JUNE 24, 2025

PROJECT NO: 2448-7006

SENT VIA: EMAIL

Town of Caledon
6311 Old Church Road
Caledon, ON L7C 1J6

Region of Peel
Transportation Division, Public Works
10 Peel Centre Drive, Suite B, 4th Floor
Brampton, ON L6T 4B9

Attn: Kavleen S. Younan, P.Eng., Transportation Engineer, Town of Caledon
Yifan Shen, Specialist, Transportation Development, Region of Peel

RE: TRANSPORTATION CONFORMANCE LETTER
ALLOA – 12101 CREDITVIEW ROAD DRAFT PLAN OF SUBDIVISION

Dear Kavleen and Yifan,

C.F. Crozier & Associates Inc. (Crozier) has been retained to prepare a Transportation Compliance Letter in support of the 12101 Creditview Road Draft Plan of Subdivision development application. The 12101 Creditview Road Draft Plan is comprised of part of Lots 18 & 19, Concession 3, in the Town of Caledon, Regional Municipality of Peel. The Draft Plan is also located within the Alloa Secondary Plan and Alloa Phase 1 Tertiary Plan.

A Transportation Impact Study (Crozier, December 2024) was prepared in support of the Alloa Phase 1 Tertiary Plan. The TIS comprehensively evaluated the impacts of the Alloa Phase 1 Lands from a transportation perspective, identifying required mitigation measures as warranted. The Tertiary Plan was designed to comprise the intended individual Draft Plans such that the Tertiary Plan's road network and land use layout was reflective of the respective Draft Plans for each parcel.

The Transportation Conformance Letter builds on and accompanies the Alloa Phase 1 Tertiary Plan TIS, and has been prepared to support of the Draft Plan development application. The letter herein reviews the following:

- Site Context
- Development Proposal
- Site Generated Traffic Review
- Recommendations

211 Yonge St., Suite 600
Toronto, ON M5B 1M4
T. 416.477.3392
cfcrozier.ca

1.0 Site Context

1.1 Subject Lands

The 12101 Creditview Road Draft Plan is located within the Alloa Phase 1 Lands, covers an area of approximately 60.10 ha and currently consists of undeveloped greenfield lands. The Subject Site is located on the southeast side of the Alloa Phase 1 Lands and is generally bound by Creditview Road to the west, Mayfield Road to the south and undeveloped greenfield lands to the north, south and east.

Figure 1 illustrates the site location.

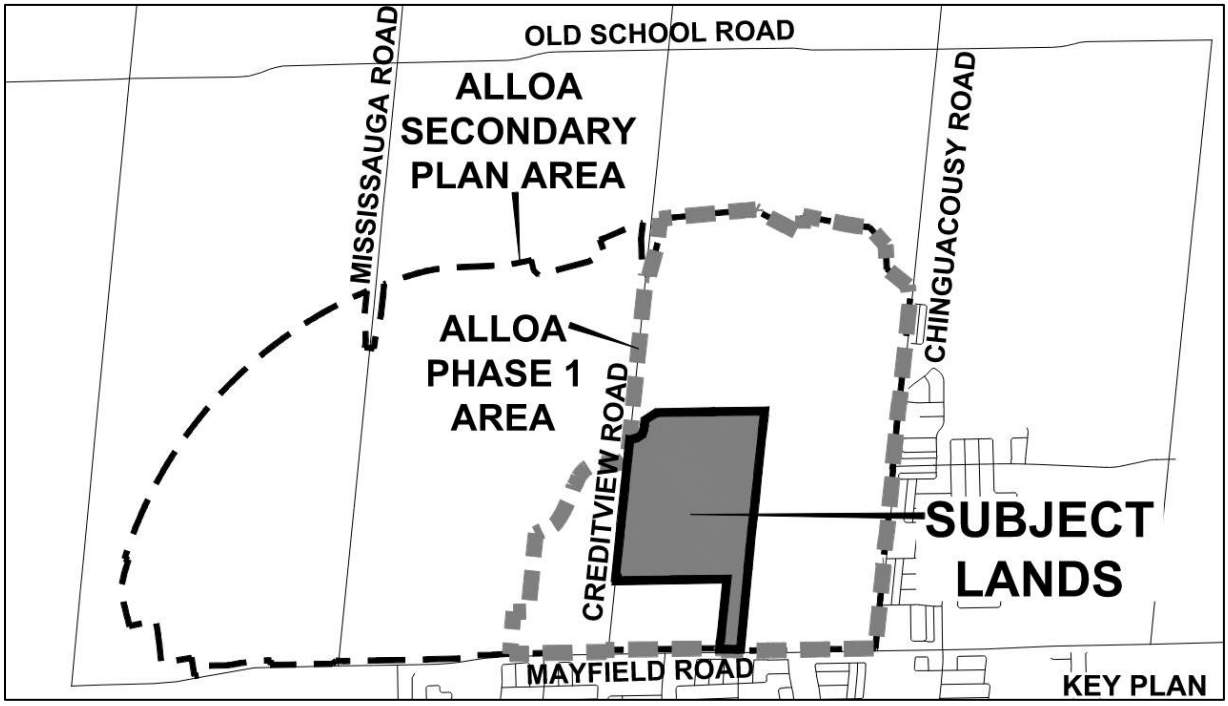


Figure 1: Site Location

1.2 Existing Transportation Context

Table 1 outlines the roadways near the Subject Site, including road and active transportation network features.

Table 1: Existing Roadway Network

Feature	Roadway	
	Mayfield Road	**Creditview Road**
Direction	Two-Way (East-West)	Two-Way (North-South)
Span	Winston Churchill Blvd to Albion Vaughan Rd	The Grange Sideroad to Mayfield Rd
Jurisdiction	Region of Peel	Town of Caledon
Number of Travel Lanes	Two Lanes	Two Lanes
Pedestrian Facilities	None	None
Cycling Facilities	None	None

1.3 Future Transportation Context

Capital road network improvements are planned near the 12101 Creditview Road Draft Plan Lands to support future traffic growth. In addition, a collector road network is proposed to service the Alloa Secondary Plan Area, with some roads located within the 12101 Creditview Road Draft Plan.

Table 2 outlines the future transportation improvements, relevant to the 12101 Creditview Road Draft Plan.

Table 2: Future Transportation Improvements

Roadway	Improvement	Improvement Type	Horizon Year
Mayfield Road	Widening to Five Lanes	Capital Project	2027
	Widening to Six Lanes	Capital Project	2041
Chinguacousy Road	Widening to Four Lanes	Capital Project	2031
Highway 413	New Highway	Capital Project	2031[2]
Creditview Road	Widening to Four Lanes	Capital Project	2051
Welsh Avenue (Street A in Tertiary Plan)	New Collector Road	Alloa Secondary Plan Collector Road Network	2031[3]
Tim Manley Avenue (Street B in Tertiary Plan)	New Collector Road	Alloa Secondary Plan Collector Road Network	2031[3]
Speersville Drive (Street E in Tertiary Plan)	New Collector Road	Alloa Secondary Plan Collector Road Network	2031[3]
Blackhorse Drive (Street F in Tertiary Plan)	New Collector Road	Alloa Secondary Plan Collector Road Network	2031[3]

Note 1: Interim 5-lane widening expected to be completed by 2027.
Note 2: No official completed date available. The Tertiary Plan TIS assumes completion in the 2031 horizon year.
Note 3: Alloa Secondary Plan is not yet approved, therefore timing is estimated for Phase 1 Tertiary Plan roads.

Further details regarding these improvements are included within the Alloa Phase 1 Tertiary Plan Transportation Impact Study (Crozier, December 2024).

Attachment 1 includes excerpts from the Alloa Phase 1 Tertiary Plan Transportation Impact Study (Crozier, December 2024).

2.0 Development Proposal

The 12101 Creditview Road Draft Plan proposes a mix of residential dwellings, mixed use blocks and an elementary school.

Table 3 summarizes the Development Proposal and compares the development statistics with that assumed in the Tertiary Plan. Exact numbers of units are not yet finalized, and thus a range in the development yield is displayed.

Table 3: Proposed Development

Plan	Land Use		Statistic	Area
Draft Plan	Residential	Low Density	993-1,714 units[1]	15.93 ha
		Medium Density		9.83 ha
	Mixed-Use	Residential	283 units	1.42 ha
		Commercial	3,542 m^2	
	Institutional	Elementary School	1 School	3.24 ha
	Total[2]			60.10 ha

*Note 1: Possible ranges of low density detached dwellings or medium density townhouse dwellings are included in the Draft Plan in **Attachment 2**.*
Note 2: Toal area includes road widening, collector and local road rights-of-way areas that are not displayed in this land use table.

Attachment 2 includes the Draft Plan prepared by Glen Schnarr & Associates Inc. and dated May 13, 2025.

2.1 Tertiary Plan Comparison

A comparison in development yield between the proposed development Draft Plan and the yield assumed in the Alloa Phase 1 Tertiary Plan Transportation Impact Study (TIS) (Crozier, December 2024) was performed to understand the differences in the plan to that assessed in the associated Transportation Impact Study. **Table 4** contains the proposed Alloa Phase 1 Tertiary Plan development statistics for the 12101 Creditview Road subject lands. Also included is the net change in development yield between the Draft Plan and the development statistics assumed for the Phase 1 Tertiary Plan TIS (i.e. a positive value means Draft Plan proposes more units than what was considered in the Alloa Phase 1 Tertiary Plan TIS).

Table 4: Development Proposal – Alloa Phase 1 Tertiary Plan Development Statistics

Plan	Land Use		Statistic (Draft Plan Net Change)	Area
Tertiary Plan[1]	Residential	Low Density	388 units (+64 to +89 units)	14.03 ha
		Medium Density	701 units (-185 to +561 units)	12.84 ha
	Mixed-Use	Residential	132 units (+151 units)	0.66 ha
		Commercial	1,646 m^2 (+1,896 m^2)	
	Institutional	Elementary School	50 jobs (+0 jobs)	3.25 ha
	Total[1]			**60.10 ha**

Note 1: 12101 Creditview Road Draft Plan represents Zones R, S, T, U, and approximately 40% of Zone W in the Alloa Phase 1 Tertiary Plan.
Note 2: The unit ranges are based on the low, medium, and high development yield scenarios assumed for analysis of this letter.

This Draft Plan originally contemplated a unit yield consistent with the December 2024 Phase 1 Tertiary Plan. However, to provide flexibility in development scenarios at the response of current markets conditions, the proponent is considering additional options that vary in intensity and product type. As such, for the site generated traffic review, this letter explores three different development scenarios to understand impacts associated with the possible development options pursued on this Draft Plan. These scenarios include the low, medium, and high development yield scenarios.

The low scenario represents the lowest units within the development range identified, the medium-yield scenario represents the midpoint of the development yield range identified, and the high-yield scenario represents the upper end of the development yield range. For land use types which could include either detached or townhouse units, the lower end of the range was assumed as detached units, while the higher end of the range was assumed as townhouse units.

3.0 Site Generated Traffic Review

For comparative purposes, trip generation rates were calculated based on the Alloa Phase 1 Tertiary Plan trip generation and development yield, as outlined in the Alloa Phase 1 Tertiary Plan Transportation Impact Study (TIS) (Crozier, December 2024), given the non-linear nature of the trip generation rates outlined in the Institute of Transportation Engineers (ITE) Trip Generation Manual, 11th Edition (September 2021).

Table 5 outlines the trip generation rates based on the Alloa Phase 1 Tertiary Plan trip generation and development yield.

Table 5: Trip Generation Rates

Land Use		Statistic	A.M.		P.M.	
			In	Out	In	Out
Commercial[1]		52,003 m^2	0.35/100 m^2	0.26/100 m^2	0.86/100 m^2	0.89/100 m^2
Residential	Low Density	2,171 units	0.10/unit	0.32/unit	0.40/unit	0.24/unit
	Medium Density	2,565 units	0.05/unit	0.18/unit	0.21/unit	0.13/unit
	Medium-High Density[1]	4,429 units	0.07/unit	0.26/unit	0.18/unit	0.11/unit
Elementary School		150 jobs	1.25/job	1.05/job	0.26/job	0.31/job

Note 1: Includes mixed use development yield.

These trip generation rates were applied to the three Draft Plan development scenarios described in **Section 2.1** for the site generated traffic review. **Table 6** outlines the trip generation for the 12101 Creditview Road Draft Plan. It is noted that the reason that detached dwellings goes down for higher unit yield scenarios is that more townhouses would occupy the Draft Plan at the expense of detached dwellings, with a corresponding higher overall trip rate.

Table 6: Trip Generation Forecasts

Land Use	Statistic	A.M. Trips[1]			P.M. Trips[1]		
		In	Out	Total	In	Out	Total
Low-Yield Scenario (993 Low to Medium Density Dwelling Units)							
Low Density Residential (LUC 210)	477 units	46	154	200	193	115	308
Medium Density Residential (LUC 220)	516 units	27	95	122	110	66	177
Mixed-Use Residential (LUC 221)	283 units	19	73	92	52	31	84
Mixed-Use Commercial (LUC 820)	3,542 sq.m	12	9	22	31	32	62
Elementary School (LUC 520)	50 jobs	63	53	115	13	16	29
Alloa Phase 1 Internal Trips[2]	-	31	34	65	25	28	53
Total		**198**	**418**	**616**	**424**	**299**	**712**
Medium-Yield Scenario (1354 Low to Medium Density Dwelling Units)							
Low Density Residential (LUC 210)	465 units	45	150	195	188	113	300
Medium Density Residential (LUC 220)	889 units	46	164	211	190	114	304
Mixed-Use Residential (LUC 221)	283 units	19	73	92	52	31	84
Mixed-Use Commercial (LUC 820)	3,542 sq.m	12	9	22	31	32	62
Elementary School (LUC 520)	50 jobs	63	53	115	13	16	29
Alloa Phase 1 Internal Trips[2]	-	37	40	77	30	35	65
Total		**222**	**489**	**711**	**504**	**340**	**844**
High-Yield Scenario (1714 Low to Medium Density Dwelling Units)							
Low Density Residential (LUC 210)	452 units	43	146	189	182	109	292
Medium Density Residential (LUC 220)	1262 units	66	233	299	270	162	432
Mixed-Use Residential (LUC 221)	283 units	19	73	92	52	31	84
Mixed-Use Commercial (LUC 820)	3,542 sq.m	12	9	22	31	32	62
Elementary School (LUC 520)	50 jobs	63	53	115	13	16	29
Alloa Phase 1 Internal Trips[2]	-	42	47	89	36	41	77
Total		**245**	**561**	**807**	**585**	**391**	**976**

Note 1: Rounding may cause the appearance of discrepancies.
Note 2: The internal trips are scaled based on the new development yield of the Draft Plan but based on forecasts from the Tertiary Plan.

The 12101 Creditview Road Draft Plan is expected to generate up to 807 and 976 two-way vehicle trips during the weekday a.m. and p.m. peak hours, respectively.

3.1 Tertiary Plan Comparison

The Alloa Phase 1 Tertiary Plan was split into zones for the purpose of trip distribution and assignment. The total Tertiary Plan trip generation was also divided into these zones, based on the proportional area of each zone in comparison to the total area for each land use. The 12101 Creditview Road Draft Plan is representative of the Zones R, S, T, U and a portion of Zone W, as outlined in the Alloa Phase 1 Tertiary Plan TIS (Crozier, December 2024).

Table 7 outlines the trip generation for the 12101 Creditview Road Lands based on the 12101 Creditview Road Draft Plan and the zonal approximation of the Alloa Phase 1 Tertiary Plan.

Table 7: Trip Generation (Comparison)

Plan	Land Use	Statistic	A.M. Trips[1]			P.M. Trips[1]		
			In	Out	Total	In	Out	Total
Tertiary Plan Assumption	Low Density Residential (LUC 210)	395 units	37	125	163	157	94	251
	Medium Density Residential (LUC 220)	670 units	36	130	166	150	90	240
	Mixed-Use Residential (LUC 221)	132 units	9	34	43	24	15	39
	Mixed-Use Commercial (LUC 820)	1,646 sq.m	6	4	10	14	15	29
	Elementary School (LUC 520)	50 jobs	63	53	115	13	16	29
	Alloa Phase 1 Internal Trips[2]	-	35	39	74	28	32	60
	Total		**186**	**384**	**570**	**387**	**261**	**647**
Draft Plan – Scenarios Comparison	**Low Yield Scenario**	**Total**	**198**	**418**	**616**	**424**	**288**	**712**
		Net Change	**+12**	**+33**	**+45**	**+37**	**+27**	**+65**
	Medium-Yield Scenario	**Total**	**222**	**489**	**711**	**504**	**340**	**844**
		Net Change	**+36**	**+105**	**+141**	**+118**	**+79**	**+197**
	High-Yield Scenario	**Total**	**245**	**561**	**807**	**585**	**391**	**976**
		Net Change	**+59**	**+177**	**+236**	**+198**	**+130**	**+328**

Note 1: Rounding may cause the appearance of discrepancies.
Note 2: For the Tertiary Plan, the internal trips are estimated by a zonal approach. For the Draft Plan, the internal trips are scaled based on the new development yield of the Draft Plan but based on forecasts from the Tertiary Plan.

In comparison to trip generation for the Proposed Development outlined in the Alloa Phase 1 Tertiary Plan Transportation Impact Study, the Draft Plan is expected to generate more vehicle trips during the weekday a.m. and the weekday p.m. peak hours.

