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Ottawa School Streets Feasibility Study

PROJECT FUNDING

EnviroCentre, in partnership with the Ottawa Student Transportation Authority (OSTA), received funding from Infrastructure Canada's Active Transportation Fund to complete this School Streets Feasibility Study.

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Government of Canada

Ottawa Student Transportation Authority

EnviroCentre

EXECUTIVE SUMMARY

A School Street is a road, or section of a road, that is temporarily closed to motorized vehicles during school drop-off and pick-up times. Its purpose is to encourage active transportation, reduce traffic and air pollution in school zones, and support community building and social connection. Generally, a School Street provides a car-free space for students and families to walk, bike, scoot, play, and interact as they arrive and depart each day. For the purpose of this report, a School Street is considered a multi-day pilot project with data collection and monitoring and/or a long-term solution to address traffic issues and increase active travel for a school.

The purpose of this report is to determine the feasibility of implementing a School Streets program in Ottawa. To make this assessment, a wide range of data were gathered from three primary sources: (1) other jurisdictions that have implemented School Streets, (2) by-laws, policies, and targets relevant to Ottawa, and (3) interviews with Ottawa stakeholders.

Data collected from Canadian School Streets projects show that School Streets can reduce traffic in front of schools, increase rates of active transportation for travel to and from school each day, improve air quality in school zones, and support community building and social connection. As such, the implementation of School Streets projects in Ottawa could contribute towards the achievement of Ottawa's sustainability and greenhouse gas reduction targets and its policies for building healthy and inclusive communities. Various City Councillors, principals, and school council representatives have demonstrated an interest in having School Streets projects in their communities. The majority of stakeholders interviewed had safety concerns regarding the volume of traffic in front of Ottawa schools during drop-off and pick-up times and supported the concept of School Streets in Ottawa to increase rates of active transportation and improve school zone safety.

The main model for School Street closures in Canada has used volunteers standing at barricades to enforce street closures. There are challenges associated with the long-term sustainability of this model, and other models should be explored, such as the use of paid staff, automated enforcement cameras, and permanent infrastructure.

Prior to implementing School Streets projects in Ottawa, the current lack of a mechanism for issuing permits for School Street closures and the significant amount of staff time that is required to effectively operationalize School Streets projects need to be considered. Should School Streets be implemented, some key recommendations include establishing a delegated authority to close School Streets, identifying an organization with expertise and project management experience to lead School Streets projects, identifying an organization willing to acquire liability insurance for School Streets closures, and acquiring funding to support the coordination and operation of School Streets projects.

In order to have the greatest long-term impact on increasing rates of active transportation and reducing traffic in school zones, School Streets projects would need to be implemented long-term. The pathway towards establishing long-term School Streets closures will first likely require the completion of a pilot or short-term project to build community support and demonstrate effectiveness at shifting travel modes. Long-term projects could then be implemented to produce long-lasting behaviour change and contribute towards the City of Ottawa's sustainability targets.

Many School Streets pilot projects have been successfully implemented across Canada. School Streets projects could be effectively implemented in Ottawa should the outlined recommendations be considered. School Streets are a substantial opportunity for Ottawa to be a leading example for active transportation programming in Canada.

RECOMMENDATIONS

FOR OTTAWA SCHOOL STREETS

1   **Establish a process for issuing School Streets closure permits**. Delegated authority does not currently exist to close streets to vehicular traffic for School Streets projects. Ottawa can follow a process similar to the process undertaken in Kingston to create a by-law to grant road closure permits for School Streets in Ottawa. Municipal participation and support are essential for permitting.

2   **Identify a school to pilot a short-term School Street project.** Any schools considered would need to meet the eligibility criteria outlined in the School Selection Matrix (see Appendix 2). Some important considerations include number of students in the walk zone, type of road, access for emergency vehicles, OC Transpo routes, etc.

3   **Complete a pilot or short-term project** to collect local data and monitor the impacts of School Street closures in Ottawa**.** A localized pilot is critical for building community support and demonstrating effectiveness at shifting travel modes.

4   **Explore opportunities to use automated enforcement cameras, paid staff, or permanent infrastructure** to enforce School Street closures. These opportunities provide solutions to challenges that other jurisdictions have encountered with relying on volunteers to enforce street closures.

5   **Complete a long-term project to create long-term shifts in travel modes to active transportation,** helping to meet City of Ottawa sustainability targets. The long-term model selected will depend on the location of the project and whether locations have alternate access. Recommended long-term models include piloting the use of automated cameras to enforce closures, hiring staff to implement closures, or installing permanent infrastructure to facilitate closures.

6   **Minimize disruption to residents living in School Street closure zones** by ensuring that streets selected for closure have few homes, residents have alternate access to their homes (alleyways), or through the use of automated camera enforcement which allow residents to travel unimpeded through the School Street zone.

7   **Ensure city services in School Streets zones are not disrupted.** Snow clearing and winter maintenance operations, waste collection, and emergency services must not be disrupted by School Streets projects.

8   **Establish a funding source for School Streets projects.** Funding will be required to run either a short-term pilot project or a long-term School Streets project in Ottawa. The staff time required to coordinate and operationalize School Streets is significant and any organizations leading such a project will require funding to do so.

9   **Identify an organization with expertise and project management experience** to lead School Streets projects. Relying on volunteers for project management or staffing is not sustainable.

10   **Identify an organization able and willing to acquire liability insurance** for School Street closures.

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OBJECTIVE

The purpose of this feasibility study is to assess the conditions for local implementation and roll out of a School Streets program in Ottawa, Canada.

The report is organized into eight sections:

1. Background and context to understand where and why School Streets have been implemented
   - Historical and international background of School Streets
   - Underlying reasons and problems that have led to School Streets projects as a proposed solution
   - Benefits of School Streets

2. Research Methodology

3. Detailed review of Canadian School Streets, focussing on 7 key themes identified in the literature: Street Closure Design, Project Leadership Structure, Project Legitimacy and Community Support, Volunteers, Permitting and Liability, Community Engagement, Monitoring and Evaluation.

4. Overview of the Ottawa context
   - Ottawa programs promoting active school travel
   - Ottawa policies and targets aligned with School Streets
   - Ottawa by-laws and guidelines relevant to School Streets
   - Highlights from interviews with Ottawa stakeholders

5. Considerations for Ottawa School Streets
   - Site design options: benefits, challenges & costs
   - Expenses and funding
   - Stakeholder roles
   - Logistics

6. Recommendations for Ottawa School Streets

7. Tools to guide and inform Ottawa School Streets

8. Conclusion

Photo Credit: John Campbell, Sustainable Calgary

1. UNDERSTANDING SCHOOL STREETS

A School Street is a road, or section of a road, that is temporarily closed to motorized vehicles during school drop-off and pick-up times. Its purpose is to encourage active transportation, reduce traffic and air pollution in school zones, and support community building and social connection. Generally, a School Street provides a car-free space for students and families to walk, bike, scoot, play, and interact as they arrive and depart each day. For the purpose of this report, a School Street is considered a multi-day pilot project with data collection and monitoring and/or a long-term solution to address traffic issues and increase active travel for a school.

School Streets began in 1989 in Bolzano Italy, in response to challenges managing traffic during peak pick up and drop off hours (8-80 Cities, 2019). Since then, the number of School Streets has grown dramatically with over 1,000 School Streets projects occurring across countries in Europe, North America, and Australia and New Zealand (Child Health Initiative and FiA Foundation, 2022).

While there is variation in the specific design features of School Streets around the world, School Streets are generally defined as car-free areas outside schools where roads are closed to vehicles (or access is severely limited) for a timed period at the start and end of the school day. The aim is to create a safer, healthier environment that will foster increased active transportation for students. School Streets often have exemptions for emergency vehicles, service providers, and residents needing access to the street. Some School Streets are permanently car-free (Sustrans, 2022) (Child Health Initiative and FiA Foundation, 2022).

In a global review of School Streets projects, the Child Health Initiative and FiA Foundation identified common features of School Streets across the world:
- Restrictions limiting access to motorized vehicles near schools during drop-off and pick-up
- Restrictions are in place for approximately 15 to 90 minutes, normally at either end of the school day (but in some cases at lunchtime as well)
- Only those using active transportation can enter the School Street zone, plus exempted vehicles, such as emergency vehicles
- The road closure is enforced using signage and either a physical barrier, automated enforcement cameras, or street design clearly showing that the street is not open to motorized vehicles
- Each scheme reflects the needs of the school and local community
- Some School Streets are permanent road closures or restrict access to only part of the road

The concept and implementation of School Streets accelerated in Europe and the UK beginning in 2012, with cities like Milan, Ghent, Glasgow, and Edinburgh establishing School Streets. In 2016, British cities including London and Camden implemented School Streets. Since 2016, School Streets have been established in Denmark, Austria, Netherlands, France, Ireland, Czech Republic, and Wales. In 2019, several Canadian cities piloted School Streets (See Table 1). In 2020, New York City, Seattle, Portland, and Los Angeles launched School Street projects. In 2021 Australia saw its first School Streets pilot implemented. In total, the Child Health Initiative estimates that over 1,000 School Streets projects have been implemented around the world.

CHALLENGES SCHOOL STREETS ADDRESS

School Streets have emerged as an intervention to address declining rates of active school transportation and the problems caused by increasing use of vehicles to drive children to and from school over the past decades. A study of Toronto school aged children showed that active transit to school for 11–13-year-olds declined by between 42.5%-53.0% during the period from 1986-2006 (Buliung, Mitra, & Faulkner, 2009). This shift from active modes to the use of vehicles has resulted in increasing congestion on streets adjacent to schools, leading to increased air pollution in school drop-off zones that also impacts the indoor air quality at schools (Requia, Adams, Arain, & Ferguson, 2017). Increased traffic encountered by children on their journey to and from school also exacerbates both real and perceived safety risks of walking or cycling to and from school (Smith L. E., Gosselin, Collins, & Frohlich, 2022). A study of child-related pedestrian collisions in Montreal found that 25% of child-related collisions occurred within 263 m of a school and that the average child-related collision occurred within 500 m of the nearest school (Cloutier & Thouez, 2007).

The shift to vehicular transportation for children also poses problems beyond the local impacts of congestion on air quality and safety at schools. Declining active transportation may have lasting mental and physical health impacts on children, and the shift from active modes to vehicular transportation creates new and growing carbon dioxide emissions which contribute to climate change (Child Health Initiative and FiA Foundation, 2022) (Kristen, Werder, & Lawson, 2008).

BENEFITS OF SCHOOL STREETS PROJECTS

School Streets can help address the problems caused by increased vehicular traffic in school zones and provide important environmental and health benefits for students and the wider community. These will be discussed in detail in the *School Streets in Canada* section of the report, however, studies tracking School Streets projects around the world and in Ontario identify the following common benefits of School Streets projects:

1. Reduce traffic in front of the school and without an increase in traffic on surrounding streets.

2. Encourage more walking, cycling, and active journeys from students and parents/guardians.

3. Raise awareness of road safety issues.

4. Reduce air pollution around the school during closure periods.

5. Encourage independent mobility.

6. Support community building and social connection.

(Child Health Initiative and FiA Foundation, 2022) (8-80 Cities, 2022)

Generally, active transportation rates are declining throughout North America. This results in traffic, distracted driving, and general safety concerns. In order to increase active transportation rates and meet Ottawa's sustainability targets, we must find solutions to address these challenges.

BENEFITS OF SCHOOL STREETS PROJECTS

A School Street is a direct link to a school that increases accessibility to active transportation and expands the network available, thus increasing (and improving) the connection between home and school. The 'final mile' is often a major deterrent for choosing active transportation – the last connection can determine the mode choice for the entire route. A family may have quiet streets in their surrounding neighborhood, but if they arrive in front of a school to a traffic jam of parents rushing, double parking, and who are often distracted, they will see this as a very dangerous environment. Therefore, they may choose to drive their child/children to school. A dangerous and congested school zone is a deterrent for families who may otherwise choose to walk/bike/scoot to school.

Some cities are experimenting with policies that prioritize people's well-being over cars and see streets as public spaces. This means designing streets that are safe and welcoming for all, regardless of age, ability, income, or mode of travel. School Streets programs exemplify this concept, giving control of streets to local communities. They challenge the prioritization of cars, make our streets more welcoming for those choosing active transportation, and promote community building and social connection.

