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29 June 2018
Project: 170260

Kaylan Edgcumbe, C.E.T.
Manager, Transportation Planning and Parking
Transportation Services Department
City of Burlington
Kaylan.Edgcumbe@burlington.ca

Dear Ms. Edgcumbe:

RE: 4880 VALERA ROAD – TRANSPORTATION IMPACT AND PARKING STUDY - RESPONSE TO TRANSPORTATION STAFF COMMENTS

City of Burlington and Halton Region Transportation Staff have undertaken a technical review of the Transportation Impact and Parking Study¹. Comments were received via email Wednesday, 16 May 2018.

City Transportation Planning Staff Comments

Introduction

The development proposal consists of 70 townhouse units, 344 high-rise condominium units and approximately 1,500 square feet of ground floor commercial retail to be located within the two-storey podium of Buildings A and B. The development is anticipated to generate a total of 127 net new vehicular trips during the AM peak hour and 169 net new vehicular trips during the PM peak hour (adjusted to reflect transit and active transportation reductions in vehicular trips).

Introduction Response

Commercial GFA has since been increased to approximately 2,100 square feet. All other unit counts are correct and up-to-date. The additional GFA will not result in a significant increase to peak hour trip generation or alter the findings and conclusion of the Transportation Impact and Parking Study. Commercial space is intended to serve the site and/or the immediate surrounding community.

¹ 4880 Valera Road Transportation Impact Study & Parking Study, Paradigm Transportation Solutions Limited December 2017

Comment 1

As previously noted at the meeting of April 30, 2018; the proposed development will require 648 (554 residential/94 visitor) parking spaces. The proposal provides 574 parking spaces, resulting in a deficiency of 74 stalls. Staff note that the requirement of 648 stalls is consistent with the updated parking standards study and is dependent upon a robust Transportation Demand Management program being integrated into overall site design. No further reduction in required parking will be contemplated for this site.

- ▶ Regular townhomes – 2 resident/0.25 visitor
- ▶ Back to back – 2 resident/0.25 visitor
- ▶ Street townhomes – 2 resident/0.25 visitor
- ▶ 1BR apartment – 1 resident/0.2 visitor
- ▶ 2BR apartment – 1.25 resident/0.2 visitor
- ▶ 3BR apartment – 1.5 resident/0.2 visitor
- ▶ Retail – 3.5 spaces per 100 m. sq

Response #1

The ratios suggested by staff results in a parking requirement of 549 occupant spaces and 95 visitor spaces. 644 total spaces (Blended ratio of 1.56 spaces per unit) as outlined in **Table 1**.

TABLE 1: STAFF RECOMMENDED PARKING SUPPLY

Unit Type	Units	Ratio			Supply		
		O	V	SUM	O	V	SUM
Regular Townhomes	30	2.00	0.25	2.25	60	8	68
Back To Back	26	2.00	0.25	2.25	52	7	59
Street Townhomes	14	2.00	0.25	2.25	28	4	32
1BR Apartment	118	1.00	0.20	1.20	118	24	142
2BR Apartment	192	1.25	0.20	1.45	240	38	278
3BR Apartment	34	1.50	0.20	1.70	51	7	58
Retail/Commercial (100 m2)	1.95	0.00	3.50	3.50	0	7	7
Total	414	1.33	0.23	1.56	549	95	644
Parking Supply					504	72	576

The Burlington City-Wide Parking Standards Review Report has not yet been formally approved by Council. It is acknowledged that the parking ratios presented in the report are lower than the current Zoning By-law.

Furthermore, ratios suggested by Staff in their comments are primarily consistent with the Burlington City-Wide Parking Standards Review Report. However, the ratio indicated for the Street Townhouse units (Freehold) includes a visitor parking space ratio. This is not consistent with the Standards Review Report. The recommended ratio for Street Townhouse units is 2.00 spaces per unit. Visitor parking for these units is accommodated on-street.



