit is required, 2 spaces minimum	In addition to the non- residential parking requirement, 1 space per dwelling uni t is required, 2 spaces minimum
4.	Multi-unit building (commercial) (includes individual buildings on the same lot as the multi-unit building)	0.2 spaces per 100 m ² GFA , 2 spaces minimum	0.1 spaces per 100 m ² GFA , 2 spaces minimum
5.	Multi-unit building (industrial) (includes individual buildings on the same lot as the multi-unit building)	0.03 spaces per 100 m ² GFA , 2 spaces minimum	0.07 spaces per 100 m ² GFA , 2 spaces minimum
6.	Commercial, service, retail Convenience store Financial establishment Fitness centre Retail establishment Service establishment School, commercial 	0.2 spaces per 100 m ² GFA , 2 spaces minimum	0.1 spaces per 100 m ² GFA , 2 spaces minimum
7.	Day care centre	0.3 spaces per 100 m ² GFA , 2 spaces minimum	0.2 spaces per 100 m ² GFA , 2 spaces minimum

	مامينة ما امتينا				
Table 5.7 - Reg	uired bicycle	parking rat	es in all zone	es except dowr	itown zones

5.8.2 Bicycle parking space and aisle dimensions

- (a) Horizontal **bicycle parking spaces** shall:
 - Be a minimum dimension of 0.6 metres wide by 1.8 metres horizontal length, with a minimum vertical clearance of 1.9 metres.
 - (ii) Be accessed by an aisle with a minimum width of 1.5 metres.
- (b) Vertical **bicycle parking spaces** shall:
 - (i) Have a minimum dimension of 0.6 metres wide by 1.8 metres vertical length, where the bike, when secured on the storage rack is provided with a minimum horizontal clearance from the wall of 1.2 metres.
 - (ii) Be accessed by an aisle with a minimum width of 1.2 metres.
- (c) Stacked **bicycle parking spaces** shall:
 - (i) Have minimum dimensions of 0.6 metres wide by 1.8 metres horizontal length, with a minimum vertical clearance of 1.2 metres.
 - (ii) Be accessed by an aisle with a minimum width of 1.2 metres.

5.9 Electric vehicle parking requirements

- (a) A minimum of 20% of the total required parking spaces for multi-unit buildings with 3 or more dwelling units and mixeduse buildings on lots identified with a (PA) suffix shall be provided as electric vehicle parking spaces.
- (b) A minimum of 80% of total required parking spaces for multi-unit buildings with 3 or more dwelling units, townhouse – cluster, stacked, stacked back-to-back, and mixed-use buildings shall be provided as designed electric vehicle parking spaces.

(c) For any non-residential use, a minimum of 10% of required parking spaces shall be provided as electric vehicle parking spaces and a minimum of 20% of required parking spaces shall be provided as designed electric vehicle parking spaces.

5.10 Parking spaces within automated parking systems

- (a) Despite Table 5.2, parking spaces provided within an automated parking system may count towards satisfying the required minimum and maximum parking space calculations under this by-law, except this shall not apply to satisfying required accessible parking spaces, visitor parking spaces, and/or electric vehicle parking spaces.
- 5.11 Garages and drivewaysresidential zones
- 5.11.1 Maximum width of attached garage residential
 - (a) The maximum permitted **garage width** within residential **zones** shall be in accordance with Table 5.9.
- 5.11.2 Garage location
 - (a) Within residential zones, attached garages shall not project beyond the main front wall of the first storey containing habitable floor space oriented towards the front lot line or exterior side lot line abutting a street line. Where a roofed porch is provided, the attached garage may be located ahead of the main front wall, to a maximum projection of 2 metres.
 - (i) For single detached dwellings and semi-detached dwellings in downtown zones, attached garages shall not project beyond the main front wall of the building.