



Prepared for Town of Kentville
May 2019

Kentville Moves

ACTIVE TRANSPORTATION PLAN

UPLAND

Acknowledgements

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Kentville Moves Active Transportation Plan

1. INTRODUCTION

1.1 WHAT IS ACTIVE TRANSPORTATION?

Active transportation is a broad term that refers to all forms of human powered or non-motorized transportation. This includes walking, the use of assisted devices such as wheelchairs, cycling, and also skateboarding, rollerblading, etc. Seasonal activities like skiing, canoeing, and kayaking are also considered active transportation.

Active transportation can be used for recreation, leisure and fitness, but also for utilitarian transportation that gets you from point A to point B for commuting and travel.

There are many incentives to use active transportation: local businesses often benefit from increased traffic, active transportation can also be a draw for visitors and reduce a community's carbon footprint all while improving residents' mental and physical health.

1.2 WHY ACTIVE TRANSPORTATION?

Active transportation has steadily been gaining popularity across the continent because of the health, social, environmental, economic and tourism benefits. There is clear evidence of the advantages associated with designing cycling and pedestrian friendly communities which enable and encourage residents to be more active by walking and biking for both recreational and utilitarian purposes.

"Canada's most vibrant small town", Kentville is a hub for Kings County, with many recreational facilities, community services, health care facilities, schools and government offices serving residents and visitors alike.

The Town is on the verge of more growth, and as an upcoming housing strategy looks to accommodate higher densities, this active transportation plan hopes to enhance how people move. Recognizing the importance of safe and enjoyable transportation, the Town has already made many investments into trails and amenities, while this plan will provide an all-encompassing strategy to connect these trails with active transportation facilities. Incorporating education, equity and playfulness into this strategy will ensure that it benefits all users.

1.3 ABOUT THIS PLAN

This document is the official Active Transportation Plan for the Town of Kentville, which aims to increase and enhance active transportation as a part of everyday life for all residents. Starting in late 2018, the Town of Kentville, along with a group of planners from UPLAND worked together to create a plan that will expand the active transportation options and quality for residents walking or wheeling as a mode of transportation or recreation. The focus of this plan is on improving active transportation corridors and networks over the next 10–15 years.

Specifically, this plan hopes to:

- Create guiding principles that will facilitate active transportation improvements;
- Identify opportunities for new active transportation infrastructure and upgrades;
- Form design guidelines for future active transportation infrastructure and upgrades;
- Note opportunities for education and marketing of the benefits of active transportation (financial, health, social and economic);
- Improve routes to school and employment hubs within the Town;
- Build upon provincial and local trail networks; and
- Provide a 10–15 year implementation strategy which identifies priorities, best practices and a decision making process.

1.4 ABOUT THE TOWN OF KENTVILLE

The Town of Kentville is located in Kings County, Nova Scotia. Just 8 kilometres from the Minas Basin, Kentville serves as the professional centre for the Annapolis Valley. Originally settled by the Mi'kmaq people around 10,000 years ago, the area was later inhabited by both Acadian and British colonists, eventually becoming known as the heart of Nova Scotia's apple industry. At about an hour and fifteen minute's drive from Halifax, Kentville is connected to the capital by the Highway 101.

Transportation and recreation networks in Kentville have been expanding in recent years, and the Town is home to many recreational and community facilities serving the greater region. The Harvest Moon Trail, Miners Marsh Trail, the Gorge, and Kentville Ravine Trail form some of the area's active transportation network, and connect to destinations like local parks, sports fields and schools. The Town of Kentville's Active Transportation Plan will encompass not only these recreational amenities but also the street networks that connect to local businesses, services, and homes.





1.5 IMPACTS AND BENEFITS

Communities across Canada and North America are realizing the benefits of promoting active transportation. The following section outlines some of the high-level benefits of implementing active transportation initiatives at a local level.

Environmental Benefits

Active transportation and its associated infrastructure have a low environmental impact, particularly when compared to driving a vehicle.

Car use contributes to air pollution through emission of harmful greenhouse gases such as nitrous oxide, carbon dioxide and low level ozone. The impact of vehicle infrastructure also has negative environmental implications. Road and parking maintenance have impacts on soil contamination and water quality. Impermeable road surfaces increase the degree of runoff during heavy precipitation and contaminate neighbouring ecosystems. On the other hand, active transportation infrastructure has substantially fewer negative environmental impacts. Trails and bike paths have narrower right-of-ways and are often permeable with less detrimental affects on adjacent ecosystems.

Tourism

Bicycle tourism has been growing steadily over the past few decades, initiated by successful experiences in Northern Europe and the UK. This growing trend stems from the shifting inclination of tourists to healthier, more experiential and contemplative methods of travel. Locally, a 2016 study of the Rum Runners Trail on Nova Scotia's South Shore found that 82% of the \$4.2 million in trail-related spending came from visiting users, with \$409,000 spent within 20 minutes of the trails. This spending generated by active tourism goes a long way to support local businesses when visitors make use of shops within close proximity of trails. Nova Scotia's 2015 Thrive report indicates that 80% of tourist money is spent in walkable areas. Active transportation provides a way to enjoy the natural landscape, and playful aspects of recreation and design can attract visitors as well as build community amongst residents.

In Kentville, an expansive recreation network of parks and trails attracts visitors from all over the region. The Harvest Moon Trailway is the Town's longest trail. The full corridor stretches 110 kilometres across the Annapolis Valley, and 7 kilometres of this trail lays within Kentville.

Health Benefits

The rise of physical inactivity throughout North America is so prevalent that it is often referred to as an epidemic (Velo Quebec, 2010; Mapes J, 2009). While Annapolis and Kings Counties report higher rates of physical activity than provincial and national statistics, the overall health of residents here is low at only 55% (as revealed in a Nova Scotia Health Profile from 2015). A quarter of residents have been diagnosed with high blood pressure, a risk factor which can be controlled and prevented by regular physical activity according to the Heart and Stroke Foundation.

The Town of Kentville’s Physical Activity Strategy (2018) states that:

- While 87% of respondents to a residents survey said they walk regularly, 40% would like to walk more.
- 22% would like to cycle more.
- Key barriers to physical activity include having someone to go with, a lack of programs that fit residents’ schedule and interests, and poor road conditions.

Fitness, regardless of body mass has been shown to be the best indicator of mortality risk (Parker-Pope, 2008). Research suggests that increasing physical activity rates is one of the most effective ways to create

a culture of healthy living (Department of Health and Wellness, 2012). Nova Scotia’s Thrive health initiative (2015) adds that 45% of trips are spent shopping and running errands—tasks that are easily done using active transportation if residents feel safe and comfortable. Kentville’s Physical Activity Strategy (2018) identified priorities including physical activity and programming for women across lifespans and youth aged 12-18, as well as active transportation for all, and improved outdoor recreation and inclusion. The Town of Kentville hopes to address these concerns by engaging residents, fostering social connections, and creating welcoming environments and supportive policies.

Economic Benefits

According to a recent poll, owning and operating a car is the second largest expense for Canadian families (CAA, 2013). The average annual costs for a small compact car is \$9,500 or \$0.528 per kilometre. In comparison, the costs of walking and cycling are significantly lower. Parking also has significant costs associated with it including land, construction, maintenance and operational costs which can be minimized through reduction or centralization of parking.

2015 Health Indicators
Annapolis & Kings Counties

Self Reported Good Overall Health 55 % <i>Excellent or very good overall health</i>	Self Reported Good Mental Health 72 % <i>Excellent or very good mental health</i>
Self Reported Physically Active 57 % <i>Moderately or regularly active</i>	High Blood Pressure 24 % <i>As diagnosed by a health professional</i>



2015 Health Indicators
Nova Scotia

Self Reported Good Overall Health 58 % <i>Excellent or very good overall health</i>	Self Reported Good Mental Health 72 % <i>Excellent or very good mental health</i>
Self Reported Physically Active 54 % <i>Moderately or regularly active</i>	High Blood Pressure 21 % <i>As diagnosed by a health professional</i>



2015 Health Indicators
Canada

Self Reported Good Overall Health 60 % <i>Excellent or very good overall health</i>	Self Reported Good Mental Health 72 % <i>Excellent or very good mental health</i>
Self Reported Physically Active 52 % <i>Moderately or regularly active</i>	High Blood Pressure 18 % <i>As diagnosed by a health professional</i>

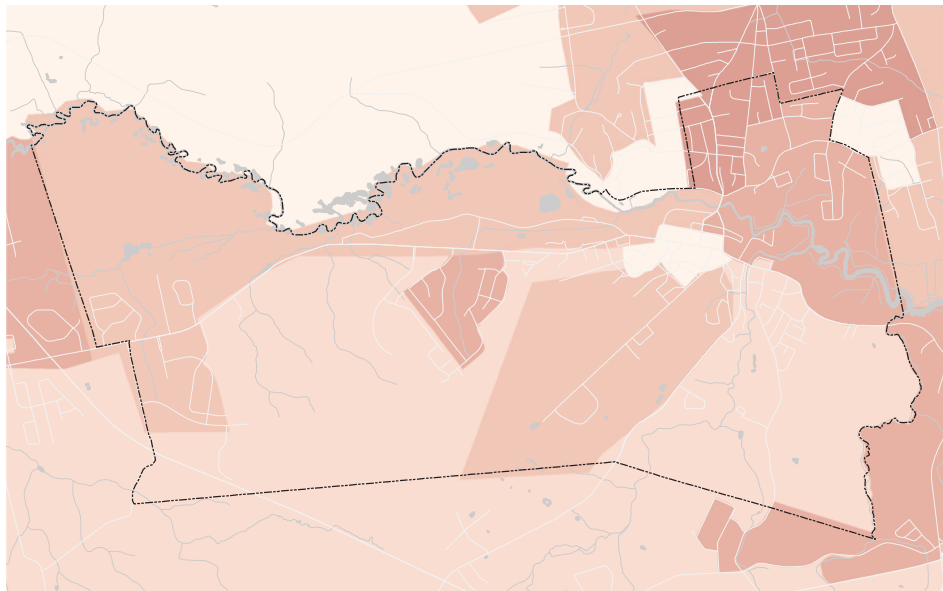
Spatial Equity & Benefits

Safe Routes to School (2015) defines equity as “address(ing) the effects of power imbalances and the social, economic, and political differences that generate disparate outcomes for people in areas like health, education, and employment”. Their report looks at the ways in which low-income households and people of colour face barriers to transportation making access to basic needs difficult, dangerous or

impossible. Equitable access to convenient active transportation can make these trips easier and less costly rather than perpetuating the cycle of poverty. The geographic inequity faced by residents of different incomes, races, ages, abilities and genders can be seen in Kentville, and an equity lens aims to mitigate these effects.

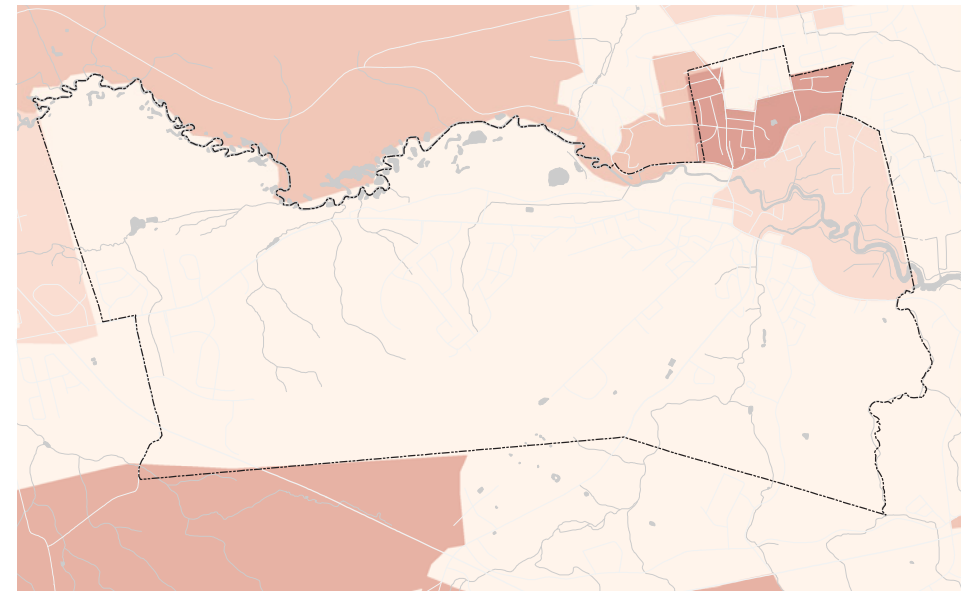
Indicators of spatial equity taken from the 2016 census demonstrate the distribution of wealth and vulnerability throughout Kentville. On the maps, each indicator is grouped into five ranges and visualized across census dissemination areas. Vulnerable populations that are more likely to be victims of spatial inequity and discrimination often experience more barriers to active transportation.

Although trends have been changing, 2011 research by Sightline Institute indicates that about 80% of American cyclists identify as white. While it has been thought that upper middle-class men dominate in the cycling world, this research shows that each of the ten income ranges contain fairly equal portions of cyclists. Though assumptions are evidently not always correct, it is worth considering barriers to active transportation.



Visible Minorities (%)

Low (0–2) High (6–13)



Recent Immigrants, arrived post 2011 (%)

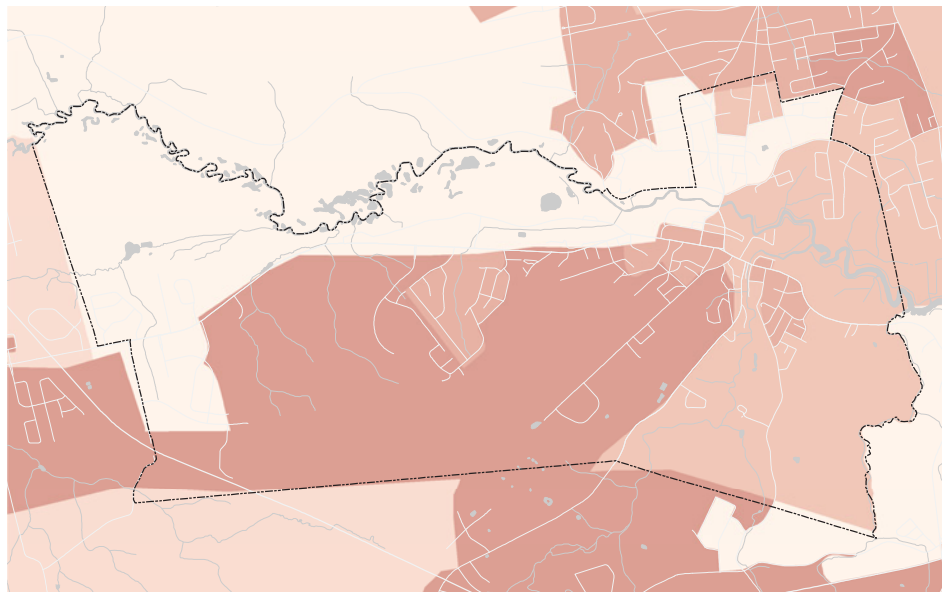
Low (0) High (3.4–4.5)

The highest proportion of residents identifying as a visible minority is in North End Kentville at 13%, while three dissemination areas have none.

Recent immigrants (defined by Statistics Canada as arriving later than 2011) reside almost exclusively in North End Kentville as well as beyond Town boundaries in North Kentville (which, although not governed by this plan, is still valuable context to consider). The highest proportion of recent immigrants is 4.5% of the total dissemination area population.

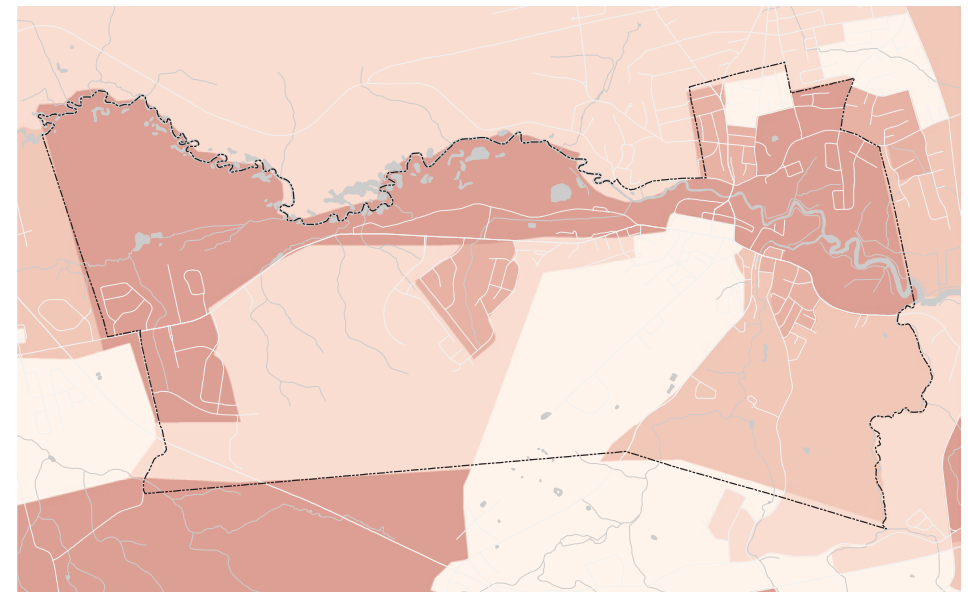
Looking at the proportion of youth and seniors, pockets in the area surrounding Kings County Academy and east Kentville show a fairly even age distribution. Remaining areas demonstrate a stark contrast between the homes of youth and seniors, with seniors tending to reside more to the north, and youth more to the south.

While the median age of Kentville is 45.4 years, the average age of the 11 dissemination areas that fall within Kentville's boundaries ranges from 36 to 54. Generally, there is a concentration of younger people in North End Kentville, as well as outside of the Town in North Kentville surrounding the NSCC campus, and in Coldbrook.



Youth, age 0-14 (%)

Low (10 - 13) High (18 - 21)



Seniors, 65+ (%)

Low (9-16) High (22-40)

Incomes and wealth tend to effect access to active transportation through systemic discrimination in the distribution of infrastructure such as sidewalks and trails where low income communities are concentrated. People of lower income levels are also likely to have financial barriers to active transportation, and often have less time for leisure activities.

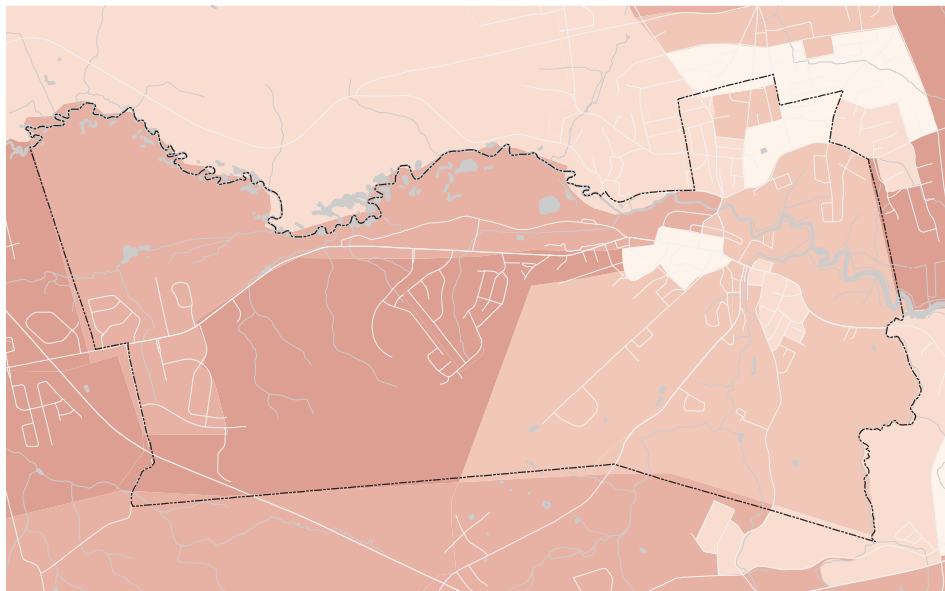
Kentville’s median before-tax household income was \$56,909 in 2015, and average incomes show a clear divide between the spatial distribution of wealth and vulnerable populations, particularly visible minorities and recent immigrants.

Median before-tax household incomes for these dissemination areas range from \$37,248 to \$90,061 per year. The higher ends of this range are generally located

in subdivisions to the south of Kings County Academy, by the river crossing just outside town boundaries, and southwest of town boundaries (median home values and shelter costs are higher in these communities as well).

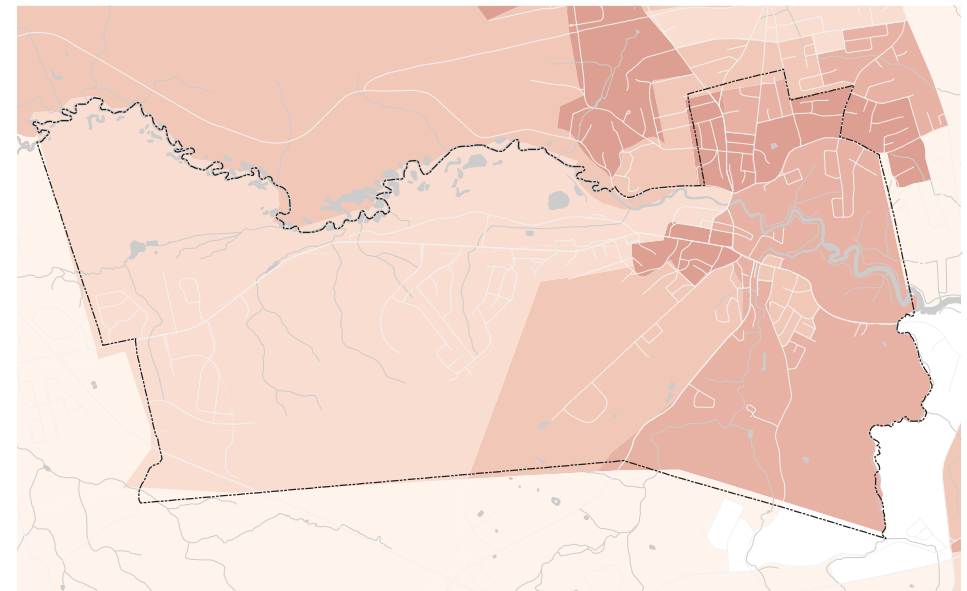
Almost the inverse of median incomes, the last map shows households spending over 30% of their income on shelter costs, which is one indicator of housing poverty.

While some dissemination areas have no households spending over 30% of their income on shelter, the highest proportion of housing poverty in this region is 45% of households. Areas with lower median incomes are more likely to spend over 30% of their income on shelter, this is concentrated in Kentville’s East End and North End Kentville, also extending north past town boundaries.



Median Household Income, Before-Tax (\$)

Low (37,248–45,760) High (74,241–90,061)



Households Spending Over 30% of Their Income on Shelter (%)

No Data Low (0–11) High (32–45)



1.6 BARRIERS IN KENTVILLE

There are several challenges to understand and overcome when promoting active transportation in Kentville and similar rural Canadian communities.

Size and Density

The rural settlement patterns of Kentville's surrounding communities and towns typically result in greater travel distances than in the more dense downtown neighbourhood. Many residents of Kentville work elsewhere in the county, and active transportation may not be feasible for longer commutes.

Car Culture

The dominance of car culture throughout North America, particularly outside urban centres, has made driving a default for a long time. Although automobile use is necessary for many rural routes, there may be some shorter trips that could be made using active modes of transportation. In Kentville, fears about loss of parking that may accompany new bike lanes and the impact on downtown businesses has caused some resistance to active transportation.

Accessibility

Accessibility of active transportation routes affect people with physical or mental disabilities, people with temporary disabilities, seniors, small children, families, and more. Accessibility includes the design and maintenance of both streets and the built form, and even features like the tilt of a sidewalk. Inaccessible spaces make active transportation less comfortable and navigation becomes not only difficult but impossible for some users.

Rural Road Design

Most Canadian rural roads have been designed for efficient car use without much consideration for pedestrian and cyclist safety. Although this conventional approach to road design is changing, many existing roads are straight, two-lane right-of-ways that encourage high traffic volumes and high speeds and do not incorporate other space for active transportation users. This results in transportation corridors that favour fast automobile traffic without offering any safe corridors for slower and more vulnerable active transportation users. The hilly terrain in Kentville can also be a challenge in implementing facilities and promoting active transportation particularly for hesitant cyclists.

Climate

Climate can be a major determinant in the use and enjoyment of active transportation. Nova Scotia's North Atlantic climate is mild in summer months, but harsh and unpredictable in winter months. Sub-zero temperatures, strong winds, heavy precipitation and ice can be a physical barrier in colder months, particularly for anyone with mobility challenges. Varying temperatures and freeze-thaw cycles also increase the amount of road maintenance required for roads and pathways.

1.7 OPPORTUNITIES IN KENTVILLE

Although planning for active transportation comes with its own challenges, there are also many opportunities that can be taken advantage of, particularly in Kentville.

Beauty

Just inland from the Minas Basin shore, Kentville's irregular terrain features rolling hills and agricultural lowlands. With more sunny days than most of surrounding Nova Scotia, Kentville is a popular destination, home to a historic downtown which hosts many celebrations, including the annual Harvest Festival.

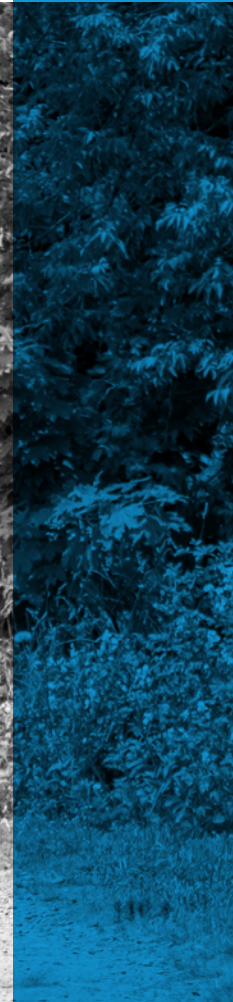
Existing Networks

The existing network of trails and parks in Kentville, including the old rail corridor, provide an excellent starting point for a well-connected active transportation network. The culture of recreation is strong, and community support for these amenities fuels the discussion around how to expand and improve on what the Town already has.