Photo Credit: Sustainable Calgary

2. RESEARCH METHODOLOGY

To determine the feasibility of implementing a School Streets program in Ottawa, a wide range of data were gathered from three primary sources to ensure broad and inclusive data collection: (1) other jurisdictions that have implemented School Streets, (2) by-laws, policies, and targets relevant to Ottawa, and (3) interviews with Ottawa stakeholders.

1. **Other jurisdictions that have implemented School Streets:** background research was conducted to understand different models, approaches, best practices, and lessons learned from other jurisdictions that have implemented School Streets programs. Reports and documents outlining the rollout of School Streets in other jurisdictions were reviewed. Interviews with four Canadian School Streets program delivery agents were conducted (Vancouver, Mississauga, Markham, and Kingston). The School Streets programs implemented in these cities represented a variety of project leadership structures and models.

2. **City of Ottawa by-laws, policies, and targets** were reviewed to determine areas of alignment or relevance for the potential rollout of School Streets.

3. **Interviews** were conducted with Ottawa stakeholders in February 2023 through June 2023 to gather information and perspectives from various organizations about the potential implementation of School Streets in Ottawa. Each interview was approximately 1-hour in length, and interviewees were asked questions about on-site logistics, policy and by-law considerations, community engagement, and volunteers. Representatives from various organizations were interviewed, and each interview often included multiple representatives from the same organization or group. The organizations interviewed fell into 5 categories and are summarized in the list below.

a. City of Ottawa staff from the following branches
- Neighbourhood Traffic Calming
- Active Transportation Planning
- Road Safety
- Traffic Investigations and Surveys
- By-law enforcement
- Road Services
- Paramedic Services
- Fire Services
- Ottawa Public Health
- Parking Services

b. City of Ottawa Councillors
- Councillor Cathy Curry
- Councillor Glen Gower
- Councillor Jeff Leiper
- Councillor Shawn Menard

c. School Boards and School Community
- Conseil des écoles publiques de l'Est de l'Ontario
- Ottawa Carleton District School Board
- Ottawa Catholic School Board
- School council representatives and principal at Devonshire Community Public School
- School council representatives and principal at École élémentaire publique Trille des Bois

* Several requests to schedule an interview with a representative from the Conseil des écoles catholiques du Centre-Est were sent, but a reply was never received.

    d. Local Stakeholders
        ○ Ottawa Safety Council
        ○ Ottawa Student Transportation Authority

    e. Advocacy Organizations
        ○ Bike Ottawa
        ○ Canadian Automobile Association (CAA)
        ○ Ottawa School Streets
        ○ Cycling advocate – Hans Moor

Organizations and individuals were invited for interviews based on an assessment of whether a School Street would impact their organization or department and/or their familiarity or involvement with active transportation initiatives in Ottawa.

A list of questions asked in each interview and a detailed summary of responses to each question is found in Appendix 1.

3. SCHOOL STREETS IN CANADA DESIGN AND IMPLEMENTATION

This section provides a detailed review of Canadian School Streets, focusing on 7 key themes identified in the literature: (1) Street Closure Design, (2) Project Leadership Structure, (3) Project Legitimacy and Community Support, (4) Volunteers, (5) Permitting and Liability, (6) Community Engagement, and (7) Monitoring and Evaluation.

Many School Streets projects have taken place across Canada, each of varying scope and scale. Table 1 below provides a brief overview of some of the School Streets projects that have taken place in Canada and informed the content of Section 3 of this report.

Photo Credit: 8 80 Cities

Table 1 - Some School Streets projects that have taken place in Canada

Location	Leadership	Project Scope and Timeframe	Notable Features
Toronto	880 Cities	2019 – four-day pilots at three schools	Summary report
Winnipeg	Green Action Centre	2020 – 60-day pilot at one school	Project overview
Victoria	City of Victoria	2021 – multi-day pilot at two schools	Guidebook
Vancouver	City of Vancouver	2021 – One month program at three schools 2022 – One month program at four schools; one year program at one school 2023 – one month program at six schools; full year program at one school (continuation from year-long program in 2022)	All schools selected had alleyways or alternate access to homes located on the street closure. Ran for two full school years at one school. 2021-2022 Report 2022-2023 Report
Montreal	Centre d'écologie urbaine de Montréal (CEUM)	2021 – one day per week pilot at two schools	Revue des exemples inspirants de rues ludiques et de rues-écoles
Kingston	Kingston Coalition for Active Transportation (NGO run by volunteers)	2021– Full school year at one school 2022 – Full school year at two schools (one school was a continuation from 2021)	Ran for two full school years at one school. School Streets Playbook Ontario School Streets Pilot Summary Report
Markham	School Board, City of Markham, non-profit	2022 – Pilot once a week in May at one school	Final report Ontario School Streets Pilot Summary Report
Mississauga	City of Mississauga, School Board, volunteers	2022 – Pilot for three weeks in May – June at two schools	Ontario School Streets Pilot Summary Report
Hamilton	City of Hamilton	2022 – once a week in June at one school	Ontario School Streets Pilot Summary Report

3.1 STREET CLOSURE DESIGN AND CHARACTERISTICS

School Streets projects that have been implemented in Canada all have similar characteristics for the logistics and mechanisms for closing the street.

Use of Temporary Barriers

- Most of the projects used plastic or wooden temporary barriers to restrict vehicle access to streets, often in combination with pylons and temporary signs. In some cases, cities provided barriers for the programs.
- Volunteers were typically responsible for supervising the barriers during street closures and transporting the barriers to and from the storage location.
- Several projects also placed vehicles (in some cases, a police vehicle) at the barricades to ensure safety.
- Barriers and signs were sometimes painted in bright colours or decorated to contribute to the fun, inviting atmosphere of projects.

Closing a small section of the street directly in front of the school

- All projects in Canada closed a relatively small section of street, usually directly adjacent the school ranging from 70 m – 450 m long. Although Kingston's project started out with 450 m of street closed, this was reduced to 200 m based on community feedback.

Length of street closure and length of program

- Most School Streets closed the street for between 30-60 minutes during morning drop-off and afternoon pick-up.
- Some programs only ran once per day, either during morning drop-off or afternoon pick-up. These decisions were based on community feedback or volunteer capacity.
- Projects ran for varying lengths of time. Kingston's School Street project ran every day for the entire 2021-2022 and 2022-2023 school years for 25 minutes during morning drop-off and 25 minutes during afternoon pick-up. A School Street project in Vancouver also ran every day for the 2021-2022 and 2022-2023 school years. Other projects ran only one day per week for a shorter time period in the spring (3-4 weeks).

Photo Credit: Dr. Patricia Collins via Twitter

Vehicle Exemptions

- Depending on neighbourhood and school characteristics, almost all School Streets projects allowed certain exempted vehicles to use the street. These vehicle exemptions were typically for the following categories of vehicles:
  - Residents living on the closed part of the School Street
  - Emergency vehicles
  - School buses
  - School buses or vans for students with special needs
  - Caregivers for students with an identified accessibility need
- Exemptions were typically NOT given to the following:
  - Parents
  - Delivery drivers
  - Tradespeople
  - Visitors
- Some School Streets provided exemptions for school staff, others did not.
- Vehicle exemptions usually work by giving owners/operators of exempted vehicles a pass that can be shown to volunteers at the temporary barrier. A volunteer then chaperones exempted vehicles through the School Street at walking speed to ensure safety.

Other Street Closure Mechanisms – Automated Enforcement

In the London Borough of Hackney, School Streets have been successfully implemented since 2017. The Hackney model of School Streets has significant differences from the models implemented in Canada. Volunteers do not chaperone vehicles at walking speed, barricades are only sometimes used, and School Streets are not generally used as play streets, except for the first day when the School Street launches. Instead of relying on volunteers to barricade streets, automated cameras are often used to issue fines to cars that enter School Streets zones during street closure times. Retractable bollards and barricades with volunteers are sometimes used, but often the only indication that the street is closed to traffic is a road sign. Hackney allows exempted vehicles to enter the School Street zone, but the reliance on volunteers is essentially non-existent compared to the use of volunteers in Canadian School Streets programs. The Hackney School Streets Toolkit lists the cost of automated cameras at £20,000 per camera.

Photo Credit: Hackney Council

Other Street Closure Mechanisms – Long-term closures

In 2022 and 2023 Sustainable Calgary transformed part of 10th Street in Calgary, in front of Connaught School, into a public space described as an open street. This project was brainstormed by students at Connaught School who wanted to make walking and wheeling to school safer and more fun for everyone, and Sustainable Calgary brought the students' vision into reality. The street was closed to all motorized vehicles for 4 months in 2022 and closed again in 2023. Concrete Jersey barriers were used on 10th street in front of Connaught School to eliminate all access to motorized vehicles 24 hours a day, 7 days a week from June – October 2022, and again in July 2023 with plans to extend the summer of 2023 closure into the winter. During closures, the street is open as a public space for the community to use for recreation and socializing. Sustainable Calgary plans to use community feedback gathered after the 2023 closure to develop concepts for a more permanent installation. This long-term/semi-permanent closure provides a very high level of street safety and accessibility for students.

Photo Credit: Sustainable Calgary

Street Animation or "Play Streets"

Some Canadian School Streets projects provided opportunities to animate closed streets, allowing students to use the roadway for play and recreation, but not all School Streets projects in Canada used this model. Play streets can transform School Streets into public spaces where families and community members can play and connect with one another.

Of the four pilots in Ontario, the two Mississauga School Streets and the Hamilton School Streets project incorporated play streets programming. Markham's project did not have street animation due to safety concerns from the municipality. Kingston's project chose not to animate the street to keep the project as simple as possible, but unorganized, impromptu social activities did occur as community members enjoyed opportunities for interaction. Vancouver projects provided programming for play streets. Details of the programming offered by some Canadian School Streets projects are found below.

- In Hamilton, the School Street activity took place off the street and was a StoryBook Walk, which allowed children to read a story as they walked to school.
- In Mississauga, activities were organized by a variety of community members, including a class of grade 8 students at one site, and teachers, support staff and local high school students at the other site. In addition, City staff and other agencies working in partnership with the City coordinated to provide educational activities and giveaways. Programming included bike rodeos, bike safety education, arts and play activities, mindfulness sessions, and environmental education. During the November 2022 Ontario School Streets Pilot Launch and Discussion, the City of Mississauga described how communities were more accepting of School Street closures when the street was being used for play streets programming compared to when it was simply closed to vehicular traffic.
- Vancouver partnered with the Society for Children and Youth of BC (SCY) to offer Play Streets at School Streets locations on select days and times.

Photo Credit: Green Communities Canada

3.2 PROJECT LEADERSHIP STRUCTRE

School Streets projects in Canada had multiple stakeholders who championed and supported the projects, but the programs were typically led by municipal staff, a non-profit organization, or a hybrid where a non-profit organization was officially supported by municipal staff. There was one instance of a school board leading the project in partnership with the municipality.

Table 2, on the next page, summarizes the main project leadership structures seen in School Streets projects across Canada.

Table 2 – Project Leadership Structures

Project Lead	Cities	Advantages
Municipality	Vancouver, Victoria, Hamilton, Mississauga	- City maintains liability for the street - Access to city staff to cover events when insufficient volunteers are available - In some cases, city staff can have capacity to take on volunteer coordination (Mississauga) - Has demonstrated success for two full school years (Vancouver)
School Board	Markham	- Program well integrated with the schoolboard - Potential for schoolboard staff to cover for shortfall of volunteers
Non-Profit/NGO	Montreal, Kingston, Winnipeg	- Liability can be taken on by non-profit/ NGO if schoolboard or city cannot, or do not wish to, take this on. - Has demonstrated success for two full school years (Kingston)

Opinions differ regarding the organization that is best suited to lead School Streets projects. For a master's degree report for Urban and Regional planning at Queen's University, a researcher (Koenig, 2023), interviewed 11 stakeholders who had implemented or had an interest in the implementation of School Streets projects in Ontario. When asked which organization should lead School Streets projects, the respondents pointed out strengths and weaknesses of each of the organizations listed above, and there was no consensus on which organization was best suited to do so.

Many stakeholders are supportive and contribute to School Streets projects, but due to the number of stakeholders involved, a clear project leader is required to coordinate the projects, establish School Streets, and scale School Streets across a municipality (Koenig, 2023). The School Streets programs that have been led by either a municipality or non-profit/NGO have demonstrated the greatest longevity in Canada, as each model has successfully implemented programs for two full school years.