The low-yield development scenario trip forecast falls generally in line with the Alloa Phase 1 Tertiary Plan TIS assumptions, while the medium-yield scenario represents an increase in trip generation of 141 (20%) and 197 (23%) two-way trips during the a.m. and p.m. peak periods, respectively. The high-yield scenario represents higher increases in trip generation forecasts compared to Tertiary Plan assumptions.

As trip generation associated with the low-yield scenario is only marginally higher than that assumed from the Tertiary Plan study, the recommendations associated with the Tertiary Plan study can be considered valid.

Trip generation is expected to be notably higher under the high-yield development scenario in particular; however, the traffic operations results at the boundary road intersections in the previously submitted Tertiary Plan TIS suggest that capacity is available to accommodate increases in traffic growth – but increases in auxiliary turn lane storage lengths on the external road network may be required.

A review of traffic operations at the nearby intersections to the 12101 Creditview Road Draft Plan was performed using the results of the previously submitted Alloa Phase 1 Tertiary Plan Transportation Impact Study. The intersections reviewed include those that are within or border the 12101 Creditview Road subject lands, as well as external arterial road network intersections with roadways that pass near or through the subject lands. The list of these key intersections is included below:

- Creditview Road and Street “B” (Tim Manley Avenue)
- Creditview Road and Street “A” (Welsh Avenue)
- Mayfield Road and Thornbush Boulevard / Street “F” (Blackhorse Drive)
- Mayfield Road and Brisdale Drive / Street “E” (Speersville Drive)
- Chinguacousy Road and Tweedhill Avenue / Street “A”
- Chinguacousy Road and Tim Manley Avenue / Street “B”
- Street “B” and Street “F”
- Street “B” and Street “E”
- Street “A” and Street “F”
- Street “A” and Street “E”

Based on the previously submitted Tertiary Plan, the most affected nearby study intersections are operating satisfactorily, at a LOS “C” or better for Chinguacousy Road and Tim Manley Avenue / Street B, and at a LOS “B” or better at the remaining intersections assessed during the weekday peak hours. In addition, a maximum movement or intersection volume-to-capacity ratio of 0.86 at the intersection of Chinguacousy Road and Tim Manley Avenue, and 0.65 at the remaining study intersections was observed. These results indicate that the network has reserve capacity to accommodate increases in traffic volumes that may be associated with higher development yields; however, additional analysis will be required to confirm impacts to individual turning movements, and further requirements for signal timing optimization, increases in auxiliary turn lane storage lengths and if additional auxiliary turn lanes may be required.

Attachment 1 includes excerpts from the Alloa Phase 1 Tertiary Plan TIS. **Attachment 3** includes the Level of Service definitions. **Attachment 4** outlines the 2041 Future Total traffic operation at these key intersections from the previously submitted Alloa Phase 1 Tertiary Plan TIS.

Moreover, as individual Draft Plans advance, some with lower trip generation yields, increased trip generation in one parcel may be offset by reduced trip generation in another. Accordingly, we recommend the Tertiary Plan Transportation Study be revised to identify mitigation measures that may be required to support higher-yield development scenarios as part of sensitivity analyses. This approach intends to avoid a piecemeal process of confirming traffic volumes and impacts associated with individual Draft Plan scenarios, considering the comprehensive nature of the Tertiary Plan transportation Study.

We also understand that the details of the internal Draft Plan may be further refined, as different development yields may warrant different configuration of internal local roadways. Accordingly, Internal site-specific details such as internal local road traffic controls should also be confirmed in future applications once development yields and details have been confirmed.

Recognizing that the high-end development scenario of the 12101 Creditview Road Draft Plan could result in an approximately 236 and 328 net trip increase in the weekday a.m. and p.m. peak hours, respectively, it is recommended that the internal traffic controls and auxiliary turn storage lane lengths be reassessed in a forthcoming Alloa Phase 1 Tertiary Plan TIS update. An Alloa Phase 1 Tertiary Plan TIS update would confirm whether increases in auxiliary turn storage lane lengths due to 95th percentile queuing projections or internal intersection traffic signal control upgrades are required. Overall, however, the Alloa Phase 1 Tertiary Plan TIS traffic operations indicate that there is room to accommodate increased vehicle trips.

4.0 Recommendations

The Alloa Phase 1 Tertiary Plan Transportation Impact Study (TIS) (Crozier, December 2024) outlined recommendations to support the Alloa Phase 1 Lands, which are expected to remain valid should the low or medium density yield scenarios for the Subject Draft Plan advance. However, the Tertiary Plan TIS should be updated to confirm the recommendations required to support the subject Draft Plan. The section herein reviews the multi-modal transportation network recommendations as it relates to the 12101 Creditview Road Draft Plan.

4.1 Automobile

As part of the Alloa Phase 1 Tertiary Plan TIS (Crozier, December 2024), **Table 8** outlines the automobile recommendations were identified within the 12101 Creditview Road Draft Plan. Despite that updates to the study will be needed, the requirements for transportation improvements identified in **Table 8** are expected to be relatively similar to those identified in the future study update, particularly if the low end development yield scenario is pursued.

Table 8: Alloa Phase 1 Tertiary Plan (December 2024) Relevant Recommendations

Location	Improvement	Responsibility
Mayfield Road and Brisdale Drive / Speersville Drive/Street E	Implement Signal Control	Region/ Proponent
	Implement auxiliary turn lanes for the following movements: • EBL: 30 m • SBL: 55 m	
Creditview Road & Tim Manley Avenue/Street B	Implement signal control.	Town/ Proponent
	Implement auxiliary turn lanes for the following movements: • WBL: 30 m	
Creditview Road & Welsh Avenue/Street A	Implement signal control.	Town/ Proponent
	Implement auxiliary turn lanes for the following movements: • WBL: 30 m	
Tim Mnaley Avenue/Street B & Blackhorse Drive/Street F	Implement all-way stop control.	Proponent
	Implement auxiliary turn lanes for the following movements: • EBL: 30 m • WBL: 30 m	
Tim Manley Avenue/Street B & Speersville Drive/Street E	Implement all-way stop control.	Proponent
	Implement auxiliary turn lanes for the following movements: • EBL: 30 m • WBL: 30 m	
Welsh Avenue/Street A & Blackhorse Drive/Street F	Implement all-way stop control.	Proponent
Welsh Avenue/Street A & Speersville Drive/Street E	Implement all-way stop control.	Proponent

Attachment 1 includes excerpts from the Alloa Phase 1 Tertiary Plan TIS (Crozier, December 2024). However, as noted in **Section 3.1**, these recommendations should be further reviewed in the forthcoming Tertiary Plan TIS Update, to confirm revisions to these recommendations associated with the higher yield development scenarios.

4.2 Active Transportation

Active transportation facilities, including sidewalks and pedestrian crossings, are proposed throughout the Draft Plan. Both sides of all streets (apart from laneways) are recommended to have sidewalks and/or multi-use paths (MUPs). Pedestrian crossings consistent with the Alloa Phase 1 Tertiary Plan TIS (Crozier, December 2024) will be provided in this Draft Plan.

Since the Tertiary Plan Transportation Study (December 2024), further correspondence with Town staff has resulted in revisions to the recommended cross-sections within the Alloa Secondary Plan lands. Key revisions, which are reflected in the Subject Draft Plan will include the following features:

- **Tim Manley Avenue (29 m Right-of-Way)**
    - 3.3 m MUPs on both sides
    - Parking permitted on both sides (via Layby)
- **Collector Roads (22 m Right-of-Way)**
    - 3.3 m MUP on one side (fronting parks and schools)
    - 1.8 m sidewalk on other side
    - Parking permitted on both sides (alternating)
- **Local Roads (18 m Right-of-Way)**
    - 1.8 m sidewalks on both sides
    - Parking on one side

Attachment 5 includes the pedestrian circulation plan, prepared by GSAI. It is expected that the MUP along Welsh Avenue (Street A) will be on the north side to run alongside the proposed elementary school block, along the east side of Blackhorse Drive (Street F) for the same reason, and along the east side of Speersville Drive.

4.3 Transit

The Alloa Phase 1 Tertiary Plan TIS (Crozier, December 2024) outlined a proposed transit network to service the Alloa Phase 1 Lands. The 12101 Creditview Road Draft Plan can be serviced by the proposed new transit route that operates along Speersville Drive (Street E), as well as the extension of Brampton Local Transit Route 27, which is proposed to run along Welsh Avenue (Street A) and Blackhorse Drive (Street F).

Attachment 6 includes the proposed transit network for the Alloa Phase 1 Lands.

5.0 Conclusions

The 12101 Creditview Road Draft Plan is located within the Alloa Phase 1 Tertiary Plan Lands, for which a Transportation Impact Study (TIS) (Crozier, December 2024) was prepared.

The 12101 Creditview Road Draft Plan contemplates a range of development density scenarios, referred to in this letter as low, medium and high-yield development scenarios. The trip generation associated with the low yield scenario is generally consistent with the Tertiary Plan TIS (December 2024); and should this configuration be pursued the Tertiary Plan recommendations can be considered valid.

While the medium and high-yield scenarios represent increased trip generation forecasts compared to the previously submitted Tertiary Plan, 2041 future total traffic operations (Tertiary Plan TIS, Dec 2024) on the boundary road indicate that reserve capacity exists on the boundary road network to accommodate increases in traffic growth. However, we recommend a detailed review of these scenarios as part of forthcoming Tertiary Plan TIS update to further confirm impacts (delays and queues) associated with higher-yields and confirm any additional mitigation measures (increases in auxiliary turn lane storage, signal timing optimization, internal traffic control, etc.) that may be warranted to support these yields.

The forthcoming Tertiary Plan Update should therefore review these high-yield scenarios in greater detail, recognizing that as individual Draft Plans advance, increased trip generation in one parcel may be offset by reduced trip generation in another.

The Draft Plan also reflects the revised cross-sections per recent discussion with Town staff for Tim Manley Avenue, collector roads and local roads within the Secondary Plan area. The revised cross-sections for the following roadways will include:

- **Tim Manley Avenue (29 m Right-of-Way)**
    - 3.3 m MUPs on both sides
    - Parking permitted on both sides (via Layby)
- **Collector Roads (22 m Right-of-Way)**
    - 3.3 m MUP on one side (fronting parks and schools)
    - 1.8 m sidewalk on other side
    - Parking permitted on both sides (alternating)
- **Local Roads (18 m Right-of-Way)**
    - 1.8 m sidewalks on both sides
    - Parking on one side

While these revised cross-sections will be detailed as part of the forthcoming Alloa Secondary Plan Transportation Needs Assessment Update, the most recent requests by the Town have been reflected in this Draft Plan in advance.

Should you have any questions or require any further information, please do not hesitate to contact the undersigned.

Respectfully submitted by,

C.F. CROZIER & ASSOCIATES INC.

Aidan Hallsworth, EIT
Engineering Intern, Transportation

C.F. CROZIER & ASSOCIATES INC.

Michael A. Linton, MASc., P.Eng., Associate
Senior Project Manager, Transportation

Enclosed
Attachment 1: Alloa Phase 1 Tertiary Plan Transportation Impact Study Excerpts
Attachment 2: Draft Plan
Attachment 3: Level of Service Definitions
Attachment 4: Alloa Phase 1 Tertiary Plan Transportation Impact Study – 2041 Future Total Key Intersection Operations
Attachment 5: Pedestrian Circulation Plan
Attachment 6: Proposed Transit Network

/AH/my

J:\2400\2448 - Alloa Landowners Group\6683 - Alloa Development Area\Letters\2025.05.22_12101 Creditview Road Transportation Conformance Letter\2025.06.20 12101 Creditview Road Transportation Conformance Letter.docx

Attachment 1:

Alloa Phase 1 Tertiary Plan Transportation Impact Study Excerpts

TRANSPORTATION IMPACT STUDY

ALLOA PHASE 1 LANDS
TERTIARY PLAN

TOWN OF CALEDON
REGION OF PEEL

PREPARED FOR:

ALLOA PHASE 1 LANDOWNERS GROUP INC.

PREPARED BY:

C.F. CROZIER & ASSOCIATES INC.
211 YONGE STREET, SUITE 600
TORONTO, ON M5B 1M4

DECEMBER 2024

CFCA FILE NO. 2448-7006

CROZIER

1.2 Development Proposal

The Alloa Phase 1 Tertiary Plan proposes a mixed-use community comprising 26,724 population and jobs across a number of low, medium and high-density residential uses, in addition to commercial, institutional and recreational uses. As outlined in the Tertiary Plan and development statistics prepared by Glen Schnarr & Associates Inc., dated August 20, 2024, and June 3, 2024, respectively, the Alloa Phase 1 Lands consists of 7,203 residential units and 27,478 m^2 of commercial gross floor area, as well as mixed-use areas consisting of 1,962 residential units and 24,525 m^2 commercial gross floor area.

In addition to the existing road network and planned capital works by the Town of Caledon (Town), Region of Peel (Region) and Ontario Ministry of Transportation (MTO), the Tertiary Plan also proposes an internal network of collector and local roads, intended to support multimodal connectivity within the Secondary Plan area and to the external study road network.

Table 1 summarizes the Development Proposal.

Table 1: Development Proposal

Land Use	Type	Statistic[1]	Area[1]	Jobs/Population[1]
Commercial		27,478 m^2	12.49 ha	550 jobs
Mixed Use		24,525 m^2	9.81 ha	491 jobs
		1,962 units		4,061 people
Residential	Low Density	2,171 units	72.35 ha	7,901 people
	Medium Density	2,565 units	42.75 ha	8,465 people
	Medium-High Density	2,467 units	16.44 ha	5,106 people
Elementary School		3 schools	8.91 ha	150 jobs
Parks		-	15.52 ha	-

Note 1: Alloa Phase 1 statistics based on the latest Alloa Secondary Plan Development Statistics, dated June 3, 2024, from Glen Schnarr & Associates Inc.

Figure 2 illustrates the Alloa Phase 1 Tertiary Plan. **Appendix A** includes the Alloa Phase 1 Tertiary Plan as well as the proposed statistics.

LEGEND

RESIDENTIAL
- DETACHED
- TOWNHOUSE
- MEDIUM - HIGH DENSITY
- MIXED-USE

COMMERCIAL
- COMMERCIAL BLOCK

INSTITUTIONAL
- ELEMENTARY SCHOOLS

OPEN SPACE
- NEIGHBOURHOOD PARK
- OPEN SPACE
- NATURAL HERITAGE SYSTEM (WOODLOT)
- NATURAL HERITAGE SYSTEM
- SWM PONDS
- GREENBELT PLAN AREA

OTHER
- SECONDARY PLAN BOUNDARY
- BLOCK PLAN BOUNDARY
- HIGHWAY 413 FOCUSED ANALYSIS AREA
- MUNICIPAL INFRASTRUCTURE
- FUTURE EMPLOYMENT
- FUTURE RESIDENTIAL

HIGHWAY 413
HIGHWAY 413 TRANSITWAY
NHS (GREENBELT) 1.30ha (3.21ac)
NHS (WOODLOT) 0.04ha (0.10ac)
NHS (CHANNEL & BUFFERS) 6.98ha (17.25ac)
NHS (GREENBELT) 3.42ha (8.45ac)
NHS (WOODLOT) 3.61ha (8.92ac)
MEDIUM - HIGH DENSITY RESIDENTIAL 1.05ha (2.59ac)
MEDIUM - HIGH DENSITY RESIDENTIAL 0.86ha (2.13ac)
MEDIUM - HIGH DENSITY RESIDENTIAL 0.42ha (1.04ac)
MEDIUM - HIGH DENSITY RESIDENTIAL 0.60ha (1.48ac)
STREET 'C'
NEIGHBOURHOOD PARK 2.76ha (6.82ac)
STREET 'F'
NHS (WOODLOT & WETLAND) 8.10ha (20.02ac)
NHS (BUFFER) 1.24ha (3.06ac)
STREET 'D'
BIRKHEAD DRIVE
SWM POND 4.11ha (10.16ac)
NEIGH. PARK 2.22ha (5.49ac)
CATHOLIC ELEMENTARY SCHOOL 2.43ha (6.00ac)
SWM POND 3.76ha (9.29ac)
NHS (CHANNEL) 6.12ha (15.12ac)
NP
PHASE 2 AREA
NHS (CHANNEL) 3.90ha (9.64ac)
NHS (CHANNEL & BUFFER) 10.22ha (25.25ac)
LINDSAY AVENUE
CREDITVIEW ROAD
CHINGUACOUSY ROAD
MEDIUM - HIGH DENSITY RESIDENTIAL 0.82ha (2.03ac)
STREET 'F'
SWM POND 2.28ha (5.63ac)
NHS (WOODLOT) 2.14ha (5.29ac)
SWM POND 1.61ha (3.98ac)
STREET 'B'
TIM MANLEY AVENUE
SW
COMMUNITY PARK 5.53ha (13.66ac)
NHS (WOODLOT & WETLAND) 1.82ha (4.50ac)
NHS (BUFFER) 0.57ha (1.41ac)
NEIGH. PARK 2.11ha (5.21ac)
NEIGHBOURHOOD PARK 2.22ha (5.49ac)
MEDIUM - HIGH DENSITY RESIDENTIAL 3.50ha (8.65ac)
SWM POND 1.69ha (4.18ac)
MEDIUM - HIGH DENSITY RESIDENTIAL 2.11ha (5.21ac)
PUBLIC ELEMENTARY SCHOOL 3.25ha (8.03ac)
PUBLIC ELEMENTARY SCHOOL 3.24ha (8.00ac)
TWEEDHILL AVENUE
STREET 'A'
STREET 'G'
STREET 'E'
ALLOA RESERVOIR, PUMPING STATION & FEEDMAIN
MEDIUM - HIGH DENSITY RESIDENTIAL 4.70ha (11.61ac)
JAMES MAYNARD ROAD
COMMERCIAL 9.72ha (24.02ac)
COMMERCIAL 2.78ha (6.87ac)
SWM POND 4.31ha (10.65ac)
MIXED-USE 4.51ha (11.14ac)
MIXED-USE 2.80ha (6.92ac)
SWM POND 2.90ha (7.17ac)
MIXED-USE 1.35ha (3.34ac)
MIXED-USE 1.41ha (3.48ac)
NHS (COMPENSATION) 0.39ha (0.96ac)
CALEDON WORKS YARD
MAYFIELD ROAD
EXISTING HYDRO TRANSFORMER
ROBERT PARKINSON DRIVE
THORNBRUSH BOULEVARD
BRISDALE DRIVE
CLOCKWORK DRIVE

ALLOA SECONDARY PLAN
TERTIARY PLAN - PHASE 1

PART OF LOTS 18-21, CONCESSIONS 3 & 4, TOWNSHIP OF CHINGUACOUSY
TOWN OF CALEDON, REGIONAL MUNICIPALITY OF PEEL

0 50 100 150 200 250 300

SCALE 1:4000
AUGUST 20, 2024

GSAI
Glen Schnarr & Associates Inc.