Compact Downtown

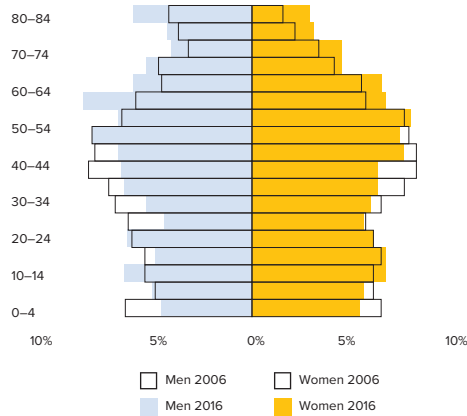
Kentville's historic downtown offers many professional services and everyday amenities, all concentrated in a walkable core. Improved connections within the downtown and to surrounding neighbourhoods would enable residents to access the majority of their needs easily and efficiently.





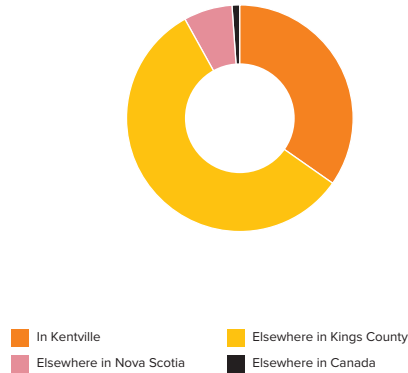
2. EXISTING CONDITIONS

Age Distribution



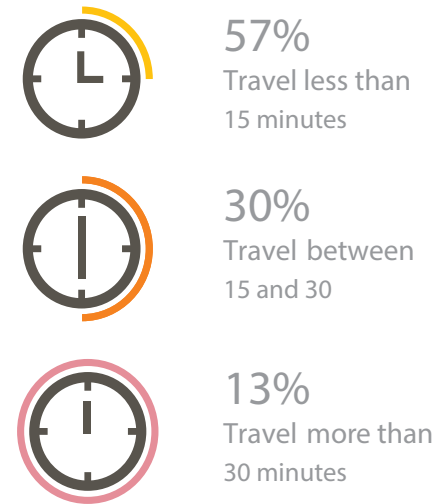
Age distribution by year (Statistics Canada, 2006, 2016)

Place of Work



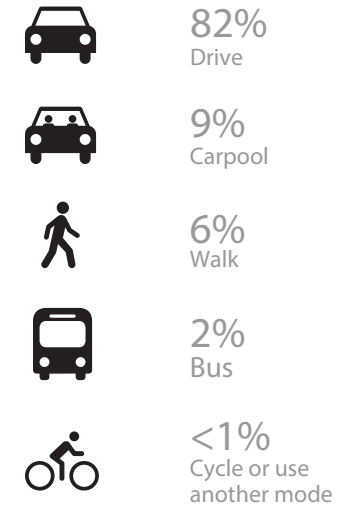
Income Deciles (Statistics Canada, 2016)

Commute Time



Mode of transportation to work (Statistics Canada, 2016)

Mode of Transportation



Commute duration (Statistics Canada, 2016)

2.1 SOCIOECONOMIC PROFILE

With a 2016 population of 6,271, the Town of Kentville has seen a 2.9% change since 2011, increasing by about 200 people.

There are 2,891 households (148 of which are occupied by seasonal residents or students).

The median age in Kentville is 45.4 and adults aged 40-64 make up the largest portion of this population. Families make up 60% of all households, and of these 47% are comprised of couples without children, while 35% are couples with children and 18% lone parents.

At Kings County Academy, the majority of students take the school bus to and from school (with 54% using this mode to school, and 67% from school), while 31% of students get driven to school and 21% are driven home. Between 8 and 9% of students

walk, while 2-3% bike. Remaining students walk part-way or carpool, amounting to less than 3%.

Seniors and youth will be important demographics to target when promoting active transportation. Infrastructure that works for the youngest and oldest users will make all users more comfortable, and education and promotion of active transportation starts with children. Improvements which make walking and wheeling to school easier will support active transportation for all Kentville residents and visitors.

As of 2016, 35% of residents work within the Town, while 58% commute to somewhere else within Kings County and an additional 7% commute elsewhere in the province.

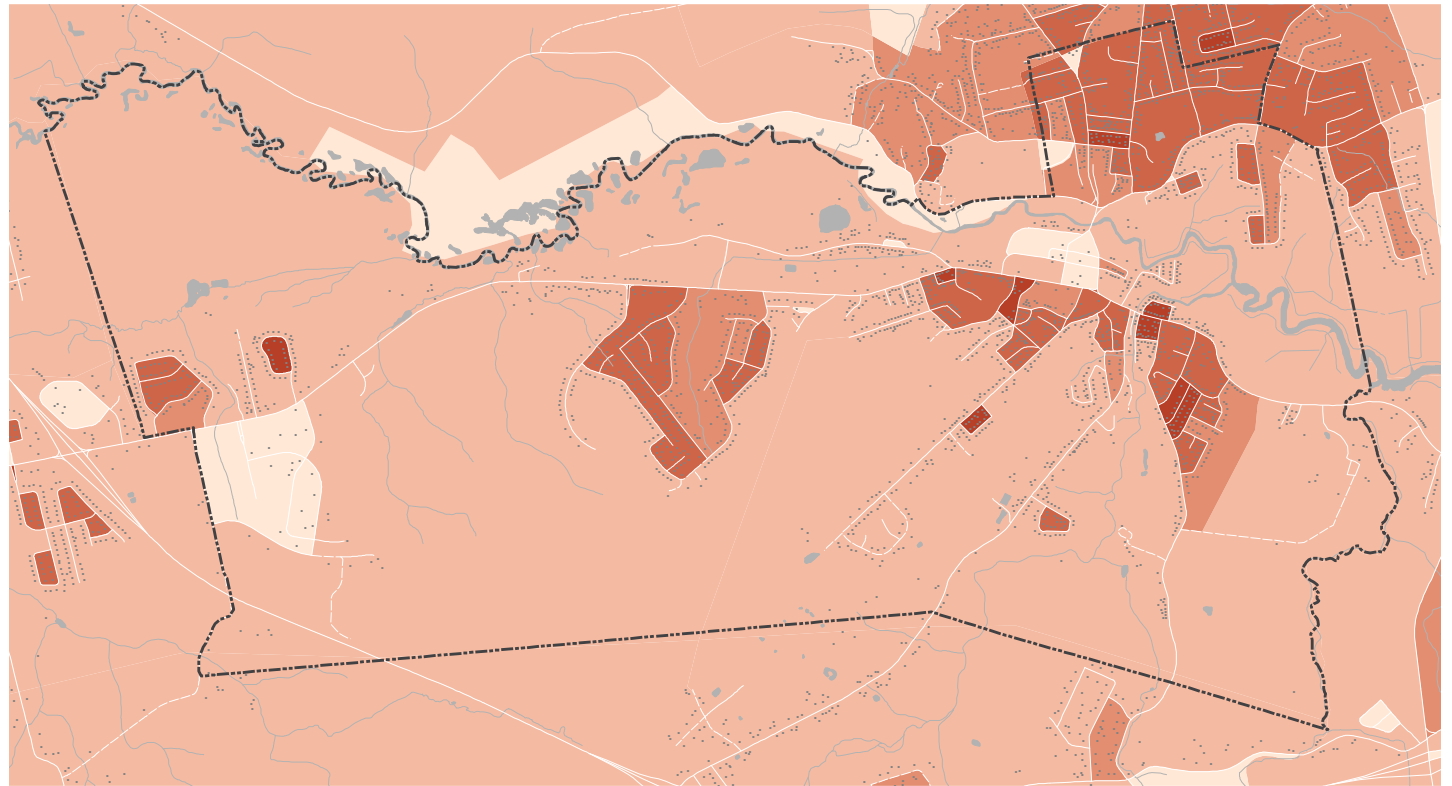
Although many commuters work outside Town limits, most of these commutes (57%) take less than 15 minutes, while 30% take 15-30 minutes, and 13% take longer than that.

While most commutes are quite short, a full 82% of residents drive to work, while 9% carpool as a passenger. Walking is less than 6%, while only 2% take the bus, and under 1% use a bicycle or other mode of transportation. These figures are reflective of provincial trends, but show much room for improvement with the main modes of active transportation composing less than 8% of total commuters.

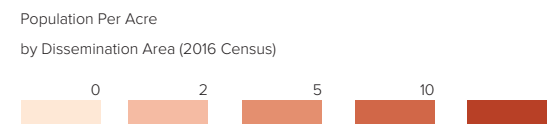
This data suggests that active transportation improvements have potential to reach the majority of commuters, improving the health and sustainability of many commutes.

2.2 POPULATION DISTRIBUTION

The population of Kentville is concentrated primarily in four areas; North End Kentville, downtown, the residential area south of the Kings County Academy, and the west end. Some of the most densely populated pockets (where there are over 10 people per acre) are due to apartment buildings or complexes, however the majority are occupied by single-family dwellings on small lots, set close together.



Population Density



2.3 ROAD NETWORK

Kentville is served by a network of municipal and provincial roads and highways that provide connections with neighbouring municipalities.

Route 341

Route 341 is the only road connection crossing the river within Kentville's municipal boundary. It connects downtown Kentville to North Kentville which is a significant residential area as well as the location of the NSCC campus and the Valley Regional Hospital. This collector road is the second busiest road in Kentville, with 8400 cars passing daily on average and a posted speed limit of 50 km/hr. In North Kentville, Route 341 turns into Aldershot Rd, and traffic volume decreases to under 7000 cars per day on Aldershot Road and Nicols Ave.

Chester Avenue

Chester Avenue provides a direct link between Main Street (Downtown Kentville) and Highway 101. It is a local arterial road physically similar to Trunk 1, with a posted speed limit of 50 km/hr close to Downtown Kentville increasing to 70 km/hr as it approaches the Highway 101. There are few residences on it and the services along it are generally accessed from the Highway 101 so it maintains a low average traffic volume.

101 Harvest Highway

The main route into Kentville is the 101 Harvest Highway, stretching from Bedford to the Minas Basin, and along the Fundy Coast into Yarmouth. This east-west 100 series controlled-access highway has three lanes leading into Kentville, but ranges from two to four lanes in other sections. This highway is characterized by high speeds and high traffic.

Trunk 1

Replaced in some sections by the 101, Trunk 1 is another east-west corridor that is one of the oldest major roads in Nova Scotia, and the principal route through the Town of Kentville. It was once called the Great Western Road, or the Post Road, connecting Halifax to the Western regions, and facilitating mail delivery, now sometimes referred to as "the old number one". It runs more or less parallel to Highway 101 and hosts the Evangeline Trail scenic roadway along its entire length.

Trunk 1 has a posted speed limit of 60km/hr near where it meets Highway 101 at Coldbrook, 50 km/hr through most of the municipality, and 30 km/hr as it passes Kings Academy. This road has the highest traffic volumes of any road in Kentville, with especially heavy volumes at the east end of the Town and into New Minas. From

Chester Ave to the Business Park, this road experiences 13400 cars passing per day, on average. A paved shoulder is present along some portions of the route.

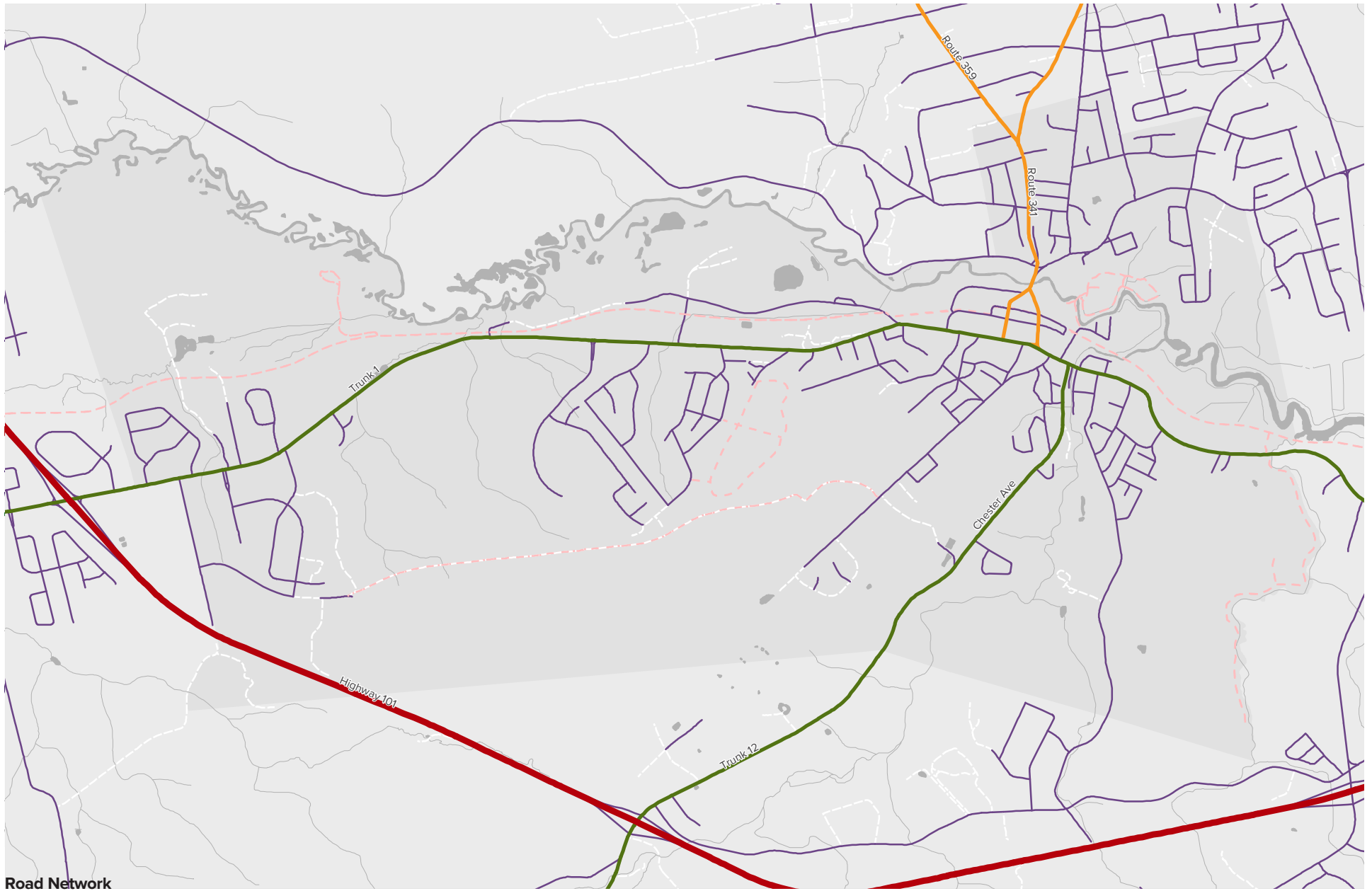
As Trunk 1 passes through the Town from west to east, it becomes Park St (passing Memorial Park), Main Street (through downtown) and finally Commercial Street (east of downtown). This is a busy route both for traffic local to Kentville and for drivers travelling between neighbouring communities.

Trunk 12

This route runs from Chester Basin into Kentville, a total of 67 kilometres through Lunenburg and Kings Counties. This two-lane highway is residential for much of its stretch.

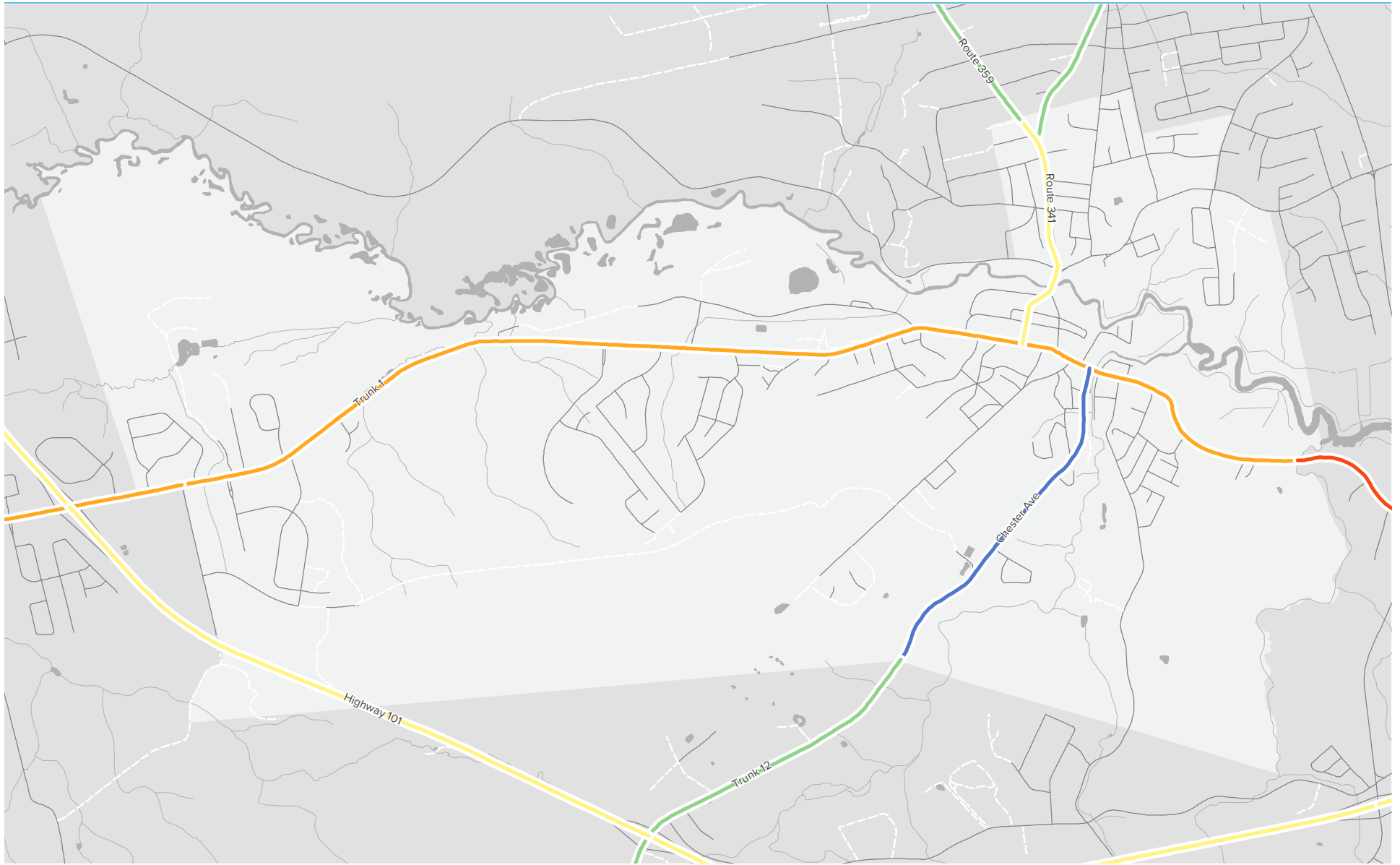
Route 359

Route 359 is a collector road in Kings County connecting to the Trunk 1 in downtown Kentville, and to the Route 221 in Centreville before ending in Halls Harbour on the Fundy Shore.

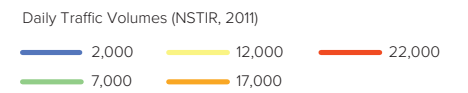


Road Network

- Highway
- Local (Paved)
- Arterial
- Collector
- Local (Unpaved)
- Trail



Traffic Volumes

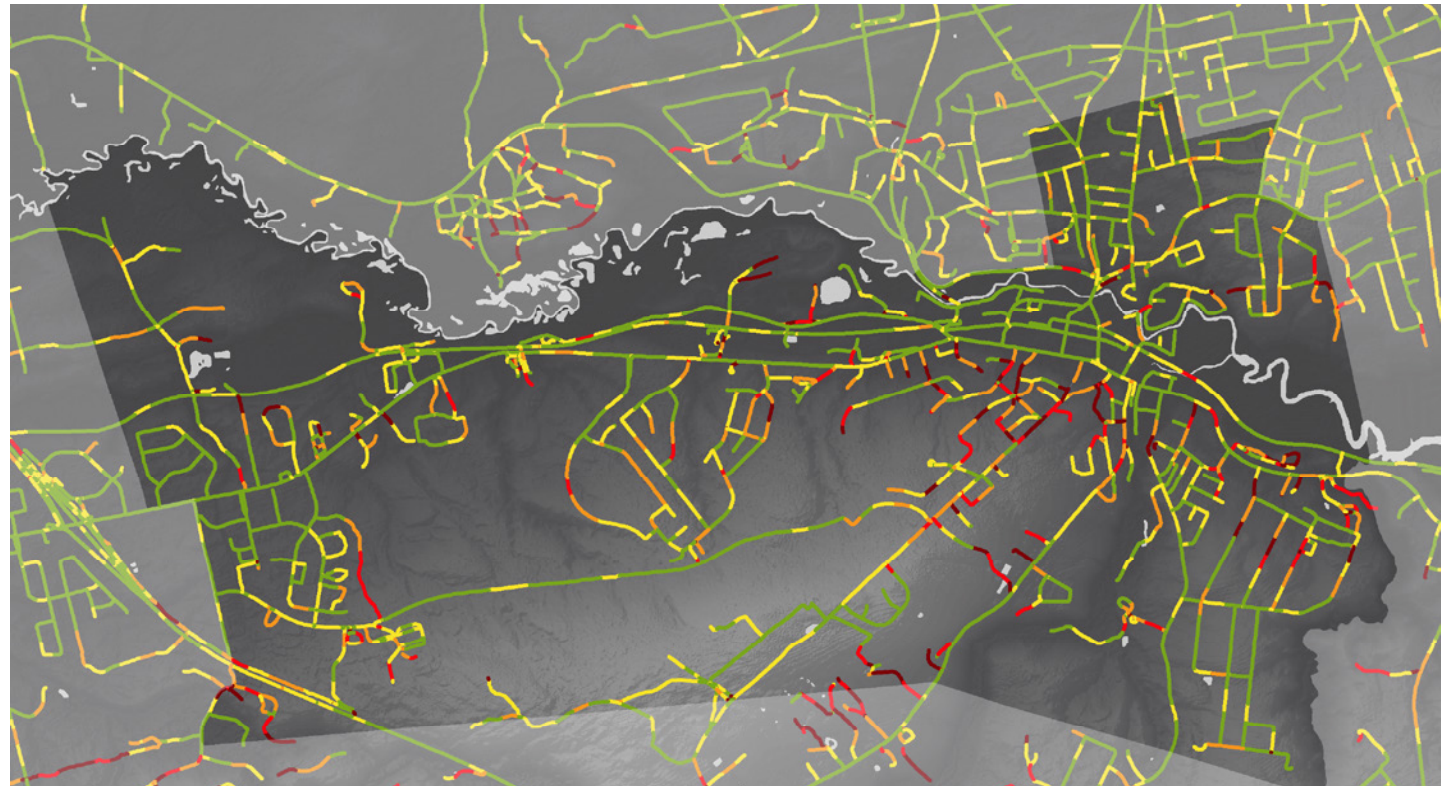


2.4 SLOPE OF ROADS

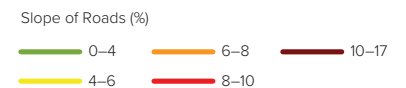
About 11% of the road network is above an 8% grade (shown as red and dark red on the map). These segments should be avoided when considering active transportation routes as they are not suitable for cycling and can be challenging for pedestrians with any mobility impairments. Roads classified as green and yellow on the map have slopes below 6% grade, and are most suitable for active transportation infrastructure.

The topography of Kentville is shaped around the river which splits the Town down the middle. The river valley has relatively little slope, and Kentville's downtown is characterized by very gentle slopes, as is much of the trail network. Local roads further inland from the river and particularly to the south of downtown pose greater barriers to active transportation. North-south roads in Kentville can be challenging for this reason.

Slope can be a particularly important factor to anyone with accessibility concerns, and residents using mobility devices may plan their routes to avoid steep slopes.



Slope of Roads



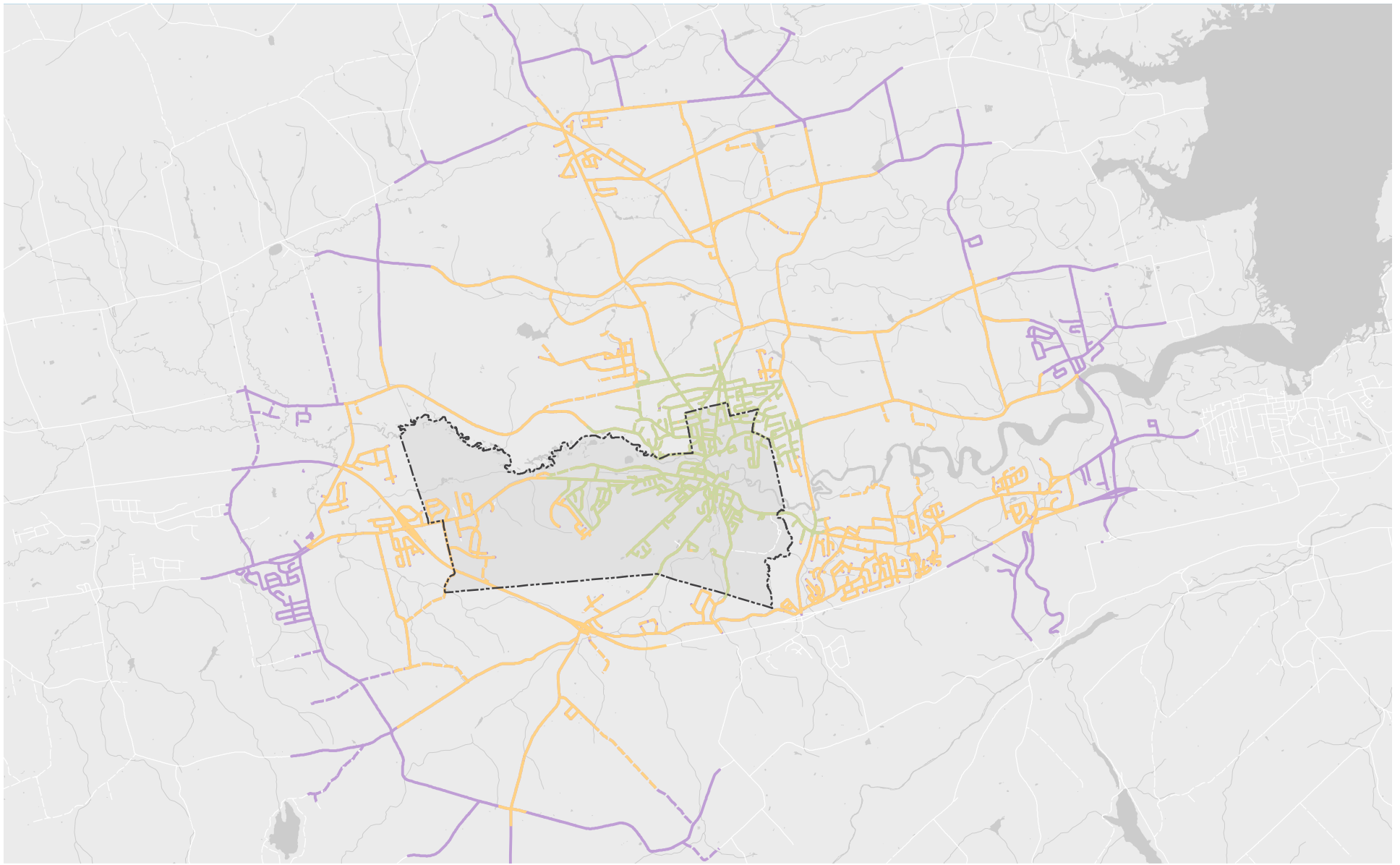


2.5 EXISTING ACTIVE TRANSPORTATION INFRASTRUCTURE

Kentville's downtown core features a network of one-way streets and sidewalks, with dense and human-scale built form welcoming residents and visitors. Leading out of downtown, there are sidewalks on Trunk 1 and Route 341, creating walking routes to North Kentville and the business park in the west end. There are also a number of nature trails that are well-connected and accessible by foot from downtown Kentville. Despite the compact downtown and the abundance of trails, the sidewalks in some places are cracked, narrowed, or disconnected, and outside of the downtown many areas put pedestrians at risk with major gaps in the network.