Proposed Supply

The site plan proposes 504 occupant spaces and 72 visitor spaces. 576 total spaces (Blended ratio of 1.37 spaces per unit) as outlined in **Table 2**. The proposed parking supply for the apartment units is 1.05 (O) + 0.15 (V). The proposed parking supply for Regular and Back to Back townhouses parking supply is provided at the suggested Parking Standards Review rate of 2.00 (O) + 0.25 (V) spaces per unit.

The parking supply for the commercial land use is shared with the at grade on-site visitor parking as the proposed development is a mixed-use site. Zoning By-law 2020, Part 5, section 4.6 – states that where a development is comprised of a mix of residential and non-residential uses, non-residential parking located on the same property as the residential uses may be counted toward required visitor parking for the residential use.

TABLE 2: PROPOSED PARKING SUPPLY

Unit Type	Units	Ratio			Supply		
		O	V	SUM	O	V	SUM
Regular Townhomes	30	2.00	0.25	2.25	60	8	68
Back To Back	26	2.00	0.25	2.25	52	7	59
Street Townhomes	14	2.00	0.00	2.00	28	0	28
1BR Apartment	118	1.05	0.15	1.20	124	18	142
2BR Apartment	192	1.05	0.15	1.20	202	29	231
3BR Apartment	34	1.05	0.15	1.20	36	5	41
Retail/Commercial (100 m2)	1.95	Shared w Res.			0	0	0
Total	414	1.21	0.16	1.37	502	67	569
Parking Supply					504	72	576

The proposed parking supply is supported by local survey data collected by the IBI Group as part of the Draft City-Wide Parking Standards Review as well as survey data previously collected by the City and by Paradigm.

Draft City-Wide Parking Standards Review

The Draft City Wide Parking Standard Review states on Page 50 - “A total of 16 spot surveys were conducted at three different locations during the peak parking demand period (Weekdays between 20:00 and 23:00). The maximum observed parking demand from the spot surveys was 1.1 spaces/unit, with a maximum observed visitor demand of 0.1 spaces/unit.” To summarize, the visitor parking space demand of 0.1 spaces/unit is included in the overall ratio of 1.1 spaces/unit. The three locations include 1284 Guelph Line, 559 Maple Avenue, and 955 Warwick Court.

The 1284 Guelph Line (Mod’rn) site is one which Paradigm has previously surveyed and also found peak parking demands of less than 1.10 spaces per unit inclusive of visitors. A description of the site is provided at the following link -

<https://condos.ca/burlington/the-modrn-condominium-1284-guelph-line>



The 551 Maple Avenue location is known as the Strata (survey data collected by City) which supports our proposed rates but we did not include it as part of our survey data as this site is technically in the Downtown area. A description of the site is provided at the following link - <https://condos.ca/burlington/strata-condos-551-maple-ave>

The 955 Warwick Court location is a rental building and is technically not representative of the product that ADI is proposing. Rentals typically have lower parking demands as the resident income levels are typically not as high as those in condo apartments even though some proportion of most condos have a number of units that are rentals. A description of the site it provided at the following link - https://www.timbercreekcommunities.com/find-your-home/burlington/apartment_rentals/955-warwick-court

City and Paradigm Parking Surveys

Table 3 details the observed parking demand rates for apartment and townhouse units obtained from surveys in the City of Burlington.

TABLE 3: OBSERVED PARKING DEMAND RATES

Land Use	Address	Parking Demand Ratio		
		O	V	TOTAL
Apartment	1284 Guelph Line - Day 1	0.69	0.17	0.86
	1998 Ironstone Dr	0.83	0.07	0.90
	1284 Guelph Line - Day 2	0.68	0.24	0.92
	1284 Guelph Line - Day 3	0.87	0.10	0.97
	1980 Imperial Way	0.93	0.05	0.98
	1284 Guelph Line - Day 4	0.93	0.14	1.07
	1980 Imperial Way	0.96	0.12	1.08
	3060-3070 Rotary Way	0.97	0.19	1.16
	Proposed - 4880 Valera Rd	1.05	0.15	1.20
Townhouse	1401 Plains Rd E			1.71
	4266 Fairview Rd E			1.81
	5080 Fairview Rd E			1.97
	Proposed - 4880 Valera Rd (Freehold)	2.00	0.00	2.00
	Proposed - 4880 Valera Rd (Regular & Back to Back)	2.00	0.25	2.25
	362 Plains Rd E			2.34

We have provided links for each of the apartment sites where survey data has been obtained. These locations are typical condo sites where anyone can buy a unit. They are not retirement homes or adult lifestyle buildings.