Table 12: Town of Caledon Mode Share Targets

Mode	2041 Vision[1]	2051 Vision
Automobile Driver	68%	60%
Automobile Passenger (Carpool)	10%	13%
Transit	3%	6%
Walk	4%	6%
Cycle	1%	1%
Other[2]	15%	14%
Total	**100%**	**100%**
Sustainable Mode Share	*32%*	*40%*

Note 1: Consistent with the Region of Peel's Long Range Transportation Plan (2019).
Note 2: Other includes motorcycle and school bus.

Appendix H outlines the relevant excerpts from the Town of Caledon MMTMP (June 2024).

4.1.5 Town of Caledon Active Transportation Plan

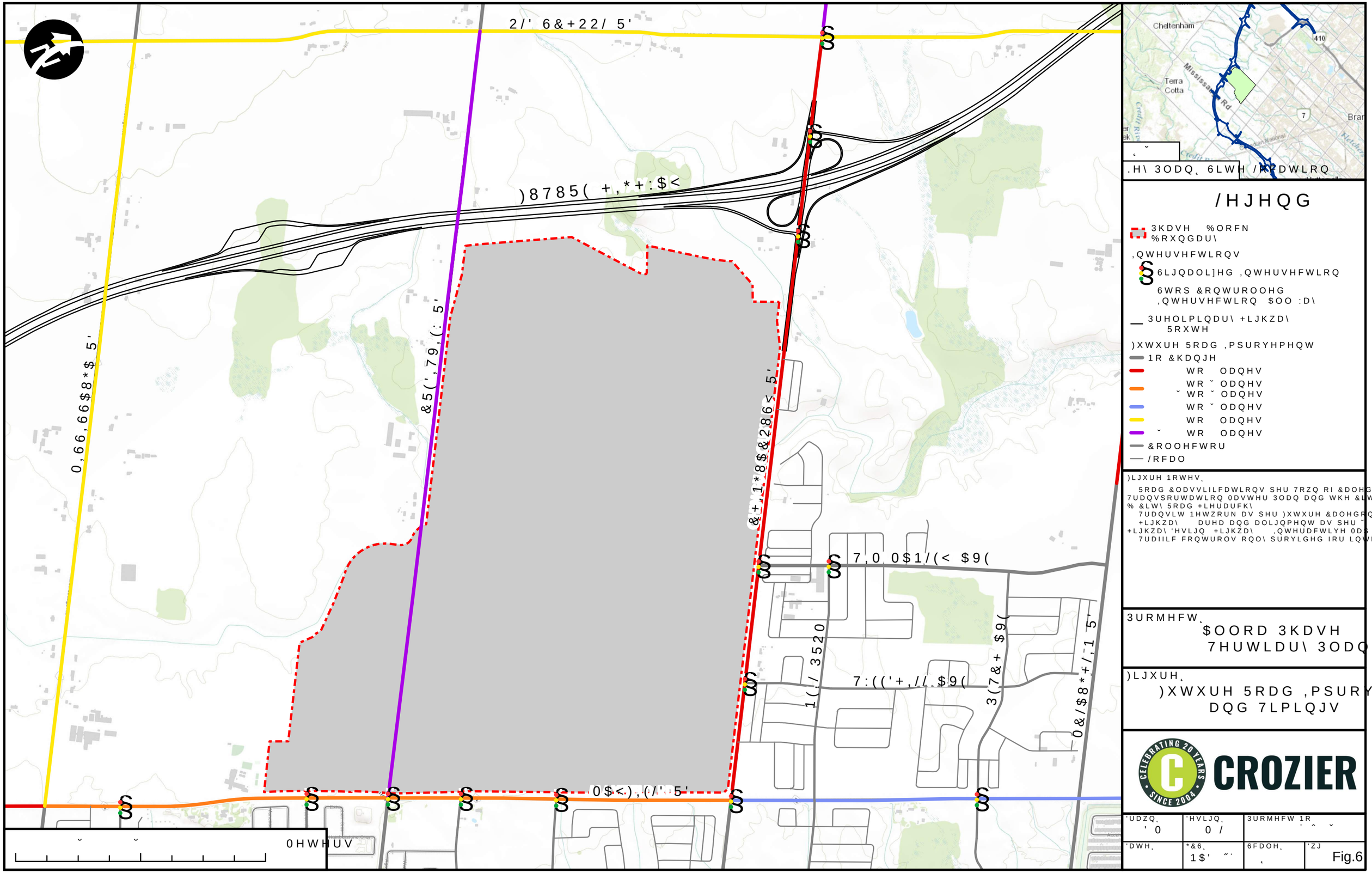
The Town of Caledon recently completed the Active Transportation Master Plan (June 2024), which supplements the Town's Multi-Modal Transportation Master Plan (Town of Caledon, June 2024) by providing more details and policies objectives concerning sidewalks, dedicated cycling facilities and trails. Notably, the plan identifies preferred design cross-sections for multi-use trails connecting neighbourhoods and as walking trails and provides a recommended active transportation network for on-road and off-road facilities. In addition, a sidewalk policy framework which identifies where sidewalks should be implemented, on one or both sides, was identified and has also been developed as part of this plan.

Appendix H outlines the relevant excerpts from the Town of Caledon Active Transportation Master Plan (June 2024).

4.2 Future Transportation Network

In the vicinity of the Alloa Phase 1 Lands, there are many planned transportation network improvements. Many of these improvements were identified in the relevant planning documents outlined in **Section 4.1**. This section herein reviews the relevant future background improvements.

Figure 6 summarizes the future road improvements and timings of these improvements within the study area.



/HJHQG

- 3KDVH %ORFN %RXQGDU\
- ,QWHUVHFWLRQV
  - 6LJQDOL]HG ,QWHUVHFWLRQ
  - 6WRS &RQWUROOHG ,QWHUVHFWLRQ $OO :D\
- 3UHOLPLQDU\ +LJKZD\ 5RXWH
-)XWXUH 5RDG ,PSURYHPHQW
  - 1R &KDQJH
  - WR ODQHV
  - WR ODQHV
  - WR ODQHV
  - WR ODQHV
  - WR ODQHV
  - &ROOHFWRU
  - /RFDO

)LJXUH 1RWHV¸

5RDG &ODVVLILFDWLRQ SHU 7RZQ RI &DOHGRQ 7UDQVSRUWDWLRQ 0DVWHU 3ODQ DQG WKH &LW\ RI % &LW\ 5RDG +LHUDUFK\
7UDQVLW 1HWZRUN DV SHU)XWXUH &DOHGRQ 2 +LJKZD\ DUHD DQG DOLJQPHQW DV SHU ˇ 3U +LJKZD\ 'HVLJQ +LJKZD\ ,QWHUFKDQJH 0DS 7UDIILF FRQWURO RQ SURYLGHG IRU LQWHU

3URMHFW¸

$OORD 3KDVH 7HUWLDU\ 3ODQ

)LJXUH¸

)XWXUH 5RDG ,PSURYHPHQWV DQG 7LPLQJV

CROZIER

'UDZQ¸	'HVLJQ¸	3URMHFW 1R
' 0	0 /	
'DWH¸	*&6¸ 1$'	6FDOH¸

Fig.6

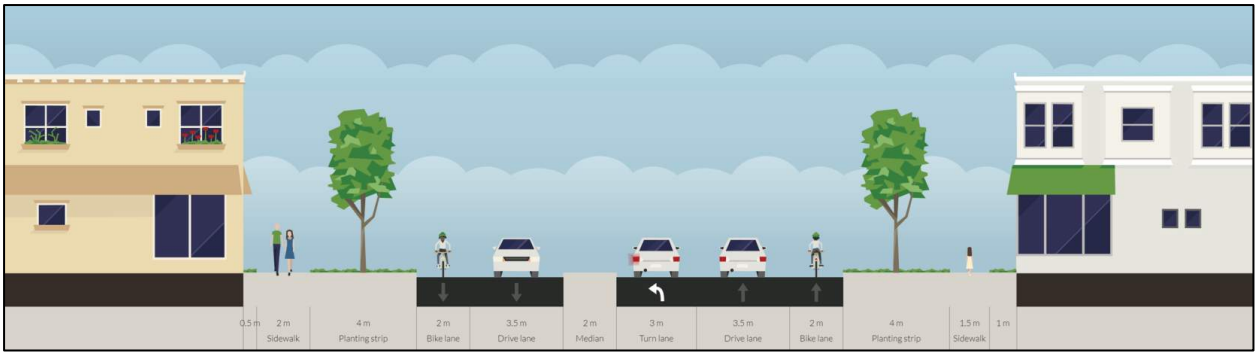


Figure 13: Tim Manley Avenue Cross-Section (29 m ROW) (Wood)

Appendix H includes the relevant Tim Manley Avenue excerpts.

4.2.6 Brampton Transit Expansion

There are transit expansion plans, as detailed in the Brampton Transit Public Information Session for the Annual Transit Service Plan (Brampton Transit, March 2024), that are of relevance to the study area. The following changes to existing transit operations in **Section 2.2** are detailed in the plan and are expected to be implemented in the near future:

- Route 25 (Edenbrook): While this proposed change does not directly impact the Subject Lands, a transit route option to service the completed elements of the adjacent Mayfield West Phase 2 community is outlined and is expected to be implemented in the future.

- NEW Route 504 (Züm Chinguacousy): Brampton Transit is planning to implement a Chinguacousy Züm service between 2024 and 2026. This new express transit route will operate Sandalwood Parkway and Steeles Avenue along Chinguacousy Road. The route is planned to continue east on Steeles Avenue, connecting at Sheridan College, Brampton Gateway, and at Bramalea GO, where the line terminates. The implementation of this service would result in several transit network changes, including the following:

    - Route 4/4A (Chinguacousy): The route will continue to operate local service, with realignment planned. Route 4 will operate along Sandalwood Parkway, Brisdale Road and Wanless Drive, and Route 4A will service Mount Pleasant GO Station via Bovaird Drive.

    - Route 104 (Chinguacousy Express): The current Route 104 will be replaced by the proposed Züm express transit route.

    - NEW Brisdale Drive Transit Route: A new transit route is planned along Brisdale Drive from and to Mount Pleasant GO Station, with the routing reaching and looping at Mayfield Road. This route will replace the current Route 4 service along Brisdale Drive.

The public information session also outlines long-term transit service concepts, including potential extensions and new transit routes into the Town of Caledon and the Alloa Community. These potential extensions and new transit routes are expected to be implemented in the future, and may be refined at a later stage.

Appendix H outlines the relevant future transit excerpts.

4.2.7 Natural Heritage System Multi-Use Trails

To support the creation of sustainable communities in the Town, the Town of Caledon's Active Transportation Master Plan (ATMP) outlines various active transportation improvements. In addition to the planned improvements outlined in **Section 4.2.1** to **Section 4.2.6**, the ATMP (Town of Caledon, June 2024) identifies multi-use trails, the Settlement Area Boundary Expansion Concept Trails, proposed along the natural heritage system near the Subject Site.

It is anticipated that these trail improvements will be completed in coordination with the Town to support surrounding developments, including the Proposed Development. As 2 of the planned multi-use trails are located within the Subject Lands, the neighbourhood connector and/or walking trail cross-sections are anticipated to be required to accommodate the natural heritage system trails.

Figure 14 outlines the neighbourhood connector and walk trail cross-section proposed in the Alloa Secondary Plan Transportation Needs Assessment (Crozier, July 2024).

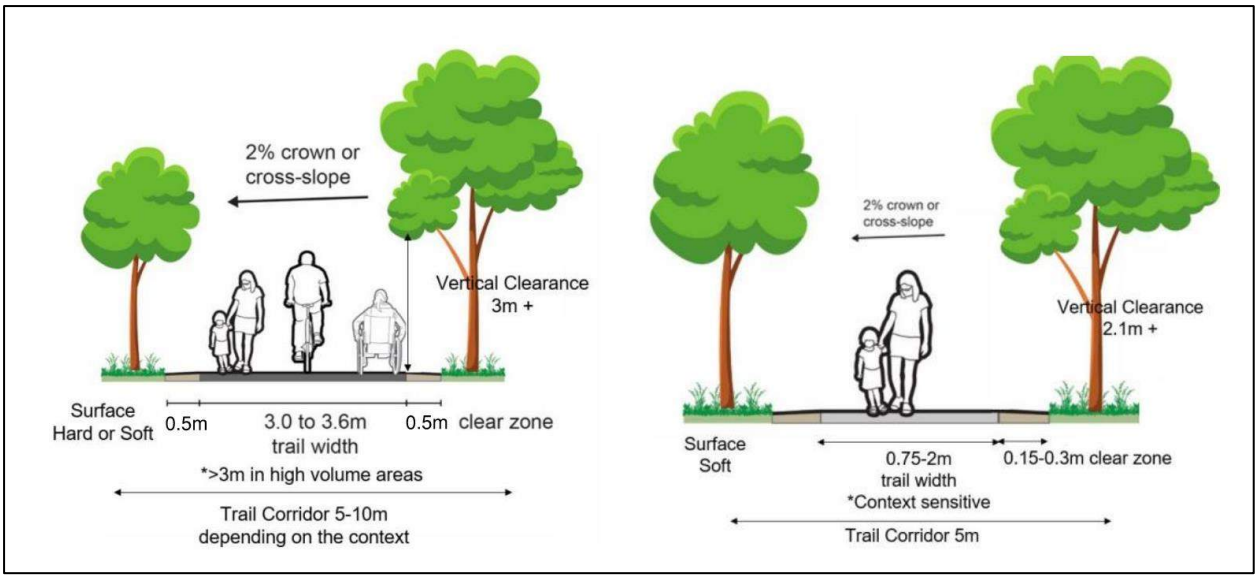


Figure 14: Natural Heritage System Trails - Cross-Section Options (Crozier)

We noted that these sections generally conform with the standard cross-section outlined in the Town of Caledon ATMP (Town of Caledon, June 2024), with the exception of the proposed 0.5 m clear zone, instead of 0.6 m.

Appendix H contains the relevant excerpts regarding the multi-use trails planned near and within the Subject Lands as highlighted in the Town of Caledon's ATMP (June 2024).

4.2.8 Summary

Table 13 summarizes the future roadway improvements in the study area.

Table 13: Planned Improvements in Study Area

Roadway	Improvement	Segment	Year	Source
Mayfield Road	Widening to Six Lanes (Ultimate)	Chinguacousy Road to Hurontario Street	2026	Mayfield Road Construction Timeline (February 2024)
	Widening to Four Lanes (Ultimate)	Winston Churchill Boulevard to Mississauga Road	2028	
	Widening to Five Lanes (Interim)	Mississauga Road to Chinguacousy Road	2028	
	Widening to Six Lanes (Ultimate)	Mississauga Road to Chinguacousy Road	2041	Region of Peel LRTP
Chinguacousy Road	Widening to Four Lanes	Mayfield Road to Mayfield West Phase 2 North Limits	2031	Chinguacousy Road Functional Design[1]
		Mayfield West Phase 2 North Limits to Old School Road	2041	
	Widening to Six Lanes	Bovaird Drive to Mayfield Road	2041	City of Brampton TMP Update
Old School Road	Widening to Four Lanes	Winston Churchill Boulevard to Gore Road	2041	Town of Caledon Draft MMTMP
Highway 413	New Highway	Highway 401 to Highway 400	2031	Assumed
Natural Heritage System Multi-Use Trails		Varies[2]	2031	Assumed

Note 1: As confirmed with Town of Caledon staff. ***Appendix B*** *includes the relevant correspondence.*
Note 2: ***Appendix H*** *includes the relevant Active Transportation Master Plan (Town of Caledon, June 2024) excerpts that outline the natural heritage system multi-use trail locations.*

5.0 Future Background Network Review

This section reviews the future operations of the surrounding transportation network, in a similar approach that was applied to the existing conditions in **Section 3.0**. Consistent with the Existing Mobility Network Review, the automobile operations were reviewed using Synchro software and evaluated based on the Highway Capacity Manual methodology, while active transportation level of service was assigned based on criteria from the York Region Transportation Mobility Plan Guidelines (November 2016).