Cycling in Kentville is more of a challenge. On both Trunk 1 and Route 341, the extra space in the road's right-of-ways is occupied by the separated sidewalks, and as a result there is no paved shoulder and not much space for cyclists to ride along side vehicles. Route 341, a main connection between downtown Kentville and North Kentville, is particularly narrow, steep and curved, making it particularly inaccessible for cyclists. One exception, the paved shoulder on Trunk 1 between downtown Kentville and New Minas offers an opportunity for a cycling path. The Harvest Moon Trailway provides a safe and enjoyable east to west cycling and walking route as an alternative to

Trunk 1, connecting the Town of Kentville to Coldbrook, New Minas and other neighbouring communities. The gap in this trail as it passes through downtown leaves active transportation users to confront vehicles without a clear path.



Active Transportation Catchment Area

From Kentville Town Hall:

- 10 Km by Road
- 30 Minute Bike Ride
- 30 Minute Walk

2.6 PARKS AND TRAILS

While Kentville is one of the densest commercial and residential centres in the Annapolis Valley, it has maintained a number of significant green spaces, including a well maintained sports park, wild forested ravines, and extensive and rich wetland habitat flanking the river.

The variety of trails in Kentville provide residents and visitors with a wide range of experiences, from a reflective stroll around scenic wetlands to challenging mountain bike trails through a forested gorge. The Harvest Moon Trailway, part of the Trans Canada Trail and Nova Scotia's Blue Route also passes through downtown Kentville providing access to this linear cycling route over 100 km in length (Trail Inventory). Based on user ratings, trail classifications taken from various sources indicate the difficulty of each route.

1. Harvest Moon Trailway

Length: 110 km (7 km within Kentville)
Difficulty: Easy
Surface: crusher dust, asphalt

This trail, developed on an old rail bed, connects the Annapolis Valley. About 7 km of this trail are within the Town of Kentville. The majority of the Harvest Moon Trailway is multi-use (including OHV uses), however the section within Kentville is designated for active transportation uses only. This section passes through the Kentville Bird Sanctuary and has a well-maintained and even crusher suitable for any ability and mode of active transportation, paved between the western trailhead to past Kings County Academy.

2. Kentville Bird Sanctuary Trail

Length: 1.4 km
Difficulty: Moderate
Surface: gravel, grass

The Kentville Migratory Bird Sanctuary is a 200 ha area, half of which falls within the Kentville boundary. The Bird Sanctuary trail is a loop with several small spurs, which winds through forest and along the river. Although privately owned, the trail is popular for bird watching, and well used for cross country skiing and snowshoeing in the winter. The trail is accessed via the Harvest Moon Trailway or behind the Evergreen Home for Special Care.

3. Active Transportation Connector

Length: 3.2 km
Difficulty: Easy
Surface: gravel, dirt

A piece of publicly owned land flanking a gravel access road provides a connection through forested land across the southern part of the municipality. The access road connects Donald E Hiltz Connector Road in the business park to Prospect Avenue and passes by the southern end of the Gorge.

4. Memorial Park

Memorial Park is the hub for athletic recreation in Kentville. It features a grandstand, baseball and softball fields, three tennis courts, an outdoor swimming pool, a playground and a skatepark. The Town of Kentville maintains a large sports facility featuring two large outdoor soccer fields surrounding Kings County Academy and one indoor facility.

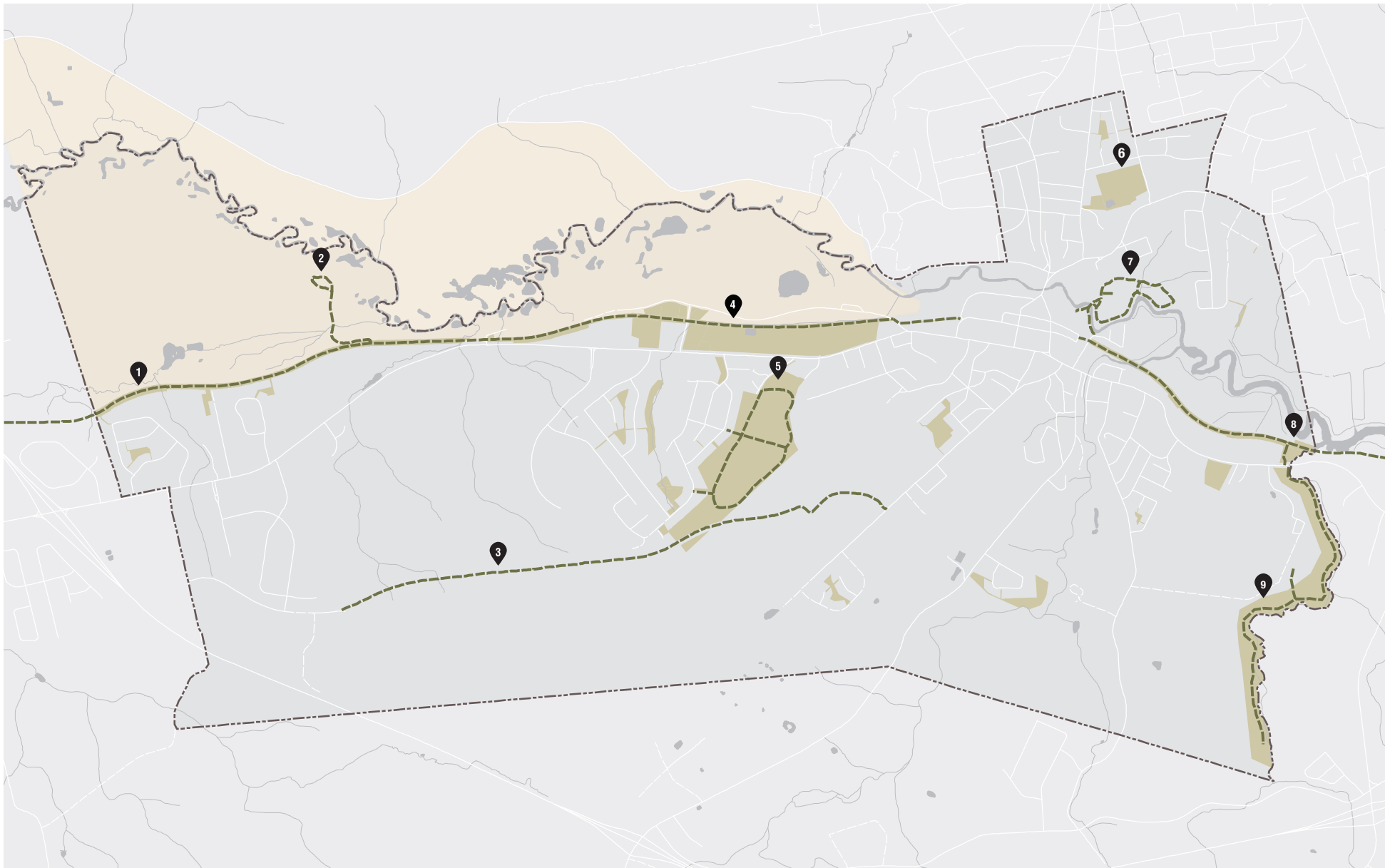
5. The Gorge Park and Trails

Length: 1.5 km of double track
17 km of single track
Difficulty: Moderate - Difficult
Surface: gravel, grass, dirt

The Gorge is a natural woodland featuring several hiking and mountain biking trails, accessed primarily from the end of Gladys Porter Dr. There are two stacking loops of double-track multi-use trails, and many other interconnected trails of more challenging single-track trails for mountain biking. These trails are also used in the winter months by cross country skiers and snow-shoers.

6. Oakdene Park

Oakdene park in North End Kentville is a neighbourhood park featuring sports fields as well as open space and facilities for casual recreation. There are two soccer fields in the park, a basketball court, community stage and a natural playground, as well as a community garden, a pond that is used for skating in the winter, and several trails.



Trail and Park Inventory

- | | | |
|-----------------------------------|-----------------|--------------------------|
| 1 Harvest Moon Trailway | 4 Memorial Park | 7 Miner's Marsh Trail |
| 2 Kentville Bird Sanctuary Trail | 5 The Gorge | 8 Eaves Hollow |
| 3 Active Transportation Connector | 6 Oakdene Park | 9 Kentville Ravine Trail |

7. Miner's Marsh Trail

Length: 2 km
Difficulty: Easy
Surface: crusher dust

The Miner's Marsh Trail forms a figure-eight around thriving wetland habitat areas constructed by Ducks Unlimited. The trail is wide and flat, suitable for walking as well as most wheelchairs, walkers and strollers. There are a number of picnic tables, interpretive panels and viewing platforms (including an observation tower), making this a great trail for families, picnickers, and bird watchers.

8. Eaves Hollow

This small park is located where Elderkin Brook flows into the river at the east end of Kentville. Eaves Hollow provides a scenic stopping place for people travelling by road or along the Harvest Moon Trailway, with a parking lot, a picnic table and a bike maintenance stand.

9. Kentville Ravine Trail

Length: 2 km
Difficulty: Moderate
Surface: gravel, dirt

This trail is located in the east end of Kentville on lands owned by the Agricultural Research Station. The main trail-head is behind the research station where there is a picnic area and washrooms (open seasonally). The trail descends through an old growth hemlock forest into the ravine, and from there follows the brook both north over several bridges, up to a waterfall. The trail is wide but uneven in sections, and steep where it descends into the ravine.

2.7 DESTINATIONS

The destinations identified on the map are grouped by the type of service they provide. These categories are intended to create a look into the everyday services a Kentville resident may need to access. Spatial distribution of these necessities demonstrate walkability (or bikeability) of any given neighbourhood. Employment in Kentville is focused in three areas: the business park towards the west, downtown, and New Minas to the east.

West Kentville/Coldbrook

The west end of Kentville is defined by the business park that is located there, near the border with Coldbrook. The services Access NS and PeopleWorx are located there as well as several health services, and a number of businesses that do not have commercial fronts but are large employers in the region.

Memorial Park/The Gorge

This part of Kentville, just west of Downtown on Main Street, is where a concentration of sports and recreation facilities are located. The Credit Union Recreation Complex soccer field, skate park, playground, tennis courts, pool and sports fields in Memorial Park are across the street from the Participark/Gorge wilderness area, a fantastic area for hiking, biking and skiing. Aside from recreation opportunities and the Kings County Academy, this area of Kentville is residential.

Downtown Kentville

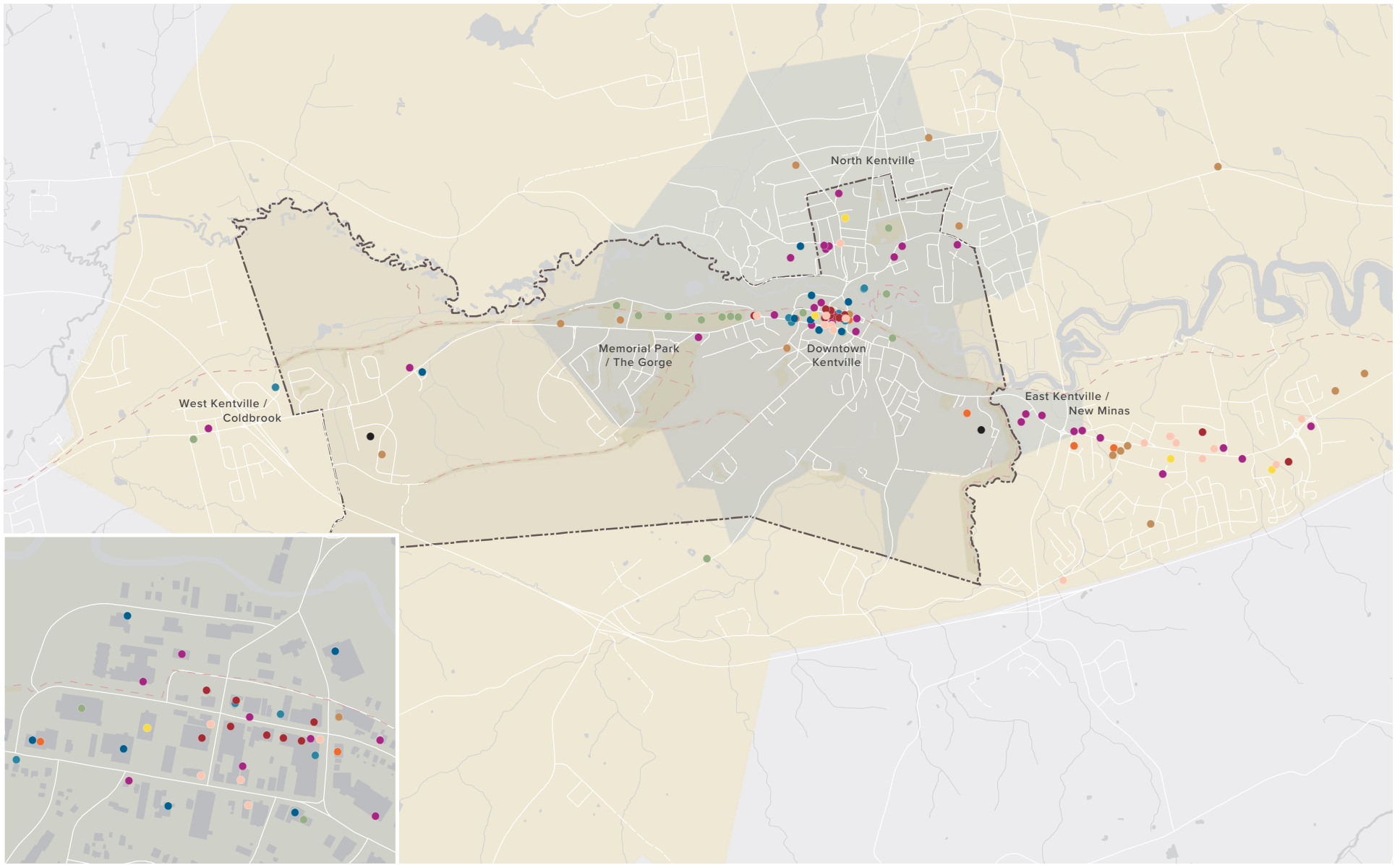
Downtown Kentville is where the greatest concentration of commercial activities take place within the municipal boundary. There is one grocery store, as well as several restaurants, cafés, banks, municipal services and museums. Services including the Family Resource Centre and Open Arms Centre support low income residents and the wider community. Although it extends north of the river, Miner's Marsh is accessed via Kentville's downtown.

North Kentville

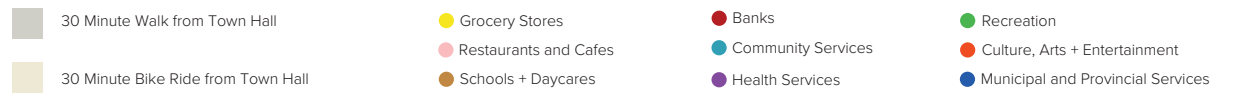
North Kentville and North End Kentville are relatively dense and young residential neighbourhoods, and the location of the Regional Hospital, assorted health services, Aldershot Elementary School and the NSCC Kingstech campus. The community is served by one grocery store, and there are also some popular outdoor recreation assets north of the river including Oakdene Park. The Fundy Food Bank located just north of the river serves as an important resource.

East Kentville/New Minas

Development is limited in the east end of the Kentville Municipality. However, it is the location of the Agricultural Research Station, a significant employer, as well as the popular recreation area the Kentville Ravine and the Burgher Hill 4 cross track and sledding hill. Outside the Kentville boundary to the east is the commercial centre of New Minas which is where many residents of Kentville and the surrounding area go for box store shopping, groceries, restaurants and the movie theatre.



Destinations



2.8 POLICY FRAMEWORK

Kentville's existing plans and strategies form the policy foundation on which this Active Transportation Plan will rest. The Kentville Municipal Planning Strategy is the Town's guiding plan, while other relevant documents include the Recreation Master Plan, Transportation Plan, Integrated Community Sustainability Plan and the Physical Activity Strategy.

Municipal Planning Strategy (2001)

Kentville's Planning Strategy establishes guiding policy regarding land uses, growth, service provision and community development. Policy topics relevant to active transportation and physical activity in Kentville include parks and recreation, road networks, and pedestrian and cycling infrastructure:

Policy T-14

IT SHALL BE THE INTENTION OF TOWN COUNCIL to recognize cycling and walking as valid forms of transportation which should be encouraged to reduce automobile pollution, promote health, and reduce vehicular congestion in the Town.

Policy T-15

IT SHALL BE THE INTENTION OF TOWN COUNCIL to provide for pedestrian and bicycle trails when planning future roads and subdivision designs in the Town.

Policy T-17

IT SHALL BE THE INTENTION OF TOWN COUNCIL to make every effort where appropriate and feasible, to make park areas and recreational facilities accessible to the disabled.

Policy P-18

IT SHALL BE THE INTENTION OF TOWN COUNCIL to preserve these linear rights-of-ways [Kentville trails and greenbelts], wherever possible, in order to create a continuous recreational link throughout the length of the Town.

Policy P-19

IT SHALL BE THE INTENTION OF TOWN COUNCIL to encourage the development of greenbelts and recreational trails through the linear rights-of-ways and C.P. lands to increase the amount of greenspace in the downtown and to allow for easy access to recreational trails throughout the Town.

Recreation Master Plan (?)

This Master Plan makes recommendations for the future of leisure and recreation in Kentville. Policy within this document is intended as a guide for the Recreation Department.

Concern for green space was mentioned by 91% of all survey respondents, with residents identifying a need for the following amenities:

- trails or paths that can be used for walking, jogging, hiking, cycling, and cross-country skiing
- benches for sitting and resting
- picnic areas with tables and barbecues
- areas such as open fields for informal play
- hard-topped areas for informal games

Public consultation noted several groups which derive particular benefits from green space including seniors, families, people with disabilities, and hospital users. Participants emphasized the need for recreation and green space which is accessible for these groups in particular. The plan notes that improved programming and barrier-free paths can decrease social isolation for seniors and all residents.

Transportation Plan (2011)

The Town's Transportation Plan serves to assess the impact of future growth and development on Kentville's transportation systems. The goals of this document include: ensuring road networks adequately service new development, prioritizing needs for road improvements, and identifying potential for new transit and active transportation corridors. Policy recommendations relevant to this Active Transportation Plan include a proposed active transportation link connecting the Harvest Moon Trailway gap by following the riverbank and other suggested trail networks connecting the Kentville Business Park, MacDougall Heights, Donald Hiltz, Mill Brook Valley and northwest of the Harvest Moon Trailway.

The Plan recommends requiring the design of trail connections with subdivision development. It is suggested to increase densities in the most walkable parts of town, extending 250 to 1,000 metres out of the downtown. Authors highlight the opportunity to support local businesses through this increased resident base.

Integrated Community Sustainability Plan (2010)

This is a long-term plan intended as an overview of social, economic and environmental sustainability goals and steps to achieving a healthy and complete community. The plan states that "Ensuring the connectivity of the trail as it runs through the downtown remains a top priority for the Town". Policy recommendations include:

"Continuing regional collaboration for the connectivity of trails and green space".
"Planning for trail connectivity and integrative active transportation in new green spaces, recreation areas and transportation infrastructure developments within the Town (including development of an Active Transportation Plan)".
"Better communications and promotions of the Town's trails and active transportation opportunities (including improved signage, accessibility, visibility of entrance points etc.)."

Physical Activity Strategy (2018)

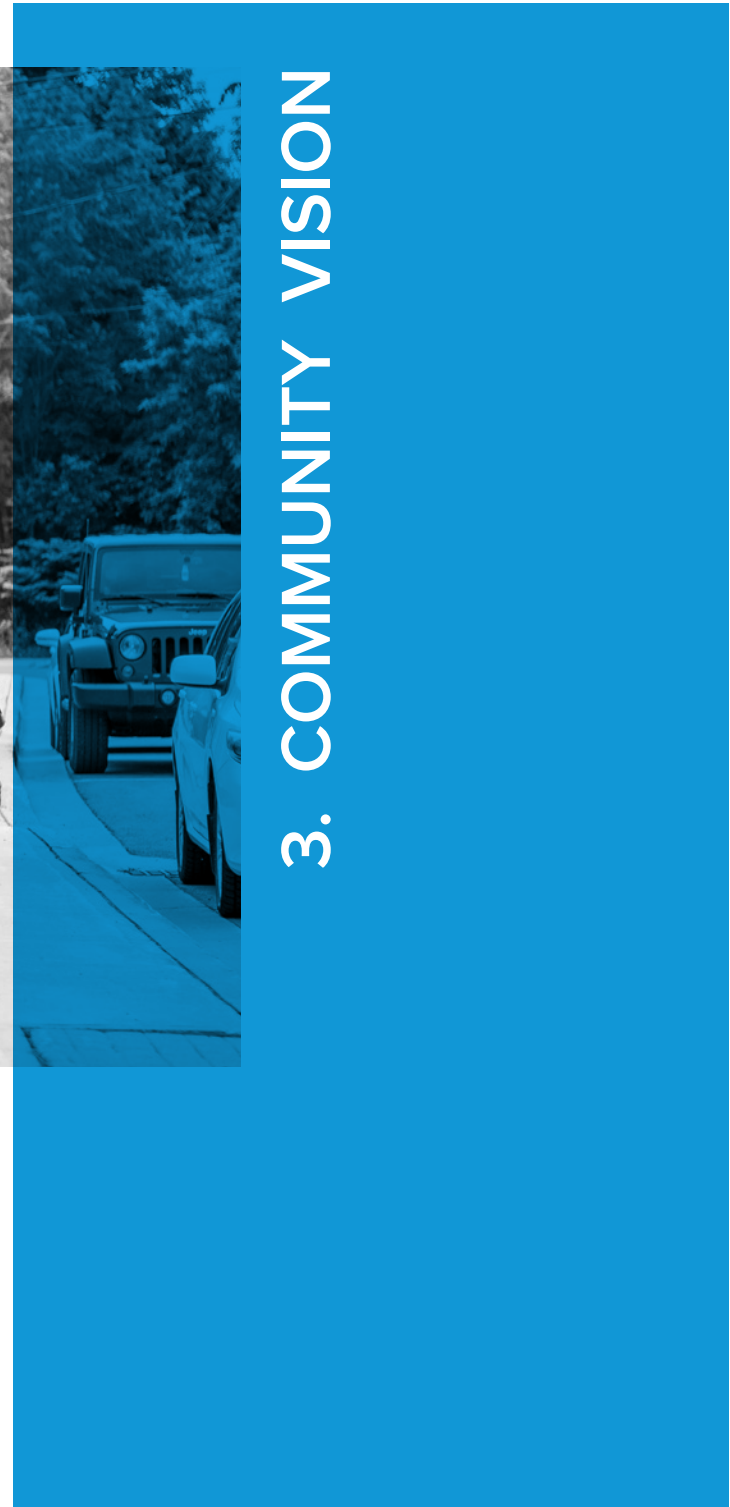
In partnership with the province, Kentville created this Strategy to target physical inactivity, and has been working on this project since 2008. It combines projects of the province and municipality, and guides the work of the Parks and Recreation Department.

The Strategy notes that as of 2014, 87% of Kentville residents report walking regularly, making it the most common physical activity. Of survey respondents, 40% would like to walk more and 22% would like to cycle more. The biggest barriers to physical activity were not having people to go with, programming that doesn't fit interests or schedules and poor road conditions limiting activity.

The Strategy outlines the following opportunities:

- Interactive websites for connecting residents
- More non-competitive recreation offering, and programs which attract women and families
- Infrastructure improvements for sidewalks, crosswalks, trails and bike paths, and accessibility and wayfinding
- Expansion of equipment loans to include adaptive equipment

The Strategy supports the use of evidence-based decision making focused on existing strengths of the community. An equity lens and heightened community engagement are recommended for the use of future Parks and Recreation planning.





3.1 COMMUNITY INPUT

Input from the community is critical in order to understand the current state of active transportation in the Town of Kentville and to ascertain the key issues and opportunities. A variety of public engagement events were held to provide multiple methods through which the community could provide input into the Active Transportation Plan.

These events included a public drop-in session, a walking tour, focus groups with both middle school students and seniors, and an online survey. Information on all the community engagement opportunities were well publicized, which resulted in a positive participation rate.

3.2 PUBLIC DROP-IN SESSION

With about ten participants, the public drop-in was held at the Kentville Library and featured panels with information about the project, as well as interactive mapping activities. Participants pointed out barriers they face on their routes, identified potential active transportation connections, and located potential infrastructure upgrades.