- <https://condos.ca/burlington/millcroft-place-1998-ironstone-dr>
- <https://condos.ca/burlington/appleby-woods-1980-imperial-way>
- <https://condos.ca/burlington/alton-village-3060-3070-rotary-way>
- <https://condos.ca/burlington/the-modrn-condominium-1284-guelph-line>



Adi Sales Data for Current Sites

Adi sales data for two other sites in Burlington including the Link (1.05 occupant space/unit) and Station West (1.00 occupant space/unit) suggest a resident parking uptake in the order 1.05 spaces per unit or less. These finding further reinforces that the proposed occupant rate for apartments is inline with market demands.

On-Street Parking Survey

The condo board has the ability to monitor and enforce visitor parking supply to discourage long-term parking demand by visitors on the site. As we have heard concerns related to on-street parking within the existing Community we completed supplementary on-street parking surveys within 200 metres of the subject site.

Attachment A contains supplementary on-street parking demand data collected by Paradigm for the immediate area surrounding the subject site. The survey data suggests that parking demand for on-street parking within the immediate area is utilized to about 52 percent indicating that 48 percent of on-street parking is available.

The site's service vehicle and loading requirements will be accommodated on-site through use of the designated loading zone areas. Service vehicles may also utilize the on-site visitor parking supply. All on-site roadways are signed and enforceable Fire Routes.

Transportation Staff have previously supported a 1.20 space per unit ratio for medium/high-density residential units (1.05 occupant spaces + 0.15 visitor spaces) for the adjacent site at 4853 Thomas Alton Boulevard². Settled 13 February 2018.

Comment #2

The analysis recommends a widening of Thomas Alton Boulevard in order to accommodate a westbound left-turn lane at Valera Road. The analysis also indicates that the development effectively doubles the proportion of left turning vehicles in the advancing traffic stream (10% left turns under existing PM traffic conditions compared to 20% left turns in future PM traffic conditions). Staff are of the position that the widening of Thomas Alton Boulevard in order to facilitate a westbound left turn lane is a result of the proposed development as the TIS confirms that there are no operational issues at the intersection of Thomas Alton Boulevard and Valera Road under existing traffic conditions. Staff support the inclusion of a westbound left turn lane at Valera Road.

However, the proposed eastbound left-turn lane at the private drive opposite Valera Road is not supportable. Designing an eastbound left-turn lane at this location would encourage traffic to cut through private property (4903 Thomas Alton Boulevard) in order to "by pass" the left-turn queues at Appleby Line. The developer shall pay all costs associated with any design and construction works related to the widening of Thomas Alton Boulevard, including the cost of preparing any reference plan.

² Staff Report PB-100-16



Response #2

Official Plan Amendment – Approved by Council in October 2018 required no improvements to Thomas Alton Boulevard.

Current ZBA Application is consistent with the approved density in the previously approved OPA. A Zoning Bylaw Amendment application was required to conform with the OPA. This application should be treated as a “house cleaning” exercise.

City staff throughout the OPA approval process and prior to submission of the ZBA application confirmed they will not support a road widening at Thomas Alton Boulevard between Appleby Line and Valera Road.

“The roadway network was designed in a manner to accommodate full-build out of adjacent lands. As such, we are not in support of additional road widenings required to accommodate proposed levels of development, specifically the widening of Thomas Alton Boulevard between Appleby Line and Valera Road in order to accommodate the recommended eastbound and westbound auxiliary lanes³”

Overall LOS at Appleby Line and Thomas Alton Boulevard does not change when comparing the OPA application with the rezoning application. Halton Region comments do not require any improvements to Appleby Line and Thomas Alton intersection. **Table 4** details the LOS comparison between the approved OPA and the current rezoning application. The TIS that was approved as part of the OPA considered 407 units versus what was the permitted density under the OPA which is 414 units.

