



City of Moncton

Active Transportation Plan Phase Two Report

May 2022



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Acknowledgements

The City of Moncton is located on the traditional territories of the Wabanaki and Mi'kma'ki peoples.

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Chapter 1. Introduction and Plan Development

Phase Two of the City of Moncton Active Transportation Plan is intended to evaluate the work completed from the Phase One plan (completed in 2002), and identify infrastructure, programming, and policy updates for the City to implement to enhance the experience, safety, and access to active transportation.

Background

What is Active Transportation?

Active transportation includes walking, cycling, and other forms of rolling, including using a wheelchair, skateboarding, rollerblading, and using a motor assisted device. This plan primarily focuses on pedestrian and cycling connections, which other forms of active transportation may also use. The plan focuses on active transportation as part of everyday travel, whether it is walking to the bus, cycling to the park, or part of a commute.

Why Plan for Active Transportation?

There are numerous reasons why a city would plan for active transportation. Throughout the 20th century cities across the world have been planned to enable and prioritize automobile traffic. In the past few decades, the need to plan more for active transportation has been identified as necessary to make cities more accessible, equitable, economic and environmentally sustainable, safe, and to improve the quality of life for people that live there. Planning for active transportation also provides an opportunity to reflect on who is being planned and designed for – and that should be everyone, from children to seniors, people with disabilities, newcomers, residents, and visitors.

Active Transportation Plan Phase One

The Phase One plan considered the potential for active transportation in Moncton, and developed a vision for the City based on the plan.

Vision from Phase One

The City of Moncton active transportation system is a safe and comfortable multi-modal network that connects communities to the schools, parks, work and shopping areas. The well-designed system combined with citywide education encourages everyday use of public transit, trails and active transportation routes.

The plan proposed an active transportation network based around a primary network designed for active transportation using both on-road and off-road trail connections. The plan also identified education and promotion programs to support and encourage people to use active transportation.

Moving Forward from Phase One

The Phase One plan was suitable for its time, but since its development, active transportation practice and guidance has developed significantly and are better equipped to help realize the vision from Phase One. Phase One also left gaps in the network, referred to as Challenging Streets (i.e., Mountain Road, Killam Drive, and Lewisville Road) where facilities were not implemented. Best practice now focuses on designing active transportation networks and facilities to be used by people of all ages and abilities. This thinking recognizes that most people do not feel comfortable or safe walking or cycling on or next to roads with high automobile traffic speeds and volumes.

Relevant Design Guidance and Best Practice Documents

The following documents are a summary of current design guidance and best practice to be used to support the planning and design of active transportation networks and facilities.

- Transportation Association of Canada (TAC)
 - [Geometric Design Guide for Canadian Roads](#)
- National Association of City Transportation Officials (NACTO)
 - [Urban Street Design Guide](#)
 - [Urban Bikeway Design Guide](#)
 - [Don't Give Up at the Intersection](#)
- Other Provincial Guidance
 - [Ontario Traffic Manual Book 18: Cycling Facilities](#)
 - [BC Active Transportation Design Guide](#)

Community Engagement and Consultation

During the development of the Phase Two plan, stakeholders and the public were engaged and consulted throughout the process, organized into two rounds.

Round One (Spring 2021)

Round one of engagement focused on hearing about the experiences and needs of people using active transportation living in and around Moncton. This round of engagement included focused interviews with representatives from relevant organizations and advisory committees and online engagement. The online engagement was available through the City's Let's Chat Moncton website for a three-week period. During that time, there were over 3,500 visitors to the website. The website included a survey and interactive map where people could place pins to provide feedback about where they want to travel to, and where they experience barriers to travelling using active transportation. The survey received over 600 responses total, and on the interactive map, 75 contributors placed 401 pins.

Key feedback received was on how trails do not connect to on-road facilities, and that many people do not feel comfortable or safe cycling on most roads in Moncton, despite many people being interested in cycling more year-round. High automobile speeds and volumes were cited as a primary concern on many key arterials. People felt that existing cycling facilities are insufficient for providing a comfortable experience.

Round Two (Fall 2021)

Round two of engagement used Let's Chat Moncton website to present the proposed cycling network and the approach to sidewalks and sought feedback on those proposals and how the cycling network should be prioritized. The engagement survey also asked about programs to support active transportation. Additional stakeholder interviews were also completed to get in depth feedback. In total the survey received 219 responses, and 11 interviews were completed.

Overall, people were supportive of the proposed network and approaches. Of respondents who currently cycle, 90% said the network would help them cycle more often. Of respondents who don't currently cycle, 93% said the network would help them to cycle. A total of 91% of respondents agreed with the proposed sidewalk approach. Feedback received around additions to the network and priorities for implementation were reviewed and considered as part of the network development and prioritization process. Feedback on programs and other issues provided were reviewed and considered as part of the recommendations for policies and programs.

Chapter 2. Existing Conditions

The existing active transportation network in Moncton is comprised of cycling-only facilities, trails, and sidewalks. People cycling can use cycling facilities and most trails, while people walking can use sidewalks and trails. The following section examines the types of cycling facilities, trails, and sidewalks in Moncton currently. The facilities are shown on the Existing Conditions map on page 5.

Trail Facilities

There are three kinds of trails in Moncton. Trail types and route impact who and how the trail is used.

Hard-Surface Multi-Use Trails

Hard-surface multi-use trails are intended for people walking, cycling, and rolling. They are either located adjacent to the roadway or in their own corridor, such as in parks and the Riverfront trail. There are 16 km of hard-surface multi-use trails currently in Moncton.

Figure 1. Asphalt multi-use path on Millennium Boulevard (City of Moncton)



Soft-Surface Multi-Use Trails

Soft-surface multi-use trails are intended for people walking and cycling. They are most often in their own corridor, such as the trails in Centennial Park, or the Northwest Trail, but there are instances where they are adjacent to roadways. There are currently 56 km of soft-surface multi-use trails in Moncton.

Figure 2. The Northwest Trail (City of Moncton)



Hiking Trails

Hiking trails are commonly on natural surfaces, or on boardwalks where necessary to protect environmentally sensitive areas. They are usually narrow, and intended for people walking. There are currently 9 km of hiking trails in Moncton. Hiking trails are not the focus for this plan.

Cycling Network

Cycling Facilities

There are different types of cycling facilities, which accommodate people cycling in different ways. The Motor Vehicle Act, establishes where people cycling are allowed to cycle. Section 179(1) states that people cycling are expected to ride as near to the right side of the roadway as practical. Recognizing that riding in mixed traffic is not a comfortable or safe place to ride for most people, cycling facilities provide treatments with the aim to provide an enhanced experience for people cycling. There are other types of cycling facilities not currently implemented in Moncton that will be discussed in Chapter 3.

Bike Lane

Bike lanes are dedicated facilities for people cycling to use on the roadway. They are designated by a white painted line, signage, and pavement markings to indicate the designation. There are currently 44 km of roads with bike lanes in Moncton, based on the road centreline. They are all located on arterial or collector roads. Examples of roads with bike lanes are Vaughan Harvey Boulevard, Collishaw Street, Shediac Road, Ryan Street, and Edinburgh Drive.