3.3 PROJECT LEGITIMACY AND COMMUNITY SUPPORT

No matter the organization that leads a School Streets project, for it to be successful it is essential that key institutions show support for the project. When municipal staff, elected officials, and the school demonstrate support for projects, community members perceive the projects as legitimate, which builds community support. Communities see projects as legitimate when they have a project leader that shows expertise and an understanding of the community, and key institutions show support for the project (Smith L. , Gosselin, Collins, & Frohlich, 2022).

A School Streets project failed to launch in Montreal in September 2021 due to the lack of a supportive school principal to champion the intervention as well as lack of support from a manager or leader within the municipality. The municipality did not openly voice its involvement in the School Street when interacting with the public or other stakeholders, which might have contributed to undermining the legitimacy of the project to the community (Smith L. , Gosselin, Collins, & Frohlich, 2022).

All successful School Streets projects have community support. Municipal staff, elected officials, the school principal, the school board, and a project leader with expertise (a non-profit, school board, or municipality) have the influence to build support in communities.

3.4 VOLUNTEERS

Canadian School Streets programs have relied on volunteers to be stationed at barriers to ensure vehicles don't enter, and to escort exempted vehicles through the School Street. In some cases, volunteers have also played key roles in administering the programs.

The number of volunteers needed has varied based on the design of the School Streets, the length of time the program has run, and the frequency of the closure (for example schools in Vancouver and Kingston ran all year everyday while many pilots were for shorter periods). Some programs had two volunteers stationed at each barrier to ensure that one could escort exempted vehicles in and out of the School Street, while the other could stay at the barrier. Vancouver had one volunteer stationed at each barrier, as chaperones were not required due to alternate access options to resident homes through alleyways (one criterion for school selection in Vancouver is that all residents on the School Street must have alternate access to their homes). Other programs had only one volunteer at the barrier but had chaperones in the School Street to help escort vehicles. One School Street program required 3 volunteers at barriers due to traffic concerns at a T-intersection. Volunteers can expect to do a lot of walking when escorting vehicles.

Coordinating volunteers requires maintaining a volunteer roster and scheduling volunteers. In some cases, this work has been supported using paid staff, or in other programs the role of a volunteer coordinator has been carried out by a volunteer who may or may not receive a small stipend.

> **Volunteer Success Stories: Kingston and Vancouver**
>
> Kingston's School Streets program ran successfully at Winston Churchill school everyday for two years (2021-2022 and 2022-2023). The School Streets were completely run by volunteers who were a mix of parents, Queen's University students, high school students (over 16 years old), and neighbours. A Queen's student was paid to coordinate the volunteer roster and schedule using a shared Google spreadsheet. The program needed around 45 volunteers who volunteered 1-2 shifts per week. Kingston's School Streets program also ran at Central Public school for one year using volunteers (2022-2023).
>
> A Vancouver School Street ran successfully every day at Lord Roberts Elementary for two school years (2021-2022 and 2022-2023). The school community was responsible for coordinating and recruiting volunteers. Fewer volunteers were required in Vancouver than in Kingston, as residents did not need to be chaperoned to their homes since alternate access to homes was available via alleyways.

While Kingston and Vancouver are great success stories, other programs were not able to cover 100% of their volunteer shifts and had to pull in city or school board staff at times.

> **Volunteer Challenges: Kingston and Vancouver**
>
> While both Kingston and Vancouver have each successfully implemented daily School Streets program for two years, both jurisdictions have described challenges with relying on volunteers for School Streets closures over the long term. In addition to the time and logistical challenges of coordinating many volunteers, the Kingston School Streets program described challenges associated with the requirement to obtain Canadian Police Information Center (CPIC) checks for all volunteers.
>
> Vancouver municipal staff who have implemented School Streets explained that the time and coordination required by volunteers to implement daily School Streets make this model difficult to sustain over the longer term. They are investigating options for hiring paid staff to implement street closures and exploring tactical infrastructure changes to reduce reliance on volunteers.
>
> The non-profit organization, Kingston Coalition for Active Transportation (KCAT), which led the Kingston School Streets initiative in 2021-2023 stepped away from this role in the summer of 2023. KCAT is an organization run solely by volunteers. The time commitment required to operationalize projects such as year-long School Streets is significant, and during the interview with EnviroCentre, Roger Healey, the Chair of KCAT stated, "running School Streets with volunteers is not sustainable."

3.5 PERMITTING AND LIABILITY

To close a street for School Streets usually requires obtaining a permit under city by-laws. In some cities, existing by-laws have been used, even if they don't perfectly match School Streets activities. In other cases, by-laws have been passed via council to permit School Streets closures. School Streets projects need to work with and submit street closure and traffic management plans to city transportation services to obtain these permits.

In city-administered School Streets programs, the city maintained liability for the School Street, and in some cases where the school board administered the School Street the city maintained liability. In Kingston, where KCAT administered the closure, they had to purchase liability insurance. While not all insurers have coverage for this type of road closure, the NGO was able to find a provider to insure the closure.

Memorandums of Understanding were used by the City of Mississauga and School Boards to set out the terms and understanding of both parties. These can help create certainty for all parties involved and lead to smooth and successful implementation.

Permitting and Liability: A deep dive into Kingston's process 2021-2023

To get its initial permit to close the road, KCAT submitted a report to Council including a Temporary Road Closure Application on August 10, 2021. Council unanimously voted in favour of the by-law permitting the closure of the School Streets, and it was passed under by-law 2005-255.

NOTE: Section 11 of the Municipal Act, S.O. 2001, c.25, permits municipalities to pass by-laws for closing to vehicular traffic on a temporary basis for such period as may be specified in the By-law, any highway or portion of such highway under the jurisdiction of the Council for social, recreational, community or athletic purposes as specified in the By-law.

KCAT obtained liability insurance, costing approximately $5,000 per year, for the closure of the streets and implemented a School Street closure in 2021-2022.

Following the 2021-2022 street closure, the School Pedestrian Safety Working Group presented Report EITP-22-004 outlining a series of recommendations to City Council, including the expansion of the School Streets program to an additional school in the 2022-2023 school year. In July 2022, Council adopted the recommendations presented in Report Number 22-188, unanimously approved the expansion of the School Streets program for the upcoming year, and provided $50,000 in funding to implement School Streets programs in Kingston. This approval meant that future School Streets applications do not need to receive full Council approval and can be approved by the Department of Transportation Services.

On June 13, 2023 the Director of Transportation Services submitted Report EITP-23-007 to the Environment, Infrastructure & Transportation Policies Committee. This report included a School Streets Playbook to provide a tangible 'how-to' guide for school communities and/or community groups to pilot School Streets and outlines how the remaining $35,000 of the original $50,000 in city funding can be spent. Some funding was allocated to support a proposal led by Green Communities Canada to secure funding under the National Active School Streets Initiative.

The remaining funding was made available to community groups, volunteer organizations, and school parent council groups to cover the costs of materials, staff/volunteer training, and other related expenses for School Streets initiatives in 2023 and beyond. Municipal approval is required through the completion of a Temporary Road Closure Application, proposal, and traffic control plan.

Because KCAT stepped away from the role of obtaining liability insurance and the temporary road closure permit, at the time of this report's drafting, no organization has been found to take on this role in Kingston.

3.6 COMMUNITY ENGAGEMENT

School Streets community engagement in Canada has had many goals, some of which include:

- Educating the school community on the purpose and benefits of School Streets.
- Helping residents understand street closures are temporary for a pilot project.
- Helping residents understand that feedback on the pilot project will be gathered to see what works and what does not.
- Advising residents of the impacts of the closure and how it will operate.
- Making active school transportation a priority for the City Council.
- Gaining long-term support for School Streets.
- Educating and demonstrating that School Streets are a practical solution to community safety challenges.
- Demonstrating measurable benefits and positive outcomes of School Streets.
- Collecting feedback from residents, parents, volunteers, and school staff before, throughout, and following pilot projects.
- Sparking a community-wide conversation about the benefits of safe and active streets for children, caregivers, and residents.
- Engaging a diverse range of perspectives and lived experiences.
- Prioritizing the engagement of children and students and make engagement a leadership opportunity for people of all ages.

Table 4, on the next page, summarizes different audiences that have been engaged for School Streets projects and methods of engagement.

Photo Credit: 8 80 Cities

Table 4 – Methods of engaging audiences

Key audiences:	Methods of Engagement
School Leadership Principal and School Council, potentially superintendents and trustees	• Presentations to principals, teachers, and school councils • One-on-one meetings, email communication, and small group planning meetings
Students Elementary students attending participating schools, as well as student volunteers from local high schools	• Involvement in large group project planning meetings (x3 per community) • Small group planning meetings • Projects done during class time
Local Community Neighbourhood, general public, community organizations	• Household mailers, letters with information on how to provide feedback to residents within a two-block radius • On-street pedestrian signage, banners, media release, and online promotion • Public meetings, open houses, and surveys Community Pop-ups • Updates in newsletters • Social media • Digital sign boards at city facilities
City Staff	• One-on-one meetings, email communication, and small group planning meetings • Formal announcements, presentations at meetings • Stories posted to internal municipal news channels
Elected Officials (Council, Ward Councillors and School Trustees)	• Formal announcements, presentations at meetings, stories posted to internal municipal news channels

For first-time pilot projects in Canada, engagement typically began approximately one year before the projects were to take place, beginning with engagement with key institutions including the municipalities, schools, and school boards. The communities where the street closures were to take place were then engaged approximately 3 months before the anticipated road closure.

3.7 MONITORING AND EVALUATION

All School Streets projects collected data to evaluate whether projects were successful in achieving goals. Evaluation methods for Canadian projects varied and were determined by the goals of each project. School Streets pilots generally collected baseline data before School Streets projects and post-implementation data immediately following the School Streets projects. Some projects also collected data during the pilot projects.

All School Streets projects have a goal of increasing rates of active transportation, and family surveys or hands-up classroom surveys were generally used to determine travel modes. School board support is essential for collecting data to evaluate School Streets projects using hands-up surveys, as teachers conduct these surveys during class time. Many projects also aimed to reduce congestion in front of schools, so traffic counts were used. Sample survey and traffic count forms are found on pages 24 and 25 of the City of Victoria's School Streets Guidebook. Some projects also aimed to improve air quality in the school zone, so particulate matter measurements are taken at some schools.

Some projects measured community support for School Streets projects by using surveys to ask community members about their level of support for road closures and their perceptions of safety. The Markham School Streets Report provides a summary of pre and post-surveys provided to the community.

Table 5 provides a summary of monitoring and evaluation data that was collected by some Canadian School Streets projects. The cells highlighted in green show data that indicated a positive impact of the School Streets project (increased active school travel, decrease in overall vehicular traffic counts, improved air quality in the school zone, positive community perception), and the cells highlighted in orange show a negative or neutral impact of School Streets projects.

Photo Credit: Green Communities Canada

Table 5 – Summary of monitoring and evaluation data from Canadian School Streets projects

City and School	Active School Travel Rates	Traffic Count (AM)	Air Quality (AM)	Community Surveys
Hamilton: Strathcona Elementary School (8-80 Cities, 2022)	Before: 65% During: 72%	n/a	n/a	n/a
Markham: John McCrae Public School (The Centre for Active Transportation, 2022)	Before: 85% After: 89%	Before: 57 During: 33 After: 44	During: 42% of air pollution was removed from school zone	62% of **staff, parents, students and residents** liked School Streets. 38% of **staff, parents, students and residents** were neutral or unsure or disliked School Streets
Mississauga: Hillside Public School (8-80 Cities, 2022) (City of Mississauga, 2023)	Before: 49% During: 69% After: 56%	Before: 558 During: 369 After: 445 *pedestrian counts doubled	During: 65% of air pollution was removed	Before: 14% of **community members** thought School Streets were a good idea After: 54% of **community members** thought School Streets were a good idea. 100% of **students** indicated they would feel happy if a School Street happened again in their community
Kingston: Winston Churchill Public School (8-80 Cities, 2022)	11% increase in active travel compared to before project	n/a	n/a	Note: not able to acquire "before" data because of Covid-19 school closures. After: 76% of **parents** said they would support School Streets continuing
				After: 48% of **residents** felt School Streets experience was unpleasant*
Vancouver: 7 different schools (City of Vancouver, 2023)	23% of elementary school families walked more 21% of elementary school families biked more 500 families tried walking, biking, rolling for the first time	n/a	n/a	74% of **parents** want School Street to continue

*NOTE: During the first 5 weeks of the closure, a much larger portion of the street was closed (520 metres), which impacted 36 households. After receiving community feedback about the closure, the closure was reduced to 200 metres, impacting only 9 households. Minimal negative feedback was received once the closure zone was reduced.