5.1 Pedestrian Network

The pedestrian level of service (LOS) was reviewed for future background conditions based on the York Region guidelines. **Appendix E** outlines the York Region pedestrian LOS definitions.

Table 14 and **Table 15** summarizes the 2031 and 2041 future background pedestrian LOS, respectively.

6.0 Alloa Secondary Plan Mobility Context

The Alloa Secondary Plan Transportation Needs Assessment (Crozier, July 2024) outlines a recommended mobility network for the Alloa Secondary Plan area. The section herein reviews the Alloa Secondary Plan transportation network as well as the key considerations specifically for the Alloa Phase 1 Tertiary Plan area.

Appendix N outlines the relevant excerpts from the Alloa Secondary Plan Transportation Needs Assessment (Crozier, July 2024).

6.1 Mobility Framework

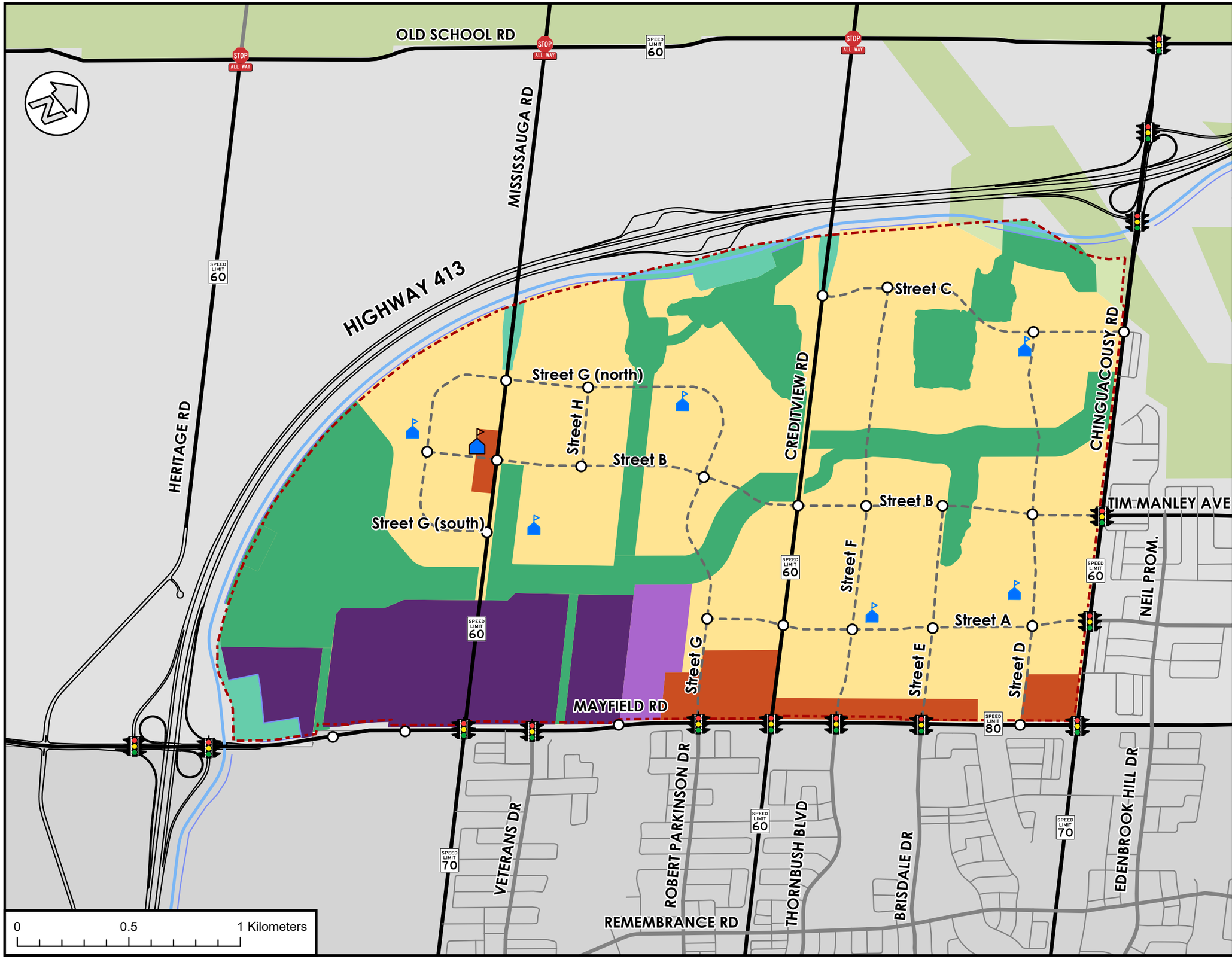
The Alloa Secondary Plan transportation network includes an internal collector road network, active transportation network, including a cycling and trail network, and transit network, comprised of potential routes and bus stop locations. This transportation network is reflected in the Alloa Phase 1 Tertiary Plan.

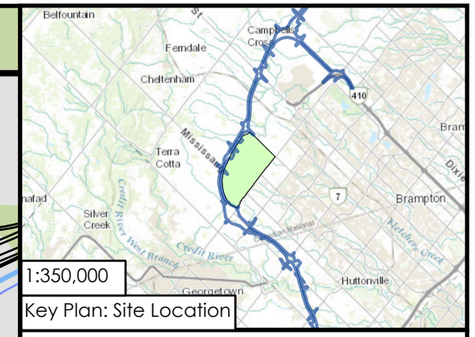
A preliminary transit network was recommended in Section 11.3 of the Alloa Secondary Plan Transportation Needs Assessment (Crozier, July 2024. The conceptual transit network proposed for the Alloa Secondary Plan was developed based on a review of a number of transit plans for the surrounding area and the existing transit operations, similar to those highlighted in **Section 2.2**, and a target to maximize transit stop coverage. The transit planning documents outlining future transit service patterns for the areas in proximity to the Subject Lands include:

- Brampton Transit Public Information Session for the Annual Transit Service Plan (March 2024)
- Town of Caledon Transit Feasibility Study (April 2019)
- Town of Caledon Multi-Modal Transportation Master Plan (June 2024)
- Highway 413 Transportation Corridor – Public Information Session #4 (MTO, October 2023)

This transit plan continues to be recommended upon full buildout of the Secondary Plan. However, these documents were reviewed to determine an interim future transit plan for Alloa Phase 1, which is detailed in **Section 11.0**.

Figure 23, **Figure 24**, and **Figure 25** illustrate the Alloa Secondary Plan's proposed road, active transportation and transit network, respectively.





Key Plan: Site Location

Legend

- Secondary Plan Boundary
- Ontario Greenbelt

Road
- Arterial
- Collector
- Local
- Proposed
- Preliminary Highway (Edge of Pavement)
- Preliminary Transitway
- Preliminary Transitway (Right-of-Way)
- School

Intersections
- Proposed Intersection
- Signalized Intersection
- Stop Controlled Intersection (All-Way)

Proposed Land Use Plan
- Developed Area
- Commercial
- Prestige Employment
- General Employment
- Natural Environment System Area
- Highway 413 Design Area

Figure Notes:

1. Road Classifications per Town of Caledon Multi-Modal Transportation Master Plan and the City of Brampton OP Schedule B City Road Hierarchy
2. Transit Network as per Future Caledon Official Plan 2024
3. Highway 413 area and alignment as per 50% Preliminary Highway Design (Highway 413 Interactive Map, 2024)
4. Alloa Phase 1 Tertiary Plan has been slightly refined since the original submission of the Alloa Secondary Plan. (July 2024)

Project:
Alloa Phase 1
Tertiary Plan

Figure:
Alloa Secondary Plan
Proposed Road Network
(July 2024)

CELEBRATING 20 YEARS SINCE 2004
CROZIER

Drawn:	Design:	Project No.	
D.M	M.L.	2448-7006	
Date:	GCS:	Scale:	Dwg.
2024-10-04	NAD 1983	1:16,000	Fig.23

Table 41: External Primary Vehicle Trip Generation

Land Use	Statistic	A.M. Trips[1]			P.M. Trips[1]		
		In	Out	Total	In	Out	Total
Major Commercial	295,773 ft²	95	72	167	238	245	483
Mixed Use	263,987 ft²	85	64	149	212	219	431
	1,962 units	134	504	638	362	217	579
Low Density Residential	2,171 units	209	701	910	876	525	1,402
Medium Density Residential	2,565 units	133	474	607	549	329	878
Medium-High Density Residential	2,467 units	169	633	802	455	273	728
Elementary School	150 employees	188	158	346	39	47	86
Total		**1,014**	**2,606**	**3,620**	**2,732**	**1,856**	**4,588**

Note 1: Rounding may cause the appearance of discrepancies.

The Alloa Phase 1 Lands are expected to generate 3,620 and 4,588 two-way external primary vehicle trips during the weekday a.m. and p.m. peak hours. As noted in **Section 7.1.3**, a total of 398 and 408 two-way internal trips are also forecast for the Alloa Phase 1 Lands in the weekday a.m. and p.m. peak hours.

7.2 Zonal Disaggregation

Given the scale of the Alloa Phase 1 lands and the intent for consistency with future Draft Plan and Site Plan applications, the Subject Lands were divided into zones to better distribute traffic volumes. The zones are generally bound by the external arterial roads, internal collector road and/or other major features, such as the natural heritage system, Highway 413 corridor or the Alloa Phase 1 limits. However, property lines were also considered in the establishment of the zones to more easily compare the Tertiary Plan study to future Draft Plan applications for consistency.

The Subject Lands were split into 32 zones, lettered A to AF. The site generated trips for each zone were determined based on the proportion of units, GFA or area of land uses in each zone relative to the overall Phase 1 Trip generation.

For the purpose of modelling, local road connections to each zone were assumed reflect a consolidation of several multiple minor local accesses in some cases. This approach was adopted for simplicity, to avoid modelling of an excessive number of accesses or local road connections.

As the property limits for future Draft Plan applications were factored into delineating the zones, in practice traffic within some zones may use a local road connection of an adjacent zone due network orientation and local street design. However, for the purpose of the analysis herein, the

trips associated with a particular zone were assigned to the local road connection within that zone. This approach allows for an easier comparison between trip assignment forecasts with the Tertiary Plan study and future reports prepared in support of Draft Plan application.

Figure 35 illustrates the zonal system and future total study intersections for the trip assignment.

CREDITVIEW RD
Creditview Road and Old School Road
OLD SCHOOL RD
Chinguacousy Road and Old School Road
CHINGUACOUSY RD
OLD SCHOOL RD
FUTURE HIGHWAY 413
Chinguacousy Road & Hwy. 413 WB
Chinguacousy Road & Hwy. 413 EB
PETCH AVE
Mayfield Road and Queen Mary Drive / Petch Ave
MAYFIELD RD
MISSISSAUGA RD
Mayfield Road and Veterans Drive
MAYFIELD RD
VETERANS DR
Zone A
Street "C" & Street "F" / Zone A Access 1
STREET C
Creditview Road & Street "C"
Street "C" & Zone D Access
Street "C" & Zone A Access 2
Zone B
Zone C
Zone D
Zone E
Street "F" & Zone E Access / Zone F Access
Zone F
Zone I
Zone J
Street "C" & Street "D" / Zone B+C Access 1
Street "C" & Zone B+C Access / Zone J Access
Chinguacousy Road & Street "C" / Local Street
Creditview Road & McMinn Drive
Street "D" & McMinn Drive
MCMINN DR
Street "F" & McMinn Drive
McMinn Drive & Zone H Access
McMinn Drive & Zone I Access / Zone K Access
Zone G
Zone H
Zone K
Street "F" & Zone G Access
CREDITVIEW RD
CHINGUACOUSY RD
Creditview Road & Zone L Access
Zone L
Street "F" & Zone R E. Access / Zone S Access
Zone S
Street "D" & Zone Y Access / Zone Z Access
Zone Y
Zone Z
STREET D
Creditview Road & Street "B"
Zone R
Street "B" & Street "F"
STREET B
Street "B" & Street "E"
Street "B" & Zone R Access / Zone T Access
Street "B" & Zone S Access / Zone U Access
Street "B" & Zone Y S. Access / Zone AA Access
Street "B" & Street "D"
Tim Manley Avenue & Neil Promenade
TIM MANLEY AVE
Street "B" & Zone AC+AD Access
Chinguacousy Road & Tim Manley
Street "F" & Zone T Access
STREET E
Zone AA
Zone AC
Zone T
Zone U
STREET F
Street "E" & Zone U Access / Zone AA+AB Access
Street "D" & Zone AA+AB Access / Zone AC+AD Access
Zone N/O
Zone M
Zone AB
Zone AD
Chinguacousy Road & Tweedhill Avenue / Street "A"
Street "A" / Zone M Access & Street "G" / Zone N Access 2
Creditview Road & Street "A"
Street "A" & Street "E"
Zone AA
Street "A" & Street "D"
Zone AC
Zone P
STREET A
Street "A" & Zone N+O S. Access 1 / Zone P Access
Street "A" & Zone T Access / Zone V Access
Street "A" & Street "F"
Street "A" & Zone U Access / Zone W Access
Street "A" & Zone AA+AB Access / Zone AE Access
Street "D" & Zone AE Access / Zone AF Access
STREET G
Street "G" & Commercial Access 1
Zone V
Zone W
Zone AE
Zone AF
Zone Q
Street "F" & Zone V Access
Street "E" & Zone W+X Access / Zone AE Access
Street "D" & Zone AF Access
Street "G" & Commercial Access 2
Zone X
Mayfield Road & Commercial Access 3
Mayfield Road & Thornbush Boulevard
Mayfield Road & Chinguacousy Road
MAYFIELD RD
Mayfield Road & Robert Parkinson
Mayfield Road & Commercial Access 4
Mayfield Road & Creditview Road
Mayfield Road & Brisdale Drive / Street "E"
Mayfield Road & Street "D"
ROBERT PARKINSON DR
THORNBUSH BLVD
BRISDALE DR

Study Intersection
Local Intersection
Proposed Road
Collector
Major Local
Phase 1 Block Boundary
Forecasting Zone Boundary
Block Plan
Existing / Planned Road Classifications
Arterial
Collector
Preliminary Highway (Edge of Pavement)

CROZIER

Alloa Phase 1
Tertiary Plan
Zonal System and Future Total Study Intersections
Fig.35

Table 42 outlines the external primary vehicle trip generation for each zone.

Table 42: Zonal External Primary Vehicle Trip Generation

Zone	A.M. Trips[1]			P.M. Trips[1]		
	In	Out	Total	In	Out	Total
Zone A	35	120	155	148	89	236
Zone B	44	161	205	130	78	208
Zone C	6	20	26	24	14	38
Zone D	3	10	13	12	7	19
Zone E	19	66	84	78	46	124
Zone F	11	38	49	47	28	75
Zone G	1	3	4	4	2	6
Zone H	18	60	78	75	45	120
Zone I	13	45	58	56	34	90
Zone J	18	62	80	76	46	122
Zone K	63	55	118	16	17	33
Zone L	10	37	47	27	16	43
Zone M	6	21	27	25	15	40
Zone N	8	28	36	33	20	52
Zone O	25	95	120	68	41	109
Zone P	8	27	34	32	19	52
Zone Q	95	72	167	238	245	483
Zone R	8	28	37	35	21	55
Zone S	10	34	44	41	24	65
Zone T	34	115	149	140	84	223
Zone U	80	114	194	86	59	145
Zone V	76	208	284	222	159	380
Zone W	30	90	120	102	67	169
Zone X	15	38	53	39	29	68
Zone Y	15	50	64	61	37	98
Zone Z	14	46	60	57	34	92
Zone AA	43	82	125	81	51	132
Zone AB	42	45	87	25	19	44
Zone AC	52	194	247	156	94	249
Zone AD	4	14	18	17	10	26
Zone AE	54	162	216	176	118	295
Zone AF	155	466	620	409	287	696
Total	**1,014**	**2,606**	**3,620**	**2,732**	**1,856**	**4,588**

Note 1: Rounding may cause the appearance of discrepancies.

Appendix K contains details related to the zonal system as well as the calculations and assumptions used for the zonal trip generation forecast.

2041 Horizon Year

Table 59 and **Table 60** outline the 2041 future total traffic operations, including level of service (LOS) and volume-to-capacity (v/c) ratio, at the signalized and unsignalized study intersections, respectively. **Appendix G** contains the detailed capacity analysis worksheets.