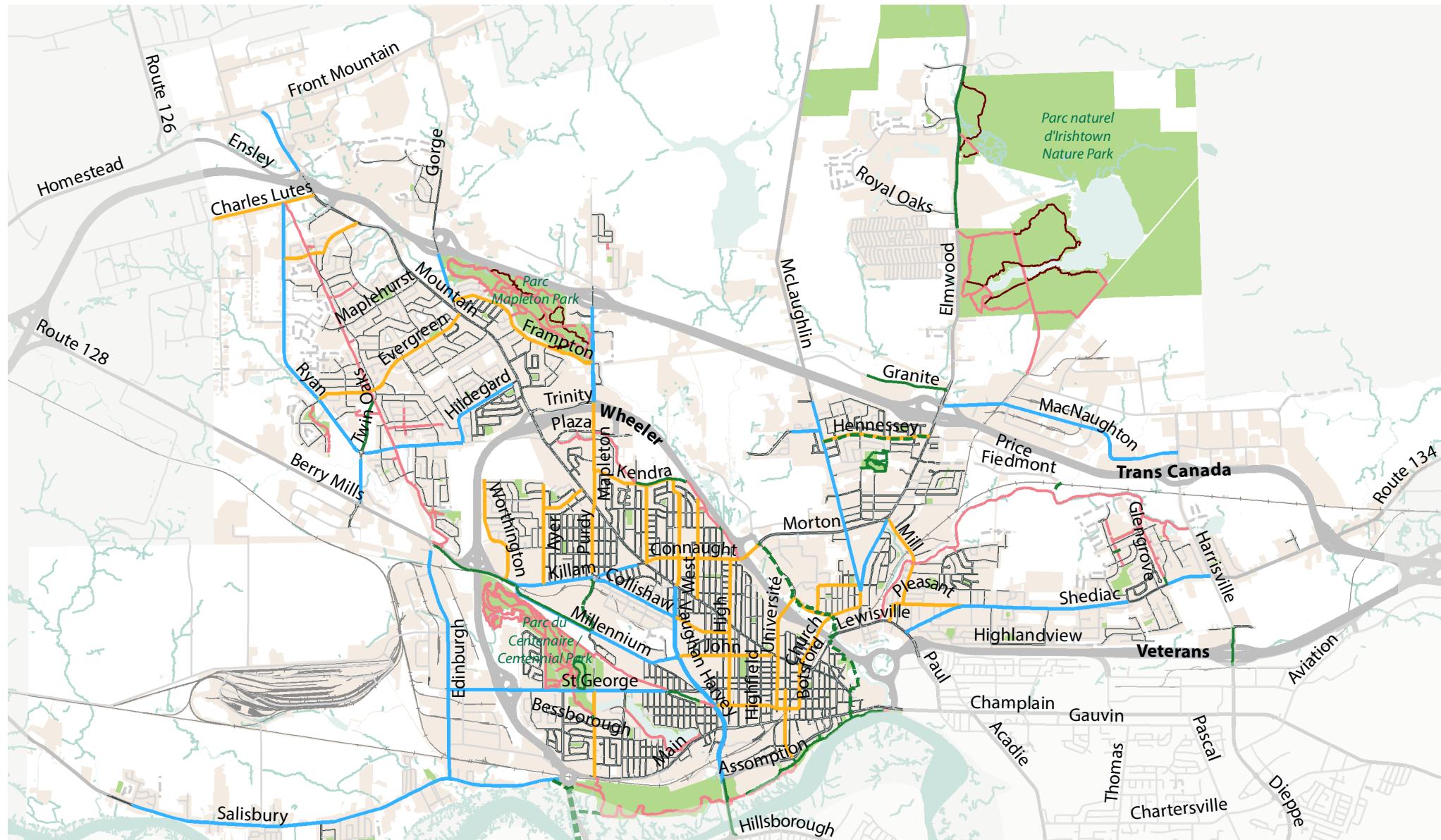
Figure 3. Painted bike lane on Shediac Road (City of Moncton)

Shared Street

Shared streets do not have dedicated cycling facilities for people to use, but include pavement markings and signage to indicate where people cycling should be located within the roadway and to remind people driving to expect people cycling along the route. There are currently 36 km of roads with the shared street treatment in Moncton. They are mainly on collector and local roads, but there are some shared street treatments on arterial roads as well. Examples of roads with shared street treatment include Church Street, Milner Road, Mill Road, and Evergreen Drive.



Figure 4. Shared street treatment on Mill Road (City of Moncton)



0 1 2 KILOMETRES



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Data provided by the City of Moncton.
Map produced 3/8/2022.

Assessment of the Cycling Network

The existing cycling network was evaluated based on the network principles of **quality**, **directness**, **density**, **completeness**, and **access to destinations**. The Cycling Network Assessment map on page 7 illustrates the assessment.

The existing cycling facilities were assessed based on the Transportation Association of Canada (TAC) *Geometric Design Guide for Canadian Roads* (2017). Higher motor vehicle speeds require increased separation for safety and comfort of people cycling, while higher motor vehicle volumes increase the number of potential conflicts. Facilities were also evaluated on widths and their design. These relate the network principle of **quality**.

The result of this analysis shows that the majority of the existing cycling network in Moncton is not suitable based on the current road characteristics. They are summarized into the following categories:

- **Local Gap** – Road with shared lanes is considered a gap due to 50 km/h speed limit on a Local street
- **Appropriate for Visual Separation** – Road context is appropriate for a visually separated facility (painted bike lane)
- **Appropriate for Physical Separation** – Road context is appropriate for physically separated facility (cycle tracks, on-road protected bike lane, multi-use path)
- **Not Gap** – Road context is appropriate for existing facility type

Missing Links

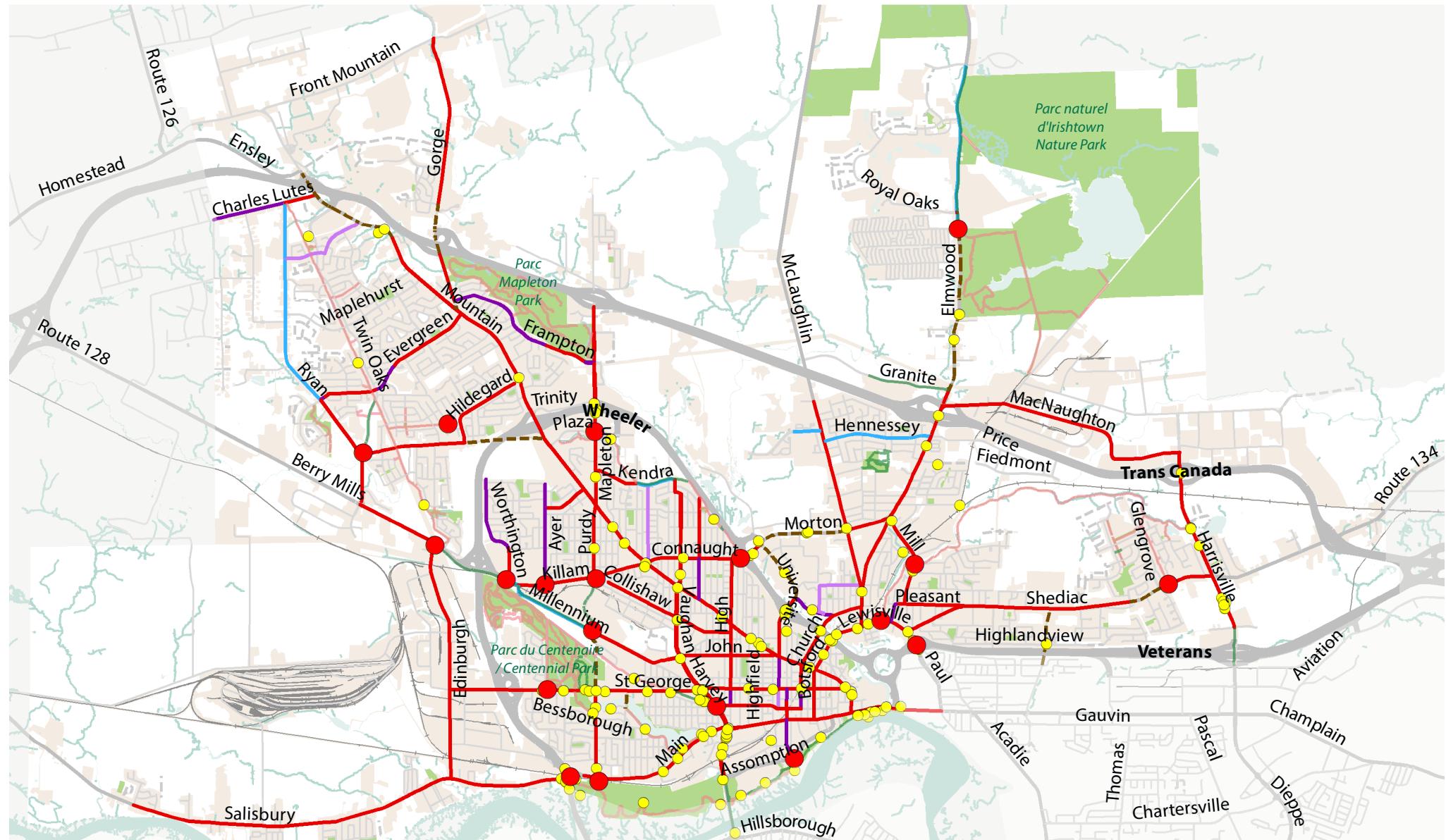
Missing links were identified that connect between existing cycling facilities and which provide more direct routes (**directness**), provide access to areas without facilities (**completeness**) or provide additional connectivity (**density**) and **access to destinations**.