The data collected by all projects showed **increased rates of active school travel** during School Streets projects compared to baseline data. The schools that collected data 2 weeks after the project also saw increases in active travel rates, although these increases were not as high as during the projects. All projects that collected vehicular count data showed decreased vehicular counts during and after the projects, including traffic observed on other surrounding streets, indicating that traffic was not displaced and there was an **overall decrease in the amount of traffic**. For projects that collected air pollution data, **air pollution in the school zone was reduced**.

Survey data collected in the Ontario School Streets pilot projects indicated that **School Streets support community building and social connection** (8-80 Cities, 2022). In Kingston, approximately.

Community surveys were often used to measure the change in community members perceptions of School Streets projects. The Hillside Public School project in Mississauga initially only had 14% of community members in support of School Streets, but this increased by 40%, with 54% of community members reporting that School Streets were a good idea at Hillside Public School following the project. "**Acceptability to local community members increased** after the pilot had finished compared to before, demonstrating that seeing the concept in real life helped gain buy-in from residents" (City of Mississauga, 2023). There were still 38% of community members surveyed who did not think that School Streets were a good idea, and the negative impacts that most survey respondents selected were the inconvenience to parents and pushing traffic congestion elsewhere.

Community surveys asked different questions of different audiences, and **community perceptions varied based on the audience surveyed** and the type of program implemented. In Kingston, 48% of residents surveyed felt the School Streets experience was unpleasant, but 76% of parents surveyed said they would support School Streets continuing. **Residents were the ones who were likely the most inconvenienced** by having to be escorted through the School Streets zone, so it is important to minimize disruption to residents as much as possible.

During the November 2022 Ontario School Streets Pilot Launch and Discussion, the City of Mississauga described how communities were more accepting of School Street closures when the street was being used for play streets programming compared to when it was simply closed to vehicular traffic. The use of play street programming may be one way to increase resident support for School Streets projects.

Photo Credit: Green Communities Canada

4. OVERVIEW OF OTTAWA CONTEXT

Based on this report's definition of a School Street, no School Streets projects have been implemented in Ottawa to date. Some pop-up street closures in front of schools have been implemented successfully, such as one closure during morning drop-off at École élémentaire publique Trille des Bois at the end of the 2022-2023 school year.

Although pop-up events such as these are positive, they often don't include all the elements of School Streets projects, such as data collection and monitoring, to be classified as School Streets projects. Regionally, a School Street project was implemented in Gatineau in the spring of 2023.

> For the purpose of this report, a School Street is considered a multi-day pilot with data collection and monitoring and/or a long term solution to address traffic issues and increase active travel for a school.

Ottawa programs, organizations, and networks promoting active school travel

There are various programs, organizations, and networks that encourage active travel at Ottawa schools.

Programs

- **School Active Transportation (SAT) Program:** From 2011-2023, the SAT program has encouraged active transportation at schools across Ottawa. The SAT program includes school travel planning, a model that has been implemented at 48 Ottawa schools, using data to inform locally relevant activities that reduce congestion in school zones and encourage active modes of transportation. The planning and implementation of this program has been a collaboration between partners including, Green Communities Canada, City of Ottawa, Ottawa Student Transportation Authority, Ottawa Public Health, and EnviroCentre, among others.
- **Walking School Bus Program** ran in Ottawa from 2014-2023 as a partnership between Ottawa Student Transportation Authority and the Ottawa Safety Council, with support from various organizations.
- **Adult Crossing Guard Program** is a partnership between the City of Ottawa and the Ottawa Safety Council to ensure students can walk or wheel to and from school safely.

Organizations

- The **City of Ottawa** offers bike rodeos to schools and community groups free of charge, teaching students about topics such as helmet fitting, bicycle maintenance, handling, signalling, gears, braking, and avoiding road hazards. The City of Ottawa also funds the SAT Program. Ottawa Public Health also encourages active transportation at schools.
- **Ottawa Safety Council** promotes safe and active transportation through Pedestrian Safety and CycleSafe workshops, among other initiatives designed to promote road safety and increase rates of active transportation.
- **Ottawa Student Transportation Authority** actively encourages students to use active travel modes through various initiatives including Walk-a-Block maps, walking route maps, walk and roll meetup maps, among others described here. Ottawa Student Transportation Authority was a primary funder of the SAT program until August 2023.

Networks

- **Ottawa School Active Transportation (OSAT) Network** meets three times a year, bringing together City of Ottawa staff, service providers, and educators to support programs and policies that will generate a measurable shift towards active transportation for the daily journey to and from school among elementary students in Ottawa. Members include school board representatives from Ottawa's 4 public school boards, City of Ottawa (Transportation Planning, By-law, Traffic Services, including Safer Roads Ottawa, Recreation, Cultural and Facility Services, Ottawa Police Services, Ottawa Public Health), Canadian Automobile Association (CAA), Consortium de transport scolaire d'Ottawa, Ottawa Student Transportation Authority, EnviroCentre, and Ottawa Safety Council.
- **School Streets Ottawa** is a coalition of local volunteers along with supporting organizations who are advocating for kids to have healthy and safe ways to get to school.

Ottawa policies and targets aligned with School Streets

Ottawa has various policies that set targets to reduce greenhouse gas (GHG) emissions and increase the modal share of residents using active transportation. As School Streets are proven to increase active transportation rates and reduce the number of families driving to school, they can help meet targets set in these policy documents.

Evidence: School Streets increase active transportation rates, reduce vehicular traffic, and reduce emissions

Hackney School Streets have been running in the borough of Hackney in the United Kingdom since 2017. Data from the Hackney School Streets Toolkit shows:
- Average of 68% decrease in traffic levels outside of school gates
- Up to 51% increase in children cycling to school
- Up to 30% increase in walking rates
- 74% decrease in vehicle emission of oxides of nitrogen, PM10, and PM2.5*

*PM10 and PM2.5 are airborne particulate matter. According to the California Air Resources Board, children are among the groups most likely to experience adverse health effects with exposure to PM10 and PM2. "For PM2.5, short-term exposures (up to 24-hours duration) have been associated with premature mortality, increased hospital admissions for heart or lung causes, acute and chronic bronchitis, asthma attacks, emergency room visits, respiratory symptoms, and restricted activity days…Short-term exposures to PM10 have been associated primarily with worsening of respiratory diseases, including asthma and chronic obstructive pulmonary disease (COPD), leading to hospitalization and emergency department visits" (California Air Resources Board).

Below are some City of Ottawa policies with GHG reduction and active transportation targets that School Streets projects could contribute towards.

1. The Transportation Master Plan (TMP) – Part 1 states that "shifting a large portion of residents' daily trips from private automobile to more sustainable modes of travel is critical for meeting the City's GHG emission reduction targets." The TMP also indicates that trips by car will need to drop to 58% of the daily total by 2030 to achieve GHG reduction targets.

   The TMP also makes direct references to School Streets. Policy 11-2 to prioritize active school trips "could include piloting "School Streets" (car-free zones in front of schools during peak school arrival and departure times) in locations with safety concerns or where there are opportunities to achieve high active transportation mode shares, following from similar initiatives in other Canadian cities."

2. The City of Ottawa Official Plan states that by 2046, the majority of trips in the city will be made by sustainable transportation.

3. The Climate Change Master Plan outlines the City of Ottawa's community GHG reduction targets (based on 2012 levels): 43% reduction by 2025; 68% by 2030; 96% reduction by 2040; and 100% reduction by 2050. As Ottawa's transportation sector contributes 44% of the city's community GHG emissions, shifting travel modes to school to active transportation through School Streets programs could contribute towards achieving these goals.

4. <u>Energy Evolution</u> strategy states that to achieve 100% GHG reduction by 2050, active transportation mode share should be 21% by 2030. In 2011, <u>14% of all trips</u> taken within the City of Ottawa were by active travel. Note: This is the latest data available as we await the results of the 2022 Origin Destination Survey.

School Streets can also contribute towards Ottawa's policies for building healthy and inclusive communities. School Streets support community building and social connection by providing an opportunity for families to meet and socialize with other community members and can support the directions laid out in the documents below.

1. The City of Ottawa <u>Official Plan</u>, section 2.2.4, states an intent to build accessible, inclusive communities, and design for all ages, including children and older adults, indicating that "health is shaped by the conditions in which we live, work and play." As School Streets contribute towards increased rates of active transportation and support community building and social connection, they can help improve physical and mental health outcomes and support this strategic direction.

2. The City of Ottawa <u>Official Plan</u>, section 2.2.4, states an intent to advance human health through decision-making on the built environment. The plan recognizes that "regular physical activity, with all the positive health co-benefits, can be encouraged through designing safe, all-season and convenient active transportation infrastructure for walking, cycling and transit." School Streets can have wide-ranging positive health benefits by adding to Ottawa's active transportation network.

Photo Credit: City of Hamilton

Ottawa by-laws and guidelines relevant to School Streets

Various City of Ottawa by-laws and guidelines are relevant to the potential future implementation of School Streets in Ottawa.

1. **Road Closure Permit:** Currently, there is no delegated authority to close School Streets under existing Ottawa by-laws. The following by-laws may need to be amended or a new by-law may need to be passed by City Council to grant road closure permits for School Streets in Ottawa.

   a. Special Events on City Streets (By-law No. 2001-260) has limitations that do not make it applicable to issuing permits for School Streets closures, except for one day pop-up events. Under this by-law special events are defined as: "demonstration, parade, sports event, festival, carnival, donation station, street dance, residential block party, sidewalk sale, outdoor mass and other like events." School Streets do not fit well within any of these categories. The "Other" category of the special events permit includes "festivals, carnivals, street dances, outdoor masses, fun-a-thons and various fund-raising activities." School Streets don't fit under the other category either, and if they did qualify as an "other event," they cannot be granted a permit as section (7) of the by-law states, "An event will not be permitted on a City street from Monday to Friday (statutory holidays excepted) between 7:00 a.m. and 6:00 p.m. and comfort of any person in any dwelling house, apartment house, hotel or other type of residence)." School Streets would take place during this exclusion time period.

   b. Traffic and Parking (By-law No. 2017-301): Section 74 describes how pedestrians are prohibited on a roadway, "except for the purpose of crossing a roadway, where there is a sidewalk that is reasonably passable on one side or on both sides of a roadway, a pedestrian shall use the available sidewalk." Section 76 outlines how "no person shall play or take part in any game or sport upon a roadway." Before implementing a School Street model that incorporated play streets or allowed families to walk on the roadway, this by-law would have to be considered. Depending on the model of School Street closure implemented, this by-law may need to be amended to allow people to walk or play on the street during a School Street closure.

2. **Liability Insurance:** Liability insurance will be required for School Streets closures, similar to current liability requirements for special events permits. Current road closure permits issued under Special Events on City Streets (By-law No. 2001-260) require "Comprehensive Liability or Special Events Liability insurance subject to limits of not less than Two Million ($2,000,000.00) dollars inclusive per occurrence for bodily injury, death and damage to property and such insurance shall be in the name of the applicant and shall name the City of Ottawa as an additional insured."

3. **Signage:** All signage informing residents of School Streets closures would need to follow various by-laws. Section 11 of the Signs on City Roads (By-law No. 2003-520) states that no sign shall be "placed within fifty centimetres (50 cm) of a curb or sidewalk, or where there is no curb or sidewalk, within two metres (2 m) of the roadway or within fifty centimetres (50 cm) of the edge of a shoulder where such exists." To place a sign on private property, a permit is required under Temporary Signs on Private Property (By-law No. 2004-239).

4. **Street Selection Criteria:**

   a. The Traffic Calming Design Guidelines could be used as a tool to inform what streets to avoid during school selection. Appendix D in the guidelines provide Key Emergency Response Streets Identified by Fire and Paramedic Services (for the sole purpose of the development of traffic calming concepts). The map could also be used to highlight streets which should be avoided for any School Streets projects. Any emergency key response street should be ineligible for a School Street closure. Transit routes, truck routes, and any roads classified as higher than minor collector by should also be avoided.

b. The <u>Multi-Modal Level of Service (MMLOS) Guidelines</u> provide direction on minimum desirable levels of service for all travel modes on arterial, collector and local roads. The MMLOS has specific targets within 300 m of a school with very high levels of service for pedestrians, cycling and transit. Recognizing that multi-modal streets often involve trade-offs in convenience and comfort for some road users, the MMLOS could be used to quantitatively compare those trade-offs and analyze transportation impacts of School Streets. MMLOS would typically be applied only when making permanent modifications to the roadway.