Crosswalks, multi-use trails and sidewalks were identified as active transportation priorities while there was also support for paved shoulders, bike lanes, accessibility, maintenance and gathering spaces. General recommendations included distance markers on all trails, smoother and wider sidewalks downtown, and more seating. Crosswalks are needed at the following intersections:

- Highway 1 and Harrington
- Highway 1 at Memorial Park
- Webster and River at the Harvest Moon Trailhead
- West Main and Park
- Oakdene and Belcher

Sidewalks are needed along Highway 1 between Harrington and Roscoe, and Oakdene between Dell and James. Some potential active transportation routes were recommended including a downtown connection for the Harvest Moon Trailway, a water route along the river towards the Bird Sanctuary, a walking route over existing dyke lands, connections between the Active Transportation Connector route, and a river-crossing bridge towards Miner's Marsh.

3.3 WALK AND TALK

A public walk and talk gathered eleven participants at the local farmer's market before touring the downtown to identify major barriers and opportunities for active transportation in Kentville.

Accessible streets which improve active transportation options for people with mobility issues and other disabilities also make streets more comfortable for all users. Parents with strollers, small children, pedestrians carrying heavy bags, and people with temporary injuries are just

some of the individuals that can benefit from accessibility, and this was reinforced by walking group participants. Residents felt that Kentville's recent improvements in accessibility have been good, and even persuaded some to move into town, but more measures are needed to make pedestrian spaces truly equitable.

Slight surface changes such as sloping towards the street, raised driveways, cracks and raised bricks pose the biggest barrier. The desire for more benches, rest spaces and public washrooms was another concern agreed upon by participants. The snow and ice removal have been inconsistent within the downtown, making walking more difficult in colder months. One participant noted that stresses such as heavy traffic and other noises, buzzing or flickering lights, and harsh lighting can be a concern for residents and visitors prone to sensory overload which could be associated with autism and/or anxiety disorders.



Other general opportunities for accessibility improvements were sidewalk bump outs (particularly where pathways are narrow along Webster Street and approaching intersections), smaller blocks, more crosswalks, clear wayfinding, pedestrian islands, and traffic calming measures.

Intersections are the main source of concern for pedestrians and cyclists, and many participants have witnessed near-accidents during left turns onto one-way roads. These intersections in particular are confusing to drivers, and major crossroads at the town clock and the bridge are both especially difficult for pedestrians to navigate. Illegal parking too close to intersections has caused an issue with sight lines, something sidewalk bump outs could help to improve. Participants felt that aside from street design, the 50 km/hr speed limit is too high for a downtown.



Trails are well-used and appreciated in Kentville, but litter has been an issue along these pathways and the absence of a dog park or off-leash areas leads to some residents fearing unruly pets. Plowing the trail to KCA School was suggested as a priority, making it easier for students to access this route on their winter commute. With no bike lanes downtown, all participants felt that a trail connection was needed through the downtown, and the possibility of a multi-use path was agreed upon as an optimal option which would remove minimal parking. Participants wanted trail users to be led through the downtown, as this is the most scenic and straightforward route and could bring more visitors and money into local shops. At one end of this route, improved signage and access to Miner's Marsh could meet with the Harvest Moon Trailhead in an active transportation node.



3.4 YOUTH WORKSHOP

Held at Kings County Academy, a random selection of ten middle-school students participated in an hour-long youth workshop. The participants use active transportation for both transportation and recreation including walking, biking, scootering, skiing and sledding. Destinations included school and home as well as shops, the library, the market, friends' houses, and recreation sites. The students pointed out locations where there are hazards to walking and biking as well as optimal locations for new infrastructure.

The need for more crosswalks, particularly on main routes to school, is a major concern for students using active transportation, and bike racks are needed at Burger Hill, the farmer's market, Miner's Marsh, Ultramar, Centre Square and the pool. Many students use the Harvest Moon Trailway to get to school but find it difficult cycling downtown where there is a gap in the trail. Pot holes, upturned bricks and eroding trails came up in a discussion of road conditions and some students noted that they have a hard



time biking along rocky or gravel portions of the Harvest Moon Trailway. Most prefer the cut-back sections of the trail where sight lines are improved, and found this improved their sense of security particularly after dark. Students also mentioned the opportunity for dog bag dispensers and trash cans along trails and trail heads.

Interpretive planning and playfulness were concepts well received by youth participants, including wayfinding signage with major destinations and distances, scavenger hunt style trail signs identifying wildlife (such as that used in Port Williams), jumps for bikes and scooters, interactive interventions and art. Students felt that more active events such as the Terry Fox Run, outdoor learning and walking groups would encourage them to spend more time outside. More spaces that allow students to stop and hang out a while such as food and recreation destinations should be encouraged throughout the downtown and major routes to school.



3.5 SENIORS WORKSHOP

An active transportation workshop for seniors was held at Kings Riverside Court, engaging 26 participants. The seniors divided themselves among four tables, each with a facilitator. One of the main topics discussed was the need for a cultural shift away from the car-dominated downtown in order to take back pedestrian space. Participants felt that rather than accommodating delivery trucks, Kentville should encourage density and adopt share the road principles to accommodate the people that live, work and shop in town. One particular accessibility concern was building entrances, but participants felt improvements to accessibility must extend out from the public streetscape and into the entire built form.

While the groups enjoyed the downtown and felt the people are helpful and friendly, the design and maintenance of pedestrian space makes getting around very difficult for most participants. The combination of the too-high speed limit and drivers disobeying traffic laws was identified as

one of the biggest issues in downtown Kentville. Some participants noted that before moving to Kentville they avoided this downtown, fearful of the chaotic traffic flow. Redirecting heavy traffic onto Main Street and away from Webster was suggested in order to calm traffic. The one-way streets make many pedestrians feel unsafe, and participants added that allowing left on reds make these crosswalks unsafe.

Senior participants get around almost exclusively by foot and barriers like narrow paths, uncleared snow and ice, cracked or slanted sidewalks and upturned bricks pose a hazard to anyone with mobility issues. Lamp posts placed in the centre of sidewalks, midday deliveries, garbage day and sidewalk gaps can make it impossible to pass with a mobility device or support person. Crossing lights that don't function consistently or have inaccessible pedestrian buttons were another major concern, and seniors often have to strategize alternative routes to avoid these barriers, even when walking to the grocery store just across the street. One group pointed out that summer

patios have temporary sidewalks which are impossible to pass for those using mobility devices, while a patio that leaves the sidewalk intact would be more appropriate. Two groups noted that the design of Centre Square favours cars over pedestrians, presenting the potential opportunity for a pedestrian only zone.

While trails are well used in the warmer months, participants suggested ploughing the Harvest Moon Trailway between Kings Riverside Court and Shannex, and improving connectivity for cyclists. General traffic calming measures such as sidewalk bump-outs, speed bumps, added crosswalks at common destinations and street trees were embraced by participants. The need for more benches and public washrooms was also discussed by all groups as a pedestrian necessity.

3.6 ONLINE SURVEY

The survey collected a total of 298 responses (though this varied per question), 206 of these Town of Kentville residents.

This survey was self-selecting, promoted through the Town website, social media, newsletter and radio. About 68% of survey respondents identified as female, and about 32% as male. 4.5% of respondents were under 24 (compared to 55% within the Town), while 44.5% were between 25 and 44 (compared to 44.6%), 40.7% were between 45 and 64 (compared to 56.6%), and 10.3% were seniors (compared to 44.7%). This self-selector bias has resulted in disproportionately low responses from both youth and men, and likely representation from various communities and socioeconomic backgrounds is limited.

69% of these respondents live within the Town of Kentville, while 26% of the remaining live in New Minas, the rest divided between 38 surrounding communities. Retirees made up about 18% of respondents, and 7% do not work. Of those that work, 45% work within the Town, while 19% of the remaining work in New Minas, 13% in Wolfville, and the rest are spread between 21 communities.

Respondents identified destinations they access at least once a month, and a top five are listed below:

1. Downtown stores and restaurants (90%)
2. Miner's Marsh (67%)
3. Valley Regional Hospital (52%)
4. Harvest Moon Trailway (41%)
5. Kentville Farmer's Market (40%)

Driving was the most common form of transportation among survey respondents, with 85% frequently using a vehicle, followed by walking and the use of assistive devices, used frequently by 48% of respondents. About 11% frequently cycle, 4% utilize other forms of transportation not identified here, and 3% frequently bus. The top reasons for not using active transportation were:

6. Weather (37%)
7. Working too far from home (29%)
8. Uneven, unmaintained sidewalks (27%)
9. Drivers, pedestrians and cyclists don't know the rules of the road (26%)
10. High traffic and speeds at peak hours (24%)

108 people responded to an open-ended question identifying destinations they would like to access using active transportation, and the barriers they face in doing so. The

most commonly mentioned destination was downtown stores, restaurants and businesses, with 34% of these respondents identifying them. Following this was parks and trails (noted by 32% of respondents), residential areas and subdivisions (14%), recreational spaces (10%), surrounding communities and towns (9%), and schools and daycares (8%).

The need for new and better active transportation paths was mentioned in 40% of these comments, including bike paths, sidewalks and trails, and crosswalks. In addition to this 40%, the downtown gap in the Harvest Moon Trailway was specifically noted in 14% of responses. Cars that are speeding or unaware of pedestrians and cyclists were mentioned by 12% of respondents, followed by maintenance of streets and trails (11%) and accessibility concerns (10%).

A second open-ended question (answered by 84 respondents) looked at routes people frequent using active transportation (or would like to), and suggested improvements. The main routes included downtown (45%), followed by mentions of the trail gap specifically (20%), followed by other portions of the Harvest Moon Trailway (11%), surrounding communities and towns (10%), and Miner's Marsh (8%).

Improvements recommended by respondents included bike lanes (21%), new or improved sidewalks and trails (16%), changes to traffic such as slowing the speed limit and reintroducing two-way traffic (11%), accessibility improvements (8%), and lights, wayfinding and other amenities (8%). Several respondents answered these open-ended questions, but did not identify any desired destinations, routes, or barriers faced and so were not included in these counts.

A final question allowed respondents to make any additional comments, which again demonstrated the gap in the Harvest Moon Trailway as a major resident priority (though 4% felt this downtown trailway should not continue through Webster Street, and 5.5% felt bike paths do not belong in the downtown). Other priorities included traffic calming and accessibility for people with mobility issues, seniors, and families with small children.

The most common thread in these additional comments was the need for a cultural shift in order to facilitate and encourage safe and comfortable active transportation. This included a discussion of the education of drivers, pedestrians and cyclists, as well as promotions through events and activities.

3.7 VISION STATEMENT

Active transportation is a comfortable and enjoyable part of everyday life in the Town of Kentville for users of all ages, abilities and backgrounds. Residents and visitors will engage fully with the community's local stories and landscapes.

3.8 GUIDING PRINCIPLES

These guiding principles flow from the existing conditions analysis in this report, as well as site visits and community engagement. The following concepts will guide the active transportation strategy and proposed network designs. The goal throughout these principles is design that allows active transportation to be accessible, safe, and also playful and inviting for all users.



Prioritizing Active Transportation Users

Kentville has been designed to prioritize drivers, and community engagement identified a need to shift this modal hierarchy. Everyone is a pedestrian for at least a portion of their trip, and prioritizing the comfort and safety of everyone regardless of age, income or ability will be key in encouraging sustainable and healthy transportation. Walking and the use of assisted devices are the most commonly used form of active transportation in Kentville, but engagement also identified cycling, running, scootering, roller blading, skateboarding, snowshoeing and skiing as modes that should be accommodated.



Education and Awareness

Education for all road users, in combination with the promotion of active transportation benefits will not only encourage active transportation but improve relationships and safety. This can be done through the promotion of shared streets concepts, and hosting of workshops and public events.



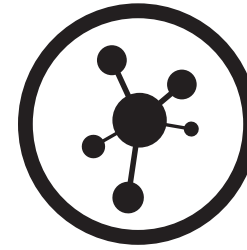
All Seasons

A successful active transportation network can be used year-round. Our public survey identified weather as a key deterrent to active transportation use, and accessibility concerns regarding insufficient snow and ice removal came up throughout consultations. Infrastructure should facilitate easy snow removal, outdoor spaces should accommodate both warm and cold weather activities, and drainage should be considered in design.



Equity and Accessibility

Accessibility and equity can make active transportation more comfortable and attractive for all users, and accessibility and equity is necessary for the inclusion of those who would otherwise not be able to participate in active transportation, whether their barriers are physical, financial, or otherwise. Inequities in Kentville are evident in the spatial distribution of active transportation networks such as sidewalks, recreation access and other amenities. Accessibility in particular was a main topic of discussion, and commonly it was the small things that made all the difference. Sloped sidewalks, out of reach crosswalk buttons, unmaintained streetscapes, a lack of public washrooms and benches, and inaccessible entrances can be major barriers to active transportation for people with permanent or temporary disabilities, seniors, or people with strollers or young children.



Completing Networks

The gap in the Harvest Moon Trailway network as it meets downtown Kentville has emerged as a priority throughout all consultation sessions. It is clear that a connection is needed which best accommodates all users and promotes the downtown while having minimal impact on existing conditions. Other connection priorities identified included incomplete sidewalk networks, trail connection, and the connecting the dots between key destinations and routes.



Playfulness

By making active transportation more interesting and enticing, playfulness in design can promote physical activity not only for youth but all users. Playful streetscapes and recreation can consider the dimensions and materials of pathways, colour, biomimicry, the incorporation of ice and snow, sun, water, connections to history and ecosystems, written instructions, and the use of props.



Kentville Moves Active Transportation Plan

4. PROGRAMMING / PROMOTION

4.1 ACTIVE TRANSPORTATION EVENTS

Kentville already has a strong culture of recreation including clubs, events and festivals. Some of the existing events have an active transportation event focus, such as Women on Wheels, Bike Week, and the Torchlight Parade. Continuing this tradition of events will help build momentum for active transportation by incorporating playful elements which celebrate the community's offerings.

Events should incorporate an equity lens and follow guidelines from the Canadian Association for the Advancement of Women and Sport and Physical Activity to ensure that the events and workshops are accessible for all.



1 Host general active transportation related events and programs

Description

The following active transportation related events and programs can help shift commuting habits and improve the accessibility of active transportation in the Town:

- **Bike rodeos and fun runs focused on youth and families:**
Regular active events and programs can highlight the benefits of physical activity and bring people together either for a cause, or just for fun.
» Example: Kids Run Club by Doctors Nova Scotia
- **Bike maintenance workshops:**
Education around bicycle maintenance can make cycling more accessible and affordable. Offering childcare or providing family-friendly options where appropriate will improve attendance.
» Example: The Ecology Action Centre's Bike Again!
- **Walk, bike, wheel to work days:**
In partnership with local employers, this type of incentive will encourage sustainable commutes or mid-day breaks.

Image: Switch Dartmouth open street event

2 Host an annual open street event

Description

An annual active community event that opens streets to pedestrians, cyclists, skateboarders, scooters, vendors, performers and more. Open street events allow participants to walk or wheel through the downtown and take ownership of this public space. Prioritizing the comfort and enjoyment of active transportation users introduces a sense of equity while showcasing the downtown's offerings. Playfulness tactics can be highlighted in these events, encouraging inclusion of all ages and promoting active transportation in the process. This event is an excellent way to kick off the active transportation strategy and celebrate upcoming investments.

4.2 SCHOOL PARTNERSHIPS

Fostering active transportation culture among young generations will build a strong foundation for lifelong use, and can improve awareness and respect among all modal users. Working with schools to provide a variety of related programming will expose students to the benefits of active transportation, and help build their comfort level. Kentville's schools (particularly Kings County Academy) are located close to parks and recreational hubs, allowing students to make the most of these amenities through curricular and extracurricular programming.



1 Provide cycling courses to students

Description

Continuing to offer active transportation training through Making Tracks will improve the awareness and equitability of cycling in Kentville, providing kids with the knowledge and practice they need to safely maneuver streets, and increasing parents' comfort level. The Town should consider expanding this program through the Ecology Action Centre or partnerships with other local youth groups. In order to provide youth with additional cycling skills, an introduction to winter cycling guidelines and bicycle maintenance could encourage cycling independence. Offering equipment loans (including adaptive models) as part of the Town's existing inventory will eliminate one basic barrier, allowing all students to participate.

2 Work with schools to incorporate active transportation into curricula

Description

- **Continuing to offer walk to school days:**
This incentive has been very well received by both families and students, and should be continued. Supporting parents in organizing walking groups to and from school may be an option for increasing participation.
- **Encouraging outdoor play:**
Working with physical education departments to incorporate active transportation into the curriculum and bringing classes outdoors as much as possible, throughout all seasons.
- **Encouraging outdoor learning and extracurricular programming:**
Outdoor classrooms can be incorporated into regular programming or as voluntary extracurriculars. Outdoor learning can teach students about native plants and species, getting them involved in activities like gardening, composting, art projects and science experiments.
 - » Example: Outdoor Classroom Day, William King Elementary School in Herring Cove

Image: William King Elementary School's outdoor classroom

4.3 BUSINESS PARTNERSHIPS

Improvements in active transportation infrastructure can help support local businesses and services through increased spending from residents and tourists. Encouraging the business community to take advantage of opportunities to expand their reach will make local shops more accessible to pedestrians and cyclists while offering the potential to improve their marketing and profits.



1 Offer a ramp program for businesses

Description

Businesses with one-step inaccessible entrances can benefit from a portable ramp program. Using volunteers and donations, ramps can be provided to businesses at little to no cost, and developed through the Town, local volunteers, or as a part of the Toronto-based Stop Gap initiative. These ramps can be very simple and cost-efficient, and the design or colour can change with each build. Temporary ramps work around common encroachment laws, allowing businesses to remove the ramps when needed—but typically remain in place during business hours.

» Example: Stop Gap

2 Implement bike friendly business certification

Description

Bicycle friendly workplaces can demonstrate leadership, tap into a growing tourism market, improve their visibility and reap benefits related to increased worker productivity and increased spending from cycle tourism and residents. Bicycle Nova Scotia's certification process has varying requirements depending on the type of employer but can include short or long-term bike parking, access to washrooms, and bike repair kits. Recommended additions include staff showers, shipping for purchases, stocking bike and trail maps, flexible work schedules, incentive programs and bicycle training lunch + learns. Encouraging the uptake of this program in Kentville would come at no cost to the Town, and could start with municipal facilities and services.

» Example: Halifax Bike Friendly Certified Program / Smart Trip

4.4 MARKETING

Kentville has a strong network of trails and parks attracting both visitors and residents through all seasons. Continuing to build on these amenities in order to attract more active transportation users will improve both the tourism sector and the quality of life in Kentville. It will be important for the Town moving forward to distribute clear information about available infrastructure and events in order to make the most use of its offerings.



1 Work with stakeholders to promote active transportation tourism

Description

Continuing to promote Kentville as a destination for active transportation tourism will encourage use of the Town's many valuable trails. Working with downtown business owners and the hospitality sector will help to pull visitors into the Kentville area as they pass through the Valley's trail system.

2 Create and distribute active transportation brochure series and website

Description

Following the implementation of this plan it will be important to continue promoting active transportation, demonstrating successes and opportunities as well as the overall benefits of physical activity. The Town's existing social media presence and website will be an important hub for related information and announcements, and the available trail maps visualize local recreation. Additional promotional materials (both for the website and available in print form to distribute through local businesses) will provide tourists and residents with more details relating to the local parks and trails as well as nearby attractions and accommodations and recommended on-street bike routes. Additionally, a website dedicated to the Harvest Moon Trailway would showcase the beautiful trail that extends through Kentville and around the Annapolis Valley.

» Example: Active Argyle AT series, produced by UPLAND (2019)

4.5 DATA COLLECTION AND EVALUATION

Data and evaluation tools which highlight socioeconomic inequities in Kentville neighbourhoods can be included in program selection criteria, and help to refine project concepts and proposals. Using equity indicators Kentville can prioritize improvements which have the least negative impacts on marginalized communities and aim to overcome gaps in access to active transportation.

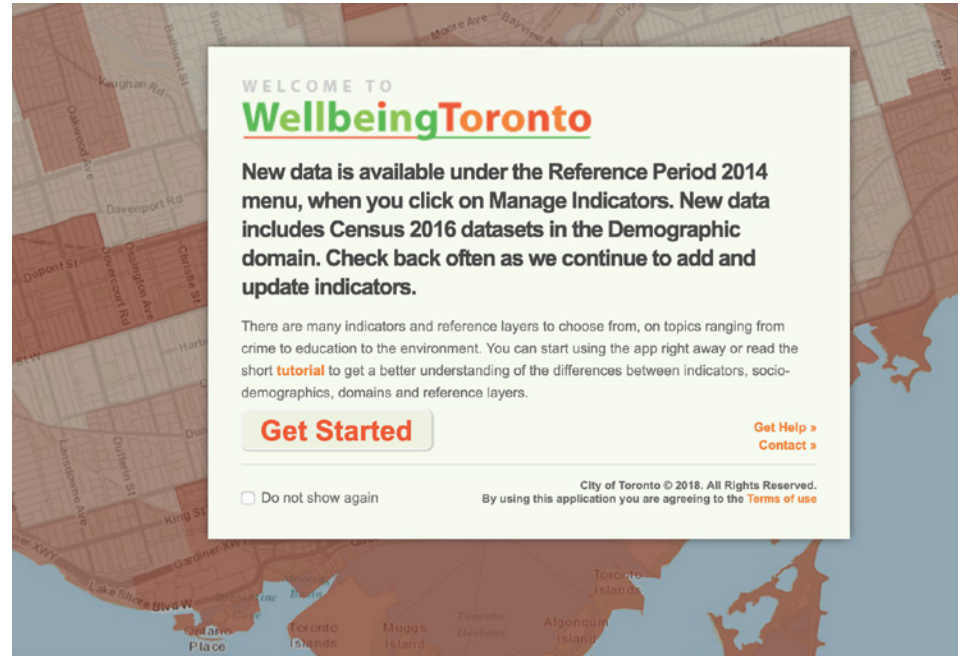
Modal data can track the success of active transportation programs and infrastructure improvements, as well as raise awareness among the community and assist in grant applications. Kentville's existing Physical Activity Strategy (2018) created a baseline for this data, and additional sources can expand the analysis to consider the impacts on tourism.

1 Create and maintain an equity mapping index

Description

An equity index or atlas collates demographic information spatially in a format that can be used as a policy tool and database. An interactive mapping tool available to all community members and policy makers should be updated as new data becomes available, and can be used to track demographic shifts and identify spatial inequities. Data can be pulled from both Town records and the census, with the opportunity for additional data gathered from the Kentville Police Service and Nova Scotia Health Authority. Indicators can include data relating to income, housing, education & employment, health & disabilities, age, race and other demographics, municipal spending, access to everyday amenities, active transportation facilities, and more.

- » Examples: Wellbeing Toronto, American National Equity Atlas, American Opportunity Index



2 Create an equity toolkit

Description

Develop an equity toolkit to be used in conjunction with the mapping index. This toolkit can be used in the decision-making process to assess impacts on equity and track change. This document would guide users to set equitable outcomes with desired results and indicators, collect and analyze data (through the mapping index), examine historical context, engage those most impacted, develop equitable strategies, implement changes and create accountability through evaluation and reporting.

- » Example: City of Portland Racial Equity Toolkit



3 Collect data relating to active transportation use

Description

Collect and analyze active transportation indicators in order to track uptake and measure project success:

- » data on commutes to school
- » foot traffic data before and after project implementation
- » information on active transportation tourism through the accommodations sector (eg. total number of hotel stays by cyclists)
- » data on trail and sidewalk use through regular traffic counts
- » track shifts in commute modes through census data

4.6 POLICY RECOMMENDATIONS

The Town of Kentville Municipal Planning Strategy and Subdivision Bylaw include many policies and regulations that determine how future streets and green space will be developed. As primary locations for active transportation, it is essential that these policies and regulations about streets and parkland align with the goals and objectives of this Active Transportation Plan.

Road standards can be designed to encourage active transportation. The Town of Kentville's Subdivision Bylaw includes street specifications which follow criteria from the Transportation Association of Canada. This includes specifications for arterial, collector, and local streets as well as cul-de-sacs. These criteria govern street dimensions and construction materials. Specifications are also given for sidewalks and walkways, but the Plan and Bylaw make little mention of active transportation, and street space is designed mainly for cars. Recommended changes are included below in bold:

TOWN OF KENTVILLE SUBDIVISION BYLAW - APPENDIX B

Part 2: Street Specifications

In all respects, the criteria set out by the Transportation Association of Canada shall service as the basic guidelines for road design in the Town of Kentville. **Attention should be given to the design of barrier-free facilities that encourage public transportation and active transportation, including bikeways, walkways, and sidewalks.**

2.1.1 Local streets shall:

- (a) **Permit safe and comfortable pedestrian and bicycle movements as well as automobile movements, and protect vulnerable users such as people with disabilities, children and seniors;**
- (b) **Enhance the overall pedestrian experience through well-designed street layout and landscaping; and**
- (c) **Utilize strategies for reducing auto-dependence as a legitimate means of traffic management.**

- 2.2A **Cul-de-sacs shall not be used where, in the opinion of the Development Officer, the land can be effectively serviced by continuous streets.**
- 2.2B **Where cul-de-sacs are provided, islands shall be discouraged. Where islands are necessary, the minimum radius of the island shall be 6 m and the minimum width shall be 9 m between curbs. Islands shall be designed to be low-maintenance.**
- 2.2C **On cul-de-sacs with townhouse lots a sidewalk may, at the discretion of the Development Officer, be required where there is a pedestrian destination on the route such as a park or walkway.**
- 2.2D **The length of a cul-de-sac shall be measured along the cul-de-sac's centreline from its intersection with the centreline of the intersecting street to the centre of the cul-de-sac bulb.**
- 2.2E **Cul-de-sacs shall be a maximum length of:**
 - (a) **230 m where a walkway that connects to an adjacent street is provided at the end of the cul-de-sac; and**
 - (b) **100 m otherwise.**
- 2.12 Sidewalks shall be incorporated into the construction of new arterial and collector roadways as per the following:
 - Arterial Roadways - Both Sides
 - Collector Roadways - Both Sides**
- 2.15 **Traffic laybys should be considered only where vehicle traffic movement will otherwise be restricted.**

Part 7: Walkway Specifications

7.7 All walkways in residential and commercial areas shall be fenced on both sides for the entire length of the walkway right-of-way, unless otherwise approved by the Parks and Recreation Committee. Fencing shall be chain link fencing of minimum height of 1.2 metres and shall conform to Standard Drawing SD-13. Fencing materials shall meet the requirements of Part 14.10.