TABLE 4: LOS COMPARISON

Analysis Period	Intersection	Application	Direction / Movement / Approach																OVERALL				
			EB				WB				NB				SB								
			L	T	R	APP	L	T	R	APP	L	T	R	APP	L	T	R	APP					
AM Peak Hour	Appleby & Thomas Alton Blvd	Approved	<	C	C	C	C	C	B	>	C	A	A	>	A	A	B	B	B	A	B	B	
	Proposed	<	D	D	D	C	C	C	C	>	C	A	A	>	A	A	B	B	B	A	B	B	
	Thomas Alton Blvd & Valera Road	Approved	<	A	>	A	<	A	>	A	<	D	>	D	<	B	>	B	>	B	>	B	
	Proposed	<	A	>	A	<	A	>	A	<	D	>	D	<	C	>	C	>	C	>	C	>	C
PM Peak Hour	Valera Road & Verdi St/Driveway A	Approved	<	A	>	A	<	A	>	A	<	A	>	A	<	A	>	A	<	A	>	A	
	Proposed	<	B	>	B	<	A	>	A	<	A	>	A	<	A	>	A	<	A	>	A	>	A
	Appleby Line & Driveway B	Approved			A	A									A		A		A		A		
	Proposed			A	A										A		A		A		A		
PM Peak Hour	Appleby & Thomas Alton Blvd	Approved	<	C	C	C	E	C	>	D	D	A	>	C	B	C	C	B	C	C	C	C	C
	Proposed	<	D	D	D	E	D	>	D	E	A	>	C	C	C	C	C	C	C	C	C	C	C
	Thomas Alton Blvd & Valera Road	Approved	<	A	>	A	<	A	>	A	<	C	>	C	<	E	>	E	>	E	>	E	
	Proposed	<	A	>	A	<	A	>	A	<	C	>	C	<	F	>	F	>	F	>	F		
PM Peak Hour	Valera Road & Verdi St/Driveway A	Approved	<	A	>	A	<	A	>	A	<	A	>	A	<	A	>	A	<	A	>	A	
	Proposed	<	B	>	B	<	A	>	A	<	A	>	A	<	A	>	A	<	A	>	A	>	A
	Appleby Line & Driveway B	Approved			A	A									A		A		A		A		
	Proposed			A	A										A		A		A		A		

³ Email – Lisa Stern Sent August 19-15 3:27 PM To Glenn Wellings Cc: Edgcumbe, Kaylan Subject: 4880 Valera Road Transportation Comments



Intersection Operations

No intersection capacity related issues are noted to be occurring under existing conditions. The southbound approach begins to deteriorate under background traffic conditions (LOS E | v/c 0.44). Under total traffic conditions, the operations of the southbound approach deteriorate further (LOS F | v/c 0.67).

The southbound approach is a private driveway connection to the commercial site at 4903 Thomas Alton Boulevard. The LOS E-F is not atypical for a commercial driveway onto a roadway with moderate to high through volumes. Furthermore, there is a relatively significant amount of reserve capacity as indicated by the v/c ratios.

The northbound approach of Valera Road to Thomas Alton Boulevard is forecast to operate with delays in the LOS C-D range with a v/c ratio of 0.25. Delays of this extent for a municipal roadway approach to a collector roadway are considered acceptable.

Westbound Left-Turn – Warrant & Storage

Section 5.2 and Appendix G of the December 2017 TIS contains the left-turn lane warrant analysis for the Thomas Alton Boulevard intersection with Valera Road.

The warrant analysis examined the existing conditions (no site traffic) and concluded that a left-turn lane with 15 metres of storage is warranted. The need for this improvement is not directly related to the development of the subject site as it is warranted under existing conditions. Technically, this westbound left turn lane should be installed today by the City.

Without the left-turn lane under existing conditions, westbound through traffic was observed overtaking turning vehicles in the adjacent on-street bicycle lane. To improve safety for the vulnerable road users (cyclists) consideration should be given to implement the turn lane prior to the development of the subject site.