Highlights from interviews with Ottawa stakeholders

During interviews with stakeholders, all interviewees agreed that there is a strong need to address the safety concerns associated with large volumes of traffic in front of schools during drop-off and pick-up times, and they were supportive of the concept of School Streets as a potential tool to help address this issue in certain locations. Stakeholders highlighted three primary concerns about the implementation of School Streets in Ottawa, outlined in Table 6 on the next page.

Table 6 – Concerns of Ottawa stakeholders and potential solutions

Concerns	Potential Solutions
It is challenging to attract and maintain volunteers to staff the barricades for long-term School Streets closures. The volunteer model works well in the short-term, but a different solution may be required for long-term projects.	Three possible options for long-term School Streets projects: • Use paid staff to close streets using barricades. • Install permanent infrastructure to reduce reliance on volunteers. • Use automated enforcement cameras to close streets instead of volunteers.
Ottawa does not have a by-law that could sanction a School Street closure.	City Council could pass a by-law for a School Street closure, similar to the process followed in Kingston.
If the City does not administer the closure, then either the School Board or a third-party non-profit/NGO must take on liability, requiring $2 million in coverage.	Kingston provides an example of how an NGO can obtain liability insurance.

The challenges and solutions outlined in Table 6 will be explored in more detail in the following section.

5. CONSIDERATIONS FOR OTTAWA SCHOOL STREETS

The information gathered through research and interviews was used to develop a summary of benefits, challenges, and other considerations specific to School Streets projects in Ottawa. Ottawa-specific considerations include site design options, expenses and funding, stakeholder roles, and logistics.

5.1 SITE DESIGN OPTIONS: BENEFITS, CHALLENGES AND COSTS

There are various models to consider for the implementation of School Streets in Ottawa depending on the duration and goals of the project, and each model has costs and benefits to consider.

Short term pilots are beneficial for gaining support from the community for School Streets projects, collecting data to show shifts in modal share, and demonstrating the need for long-term solutions. To see significant long-term changes in modal share, School Streets need to be running long-term. While it is possible to use volunteers to close streets for multiple years, as demonstrated in Vancouver and Kingston, this model is not a solution beyond 1-2 years, as it is reliant on passion of volunteers, which is challenging to maintain. For example, Vancouver municipal staff are investigating options for hiring paid staff to implement street closures and exploring tactical infrastructure changes to reduce reliance on volunteers. KCAT, the organization that coordinated Kingston's School Streets closures for two years, is no longer doing so due to the lack of sustainability of the model. Due to the challenges experienced by these jurisdictions, the volunteer model is only recommended for short-term projects.

This section explores the benefits, challenges, and costs associated with each of the following models.

1. **Short-term pilot with volunteers**

2. **Long term project with paid staff**

3. **Long-term project with automated enforcement**

4. **Long-term project with permanent infrastructure changes**

1. **Short-term pilot with volunteers:** School Streets are very effective at shifting travel modes to active transportation while the School Street is running. Data from Mississauga shows significant changes in active transportation during the project (20% increase), along with a smaller increase after the pilot ended (7% increase).

   Figure 1 shows how 49% of those surveyed used active transportation before the pilot, 69% during the pilot project, and 56% two weeks after the pilot.
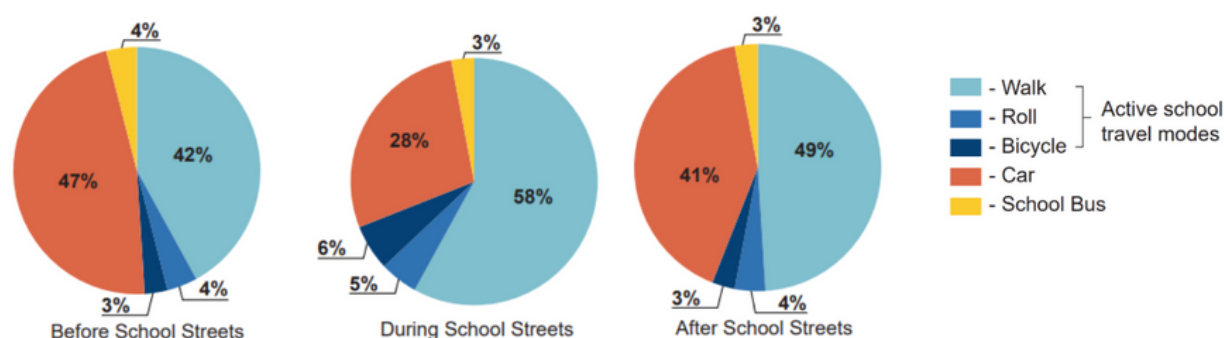

Figure 1: Mississauga Hands-Up Survey results (8-80 Cities, 2022)

While active transportation rates went up 20% during the Mississauga pilot, this same level of behaviour change was not observed once the School Street project concluded. It is encouraging that the active transportation rates were 7% higher two weeks after the project concluded, but data about the long-term effects of the pilot on changes in transportation behaviour do not exist. Whether the increased active transportation rates continued the following school year is unknown. Short term pilot projects are very effective at influencing travel modes while they occur, but changes are not as significant once streets re-open, demonstrating the need for a long-term solution.

There are also equity concerns that must be considered when using the volunteer model. School communities with capacity to volunteer are often those in higher-income areas, and schools located in low-income communities often have fewer family members available for volunteer opportunities.

The costs of the volunteer model vary greatly, depending on the number of hours provided in-kind to coordinate School Streets programs. The York Region District School Board in partnership with the City of Markham ran a one-day per week pilot for one month using the volunteer model, and the costs for the pilot are summarized below from the project's <u>final report</u>:

Road Closure	$ 5,258.10
Road Occupancy Permit	$ 476.50
Social Media	$ 1,198.69
Signage	$ 1,288.20
Surveys	$ 3,758.00
Report	$ 6,180.00
TOTAL	**$ 18,160**

A municipality that led the implementation of School Streets as part of its active travel program estimated the cost to run a volunteer model School Streets pilot program for one month at one school (daily during morning drop-off and afternoon pick-up) to be approximately $20,000. This cost estimate includes signage, barriers, incentives (including a volunteer coordinator stipend of $200), communications, traffic counts, and staff time. The cost of permitting and liability insurance are not included in this estimate.

Table 7 – Benefits and challenges of short-term pilot with volunteers

Benefits	Challenges
• Less expensive than long-term models • Demonstrates significant shift in travel modes to active travel while pilot is running	• Requires community to take on role of volunteer coordination and recruitment • Challenging to find sufficient volunteers • Longevity of behaviour change from short-term pilots is unknown • Relying on volunteers raises equity concerns

2. **Long-term project with paid staff:** Hiring paid staff is one method of overcoming the main challenge often described with the volunteer model – the challenge of coordinating volunteers to staff barricades and chaperone vehicles through the School Street closure. Instead of relying on volunteers to staff barricades, paid "School Street Supervisor" roles could be established.

Although financial compensation makes it easier and more sustainable to find people to staff the barricades than asking people to donate their time to do so, finding paid staff to perform shifts like these can also be challenging. The school bus driver shortage that has affected Ottawa for a number of years, along with challenges hiring sufficient adult school crossing guards indicate that there may also be challenges involved with finding paid staff to barricade School Streets. To overcome this challenge, some Canadian jurisdictions are exploring paying Educational Assistants to extend their workdays at school in exchange for extra compensation to take on the role of School Streets Supervisors. Since Educational Assistants are already present at schools, they may have capacity to take on extra duties. Supervision aids or schoolyard/lunch monitors may also be interested in additional paid working hours within the school where they already work.

Another option would be to hire part-time staff, similar to how Ottawa Safety Council hires staff as adult school crossing guards. Staff could be paid for approximately 2 hours per day – one hour for a morning shift and one hour for an afternoon shift as a School Street Supervisor.

If a person were to be paid as a School Street Supervisor at a rate of $20 per hour for a 2-hour shift, the employee would earn $40 per day. School is in session for approximately 194 days a year, so the cost would be approximately $7,800 per employee per year to staff one barricade. Schools often require 2 barricades (2 people to staff barricades), plus one chaperone, so the cost of hiring staff alone could be upwards of $23,000 per year to implement this model. The costs of barricades, signage, traffic counts, etc. are not included in this estimate and would be additional. The high costs associated with hiring School Street Supervisors long-term could make the hired-staff model cost-prohibitive.

In some cases, existing adult school crossing guards may no longer be needed if the intersection where a crossing guard was stationed were to be closed for a School Street. In this case, funding that previously went towards paying for a crossing guard at this location could be re-allocated to a School Street Supervisor or arrangements could be made to re-deploy the crossing guard into a new role for the duration of the School Street project.

Table 8 – Benefits and challenges of long-term project with paid staff

Benefits	Challenges
• Removes the challenge of volunteer coordination from the community • Long-term behaviour change (increase in active travel) due to long-term street closure • More consistent staffing/reliability	• Expensive – annual cost for hiring school street closure staff estimated at $23,000 per school • May be challenging to find staff to fill shifts

3. **Long-term project with automated enforcement:** In the borough of Hackney in the United Kingdom, volunteers or paid staff are rarely used to implement School Streets closures. Instead, signs are posted indicating the times of street closures, and automated enforcement cameras are used at some (but not all) locations to enforce closures. Cameras cost approximately £20,000 or $33,000 per camera. This cost is $10,000 more than the estimated cost of hiring 3 School Street Supervisors to barricade and chaperone vehicles through a School Street closure for one year, but these cameras can be used year-after-year and could generate revenue that could help fund School Streets programming. Mobile automated enforcement cameras are also available, allowing cameras to move to different schools each year. The cost of barricades and logistical challenges of storing barricades do not exist with this model. Residents are not disrupted by School Street closures, as they are exempted from fines and permitted to enter the School Street during closures.

The logistics of how to exempt certain vehicles, such as residents, postal service vehicles, and school buses from fines would need to be considered when using this model. A potential challenge of this model is that there may be political barriers or privacy concerns from community members regarding the use of cameras. Another challenge may be that community members may not perceive the safety benefit to be as significant. School Streets are not barricaded in this model, and closures rely on drivers to follow posted signage, but some drivers may ignore the signs and travel through the School Street. Students would not be able to use the street as a play street, but it could still be effective at reducing traffic volumes on the street, as has been observed in Hackney. The Hackney School Streets Toolkit indicates an average 68% decrease in traffic levels outside of school gates at Hackney School Streets.

Although there is no Canadian data about the effectiveness of using cameras for automated enforcement for School Streets, the 2022 Automated Speed Enforcement (ASE) Program in Ottawa showed a 200% increase in compliance with the speed limit and 72% decrease in drivers travelling at 15 km/h over the speed limit. The ASE program produced $8.97 million in revenue for the city from fines in 2022. These cameras do change behaviour, and it may be worthwhile investigating their effectiveness at limiting access to a street during School Street closures and using fines as a revenue source to fund School Streets programs. The city is experiencing some challenges with processing fines through the provincial court system, and these challenges would need to be addressed before automated enforcement cameras could be expanded for use in other programs such as School Streets.

Table 9 – Benefits and challenges of long-term project with automated enforcement

Benefits	Challenges
- Removes burden from community members to coordinate volunteers - Long-term behaviour change (increase in active travel) due to long-term street closure - Barricades are not required - Residents are not disrupted by School Street closures and experience benefits of reduced traffic on streets - Fines produce revenue that could be used to fund School Streets programs	- Expensive – cost for camera estimated at $33,000 per school - Potential political barriers or privacy concerns regarding use of cameras - Street may be perceived as "less safe" because barricades aren't used - On-going challenges with processing of fines

4. **Long-term project with permanent infrastructure:** Another method for removing the challenge of volunteer coordination and enforcing a School Street closure is through the use of permanent infrastructure. Some locations internationally use timed retractable bollards to enforce a School Street closure, and other jurisdictions have installed gates that can swing open and shut to reduce the burden of storing barricades each day. Some places are considering using small cement curbs and sturdy bollards to close School Streets, which allows emergency vehicles access to the street by driving over the infrastructure, if required, but keeps residential vehicles out of the School Street.

There are locations, such as Calgary, closing streets in front of schools to all vehicles for months at a time. A potential challenge of implementing a permanent road closure may be gaining community support. Even with alternate access, there may be residents hesitant to support a permanent road closure.

