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College Catholique Mer-Bleue Transportation Impact Assessment (Screening and Scoping)

January 2023 – 22-5352

Certification

1. I have reviewed and have a sound understanding of the objectives, needs, and requirements of the City of Ottawa's Official Plan and the Transportation Impact Assessment (2017) Guidelines;
2. I have a sound knowledge of industry standard practice with respect to the presentation of transportation impact assessment reports, including multimodal level of service review;
3. I have substantial experience (more than 5 years) in undertaking and delivering transportation impact studies (analysis, reporting and geometric design) with strong background knowledge in transportation planning, engineering, or traffic operations; and,
4. I am either a licensed or registered professional in good standing, whose field of expertise is either transportation engineering or transportation planning.

Signature of individual certifier that s/he meets the above four criteria.

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1.0 Screening

1.1 Description of Proposed Development

Municipal Address	Build-out year
Description of Location	Collège catholique Mer-Bleue is an existing high school offering a French Catholic education for pupils in Grade 7 to Grade 12. The school is located within the Orleans district.
Land Use Classification	I1A[2130]– Minor Institutional Zone: 1. permits a range of community uses, institutional accommodation and emergency service uses to locate in areas designated as General Urban Area or Central Area in the Official Plan; and 2. minimize the impact of these minor institutional uses located in close proximity to residential uses by ensuring that the such uses are of a scale and intensity that is compatible with neighbourhood character
Development Size	The CECCE is proposing to expand the school to provide an additional 13 classrooms, 2 science rooms and a technology room. In total, the school anticipates providing space for an additional 336 students.
Number of accesses and locations	The staff and student parking lot is accessed via Fern Casey Street with a bus loop providing access from Renaud Road, access modifications are not anticipated.
Phases of development	Single Phase
Build-out year	2024

1.2 Trip Generation Trigger

Land Use Type	Minimum Development Size	Yes	No
Single-family homes	40 units		X
Townhomes or apartments	90 units		X
Office	3,500 sq.m.		X
Industrial	5,000 sq.m.		X
Fast-food restaurant or coffee shop	100 sq.m.		X
Destination retail	1,000 sq.m.		X
Gas station or convenience market	75 sq.m.		X
Other	60 person trips or more during weekday peak hours	X	

1.3 Location Triggers

	Yes	No
Does the development propose a new driveway to a boundary street that is designated as part of the City's Transit Priority, Rapid Transit or Spine Bicycle Networks?		X
Is the development in a Design Priority Area (DPA) or Transit-oriented Development (TOD) zone?*		X

1.4 Safety Triggers

	Yes	No
Are posted speed limits on a boundary street are 80 km/h or greater?		X
Are there any horizontal/vertical curvatures on a boundary street limits sight lines at a proposed driveway?		X
Is the proposed driveway within the area of influence of an adjacent traffic signal or roundabout (i.e., within 300 m of intersection in rural conditions, or within 150 m of intersection in urban/ suburban conditions)?		X
Is the proposed driveway within auxiliary lanes of an intersection?		X
Does the proposed driveway make use of an existing median break that serves an existing site?		X
Is there is a documented history of traffic operations or safety concerns on the boundary streets within 500 m of the development?		X
Does the development include a drive-thru facility?		X

1.5 Summary

	Yes	No
Does the development satisfy the Trip Generation Trigger?		X
Does the development satisfy the Location Trigger?		X
Does the development satisfy the Safety Trigger?		X

The development is anticipated to generate more than 60-person trips and therefore meets the Trip Generation Trigger and a traffic impact study is required. **Figure 1** illustrates the site location.

Figure 1: Site Location

Background image source: geoOttawa

2.0 Scoping

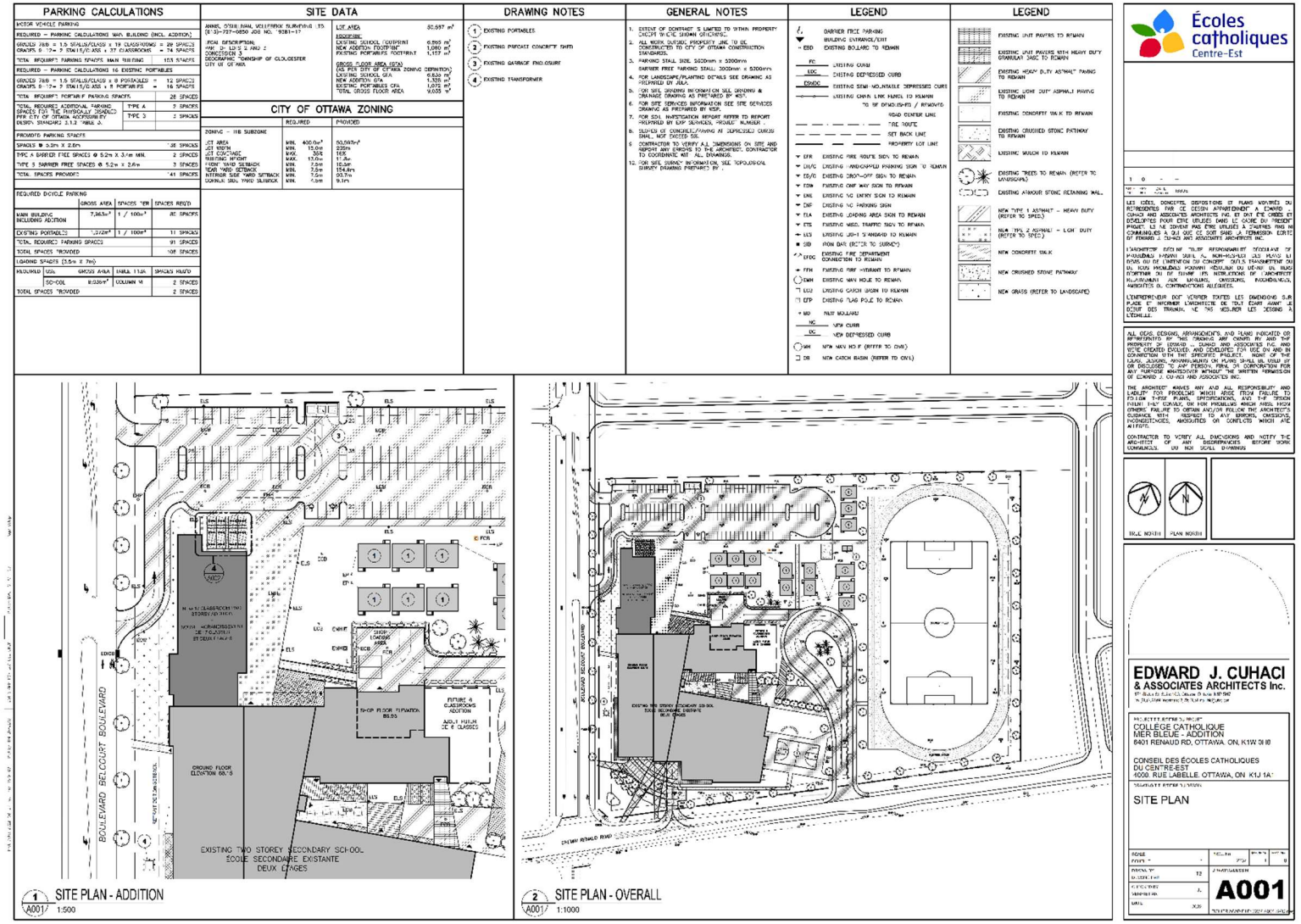
2.1 Existing and Planned Conditions

2.1.1 Proposed Development

Collège catholique Mer-Bleue is an existing French Catholic high school that provides education for students in grades 7 to 12. It operates from 8:00 AM to 2:15 PM each school day. The CECCE has plans to expand the school by adding 13 classrooms, 2 science labs, and a technology room. The expansion will add approximately 336 new students to the school. The school's staff and student parking lot can be accessed from Fern Casey Street, and the school's bus loop can be accessed from Renaud Road. No changes to the school's current access driveways are anticipated.