It is further noted, that the increased non-site related (background) traffic results in the need to provide an additional 10 metres of storage for the left turn lane (25 metres total). When site traffic is considered the total storage required for the left turn lane is 40 metres.

Cost share based on warranted storage lane lengths

- ▶ Road Authority – 63 percent (25 m of 40 m) – warranted under existing conditions
- ▶ Applicant – 37 percent (15 m of 40 m)

SimTraffic Queueing Analysis

Ten 60-minute simulations of SimTraffic with the introduction of a westbound left-turn lane suggests the 95th percentile queue length will measure ± 17 metres with an average queue length of ± 8 metres. It would therefore be reasonable to design the turn lane with at most 20 metres of storage.

Deflection to Develop Westbound Left-Turn Lane

To develop the westbound left-turn lane deflection is required to move eastbound vehicles around the left-turning traffic. To develop the necessary deflection, a departure taper is required. The departure taper will not function as an eastbound left-turn lane and eastbound left turning traffic will need to use the through lane to make a left turn into the commercial site. This may become problematic given the potential of through traffic passing on the right and using the existing on-street bicycle lane. To improve safety for the vulnerable road users (cyclists) consideration should be given to developing the eastbound left-turn lane in conjunction with the westbound left-turn lane.

There is also a disadvantage to other vulnerable road users (pedestrians) by expanding the lane geometry at the intersection. While the expanded lane geometry reduces delay to through volume, it could also result in higher travel speeds for motor vehicles. This can have negative impacts related to pedestrian fatality rates vs. impact speed.

The expanded lane geometry also increases the crossing distance for pedestrians. The turn lane would add about 3.0 metres to the cross-sectional width of Thomas Alton Boulevard. This would equate to an additional 2.50-3.75 seconds of exposure time to a pedestrian (1.2 m/s to 0.80 m/s).

Comment #3

Given that intersection turning movements at Appleby Line and Thomas Alton are now at capacity, the developer is required to fund intersections improvements specifically related to the northbound left-turn and eastbound right-turn movements at the intersection. The developer shall pay all costs associated with any design and construction works related to the widening of Thomas Alton Boulevard and Appleby Line, including the cost of preparing any reference plan.



Response #3

Per the Halton Region comments received 16 May 2018, the Region has confirmed that no additional ROW dedication is required and therefore the developer will not be responsible for any associated cost for design and construction of the widening of Appleby Line and Thomas Alton Boulevard. As the Region has noted, there will be no land dedication, therefore no reference plan will be required.

“Right-of-way:

Regarding right-of-way, Halton Transportation Planning will not be requesting any additional lands along Appleby Line or a change in the existing daylight triangle at the Thomas Alton intersection, and the existing property line can be held.

Appleby Line is already widened to 6 lanes along this section (Dundas Street to Highway 407) and no additional ROW is required (ultimate ROW already taken as part of our past capital project).”

In addition to the above, the Region has confirmed they will continue to monitor the existing and future conditions of the area roadways and intersections.

“Transportation Impact Study:

A Transportation Impact Study was completed by Paradigm dated December 2017. The overall Study assumptions and findings are acceptable.

The Study recommends the following road improvements, which are stated as not directly related to the development traffic impacts:

- ▶ *westbound left-turn lane on Thomas Alton at Valera Road*
- ▶ *eastbound left-turn lane on Thomas Alton at Valera Road*
- ▶ *eastbound right-turn lane extension westerly to Valera Road*

Halton Region and the City of Burlington will monitor the existing and future conditions of the area roadways and intersections, and look to implement the above note road improvements if required.

With the intersection turning movements at Appleby Line and Thomas Alton now at capacity, any other area medium to larger scale developments will be required to fund intersections improvements, specifically related to the northbound left-turn and eastbound right-turn movements at this Regional intersection.”

Comment #4

In order to examine all feasible alternatives to widenings at the intersection of Thomas Alton Boulevard and Valera Road, Transportation Planning staff requested that the developer completes a roundabout analysis. This requirement was documented in the pre-study consultation. Based on a review of the TIS, staff confirm that a feasibility



analysis of a single lane roundabout has not been completed. We require rational as to why this analysis was not undertaken.