Permanent infrastructure installations could have many benefits for the implementation of School Streets programs, such as reducing reliance on volunteers and the need for barricades. Permanent infrastructure could also reduce the need for adult school crossing guards in the closed street area. As finding staffing for sufficient adult school crossing guards in Ottawa has been challenging, this could be beneficial and allow staff to focus on areas where permanent infrastructure does not provide safe crossing areas.

Table 10 – Benefits and challenges of various types of permanent infrastructure

Type of Infrastructure	Benefits	Challenges
Permanent closure to all vehicles (planter boxes, Jersey barriers, mountable curbs, etc)	• Removes burden from community members to coordinate volunteers • Reduces reliance on adult school crossing guards	• Challenging to find locations where alternate access exists for residents and emergency vehicles
Permanent gate used to close School Street during select hours (instead of barricades)	• Barricade purchase/ storage is not necessary	• Volunteers required to open and close gate, and to chaperone; or • Challenging to find locations where alternate access exists for residents (if volunteers are not stationed at gates during closure)
Retractable Bollards (on a timer)	• Barricade purchase/ storage is not necessary	• Challenging to find locations where alternate access exists for residents • May not work in heavy snowfall during Ottawa winters

5.2 EXPENSES AND FUNDING

There are a variety of expenses associated with implementing School Streets, and funds to support School Streets projects are required. The total funding required differs depending on the model selected and the project leadership structure.

Kingston's School Streets Playbook provides a thorough summary of expenses to consider when implementing School Streets using the volunteer model, run by a non-profit/NGO or a non-municipal organization:

School Streets Costs
- Permit
- Insurance
- Regulatory signage
- Informational signage
- Barriers or other related traffic control materials
- Storage of materials
- Communications
- Safety equipment, including whistles and reflective vests
- Safety-related training costs (Traffic Control Person training)
- Canadian Police Information Centre checks
- Materials related to maintenance (e.g., snow shovels)
- Wages for staffing to support operational coordination/scheduling

KCAT donated hundreds of hours of time in-kind for the operational coordination of School Streets and paid a staff person to do volunteer coordination. Using this volunteer model, the cost of School Streets for the 2022-2023 school year (when School Streets ran for one year at two locations) was $15,000.
Unlike Kingston, no organizations in Ottawa have been identified with the capacity to donate time in-kind to effectively operationalize School Streets long-term. The costs of staff time need to be considered, for either the coordination of short-term pilot programs using the volunteer model or long-term projects.

Time Requirements for Coordinating and Operationalizing School Streets

The time required to coordinate School Streets projects is significant. Interviews with organizations that piloted one-month pilot programs estimated the time commitment required to coordinate the pilots to be anywhere from 2 months of full-time work to 6 months of work per school (spread out over a longer period, up to a year), depending on the level of community engagement. Operational coordination costs depend on the project leadership structure and the length of the pilot (short- or long-term), and whether the role of volunteer coordinator is paid or unpaid.

Table 11 provides a summary of costs of a program led by an NGO and Canadian municipality.

Table 11 - Summary of School Streets Costs

Location	Number of schools	Duration of Project	Key items included in budget	Key items excluded in budget	Budget Contribution
Kingston (NGO-led)	2	1 year (daily AM and PM)	Supplies Volunteer coordinator wage Liability insurance Permits	Operational coordination (KCAT volunteers provided hundreds of hours of in-kind support)	$15,000
Municipal-led program	1	1 month (daily AM and PM)	Supplies Staff costs for operational coordination Traffic Counts	Volunteer coordination (schools responsible for volunteer coordination) Liability insurance and permits (not required in municipal programs)	$20,000

EnviroCentre provided a letter of support for Green Communities Canada's submission to the National Active School Streets Initiative through the Public Health Agency of Canada's Healthy Canadians and Communities Fund. This initiative, if successful, could provide funding of up to $40,000 for the implementation of two School Streets pilot projects in Ottawa (one-month duration for each pilot). Grant funding, if successful, would be for 2024 – 2027.

The City of Vancouver has the largest School Streets program in Canada, having run pilots at 13 schools since 2021. The City of Vancouver's dedicated funding in support of School Streets has allowed the program to expand its scope and scale over the past few years. As School Streets could help meet the targets set by various City of Ottawa policy documents (TMP, Official Plan, Climate Change Master Plan, Energy Evolution), funding could be provided by the City of Ottawa to pilot School Streets in Ottawa. Such a pilot could be operationalized by the city, or funding could be provided to a non-profit/NGO or school board to lead a pilot project.

Other financing suggestions were provided by stakeholders during interviews, including the Road Safety Action Plan via the Ministry of Transportation (using revenues from Automated Speed Enforcement), school boards, Healthy Canadians and Communities fund, Diabetes Canada, Ottawa Climate Action Fund, Ottawa Public Health, Infrastructure Canada or other provincial grants, school fundraisers, CHEO, Kanata North Tech Special Economic District, Bell Let's Talk, Green Communities Canada, Road Safety Community Partnership Fund, the Ottawa Student Transportation Authority, and community safety zone camera fines. These other funding sources would require an organization to engage with potential funders to request funding, which is an endeavour that takes time, and organizations may not have capacity to recruit funding.

5.3 STAKEHOLDER ROLES

Stakeholders interviewed were not able to give a firm commitment with respect to contributing funding or in-kind support to School Streets projects. Generally, stakeholders were supportive of School Streets projects, but commitments could not be made.

Support from the municipality, schoolboard, and school community are all essential for projects to be seen as legitimate, supported by the community, and executed successfully. School Streets require leadership from one or a combination of a) the city b) the schoolboard or c) a third-party non-profit/NGO with sufficient project management capability to manage and implement all main components of a School Streets project. Smaller community organizations are also important sources of community support.

While support is required from various stakeholders to implement School Streets projects, municipalities are the essential enablers of School Streets in Ontario (Koenig, 2023). Municipal support is required to obtain delegated authority for street closures, which is a first step towards piloting School Streets in Ottawa.

Interviews indicated that there may be challenges or complications regarding the liability insurance required for a School Street closure. As such, it may be unlikely that the City of Ottawa would lead a School Streets project. A non-profit/NGO or School Board will likely be required to lead a School Street project and obtain liability insurance. The Kingston NGO, KCAT, was successful in obtaining liability insurance, but there are no examples to date of a School Board taking on the liability for a School Street closure.

5.4 LOGISTICS

A variety of logistical considerations were discussed with all stakeholders during interviews, and the key topics included volunteers, resident access, city services, snow clearing, traffic displacement, barricade storage, and play streets.

Volunteers: Ottawa stakeholders expressed similar concerns to those highlighted by other jurisdictions that have implemented School Streets – there are challenges with attracting and maintaining volunteers to staff the barricades for School Streets closures. The volunteer model can work well in the short-term at schools with very involved school communities, but a different solution may be required for long-term projects and for schools where families do not have opportunities to volunteer due to work commitments. The volunteer model raises equity concerns, as school communities with capacity to volunteer are often those in higher-income areas, and schools located in low-income communities often have fewer family members available for volunteer opportunities. School selection criteria needs to incorporate equity to ensure that schools in low-income communities are not disadvantaged in their opportunities to participate in a volunteer-based School Streets program. To overcome the barrier of finding volunteers, there were suggestions from stakeholders to engage high school students in the role of supervising barricades.

Resident access: One of the biggest concerns of residents living in School Street closure zones is losing free access to their home during closures. The inconvenience of being escorted through a barricade is not desirable to many residents. The United Kingdom avoids this issue by using automated enforcement cameras and not barricading the streets. This model provides residents with unimpeded access to their homes. Other jurisdictions ensure that residents can access their homes on an alternate street, such as an alleyway, but Ottawa does not have many alleyways. In order to minimize disruption to residents using the short-term volunteer model using barricades, selecting schools with few homes on streets would help minimize disruption to residents.

City services: Policies need to be in place when issuing School Streets permits to ensure that emergency services, waste collection, and winter maintenance operations can continue to operate during School Streets closures.

Snow clearing: Some stakeholders were concerned about the impact of Ottawa's snowfall on the implementation of School Streets in Ottawa. Generally, snow clearing operations in front of schools happen outside of drop-off and pick-up times, so regular snow clearing operations should not impact School Streets operations. If an extreme weather event were to occur, and snow clearing vehicles needed to pass through a School Street during a closure time, policies would need to be in place to allow the snow clearing vehicles to pass through. Kingston has a similar climate to Ottawa, and it operated School Streets closures for two winters, without any issues with snow clearing.

Traffic displacement: Many stakeholders had questions about how School Streets projects would affect traffic in the neighbourhood and asked whether traffic that is normally in the School Street zone would simply be displaced to elsewhere in the neighbourhood. Canadian School Streets projects have conducted traffic counts on surrounding streets, including streets away from the School Street closure zone, and this data shows an overall reduction in traffic (8-80 Cities, 2022). To prevent areas from becoming congested, schools can also provide families with maps outlining a variety of alternate parking locations.

Barricade storage and relocation: The storage and movement of barricades is a logistical challenge that any school implementing the volunteer model has to find solutions for. Barricades are often heavy, so volunteers need to have enough strength to move them to and from the storage location between each street closure. Ideally, barriers should be stored within 50 m and secure from vandals and nuisance theft. It can be challenging to find locations at schools to store barricades, so schools selected for School Street projects need to have a plan in place for where to store barricades and how to transport them between storage and the School Street.

Play Streets: Ottawa stakeholders were divided about whether School Streets closures should include play streets or street animation. The key concerns expressed by stakeholders not interested in hosting a play area were that such an area may lead to supervision, liability, and risk management challenges. Alternatively, animating the space with programming and activities can provide greater opportunities for physical activity and community building and should be strongly considered for future School Streets (8-80 Cities, 2022). In the City of Mississauga, it was noted that drivers encountering the closure were more supportive of the School Streets when play streets were in operation compared to when streets were void of activity.

Photo Credit: YRDSB

6. RECOMMENDATIONS FOR OTTAWA SCHOOL STREETS

The information gathered through research and interviews was used to develop a set of recommendations for Ottawa School Streets projects, should they be considered.

1. **Establish a process for issuing School Streets closure permits.** Delegated authority does not currently exist to close streets to vehicular traffic for School Streets projects. Ottawa can follow a process similar to the process undertaken in Kingston to create a by-law to grant road closure permits for School Streets in Ottawa. Municipal participation and support are essential for permitting.

2. **Identify a school to pilot a short-term School Street project.** Any schools considered would need to meet the eligibility criteria outlined in the School Selection Matrix (see Appendix 2). Some important considerations include number of students in the walk zone, type of road, access for emergency vehicles, OC Transpo routes, etc.

3. **Complete a pilot or short-term project** to collect local data and monitor the impacts of School Street closures in Ottawa. A localized pilot is critical for building community support and demonstrating effectiveness at shifting travel modes.

4. **Explore opportunities to use automated enforcement cameras, paid staff, or permanent infrastructure** to enforce School Street closures. These opportunities provide solutions to challenges that other jurisdictions have encountered with relying on volunteers to enforce street closures.

5. **Complete a long-term project to create long-term shifts in travel modes to active transportation,** helping to meet City of Ottawa sustainability targets. The long-term model selected will depend on the location of the project and whether locations have alternate access. Recommended long-term models include piloting the use of automated cameras to enforce closures, hiring staff to implement closures, or installing permanent infrastructure to facilitate closures.

6. **Minimize disruption to residents living in School Street closure zones** by ensuring that streets selected for closure have few homes, residents have alternate access to their homes (alleyways), or through the use of automated camera enforcement which allow residents to travel unimpeded through the School Street zone.

7. **Ensure city services in School Streets zones are not disrupted.** Snow clearing and winter maintenance operations, waste collection, and emergency services must not be disrupted by School Streets projects.

8. **Establish a funding source for School Streets projects.** Funding will be required to run either a short-term pilot project or a long-term School Streets project in Ottawa. The staff time required to coordinate and operationalize School Streets is significant and any organizations leading such a project will require funding to do so.

9. **Identify an organization with expertise and project management experience** to lead School Streets projects. Relying on volunteers for project management or staffing is not sustainable.

10. **Identify an organization able and willing to acquire liability insurance** for School Street closures.

7. TOOLS TO GUIDE AND INFORM OTTAWA SCHOOL STREETS

Based on best practices of other Canadian jurisdictions that have implemented School Streets projects, the following tools were developed to guide and inform Ottawa School Street pilot projects, should they be considered.

1. **School Selection Matrix:** Not all schools are good candidates for School Streets projects. Various criteria need to be assessed at each candidate school to ensure they have all required elements for successful implementation.