Spot Gaps

Spot gaps are point locations where there is a gap in the existing network. Spot gaps were identified at intersections and crossing locations where there are no crossing treatments, or insufficient treatment to support pedestrian or cycling movements at that location.

Gaps from Public Feedback

In addition to the gaps identified in our analysis, the 228 gap or barrier pins that the public submitted on the Let's Chat Moncton website during the 3-week engagement period between March-April 2021 are included on the Cycling Network Assessment map. The majority of these pins described stressful conditions, and poor crossing opportunities at crossings and intersections along the corridors. The crossings of Wheeler Boulevard had many pins describing the challenging conditions. Pins on the Riverfront Trail describe sections of the trail as narrow given the traffic along the trail and a lack of access to downtown businesses from the trail. At some sections of gravel trails, pins describe eroding, loose gravel conditions. Many comments describe a lack of or poor maintenance creating gaps in the cycling network. Two comments highlighted lack of lighting along the Northwest Trail as a barrier to sense of safety and security.

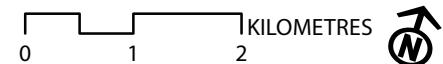


CYCLING NETWORK ASSESSMENT

ACTIVE TRANSPORTATION PLAN 2022-2035

- Spot Gap
 - Gap from Public Feedback
 - Missing Link
 - Local Gap
 - Need for Bike Lane
 - Need for Physically Separated
 - Not gap

- A legend titled "DESTINATIONS + BOUNDARIES" containing four entries: "Railroad" with a black line icon, "Parks" with a green square icon, "Built-up Area" with a light brown square icon, and "Water" with a light blue square icon.



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Data provided by the City of Moncton.
Map produced 3/28/2022.

Pedestrian Network

Pedestrian Facilities

Sidewalks are dedicated spaces for people to walk and use mobility devices separated from other vehicle traffic. On roads without sidewalks, people may walk on the road on the left side, towards traffic. Sidewalks can be on one side or both sides of the road. Sidewalks are most commonly concrete, but can also be constructed with pavers or asphalt. Sidewalks can be directly adjacent to the roadway or set back by boulevard landscaping or furnishing zones with utilities, bike parking, trees, and other features. There are approximately 470 km of sidewalks in Moncton. The majority of sidewalks are between 1.5 to 1.7 m.



Figure 5. Wide sidewalk with pavers on Main Street (City of Moncton)

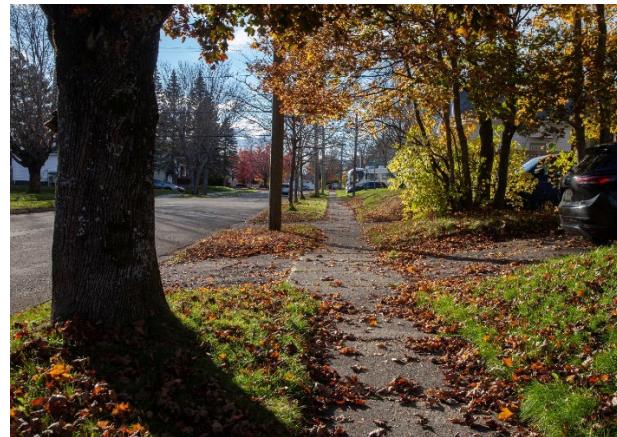


Figure 6. Sidewalk set back from road on Chapman Street (City of Moncton)

Assessment of Pedestrian Network

Sidewalk Existence

Roads were evaluated on whether there were sidewalks or multi-use paths on both, one, or neither side of the road. This helped to identify where there are gaps in the sidewalk network.

Sidewalk Width

Sidewalk widths were evaluated based on guidance from the TAC *Geometric Design Guide*. The majority (92%) of sidewalks in Moncton are in the 'Practical lower limit' of acceptability, with widths between 1.5 and 1.7 m.

Sidewalk Quality

Sidewalks can also be assessed on their quality, which considers factors of surface conditions and sidewalk setback. Surface conditions look at whether there is a smooth, stable, and flat surface to walk or use a mobility device on. Sidewalks with major cracks or uplifting from tree roots provide a poor and unsafe experience for people using sidewalks. Sidewalks set back from roads provide a more comfortable experience for people using them. When sidewalks abut roadways, especially roadways with higher traffic speeds and volumes, the experience of walking on the sidewalk can be stressful. Major roadways such as Mountain Road, Salisbury Road, Shedia Road, and on sections of Mapleton Road have integrated sidewalks.

Access to Destinations

The sidewalk data was used to assess whether there is sidewalk access to different types of key destinations in Moncton. These included transit, parks, schools, and grocery stores.

Existing Programs

Programs for active transportation focus on encouraging and supporting people to use active transportation. Programs include events to promote and encourage people to use active transportation, campaigns to promote awareness and safety for active transportation, initiatives to educate people on cycling or about the City's network, and installing end of trip facilities for people cycling.

Existing programs were developed from the Phase One of the Active Transportation Plan or through other initiatives developed in the interim. The City has implemented the following programs:

- Parks and Trails Day/Month – event promoting use of City parks and trails
- Environment Week – bike rodeos and lights and reflector giveaway
- Canada Day Bike Rides
- Valet Bike Parking at large events (i.e., Canada Day, Rib Fest, Acadie Rock)
- Healthy Kids Day – bike rodeos at the YMCA
- Continued installation of bike racks and lockers during City construction and working with groups and businesses when racks are requested
- Continued to update public parks and trails map
- Providing in-kind financial support to La Bikery Co-operative who run bike repair and rentals and supports cycling programming in the city
- Bike maintenance and safety workshops
- Share the road decal campaign – installed on all City vehicles including transit and on taxis
- Various social media campaigns to promote walking and cycling
- Share the trail campaign – promoting user etiquette on trails and working with trail ambassadors
- Bike and Ride – bike racks on CodiacTranspo buses

Existing Policies

Policies are directives, standards, or practices the City of Moncton has in place to direct or support decision-making. Many of these policies are developed from other plans and strategies the City has completed, such as the Municipal Plan. Some of the policies in these documents are relevant and can have an impact on active transportation and the recommendations of this plan. Plans that were considered for their relationship to the Active Transportation Plan include:

- PlanMoncton: Municipal Plan
- Strategic Plan
- Zoning By-law
- Community Energy and Emissions Plan (2022)
- Climate Action Report (2020)
- Trail Master Plan (2019)
- Park and Trail Guidelines (2017)
- Southeast Regional Service Commission Recreation Master Plan (2017)
- Destination 2040 – Regional Sustainable Transportation Master Plan (2015)
- Active Transportation Master Plan Map (2013)
- Sidewalk Master Plan Phase 1 (2010)
- Active Transportation Plan Phase One (2002)

Chapter 3. Plan Recommendations

Network Development

The recommendations from this plan are based on the work completed as part of the existing network assessments. Building on the gaps and needs identified in those assessments network recommendations were developed in consultation with City staff. The proposed network was then publicly reviewed as part of round two of public engagement. The final network recommendations build on the feedback received.

Cycling Network Recommendations

Recommended Cycling Facility Types

Physically Separated Bikeway

Physically separated bikeways are recommended on roads with high traffic volumes or speeds, to provide a lower stress experience for users. There are many different types of physically separated bikeway facilities which the City can consider implementing on these corridors. Each type has different considerations and may be more suitable based on available right-of-way, utilities, road reconfiguration opportunities, and how the project is being implemented. Types of physically separated bikeways are shown below. Note that multi-use paths can be used by people cycling and pedestrians.