7.11 Walkways shall be oriented so as to make use of the existing street lighting, where possible. **Where street lighting does not exist, walkways shall be lighted, with a maximum distance of 75 m between lights. Light fixtures shall be of a full cutoff type and shall be located to avoid light trespass on neighbouring residential properties.**

Part 9: Curb and Gutter Specifications

9.5.1 Residential and commercial lots shall be limited to one driveway access per street frontage.

Parkland Dedication is governed by the **Municipal Government Act** which allows municipalities to require all new development to contribute to the expansion and enhancement of the public park system. The Town of Kentville requires, through the Subdivision Bylaw, that subdividers transfer 5% of the area of land shown on the final subdivision plan (exclusive of streets, walkways and remainder lots) to the Town, or cash-in-lieu equal to 5% of this land's assessed value. Currently, the possible types of parkland are not specified, and land quality criteria is ambiguous, which could lead to issues where the subdivider's interpretation of "usable land" does not result in land fit for parkland development. The option for subdividers to provide equivalent value in site development could offer Kentville a way of increasing recreation facilities where they are lacking. We recommend the following changes, with additions shown in bold:

TOWN OF KENTVILLE MUNICIPAL PLANNING STRATEGY

Policy P-16

IT SHALL BE THE INTENTION OF TOWN COUNCIL that the Development Officer shall co-ordinate recreation land dedication, cash-in-lieu of land dedication, **or in-kind site development**, and the use of such dedicated land, with the Director of Parks and Recreation.

TOWN OF KENTVILLE SUBDIVISION BYLAW

Part 3: Definitions

(va) USABLE LAND means land that:

- (i) has a minimum contiguous area of 1,000 square metres, not including portions of the lands with dimensions less than 6 m in any direction;**
- (ii) has a maximum slope of five per cent (5%);**
- (iii) is free from wet or swampy areas, or areas covered by water;**
- (iv) is not subject to any known environmental contamination;**
- (v) is not required as part of a stormwater treatment pond; and**
- (vi) is not an electrical or gas transmission corridor.**

Part 9: Parkland Transfers

- 9.1 (a) At the time of endorsement of approval on the final plan of subdivision by the Development Officer, the subdivider shall reserve and convey to the Town free of encumbrances, for park, playground, or similar public purposes, an area of usable land to the Town equal to 5% of the area of land shown of the final plan of subdivision, exclusive of streets, walkways, and any remainder lot, **where, in the opinion of the Development Officer, a deficiency in parkland exists. In determining the sufficiency of parkland, the Development Officer may reference Table A: Parkland Types, confer with the Parks and Recreation department, and/or reference any parks and open space plan in effect in the Town.**
- (b) The subdivider may reserve and convey to the Town, under section 9.1 (a) above, more than the required five percent.
- (c) As an alternative to the requirements of Section 9.1(a) and pursuant to the Municipal Government Act, the Clerk may accept for park, playground, or similar public purpose, a sum of money equal to 5% of the assessed value of the new lots created, exclusive of streets, walkways and any remainder lot.
- (d) As an alternative to the requirements of Section 9.1 (a) and pursuant to the Municipal Government Act, the Clerk may accept equivalent value of Section 9.1 (c) as in-kind site development equal in value to 5% of the assessed value of the new lots created, where sufficient parkland is available but a deficiency in recreation facilities exists.**
- (e) As an alternative to the requirements of Section 9.1 (a) and pursuant to the Municipal Government Act, the Clerk may accept any combination of land, cash, and site development, where the dedication required by Section 9.1 (a) will result in more than sufficient parkland to serve the surrounding area.
- (f) Where, in the opinion of the Development Officer, sufficient parkland or recreation facilities are available, the dedication shall be in the form of cash-in-lieu, as provided for in clause (c).

Table A: Parkland Types

Criteria	Trail or Corridor	Neighbourhood Park	Community Park	District Park	Regional Park
Typical service area	Varies with length and connectivity	500 metre service radius (10 minute walk)	2 km service radius	5 km service radius	Varies with physical or cultural heritage features
Typical active and passive recreation facilities	Paved or unpaved active transportation trails, benches, picnic area, drinking fountains, bicycle parking and repair stations, interpretive signage.	Play structures, footpaths and trails, play meadow, watercourse access, paved court, gazebo, drinking fountain, outdoor pool or fountain, skating rink, benches, picnic area, etc.	Similar to neighbourhood parks. May also include sports fields, parking lots, washrooms, etc.	Similar to community parks.	Similar to community and district parks. May also include change rooms, indoor/outdoor sports complex, campgrounds etc.
Typical complementary municipal facilities	Schools, bus stop, bulletin board	Post box, community garden	Schools, community mailboxes, bulletin board, bus stop	Schools, community mailboxes, bus stop	Library, transit station or bus stops

9.1.2 Where the parkland dedication is to be provided in the form of land, it shall:

- (a) meet the definition of usable land; and
- (b) have at least 6 metres of frontage on a public road or, where the land use dedicated for trail purposes, connect to an existing public trail network.

9.1.3 In addition to the requirements of Subsection 9.1.2, where the land being subdivided abuts a natural watercourse appropriate for water-based activities, a portion of the lands to be dedicated to the Town shall provide at least one access point to the shoreline that is appropriate for human use.

9.1.4 Some or all of the requirements of Subsection 9.1.2 may be lifted at the discretion of the Development Officer where the unique cultural, heritage, physical, or ecological characteristics are valuable for interpretation and public access.

9.1.5 Land protected under separate regulations as conservation lands with a portion intended for public access shall be included within the parkland dedication calculation of 5% total land.



Kentville Moves Active Transportation Plan

5. ACTIVE TRANSPORTATION NETWORK

5.1 APPROACH

The most obvious way to encourage active transportation in Kentville is by simply providing safe and convenient routes to do so. Active transportation routes should be safe, direct, comfortable and logical.

Safe. Our roads are designed using standards to make it as safe as possible to drive a vehicle. Stopping distances and corner sight lines are two things traffic engineers consider when designing our roads. The same approach to safety should be taken with active transportation so that users are not anxious, stressed, or feeling unsafe while traveling.

Direct. Everyone loves shortcuts. Like our roads, active transportation routes should provide options for short and direct routes between origins and destinations.

Comfortable. Roads full of potholes are enough to drive someone crazy. Indeed, no one enjoys a bumpy ride. For active transportation users, an even surface with a decent amount of space is essential to making the facilities usable.

Logical. While driving, particularly in new places, we rely on a system of road-side wayfinding signs to help us arrive at our intended destination. The active transportation network should also make sense to a visitor - signage should be available to help active transportation users easily plan their trip and navigate the network.

The Kentville Active Transportation Network is made up of many existing and proposed route types - each with different roles and characteristics.

5.2 ROUTE TYPES

Each route within the network has a specific class and hierarchy.

Hierarchy

A clear network hierarchy helps establish a logical structure to the active transportation network. Just as neighbourhood streets, collector streets, and highways work together to form an effective street network, the different types of active transportation routes work together to form an effective active transportation network.

Regional routes are the “spine” of the Kentville Active Transportation Network. These are longer, uninterrupted routes that may also provide connections to neighbouring municipalities. These routes typically enable efficient travel over long distances.

Local routes enable shorter distance active transportation trips within travel within a neighbourhood or district. They connect common origin and destination points to allow active transportation to be better used for utilitarian purposes.

Class

There are many different classes of active transportation routes that accommodate different modes, trip types and spatial contexts. The Kentville Active Transportation Network includes signed bike routes, bike lanes, paved shoulders, multi-use pathways, nature trails and more. Each of these route classes can be regional or local route types.

The following pages describes these route classes used in the Kentville Active Transportation Network.

SIGNED BIKE ROUTE

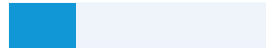
Cost:



AT Modes:



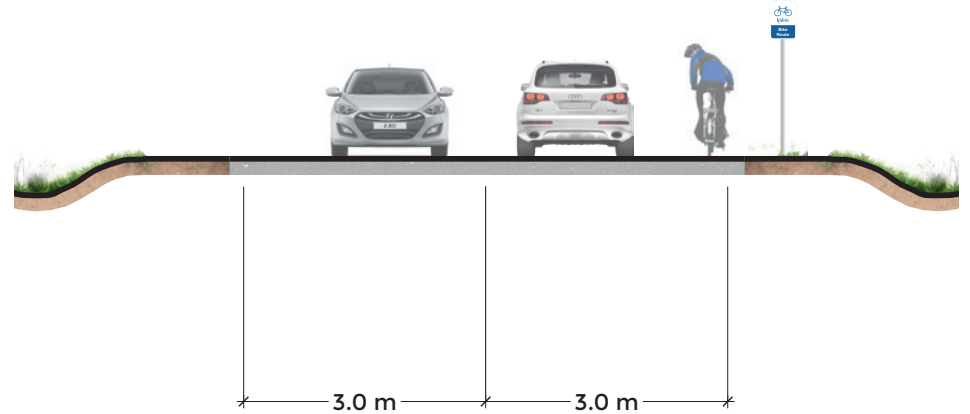
Level of Comfort:



Signed bike routes are designated on-road 'shared use lanes', and use signage that indicates that the road is to be shared by motorists and cyclists. Signed bike routes are suitable on lower volume / lower speed roads or in locations where it is important to maintain continuity of a bicycle facility through an area where it is too narrow to fit other active transportation route types.

These types of routes should feature "Bike Route" signage, or directional signage that acknowledges that the road is a bike route. For longer distance routes, "Share the Road" signs can also be placed to reinforce that the road must be shared by all road users.

Signed bike routes improve the level of comfort for cyclists, but still require a reasonable level of experience and confidence. Novice or beginner riders will likely not be comfortable riding in a shared use lane.



BICYCLE LANE

Cost:



AT Modes:



Level of Comfort:

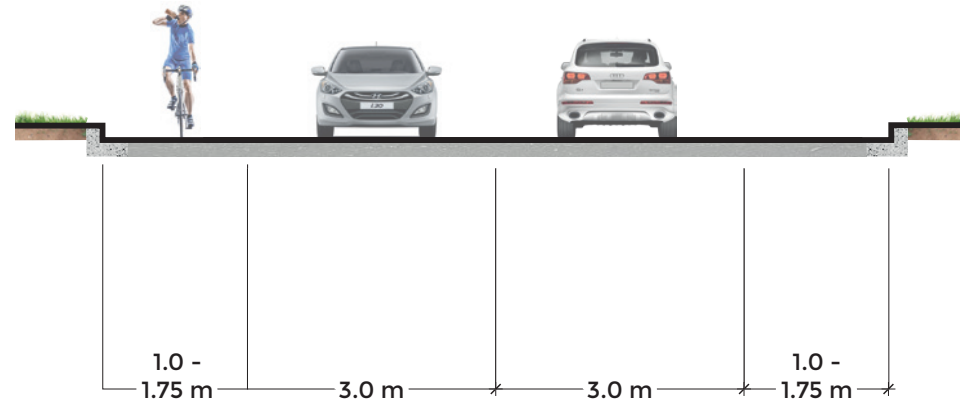


Bicycle lanes provide dedicated space for cyclists alongside vehicular traffic. They improve the level of comfort for cyclists over shared use lanes because they delineate a dedicated space for cyclists. They should be 1.8 metres wide (but must be at least one metre wide) and demarcated with a bicycle stencil placed in the center of the lane. Bike lanes provide a reasonably safe and comfortable cycling facility, particularly on roads with high traffic volumes and speeds.

It is important that bicycle lanes stay obstacle-free and are kept clean of snow, ice, litter and debris. It is also important that local law enforcement ensure that bicycle lanes aren't used for parking or loading. If cars regularly obstruct bike lanes, cyclists are forced to swerve into vehicular lanes, which creates very dangerous situations.

There are a handful of on-road active transportation routes within the Town that feature high traffic volumes or are key regional corridors, and should feature bike lanes to allow cyclists to use both sides of the road in a safe and comfortable manner.

The cost to develop bike lanes depends on the context. If unused, paved space exists alongside the road already exists, then all that is required is paint and other minor improvements. However, if the shoulders need to be paved, the costs can go up considerably. Furthermore, if on-street parking needs to be removed to accommodate a bike lane, costs could include relocating the parking spaces elsewhere.



SEPARATED MULTI-USE PATHWAY

Cost:



AT Modes:

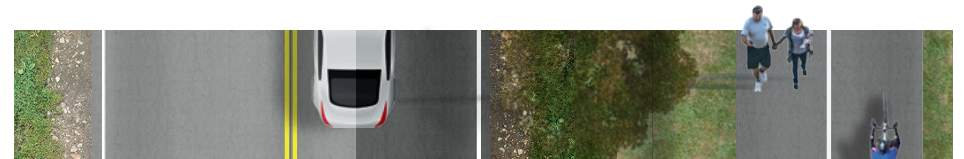
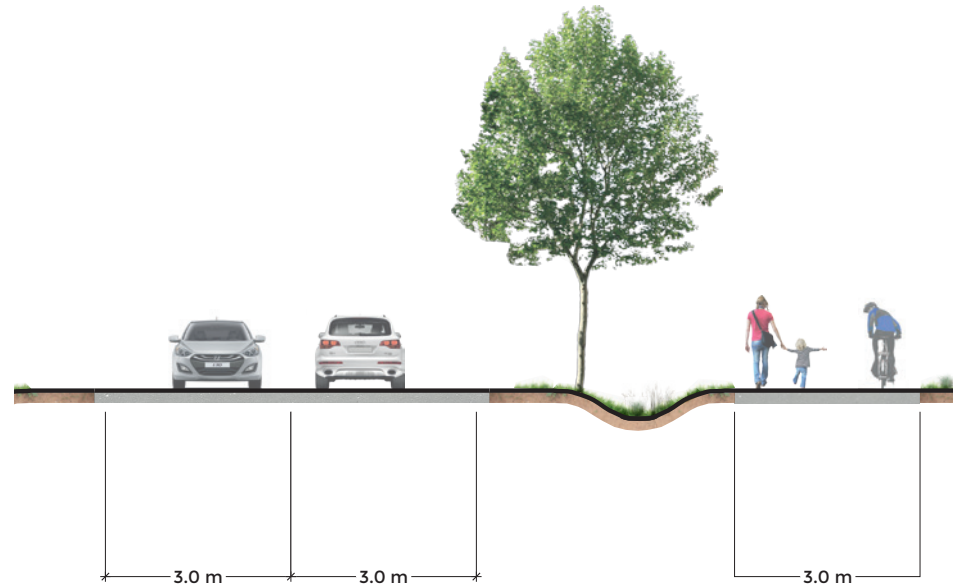


Level of Comfort:



Separated multi-use trails are located along a road right-of-way and are offered in lieu of a sidewalk and bike lane combination. They can accommodate a variety of active transportation users, including pedestrians and cyclists in the summer, and cross country skiers, and snowshoers.

Cyclists and pedestrians can usually share these trails without conflict, however if the number of users grow, the trail width should be increased to 4.5 m and pedestrian and bike paths should be separated by a line.



MULTI-USE PATHWAY

Cost:



AT Modes:

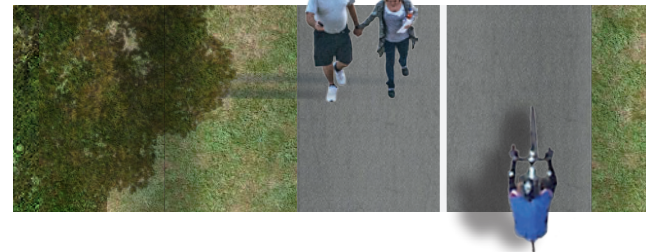
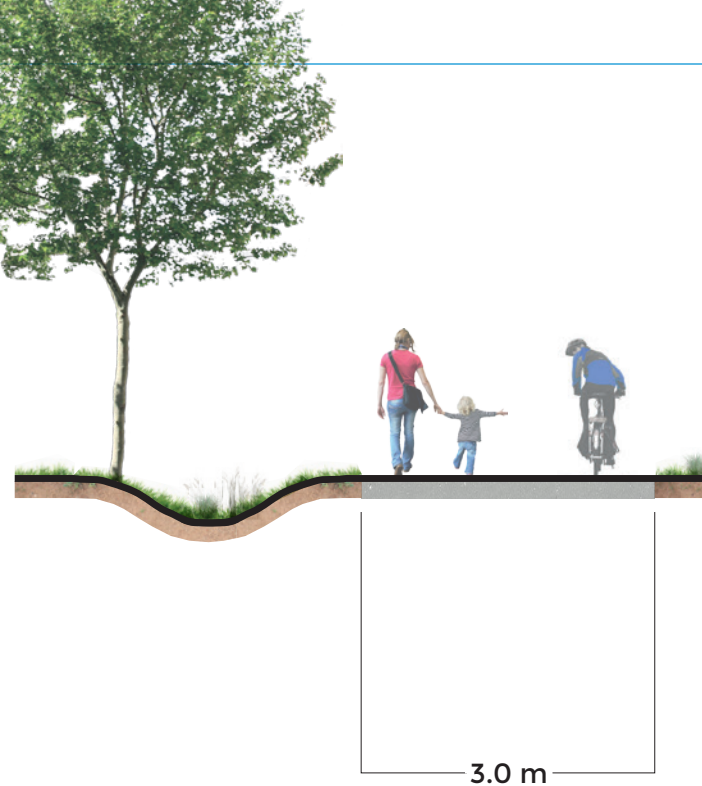


Level of Comfort:



Multi-use pathways are similar to separated multi-use pathways, but are not within the road right-of-way).

- Trail treads must be a minimum of 3 m (8 ft) wide
- Both sides of the trail should be kept clear of branches and brush for a minimum of 0.8 m (2.5 ft)
- Vertical clearance must be a minimum of 3 m (10 ft)
- Trail surface consists of 4" compacted crushed rock base
- Desired Grade: 0 to 5%
- Maximum Grade: 8% (sustained), 12% less than 20 m (160 ft)
- Outslope Grade: 4% (maximum)



PEDESTRIAN TRAIL

Cost:



AT Modes:

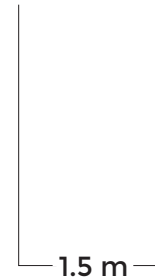


Level of Comfort:



Pedestrian trails are basic trails that are narrower than multi-use trails and are too narrow or steep to accommodate bicycles. They can be used by pedestrians, cross country skiers, or snowshoers.

- Trail treads must be a minimum of 1m (3 ft) wide
- Both sides of the trail should be kept clear of branches and brush for a minimum of 0.6 m (2 ft)
- Vertical clearance must be a minimum of 3 m (10 ft)
- Trail surface consists of natural/native soil
- Desired Grade: 0 to 5%
- Maximum Grade: 10% sustained, 15%, less than 20 m (160 ft)
- Outslope Grade: 4% (maximum)
- Straight or switchback ramps should be provided for slopes over 5%
- Staircases and ramps should be provided for any grades greater than 15%
- Ramps and staircases should be slip-resistant with colour contrasting strips and continuous handrails



Kentville Moves

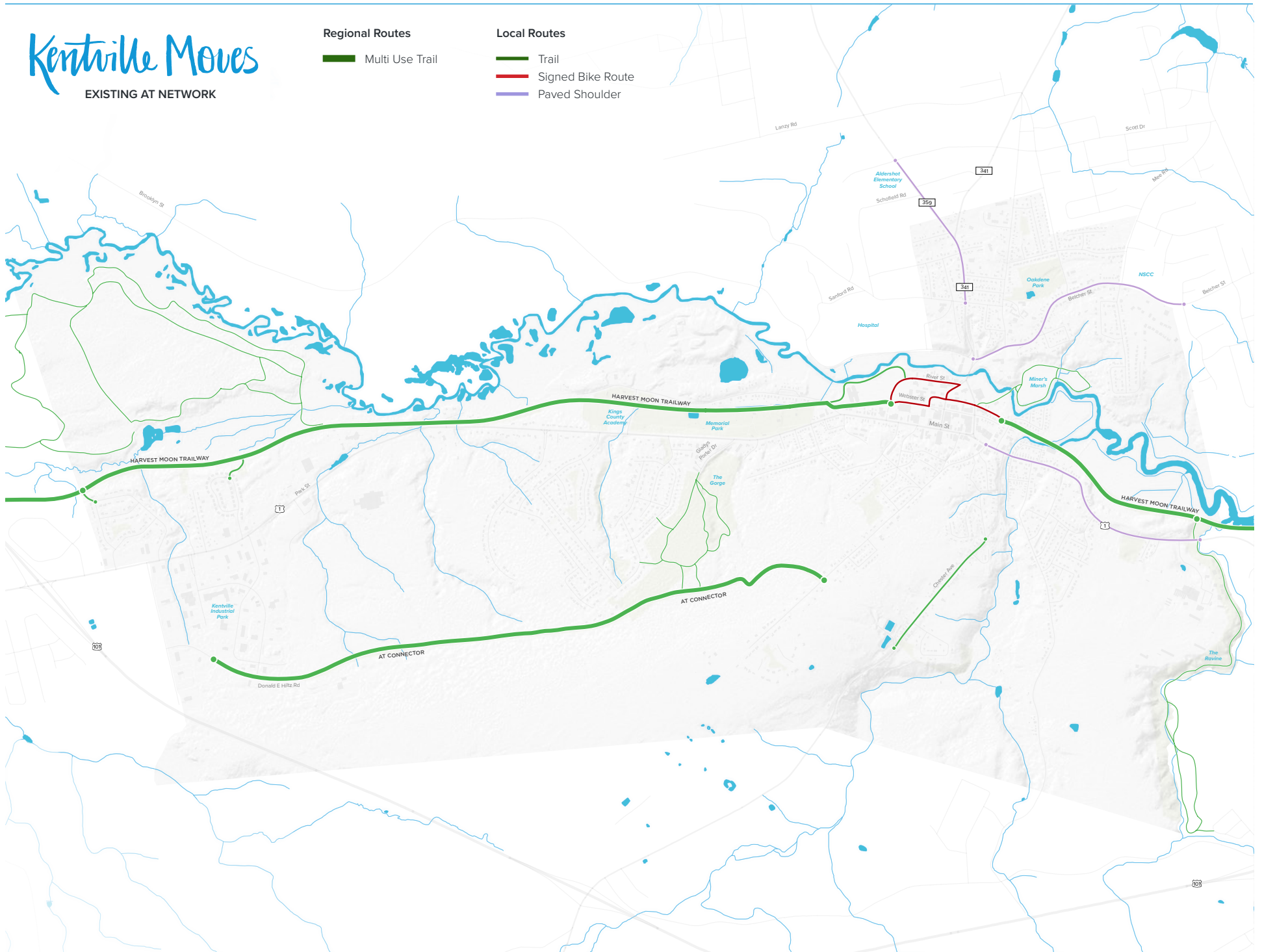
EXISTING AT NETWORK

Regional Routes

Multi Use Trail

Local Routes

- Trail
- Signed Bike Route
- Paved Shoulder



Kentville Moves

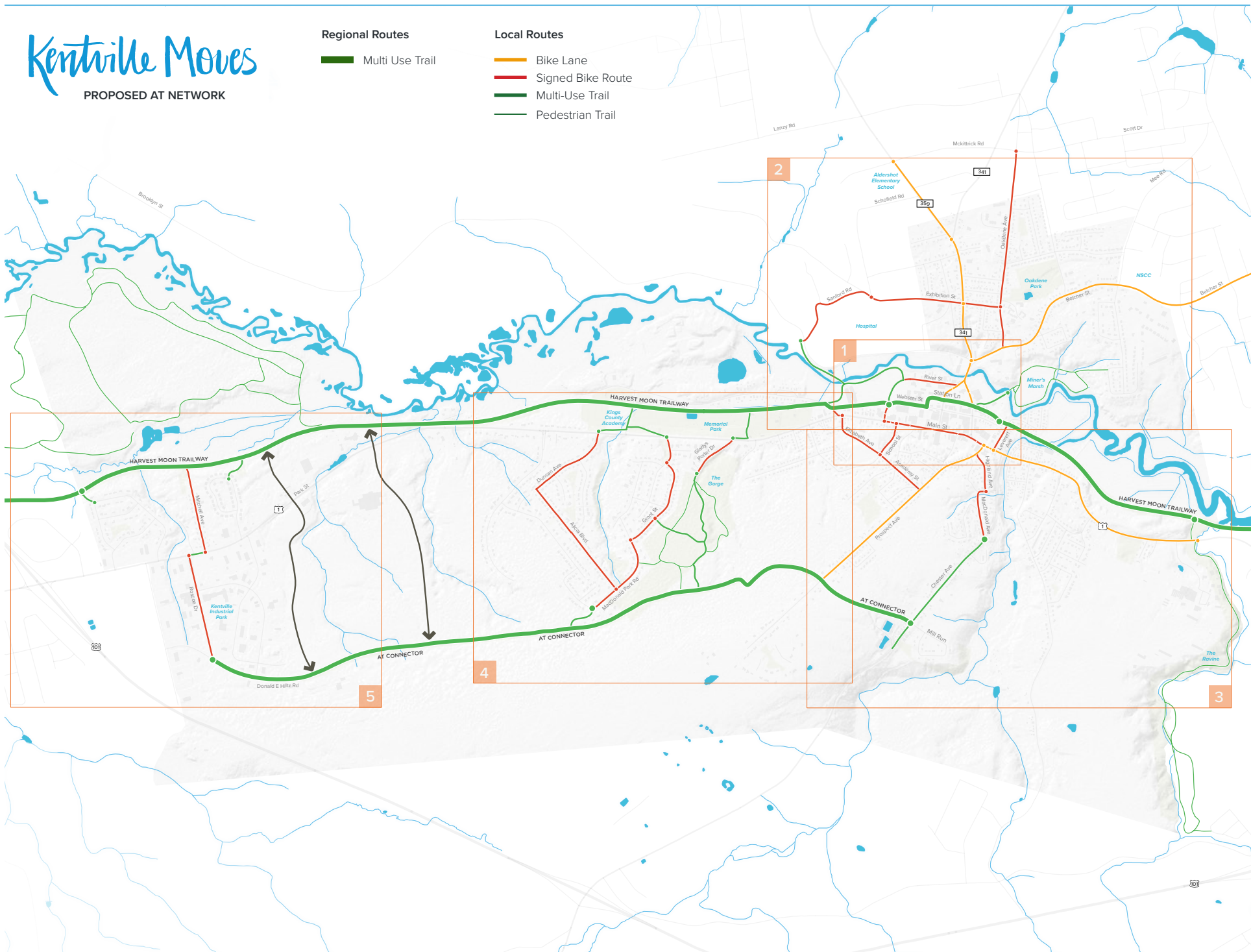
PROPOSED AT NETWORK

Regional Routes

Multi Use Trail

Local Routes

- Bike Lane
- Signed Bike Route
- Multi-Use Trail
- Pedestrian Trail



5.3 REGIONAL ACTIVE TRANSPORTATION ROUTE IMPROVEMENTS

The proposed Active Transportation Network features two key east-west regional active transportation routes. The Harvest Moon Trailway is essentially a 100-series highway for active transportation, providing a safe and comfortable east to west corridor for active transportation users along the northern periphery of the Town. Another east-west regional corridor is proposed along the southern periphery of the Town, and is called the Active Transportation Connector.