Table 59: 2041 Future Total Traffic Operations – Signalized Intersections

Intersection	Performance Metrics						
	Movement	LOS[1]		Delay (s)		v/c ratio[2]	
		A.M.	P.M.	A.M.	P.M.	A.M.	P.M.
Mayfield Road & Queen Mary Drive/Petch Avenue	**Overall**	**C**	**B**	**22**	**16**	**0.71**	**0.56**
	EBL	B	A	19	9	0.01	0.26
	EBTR	C	B	28	18	0.52	0.43
	WBL	A	A	8	7	0.18	0.29
	WBTR	A	B	7	12	0.31	0.54
	NBL	D	E	52	57	0.30	0.26
	NBTR	D	D	49	54	0.02	0.03
	SBL	D	D	49	48	0.71	0.56
	SBTR	D	-	35	-	0.01	-
Mayfield Road & Chinguacousy Road	**Overall**	**C**	**D**	**36**	**41**	**0.85**	**0.82**
	EBL	B	C	14	33	0.34	0.62
	EBT	C	D	25	40	0.59	0.57
	EBR	C	F	23	86	0.14	0.14
	WBL	D	E	49	59	0.63	0.63
	WBT	D	C	41	28	0.42	0.59
	WBR	B	D	19	37	0.05	0.15
	NBL	C	C	32	33	0.40	0.62
	NBTR	D	D	53	50	0.85	0.82
	SBL	D	D	37	51	0.76	0.72
	SBTR	D	D	37	45	0.62	0.55
Chinguacousy Road & Tim Manley Avenue/Street B	**Overall**	**C**	**C**	**25**	**28**	**0.74**	**0.86**
	EBL	C	C	23	23	0.51	0.44
	EBTR	D	C	40	28	0.74	0.33
	WBL	C	C	27	23	0.46	0.31
	WBTR	D	D	46	48	0.74	0.86
	NBL	B	C	19	28	0.06	0.33
	NBT	C	C	25	30	0.58	0.62
	NBR	B	C	20	25	0.13	0.26
	SBL	B	B	15	19	0.48	0.51
	SBT	B	B	13	20	0.29	0.53
	SBR	B	B	11	16	0.04	0.18

Intersection	Performance Metrics						
	Movement	LOS[1]		Delay (s)		v/c ratio[2]	
		A.M.	P.M.	A.M.	P.M.	A.M.	P.M.
Mayfield Road & Brisdale Drive/Street E	**Overall**	**A**	**A**	**6**	**10**	**0.35**	**0.49**
	EBL	A	A	2	8	0.08	0.31
	EBT	A	A	2	3	0.30	0.35
	EBR	A	A	4	5	0.02	0.03
	WBL	A	B	2	12	0.09	0.34
	WBTR	A	A	2	9	0.32	0.37
	NBL	D	D	52	53	0.28	0.24
	NBTR	D	D	50	54	0.16	0.06
	SBL	D	D	41	53	0.35	0.49
	SBT	D	D	38	53	0.07	0.08
Mayfield Road & Thornbush Boulevard/Street F	**Overall**	**B**	**A**	**14**	**5**	**0.47**	**0.64**
	EBL	A	A	3	1	0.11	0.22
	EBT	A	A	2	1	0.28	0.35
	EBR	A	A	5	0	0.00	0.02
	WBL	B	A	13	3	0.07	0.21
	WBT	B	A	16	2	0.33	0.31
	WBR	C	A	33	1	0.03	0.10
	NBL	D	D	51	47	0.21	0.09
	NBTR	D	D	50	47	0.14	0.04
	SBL	D	E	39	59	0.47	0.64
	SBTR	C	D	35	47	0.07	0.06
Mayfield Road & Creditview Road	**Overall**	**B**	**C**	**18**	**25**	**0.65**	**0.57**
	EBL	A	B	8	15	0.19	0.52
	EBT	B	B	13	18	0.31	0.55
	EBR	B	A	13	5	0.04	0.08
	WBL	A	C	8	34	0.33	0.57
	WBT	A	C	8	24	0.36	0.40
	WBR	B	B	11	17	0.01	0.04
	NBL	C	C	34	35	0.31	0.46
	NBT	C	D	35	41	0.34	0.41
	NBR	C	D	33	38	0.11	0.13
	SBL	D	D	44	44	0.36	0.19
	SBT	D	D	49	50	0.65	0.50
	SBR	D	D	41	46	0.11	0.09

Intersection	Performance Metrics						
	Movement	LOS[1]		Delay (s)		v/c ratio[2]	
		A.M.	P.M.	A.M.	P.M.	A.M.	P.M.
Mayfield Road & Robert Parkinson Drive/Street G	**Overall**	**A**	**C**	**7**	**23**	**0.36**	**0.90**
	EBL	A	B	5	12	0.11	0.33
	EBT	A	B	4	18	0.21	0.41
	EBR	A	C	2	28	0.02	0.03
	WBL	A	B	2	14	0.09	0.30
	WBT	A	B	2	14	0.34	0.33
	WBR	A	B	0	18	0.02	0.06
	NBL	D	D	45	35	0.19	0.09
	NBTR	D	D	48	35	0.16	0.09
	SBL	D	E	41	72	0.36	0.90
	SBTR	D	C	45	35	0.08	0.07
Mayfield Road & Veterans Drive	**Overall**	**B**	**A**	**13**	**5**	**0.35**	**0.42**
	EBT	A	A	10	2	0.22	0.30
	EBR	A	A	8	1	0.01	0.02
	WBL	B	A	14	7	0.21	0.42
	WBT	B	A	13	0	0.35	0.21
	NBLR	C	D	29	54	0.15	0.24
Chinguacousy Road & Old School Road	**Overall**	**B**	**B**	**14**	**18**	**0.70**	**0.83**
	EBL	C	B	22	17	0.01	0.01
	EBTR	C	B	25	19	0.42	0.24
	WBL	D	D	36	38	0.70	0.83
	WBTR	C	B	24	19	0.32	0.33
	NBL	A	A	4	9	0.01	0.01
	NBTR	A	B	5	11	0.21	0.36
	SBL	A	B	4	10	0.07	0.12
	SBTR	A	A	5	10	0.18	0.17
Chinguacousy Road & Tweedhill Avenue/Street A	**Overall**	**B**	**B**	**14**	**16**	**0.50**	**0.65**
	EBL	C	C	26	30	0.50	0.42
	EBTR	C	C	25	28	0.38	0.19
	WBLTR	D	D	42	49	0.51	0.65
	NBL	A	A	7	9	0.02	0.11
	NBTR	A	B	10	11	0.37	0.45
	SBL	A	A	8	9	0.06	0.12
	SBTR	A	B	10	12	0.38	0.51
Chinguacousy Road & Street C	**Overall**	**B**	**B**	**17**	**15**	**0.75**	**0.77**
	EBL	C	C	22	26	0.75	0.63
	EBTR	B	B	12	20	0.07	0.04
	WBLTR	B	D	12	36	0.03	0.01
	NBL	B	B	12	12	0.18	0.41
	NBTR	B	A	17	9	0.71	0.51
	SBLT	B	B	13	19	0.42	0.77
	SBTR	B	B	11	14	0.10	0.48

Intersection	Performance Metrics						
	Movement	LOS[1]		Delay (s)		v/c ratio[2]	
		A.M.	P.M.	A.M.	P.M.	A.M.	P.M.
Mayfield Road & Street D	**Overall**	**B**	**B**	**12**	**18**	**0.72**	**0.63**
	EBL	A	B	8	13	0.19	0.52
	EBT	A	A	9	9	0.31	0.31
	WBT	A	B	4	14	0.29	0.35
	WBR	A	C	1	20	0.07	0.22
	SBL	D	E	51	61	0.72	0.73
	SBR	D	D	38	46	0.12	0.09
Creditview Road & Street A	**Overall**	**A**	**A**	**8**	**8**	**0.32**	**0.31**
	EBL	C	C	20	21	0.19	0.21
	EBTR	C	C	21	21	0.32	0.31
	WBL	C	C	21	21	0.34	0.26
	WBTR	B	C	20	21	0.15	0.31
	NBL	A	A	3	3	0.02	0.05
	NBTR	A	A	3	3	0.18	0.28
	SBLTR	A	A	3	3	0.25	0.21
Creditview Road & Street B	**Overall**	**A**	**A**	**4**	**5**	**0.38**	**0.38**
	WBL	C	C	26	25	0.38	0.38
	WBTR	C	C	23	23	0.01	0.01
	NBTR	A	A	2	3	0.17	0.25
	SBLTR	A	A	2	2	0.21	0.17
Tim Manley Avenue & Neil Promenade	**Overall**	**B**	**B**	**14**	**15**	**0.80**	**0.83**
	EBL	A	A	8	8	0.00	0.04
	EBTR	B	B	17	12	0.80	0.58
	WBL	B	B	11	13	0.41	0.57
	WBTR	B	B	11	20	0.53	0.83
	NBL	A	B	10	11	0.01	0.02
	NBTR	B	B	11	11	0.10	0.07
	SBL	B	B	11	11	0.11	0.06
	SBTR	A	B	10	11	0.00	0.00
Chinguacousy Road & Highway 413 WB Off-Ramp	**Overall**	**A**	**B**	**8**	**10**	**0.46**	**0.74**
	WBL	A	A	7	8	0.46	0.74
	WBR	A	A	7	5	0.35	0.39
	NBT	A	C	9	26	0.07	0.52
	SBT	B	C	11	23	0.45	0.11
Chinguacousy Road & Highway 413 EB Off-Ramp	**Overall**	**A**	**A**	**4**	**9**	**0.34**	**0.74**
	EBLR	B	C	16	22	0.12	0.39
	NBT	A	A	2	3	0.03	0.08
	SBT	A	A	3	7	0.34	0.74

Note 1: The LOS of a signalized intersection is based on the average control delay per vehicle (HCM 2000).
Note 2: All v/c ratios above 0.90 for overall intersections, through movement and shared through/turning movements are in red text. All v/c ratios above 1.00 for exclusive movements are also in red text.

The signalized study intersections are expected to operate with an intersection LOS D or better, with low to moderate control delays and v/c ratios. These metrics indicate that the site generated trips do not materially impact the transportation network and there are no operational concerns with reserve capacity to accommodate future traffic growth.

Table 60: 2041 Future Total Traffic Operations – Unsignalized Intersections

Intersection	Performance Metrics						
	Movement	LOS[1]		Delay (s)[2]		v/c ratio[3]	
		A.M.	P.M.	A.M.	P.M.	A.M.	P.M.
Creditview Road & Old School Road	**Overall[1]**	**B**	**B**	**10**	**11**	**0.26**	**0.31**
	EBL	A	A	9	10	0.01	0.02
	EBT	B	B	10	11	0.26	0.24
	EBTR	A	A	9	10	0.14	0.13
	WBL	A	B	10	10	0.08	0.14
	WBT	A	B	10	12	0.14	0.34
	WBTR	A	A	9	10	0.08	0.19
	NBLTR	B	B	11	12	0.26	0.31
	SBLTR	B	B	10	11	0.22	0.24
Street C & Street D/Zone B+C Local Road	**Overall[1]**	**A**	**B**	**9**	**10**	**0.24**	**0.46**
	EBLTR	A	A	9	9	0.25	0.19
	WBLTR	A	B	9	11	0.18	0.46
	NBLTR	A	A	8	8	0.16	0.12
	SBLTR	A	A	8	9	0.06	0.04
Street B & Street D	**Overall[1]**	**B**	**B**	**11**	**12**	**0.45**	**0.55**
	EBL	A	A	9	9	0.02	0.02
	EBTR	B	B	12	11	0.45	0.31
	WBL	A	A	9	9	0.08	0.13
	WBTR	A	B	9	14	0.19	0.55
	NBLTR	A	A	9	10	0.18	0.15
	SBLTR	A	A	10	10	0.17	0.13
Street A & Street D	**Overall[1]**	**B**	**B**	**11**	**12**	**0.43**	**0.48**
	EBLTR	B	A	10	10	0.25	0.18
	WBLTR	A	B	10	13	0.17	0.48
	NBLTR	B	B	11	11	0.43	0.37
	SBLTR	B	B	11	10	0.31	0.23
Street A & Street E	**Overall[1]**	**A**	**A**	**8**	**8**	**0.17**	**0.16**
	EBLTR	A	A	8	8	0.17	0.14
	WBLTR	A	A	8	8	0.08	0.16
	NBLTR	A	A	7	8	0.04	0.06
	SBLTR	A	A	8	8	0.04	0.06
Street B & Street E	**Overall[1]**	**A**	**A**	**9**	**9**	**0.30**	**0.34**
	EBTR	A	A	9	9	0.30	0.23
	WBL	A	A	8	8	0.03	0.08
	WBT	A	A	9	10	0.02	0.34
	NBLR	A	A	8	8	0.06	0.05

Intersection	Performance Metrics						
	Movement	LOS[1]		Delay (s)[2]		v/c ratio[3]	
		A.M.	P.M.	A.M.	P.M.	A.M.	P.M.
Street A & Street F	**Overall[1]**	**A**	**A**	**8**	**8**	**0.14**	**0.18**
	EBLTR	A	A	8	8	0.14	0.14
	WBLTR	A	A	8	9	0.11	0.18
	NBLTR	A	A	8	8	0.12	0.04
	SBLTR	A	A	8	8	0.10	0.09
Street B & Street F	**Overall[1]**	**A**	**A**	**8**	**8**	**0.14**	**0.16**
	EBL	A	A	8	8	0.01	0.02
	EBTR	A	A	8	8	0.09	0.08
	WBL	A	A	9	9	0.08	0.16
	WBTR	A	A	8	8	0.08	0.15
	NBLTR	A	A	8	8	0.14	0.13
	SBLTR	A	A	8	8	0.10	0.06
Street C & Street F/Zone A Local Road	**Overall[1]**	**A**	**A**	**8**	**8**	**0.14**	**0.25**
	EBLTR	A	A	8	8	0.04	0.05
	WBLTR	A	A	8	8	0.08	0.25
	NBLTR	A	A	7	7	0.07	0.06
	SBLTR	A	A	8	8	0.14	0.11
Creditview Road & Street C	**Overall[1]**	**B**	**B**	**11**	**12**	**0.12**	**0.12**
	EBLTR	A	A	0	0	0.12	0.12
	WBTLR	B	B	11	12	0.06	0.05
	NBLTR	A	A	0	0	0.00	0.00
	SBLTR	A	A	1	1	0.00	0.00
Street A/Zone M Local Road & Street G/Zone N Local Road	**Overall[1]**	**A**	**A**	**7**	**7**	**0.05**	**0.11**
	EBLTR	A	A	7	7	0.03	0.02
	WBLTR	A	A	8	8	0.05	0.07
	NBLTR	A	A	7	7	0.03	0.11
	SBLTR	A	A	7	7	0.04	0.02
Street C & Zone A Local Road	**Overall[1]**	**A**	**A**	**10**	**11**	**0.04**	**0.14**
	EBLT	A	A	1	1	0.00	0.00
	WBTR	A	A	0	0	0.04	0.14
	SBLR	A	A	10	11	0.02	0.01
Street C & Zone J/Zone B+C Local Road	**Overall[1]**	**C**	**C**	**20**	**24**	**0.37**	**0.29**
	EBLTR	A	A	1	1	0.00	0.01
	WBLTR	A	A	1	2	0.01	0.05
	NBLTR	B	A	11	10	0.09	0.06
	SBLTR	C	C	20	24	0.37	0.29
Street C & Zone D Local Road	**Overall[1]**	**A**	**A**	**9**	**9**	**0.01**	**0.02**
	EBTR	A	A	0	0	0.01	0.02
	WBLT	A	A	1	2	0.00	0.01
	NBLR	A	A	9	9	0.01	0.01

Intersection	Performance Metrics						
	Movement	LOS[1]		Delay (s)[2]		v/c ratio[3]	
		A.M.	P.M.	A.M.	P.M.	A.M.	P.M.
Street F & Zone E/Zone F Local Road	**Overall[1]**	**A**	**A**	**9**	**10**	**0.08**	**0.06**
	EBLTR	A	A	9	10	0.08	0.06
	WBLTR	A	A	9	9	0.04	0.04
	NBLTR	A	A	4	4	0.01	0.03
	SBLTR	A	A	2	3	0.00	0.02
Street F & McMinn Drive	**Overall[1]**	**A**	**A**	**7**	**7**	**0.07**	**0.07**
	EBLTR	A	A	7	8	0.04	0.07
	WBLTR	A	A	8	7	0.06	0.03
	NBLTR	A	A	7	7	0.03	0.05
	SBLTR	A	A	7	7	0.07	0.05
Creditview Road & McMinn Drive	**Overall[1]**	**B**	**B**	**12**	**12**	**0.14**	**0.18**
	WBLR	B	B	12	12	0.12	0.09
	NBTR	A	A	0	0	0.14	0.18
	SBLT	A	A	1	1	0.00	0.00
Street F & Zone G Local Road	**Overall[1]**	**A**	**A**	**9**	**9**	**0.03**	**0.02**
	EBLR	A	A	9	9	0.01	0.00
	NBLT	A	A	1	1	0.00	0.00
	SBTR	A	A	0	0	0.03	0.02
McMinn Drive & Zone H Local Road	**Overall[1]**	**A**	**A**	**9**	**9**	**0.07**	**0.05**
	EBTR	A	A	0	0	0.02	0.03
	WBLT	A	A	2	6	0.01	0.04
	NBLR	A	A	9	9	0.07	0.05
McMinn Drive & Zone I/Zone K Local Road	**Overall[1]**	**B**	**A**	**11**	**10**	**0.09**	**0.05**
	EBLTR	A	A	1	1	0.00	0.01
	WBLTR	A	A	5	1	0.04	0.01
	NBLTR	A	A	10	9	0.09	0.03
	SBLTR	B	A	11	10	0.06	0.05
Street D & McMinn Drive/Zone J Local Road	**Overall[1]**	**A**	**A**	**8**	**8**	**0.17**	**0.14**
	EBLTR	A	A	8	8	0.17	0.11
	WBLTR	A	A	8	8	0.01	0.01
	NBLTR	A	A	8	8	0.07	0.08
	SBLTR	A	A	7	7	0.08	0.14
Creditview Road & Zone L Local Road	**Overall[1]**	**B**	**B**	**11**	**12**	**0.13**	**0.18**
	WBLR	B	B	11	12	0.06	0.03
	NBTR	A	A	0	0	0.13	0.18
	SBLT	A	A	1	1	0.00	0.01
Street A & Zone N+O/Zone P Local Road	**Overall[1]**	**B**	**B**	**10**	**10**	**0.11**	**0.07**
	EBLTR	A	A	1	1	0.00	0.00
	WBLTR	A	A	1	1	0.01	0.02
	NBLTR	A	A	9	9	0.03	0.02
	SBLTR	B	B	10	10	0.11	0.07