On-road protected bikeway with concrete curb (Halifax, NS)

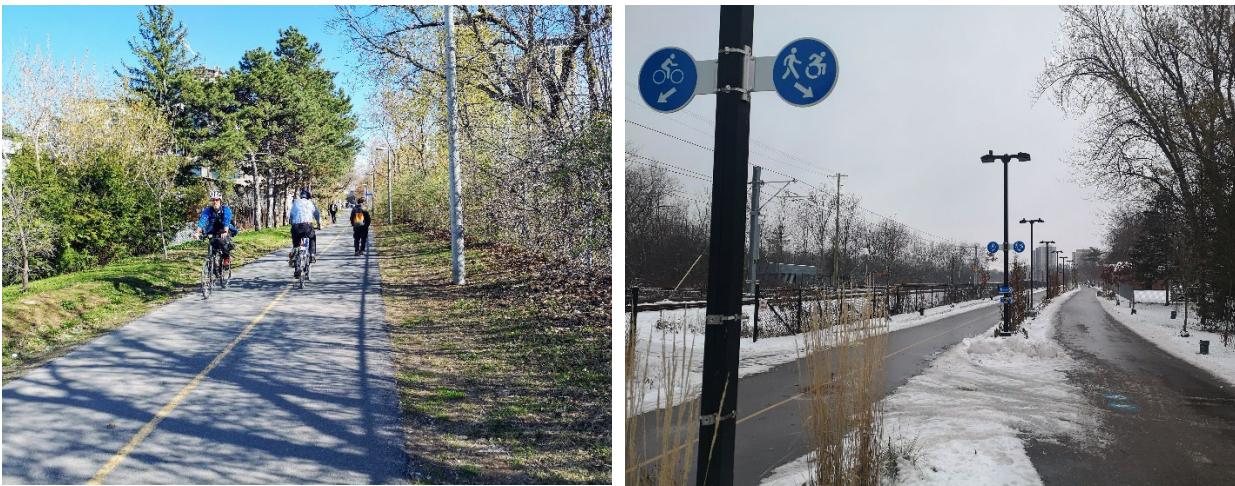
In-boulevard cycle track (Kelowna, BC)

Multi-use path (Granby, QC)

Figure 7. Types of physically separated bikeways

Multi-Use Trails

Multi-use trails are located outside of road rights-of-way. New and upgraded multi-use trails should have a hard-surface to enable more comfortable year-round facilities for people cycling and walking. Trail should be 3.0 m wide, and wider where higher traffic is anticipated. In high traffic contexts, trails should be separated use trails, with dedicated space for pedestrians separate from space for people cycling and other faster modes. Trails may need lighting to improve user safety and comfort, and full day use.



Multi-use trail (Ottawa, ON)

Separated trail (Waterloo, ON)

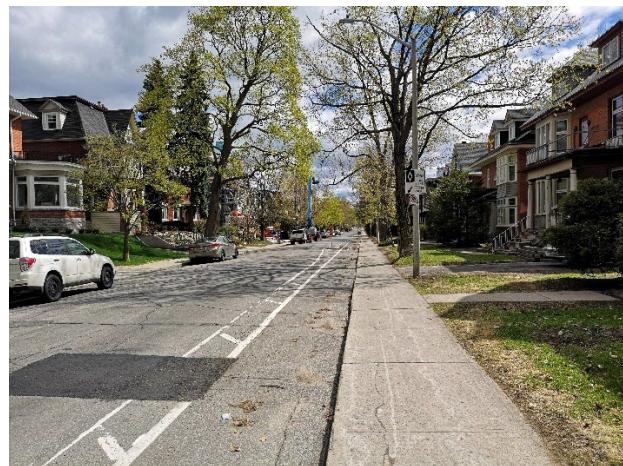
Figure 8. Multi-use trails

Visually Separated Bikeway

Visually separated bikeways are recommended on roads with medium to low traffic speeds and volumes. Visually separated facilities include unbuffered and buffered painted bike lanes. Inclusion of the buffer is often dependent on available space in the roadway.



Unbuffered bike lane (Ottawa, ON)



Buffered bike lane (Ottawa, ON)

Figure 9. Visually separated bikeways

Neighbourhood Bikeway

These are shared roadway facilities that provide a continuous bikeway corridor with operating conditions suitable for mixed traffic cycling. Neighbourhood bikeways involve limiting exposure to high motor vehicle speeds and volumes through the incorporation of traffic management and traffic calming measures. These measures include chicanes, speed humps, diverters and medians. Chicanes are offset bulbouts that require a vehicle to maneuver around them, slowing the vehicle down. Diverters physically restrict certain vehicle movements at an intersection. Ideally, neighbourhood bikeways should have a design speed of 30 km/h or lower and have fewer than 2,500 vehicles per day, though in some contexts a design speed of 40 km/h may be acceptable. Neighbourhood bikeways often maintain an existing road cross-section, with modifications at limited points along the route. For all shared traffic facility types, signage and sharrows pavement markings should indicate where people cycling should be located within the roadway, and help with route wayfinding.



No through movement restriction, curb extension
(Halifax, NS)

Traffic calming measures (speed hump and curb bulbouts)
(Kelowna, BC)

Figure 10. Neighbourhood bikeways

Grade Separated Crossing

Grade separated crossings are dedicated for people cycling and walking, providing a low stress opportunity to cross a major barrier such as waterbody, highway, or railway. Grade separated crossings can be added between distant existing crossings to compliment and add greater network density. Used over highways, they can provide safe alternative to people having to cross multiple on and off-ramps which expose people walking and cycling to potential high-speed conflict points with motor vehicles. The grade separated crossings are identified in conceptual locations based on spacing between alternative routes across barriers and network trade-offs.



Figure 11. Grade separated crossing over river (Ottawa, ON)

Conceptual

During the network development process, some connections were identified where cycling facilities would be important for network completeness and connectivity. These connections are associated with areas where there is significant land development planned. The conceptual routes capture that cycling facilities should be located in these areas but recognize that it is unclear what the appropriate facility type may be as details of the road network or the impact of land development on vehicle volumes are not yet known. The City should review the roadway conditions and facility selection guidance in the future when implementing these routes.

Recommended Cycling Network

The recommended cycling network is made up of the cycling facility types presented in this section. The Proposed Cycling Network map on page 15 shows where new or upgraded facilities are needed to create a safe and comfortable cycling network to make cycling an attractive transportation option for most people. The recommended facility types are based on existing data about the vehicle speeds and volumes on the respective roads. As projects are implemented, the current and expected vehicle speeds and volumes should be reviewed and may change the recommended facility type.