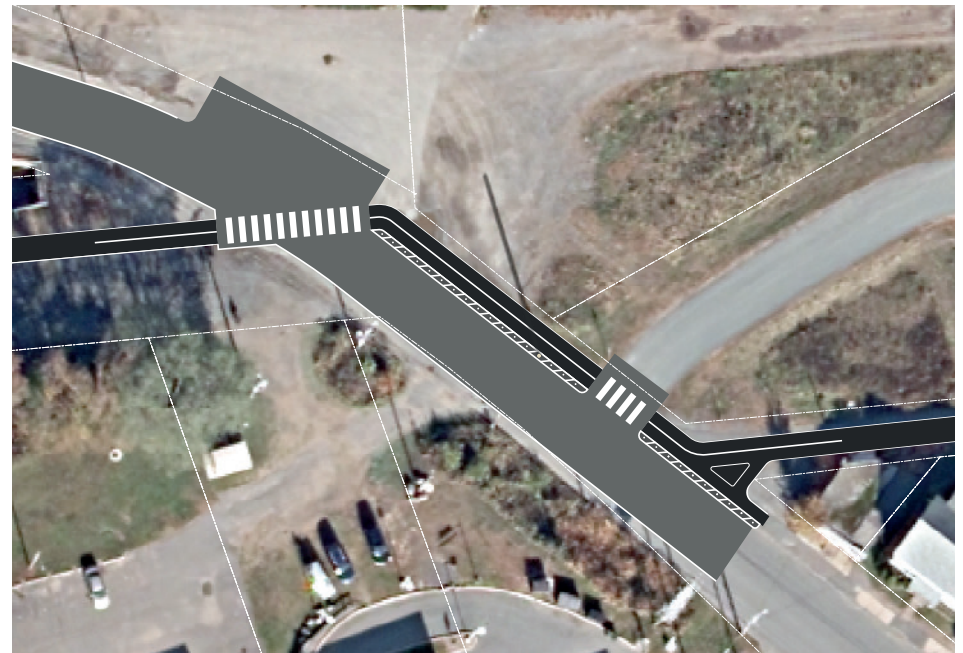
1 Improve Harvest Moon Trailway road crossing at West Main Street

Priority	Medium	Est. Costs	TBD	Length	~ 80 metres
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Description

The Harvest Moon Trailway crosses West Main Street at an oblique angle, and creates a confusing situation for trail users looking to continue along the trail. Some surface enhancements to the alignment of the road crossing would improve the user experience in this area and prevent trail users from getting lost.

A short separated multi-use pathway along the north-east side of West Main Street featuring a painted centreline would help improve the logic of this road crossing. The centreline along the surface would follow the eye of active transportation users from either end of the trail. The multi-use pathway along West Main Street is separated from traffic with a series of white flexible delineating bollards surrounded by white painted lines. Additional sign posts can be placed in this space as well to further guide trail users through the road crossing.



2 Connect Harvest Moon Trailway through the Downtown

Priority **High**

Est. Costs TBD

Length 750 metres

Description

The Harvest Moon Trailway is a world class regional trail that connects Annapolis Royal to Grand Pre, and runs right through the heart of Kentville. As the trail continues to be marketed and promoted as a tourism attraction, it is expected that trail traffic will continuously increase, bringing in more and more tourists and visitors into the Town.

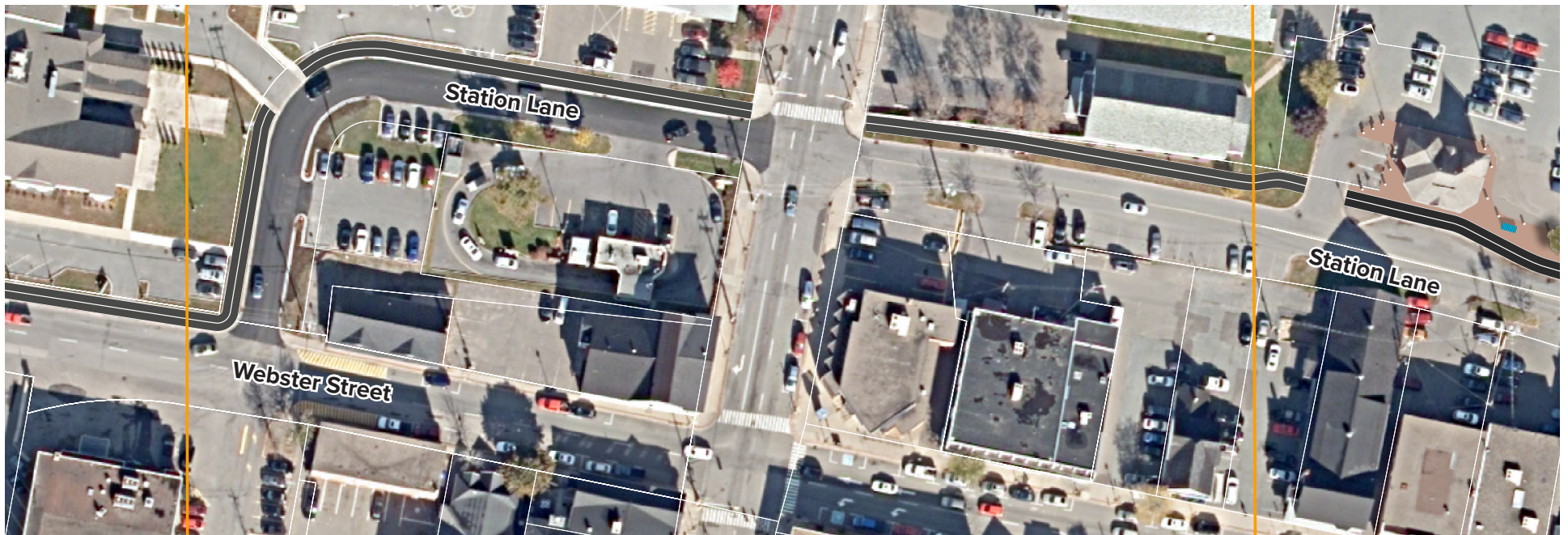
This opportunity can be leveraged by the Town by improving the Harvest Moon Trailway connection through the downtown area. Currently, the trail stops in the western end of the downtown on Webster Street and picks up again 750 metres down the eastern end of downtown on Justice Way. This gap in the trail is filled by a narrow 1.5 metre wide sidewalk and a signed on-street bike route. For pedestrians, this gap isn't a major obstacle, but for cyclists, the transition from a wide, dedicated multi-use pathway to an on-street route shared with vehicles can be a daunting one, particularly for young or inexperienced cyclists.

Looking to address this issue, the Town commissioned a study that explored several options to provide better on-street bicycle facilities. The study recommended a two-way protected bike lane running along the north side of Webster Street and Webster Court. In this concept, a two-way bike lane is separated from traffic by the on-street parking lane, which would require the removal of one of the two westbound traffic lanes (west of Cornwallis Street). The bike lane would also require the removal of 22 parking spaces along the street. While the option would have resulted in a fantastic bicycle route, the community decided against this option due to the loss of parking and a travel lane.

Another option that was considered in the study was a multi-use path along the north side of Webster Street, Station Lane and Justice Way. In this scenario, the existing sidewalk would be removed and replaced with a minimum three metre wide asphalt surface. The Harvest Moon Trailway is a multi-use trail, so continuing the same type of facility through the Downtown is consistent and direct and will be easy to follow for visitors to the area.

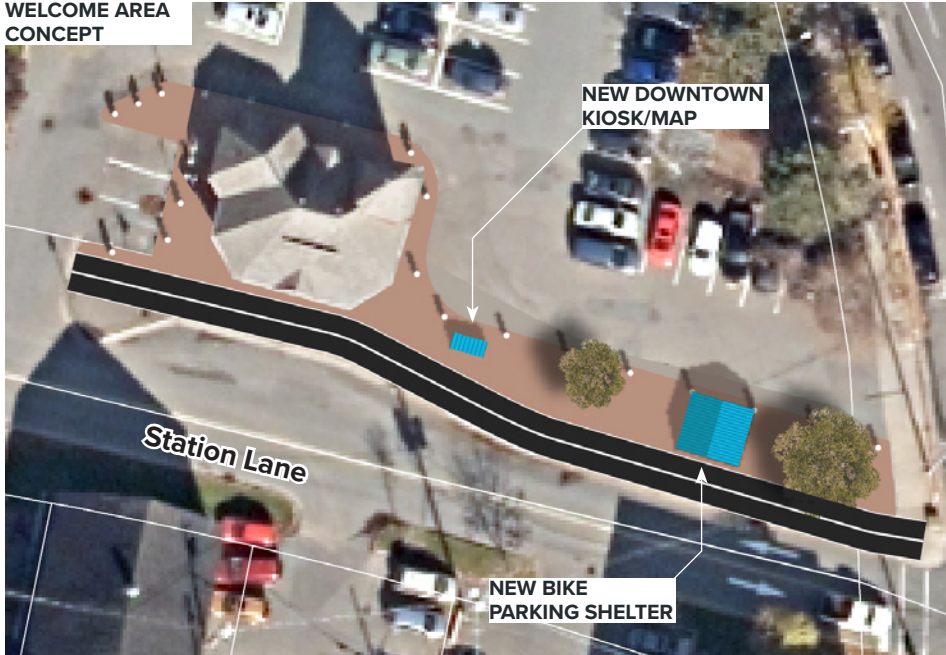
Although this option is more complicated and capital intensive than the two-way protected bike lane, it has no negative impacts in terms of on-street parking loss and traffic reconfigurations, which was the main concern from the business community. Traffic circulation would remain the same and no on-street parking would be removed. The removal or relocation of several light standards, utility poles, and street trees would be required and some minor grading would be required on adjacent lots. The bus stop on Station Lane would also need to be reconfigured, as would the municipal parking lot next to the King's County Museum.

The Town can further leverage this opportunity by creating a central Welcome Area for visitors and tourists arriving by bike near the King's County Museum and parking lot area. This Welcome Area could include an outdoor kiosk, a bicycle repair station (see pg. 87) and a bicycle parking shelter (see pg. 88). The kiosk could feature a large map of downtown Kentville that advertises the many wonderful shops, restaurants and businesses that are nearby, which will entice cyclists to stop and stay in Town (if they hadn't already planned to). They can then conveniently park their bicycles in the shelter and stay in Town for an extended period of time.





WELCOME AREA CONCEPT



3 Develop the Active Transportation Connector

Priority	Opportunity	Est. Costs	\$900,000	Length	4,500 metres
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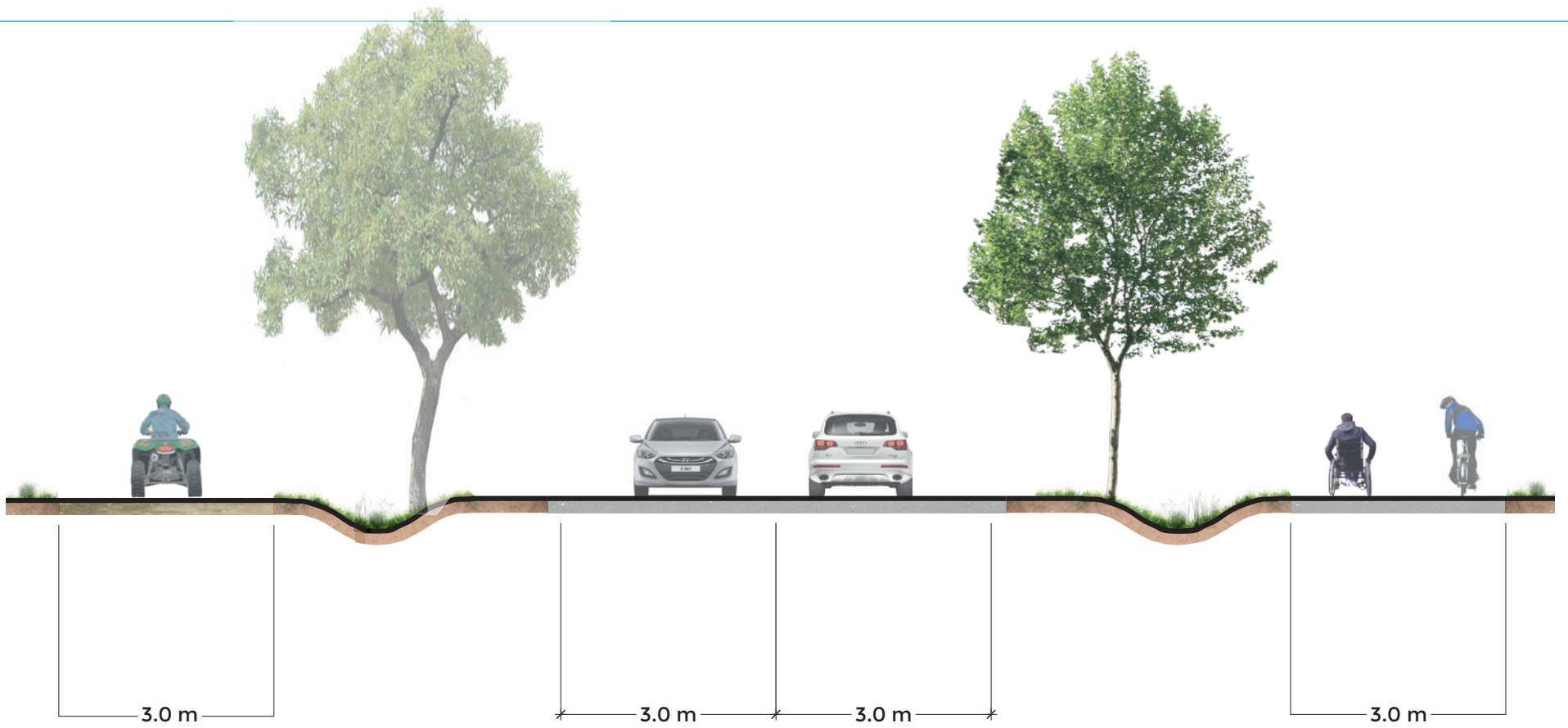
Description

Another regional route is the proposed Active Transportation Connector which also runs east-west, but along the southern boundary. Together with the Harvest Moon Trailway, these two regional trails will provide safe, convenient and direct routes for active transportation trips within and beyond Kentville.

Currently, the Active Transportation Connector is a rough, gravel trail that connects Prospect Avenue to Donald E. Hiltz Road. This trail is a useful corridor that connects several neighbourhoods to the Kentville Business Park via a convenient off-road facility. The trail is rough and suitable for mountain bikes, but not road bikes.

The Town plans to eventually develop this right-of-way into a road that will extend from the Kentville Business Park to Chester Avenue when development in the south of the Town increases in the future. When this road is built, it should include a separated multi-use path that would run alongside the northern side of the street. The road itself will likely be a \$10-15 million project, and adding a multi-use pathway would cost an additional \$900,000. The pathway would provide a very safe and convenient corridor for active transportation users that would complement the Harvest Moon Trailway (which runs in the north).

Although not related directly to active transportation, the Town may also want to consider providing space for OHV vehicles along this corridor. There is significant OHV use in the southern area of Town and connections to routes in Coldbrook could be realized through a new OHV trail that runs along the southern side of the future road.





Regional Routes

Multi Use Trail

Local Routes

- Bike Lane
- Signed Bike Route
- Multi-Use Trail
- Pedestrian Trail

5.4 DOWNTOWN ACTIVE TRANSPORTATION NETWORK

The downtown is an important area to encourage active transportation. It is a major destination and trip generator in the Town and the centre of civic activity. The downtown is home to recreation centres, farmers market, restaurants, cafes, offices and shops. It is also home to a major arterial road (Trunk 1) that accommodates high traffic volumes and runs through the heart of the district. Like most downtowns, space is a limited resource, making it difficult to balance infrastructure for all road users.

Developing a multi-use trail along Webster, Station and Justice Way (see pg 64) will be a major step forward to improving bicycle and pedestrian infrastructure in the downtown. This plan proposes several other active transportation routes in the downtown area that will further improve conditions:

1 Kentville Bridge Bike Lane			
Priority	High	Est. Costs	\$3,900
		Length	300 m. (each way)
<p>Description</p> <p>In 2019, the Kentville Bridge will be rebuilt. The new bridge design features sidewalks on both sides and a 1.5m wide paved shoulder between the sidewalks and traffic lanes. A pair of bike lanes are proposed in the paved shoulders on the bridge. The bike lanes continue north on Route 341 (see pg 74) and east via Belcher Street (see pg 73). From the bridge, the bike lane continues south to the three-way intersection at Route 341 and Aberdeen. From here the bike lanes fork into two, one-way bike lanes. One runs southbound along the west side of Aberdeen Street until it connects to the Harvest Moon Trailway connector on Station Lane. The other bike lane begins at Station Lane and runs northbound along the east side of Route 341, completing the loop back toward the bridge.</p> <p>When complete, these bike lanes will provide a direct connection between the downtown, north end Kentville and the NSCC.</p>			



2 Main Street Signed Bike Route

Priority	Medium	Est. Costs	\$2,475	Length	900 metres
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Description

A one-way signed bike route is proposed on Main Street, running eastbound between Webster Street and Prospect Avenue. This would provide a way for cyclists travelling from the southern end of the Town to access the downtown area. The signed bike route ties into the proposed Station Lane Multi-Use Path to the west (see pg 61) and the proposed signed bike route on Leverett Avenue (see below) to provide an effective active transportation loop around the downtown. The signed bike route also converts into a two-way bike lane past Prospect Avenue, which continues eastbound toward New Minas.



3 Leverett Avenue Signed Bike Route

Priority	Medium	Est. Costs	\$550	Length	200 metres
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Description

A one-way signed bike route is proposed on Main Street, running eastbound between Webster Street and Prospect Avenue. This would provide a way for cyclists travelling from the southern end of the Town to access the downtown area. The signed bike route ties into the proposed Station Lane Multi-Use Path to the west (see pg 61) and the proposed signed bike route on Leverett Avenue (see below) to provide an effective active transportation loop around the downtown. The signed bike route also converts into a two-way bike lane past Prospect Avenue, which continues eastbound toward New Minas (see pg 78).



4 New Multi-Use Pathway to Miner's Marsh Trail

Priority	Medium	Est. Costs	\$30,000	Length	150 metres
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Description

The Miner's Marsh Trail is a well-loved walking trail within the downtown district. The connection between the trail and the downtown, however, requires pedestrians to walk along a narrow asphalt pathway and through an open parking lot behind the Law Courts. A safer and more comfortable connection is needed. A 3.0 metre wide multi-use pathway is proposed that begins at the Harvest Moon Trailway and runs along Barclay Street. A protected pathway is provided through the parking lot that links up the trailhead for the Miner's Marsh Trail.



5 Improve Pedestrian Circulation, Safety and Comfort in the Downtown

Priority **High**

Description

The downtown is a vibrant area full of people and activity on any given day. The downtown has a great layout and structure, but needs an update to bring the pedestrian realm up to today's standards. The existing layout can be modified slightly with little cost and effort to become a more safe, comfortable and inviting space.

Further to this Active Transportation Plan, the Downtown should prepare a Revitalization Master Plan that would include a more detailed exploration of the following recommendations that would improve the pedestrian realm in the downtown:

Eliminate tripping hazards and uneven surfaces in the sidewalk network

Most downtown sidewalks feature a strip of brick pavers which have sunk or cracked over the years and need to be removed and replaced with a more permanent and even surface.

Several concrete sidewalk slabs have heaved or sunk, creating an uneven walking surface from one slab to another. These subtle raised surfaces can be difficult to see, especially for seniors, but can cause serious tripping hazards. Every spring, Town staff should check the condition of sidewalks and repair as appropriate.

Future sidewalk projects should avoid trowelling the expansion joints between each slab. Trowelled joints create a very bumpy surface for people using wheelchairs. Instead, expansion joints should be saw-cut and untrowelled. Concrete slabs should be swept to improve traction.

Improve and expand the pedestrian network

Crosswalks are crucial to the pedestrian network, and dangerous or incomplete intersections were identified at the following locations:

- » Main Street between Masters Avenue and Aberdeen, at Aberdeen, at Prospect Avenue
- » Route 341 at Webster Street, at Justice Way
- » Aberdeen Street at Station Lane, at River Street
- » Webster Street at River Street
- » Oakdene Avenue at Exhibition Street

Safe and accessible sidewalks are lacking in subdivisions to the south as well as the North End along Oakdene Avenue, Brooklyn Street, Exhibition Street, and Campbell Road, and upgrades to Belcher Street's paved sidewalks could improve the street. Proposed pedestrian infrastructure is focused on the downtown, but these locations should be prioritized where repaving schedules and budgets align.



Top
Kentville Sidewalk with trowelled joints

Bottom
Sidewalk with saw-cut joints

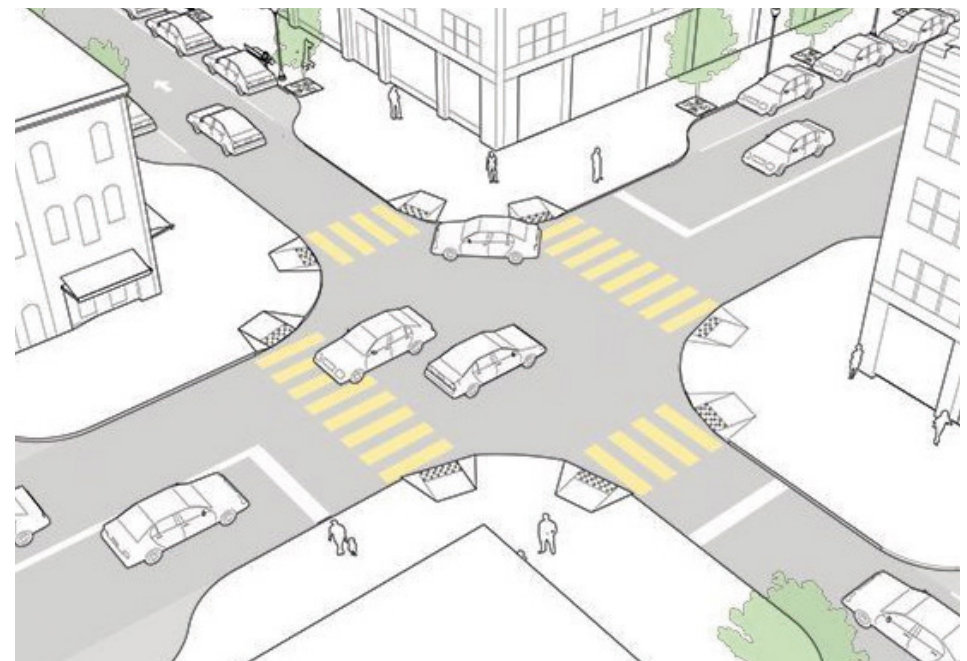
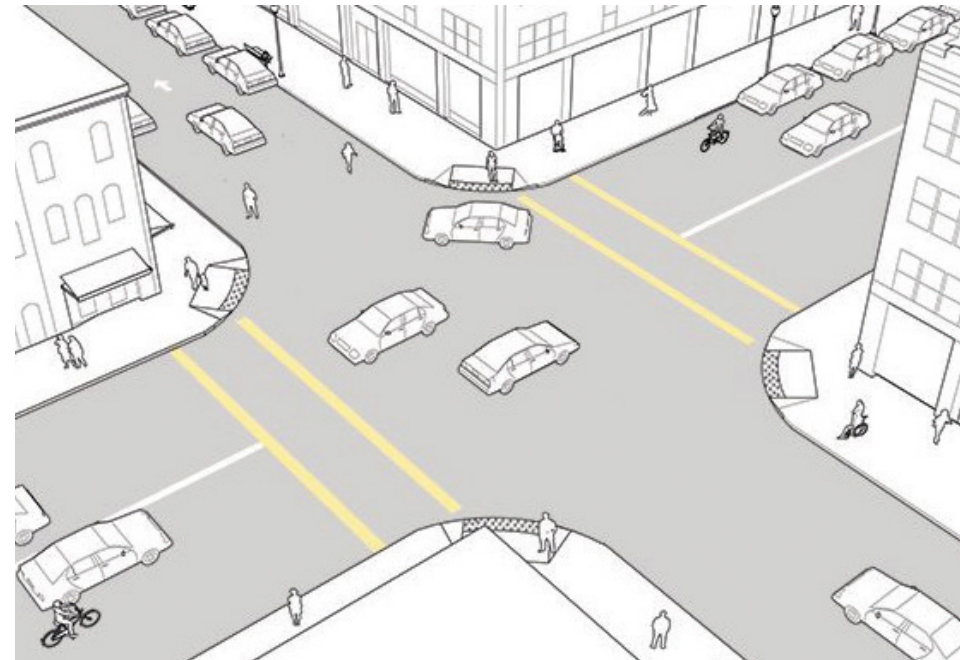
Introduce curb extensions where possible to improve and expand pedestrian space

There are areas along streets in Downtown Kentville, particularly near intersections and driveway entrances, where parking is not permitted and the roadway is unused. These areas are often identified by a yellow angled paint lines. These residual spaces and can be better used to accommodate trees, street furniture, pedestrian space, or other streetscape improvements. These spaces also provide opportunities to create areas of refuge for pedestrians who are waiting to cross the street.

Curb extensions (also known as sneckdowns or bump-outs) are used to extend the sidewalk into these residual spaces, which reduces crossing distance and adds to pedestrian space on the sidewalks. Curb extensions also decrease the overall width of the roadway and can serve as a visual cue to drivers that they are entering an urban district.

Curb extensions at crosswalks also allows pedestrians and motorists to see each other better, when vehicles parked in a parking lane would otherwise block visibility. In the downtown, crosswalks should be kept as compact as possible. Mid-block crossings should be considered to achieve a minimum distance of 100 metres between crossings. Crosswalks should be marked with a ladder or zebra paint pattern, which are more visible than standard parallel lines, and should be well lit.