Intersection	Performance Metrics						
	Movement	LOS[1]		Delay (s)[2]		v/c ratio[3]	
		A.M.	P.M.	A.M.	P.M.	A.M.	P.M.
Street G & Commercial Access 2	**Overall[1]**	**A**	**C**	**10**	**18**	**0.06**	**0.48**
	EBLTR	A	A	9	10	0.02	0.13
	WBLTR	A	C	10	18	0.06	0.48
	NBLTR	A	A	2	2	0.01	0.04
	SBLTR	A	A	2	3	0.01	0.02
Mayfield Road & Commercial Access 3 (RIRO)	**Overall[1]**	**A**	**A**	**9**	**9**	**0.29**	**0.27**
	EBT	A	A	0	0	0.16	0.27
	WBT	A	A	0	0	0.29	0.23
	WBR	A	A	0	0	0.16	0.15
	SBR	A	A	9	9	0.00	0.02
Mayfield Road & Commercial Access 4 (RIRO)	**Overall[1]**	**A**	**A**	**9**	**9**	**0.24**	**0.31**
	EBT	A	A	0	0	0.18	0.31
	WBT	A	A	0	0	0.24	0.22
	WBR	A	A	0	0	0.02	0.07
	SBR	A	A	9	9	0.01	0.05
Street B & Zone R/Zone T Local Road	**Overall[1]**	**A**	**A**	**9**	**9**	**0.03**	**0.04**
	EBL	A	A	7	7	0.00	0.01
	EBTR	A	A	0	0	0.03	0.04
	WBL	A	A	7	7	0.00	0.01
	WBTR	A	A	0	0	0.03	0.04
	NBLTR	A	A	9	9	0.02	0.01
	SBLTR	A	A	9	9	0.01	0.01
Street F & Zone R/Zone S Local Road	**Overall[1]**	**A**	**A**	**9**	**9**	**0.02**	**0.02**
	EBLTR	A	A	9	9	0.02	0.02
	WBLTR	A	A	9	10	0.01	0.01
	NBLTR	A	A	2	2	0.00	0.02
	SBLTR	A	A	0	1	0.00	0.00
Street B & Zone S/Zone U Local Road	**Overall[1]**	**B**	**B**	**10**	**11**	**0.12**	**0.15**
	EBL	A	A	7	8	0.00	0.00
	EBTR	A	A	0	0	0.12	0.09
	WBL	A	A	8	8	0.01	0.01
	WBTR	A	A	0	0	0.07	0.15
	NBLTR	A	A	10	9	0.03	0.02
	SBLTR	B	B	10	11	0.04	0.03
Street B & Zone Y/Zone AA+AB Local Road	**Overall[1]**	**B**	**B**	**10**	**10**	**0.18**	**0.18**
	EBL	A	A	8	8	0.00	0.01
	EBTR	A	A	0	0	0.18	0.12
	WBL	A	A	8	8	0.00	0.01
	WBTR	A	A	0	0	0.07	0.18
	NBLTR	B	A	10	10	0.02	0.02
	SBLTR	A	B	10	11	0.03	0.02

Intersection	Performance Metrics						
	Movement	LOS[1]		Delay (s)[2]		v/c ratio[3]	
		A.M.	P.M.	A.M.	P.M.	A.M.	P.M.
Street D & Zone Y/Zone Z Local Road	**Overall[1]**	**A**	**A**	**9**	**10**	**0.05**	**0.05**
	EBLTR	A	A	9	9	0.04	0.03
	WBLTR	A	A	9	10	0.05	0.05
	NBLTR	A	A	1	2	0.01	0.02
	SBLTR	A	A	1	2	0.00	0.01
Street B & Zone AC+AD Local Road	**Overall[1]**	**B**	**B**	**12**	**10**	**0.27**	**0.27**
	EBTR	A	A	0	0	0.27	0.17
	WBL	A	A	8	8	0.01	0.04
	WBTR	A	A	0	0	0.10	0.27
	NBLR	B	B	12	10	0.11	0.04
Street F & Zone T/Zone U Local Road	**Overall[1]**	**B**	**A**	**10**	**10**	**0.09**	**0.06**
	EBLTR	B	A	10	10	0.09	0.06
	WBLTR	A	A	10	10	0.07	0.02
	NBLTR	A	A	1	2	0.00	0.01
	SBLTR	A	A	3	1	0.02	0.00
Street E & Zone U/Zone AA+AB Local Road	**Overall[1]**	**A**	**A**	**9**	**9**	**0.03**	**0.02**
	EBLTR	A	A	9	9	0.03	0.02
	WBLTR	A	A	9	9	0.01	0.01
	NBLTR	A	A	1	2	0.00	0.01
	SBLTR	A	A	0	1	0.00	0.00
Street D & Zone AA+AB/Zone AC+AD Local Road	**Overall[1]**	**B**	**B**	**12**	**12**	**0.24**	**0.12**
	EBLTR	B	B	10	10	0.12	0.05
	WBLTR	B	B	12	11	0.24	0.12
	NBLTR	A	A	3	1	0.03	0.02
	SBLTR	A	A	1	2	0.01	0.02
Street A & Zone T/Zone V Local Road	**Overall[1]**	**A**	**B**	**10**	**10**	**0.05**	**0.06**
	EBLTR	A	A	1	1	0.01	0.01
	WBLTR	A	A	1	2	0.01	0.02
	NBLTR	A	B	10	10	0.05	0.06
	SBLTR	A	A	9	10	0.05	0.03
Street A & Zone U/Zone W Local Road	**Overall[1]**	**A**	**B**	**10**	**10**	**0.06**	**0.06**
	EBLTR	A	A	1	1	0.00	0.01
	WBLTR	A	A	1	2	0.01	0.02
	NBLTR	A	B	10	10	0.06	0.06
	SBLTR	A	B	10	10	0.03	0.02
Street A & Zone AA+AB/Zone AE Local Road	**Overall[1]**	**A**	**B**	**10**	**10**	**0.04**	**0.03**
	EBLTR	A	A	1	1	0.00	0.01
	WBLTR	A	A	1	2	0.01	0.02
	NBLTR	A	A	9	10	0.04	0.03
	SBLTR	A	B	10	10	0.03	0.03

Intersection	Performance Metrics						
	Movement	LOS[1]		Delay (s)[2]		v/c ratio[3]	
		A.M.	P.M.	A.M.	P.M.	A.M.	P.M.
Street E & Zone W+X/Zone AE Local Road	**Overall[1]**	**B**	**B**	**10**	**13**	**0.09**	**0.10**
	EBLTR	A	A	9	9	0.09	0.08
	WBLTR	B	B	10	12	0.06	0.10
	NBLTR	A	A	3	4	0.02	0.06
	SBLTR	A	A	1	1	0.00	0.00
Street D & Zone AE/Zone AF Local Road	**Overall[1]**	**B**	**B**	**10**	**12**	**0.34**	**0.52**
	EBLTR	A	A	9	9	0.14	0.11
	WBLTR	B	B	11	11	0.33	0.28
	NBLTR	B	B	11	13	0.34	0.52
	SBLTR	B	B	10	11	0.28	0.35
Street F & Zone V Local Road	**Overall[1]**	**B**	**B**	**10**	**11**	**0.20**	**0.22**
	EBLR	B	B	10	11	0.20	0.22
	NBLT	A	A	4	6	0.03	0.11
	SBTR	A	A	0	0	0.06	0.06
Street D & Zone AF Local Road	**Overall[1]**	**B**	**D**	**14**	**20**	**0.36**	**0.42**
	WBLR	B	D	14	20	0.36	0.42
	NBTR	A	A	0	0	0.11	0.28
	SBLT	A	A	1	3	0.02	0.07

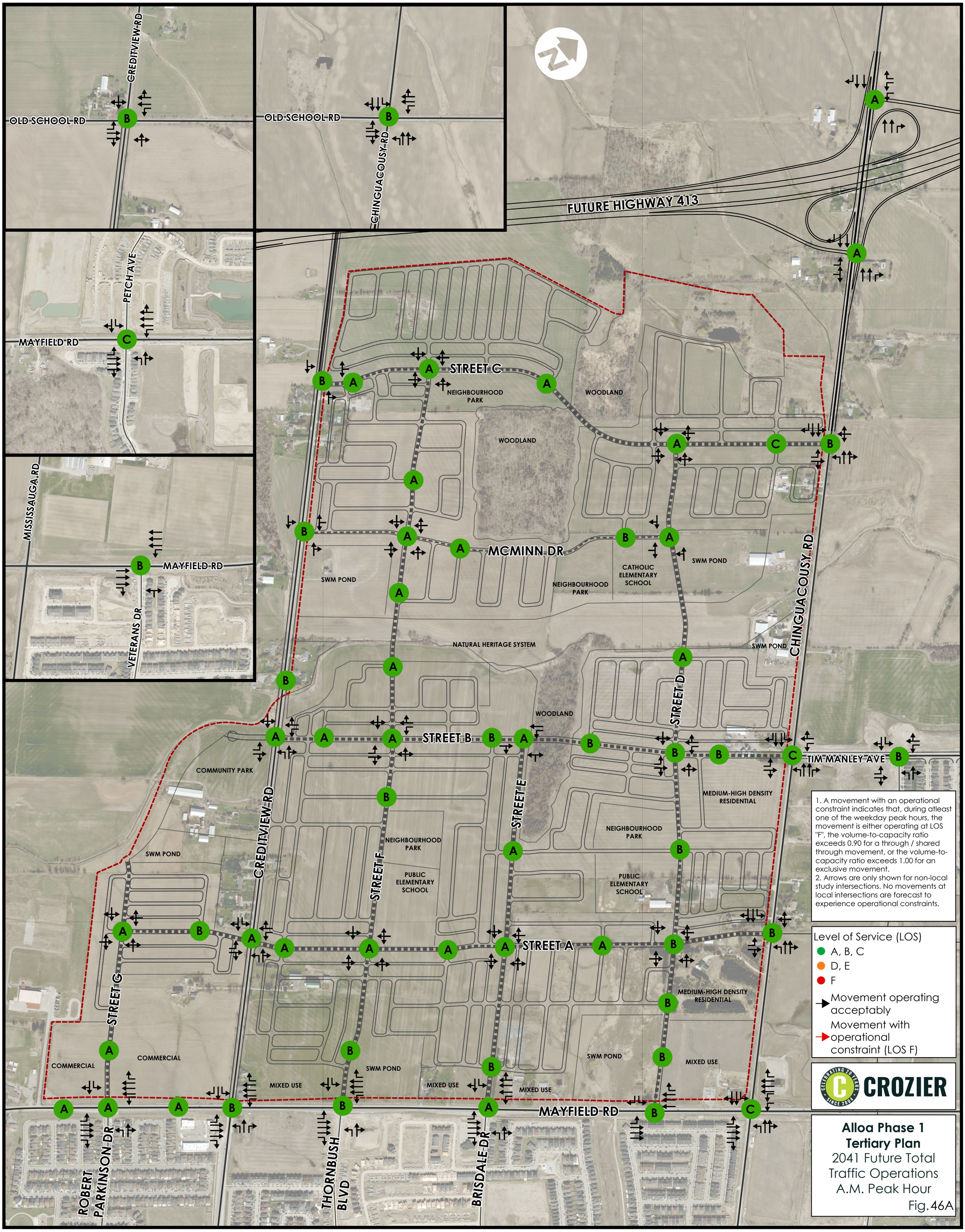
Note 1: The overall LOS of a two-way stop-controlled intersection is based on the delay associated with the critical minor road approach (HCM 2000). The overall LOS of an AWSC intersection is based on the overall delay for the intersection (HCM 2010).

Note 2: The overall control delay of a two-way stop-controlled intersection is based on the delay associated with the critical minor road approach (HCM 2000). The overall control delay of an ASWC intersection is based on the overall delay for the intersection (HCM 2010).

Note 3: The overall v/c ratio for unsignalized intersections are the maximum movement v/c ratio.

The unsignalized study intersections are expected to operate efficiently with a LOS D or better with low to moderate control delays and v/c ratios. As such, the site generated trips do not materially impact the transportation network, which has reserve capacity to accommodate future traffic growth.

Figure 46 summarizes the traffic operations under 2041 future total conditions.



1. A movement with an operational constraint indicates that, during atleast one of the weekday peak hours, the movement is either operating at LOS "F", the volume-to-capacity ratio exceeds 0.90 for a through / shared through movement, or the volume-to-capacity ratio exceeds 1.00 for an exclusive movement.
2. Arrows are only shown for non-local study intersections. No movements at local intersections are forecast to experience operational constraints.

Level of Service (LOS)
- A, B, C
- D, E
- F

Movement operating acceptably

Movement with operational constraint (LOS F)

CROZIER

Alloa Phase 1
Tertiary Plan
2041 Future Total Traffic Operations
A.M. Peak Hour
Fig. 46A

FUTURE HIGHWAY 413
CREDITVIEW RD
OLD SCHOOL RD
CHINGUACOUSY RD
PETCH AVE
MAYFIELD RD
MISSISSAUGA RD
VETERANS DR
STREET C
STREET B
STREET D
STREET E
STREET F
STREET G
STREET A
MCMINN DR
TIM MANLEY AVE
ROBERT PARKINSON DR
THORNBUSH BLVD
BRISDALE DR
NEIGHBOURHOOD PARK
WOODLAND
SWM POND
CATHOLIC ELEMENTARY SCHOOL
NATURAL HERITAGE SYSTEM
COMMUNITY PARK
PUBLIC ELEMENTARY SCHOOL
MEDIUM-HIGH DENSITY RESIDENTIAL
COMMERCIAL
MIXED USE

1. A movement with an operational constraint indicates that, during atleast one of the weekday peak hours, the movement is either operating at LOS "F", the volume-to-capacity ratio exceeds 0.90 for a through / shared through movement, or the volume-to-capacity ratio exceeds 1.00 for an exclusive movement.
2. Arrows are only shown for non-local study intersections. No movements at local intersections are forecast to experience operational constraints.

Level of Service (LOS)
- A, B, C
- D, E
- F
- Movement operating acceptably
- Movement with operational constraint (LOS F)

CROZIER

Alloa Phase 1
Tertiary Plan
2041 Future Total Traffic Operations
P.M. Peak Hour
Fig. 46B