The preliminary site plan is shown in **Figure 2**.

Figure 2: Site Plan



The following intersections have been evaluated as part of this transportation analysis:

- Access Intersections:
  - Site Driveway and Fern Casey Street (unsignalized); and
  - Bus Loop and Renaud Road (unsignalized).
- Network Intersections:
  - Navan Road and Renaud Road (signalized);
  - Renaud Road and Fern Casey Street (unsignalized);
  - Renaud Road and Mer-Bleue Road (unsignalized); and
  - Brian Coburn Boulevard and Fern Casey Street (roundabout).

2.1.2 Existing Conditions

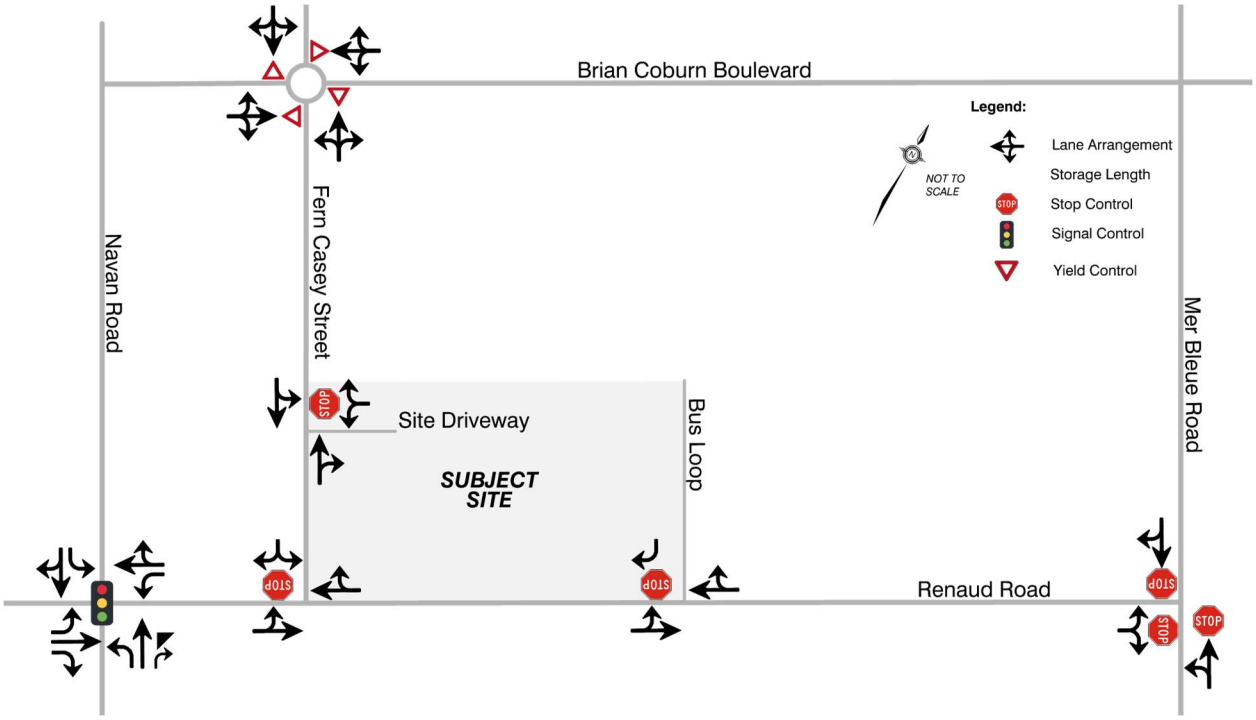
2.1.2.1 Roads and Traffic Control

The study area roadways are described as follows:

Fern Casey Street	Fern Casey Street is a two-lane municipally-owned Major Collector roadway located to the west of the development. Fern Casey Street runs north-south and connects Brian Coburn Boulevard to Renaud Road. Fern Casey Street has a posted speed limit of 60 km/h in the vicinity of the site.
Navan Road	Navan Road is a two-lane municipally-owned Arterial roadway located west of the development. Navan Road runs southeast from the Blackburn Hamlet Bypass to Trim Road. Navan Road has a posted speed limit of 60 km/h in the vicinity of the site.
Renaud Road	Renaud Road is a two-lane municipally-owned Collector roadway located on the south edge of the development. Renaud Road runs east from Anderson Road in the west to Mer-Bleue Road in the east. Renaud Road has a posted speed limit of 50 km/h in the vicinity of the site.
Mer-Bleue Road	Mer-Bleue Road is generally a four-lane, divided, municipally-owned Arterial roadway located approximately 900 metres east of the school. Mer-Bleue Road runs north from Navan Road in the south and turns into Jeanne D'Arc Boulevard at Innes Road to the north. Mer-Bleue Road has a posted speed limit of 60 km/h in the vicinity of the Renaud Road.
Brian Coburn Boulevard	Brian Coburn Boulevard is a two-lane municipally-owned Arterial roadway located north of the development. Brian Coburn Boulevard runs northeast from Navan Road in the west to Trim Road in the east. Brian Coburn Boulevard has a posted speed limit of 70 km/h in the vicinity of the site.

The lane geometry and traffic control for the study area intersections are shown in **Figure 3**.