Some site specific issues will need to be addressed with a downtown plan, where unique design constraints require finer detail. One example is the Webster Street access to the Independent grocery store, where sidewalk extensions and crosswalks will need to be designed around loading zones and parking entries.



Top
Typical street layout

Bottom
Street with curb extensions

Source:
NACTO Urban Street Design Guide, 2018

Introduce Accessible Pedestrian Signals to crosswalks

Most, if not all, of the crosswalks in Downtown Kentville would be extremely difficult to cross for pedestrians with low vision, who are hard of hearing or who use a wheelchair to get around. Pedestrians with low vision rely on audible and tactile cues to travel. Cues in the environment include the sound of traffic, presence of curb ramps, audible tones in pedestrian signals, and detectable warnings.

Important road crossing information should be provided in formats that use more than one sense. Pedestrian information includes signage, Accessible Pedestrian Signals (APS), and detectable warnings.






Accessible Pedestrian Signals (APS) are devices that communicate information about the WALK and DON'T WALK intervals at signalized intersections in non-visual formats to pedestrians who are blind or who have low vision. Audible beaoning is the use of an audible signal in such a way that blind pedestrians can hone in on the signal coming from the target corner as they cross the street. Crosswalk buttons must be placed directly at crosswalks within reach of all heights (including wheelchair users), and able to be effectively cleared of snow and ice.

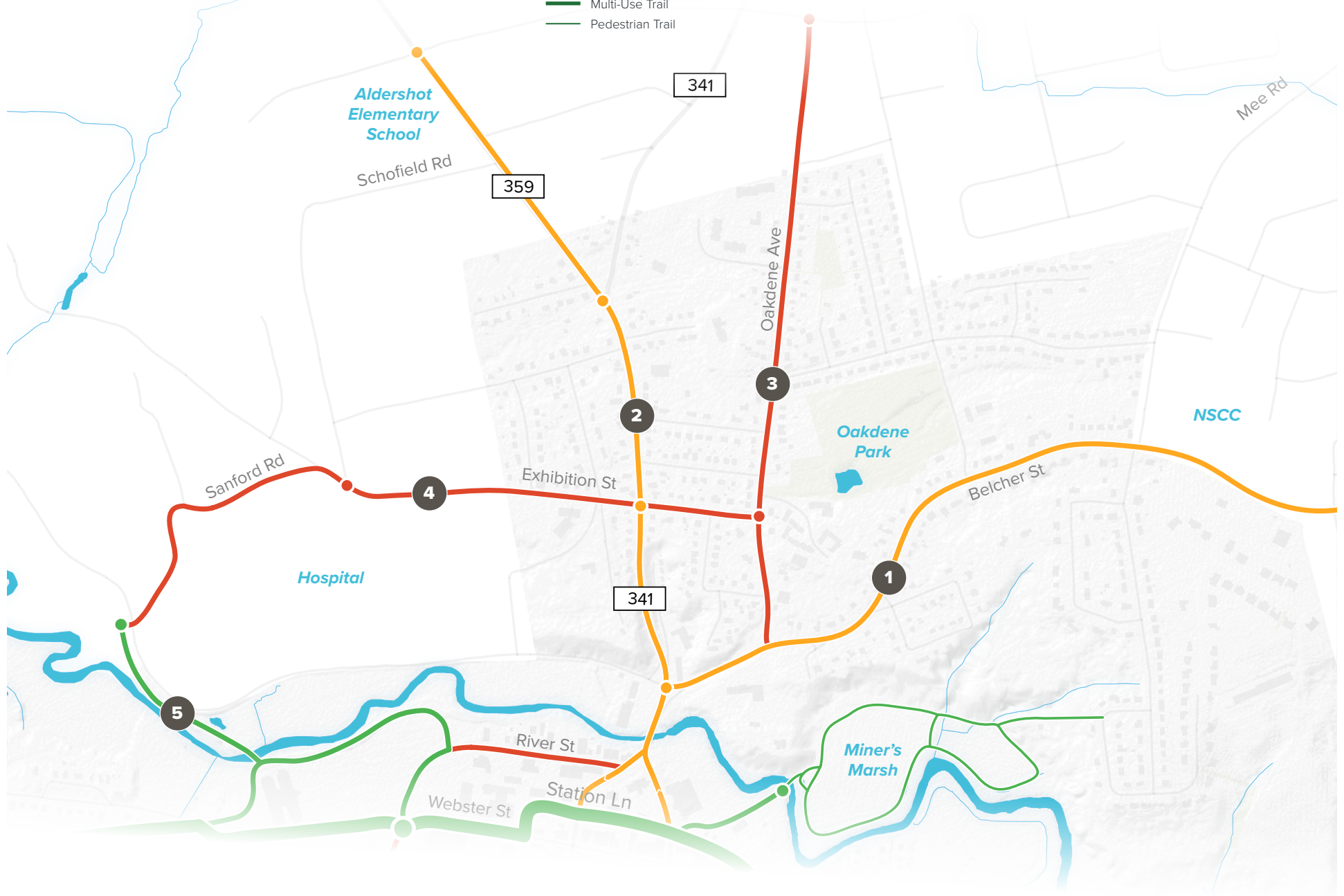
Detectable warnings are standardized surfaces placed at crosswalks, consisting of a grid of built in truncated domes to indicate crossing areas to people who are blind or who have low vision.



Top
Detectable Warning Strip

Bottom
Audible Beaoning
Accessible Pedestrian Signal

- | Regional Routes | Local Routes |
|---|--|
|  Multi Use Trail |  Bike Lane |
| |  Signed Bike Route |
| |  Multi-Use Trail |
| |  Pedestrian Trail |



5.5 NORTH END ACTIVE TRANSPORTATION NETWORK

The north end of Kentville is a densely populated residential area. It is also nearby three regional destinations - the Hospital, NSCC, and Oakdene Park. This plan proposed several active transportation routes that will improve conditions in the north end area:

1 Belcher Street Bike Lane

Priority	High	Est. Costs	\$9,100	Length	1,400 metres
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Description

Belcher Street is major arterial road that connects downtown Kentville to residential neighbourhoods in the northeast, the NSCC and continues outside the Town boundary to Port Williams. The curb-to-curb roadway is quite wide throughout most of Belcher Street and features paved shoulders on both sides of the road between Oakdene Avenue and Apple Tree Lane. These spaces can be easily converted into a bicycle lane. The small segment between Route 341 and Oakdene Avenue is getting repaved as part of the Kentville Bridge project. When this occurs, the roadway should be widened to include a bike lane.

The road also has a paved shoulder between Apple Tree Lane and Fox Hollow Drive, however, it is only paved on the north side of the street. When the road is next resurfaced or repaved, the should also be extended on the south side of the road, so that the bike lane can continue to the NSCC. When complete, these bike lanes will provide a direct connection between the downtown and the NSCC.



2 Route 341/359 Bike Lane

Priority	Low	Est. Costs	\$18,825	Length	1,200 metres
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Description

Route 341 and Route 359 provides a direct connection between the downtown and residential neighbourhoods to the north. A bike lane is proposed between Kentville Bridge and Aldershot Elementary School/McKittrick Road (just north of the Town boundary). The majority of the road features wide paved shoulders, particularly between Exhibition Road and McKittrick Road. Between the Kentville Bridge and Exhibition Road, however, the road narrows and paved shoulders are no longer available. In this area, the road bed will need to be widened to accommodate bike lanes. In this section, bike lanes will not be possible until the road is repaved. In the meantime, the Town can designate this section as a Signed Bike Route until bike lanes are possible.



3 Oakdene Avenue Signed Bike Route

Priority	Medium	Est. Costs	\$3,300	Length	1,200 metres
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Description

Oakdene Avenue is a local street that intersects with Belcher Street, and runs north past Oakdene Park. The street is proposed to be a signed bike route, as it features low traffic volume and provides access to many residential homes.

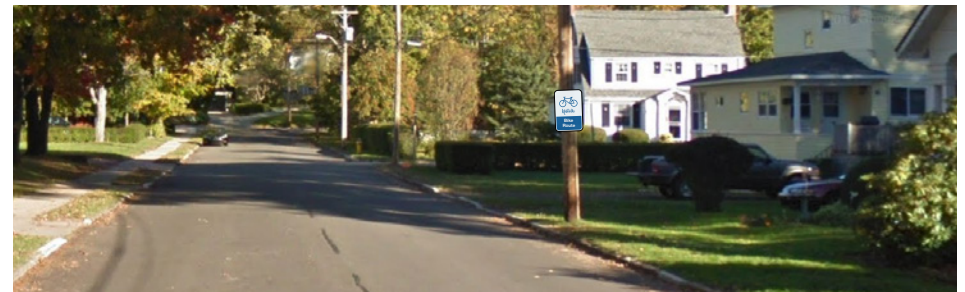


4 Exhibition Street/Sanford Road Signed Bike Route

Priority	Medium	Est. Costs	\$2,200	Length	800 metres
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Description

Exhibition Street is a, east-west residential collector street that connects Oakdene Avenue, Route 341 and the Valley Regional Hospital. The street is proposed to be a signed bike route, as it features low traffic volume, provides access to residential homes, and a hospital.

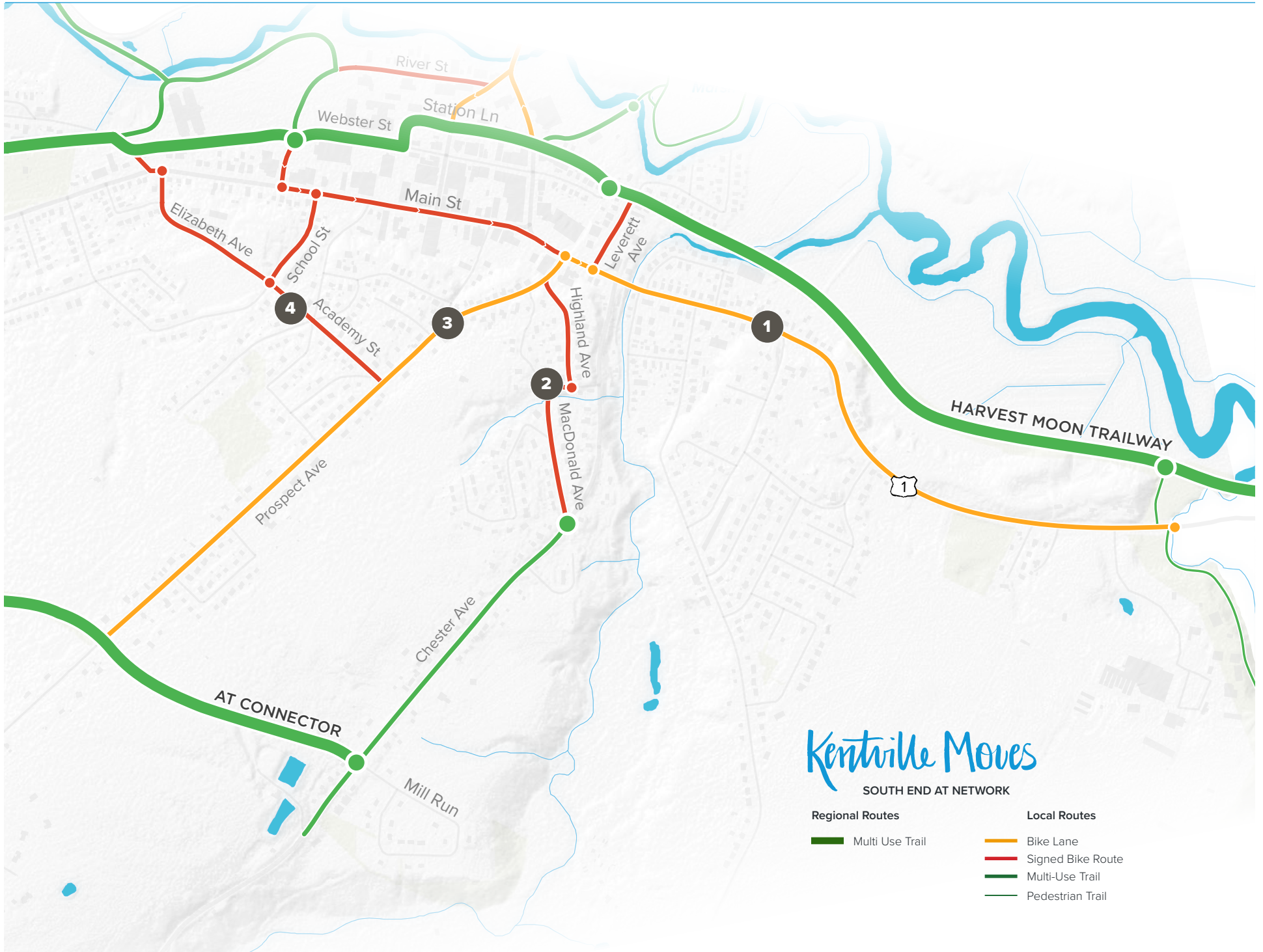


5 Aldershot Rail Trail

Priority Low	Est. Costs \$17,600	Length 400 metres
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Description

A rail corridor that once ran from Kentville to north of Aldershot and beyond has been abandoned for decades. Parcels of the rail corridor still exist, however, some lots have been sold off, making a regional trail impossible. However, a short multi-use trail that crosses the river and connects Kentville and Sanford Road would offer a shortcut to the Harvest Moon Trailway. Bridge repairs and trail surfaces would be required.



5.6 SOUTH END ACTIVE TRANSPORTATION NETWORK

The area south of Downtown Kentville is predominantly residential. As this area develops in the future, increased demand for active transportation routes will increase. This plan proposed several active transportation routes that will improve conditions in the south end area in the near and long term:

1 Main Street Bike Lane

Priority	Medium	Est. Costs	\$9,100	Length	1,400 metres
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Description

Main Street (Trunk 1) is major arterial road that connects downtown Kentville to the eastern area of Town and continues outside the Town boundary to New Minas and Wolfville. Like Belcher Street, the curb-to-curb roadway is quite wide along Main Street and features delineated paved shoulders on both sides of the road between Chester Avenue and the Town boundary. The only gaps in the paved shoulder occur when turning lanes require more of the road bed, and the paved shoulders are intermittently squeezed out around the intersection. Despite these short gaps, these paved shoulders can be easily converted into a bicycle lane by painting bike symbols on the paved shoulders. When completed, these bike lanes will provide a direct on-road connection between the downtown and New Minas.



2 MacDonald / Highland Ave Signed Bike Route

Priority	Low	Est. Costs	\$1,512.50	Length	550 metres
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Description

Chester Avenue has been recently repaved. As part of this project, a new asphalt multi-use pathway was created on the west side of the street. The multi-use pathway runs between Mill Run and MacDonald Avenue. From MacDonald Avenue to Main Street, the multi-use path ends due to the steep and narrow road right-of-way, and cyclists are forced onto the road. An alternative route for cyclists to get to the downtown should be provided. A signed bike route is proposed on MacDonald and Highland Avenue, which will take cyclists through a local, residential road with low traffic volume.



3 Prospect Avenue Bike Lane

Priority	Opportunity	Est. Costs	\$38,000-114,000	Length	1 - 3 kilometres
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Description

Prospect Avenue is a collector street that intersects at Main Street and runs southwest, crossing the future Active Transportation Connector. Eventually, as the Town develops, this road will become a more important arterial road. When this occurs and Prospect Avenue is repaved, a new bike lane and sidewalk should be provided to accommodate active transportation users. In the meantime, the street can be designated as a signed bike route.

4 Academy / School / Elizabeth Signed Bike Routes

Priority **Low**

Est. Costs \$1,925

Length 700 metres

Description

The area around the former school site is a densely populated residential neighbourhood. Locals currently cross the site to get to the downtown from the neighbourhood via Academy Street and Elizabeth Avenue. As the former school is redeveloped, active transportation users should be considered in the site plan. A signed bike route is proposed to help connect cyclists from the residential area into the downtown or to connect onto the Harvest Moon Trailway.





5.7 CENTRAL ACTIVE TRANSPORTATION NETWORK

The central area of Kentville features a densely populated residential area that is flanked by the Gorge park to the east and Memorial Park/Kings County Academy to the north. This plan proposes several active transportation routes that will improve conditions in the central area:

1 Upgrade Gorge Trails to Multi-Use Pathway

Priority Low	Est. Costs \$150,000	Length 1,000 metres
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Description

Once the Active Transportation Connector is developed, it will be extremely convenient to have several strong north-south active transportation routes to create a series of regional loops throughout the Town. One of these north-south routes is possible by upgrading some of the double-track trails in the Gorge to multi-use pathways. Another double track trail that connects to Grant Avenue is also proposed to be upgraded to a multi-use trail, which will allow residents living in the nearby neighbourhood to connect into this new active transportation route. Creating a crosswalk where this trailhead meets the Highway and Visitor's Centre will improve the walkability.

2 Signed Bike Route on Gladys Porter Drive and New Crosswalk on Park Street

Priority Medium	Est. Costs \$20,825	Length 300 metres
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Description

Gladys Porter Drive provides access to several homes and is the entrance road to the Gorge. Once the double track trails are upgraded to the multi-use pathways, an active transportation route will be required on this road. A signed bike route is proposed which will connect cyclists from the Gorge to Park Street. From here, a new crosswalk will be required at the intersection on Park Street, and a short pathway that connects to Veteran's Way will allow active transportation users to connect to the Park and the Harvest Moon Trailway.

3 Signed Bike Routes on MacDonald Park/Grant/Palmer and Alicia/Duncan

Priority Low	Est. Costs \$7,562.50	Length 2,750 metres (total)
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Description

The large subdivision that flanks the Gorge is a relatively dense residential neighbourhood and is home to many student commuters and prospective active transportation users. As such, active transportation routes that connect the neighbourhood to the many nearby recreational and institutional destinations are desired. Two signed bike routes are proposed for this neighbourhood. One is proposed in the western side of the area, beginning on MacDonald Park Road, continuing north on Grant Street, and finishing on Palmeto Avenue before reaching Park Street. Another signed bike route is proposed on the western side of the neighbourhood, beginning on Alicia Boulevard and turning onto Duncan Street until it reaches Park Street. Both signed bike routes travel through quiet residential streets with low traffic volume.

4 New Crosswalks and Trail Connections on Park Street at Palmeto and Duncan

Priority Low	Est. Costs \$100,000	Length 400 metres (total)
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Description

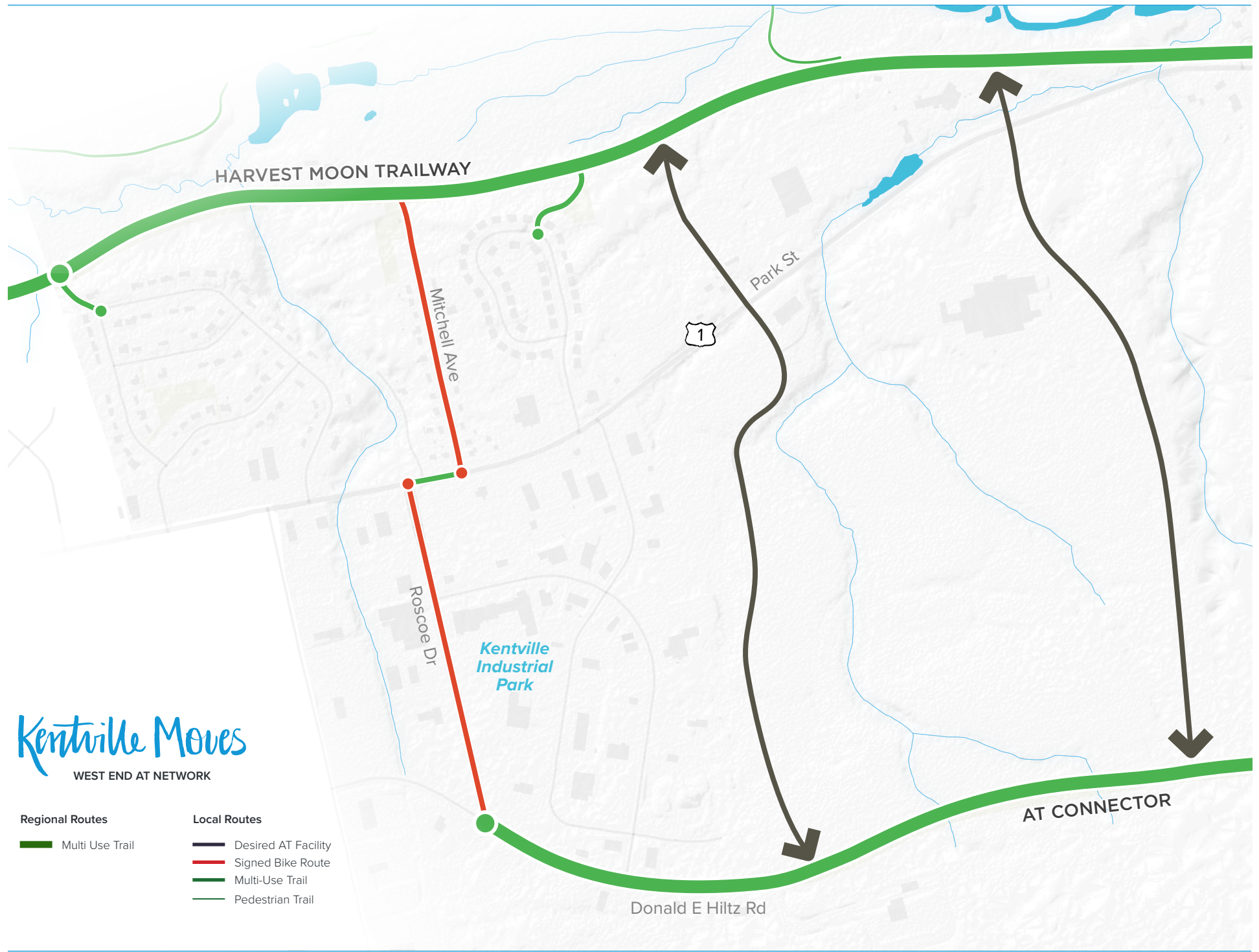
Both of the signed bike routes on Palmeto and Duncan terminate at Park Street. From here, there is a sidewalk on the south side of the street that offers a connection to a crosswalk near Gary Pearl Drive, however, this sidewalk is too narrow to be used by cyclists. Two new crosswalks are proposed at the intersection of Palmeto/Park and Duncan/Park. From here, two short multi-use pathways are proposed that will direct active transportation users toward Gary Pearl Drive, creating convenient connections to the School and the Harvest Moon Trailway.

Kentville Moves

WEST END AT NETWORK

Regional Routes
 Multi Use Trail

Local Routes
 Desired AT Facility
 Signed Bike Route
 Multi-Use Trail
 Pedestrian Trail



5.8 WEST END ACTIVE TRANSPORTATION NETWORK

The west side of Kentville features smaller residential neighbourhoods north of Trunk 1, and a growing Business Park in the southwest corner of the Town. Significant residential and industrial development is expected to occur in this area over the next decade. As such, several active transportation routes will be needed to meet current and future demand.

1 Signed Bike Route on Roscoe Drive/Mitchell Avenue

Priority	Medium	Est. Costs	\$ 3,300	Length	1,200 metres
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Description

Once the Active Transportation Connector is complete, it will offer active transportation users direct access to the Industrial Park from other areas of Town. The regional multi-use trail is currently proposed to end at Roscoe Drive, which is considered the main access road for the Kentville Business Park. A north-south active transportation route in this area will connect the Harvest Moon Trailway and the Active Transportation Connector, and improve connectivity throughout the Town.

As such, a signed bike route is proposed on Roscoe Drive between the Active Transportation Connector and Trunk 1. Cyclists will travel along a proposed multi-use trail on Trunk 1 for 100 metres, before turning onto a safe crossing and turning onto Mitchell Avenue, a quiet residential street that is also proposed to be a signed bike route. This street terminates at the Harvest Moon Trailway, thus completing the connection.



2 Desired north-south Active Transportation Routes between Active Transportation Connector and HMT

Priority	Opportunity	Est. Costs	~ \$57,000 (each)	Length	~1,500 metres (each)
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6. AMENITIES & PLACEMAKING

6.1 AMENITIES

A well connected and organized network of active transportation routes will certainly help accomplish many of the goals of this Plan. Beyond this, however, the Town can further encourage active transportation use by providing support services and amenities, such as bike racks, boat launches, picnic areas, benches, equipment tools, maps, wayfinding signage, and more. These types of services and amenities can help make active transportation more attractive, convenient, and comfortable.

Kentville's network of parks and trails provides the foundations for a lively culture of active transportation. In order to expand on this strength, the Town can add new services and amenities such as water stations, picnic areas, and updated signage which will make the use of this network more attractive, comfortable and convenient.

It will also be important for the Town to provide amenities throughout the street network for active transportation users. Improvements such as seating, bicycle parking and repair stations will improve the accessibility and inclusion for all street users in Kentville, creating comfortable public spaces which welcome all people.



1 Provide water stations in parks and along trails

Priority **Medium**

Est. Costs \$3,000 each

Description

Water and hydration is a necessary component of any physical activity, and active transportation is no exception. Water fountains and bottle filling stations to active transportation users are the equivalent to gas stations for cars. This is especially true along long distance active transportation routes like the Harvest Moon Trailway and near sport facilities like the Gorge's mountain biking park, or the sports facilities in Memorial Park. Some options offer a pet station, while others offer two heights of water fountain. Water stations require municipal water and a sanitary drain or dry well hookup. They are recommended in the following areas:

- » Harvest Moon Trailway, in the Memorial Park area;
- » Harvest Moon Trailway on Station Lane in the downtown; and
- » The Gorge Park.



2 Provide bike repair stations in parks and along trails

Priority **Medium**

Est. Costs \$2,000 each (incl. pump and repair station)

Description

In order to encourage cycling through the Town, a handful of maintenance tools for bicycles and other recreational equipment, such as screwdrivers, wrenches, and pumps could be provided at a few traffic locations. Several off-the-shelf products are available that include tools necessary to perform basic bike repairs and maintenance, including changing a flat, and adjusting brakes/derailleurs. Tools are typically attached to a stand with stainless steel cables and tamper-proof fasteners. Hanging the bike from the hanger arms allows the pedals and wheels to spin freely while making adjustments. Bicycle repair stations already exist in five locations throughout Kentville, but additional stations would be useful in the following areas:

- » Harvest Moon Trailway on Station Lane in the downtown; and
- » Oakdene Park

3 Provide more bicycle racks and transit racks

Priority **Medium**

Est. Costs \$500-1,000 per bike rack, \$500-1,500 per transit rack

Description

Bike racks allow cyclists to use their bikes for everyday trips. Priority locations for bike racks are based on common destinations and key junctions in the active transportation network. Additional bike racks are recommended in the following locations:

- » Route 359 Foodland;
- » Centre Square;
- » Kentville Skate Park (with repair station);
- » Miner's Marsh trailhead;
- » Memorial Park;
- » Kentville Memorial Pool and Splashpad; and
- » Burgher Hill, etc

The Town can also work with Kings Transit to provide front loading bike racks on their buses to facilitate multi-modal commuting in King's County. .