Zone	Component	Land Use Name	Land Use Code	Development Yield Assumed	Units	Trip Generation					
						A.M. Peak Hour			P.M. Peak Hour		
						IN	OUT	TOTAL	IN	OUT	TOTAL
Effective Rates	**Detached Homes**	**Single Family Detached Housing**	**LUC210**	**2171**	units	**0.096**	**0.323**	**0.419**	**0.404**	**0.242**	**0.646**
	Townhouses	**Multi-Family Housing (Low-Rise)**	**LUC220**	**2565**	units	**0.052**	**0.185**	**0.237**	**0.214**	**0.128**	**0.342**
	Residential Midrise Blocks	**Multi-Family Housing (Mid-Rise)**	**LUC221**	**2467**	units	**0.068**	**0.257**	**0.325**	**0.185**	**0.111**	**0.295**
	Mixed-Use Blocks (R)	**Multi-Family Housing (Mid-Rise)**	**LUC221**	**1962**	units	**0.068**	**0.257**	**0.325**	**0.185**	**0.111**	**0.295**
	Mixed-Use Blocks (C)	**Shopping Centre**	**LUC820**	**24525**	sq.m.	**0.003**	**0.003**	**0.006**	**0.009**	**0.009**	**0.018**
	Commercial Blocks	**Shopping Centre**	**LUC820**	**27478**	sq.m.	**0.003**	**0.003**	**0.006**	**0.009**	**0.009**	**0.018**
	Elementary Schools	**Elementary School**	**LUC520**	**150**	jobs	**1.253**	**1.055**	**2.307**	**0.262**	**0.312**	**0.574**
	Total	**N/A**	**N/A**								
Alloa Phase 1	**Detached Homes**	**Single Family Detached Housing**	**LUC210**	**2171**	units	**209**	**701**	**910**	**876**	**525**	**1402**
	Townhouses	**Multi-Family Housing (Low-Rise)**	**LUC220**	**2565**	units	**133**	**474**	**607**	**549**	**329**	**878**
	Residential Midrise Blocks	**Multi-Family Housing (Mid-Rise)**	**LUC221**	**2467**	units	**169**	**633**	**802**	**455**	**273**	**728**
	Mixed-Use Blocks (R)	**Multi-Family Housing (Mid-Rise)**	**LUC221**	**1962**	units	**134**	**504**	**638**	**362**	**217**	**579**
	Mixed-Use Blocks (C)	**Shopping Centre**	**LUC820**	**24525**	sq.m.	**85**	**64**	**149**	**212**	**219**	**431**
	Commercial Blocks	**Shopping Centre**	**LUC820**	**27478**	sq.m.	**95**	**72**	**167**	**238**	**245**	**483**
	Elementary Schools	**Elementary School**	**LUC520**	**150**	jobs	**188**	**158**	**346**	**39**	**47**	**86**
	Total	**N/A**	**N/A**			**1014**	**2606**	**3620**	**2732**	**1856**	**4588**
A	Detached Homes	Single Family Detached Housing	LUC210	294.48	units	28	95	123	119	71	190
	Townhouses	Multi-Family Housing (Low-Rise)	LUC220	134.55	units	7	25	32	29	17	46
	Residential Midrise Blocks	Multi-Family Housing (Mid-Rise)	LUC221	0.00	units	0	0	0	0	0	0
	Mixed-Use Blocks (R)	Multi-Family Housing (Mid-Rise)	LUC221	0.00	units	0	0	0	0	0	0
	Mixed-Use Blocks (C)	Shopping Centre	LUC820	0.00	sq.m.	0	0	0	0	0	0
	Commercial Blocks	Shopping Centre	LUC820	0.00	sq.m.	0	0	0	0	0	0
	Elementary Schools	Elementary School	LUC520	0.00	jobs	0	0	0	0	0	0
	Total	N/A	N/A	N/A		**35**	**120**	**155**	**148**	**89**	**236**
B	Detached Homes	Single Family Detached Housing	LUC210	56.78	units	5	18	24	23	14	37
	Townhouses	Multi-Family Housing (Low-Rise)	LUC220	58.37	units	3	11	14	12	7	20
	Residential Midrise Blocks	Multi-Family Housing (Mid-Rise)	LUC221	514.14	units	35	132	167	95	57	152
	Mixed-Use Blocks (R)	Multi-Family Housing (Mid-Rise)	LUC221	0.00	units	0	0	0	0	0	0
	Mixed-Use Blocks (C)	Shopping Centre	LUC820	0.00	sq.m.	0	0	0	0	0	0
	Commercial Blocks	Shopping Centre	LUC820	0.00	sq.m.	0	0	0	0	0	0
	Elementary Schools	Elementary School	LUC520	0.00	jobs	0	0	0	0	0	0
	Total	N/A	N/A	N/A		**44**	**161**	**205**	**130**	**78**	**208**
C	Detached Homes	Single Family Detached Housing	LUC210	3.21	units	0	1	1	1	1	2
	Townhouses	Multi-Family Housing (Low-Rise)	LUC220	104.37	units	5	19	25	22	13	36
	Residential Midrise Blocks	Multi-Family Housing (Mid-Rise)	LUC221	0.00	units	0	0	0	0	0	0
	Mixed-Use Blocks (R)	Multi-Family Housing (Mid-Rise)	LUC221	0.00	units	0	0	0	0	0	0
	Mixed-Use Blocks (C)	Shopping Centre	LUC820	0.00	sq.m.	0	0	0	0	0	0
	Commercial Blocks	Shopping Centre	LUC820	0.00	sq.m.	0	0	0	0	0	0
	Elementary Schools	Elementary School	LUC520	0.00	jobs	0	0	0	0	0	0
	Total	N/A	N/A	N/A		**6**	**20**	**26**	**24**	**14**	**38**
D	Detached Homes	Single Family Detached Housing	LUC210	0.00	units	0	0	0	0	0	0
	Townhouses	Multi-Family Housing (Low-Rise)	LUC220	54.07	units	3	10	13	12	7	19
	Residential Midrise Blocks	Multi-Family Housing (Mid-Rise)	LUC221	0.00	units	0	0	0	0	0	0
	Mixed-Use Blocks (R)	Multi-Family Housing (Mid-Rise)	LUC221	0.00	units	0	0	0	0	0	0

P	Residential Midrise Blocks	Multi-Family Housing (Mid-Rise)	LUC221	0.00	units	0	0	0	0	0	0
	Mixed-Use Blocks (R)	Multi-Family Housing (Mid-Rise)	LUC221	0.00	units	0	0	0	0	0	0
	Mixed-Use Blocks (C)	Shopping Centre	LUC820	0.00	sq.m.	0	0	0	0	0	0
	Commercial Blocks	Shopping Centre	LUC820	0.00	sq.m.	0	0	0	0	0	0
	Elementary Schools	Elementary School	LUC520	0.00	jobs	0	0	0	0	0	0
	Total	N/A	N/A	N/A		**8**	**27**	**34**	**32**	**19**	**52**
Q	Detached Homes	Single Family Detached Housing	LUC210	0.00	units	0	0	0	0	0	0
	Townhouses	Multi-Family Housing (Low-Rise)	LUC220	0.00	units	0	0	0	0	0	0
	Residential Midrise Blocks	Multi-Family Housing (Mid-Rise)	LUC221	0.00	units	0	0	0	0	0	0
	Mixed-Use Blocks (R)	Multi-Family Housing (Mid-Rise)	LUC221	0.00	units	0	0	0	0	0	0
	Mixed-Use Blocks (C)	Shopping Centre	LUC820	0.00	sq.m.	0	0	0	0	0	0
	Commercial Blocks	Shopping Centre	LUC820	27478.00	sq.m.	95	72	167	238	245	483
	Elementary Schools	Elementary School	LUC520	0.00	jobs	0	0	0	0	0	0
	Total	N/A	N/A	N/A		**95**	**72**	**167**	**238**	**245**	**483**
R	Detached Homes	Single Family Detached Housing	LUC210	61.76	units	6	20	26	25	15	40
	Townhouses	Multi-Family Housing (Low-Rise)	LUC220	45.35	units	2	8	11	10	6	16
	Residential Midrise Blocks	Multi-Family Housing (Mid-Rise)	LUC221	0.00	units	0	0	0	0	0	0
	Mixed-Use Blocks (R)	Multi-Family Housing (Mid-Rise)	LUC221	0.00	units	0	0	0	0	0	0
	Mixed-Use Blocks (C)	Shopping Centre	LUC820	0.00	sq.m.	0	0	0	0	0	0
	Commercial Blocks	Shopping Centre	LUC820	0.00	sq.m.	0	0	0	0	0	0
	Elementary Schools	Elementary School	LUC520	0.00	jobs	0	0	0	0	0	0
	Total	N/A	N/A	N/A		**8**	**28**	**37**	**35**	**21**	**55**
S	Detached Homes	Single Family Detached Housing	LUC210	35.72	units	3	12	15	14	9	23
	Townhouses	Multi-Family Housing (Low-Rise)	LUC220	122.40	units	6	23	29	26	16	42
	Residential Midrise Blocks	Multi-Family Housing (Mid-Rise)	LUC221	0.00	units	0	0	0	0	0	0
	Mixed-Use Blocks (R)	Multi-Family Housing (Mid-Rise)	LUC221	0.00	units	0	0	0	0	0	0
	Mixed-Use Blocks (C)	Shopping Centre	LUC820	0.00	sq.m.	0	0	0	0	0	0
	Commercial Blocks	Shopping Centre	LUC820	0.00	sq.m.	0	0	0	0	0	0
	Elementary Schools	Elementary School	LUC520	0.00	jobs	0	0	0	0	0	0
	Total	N/A	N/A	N/A		**10**	**34**	**44**	**41**	**24**	**65**
T	Detached Homes	Single Family Detached Housing	LUC210	215.43	units	21	70	90	87	52	139
	Townhouses	Multi-Family Housing (Low-Rise)	LUC220	246.07	units	13	45	58	53	32	84
	Residential Midrise Blocks	Multi-Family Housing (Mid-Rise)	LUC221	0.00	units	0	0	0	0	0	0
	Mixed-Use Blocks (R)	Multi-Family Housing (Mid-Rise)	LUC221	0.00	units	0	0	0	0	0	0
	Mixed-Use Blocks (C)	Shopping Centre	LUC820	0.00	sq.m.	0	0	0	0	0	0
	Commercial Blocks	Shopping Centre	LUC820	0.00	sq.m.	0	0	0	0	0	0
	Elementary Schools	Elementary School	LUC520	0.00	jobs	0	0	0	0	0	0
	Total	N/A	N/A	N/A		**34**	**115**	**149**	**140**	**84**	**223**
U	Detached Homes	Single Family Detached Housing	LUC210	57.51	units	6	19	24	23	14	37
	Townhouses	Multi-Family Housing (Low-Rise)	LUC220	229.92	units	12	43	54	49	30	79
	Residential Midrise Blocks	Multi-Family Housing (Mid-Rise)	LUC221	0.00	units	0	0	0	0	0	0
	Mixed-Use Blocks (R)	Multi-Family Housing (Mid-Rise)	LUC221	0.00	units	0	0	0	0	0	0
	Mixed-Use Blocks (C)	Shopping Centre	LUC820	0.00	sq.m.	0	0	0	0	0	0
	Commercial Blocks	Shopping Centre	LUC820	0.00	sq.m.	0	0	0	0	0	0
	Elementary Schools	Elementary School	LUC520	50.00	jobs	63	53	115	13	16	29
	Total	N/A	N/A	N/A		**80**	**114**	**194**	**86**	**59**	**145**
	Detached Homes	Single Family Detached Housing	LUC210	123.43	units	12	40	52	50	30	80

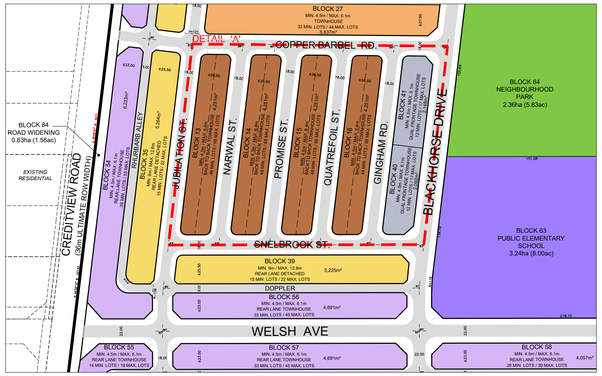
V	Townhouses	Multi-Family Housing (Low-Rise)	LUC220	57.68	units	3	11	14	12	7	20
	Residential Midrise Blocks	Multi-Family Housing (Mid-Rise)	LUC221	0.00	units	0	0	0	0	0	0
	Mixed-Use Blocks (R)	Multi-Family Housing (Mid-Rise)	LUC221	545.70	units	37	140	177	101	60	161
	Mixed-Use Blocks (C)	Shopping Centre	LUC820	6821.26	sq.m.	24	18	41	59	61	120
	Commercial Blocks	Shopping Centre	LUC820	0.00	sq.m.	0	0	0	0	0	0
	Elementary Schools	Elementary School	LUC520	0.00	jobs	0	0	0	0	0	0
	Total	N/A	N/A	N/A		**76**	**208**	**284**	**222**	**159**	**380**
W/X	Detached Homes	Single Family Detached Housing	LUC210	88.82	units	9	29	37	36	21	57
	Townhouses	Multi-Family Housing (Low-Rise)	LUC220	126.82	units	7	23	30	27	16	43
	Residential Midrise Blocks	Multi-Family Housing (Mid-Rise)	LUC221	0.00	units	0	0	0	0	0	0
	Mixed-Use Blocks (R)	Multi-Family Housing (Mid-Rise)	LUC221	131.69	units	9	34	43	24	15	39
	Mixed-Use Blocks (C)	Shopping Centre	LUC820	1646.17	sq.m.	6	4	10	14	15	29
	Commercial Blocks	Shopping Centre	LUC820	0.00	sq.m.	0	0	0	0	0	0
	Elementary Schools	Elementary School	LUC520	0.00	jobs	0	0	0	0	0	0
	Total	N/A	N/A	N/A		**30**	**90**	**120**	**102**	**67**	**169**
W/X	Detached Homes	Single Family Detached Housing	LUC210	0.00	units	0	0	0	0	0	0
	Townhouses	Multi-Family Housing (Low-Rise)	LUC220	0.00	units	0	0	0	0	0	0
	Residential Midrise Blocks	Multi-Family Housing (Mid-Rise)	LUC221	0.00	units	0	0	0	0	0	0
	Mixed-Use Blocks (R)	Multi-Family Housing (Mid-Rise)	LUC221	131.69	units	9	34	43	24	15	39
	Mixed-Use Blocks (C)	Shopping Centre	LUC820	1646.17	sq.m.	6	4	10	14	15	29
	Commercial Blocks	Shopping Centre	LUC820	0.00	sq.m.	0	0	0	0	0	0
	Elementary Schools	Elementary School	LUC520	0.00	jobs	0	0	0	0	0	0
	Total	N/A	N/A	N/A		**15**	**38**	**53**	**39**	**29**	**68**
Y	Detached Homes	Single Family Detached Housing	LUC210	130.89	units	13	42	55	53	32	85
	Townhouses	Multi-Family Housing (Low-Rise)	LUC220	39.57	units	2	7	9	8	5	14
	Residential Midrise Blocks	Multi-Family Housing (Mid-Rise)	LUC221	0.00	units	0	0	0	0	0	0
	Mixed-Use Blocks (R)	Multi-Family Housing (Mid-Rise)	LUC221	0.00	units	0	0	0	0	0	0
	Mixed-Use Blocks (C)	Shopping Centre	LUC820	0.00	sq.m.	0	0	0	0	0	0
	Commercial Blocks	Shopping Centre	LUC820	0.00	sq.m.	0	0	0	0	0	0
	Elementary Schools	Elementary School	LUC520	0.00	jobs	0	0	0	0	0	0
	Total	N/A	N/A	N/A		**15**	**50**	**64**	**61**	**37**	**98**
Z	Detached Homes	Single Family Detached Housing	LUC210	115.61	units	11	37	48	47	28	75
	Townhouses	Multi-Family Housing (Low-Rise)	LUC220	49.52	units	3	9	12	11	6	17
	Residential Midrise Blocks	Multi-Family Housing (Mid-Rise)	LUC221	0.00	units	0	0	0	0	0	0
	Mixed-Use Blocks (R)	Multi-Family Housing (Mid-Rise)	LUC221	0.00	units	0	0	0	0	0	0
	Mixed-Use Blocks (C)	Shopping Centre	LUC820	0.00	sq.m.	0	0	0	0	0	0
	Commercial Blocks	Shopping Centre	LUC820	0.00	sq.m.	0	0	0	0	0	0
	Elementary Schools	Elementary School	LUC520	0.00	jobs	0	0	0	0	0	0
	Total	N/A	N/A	N/A		**14**	**46**	**60**	**57**	**34**	**92**
AA/AB	Detached Homes	Single Family Detached Housing	LUC210	165.96	units	16	54	70	67	40	107
	Townhouses	Multi-Family Housing (Low-Rise)	LUC220	39.49	units	2	7	9	8	5	14
	Residential Midrise Blocks	Multi-Family Housing (Mid-Rise)	LUC221	0.00	units	0	0	0	0	0	0
	Mixed-Use Blocks (R)	Multi-Family Housing (Mid-Rise)	LUC221	0.00	units	0	0	0	0	0	0
	Mixed-Use Blocks (C)	Shopping Centre	LUC820	0.00	sq.m.	0	0	0	0	0	0
	Commercial Blocks	Shopping Centre	LUC820	0.00	sq.m.	0	0	0	0	0	0
	Elementary Schools	Elementary School	LUC520	20.00	jobs	25	21	46	5	6	11
	Total	N/A	N/A	N/A		**43**	**82**	**125**	**81**	**51**	**132**

Attachment 2:

Draft Plan

P:\265-045\4. Drawings\2025 05 May\DP 12101 Creditview May 13 25.dwg

DETAIL 'A'

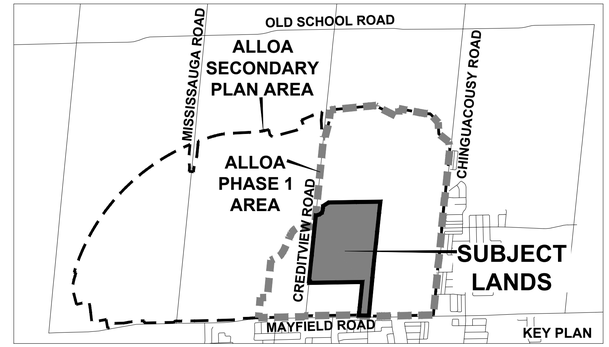


LAND USE SCHEDULE - DETAIL 'A'

LAND USE	LOTS / BLOCKS	AREA (ha)	AREA (ac)	UNITS	DENSITY (UPHA)
SINGLE DETACHED	1-12,17,18	6.29	15.54	162-227	26-36
DETACHED OR TOWNHOUSE	19-23	2.27	5.61	60-173	26-77
TOWNHOUSE	24-29,40,41	2.66	6.57	150-207	56-78
DUAL FRONTAGE TOWNHOUSE	30, 31	1.22	3.01	76-104	62-85
REAR LANE DETACHED	32-39, 42-47	5.45	13.47	156-225	28-41
REAR LANE DETACHED OR TOWNHOUSE	48,49	0.98	2.42	27-77	28-78
BACK TO BACK TOWNHOUSE	13-16	1.69	4.18	192-272	113-161
REAR LANE TOWNHOUSE	50-60	4.74	11.71	314-429	66-90
MIXED USE	61,62	1.42	3.51		
PUBLIC ELEMENTARY SCHOOL	63	3.24	8.01		
NEIGHBOURHOOD PARK	64	2.36	5.83		
WALKWAY BLOCK	65-68	0.06	0.15		
SWM POND	69	2.62	6.47		
ENVIRONMENTAL POLICY AREA	70-72	5.04	12.45		
RESIDENTIAL RESERVE	73-83	0.25	0.62		
ROAD WIDENING	84, 85	0.65	1.61		
0.3m RESERVE	86-98	0.00	0.00		
8.0m LANEWAY R.O.W. (LENGTH: 2,477m)		1.90	4.70		
18.0m LOCAL R.O.W. (LENGTH: 5,463m)		10.04	24.81		
22.0m COLLECTOR R.O.W. (LENGTH: 2,480m)		5.27	13.02		
29.0m COLLECTOR R.O.W. (LENGTH: 663m)		1.95	4.82		
TOTAL	**98**	**60.10**	**148.51**	**1,137-1,714**	**45-67**

NOTES

- TIM MANLEY AVE. & WELSH AVE. & CREDITVIEW ROAD DAYLIGHT TRIANGLE - 15.0m x 15.0m
- SPEERSVILLE DRIVE & MAYFIELD ROAD DAYLIGHT TRIANGLE - 15.0m x 15.0m
- COLLECTOR TO COLLECTOR DAYLIGHT TRIANGLE - 10.0m x 10.0m
- LOCAL TO COLLECTOR DAYLIGHT TRIANGLE - 7.5m x 7.5m
- LANEWAY TO LOCAL / COLLECTOR DAYLIGHT TRIANGLE - 3.0m x 3.0m
- LOCAL TO LOCAL DAYLIGHT RADII - 5.0m
- PAVEMENT ILLUSTRATION IS DIAGRAMMATIC



DRAFT PLAN OF SUBDIVISION
12101 CREDITVIEW DEVELOPMENTS LIMITED
FILE #21T-_____C

12101 CREDITVIEW ROAD
PART OF LOTS 18 & 19, CONCESSION 3,
TOWN OF CALEDON
REGIONAL MUNICIPALITY OF PEEL

OWNERS CERTIFICATE

I HEREBY AUTHORIZE GLEN SCHNARR & ASSOCIATES INC. TO PREPARE AND SUBMIT THIS DRAFT PLAN OF SUBDIVISION TO THE TOWN OF CALEDON FOR APPROVAL.