Pedestrian Network Recommendations

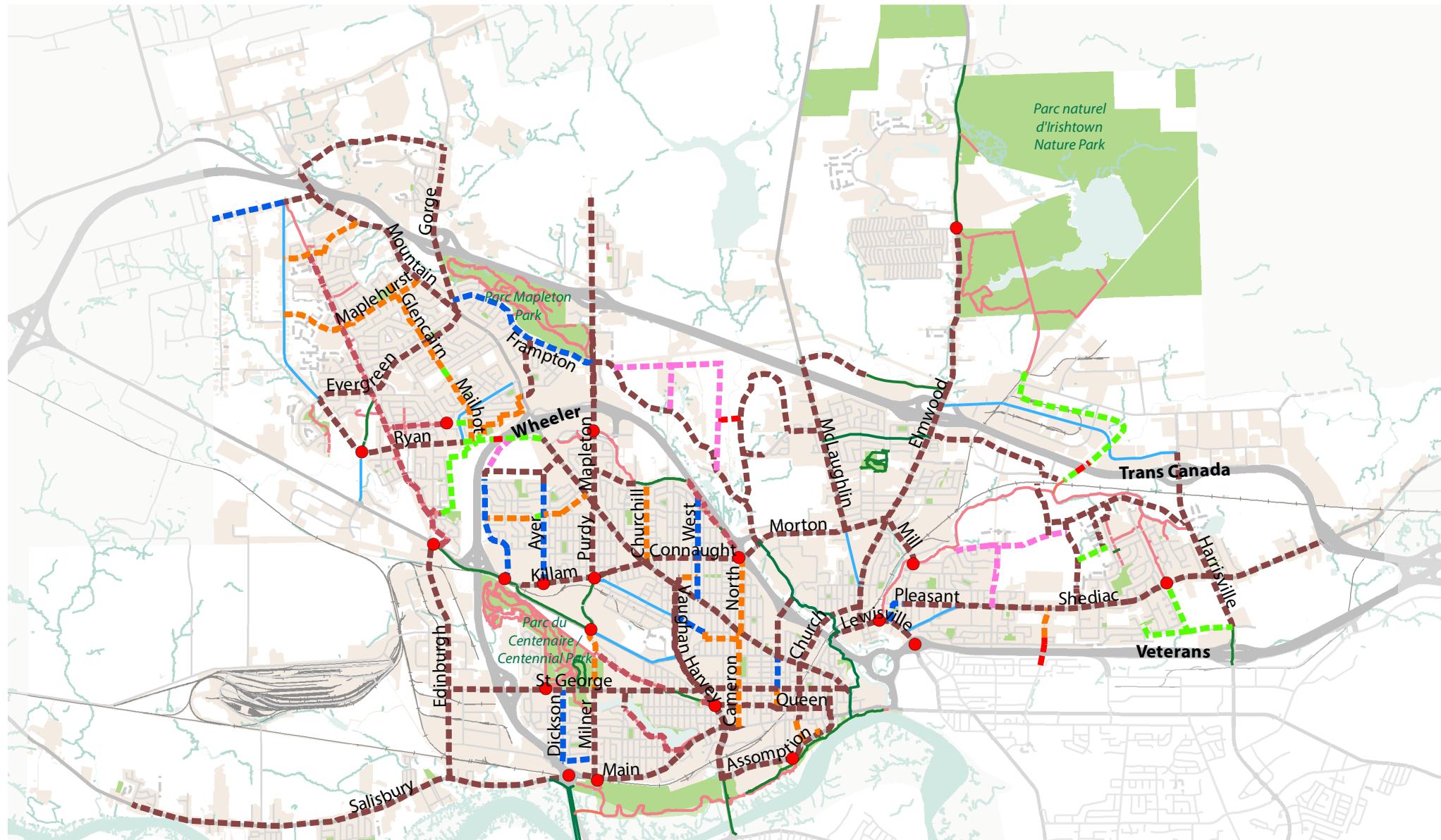
The pedestrian network recommendations use a policy and program-based approach to improve the pedestrian network over time. The recommendations address sidewalk standards and the location of new sidewalks.

Sidewalk Standards

The City should ensure that all rehabilitation projects and new build projects implement sidewalks at least 1.8 m wide. This width accommodates two people in wheelchairs to pass each other. Reduced widths may be necessary in small sections where there are existing constraints. On busy pedestrian streets (at or approaching 400 pedestrians per peak 15-minute period), 2.25-3 m is recommended (TAC, *Geometric Design Guide*). Other opportunities to improve the pedestrian realm should be considered such as implementing a boulevard space or furnishing zone between the sidewalk and roadway, especially on roads with speed limits of 50 km/h or higher or where there is a high concentration of commercial land uses. The boulevard may also be used for snow storage.

Missing Sidewalk Opportunities

In the existing conditions assessment, it was found that the presence of sidewalks varied throughout the city. To better ensure pedestrian walkability, it is recommended that sidewalks be included on both sides along arterials and collector roadways, and at least one side of local roadways. Arterials and collector roads may have transit service and multiple destinations, to which access is provided by sidewalks. The motor vehicle volumes and speeds are also higher on these roads, making it more comfortable and safer for pedestrians to have a sidewalk to walk on either side of the road, reducing the need to unnecessarily cross the road to access the sidewalk. Sidewalks on both sides of arterial and collector roads is more discretionary in rural and industrial contexts, however where a rural area is being developed as urban, sidewalk facilities should be included. Multi-use paths could be implemented in place of sidewalks to facilitate shared pedestrian and cycling traffic. These may be more appropriate in suburban, industrial, and rural locations where there are expected to be fewer users. The Sidewalk Opportunities map on page 16 shows where there are opportunities to add sidewalks based on street classification and presence of existing sidewalks.



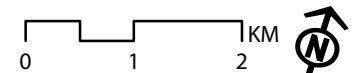
PROPOSED CYCLING NETWORK

ACTIVE TRANSPORTATION
PLAN 2022-2035

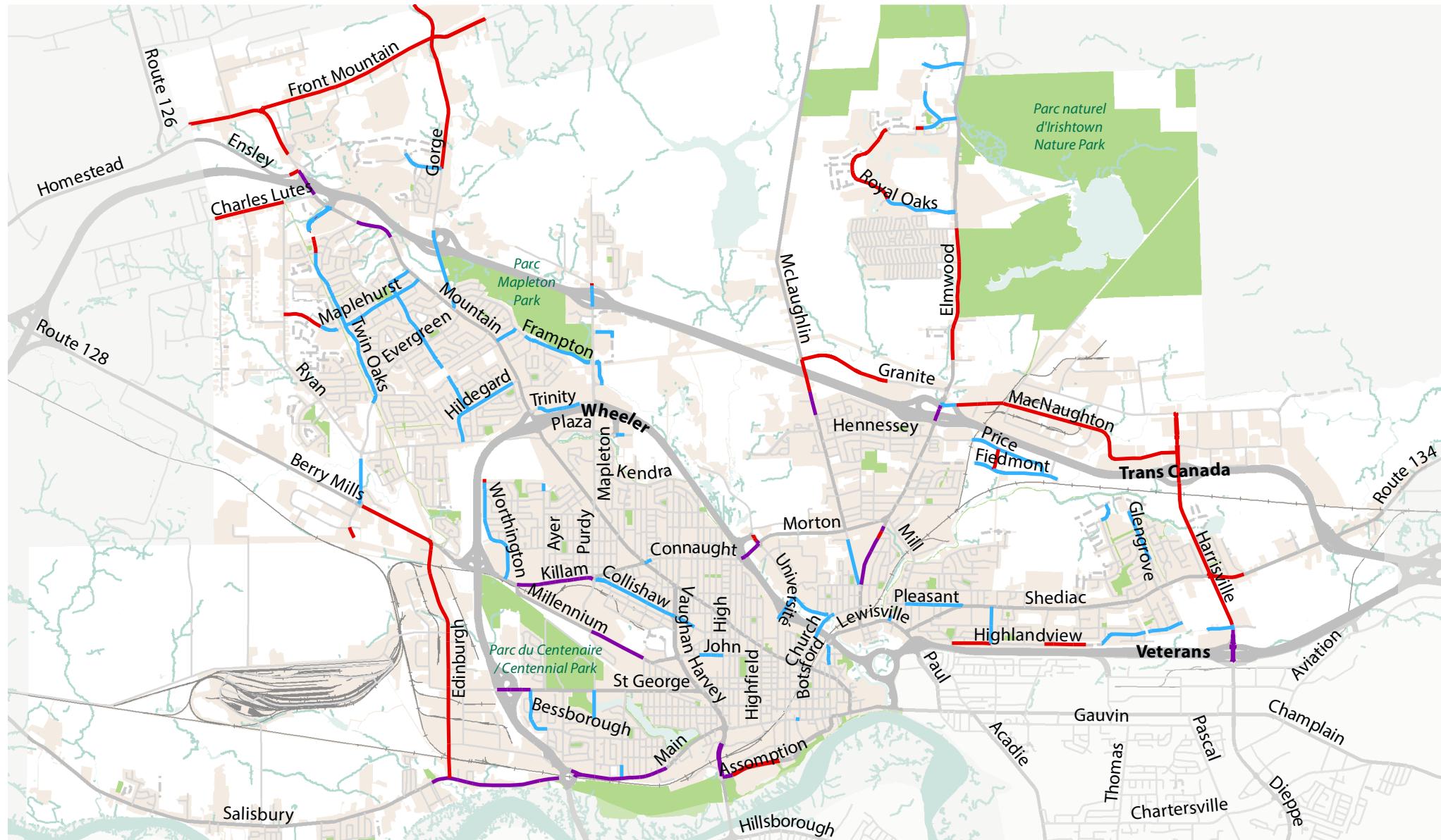
- PROPOSED INFRASTRUCTURE**
- Crossing Improvement
 - Conceptual
 - Grade Separated Crossing
 - Neighbourhood Bikeway
 - New Pathway
 - Physically Separated Bikeway
 - Upgrade Pathway
 - Visually Separated Bikeway