Response #4

As requested a roundabout analysis has been completed. The findings of the roundabout analysis clearly indicate that a roundabout is not the preferred type of traffic control for this intersection given existing distance from signalized intersections (Appleby Line at Thomas Alton Boulevard). Furthermore, the construction of a roundabout would impact the existing ROW, utilities, stormwater management, on-street parking and other private driveways. The westbound left-turn lane on Thomas Alton Boulevard is sufficient to address traffic concerns. Refer to **Attachment B** for more detail.

Comment #5

All townhouse driveways are to be a minimum of 6.7 metres in length to ensure functionality. Driveways less than 6.7 metres in length are not supportable by staff.

Response #5

Acknowledged. Townhouse driveways will be 6.7 metres in length.

Comment #6

At-grade visitor parking stalls are required to be a minimum of 6 metres by 2.75 metres or 5.5 metres by 3 metres. Stall dimensions that result in an area less than 16.5 metres square are not supportable by staff.

Response #6

Acknowledged. All parking stalls will be 16.5 metres squared.

Comment #7

Flat landing area of 6m in length needs to be provided at the top of underground parking ramp.

Response #7

Acknowledged and will be provided.

Comment #8

Underground parking ramp will need to be heated. We will require truck turning templates for the two loading spaces.



Response #8

Acknowledged. The ramp will be heated where it exceeds 8% and / or is exposed to weather.

Halton Region Transportation Planning Comments

Comment #1

Access:

Access approval for the proposed right-in/right-out access will be at the south limit of the development frontage to Appleby Line. This has been previously brought to the attention of the developer.

There are a few hydro poles within this area and the developer will have to review the design requirements and potential relocations. This has been previously brought to the attention of the developer.

All costs associated with the access design and construction (hydro pole relocation, etc.,) is the responsibility of the developer.

Response #1

Acknowledged.

Comment #2

Right-of-way:

Regarding right-of-way, Halton Transportation Planning will not be requesting any additional lands along Appleby Line or a change in the existing daylight triangle at the Thomas Alton intersection, and the existing property line can be held.

Appleby Line is already widened to 6 lanes along this section (Dundas Street to Highway 407) and no additional ROW is required (ultimate ROW already taken as part of our past capital project).

Response #2

Acknowledged.

Comment #3

Transportation Impact Study:

A Transportation Impact Study was completed by Paradigm dated December 2017. The overall Study assumptions and findings are acceptable.



The Study recommends the following road improvements, which are stated as not directly related to the development traffic impacts:

- ▶ westbound left-turn lane on Thomas Alton at Valera Road
- ▶ eastbound left-turn lane on Thomas Alton at Valera Road
- ▶ eastbound right-turn lane extension westerly to Valera Road

Halton Region and the City of Burlington will monitor the existing and future conditions of the area roadways and intersections, and look to implement the above note road improvements if required.

With the intersection turning movements at Appleby Line and Thomas Alton now at capacity, any other area medium to larger scale developments will be required to fund intersections improvements, specifically related to the northbound left-turn and eastbound right-turn movements at this Regional intersection.

Response #3

It should be noted that none of the turning movements at Appleby Line and Thomas Alton Boulevard are at capacity. The only movement nearing capacity is the northbound left turn which has an LOS E and a v/c ratio of 0.96. The intersection has overall LOS of B and C in the AM and PM peak hours respectively.

Therefore, no further upgrades are required for this development, as stated by the Region, this intersection will continue to be monitored by the City and Region as other medium and large scale development applications are submitted.



Please contact the undersigned if clarification is required regarding the above noted responses.

Yours very truly,

PARADIGM TRANSPORTATION SOLUTIONS LIMITED

A handwritten signature in black ink, appearing to read 'Stew Elkins', with a long horizontal flourish extending to the right.

Stew Elkins
BES, MITE
Vice-President



Attachment A

On-Street Parking Survey



Attachment B

Roundabout 4880 Valera Road – Roundabout Feasibility Initial Screening