4 Provide sheltered bicycle parking at key locations

Priority	Medium	Est. Costs	\$14,000 each	Length	TBD
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Description

Cyclists identified a need for both increased parking and protection from the elements. Larger scale sheltered bicycle parking should be provided at major employment centres, schools, and in the downtown. This will improve cycling conditions through all seasons, allowing cyclists to travel without worry of weather changes and minimize maintenance costs. Not only does this implementation cut costs for cyclists but residents will be more willing to cycle and more comfortable cycling if they have appropriate accommodations. These facilities can be built outside in simple shelters or incorporated into parking garages, and should include wayfinding signage so cyclists can locate parking. Locations considered for sheltered bicycle parking could include:

- » Station Lane parking lot downtown
- » Kentville Business Park
- » NSCC campus
- » Valley Regional Hospital



5 Add benches and street furniture along trails and streetscapes

Priority	Medium	Est. Costs	\$1,500 each	Length	TBD
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Description

In order to improve the accessibility of Kentville's trails and streetscapes, street furniture and other amenities are needed. People of all ages and abilities will have an easier time walking or cycling through the downtown if there are places to stop and rest and/or offer protection from the elements. These spaces will reduce stigma associated with "loitering" often placed on marginalized groups, and instead support the public use of public spaces. Lively and active streetscapes provide "eyes on the street" which will create a safe and vibrant downtown. Within Kentville's trail network benches should be placed approximately 600 metres apart, while the downtown should offer benches every 400 metres. In order to be useful benches must be carefully placed, with special consideration to comfort and view. The following criteria should be accounted for when placing outdoor seating:

- » Face towards human activity
- » Face south for peak solar exposure
- » Provide windbreaks such as plant beds to provide protection from the elements and a sense of enclosure
- » Do not block pedestrian thoroughfare

6.2 PLACEMAKING

Placemaking initiatives encourage the public to interact with their surroundings through playful or artistic design interventions. Promoting health and happiness through the built environment can make active transportation more enjoyable to both locals and visitors alike. Building on the community's assets and inspiration, these interventions will be best accomplished in partnership with the community. The Harvest Moon Trailway is an excellent platform for placemaking initiatives. It is well used by locals of all ages and abilities, it attracts tourists and visitors, and there is typically lots of space around the trail to work with. The following placemaking initiatives could be explored by the Town, with the trail as a platform:

1 Use the Harvest Moon Trailway as a platform for history and interpretation

Priority	Low	Est. Costs	N/A	Length	TBD
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Description

Kentville has an interesting and unique natural and social history. The Town could consider creating and updating interpretative planning signage along the Harvest Moon Trails that highlights the natural environment and history of the place. This signage can point out landmarks, habitats and natural assets - getting visitors actively involved with the landscape. Interpretive planning can serve as word of mouth advertising for tourism and foster community pride.

Top Right

Interpretative panels on the Olinda Creek Trail in Australia.

Bottom Right

Multimedia trail interpretation on the Ebbw Fach Trail in South Wales, Australia.



2 Use the Harvest Moon Trailway as a platform for play

Priority **Low**

Est. Costs N/A

Length TBD

Description

Play is often regarded as a key ingredient for childhood development, but is so often overlooked in adulthood. The definition of play from the Oxford English Dictionary, is "to wield lightly and freely; to keep in motion." In a world full of stress and anxiety, more moments of lightness and freedom in our days are needed. Play has been proven to stimulate creativity, release endorphins, improve brain functionality, and can help keep us feeling young and energetic. The Town can easily create a practice of play in the lives of its citizens by providing some urban "interventions" in public spaces that encourage imagination and creativity, such as:

- » Large format, outdoor board games (Chess, checkers, etc);
- » Easy bike park features (rollers, wall benches, etc) along the trail (see bottom right);
- » Outdoor table sports (ping pong, foosball, etc);
- » Symphonic swingsets (see below);
- » Environmentally driven instruments; and
- » Urban slides (see right) and swingsets, etc.



Top Right Urban slide in Utrecht, NL

Bottom Right The "Whoop-dee-doo" in Vancouver, BC

Bottom Symphonic Swings in Montreal, PQ



3 Use the Harvest Moon Trailway as a platform for public art

Priority	Low	Est. Costs	N/A	Length	TBD
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Description

Similar to play, public art can enrich a community through its ability to humanize the built environment, ignite imaginations, encourage thought and to prompt community conversations. Public art can also benefit the community by improving the sense of place and can be used as a tool in economic development. A good example of this, is the Art to Heart Trail in Raleigh, North Carolina. This regional trail runs through the city, but features a variety of art installations along the way, which attracts many visitors looking to enjoy the installations while getting some exercise in as well. The Harvest Moon Trailway could work with the local art community to develop similar outdoor installations that could be implemented over time.

Photos

Art installations along the Art to Heart Trail in Raleigh, NC



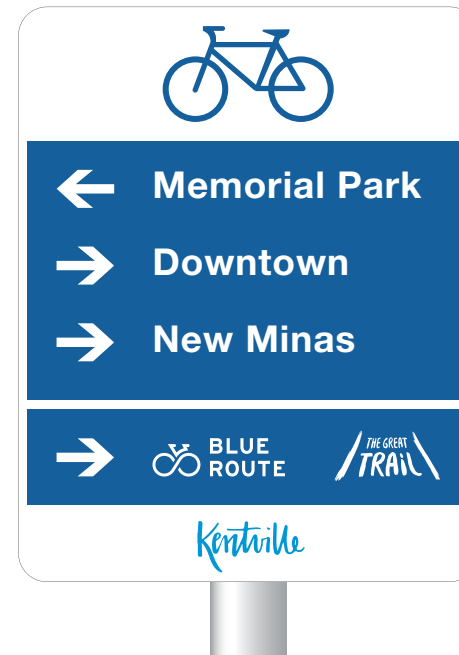
6.2 ACTIVE TRANSPORTATION WAYFINDING & SIGNAGE

Wayfinding signs are useful tools that help active transportation users move conveniently and seamlessly throughout Town. An active transportation signage system for Kentville would offer the following benefits:

- Increase awareness for active transportation routes that are underexposed due to the lack of off-site directional signs;
- Improve internal navigability for active transportation users;
- Improve linkages between on-road, trail or park facilities and adjacent community amenities; and
- Improve sense of arrival for active transportation users and visitors by installing trailhead or park signs at entrances to active transportation facilities.

Bicycle Nova Scotia is currently working with municipalities and community groups around the province to develop a standardized Bicycle wayfinding system that can be used around the province. The following signs are based on this signage system.

A guide on how to use the signage system will be released in Spring 2019.

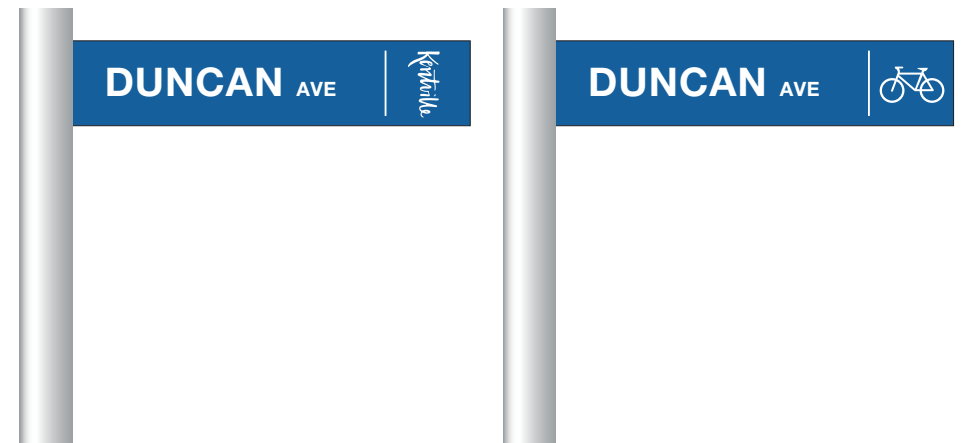


Decision Signs

Decision signs provide directions to destinations ahead of intersections to provide cyclists the time to make appropriate wayfinding decisions. Decision signs should be located at a safe stopping distance before a decision point (ie; a junction or intersection along a bicycle network).

The main objective of the sign is to communicate decision making information to ensure cyclists navigate to their intended destination. This information is presented in the blue message body portion of the sign. Decision signs can contain up to three destinations per sign.

Messages are displayed in white text on a blue background. Long names may extend over two, or exceptionally three lines, and where alternative routes exist, the addition of subtext lines may be used.



Confirmation Signs

Confirmation signs provide information about upcoming destinations and also help assure cyclists that they are on the right route to their intended destination. Confirmation signs are located after important decision making points along a bicycle route. They help confirm that cyclists have made a correct turn or movement and are on the correct path to their intended destination.

The main objective of the sign is to communicate decision making information to ensure cyclists navigate to their intended destination. This information is presented in the blue message body portion of the sign. For on-street routes, confirmation signs can accommodate up to three destinations, shown in ascending order of distance. For off-street routes, four to six destinations can be included.

Messages are displayed in white text on a blue background. Long names may extend over two, or exceptionally three lines, and where alternative routes exist, the addition of subtext lines may be used.

Street Name Bike Route Signs

Kentville has adopted customized street name signs that incorporate the Town's new brand and identity on them (see top left). A proposed alternative to the standard street name signs is one with a bicycle on it to indicate that the street is a designated bike route (see top right).



Bike Route Sign

Bike Route signs should be placed along designated bike routes throughout the Active Transportation Network. In some cases, directional bike route signs may be required to keep cyclists on the proper route.



Bike Route Directional Sign

In some cases, directional bike route signs may be required to keep cyclists on the proper route.



Share the Road Signs (MUTCD)

A standard TAC approved share the road sign is used to warn motorists that they are to provide safe space on the road for cyclists and other vehicles. This sign also warns motorists and cyclists to exercise additional caution on the upcoming section of road.



Share the Road Signs (Alternative)

The typical share the road sign is taken from the Manual for Uniform Traffic Control Devices (MUTCD), however, many people find that the sign is not effective and does not communicate the amount of space required to give cyclists on a shared road. By law, motorists are required to give cyclists a minimum distance of one metre when passing them. The alternative sign proposed above communicates this more clearly than the standard MUTCD sign.

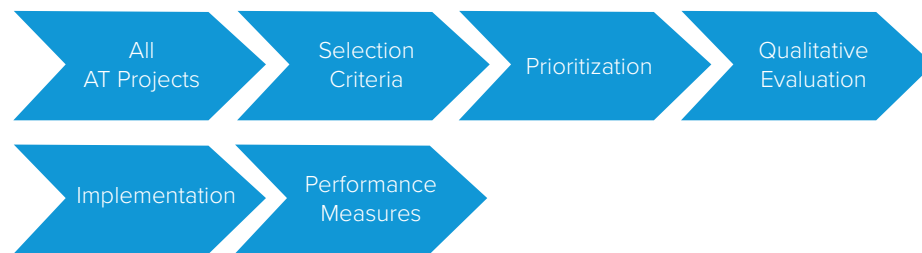


7. IMPLEMENTATION

7.1 IMPLEMENTATION

This Plan is a long-term vision for active transportation in Kentville. The recommendations in this document are intended to be implemented over the coming 15 years, and the implementation plan should be reviewed annually.

Because of this extended timeline, it will be important to prioritize recommendations by considering how they address the Plan's goals. Guiding principles will guide the project selection process, while maintaining flexibility for the town to pursue opportunities and demands as they arise.



7.2 PRIORITY AREAS

The identification of priority areas for this Active Transportation Plan is a key component of our equity principle. These areas include communities which serve vulnerable residents or benefit a high density of people when measured either through population or traffic.

- **Downtown:** The downtown is used by all residents, commuters and visitors to Kentville, and the trail gap has been identified as a priority throughout this process.
- **North End Kentville:** This neighbourhood has some of the highest densities in Kentville but comparatively less access to trails and recreation. There are concentrations of vulnerable populations in this community, and sidewalks and roads are in need of maintenance and connectivity
- **The Recreation Complex:** This area is both a recreational destination and a school zone. This key destination was selected to prioritize youth and encourage active transportation, building on existing assets.
- **Kentville Business Park:** This major employment centre also contains a host of government services. Though a key destination, this area is currently inaccessible for active transportation users.
- **Valley Regional Hospital:** Public engagement showed a need for improved routes to and from the hospital, connecting it to downtown and the surrounding residential areas. Improvements in this area will affect hospital employees, patients and visitors throughout the town and region.

7.3 SELECTION CRITERIA

Selection criteria will allow the Town to prioritize potential new projects using quantitative methods of selection, as well as qualitative methods as necessary. This criteria sorts recommendations by low, medium and high priority. To do this projects will be inventories and ranked based on which principles they address either directly or indirectly. Higher weighting will be assigned to projects which consider equity and accessibility or completing networks in order to reflect the importance of these goals. Actions which present an opportunity in terms of planned construction should be dealt with separately.

Actions can receive a maximum score of 8, though the highest received score may be lower. Actions will be sorted into three tiers of low, medium and high priority based on their ranking. The full selection criteria matrix can be found in the Appendix. High priority actions are intended to be implemented within the coming 5 years, medium priorities within 10 and low priorities within 15.

The Town can evaluate projects using qualitative criteria as they arise. These considerations are as follows:

- The immediate feasibility of projects
- The potential to access funding
- Policy or council directives
- Community interest
- Projects which target priority areas

Regardless of priority, the Town should take advantage of recommendations which can be combined with other investment or maintenance.

7.4 PERFORMANCE MEASURES

Performance measures can help to track the progress of this Active Transportation Plan and the implementation of networks and facilities.

Each guiding principle is listed in this table (such as prioritizing active transportation users), followed by measures of the principle like commute mode share or facility use, suggesting which indicators can be used to track the progress of this goal. Baselines outline the data which can be used to analyze conditions over time, such as the census' commute modes or facility spot counts. Specific performance targets and timelines may be set for each measure, such as 0 collisions by 2022, 100% of the network completed by 2030 or a 25% increase in spending by active transportation users.

Principle	Measure	Baseline	Desired Trend
Prioritizing Active Transportation Users	Commute mode share Facility use	National census commute modal splits Facility spot counts	Increase in users Increased facility use
Education and Awareness	Collisions involving cyclists and pedestrians Perceived safety Spending by mode Program participation	Number of collisions Crime rate Foot traffic counts, tourism & accommodations data Parks & Recreation enrolment records	Decrease in collisions Decreased crime Increased spending Increased participation
All Seasons	Seasonal use Perception of barriers	Facility spot counts Physical Activity Strategy survey	Increased seasonal use Decreased perceived barriers
Equity and Accessibility	Investment in priority areas Populations proximate to facilities Walkability & bikability	Capital spending records Equity mapping WalkScore tool	Increased investment Increased diversity Increased walkability
Completing Networks	Active transportation network completed	Percentage of final network completed Total facility kilometres Total public pedestrian and bicycle amenities	Increased proportion Increased total Increased total
Playfulness	Project completion Community participation Arts creation	Relevant projects Number and age of participants Public and private investment	Increased projects Increased participation Increased arts investment

7.5 PHASING

The phasing of the recommendations of this Active Transportation Plan are based on the selection criteria provided in Section 7.3 and are aimed to be completed by 2034, or within the fifteen year implementation period of this project. Altogether, this Active Transportation Plan proposes 26 kilometres of new active transportation routes and facilities throughout Kentville.

High Priority Recommendations

High priority items are expected to be implemented within the first three years of the implementation period (2019-2022). The four recommendations that have been identified as high priority are high impact (and higher cost) interventions that will help set the stage for future improvements to active transportation infrastructure. For example, the Harvest Moon Trailway connection through the downtown will immediately fill a significant gap in the regional trail. In order to complete this recommendation, more detailed design work is required. This can occur simultaneously with the Downtown Streetscape Plan that is proposed in Section 5.4.5. Together, these two recommendations will significantly improve active transportation conditions in Downtown Kentville.

The Kentville Bridge bike lane is also a high priority recommendation because construction to the bridge is happening in summer 2019, so immediate action is required to ensure these ideas are included in the project.

When these high priority items are completed, 2,450 metres of active transportation routes will be added to the Kentville active transportation network.

- 5.4.5 Improve pedestrian circulation, safety and comfort in the Downtown
- 5.3.2 Connect Harvest Moon Trailway through the Downtown
- 5.4.1 Kentville Bridge Bike Lane
- 5.5.1 Belcher Street Bike Lane

Medium Priority Recommendations

Medium priority items are expected to be complete within 10 years of the implementation period (2019-2029). These recommendations are generally lower cost interventions that can be accomplished relatively easily. These include many of the signed bike routes and active transportation amenities that are proposed. It also includes improving the Harvest Moon Trailway crossing at West Main Street (see Section 5.3.1), which should be addressed once the downtown connector is completed.

When these medium priority items are completed, 6,630 metres of active transportation routes will be added to the Kentville active transportation network.

- 5.3.1 Improve HMT road crossing at West Main Street
- 5.4.2 Main Street SBR
- 5.4.3 Leverett Avenue SBR
- 5.5.3 Oakdene Avenue SBR
- 5.5.4 Exhibition Street/Sanford Road SBR
- 5.6.1 Main Street Bike Lane
- 5.6.2 MacDonald / Highland Avenue SBR
- 5.7.2 SBR on Gladys Porter Drive and New X-walk on Park Street
- 5.8.1 SBR on Roscoe/Mitchell
- 6.1.1 Provide water stations
- 6.1.2 Provide bike repair Stations
- 6.1.3 Provide bike racks
- 6.1.5 Provide sheltered bike parking
- 6.1.6 Add benches

Low Priority Recommendations

Low priority items will be completed within the fifteen year implementation period of this plan (by 2034). These recommendations include trail upgrades and additions (such as the Gorge MUP and trails and crosswalks around the school) that will require more planning and design work, and thus more time. The proposed bike lane on Route 341/359 is also a low priority recommendation and should be completed when the road is recapitalized, which is expected to be within the next fifteen years

When these medium priority items are completed, 6,600 metres of active transportation routes will be added to the Kentville active transportation network.

- 5.4.4 New MUP to Miner's Marsh Trail
- 5.5.2 Route 341/359 Bike Lane
- 5.5.5 Aldershot Rail Trail and Bridge Upgrade
- 5.6.4 Academy/School/Elizabeth SBR
- 5.7.1 Upgrade Gorge Trails to MUP
- 5.7.3 SBR on MacDonald / Grant / Palmeto and Alicia / Duncan
- 5.7.4 New x-walk and trail on Park/Palmeto and Park/Duncan

Opportunity-Based Recommendations

Some of the recommendations in this plan are dependant on future road-based capital projects or general developments that do not have a timeline for implementation. This includes the Active Transportation Connector, the Prospect Avenue bike lanes, and the north-south connector roads in the undeveloped land in the western side of Town. These recommendations will be implemented on an opportunity basis. For example, if the collector road is built in 2025, the Active Transportation Connector should also be built when this occurs.

When these opportunity-based items are completed, 10,500 metres of active transportation routes can be added to the Kentville active transportation network.

- 5.3.3 Develop the AT Connector
- 5.6.3 Prospect Avenue Bike Lane
- 5.8.2 Develop north-south AT Routes

7.6 COST ESTIMATES

The following opinion of probable costs was developed to provide an order of magnitude cost of the project. Over the fifteen years timeframe of this project, it is estimated that approximately \$2,270,650 is required to be invested into active transportation routes, infrastructure and amenities. Over fifteen years, this is approximately \$150,000 per year, however, a higher proportion of annual funds may be required in the first few years of the implementation period to complete the high priority recommendations on time.

Variance at this level can be significant. Estimates were developed based on the information available combined with professional judgement. Changing costs of materials and labour, and principles from which contractors derive their bids for the work are outside our knowledge and control. The cost estimates are broken down by phase below.

High Priority Recommendations

In order to complete high priority recommendations within three years, it is estimated that approximately \$486,050 will be required. This includes construction costs for the Harvest Moon Trailway connector, the Kentville Bridge bike lanes and the Belcher Street bike lanes. It also includes a cost to develop a Downtown Streetscape Plan that will improve pedestrian and cyclist conditions in the downtown, however, this cost does not include construction costs to implement the outcomes of that Plan.

Intervention	Description	Qty	Unit	Cost
5.4.5 Improve pedestrian circulation, safety and comfort in the Downtown	Cost to prepare a Downtown Streetscape Plan (construction costs not included)	1	ea	\$75,000.00
5.3.2 Connect Harvest Moon Trailway through the Downtown	Demo/removal of asphalt, curbs, sidewalk, new asphalt surface, paint, sod/topsoil, hardscape welcome area, general electrical and relocation of utilities, etc	750	m	\$400,000.00
5.4.1 Kentville Bridge Bike Lane	Paint markings and signage	300	m	\$1,950.00
5.5.1 Belcher Street Bike Lane	Paint markings and signage	1400	m	\$9,100.00
Total				\$486,050.00

Medium Priority Recommendations

In order to complete medium priority recommendations within ten years, it is estimated that approximately \$119,962.50 will be required. This includes construction costs for the Harvest Moon Trailway road crossing at West Main Street, the opening of seven new signed bike routes and new bike lanes on Main Street. It also includes the supply and installation of several active transportation amenities and a new signalized crosswalk at Gladys Porter Drive.

Intervention	Description	Qty	Unit	Cost
5.3.1 Improve HMT road crossing at West Main Street	Extended asphalt, paint, flexible bollards, signage	80.0	m	\$29,200.00
5.4.2 Main Street SBR	Signage	900.0	m	\$2,475.00
5.4.3 Leverett Avenue SBR	Signage	200	m	\$550.00
5.5.3 Oakdene Avenue SBR	Signage	1200	m	\$3,300.00
5.5.4 Exhibition Street/Sanford Road SBR	Signage	800	m	\$2,200.00
5.6.1 Main Street Bike Lane	Paint markings and signage	1400	m	\$9,100.00
5.6.2 MacDonald / Highland Avenue SBR	Signage	550	m	\$1,512.50
5.7.2 SBR on Gladys Porter Drive and New X-walk on Park Street	Signage, signalized crosswalk, paint markings	300.0	m	\$20,825.00
5.8.1 SBR on Roscoe/Mitchell	Signage	1200	m	\$3,300.00
6.1.1 Provide water stations	Supply and installation	3.0	ea	\$6,000.00
6.1.2 Provide bike repair Stations	Supply and installation	2.0	ea	\$6,000.00
6.1.3 Provide bike racks	Supply and installation	7.0	ea	\$3,500.00
6.1.5 Provide sheltered bike parking	Supply and installation	1.0	ea	\$14,000.00
6.1.6 Add benches	Supply and installation	12.0	ea	\$18,000.00
Total				\$119,962.50

Low Priority Recommendations

In order to complete low priority recommendations within fifteen years, it is estimated that approximately \$536,637.50 will be required. This includes construction costs to upgrade 1,000 metres of trail in the Gorge to multi-use trail standards, installing bike lanes on Route 341/359, and new crosswalks and trails around the Kings County Academy.

Intervention	Description	Qty	Unit	Cost
5.4.4 New MUP to Miner's Marsh Trail	Extended asphalt, regrading, paint installation and removal, signage,	150	m	\$30,000.00
5.5.2 Route 341/359 Bike Lane	Paved shoulders, paint markings and signage	1200.0	m	\$18,825.00
5.5.5 Aldershot Rail Trail and Bridge Upgrade	New 400 metre long, 3m wide crusher dust multi-use trail and bridge surface repairs	400	m	\$17,600.00
5.6.4 Academy/School/Elizabeth SBR	Signage	700	m	\$1,925.00
5.7.1 Upgrade Gorge Trails to MUP	Widen and upgrade trails to 3m wide crusher dust multi-use trail	1000.0	m	\$150,000.00
5.7.3 SBR on MacDonald / Grant / Palmeto and Alicia / Duncan	Signage	2750	m	\$7,562.50
5.7.4 New x-walks and trail on Park/ Palmeto and Park/Duncan	Signage, signalized crosswalk (x2), paint markings	400.0	m	\$100,000.00
Total				\$536,637.50

Opportunity-Based Recommendations

In order to complete opportunity priority recommendations, it is estimated that approximately \$1,128,000.00 will be required. It is anticipated that these costs would be included in general road recapitalization or development costs. For example, the future arterial road along the AT Connector route will likely cost \$10-15 million to build for just the roadway. In order to add a separated multi-use pathway, an additional \$900,000.00 will be required (increasing the project budget to \$10.9 - 15.9 million).

Intervention	Description	Qty	Unit	Cost
5.3.3 Develop the AT Connector	New separated, 3m wide multi-use pathway	4500.0	m	\$900,000.00
5.6.3 Prospect Avenue Bike Lane	Paved shoulders, paint markings and signage	3000.0	m	\$114,000.00
5.8.2 Develop north-south AT Routes	Paved shoulders, paint markings and signage	3000	m	\$114,000.00
Total				\$1,128,000.00



8. APPENDIX

8.1 SELECTION CRITERIA

This table shows the full selection criteria matrix. Principles which are addressed directly are shaded in dark, while those that are addressed indirectly are shaded in a lighter colour. These actions are sorted by low priority (yellow), medium (orange), and high (green). The type of action or location of the proposed route is given in the left-hand column.

Type / Location	Action	Prioritizing AT users	Education and awareness	All seasons	Equity and accessibility	Completing networks	Playfulness	Score	Priority	
Downtown	Eg. Improve pedestrian experience	Dark		Light	Dark	Dark		5.5	High	
Downtown	Eg. New Signed Bike Route	Light			Light	Light			1.5	Low
Amenities	Eg. Provide trail amenities	Light		Light	Dark				3	Medium
Total possible score per criteria		/1	/1	/1	/2	/2	/1	/8		

Opportunities
 Eg. Develop the Active Transportation Connector

Kentville Moves

ACTIVE TRANSPORTATION PLAN

UPLAND