Figure 3: Lane Geometry and Traffic Control



2.1.2.2 Walking and Cycling

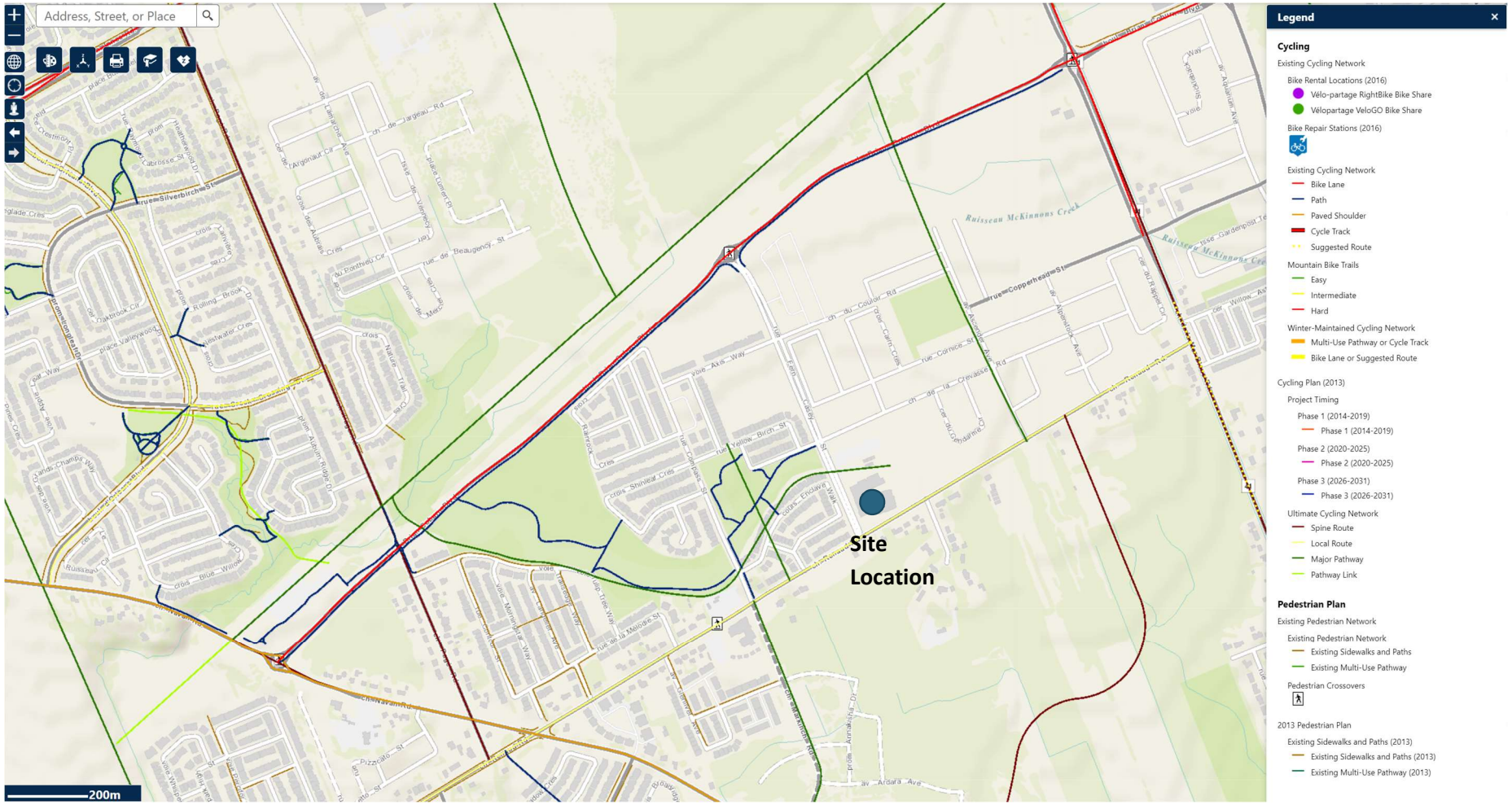
Figure 4 illustrates the existing pedestrian and cycling facilities in the vicinity of the development, bounded by the study area intersections, as documented by geoOttawa. The geoOttawa database has not been updated, sidewalks are now present along:

- Renaud Road (both sides) from Navan Road to approximately 260 metres east of Fern Casey Street;
- Fern Casey Street (both sides); and,
- Mer-Bleue Road (both sides) to the north of Promenade Decoeur (335 metres north of Renaud Road) in the reconstructed four-lane portion of the roadway. To the south of Promenade Decoeur, the roadway has yet to be urbanized.

A Multi-Use Pathway is present along Brian Coburn Boulevard, which, along with Fern Casey Street is designated as a Major Pathway in the City's 2013 Transportation Master Plan (TMP).

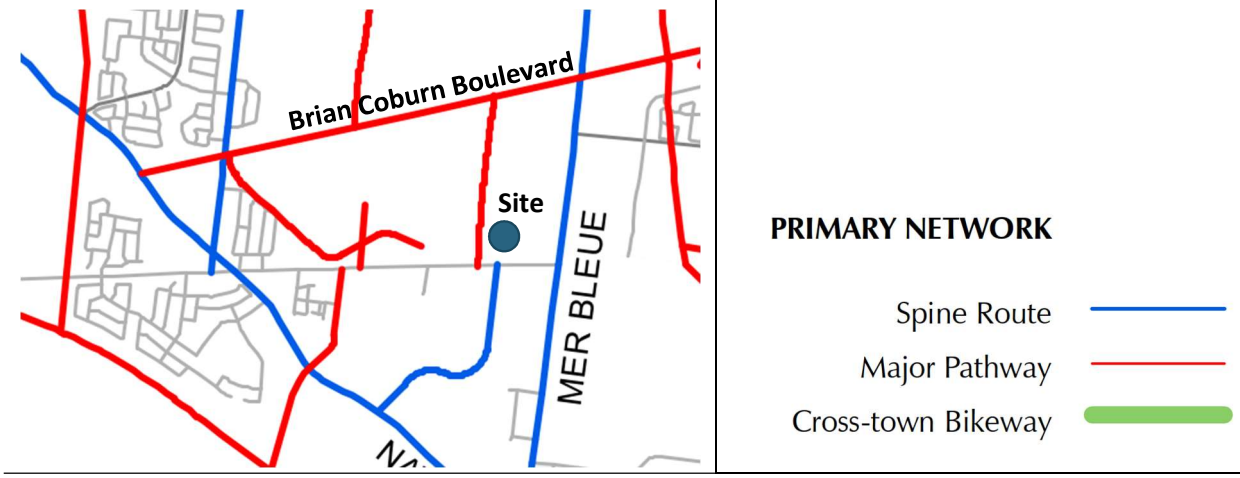
Mer-Bleue Road is designated as a Cycling Spine Route as illustrated in **Figure 5**, with on-street cycling lanes initiating approximately 335 metres north of Renaud Road. A paved shoulder is present on Navan Road for cyclists to utilize.

Figure 4: Existing Walking and Cycling Facilities



Source: geoOttawa, accessed January 16, 2023

Figure 5: City of Ottawa TMP Cycling Network



Source: City of Ottawa TMP (2013)

2.1.2.3 Transit

Figure 6 shows the existing transit service near the proposed development.

Route 32 provides direct service to the school site and is a local route that operates at 30-minute headways connecting Navan Road to Mer-Bleue Road via Renaud Road, Fern Casey Street and Brian Coburn Boulevard. Service is provided Tuesday to Friday from 5:22 AM to 2:52 PM. No weekend service is provided within the study area portion of Route 32. A Park and Ride service is provided at the Chapel Hill Station.

Route 34 is a local route that operates at 30-minute headways along Navan Road and Renaud Road to the west of the development. Service is provided Monday to Friday from 5:44 AM to 10:27 PM, Saturday from 6:39 AM to 8:33 PM, and on Sunday from 7:36 AM to 7:24 PM.

Table 5, from the Trans Trip Generation Manual Summary Report, 2020, indicates that 28% of trips to/from the Orleans district, use transit during the AM peak hour, while 22% use transit during the PM peak hour.

Figure 6: Existing Transit Service

Source: OC Transpo, accessed January 12, 2023

2.1.2.4 Traffic Management Measures

Fern Casey Street features a raised median designed to regulate turning movements and create a perception of a narrower roadway among motorists, with the aim of decreasing traffic speed.

2.1.2.5 Traffic Volumes

Existing traffic volumes are based on a combination of turning movement counts undertaken by the City of Ottawa. Table 1 summarizes the traffic counts used for this study.