   Several jurisdictions shared their process for selecting schools to participate in School Streets projects, including selection matrices. The information from other cities was analyzed and adapted to develop a School Selection Matrix for Ottawa (see Appendix 2).

2. **Safety Risk Assessment:** There are a variety of risk factors that need to be considered before implementing School Streets projects, and safety risk assessments should be conducted by the project lead of any project. The Safety Risk Assessment in Appendix 3 was adapted from the London Borough of Bromley and can be used to carry out such an assessment.

3. **Engagement Strategies:** Recommended approaches and tactics for community engagement are found in Appendix 4.

4. **Data Collection and Monitoring:** Recommended approaches for data collection, monitoring, and evaluation are found in Appendix 5.

8. CONCLUSION

School Streets can reduce traffic in front of schools, improve air quality, increase rates of active transportation for travel to and from school each day, and support community building and social connection. The implementation of School Streets projects in Ottawa could contribute towards the achievement of Ottawa's sustainability and GHG reduction targets and its policies for building healthy and inclusive communities.

Various City Councillors, principals, and school council representatives have demonstrated an interest having School Streets projects in their communities. The majority of stakeholders interviewed had safety concerns regarding the volume of traffic in front of Ottawa schools during drop-off and pick-up times and supported the concept of School Streets in Ottawa to increase rates of active transportation and improve school zone safety.

The main model for School Street closures in Canada has used volunteers standing at barricades to enforce street closures. There are challenges with the long-term sustainability of this model, and other models such as the use of paid staff, automated enforcement cameras, and permanent infrastructure should be explored.

The recommendations in Section 6 of this report outline how School Streets projects could be effectively implemented in Ottawa. Should School Streets be implemented, some key recommendations include establishing a delegated authority to close School Streets, identifying an organization with expertise and project management experience to lead School Streets projects, identifying an organization willing to acquire liability insurance for School Streets closures, and acquiring funding to support the coordination and operation of School Streets projects.

In order to have the greatest long-term impact on increasing rates of active transportation and reducing traffic in school zones, School Streets projects would need to be implemented long-term. The pathway towards establishing long-term School Streets closures will first likely require the completion of a pilot or short-term project to build community support and demonstrate effectiveness at shifting travel modes. Long-term projects could then be implemented to produce long-lasting behaviour change and contribute towards the City of Ottawa's sustainability targets.

Many School Streets pilot projects have been successfully implemented across Canada. School Streets projects could be effectively implemented in Ottawa should the outlined recommendations be considered. School Streets are a substantial opportunity for Ottawa to be a leading example for active transportation programming in Canada.

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APPENDICES

Appendix 1 – Stakeholder Interviews

Appendix 2 – School Selection Matrix

Appendix 3 – Safety Risk Assessment

Appendix 4 – Community Engagement

Appendix 5 – Data Collection and Monitoring

APPENDIX 1 - STAKEHOLDER INTERVIEWS

Stakeholders were asked the same 16 questions, listed below. Due to time constraints, some interviewees were not able to answer all 16 questions, but answered the questions that were most relevant to them or their organization.

1. What are the areas of alignment between School Streets projects and your organization's goals or mandate? (Are there areas that don't align?)
2. Does your organization have any policies or procedures that you think would be relevant to School Streets?
3. Does your organization have any specific logistical concerns regarding the implementation of School Streets? (impact of street closures, transportation, accessibility, snow clearing, etc.)
4. In your opinion, what are the most significant safety risks that should be considered with the School Streets model?
5. In your opinion, what are the most significant benefits that should be considered with the School Streets model?
6. Are there any opportunities that you are aware of that could help move a School Streets project forward in Ottawa?
7. Though we have done quite a bit of research, we know there are still going to be challenges with implementing School Streets. Are there any challenges specific to your organization that we should be considering?
8. School Streets often require a great deal of community support and volunteers. Do you have any insight from your organization's perspective on how to attract and maintain volunteers long-term for a project such as this?
9. Is there a school/community/neighbourhood that comes to mind that you think would be a good candidate for a School Street pilot?
10. In your opinion, should School Streets remain accessible for occasional drivers that need to drive through the area (for example, no play area - children go directly to the school yard)?
11. What should be considered, implemented, or attempted on a school site to improve school zone safety and walkability prior to applying the School Streets model?
12. What type and timing of public consultation with school communities and neighbourhoods affected by a change in traffic patterns needs to take place prior to implementing School Streets?
13. Do you have any ideas for potential funding sources for School Streets?
14. The draft 2023 Transportation Master Plan contains a policy to prioritize active school trips, which "could include piloting "School Streets" (car-free zones in front of schools during peak school arrival and departure times) in locations with safety concerns or where there are opportunities to achieve high active transportation mode shares, following from similar initiatives in other Canadian cities." Based on your experience and what we've discussed so far, do you believe your organization would be in support of a School Street pilot?
15. Are there any specific organizations/people you think we should interview?
16. Is there any other information you would like to share with us?

QUESTION 1

What are the areas of alignment between School Streets projects and your organization's goals or mandate? (Are there areas that don't align?)

The main areas of alignment between stakeholder organization's goals or mandate and School Streets included promoting healthy habits, active transportation, injury prevention, and school zone safety.

Topics that didn't align were that School Streets may increase disparities faced by marginalized populations as they may have less access to these programs. A program promoting active transportation may also reinforce the stigma for those with disabilities or low-income families who may not be able to provide winter clothing to walk to school.

QUESTION 2

Does your organization have any policies or procedures that you think would be relevant to School Streets?

One procedure to consider is that School Streets must not disrupt school drop-off or pick-up areas. Teachers' union agreements are also important considerations, as they prevent teachers from putting up pylons (only principals can do so because they are not part of the union). A few stakeholders questioned whether a School Street closure could fall under a special event permit with the City of Ottawa.

QUESTION 3

Does your organization have any specific logistical concerns regarding the implementation of School Streets? (impact of street closures, transportation, accessibility, snow clearing, etc)

There were many logistical concerns expressed, including issues of traffic displacement, accessibility, snow clearing, deliveries taking place for residents in School Street zones, where to store barriers, and the logistics and human resources involved in putting up barriers.

There were also many concerns about volunteers: if volunteers don't show up, if conflict arises, scheduling of volunteers, coordinating volunteers, and whether volunteers will be strong enough to move barriers. One person commented that it is challenging to get paid staff for all crossing guard positions, so getting people to do this work for free could be even more challenging. Another person commented that some principals have had unpleasant interactions with parents, and there is a concern that volunteers would be subject to similar interactions.

One person expressed a concern that School Streets may not always have the desired impact of encouraging active transportation, as some families can't or won't change driving behaviour. Many families pick up children for after-school activities or drive them in the morning so kids can sleep in a bit more.

QUESTION 4

In your opinion, what are the most significant safety risks that should be considered with the School Streets model?

There were many safety risks considered by stakeholders, including fears of people ignoring barriers and driving through the School Street, aggression from drivers, traffic displacement, children running outside of the School Street zone and thinking it's a School Street, conflicts between parents and volunteers and vetting of volunteers. One stakeholder mentioned the need to consider adaptive/multilingual resources for those with low literacy to make sure they understand what is going on in a School Street.

QUESTION 5

In your opinion, what are the most significant benefits that should be considered with the School Streets model?

Stakeholders commented on the general benefits of active transportation, including health, air quality, and community benefits that accompany a space that promotes active transportation. One person noted that School Streets demonstrate that children are valued and that the streets are not just for driving.

QUESTION 6

Are there any opportunities that you are aware of that could help move a School Streets project forward in Ottawa?

Several stakeholders suggested an opportunity for Ottawa Safety Council to be a staff provider for closing School Streets. Another opportunity identified was including permanent infrastructure to support School Street closures in road designs whenever road construction is scheduled on roads near schools.

QUESTION 7

Though we have done quite a bit of research, we know there are still going to be challenges with implementing School Streets. Are there any challenges specific to your organization that we should be considering?

Several stakeholders commented that it may be challenging to get a school on board, community buy-in, and volunteers. The challenge described with getting schools on board was that teachers are at their limit and any additional program requiring a time investment by teachers could be difficult. Buses will also be challenging to navigate through School Streets as they arrive at different times, along with vans that will need to drop children off in front of schools. It is also important to consider how a School Street could affect a crossing guard that may be stationed near a School Street.

QUESTION 8

School Streets often require a great deal of community support and volunteers. Do you have any insight from your organization's perspective on how to attract and maintain volunteers long-term for a project such as this?

Stakeholder suggestions for volunteer recruitment included sending call outs via the principal, city councillor, and community association. To motivate potential volunteers, they would need to understand how they would be helping the community and the benefits of School Streets. Specific organizations that were suggested to help recruit or provide volunteers included Ottawa Public Health's Community Engagement Team, Ottawa Network for Education, and Education Foundation of Ottawa. Many stakeholders suggested that retirees would be good candidates for volunteering. To maintain volunteers, some individuals commented on the importance of recognition, providing volunteers with a sense of ownership and agency, asking more volunteers to do less, providing orientation and training, and providing a volunteer coordinator.

Many stakeholders commented on the challenges associated with volunteers, with multiple people emphasizing the inequity of relying on volunteers and safety concerns if volunteers don't show up. Families in low-income neighbourhoods may have less time to dedicate to volunteering, making the volunteer model of delivering School Streets inequitable. Other challenges included concerns about the potential need to perform background checks on volunteers and questions about the liability for volunteer safety. Many people mentioned that volunteers are easier to recruit for short-term or one-off events, but long-term volunteers are very challenging to maintain. Some stakeholders commented on the lack of success of other volunteer-reliant initiatives in Ottawa, such as the Hybrid Walking School Bus that required a non-paid volunteer. This hybrid initiative was not successful, and the Walking School Buses that were successful were those that included a paid staff person. To address some of the challenges identified with volunteers, stakeholders suggested paying volunteers a small stipend, potentially out of the councillor's budget, or running a model similar to crossing guards with paid staff.

QUESTION 9

Is there a school/community/neighbourhood that comes to mind that you think would be a good candidate for a School Street pilot?

Some stakeholders suggested criteria that should be considered when selecting a school, including participation in EcoSchools and a history of promoting and engaging in active transportation, including participating in walking school bus programming. A suggestion was made to consider equity by using the neighbourhood rating scale to identify areas with gaps in healthy living as part of a selection matrix.

One stakeholder suggested that Ottawa Safety Council could provide feedback on pinch points to suggest which streets to close down and help identify schools to pilot School Streets at. Since Ottawa Safety Council also does pedestrian safety training, if there was a School Streets pilot happening, they could take the opportunity to educate kids on how to walk safely.

Other stakeholders suggested schools in areas that they were familiar with as potential candidates for School Streets. These suggestions were based on stakeholder's personal familiarity with areas, and any school mentioned during interviews has been noted in the list below: Devonshire, Hopewell Ave, Elmdale, Fisher Park, St Bernard, St Georges, Assumption School, First Avenue School, Lady Evelyn Alternative School, Lycée Place, Hilson Ave, Jack Donohue, South March, Stephen Leacock PS., W. Erskin Johnston, Roland Mitchener, Penfield, Varley, Ottawa Islamic School, Sir Winston Churchill, Steve Maclean, Half Moon Bay, Vimy Ridge, Stittsville, Barrigan, Ecole Trille des Bois, L'Odyssée; Le Prelude; Des Sentiers, Shingwàkons, Lorne A Cassidy, Guardian Angels, West Wind, or a suburban area in Findlay Creek or Barrhaven.

QUESTION 10
In your opinion, should School Streets remain accessible for occasional drivers that need to drive through the area (for example, no play area - children go directly to the school yard)?
About two thirds of stakeholders interviewed were not supportive of the idea of a play area as part of a School Street, believing that the street needed to remain accessible for emergency vehicles, buses, and residents on the street. The key concerns expressed by stakeholders not interested in hosting a play area were that such an area may lead to supervision, liability, and risk management challenges.

Approximately one third of stakeholders were supportive of a play area within a School Street, citing the benefit that they encourage communities to get together. One stakeholder commented that a street is about city life, it's not just a highway. A few stakeholders thought that having a play area incorporated into the School Street should be a decision made based on each community and characteristics of each specific street.

QUESTION 11
What should be considered, implemented, or attempted on a school site to improve school zone safety and walkability prior to applying the School Streets model?
Most stakeholders emphasized that schools should have engaged in the promotion of active transportation prior to implementing School Streets. Such promotion could include walk-a-block, walk to school day events, walking school buses, bike bus, cycling and pedestrian safety education. Others emphasized that schools should have crossing guards around the schools, OPS and By-law should be involved in enforcement around the school, and infrastructure improvements around the school such as protected bike lanes and raised crosswalks should be installed. Lastly, one stakeholder recommended a short pilot of a School Street before full implementation.