- EXISTING/PLANNED INFRASTRUCTURE**
- Bike Lane Street
 - Shared Street
 - Hard-surface Multi-Use Trail
 - Soft-surface Multi-Use Trail

- DESTINATION/
BOUNDARIES**
- Railroad
 - Parks
 - Built-up Area
 - Water



Data: City of Moncton
3/29/2022



SIDEWALK OPPORTUNITIES

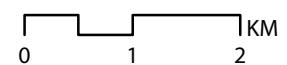
ACTIVE TRANSPORTATION PLAN 2022-2035

LOCATIONS FOR NEW SIDEWALKS

- Arterial or collector without sidewalk
- Arterial with sidewalk one side only
- Collector with sidewalk one side only

DESTINATION/ BOUNDARIES

- Railroad
- Parks
- Built-up Area
- Water



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Intersection and Crossing Improvements

The greatest potential for conflict between pedestrians and people cycling and motor vehicles is at intersections and crossings. They can be improved by making users more conspicuous, shortening crossing distances, managing vehicle speeds through geometric design, minimizing delay, and separating movements through signal phasing. Designs should include accessibility best practices such as straight paths of travel, and delineation and tactile treatments to communicate each user's space. Crossing improvements identified through the network assessment process are shown on the Proposed Cycling Network map to highlight key intersections and gaps between adjacent facilities. The spot gaps are not a complete inventory of where intersection and crossing treatments are recommended, as crossings will be identified over time, and intersections along cycling corridors are intended to be improved with the implementation of cycling facilities along the corridor.

Pedestrian Intersection and Crossing Treatments

Developing a program to strategically implement new and improve existing crossing locations will support pedestrian travel throughout the city. Mid-block crossing improvements may include curb extensions and raised crossings. At intersections, raised crossings, signal timing, leading pedestrian intervals, and reducing curb radii are some treatments to improve the crossing experience. Pedestrian crossing should be located at desired/common crossing locations to provide direct access to destinations (such as a school or community centre) and minimize need to walk "out of the way" to reach a crossing treatment

Cycling Intersection Treatments

To implement continuous high-quality bikeways, appropriate intersection treatments should be implemented along all corridors with cycling facilities based on the intersection and roadway context. Treatments should clarify movements for pedestrians and people cycling, minimize and manage conflicts with motor vehicles, reduce delay to people walking and cycling, and connect to adjacent facilities. Examples of intersections and crossings for people cycling are shown below. The TAC *Geometric Design Guide for Canadian Roads* and National Association of City Transportation Officials (NACTO) *Don't Give Up at the Intersection* report provide further guidance on treatments and best practices.



Protected intersection (Ottawa, ON)



Signalized bidirectional bikeway crossing (Kelowna, BC)

Figure 12. Examples of bikeway intersection treatments

Program Recommendations

The following are recommended programs for the City to pursue to add to and improve existing programs that promote and improve access and safety of people walking and cycling.

Program	Description	Role
Cycling Mentorship	The City should help to start a mentorship program that partners trained volunteers with target populations to teach them about cycling and walking.	Partner, Support
Driver Education and Safety	Working with CAA Atlantic and other relevant stakeholders to develop and promote educational opportunities that emphasize road safety and provide perspective on the experiences of people who cycle and walk.	Lead, Partner
Cycling Education and Safety	The City should work with the Province, CAA Atlantic, La Bikery, and the local school boards to develop and deliver an accessible, low-barrier educational program and campaign.	Lead, Partner
Communications	As part of the City's on-going communications and outreach programs it is important that information about active transportation is easily accessible. Communications can also focus on public awareness to help clarify common misconceptions such as the roles and responsibilities of people driving, walking, and cycling, and how roads and other public infrastructure is funded.	Lead
Open Streets Program	The City should consider operating an Open Streets program to create linear corridors for people to walk and cycle as part of temporary road closures.	Lead, Partner
Shared Micromobility	Shared micromobility is the umbrella term for services such as bike/e-bike share and shared electric kick scooters (e-scooters) that provide publicly available fleets of individual vehicles for people to use as part of a city's multi-modal mobility system. The City may consider working with an operator to run a system in Moncton.	Partner
Bicycle Parking/End-of-Trip Facilities	Publicly accessible bicycle parking should be provided as close to building entrances as possible to provide direct, easy access. Bike parking should receive winter maintenance and not be seasonally removed. The City should encourage and educate private businesses to clear snow from their bike parking as well. As part of the Municipal Plan Review in 2023, the City should update the Zoning By-law to include long-term bike parking requirements for multi-unit residential buildings, commercial, and institutional buildings.	Lead, Partner
Bike Theft	During public engagement many respondents identified the high number of bicycle thefts as a deterrent to cycling. Bike theft is most often a crime of opportunity and may be indicative of other social needs to be addressed in the community. Designing and locating bike parking to be intuitive to use, in well lit, visible locations will deter people who may consider stealing a bicycle.	Lead, Partner
Safe Routes to Schools	Safe Routes to Schools (SRTS) programs engage and educate students to address lack of physical activity, and build confidence and habits to use active transportation. The program can also improve safety and better manage school travel to reduce congestion at pick-up and drop-off locations using approaches like School Streets .	Partner
Wayfinding System	A wayfinding system should be implemented as part of the cycling network to support people navigating their way around the City. The City of Moncton should work with the Town of Riverview and City of Dieppe to provide consistent bilingual signage programs beyond city boundaries.	Lead

Policy Recommendations

The following are policy recommendations to support and improve planning, design, and implementation of active transportation projects.

Program	Description	Role
Collision Data Collection	The City should work with its emergency response departments and the Codiac Regional Policing Authority, and provincial representatives to update collision reports and train staff on how to record and maintain this database of information so it can be used to monitor and inform roadway design decisions including the implementation of countermeasures.	Partner
Speed Limits	The City should work with the Province to develop policies that allow lower default speed limits, particularly on local roads and in school zones. The City should reduce speed limits in conjunction with road design modifications in key locations, such as along the cycling network.	Lead
Complete Streets Policy	A Complete Streets policy provides direction that roadways should be planned and designed for all road users and also consider environmental benefits such as the inclusion of trees and green infrastructure within the road right-of-way. The City should consider how the Destination 2040 recommendations around Complete Streets are being implemented and if there is a need to improve or adopt additional policies to direct decision-making.	Lead – Engineering, Planning
Sidewalk Renewal	City staff should identify necessary budgets and capacity to renew sidewalks. Moving forward, it is recommended that the City proactively renew sidewalks as their condition worsens to prevent sidewalks from becoming Poor.	Lead – Maintenance
Standard Road Cross-sections	The City should review existing cross-section standards and ensure that they meet guidance from TAC, considering the expected speed limit and vehicle volumes on the roadway.	Lead – Engineering
Bicycle-safe Storm Drains	Feedback from the engagement of the plan noted that the storm drain grates currently used in the City can create problems for people cycling as the openings are oriented and of a size that could result in bicycle tires getting stuck in them. Bicycle-safe grates should become standard in City projects, and old grates along bicycle routes should be replaced.	Lead – Engineering
Multi-modal Level of Service	Multi-modal Level of Service (MMLOS) is a tool used by transportation planners and engineers to evaluate how streets are functioning and how modifications could improve the conditions for different users including people driving, walking, cycling, transit, and driving trucks. MMLOS guidelines can be incorporated into the municipality's process for transportation impact studies. It is also intended to be used as part of the preliminary design process when developing Complete Streets.	Lead – Engineering

Chapter 4. Prioritization and Implementation

This chapter discusses how recommendations from the plan are prioritized to support effective implementation of the recommendations. Considerations for plan implementation are also touched on such as how projects can be implemented, maintenance and operations, and recommendations for how to monitor and evaluate the plan.