Table 1: Traffic Counts

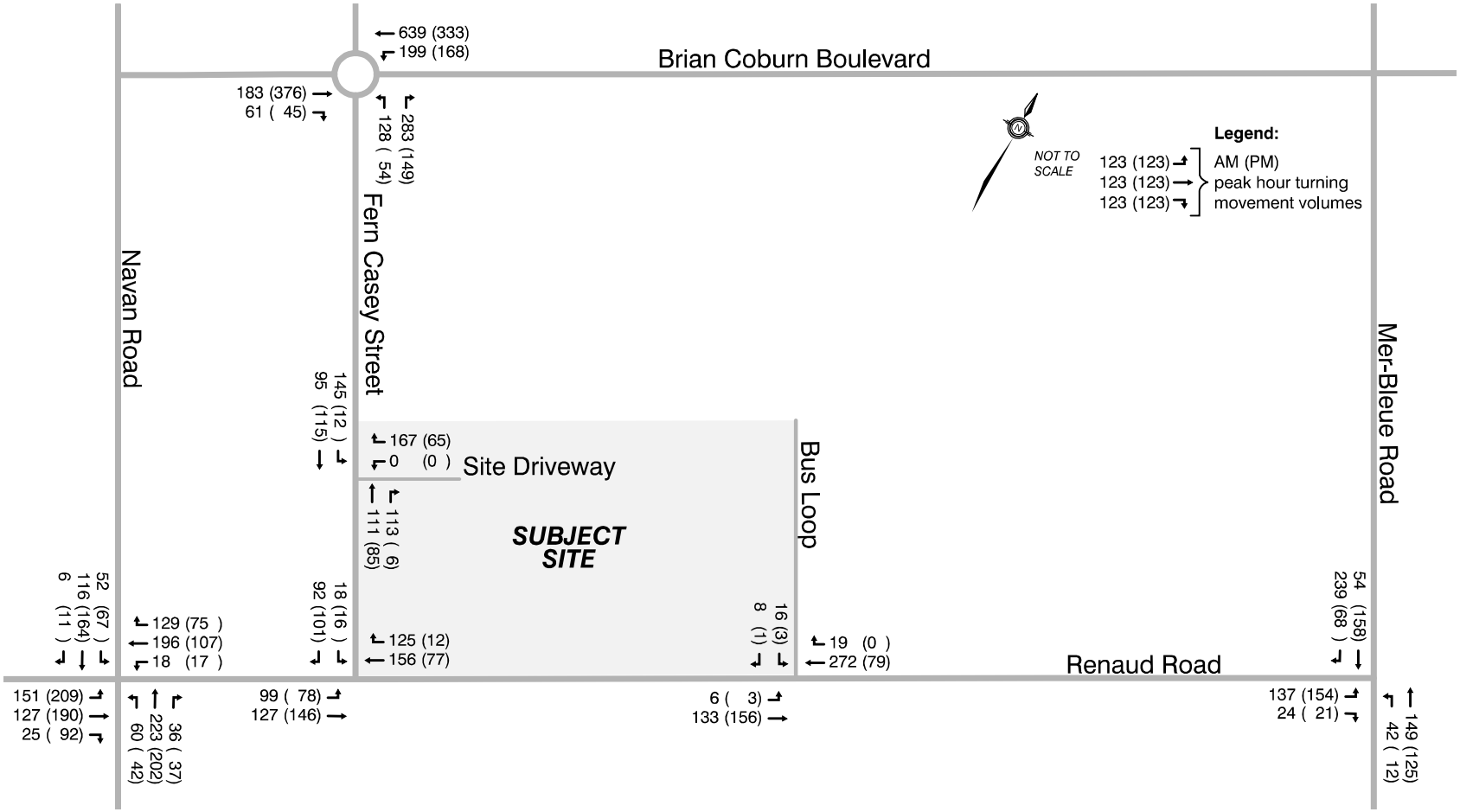
Intersection	Date	Source
1. Navan Road and Renaud Road;	September 22, 2022 & October 19, 2021	City of Ottawa
2. Renaud Road and Fern Casey Street;	December 20, 2022	City of Ottawa
3. Renaud Road and Mer-Bleue Road	December 20, 2022	City of Ottawa
4. Brian Coburn Blvd and Fern Casey Street (roundabout);	January 11, 2023	City of Ottawa
5. Site Driveway and Fern Casey Street; and,	December 20, 2022	City of Ottawa
6. Bus Loop and Renaud Road.	December 20, 2022	City of Ottawa

The site is an operating school, therefore the time periods used within this study are the weekday AM commuter hour and the PM (2:30 PM to 3:30 PM) school peak hours, which align with the school bell times, and will govern the traffic capacity analysis. For the Renaud Road and Navan Road intersection, 3:00 PM to 4:00 PM traffic volumes were used as traffic data was not available for 2:30 PM to 3:30 PM.

Figure 7 illustrates the existing study area traffic volumes.

It is noted that traffic volumes were incomplete for the count at the intersection of Navan Road and Renaud Road on September 22, 2022 – traffic volumes from October 19, 2021 were used to account for the northbound vehicle volumes, which were not counted in September 2022. No other adjustments or balancing has been made to the vehicle volumes.