SIGNED _____ DATE _____

JACK EISENBERGER,
12101 CREDITVIEW DEVELOPMENTS LIMITED

SURVEYORS CERTIFICATE

I HEREBY CERTIFY THAT THE BOUNDARIES OF THE LANDS TO BE SUBDIVIDED AS SHOWN ON THIS PLAN AND THEIR RELATIONSHIP TO ADJACENT LANDS ARE CORRECTLY AND ACCURATELY SHOWN.

SIGNED _____ DATE _____

A.U. KUMARANAYAKE, O.L.S.
R-PE SURVEYING LTD.
643 CHRISLEA ROAD, SUITE 7
WOODBRIDGE ON, L4L 8A3
PHONE: (416) 635-500

ADDITIONAL INFORMATION

(UNDER SECTION 51(17) OF THE PLANNING ACT) INFORMATION REQUIRED BY CLAUSES A,B,C,D,E,F,G, J & L ARE SHOWN ON THE DRAFT AND KEY PLANS.

H) MUNICIPAL AND PIPED WATER TO BE PROVIDED
I) SANDY LOAM AND CLAY LOAM
K) SANITARY AND STORM SEWERS TO BE PROVIDED

LAND USE SCHEDULE

LAND USE	LOTS / BLOCKS	AREA (ha)	AREA (ac)	UNITS	DENSITY (UPHA)
SINGLE DETACHED	1-18	8.05	19.89	210-295	26-36
DETACHED OR TOWNHOUSE	19-23	2.27	5.61	60-173	26-76
TOWNHOUSE	24-29	2.66	6.57	150-207	56-78
DUAL FRONTAGE TOWNHOUSE	30,31	0.80	1.98	52-70	65-88
REAR LANE DETACHED	32-47	6.25	15.44	180-259	29-41
REAR LANE DETACHED OR TOWNHOUSE	48,49	0.98	2.42	27-77	28-78
REAR LANE TOWNHOUSE	50-60	4.74	11.71	314-429	66-90
MIXED USE	61,62	1.42	3.51		
PUBLIC ELEMENTARY SCHOOL	63	3.24	8.01		
NEIGHBOURHOOD PARK	64	2.36	5.83		
WALKWAY BLOCK	65-68	0.06	0.15		
SWM POND	69	2.62	6.47		
ENVIRONMENTAL POLICY AREA	70-72	5.04	12.45		
RESIDENTIAL RESERVE	73-83	0.25	0.62		
ROAD WIDENING	84,85	0.65	1.61		
0.3m RESERVE	86-98	0.00	0.00		
8.0m LANEWAY R.O.W. (LENGTH: 2,317m)		2.02	4.99		
18.0m LOCAL R.O.W. (LENGTH: 5,143m)		9.47	23.40		
22.0m COLLECTOR R.O.W. (LENGTH: 2,480m)		5.27	13.02		
29.0m COLLECTOR R.O.W. (LENGTH: 663m)		1.95	4.82		
TOTAL	**98**	**60.10**	**148.51**	**993-1,510**	**38-58**

SCALE: 1:2500
(24 x 36)
MAY 13, 2025

GSAI
Glen Schnarr & Associates Inc.

Attachment 3:

Level of Service Definitions

Level of Service Definitions

Two-Way Stop Controlled Intersections

Level of Service	Control Delay per Vehicle (seconds)	Interpretation
A	≤ 10	EXCELLENT. Large and frequent gaps in traffic on the main roadway. Queuing on the minor street is rare.
B	> 10 and ≤ 15	VERY GOOD. Many gaps exist in traffic on the main roadway. Queuing on the minor street is minimal.
C	> 15 and ≤ 25	GOOD. Fewer gaps exist in traffic on the main roadway. Delay on minor approach becomes more noticeable.
D	> 25 and ≤ 35	FAIR. Infrequent and shorter gaps in traffic on the main roadway. Queue lengths develop on the minor street.
E	> 35 and ≤ 50	POOR. Very infrequent gaps in traffic on the main roadway. Queue lengths become noticeable.
F	> 50	UNSATISFACTORY. Very few gaps in traffic on the main roadway. Excessive delay with significant queue lengths on the minor street.

Adapted from Highway Capacity Manual 2000, Transportation Research Board

Signalized Intersections

Level of Service	Control Delay per Vehicle (seconds)	Interpretation
A	≤ 10	EXCELLENT. Extremely favourable progression with most vehicles arriving during the green phase. Most vehicles do not stop and short cycle lengths may contribute to low delay.
B	> 10 and ≤ 20	VERY GOOD. Very good progression and/or short cycle lengths with slightly more vehicles stopping than LOS "A" causing slightly higher levels of average delay.
C	> 20 and ≤ 35	GOOD. Fair progression and longer cycle lengths lead to a greater number of vehicles stopping than LOS "B".
D	> 35 and ≤ 55	FAIR. Congestion becomes noticeable with higher average delays resulting from a combination of long cycle lengths, high volume-to-capacity ratios and unfavourable progression.
E	> 55 and ≤ 80	POOR. Lengthy delays values are indicative of poor progression, long cycle lengths and high volume-to-capacity ratios. Individual cycle failures are common with individual movement failures also common.
F	> 80	UNSATISFACTORY. Indicative of oversaturated conditions with vehicular demand greater than the capacity of the intersection.

Adapted from Highway Capacity Manual 2000, Transportation Research Board

Attachment 4:

Alloa Phase 1 Tertiary Plan Transportation Impact Study – 2041 Future Total Key Intersection Operations

Table A: 2041 Future Total Traffic Operations - Key 12101 Creditview Road Intersections

Intersection	Performance Metrics						
	Movement	LOS[1]		Delay (s)		v/c ratio[2]	
		A.M.	P.M.	A.M.	P.M.	A.M.	P.M.
Chinguacousy Road & Tim Manley Avenue/Street B	**Overall**	**C**	**C**	**25**	**28**	**0.74**	**0.86**
	EBL	C	C	23	23	0.51	0.44
	EBTR	D	C	40	28	0.74	0.33
	WBL	C	C	27	23	0.46	0.31
	WBTR	D	D	46	48	0.74	0.86
	NBL	B	C	19	28	0.06	0.33
	NBT	C	C	25	30	0.58	0.62
	NBR	B	C	20	25	0.13	0.26
	SBL	B	B	15	19	0.48	0.51
	SBT	B	B	13	20	0.29	0.53
	SBR	B	B	11	16	0.04	0.18
Mayfield Road & Brisdale Drive/Street E	**Overall**	**A**	**A**	**6**	**10**	**0.35**	**0.49**
	EBL	A	A	2	8	0.08	0.31
	EBT	A	A	2	3	0.30	0.35
	EBR	A	A	4	5	0.02	0.03
	WBL	A	B	2	12	0.09	0.34
	WBTR	A	A	2	9	0.32	0.37
	NBL	D	D	52	53	0.28	0.24
	NBTR	D	D	50	54	0.16	0.06
	SBL	D	D	41	53	0.35	0.49
	SBT	D	D	38	53	0.07	0.08
Mayfield Road & Thornbush Boulevard/Street F	**Overall**	**B**	**A**	**14**	**5**	**0.47**	**0.64**
	EBL	A	A	3	1	0.11	0.22
	EBT	A	A	2	1	0.28	0.35
	EBR	A	A	5	0	0.00	0.02
	WBL	B	A	13	3	0.07	0.21
	WBT	B	A	16	2	0.33	0.31
	WBR	C	A	33	1	0.03	0.10
	NBL	D	D	51	47	0.21	0.09
	NBTR	D	D	50	47	0.14	0.04
	SBL	D	E	39	59	0.47	0.64
Chinguacousy Road & Tweedhill Avenue/Street A	**Overall**	**B**	**B**	**14**	**16**	**0.50**	**0.65**
	EBL	C	C	26	30	0.50	0.42
	EBTR	C	C	25	28	0.38	0.19
	WBLTR	D	D	42	49	0.51	0.65
	NBL	A	A	7	9	0.02	0.11
	NBTR	A	B	10	11	0.37	0.45
	SBL	A	A	8	9	0.06	0.12
	SBTR	A	B	10	12	0.38	0.51
Creditview Road & Street A	**Overall**	**A**	**A**	**8**	**8**	**0.32**	**0.31**
	EBL	C	C	20	21	0.19	0.21
	EBTR	C	C	21	21	0.32	0.31
	WBL	C	C	21	21	0.34	0.26

Intersection	Performance Metrics						
	Movement	LOS[1]		Delay (s)		v/c ratio[2]	
		A.M.	P.M.	A.M.	P.M.	A.M.	P.M.
	WBTR	B	C	20	21	0.15	0.31
	NBL	A	A	3	3	0.02	0.05
	NBTR	A	A	3	3	0.18	0.28
	SBLTR	A	A	3	3	0.25	0.21
Creditview Road & Street B	**Overall**	**A**	**A**	**4**	**5**	**0.38**	**0.38**
	WBL	C	C	26	25	0.38	0.38
	WBTR	C	C	23	23	0.01	0.01
	NBTR	A	A	2	3	0.17	0.25
	SBLTR	A	A	2	2	0.21	0.17
Street A & Street E	**Overall[1]**	**A**	**A**	**8**	**8**	**0.17**	**0.16**
	EBLTR	A	A	8	8	0.17	0.14
	WBLTR	A	A	8	8	0.08	0.16
	NBLTR	A	A	7	8	0.04	0.06
	SBLTR	A	A	8	8	0.04	0.06
Street B & Street E	**Overall[1]**	**A**	**A**	**9**	**9**	**0.30**	**0.34**
	EBTR	A	A	9	9	0.30	0.23
	WBL	A	A	8	8	0.03	0.08
	WBT	A	A	9	10	0.02	0.34
	NBLR	A	A	8	8	0.06	0.05
Street A & Street F	**Overall[1]**	**A**	**A**	**8**	**8**	**0.14**	**0.18**
	EBLTR	A	A	8	8	0.14	0.14
	WBLTR	A	A	8	9	0.11	0.18
	NBLTR	A	A	8	8	0.12	0.04
	SBLTR	A	A	8	8	0.10	0.09
Street B & Street F	**Overall[1]**	**A**	**A**	**8**	**8**	**0.14**	**0.16**
	EBL	A	A	8	8	0.01	0.02
	EBTR	A	A	8	8	0.09	0.08
	WBL	A	A	9	9	0.08	0.16
	WBTR	A	A	8	8	0.08	0.15
	NBLTR	A	A	8	8	0.14	0.13
	SBLTR	A	A	8	8	0.10	0.06

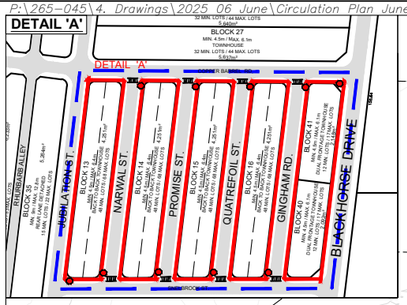
Note 1: The LOS of a signalized intersection is based on the average control delay per vehicle (HCM 2000). The LOS of a stop-controlled intersection is based on the delay associated with the critical minor road approach (HCM 2000 for two-way stop control, HCM 2010 for all-way stop control).

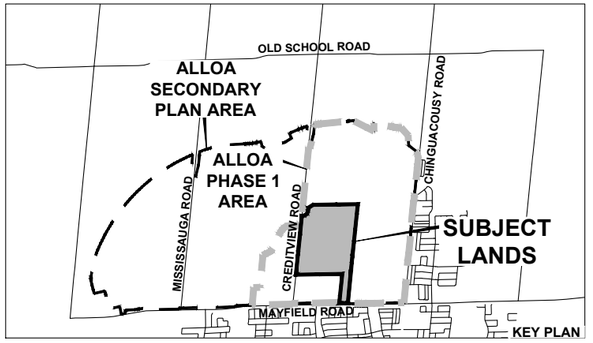
Note 2: The intersection v/c ratio is the maximum movement v/c ratio at the intersection.

Attachment 5:

Pedestrian Circulation Plan

P:\265-045\4. Drawings\2025_06 June\Circulation Plan June 26 25.dwg





PEDESTRIAN CIRCULATION PLAN

12101 CREDITVIEW DEVELOPMENTS LIMITED

FILE #21T-_____C

12101 CREDITVIEW ROAD
PART OF LOTS 18 & 19, CONCESSION 3,
WEST OF HURONTARIO STREET
(GEOGRAPHIC TOWNSHIP OF CHINGUACOUSY)
TOWN OF CALEDON
REGIONAL MUNICIPALITY OF PEEL

LEGEND

- POTENTIAL 1.8m SIDEWALK LOCATIONS (TO BE CONFIRMED AT DETAILED DESIGN)
- POTENTIAL 3.3m MULTI-USE PATH LOCATIONS (TO BE CONFIRMED AT DETAILED DESIGN)
- CONCEPTUAL PAVEMENT
- PROPOSED STOP SIGN LOCATION
- PROPOSED CROSSWALK LOCATION

Note*

This Circulation Plan only outlines internal active transportation facilities. Refer to the Alloa Phase 1 Tertiary Plan Transportation Impact Study Proposed Active Transportation Network Figure 52 for the locations of trails and external active transportation facilities.

SCALE: 1:4,800
(11 x 17)
JUNE 26, 2025

GSAI
Glen Schnarr & Associates Inc.

Attachment 6:

Proposed Transit Network

OLD SCHOOL RD

FUTURE HIGHWAY 413

MISSISSAUGA RD

CREDITVIEW RD

CHINGUACOUSY RD

Approximate 12101 Creditview Road Draft Plan Lands

NEW

27

25

26

3

TIM MANLEY AVE

TWEEDHILL AVE

NEIL PROM

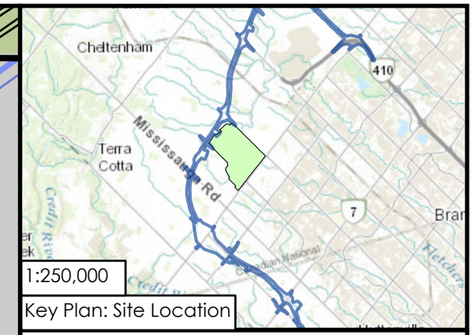
PETCH AVE

MCLAUGHLIN RD

MAYFIELD RD

To Mayfield West Transit Hub

0 250 500 1,000 Meters



Key Plan: Site Location

Legend

- Alloa Phase 1 Tertiary Plan
- Ontario Greenbelt

Road
- Arterial
- Collector
- Local
- Proposed

- Preliminary Highway (Edge of Pavement)
- Preliminary Transitway
- Preliminary Transitway (Right-of-Way)
- Proposed Transit Stop
- Existing / Planned Transit Stop

Existing / Planned Brampton Transit Routes
- Existing Route 3
- Existing Route 25
- Existing Route 26

Proposed Transit Route
- Route 27 Extension
- NEW Brisdale Dr Route

Proposed Land Use Plan
- Developed Area
- Commercial / Mixed Use Area
- Natural Heritage System

Figure Notes:

1. Road Classifications per Town of Caledon Multi-Modal Transportation Master Plan and the City of Brampton OP Schedule B City Road Hierarchy
2. Transit Network as per Future Caledon Official Plan 2024
3. Highway 413 area and alignment as per 50% Preliminary Highway Design (Highway 413 Interactive Map, 2024)

Project:
Alloa Phase 1
Tertiary Plan

Figure:
Alloa Phase 1
Proposed Interim Transit Network

CELEBRATING 20 YEARS SINCE 2004

CROZIER

Drawn:	Design:	Project No.	
D.M	M.L.	2448-7006	
Date:	GCS:	Scale:	Dwg.
2024-10-04	NAD 1983	1:13,000	Fig. 6