QUESTION 12
What type and timing of public consultation with school communities and neighbourhoods affected by a change in traffic patterns needs to take place prior to implementing School Streets?
There was a wide range of timeframes recommended for public engagement in School Streets projects. Answers ranged from 3 months to a full school year ahead of time, with most people recommending consultation take place about 3-6 months before the project. Some ways to engage with communities included Community Associations, community meetings, community surveys, meetings at the school, "what we heard" documents from meetings, flyer distribution to those within a few blocks of schools, and school boards.

A noteworthy comment included that much of consultation is about notification and recommended making sure to keep the community informed throughout the process. Another notable response described the effects of the pandemic on people and the public's general perception of restrictions following the pandemic. School Streets may be seen as a restriction by some, and they are not good coming from the top down. So direct community involvement is required, taking the time to fully engage the community to create buy-in for a concept like a School Street.

QUESTION 13

Do you have any ideas for potential funding sources for School Streets?

The most common answer from stakeholders on where funding for a School Street should come from was that the City of Ottawa should fund it. One stakeholder suggested that Safer Roads Ottawa funding under the Road Safety Action Plan could be dedicated to School Streets. Other suggestions for funding sources included School Boards, Ottawa Climate Action fund, Healthy Canadians and Communities fund, Diabetes Canada, Ottawa Public Health, Infrastructure Canada or other provincial grants, school fundraisers, CHEO, Kanata North Tech Special Economic District, Bell Let's Talk, Green Communities Canada, Road Safety Community Partnership Fund, and the Ottawa Student Transportation Authority. One stakeholder suggested that the community safety zone camera fines, which are governed by Ministry of Transportation, could be used to fund School Streets, so the funding would need to come from the Ministry.

QUESTION 14

The draft 2023 Transportation Master Plan contains a policy to prioritize active school trips, which "could include piloting "School Streets" (car-free zones in front of schools during peak school arrival and departure times) in locations with safety concerns or where there are opportunities to achieve high active transportation mode shares, following from similar initiatives in other Canadian cities." Based on your experience and what we've discussed so far, do you believe your organization would be in support of a School Street pilot?

The vast majority of stakeholders interviewed were in support of a School Street pilot. A few stakeholders were unsure, stating that the concept was great in theory, but they would need clarity on safety, liability, and logistical issues.

QUESTION 15

Are there any specific organizations/people you think we should interview?

Any feedback from stakeholders was taken into consideration, and interviewees were added based on stakeholder feedback.

QUESTION 16

Is there any other information you would like to share with us?

Stakeholders shared recommendations on a variety of topics that they believed would support School Streets in Ottawa. One recommendation included finding out why parents are driving, and the coordination of active transportation and transit so parents can walk to school and then take transit to work. Others suggested that permanent infrastructure changes be installed to support School Streets instead of relying on volunteers, and that School Streets will require a team effort and support from many organizations.

APPENDIX 2 - SCHOOL SELECTION MATRIX

School Eligibility Criteria	• Percentage of students in the school walk zone*: greater than 50% • Percentage of students bused: less than 30% • Any arterial or major collector road is ineligible for a School Street closure (adjacent streets can be considered for closure) • Any key emergency response street (as defined in Ottawa's Traffic Calming Design Guidelines) is ineligible for a street closure (see Appendix D of Traffic Calming Design Guidelines) (adjacent streets can be considered for closure) • Any road that is on an OC Transpo bus route is ineligible for a School Street closure (adjacent streets can be considered for closure)

*The number of students in an elementary school's walk zone is the number of kindergarten students living within 800 m of the school + number of Grades 1-8 students living within 1.6 km of the school.

If the candidate school meets the eligibility criteria outlined above, they are eligible for further evaluation to determine their feasibility for a School Street, and they can be scored using the matrix below.

Topic	Highest Score	Scoring	Information Source / Considerations
Street Feasibility	3	**1** – Difficult **2** – Moderate **3** – Simple/Easy	On-site data collection and observational reporting. Considerations include: Road type, traffic displacement, access impacts, alternate parking (laneway or parking garage), construction. Proposed school must be presented to City of Ottawa Traffic Services for approval.
Residential/ Neighbourhood Impact	3	**1** – High (residential/business density and no alternate access) **2** – Moderate **3** – Low (low residential/business density or alternate access)	Number of residential homes or businesses affected by street closure
Active Transportation Mode Share	3	**1** – Low <10% **2** – Medium 10-40% **3** – High >40%	OSTA Transportation Survey Reports, CECCE and CEPEO Transportation Survey Reports. Hands-up classroom surveys.
Observed Safety Concerns	3	**1** – Few (0-1) **2** – Some (1-3) **3** – Many (3+)	Number of safety concerns regularly observed in school zone during drop-off and pick-up. For example: distracted driving, speeding, U-turns, double parking, crossing mid-block, etc.
School Active Transportation (SAT) Programming	3	**1** – Limited **2** – Some **3** – Regular	School Active Transportation (SAT) Programming includes walk to school day events, bike rodeos, pedestrian safety workshops, etc.
Equity	3	**1** – Nominal equity concern **2** – Possible equity concern **3** – Strong equity concern	Neighbourhood Equity (NEI) Index
Level of Community Support: Readiness, Leadership, and Capacity	3	**1** – Principal + school community **2** – Principal + school community + City Councillor **3** – Principal + school community + City Councillor + Community Association	Project support and active engagement are demonstrated from these stakeholders
Total Possible Score	21		

APPENDIX 3 - RISK ASSESSMENT MATRIX

This risk assessment below was adapted from the London Borough of Bromley. Rate the risk of each hazard at each School Streets location using the rating scale to the right. To assess the overall risk, consider and acknowledge each potential hazard and how it may affect the success of the School Street program. Ensure there is capacity (funding, time, supervision, etc.) to mitigate any identified risks.

Risk Severity Rating
4 - Catastrophic
3 - Critical
2 - Marginal
1 - Negligible

Risk Probability Rating
A - Likely
B - Probable
C - Remote
D - Improbable

Potential Hazard	Risk	People at Risk	Mitigation	Risk Rating (Severity x Probability)
Exempted Vehicles (i.e. residents living on School Street)	Strike a pedestrian within School Street closure	Children, parents, volunteers, pedestrians	• Volunteers wear high-visibility vest • 1 volunteer escorts exempted vehicle from barrier to destination • When permitting access to vehicles remind the driver to drive carefully and be aware of pedestrians • Never leave barriers unattended • Disseminate reminders of closure letters/emails to all parents • School to send reminders to parents on a regular basis to travel in the School Street with care, keeping close contact with children at all times	
Drivers can get through temporary barrier	Risk of injury to users of the School Street if a driver does not abide by the School Street and crosses the barrier	Children, parents, volunteers, pedestrians	• Never leave barriers unattended • Never move the barrier for an unexempted vehicle • Use a warning sound (whistle) to usher all people off the street if an unauthorized driver enters the School Street • Record incidents and report to police • Use a heavier barrier to deter driving through	
Barriers	Barriers become a trip hazard	Children, parents, volunteers, pedestrians	• Ensure students and parents do not come too close to the barriers • Ensure barriers are stored correctly after use. Make sure they are stored at the agreed location	
Trips and falls	Tripping on potholes, uneven or slippery paving	Children, parents, volunteers, pedestrians	• Large potholes/uneven surface can be marked with pylons • Encourage volunteers to wear proper footwear	
Carrying barriers and signs	Personal Injury	Volunteers	• Include demonstrations of lifting techniques for volunteers in training	
Aggressive drivers	Verbal or Physical Assault	Volunteers, parents and children	• Do not stand in front of any vehicle • Equip volunteers with emergency whistle to clear road • Include de-escalation training for volunteers • Record incidents and report to police • Use a heavier barrier to deter driving through	
After road closures have ended and barriers are removed	Pedestrians may not realize the School Street has finished and continue to travel on the re-opened road	Parents and children	• At the end of the closure period make sure that pedestrians nearby are aware that the road is about to re-open • Adhere to the closure times and return equipment promptly to storage location agreed with the school	
Feeling unwell (effects of heat)	Exhaustion, injury	Volunteers	• If feeling unwell when manning the barriers, volunteers to alert a member of school staff immediately • Work within your own capabilities • Be mindful of your limitations	
Extreme weather	• Lightening strikes • Extreme heat/cold • Low visibility	Volunteers, parents and children	• Volunteer coordinator to check daily weather and cancel School Streets during severe weather warnings • Volunteers to temporarily suspend School Streets in extreme weather • Volunteers must wear appropriate, protective clothing suitable for the changeable weather conditions • High-vis tabard must be worn at all times • Suitable footwear for all types of weather and surface conditions should be worn	
Use of untrained volunteers	May not understand their role or how to deal with potential conflict	Children, parents, volunteers, pedestrians	• Volunteers must participate in a training program	

APPENDIX 4 - COMMUNITY ENGAGEMENT

Recommended approaches for School Streets Engagement include:

- Educating the school community on the purpose and benefits of School Streets.
- Helping residents understand street closures are temporary for a pilot project.
- Helping residents understand that feedback on the pilot project will be gathered to see what works and what does not.
- Advising residents of the impacts of the closure and how it will operate.
- Making active school transportation a priority for the City Council.
- Gaining long-term support for School Streets.
- Educating and demonstrating that School Streets are a practical solution to community safety challenges.
- Demonstrating measurable benefits and positive outcomes of School Streets
- Collecting feedback from residents, parents, volunteers, and school staff before, throughout, and following pilot projects.
- Sparking a community-wide conversation about the benefits of safe and active streets for children, caregivers, and residents.
- Engaging a diverse range of perspectives and lived experiences.
- Prioritizing the engagement of children and students and make engagement a leadership opportunity for people of all ages.

APPENDIX 4 - COMMUNITY ENGAGEMENT

The following methods of engagement are recommended for each audience:

Key Audiences:	Methods of Engagement
School Leadership Principal and School Council, potentially superintendents and trustees	• Presentations to principals, teachers, and parent advisory councils • One on one meetings, email communication, and small group planning meetings
Students Elementary students attending participating schools, as well as student volunteers from local high schools	• Involvement in large group project planning meetings (x3 per community) • Small group planning meetings • Projects done during class time
Local Community Neighbours, general public, community organizations	• Household mailers, letters with information on how to provide feedback to residents within a two-block radius • On-street pedestrian signage, banners, media release, and online promotion • Public meetings, open houses, and surveys • Community Pop-ups • Updates in newsletters • Social media • Digital sign boards at city facilities
City Staff	• One on one meetings, email communication and small group planning meetings • Formal announcements, presentations at meetings • Stories posted to internal municipal news channels
Elected Officials (Council, Ward Councillors and School Trustees)	• Formal announcements, presentations at meetings, stories posted to internal municipal news channels

Community engagement for first time pilot projects in Ottawa should begin approximately one year before the projects takes place.

Engagement should begin with key institutions including the municipalities, schools, and school boards. The communities where the street closures are to take place should be engaged approximately 3 months before the anticipated road closure.

APPENDIX 5 - DATA COLLECTION AND MONITORING

It is important to collect baseline data before School Streets projects, during the project, and post-implementation data immediately following School Streets projects to measure the impact of the School Streets projects on meeting desired goals or objectives.

The type of data that should be collected will depend on the specific goals or objectives of each School Streets Project. Common goals include increasing rates of active transportation, reducing congestion in front of schools, improving air quality, and building community support for projects.

Methods for collecting data to measure the success of the project at achieving desired objectives are outlined below. The following data should be collected before the School Streets project begins, during the project, and following the conclusion of the School Streets project.

1. **Increasing rates of active transportation:** Use family surveys or hands-up classroom surveys to determine travel modes. School board support is essential for collecting data to evaluate School Streets projects using hands-up surveys, as teachers conduct these surveys during class time.

2. **Reducing congestion in front of schools:** Collect traffic count data. Sample survey and traffic count forms are found on pages 24 and 25 of the City of Victoria's School Streets Guidebook.

3. **Improving air quality in the school zone:** Collect measurements of particulate matter in the school zone.

4. **Community support for projects:** Use surveys to ask community members about their level of support for road closures and their perceptions of safety. The Markham School Streets Report provides a summary of pre and post-surveys provided to the community.

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