Figure 7: Existing Traffic Volumes

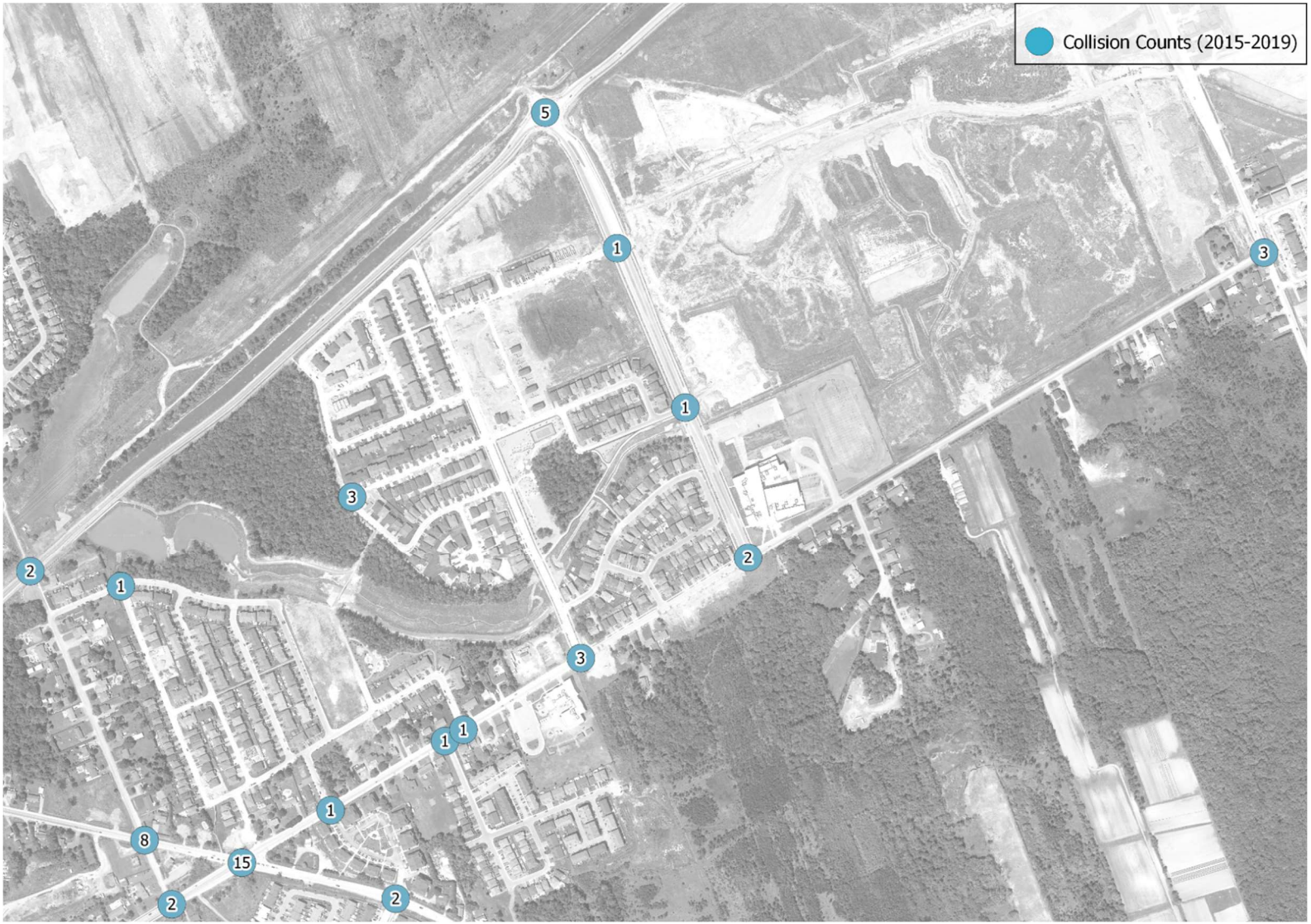


2.1.2.6 Collision History

Figure 8 illustrates the location and number of collisions in the study area between 2015 and 2019 at the study area intersections. **Figure 9** illustrates the location and number of collisions in the study area between 2015 and 2019 at midblock locations.

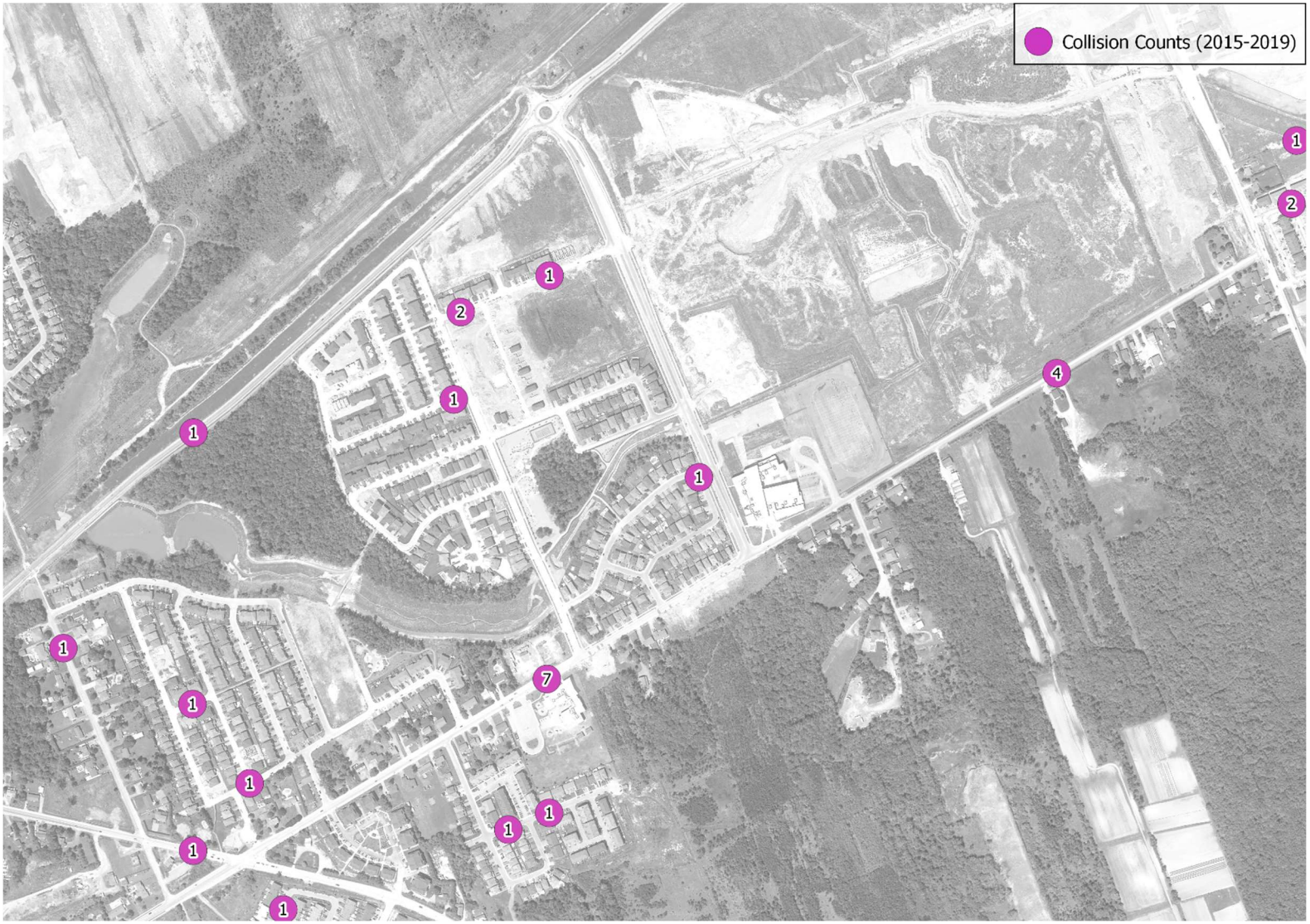
There are generally between five and 30 collisions per year at major intersections. The majority of these collisions are rear-end collisions and most resulted in property damage only. The 2020 Ottawa Road Safety Report indicates that none of the study area intersections are within the top 10 intersection collision areas. The intersection (location) with the highest number of collisions within the study area is the signalized intersection of Navan Road and Renaud Road with 15 collisions recorded over the five-year period, equating to an average of 3 collisions per year.

Figure 8: Intersection Collisions (2015 to 2019)



Source: City of Ottawa Open Data Portal, accessed January 16, 2023.

Figure 9: Midblock Collisions (2015 to 2019)



Source: City of Ottawa Open Data Portal, accessed January 16, 2023.

2.1.3 Planned Conditions

2.1.3.1 Road and Transit Network Modifications

The City of Ottawa completed the preliminary and detailed design of the extension of Brian Coburn Boulevard from Mer-Bleue Road southwest to Navan Road, and the widening of Mer-Bleue Road, from the previous widening limits at the Hydro One corridor (south of Innes Road) to Renaud Road.