Cycling Network Priorities

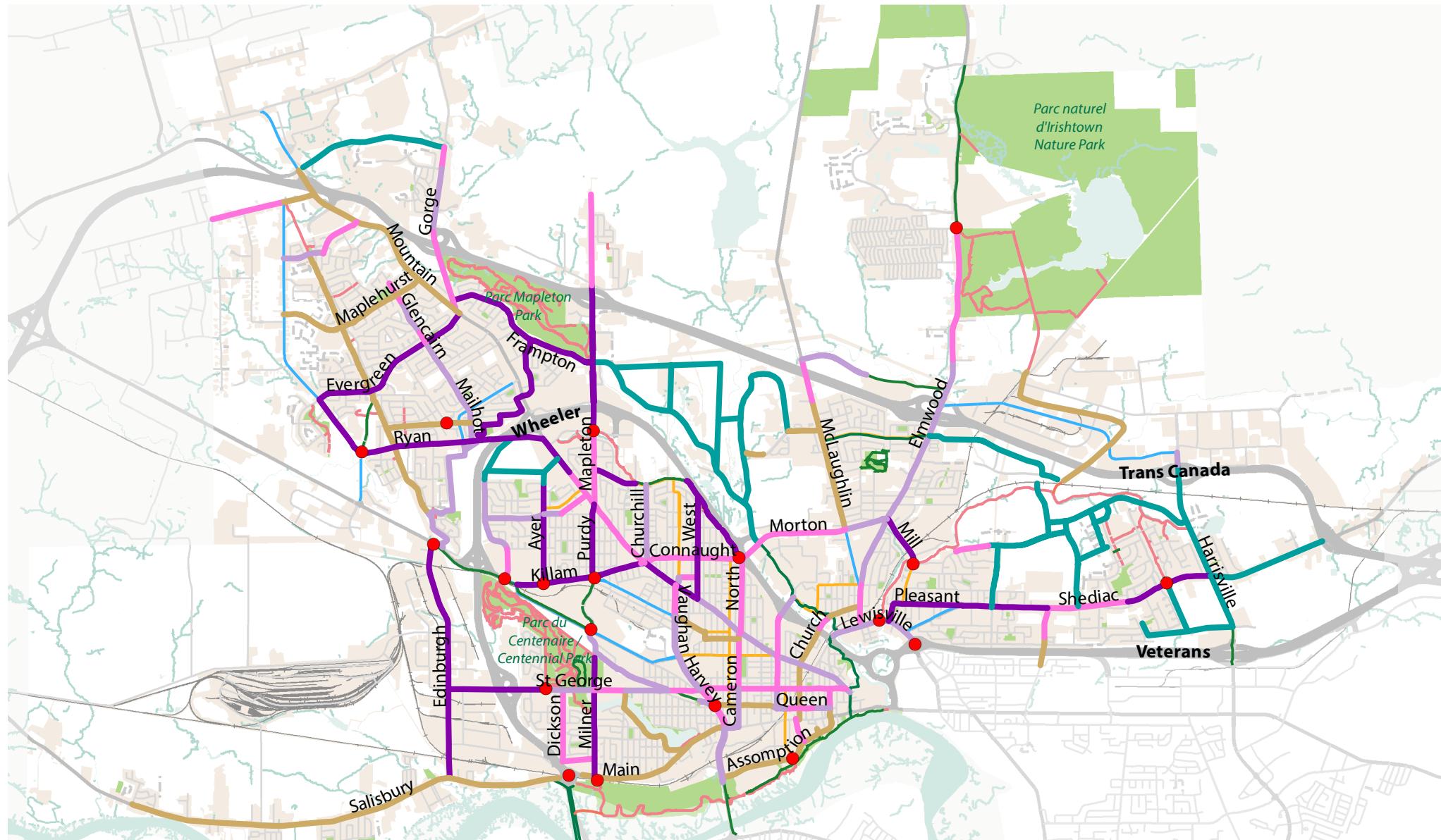
The prioritization framework was developed to support strategic development of the network, by building upon planned Capital Works projects, and based on feedback about which routes were priorities for the community from round two of public engagement. Segments were then organized into projects to be planned for implementation. First, parts of the network that overlap with planned Capital Works projects were identified, along with the routes identified by the public. Following this, additional routes were identified which strategically connect the already identified segments, while also achieving priorities of having a core network that connects throughout the city and building connections to trails. Routes frequently identified in feedback from public engagement were also included in the medium- and long-term priorities. From here, the project working group provided comment on the priorities.

The following five categories were developed to group project priorities. The projects are shown on the Proposed Cycling Network Prioritization map on page 21.

- **Short-term (2022-2027)** – All projects that have planned capital works projects plus a few strategic projects
- **Medium-term (2028-2032)** – Projects that contribute to network and identified in public engagement
- **Long-term (2033-2037)** – Other projects that support closing network gaps and goals
- **Beyond Scope of Plan (15+ years)** – Other projects that contribute to the network and should be explored as opportunities arise and as part of a future phase of the Active Transportation Plan
- **Development Based** – Projects which are dependent on the development of planned or proposed areas

Crossing Improvements

Crossing improvements were based on the spot gaps and capture key locations where improvements would support active transportation connectivity and safety, are not exhaustive. They mostly include locations where there is an interface between trail and roadway facilities, or locations identified through public engagement round 1. Many of these projects can be addressed through adjacent projects.



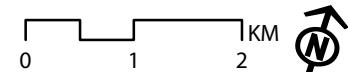
PROPOSED CYCLING NETWORK PRIORITIZATION

ACTIVE TRANSPORTATION
PLAN 2022-2035

- PROPOSED PRIORITY**
- Crossing Improvement
 - Short-term
 - Medium-term
 - Long-term
 - Beyond Plan
 - Development-based

- EXISTING/PLANNED INFRASTRUCTURE**
- Bike Lane Street
 - Shared Street
 - Hard-surface Multi-Use Trail
 - Soft-surface Multi-Use Trail

- DESTINATION/
BOUNDARIES**
- Railroad
 - Parks
 - Built-up Area
 - Water



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Implementation Framework

Projects can be implemented in coordination with planned capital work opportunities along the corridor, such as road resurfacing and road reconstruction projects. The type of work being done will influence how the project is implemented. For example, reconstruction provides the opportunity to move curbs and alter drainage, utilities, or other elements within the right-of-way that impact design. If a project is being implemented as part of a resurfacing project, it will have to accommodate the existing curbs and drainage, and there will likely be less opportunities to move or alter road elements. In recent years, cities have also used pilot, quick-build, and interim implementation to test out and implement different road and facility designs.



- Rapid, standalone implementation
- Easy to install, adjust, and remove
- Materials are reusable
- Implementation as part of standalone, resurfacing or major project
- Somewhat easy to install and adjust
- Degree of construction varies
- Permanent materials, less easy to adjust

As outlined in ‘Chapter 3. Plan Recommendations,’ general infrastructure categories are recommended in each case (e.g., physically separated bikeway). Being a high-level strategy, the document does not recommend specific facilities for implementation. It is recommended that more detailed facility studies are conducted to inform the specific design recommendations (e.g., detailed studies of key corridors such as St. George Boulevard) as needed.

Maintenance and Operations

Recommended Practices

Maintenance Activities

The plan recommends holistic maintenance practices throughout the year to proactively address conditions such as inspections, sweeping, and drainage assessment, as well as responding to incidents as needed.

Winter Maintenance

Clearing and removing snow and ice from facilities makes them safer and more comfortable for use year-round. Prioritizing and clearing snow and ice from active transportation facilities is integral for providing access, particularly for people with disabilities, who use transit, or don't have access to a vehicle. If facilities are not reliably cleared, people will not feel comfortable or safe using the facilities and therefore choose to not use active transportation. The City should consider different approaches to providing clear active transportation facilities. Ice treatment and removal can be addressed both proactively and reactively.