- The Mer-Bleue Road work included construction of a 1km section of the existing Mer-Bleue Road corridor from a two-lane rural cross-section to a four-lane urban arterial cross-section, complete with pedestrian facilities and dedicated cycle lanes, this work is generally complete at this time, however work stopped short approximately 330 metres north of Renaud road;
- The Brian Coburn Boulevard design included the ultimate four-lane cross-section and the design and construction of the interim two-lane cross-section for the new 3.2km Brian Coburn Boulevard corridor, including on-road and off-road cycling facilities. Both roadways included construction of roundabouts at all intersections. Brian Coburn Boulevard has been constructed with a two-lane cross-section and roundabouts at most intersections;
- The construction projects included a roundabout at the following intersections:
    - Mer-Bleue Road and Brian Coburn Boulevard; and,
    - Brian Coburn Boulevard and Fern Casey Boulevard.

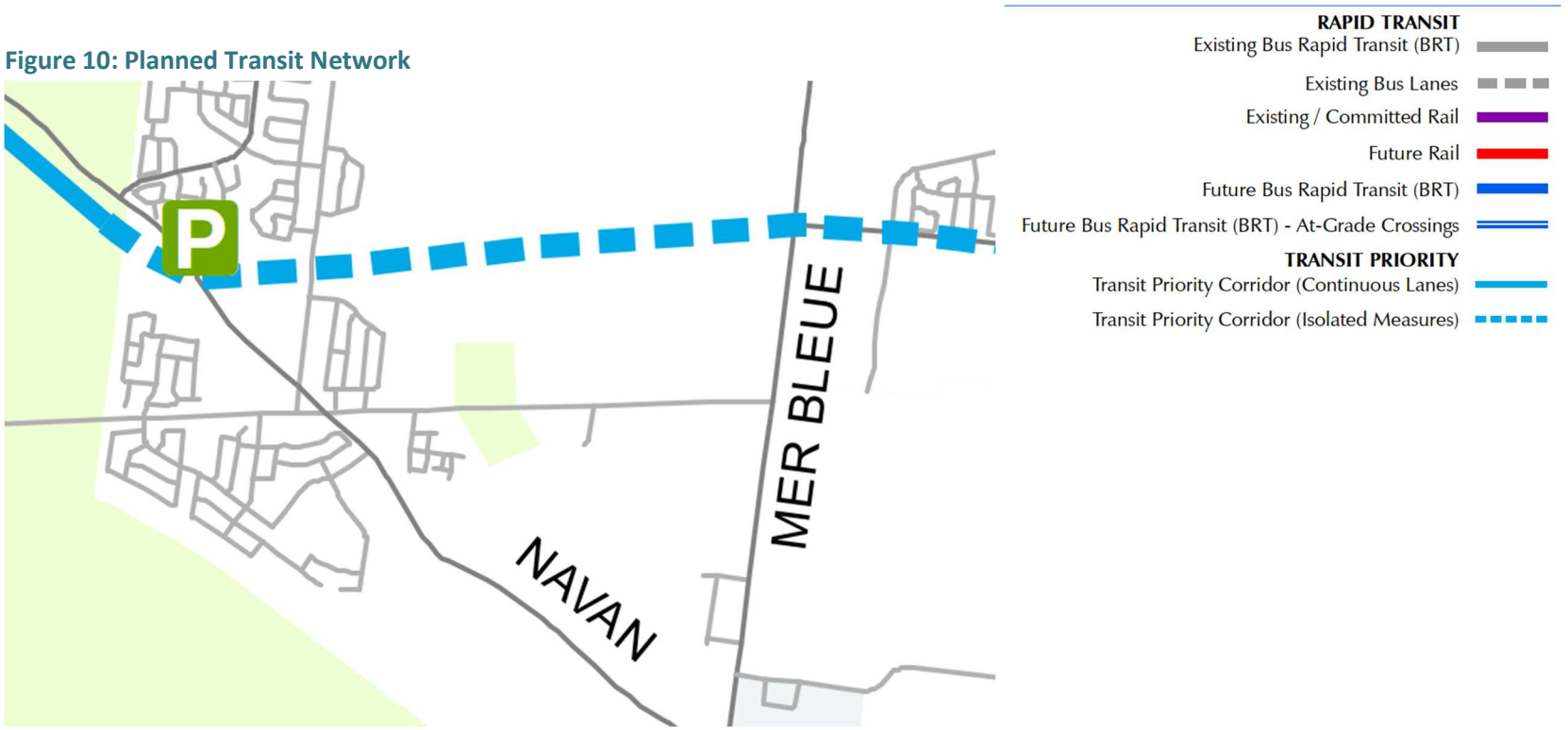
The 2013 Transportation Master Plan (TMP), 2031 Affordable Road Network identifies the following projects road widening projects:

- widen Brian Coburn Boulevard to four lanes between Navan Road and Mer-Bleue Road; and,
- Mer-Bleue Road widening from two to four lanes between Brian Coburn Boulevard and Renaud Road.

The 2013 TMP, 2031 Network Concept indicates that Mer Bleue Road is to be realigned slightly to the west of its current alignment between Renaud Road and Navan Road. No other road network modifications are anticipated in the study area.

The City's TMP includes the implementation of isolated Transit Priority Corridor measures along Brian Coburn Boulevard, based on the 2031 Affordable Transit Network **Figure 10** shows the 2031 planned affordable transit network.

Figure 10: Planned Transit Network



Source: City of Ottawa 2013 TMP, 2031 Affordable Transit Network

2.1.3.2 Walking and Cycling

The pedestrian and cycling plans of the TMP do not indicate improvements within the study area; however, it is expected that facilities would be added to Brian Coburn Boulevard, Renaud Road, and Mer-Bleue Road in conjunction with widening and urbanization of the corridors. **Figure 12** illustrates the planned walking and cycling facilities, as shown on geoOttawa.

2.1.3.3 Future Background Developments

The City of Ottawa's development applications search tool was used to identify other developments within the study area that could impact study area intersections. **Figure 11** illustrates the background developments in proximity to the school, as indicated within the City of Ottawa Online Development Applications website.

Figure 11: Background Developments

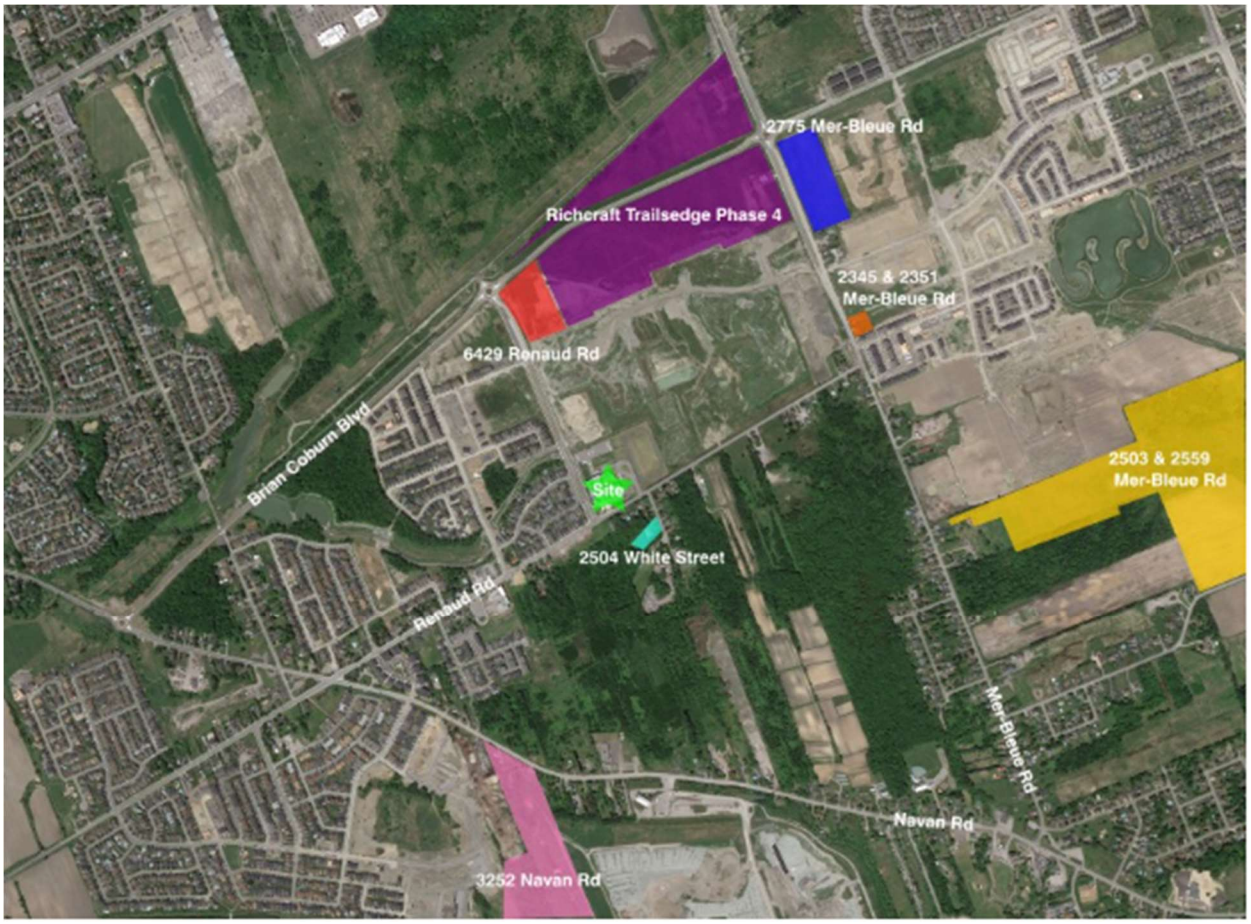
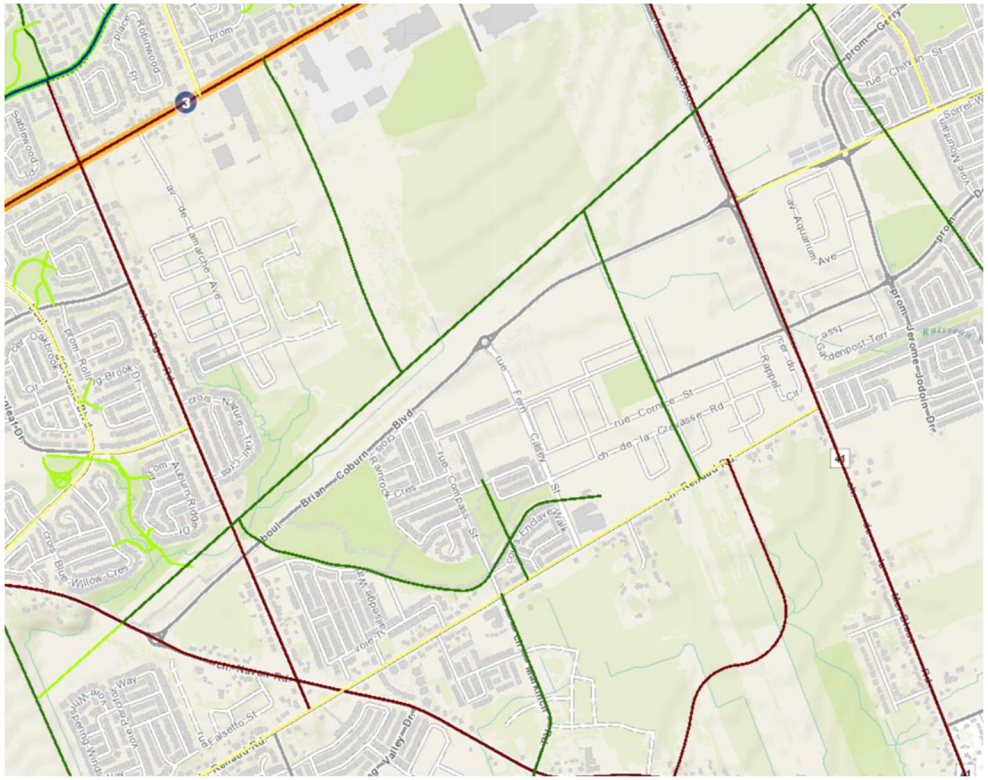


Figure 12: Planned Walking and Cycling Facilities



Legend

Cycling

Cycling Plan (2013)

Project Timing

Phase 1 (2014-2019)

Phase 1 (2014-2019)

Phase 2 (2020-2025)

Phase 2 (2020-2025)

Phase 3 (2026-2031)

Phase 3 (2026-2031)

Multi-use Bridges and Structures

Phase 1 (2014-2019)

Phase 2 (2020-2025)

Ultimate Cycling Network

Spine Route

Local Route

Major Pathway

Pathway Link

Neighbourhood Bikeways

Neighbourhood Bikeways

Cross-Town Bikeways

Cross-Town Bikeways

Winter Network

2012 Winter-Maintained Cycling Network

2013 Extension of Winter-Maintained Cycling Network

Draft 2024 Transportation Master Plan

Active Transportation Project List (April 2022)

Pedestrian Projects

Cycling Projects

Feasibility Study Projects

Rural Active Transportation Network (April 2022)

Existing Paved Shoulders on Proposed Networks

Proposed Paved Shoulder Network

Suggested Routes

Existing Rural Pathways

Pedestrian Plan

2013 Pedestrian Plan

Future Multi-Use Pathway

Future Multi-Use Pathway

Future Sidewalk - Phase 1 (2014-2019)

Future Sidewalk - Phase 1 (2014-2019)

Future Sidewalk - Phase 2 (2020-2025)

Future Sidewalk - Phase 2 (2020-2025)

Future Sidewalk - Phase 3 (2026-2031)

Future Sidewalk - Phase 3 (2026-2031)

Existing NCC Multi-Use Pathway (2013)

Existing NCC Multi-Use Pathway (2013)

Source: geoOttawa, accessed January 12, 2023.