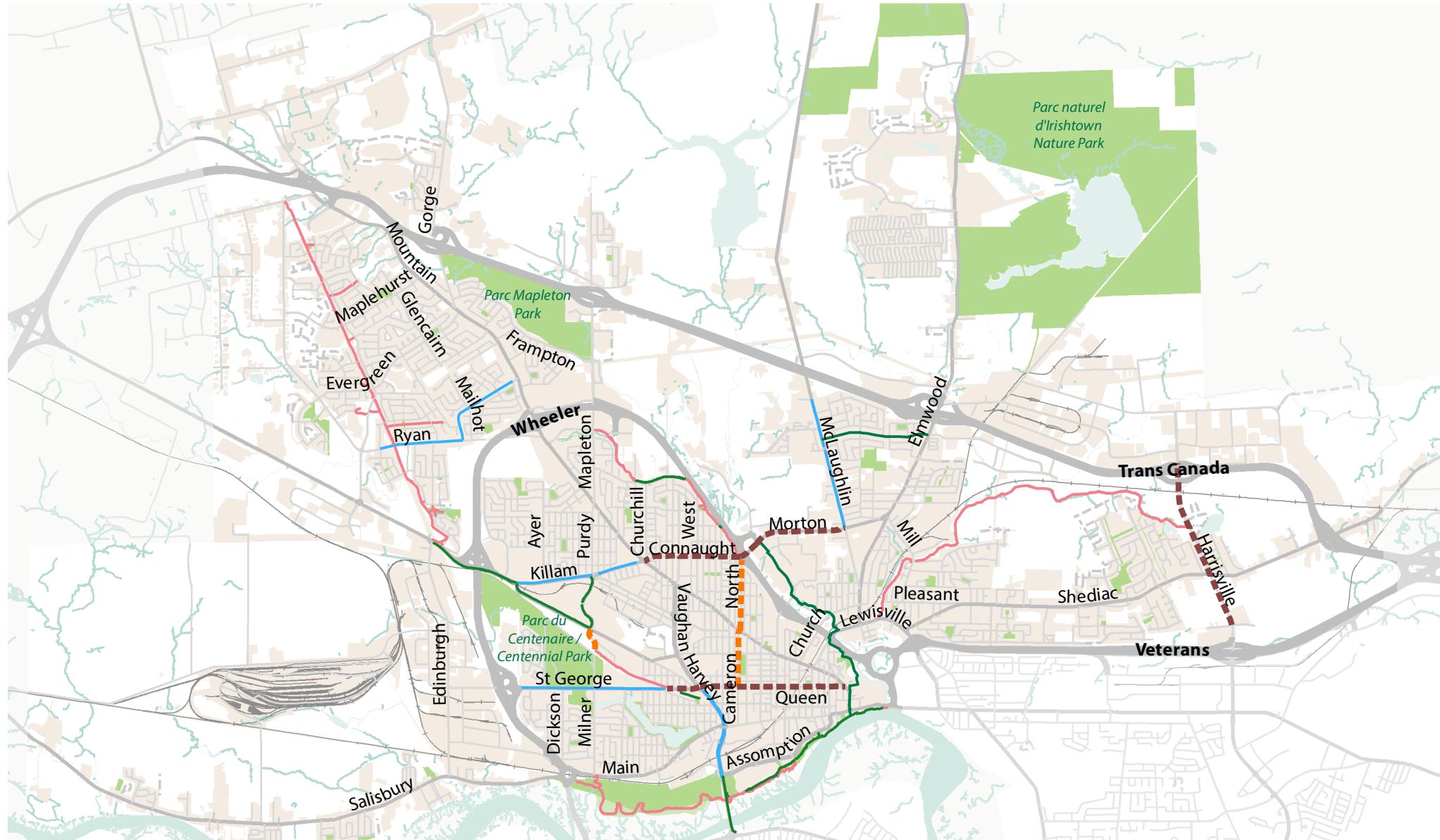
We recommend that future Sidewalk Snow Clearing Plans work to increase the number of sidewalks being cleared, including both sides of all collector roads, and at least one side of local roads within Priority 2. The percentage of sidewalks cleared should increase based on these targets:

- **2027** – 75% of all sidewalks
- **2032** – 85% of all sidewalks
- **2037** – 100% of all sidewalks

Winter Cycling Network

The proposed Winter Cycling Network is based on the existing cycling and trail networks, as well as planned projects over the next five years. The Winter Cycling Network should be refined over time, in five year increments as new facilities are built that can be a part of the Winter Cycling Network. This network should be programmed into the maintenance plans as high on the Priority 1 lists. This will require a coordinated effort between Public Works and Parks and Leisure Services departments as it includes both roadway and trail facilities. The proposed network is shown on the Proposed Winter Cycling Network map on page 24.

It is also recommended that bike parking locations receive winter maintenance and not be seasonally removed. The lack of an accessible location for people to park their bikes is another barrier to people cycling in winter. This includes bike parking within road rights-of-way and at buildings. The City should encourage private businesses to clear out snow from their bike parking as well.



PROPOSED WINTER CYCLING NETWORK

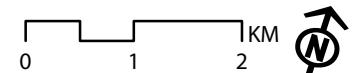
ACTIVE TRANSPORTATION PLAN 2022-2035

WINTER CYCLING NETWORK (2022-2027)

- Neighbourhood Bikeway
- Physically Separated Bikeway
- Bike Lane Street
- Shared Street
- Hard-surface Multi-Use Trail
- Soft-surface Multi-Use Trail

DESTINATION/ BOUNDARIES

- Railroad
- Parks
- Built-up Area
- Water



Data: City of Moncton
3/29/2022

Monitoring and Evaluation

Having a plan to monitor and evaluate both the implementation and key metrics is important for understanding the plan's impact. Understanding if there are challenges with plan implementation will help to understand why there may be less quantifiable impacts of the plan.

Plan Implementation

The following metrics can be used to monitor the plan's implementation.

- Number of projects completed and total centreline kilometres by facility type
- Number of program and policy recommendations completed

Metrics and Data for Monitoring

Collecting data to understand how the recommendations are operating can be important for identifying if there are issues or unmet needs with improvements. The following metrics and data should be reviewed periodically to understand if there are issues or where people are using the network. Some metrics the City should consider monitoring for evaluation are:

- Number of people who feel comfortable cycling in Moncton (survey)
- Number of people who feel comfortable walking in Moncton (survey)
- Number of users using a facility (per day/week/month/year) (traffic counts)
- Locations for collisions involving people walking or cycling (collision data)
- Modal shift for trips under 5 km (Household Travel Survey)

Greenhouse Gas Emission Reduction

The energy used to power the transportation sector is Canada's second largest source of greenhouse gas (GHG) emissions, accounting for 28% of all emissions. There is international consensus that policies that encourage modal shift towards walking, bicycling, and public transit are key to decarbonization. The Intergovernmental Panel on Climate Change (IPCC) identified non-motorized transportation as a low-barrier, high-feasibility strategy to cut emissions in urban settings.

Currently, 81% of trips in Moncton are by car, and 53% of those car trips are under 5 km, which is a highly accessible distance for trips to be made using active transportation. The recommendations from this plan will create the conditions where more people will feel comfortable using active transportation. Four scenarios were developed for varying percentages of trips under 5 km currently made by car that would be shifted to be made by active transportation to help understand the potential GHG reductions. These calculations do not consider the other benefits of active transportation such as reduced health costs.

Table 1. Potential greenhouse gas reductions

Scenario	Annual Trips Converted to AT	Annual Reduction in Emissions of Nitrous Oxides and Carbon Dioxide (CO ₂ equivalent pounds)	Reduction Equivalency – Barrels of oil consumed
Low (5%)	6,762	5,225,967	5,356
Medium (10%)	13,524	10,451,934	10,712
High (20%)	27,048	20,903,868	21,423
Max (50%)	67,619	52,259,669	53,558