The following background developments were included:

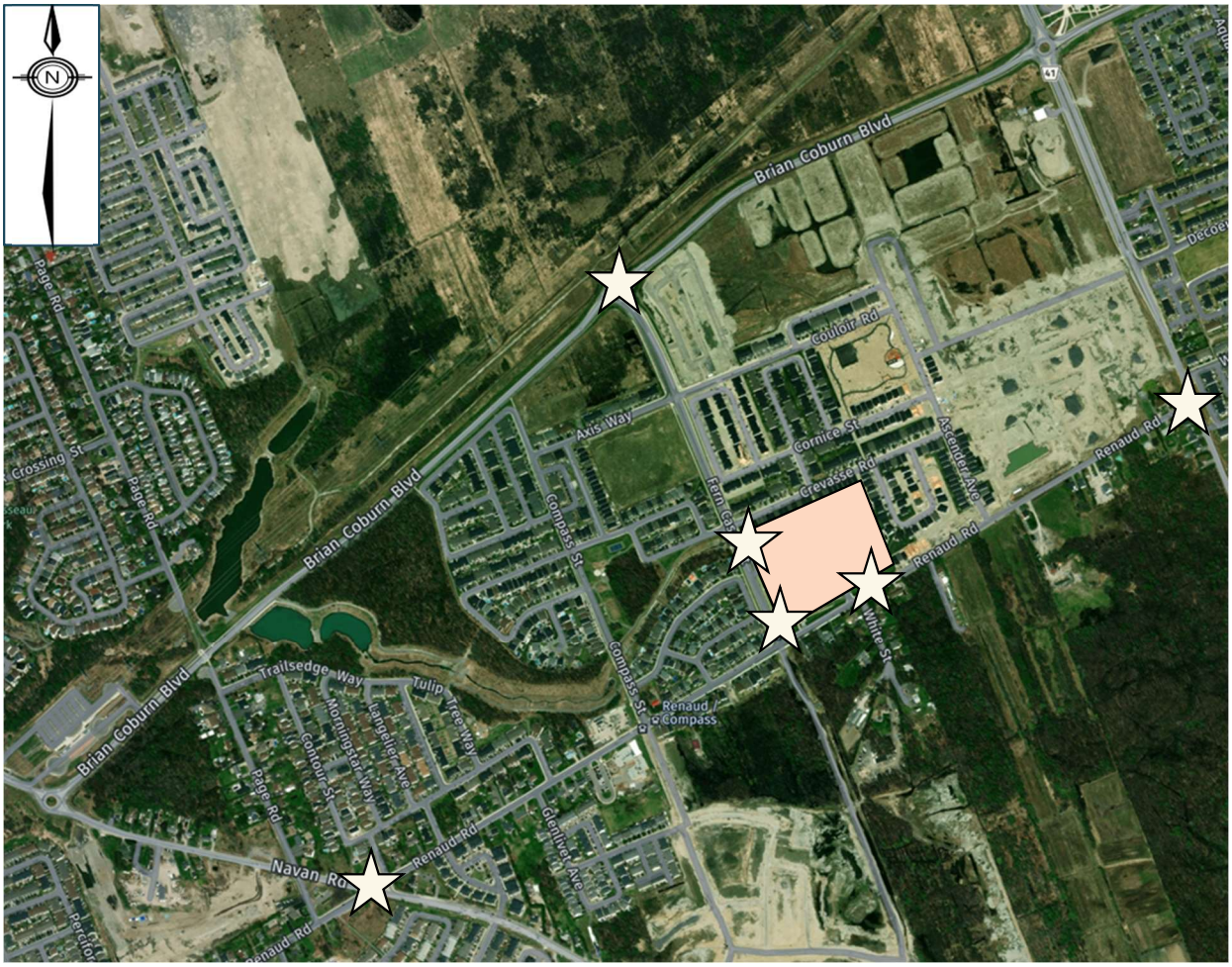
- 6429 Renaud Road (Blocks 193 and 194) – 2024 (Status – pipes being installed)
    - 186 residential dwellings
        - 90 townhomes
        - 96 mid-rise terrace dwellings
- Richcraft Trailsedge Phase 4 – 2031 (Status – no obvious construction activity)
    - 142 single-family homes, 167 townhouses, 116 back-to-back townhouses
    - Commercial area (181 jobs)
    - Mixed-use composed of 352 apartment units and 296 commercial/office jobs
- 2775 Mer-Bleue Road – 2024 (Status – No activity)
    - 32 back-to-back townhouses
    - 80 standard townhouses
    - 0.75-hectare mid-rise mixed-use development block
- 2345 & 2351 Mer-Bleue Road – (construction year unknown) (Status – no activity, existing houses appear to still be in use on the subject lands)
    - Two buildings with 15 dwelling units each (3-storeys)
    - No TIS available
- 2503 & 2559 Mer-Bleue Road & 2666 Tenth Line Road – 2025 (Status – signs of near future activity, some earth works has occurred)
    - 274 single family homes
    - 370 units townhomes
    - 2,100 m2 shopping centre
- 2504 White Street – (construction year unknown) (Status – no activity)
    - Two 2-storey townhouse dwellings (8 units)
    - Two 2.5-storey stacked townhouse dwellings (16 units)
    - No TIS available
- 3252 Navan Road (Spring Valley Trails Phases 5 & 6) – 2023 (Status – not initiated)
    - 11 single family homes
    - 262 units townhomes
    - 48 units condominiums
- 3317 Navan Road – file pending
    - Residential dwellings
- 3323 Navan Road
    - 49 Townhomes, single phase - located within Aschroft Eastboro Plan of Subdivision

2.2 Study Parameters

2.2.1 Study Area

Figure 13 illustrates the proposed study area and study area intersections. The current school parcel is shown in light pink. The white stars denote intersections and site accesses to be included within the analysis.

Figure 13: Study Area and Study Area Intersections



Background image source: HERE Wego, accessed January 12, 2023.

2.2.2 Time Periods

The site is an operating school, therefore the time periods used within this study are the weekday AM commuter hour and the PM (2:30 PM to 3:30 PM) school peak hours, which align with the school bell times, and will govern the traffic capacity analysis. It is noted that traffic volumes for the intersection of Renaud Road and Navan Road were used from 3:00 PM to 4:00 PM, as traffic data was not available for 2:30 PM to 3:30 PM.

2.2.3 Horizon Years

The school expansion is estimated to be complete by 2024. The analysis will assess transportation for the 2024 horizon year, and the 2029 horizon year (+5 years after build-out).

2.3 Exemptions Review

Table 2 presents the exemptions review table from the City of Ottawa's 2017 Transportation Impact Assessment Guidelines. The exemptions were rationalized as follows:

Table 2: Exemptions Review

Module	Element	Exemption Consideration	Status
Design Review Component			
4.1 Development Design	4.1.2 Circulation and Access	Only required for site plans Exempt as no access changes are proposed	Exempt
	4.1.3 New Street Networks	Only required for plans of subdivision	Exempt
4.2 Parking	4.2.1 Parking Supply	Only required for site plans Parking supply is not expected to be 15% below unconstrained demand	Included
	4.2.2 Spillover Parking	Only required for site plans where parking supply is 15% below unconstrained demand	Exempt
Network Impact Component			
4.5 Transportation Demand Management	All Elements	Not required for site plans expected to have fewer than 60 employees and/or students on location at any given time	Included
4.6 Neighbourhood Traffic Management	4.6.1 Adjacent Neighbourhoods	Only required when the development relies on Local or Collector streets for access and total volumes exceed ATM capacity thresholds Total volume is not expected to exceed ATM capacity thresholds;	Exempt
4.8 Network Concept		Only required when proposed development generates more than 200 person trips during the peak hour in excess of the equivalent volume permitted by established zoning Not expected to exceed established zoning.	Exempt