

January 10, 2019

# Blue Route Hubs Bikeway Project in Town of Mahone Bay

*Phase 1: Network Planning*

Prepared by:



## EXECUTIVE SUMMARY

The Blue Route Hubs Bikeway Feasibility Study is a partnership project between Bicycle Nova Scotia and several communities on the South Shore, including the Town of Mahone Bay. The project is intended to assess the barriers to cycling for transportation within each community using contemporary planning principles, propose a cycling network plan and conduct an in-depth evaluation of a top priority route. Bicycle Nova Scotia met with Town of Mahone Bay staff and key stakeholders to discuss the project in October 2018. This report uses the discussion from the meeting along with available roadway and network data to propose a minimum cycling grid for the Town of Mahone Bay.

Three key routes were identified for the town. The first route follows primarily local streets (Kinburn, Clairmont, Spur, Main and Clairmont Street) to connect the southeast and northwest neighbourhoods. This route was identified as a critical one at the stakeholder meeting, as it provides access to the Bayview Community School. The second route would be a pathway for pedestrians and cyclists, developed along the waterfront from the three churches to Oakland Road during shoreline expansion. This route has numerous network benefits, from making it more comfortable for tourists to walk into town from the parking lots to providing a separated route with less traffic stress for active transportation for residents.

The final route is Main Street and Edgewater Street. These roads were identified in both the stakeholder meeting and in the traffic analysis in this report to be major barriers for active modes due to the speeds and volumes of the motor vehicle traffic. These roads have many origins and destinations, and bisect the community so that travel on them is required to get to other destinations in town. Due to the constrained right-of-way, the town has limited space to provide separated infrastructure. However, if these roads are designed to be navigated at a 30 km/h speed for cars, it may be possible to reclaim some of the existing space to develop a cycling and walking friendly design. Section 6.4 of this report uses an example from the Netherlands, which is a country that has developed its communities, regardless of size, to promote walking and cycling, to show the types of design features that could be used. The benefits of shifting the design of these roads goes beyond just cyclists, as it would create a more comfortable space for pedestrians, including visitors to the town centre.

The next stage of the project is to conduct an in-depth evaluation and concept design of one route. The first route, which follows Kinburn and several other roads, was selected to be the topic of this study. It was identified to be a route of high importance at the stakeholder meeting, due to the connection it provides to the school, and its potential to have an impact in the short term.

## 1.0 Introduction

The Blue Route Hubs Bikeway Feasibility Study is a collaborative project between Bicycle Nova Scotia (BNS) and several communities in Lunenburg County, including Mahone Bay, Bridgewater, Lunenburg and Chester. A steering committee with representation from all partners is leading the work. The project is intended to help communities evaluate their potential to develop bicycle routes that make residents of all ages and abilities feel comfortable cycling in their community and encourage active transportation. While cycling has many benefits, the lack of safe, convenient routes is a serious deterrent for people in most communities. BNS hopes that in working together we can help communities identify achievable ways to reduce barriers to cycling within the transportation system and built environment.

BNS is a not-for-profit organization dedicated to improving conditions for cycling across the province. BNS is the lead community organization working with government and community partners to develop the Blue Route Provincial Cycling network. BNS operates a range of initiatives geared to support sport, recreation, active transportation, and cyclo-tourism in Nova Scotia.

### **Goals and Objectives:**

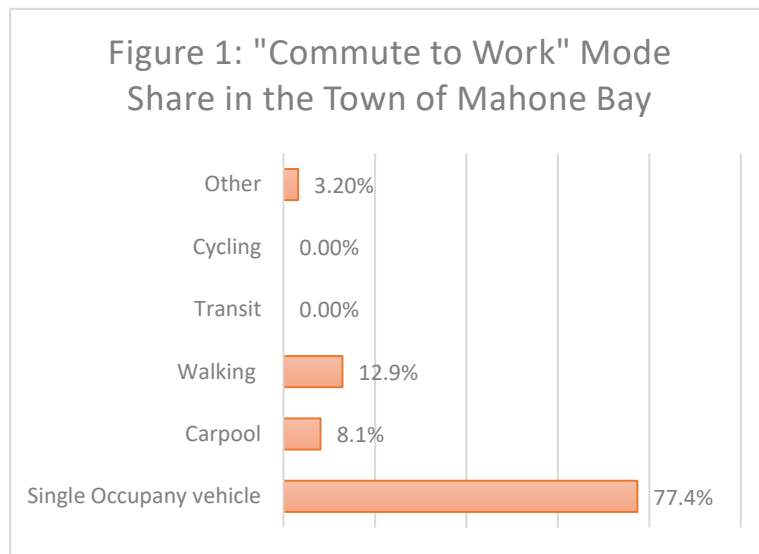
- Bring contemporary “All Ages and Abilities” bicycle facility design guidance to network planning and design
- Identify a basic key-route network plan for bicycle route development
- Prioritize implementation based on opportunity and impact
- Conduct an in-depth evaluation of a top-priority bicycle route project, including concept design and cost estimation

The purpose of this report is to examine current barriers to cycling within the town and propose a minimum grid of key routes. The minimum grid is a concept commonly used in bicycle facility planning in Canada to narrow down routes to a scope that is achievable, but effective, in the short term. Making cycling a viable transportation option requires a connected network of routes that have been designed to be accessible for cyclists of All Ages and Abilities.

## 2.0 Background

The Town of Mahone Bay is located in the South Shore region and has a population of 1,036 and a land area of 3.12 km<sup>2</sup> based on 2016 Statistics Canada census data. The Town’s economy is partially based on tourism, with Main Street being home to many shops. Travel data from the 2016 census (Figure 1) shows that most town residents commute to work via car, with 77.4% travelling on their own and 8.1% carpooling. This rate is likely influenced by workplace locations as approximately 75% of commuters from Mahone Bay work outside the town in areas such as Bridgewater and Halifax. While walking constituted a sizeable portion of the mode share at 12.9%, cycling was a negligible portion.

The potential and current role of cycling in the Town comes from both a transportation and tourist standpoint. For transportation purposes, making cycling an accessible option can increase the travel radius and speed of Mahone Bay residents for travelling via an active mode. While commute to work distances may be long, Mahone Bay has amenities such as several grocery stores, a school, a community centre, tennis club and pool. There is also potential to facilitate interregional travel; the communities of Blockhouse and Mader’s Cove are located within 5 km of Mahone Bay. As well, the Towns of Lunenburg and Bridgewater can be accessed through the rail trails, by travelling distances of 10 km and 20 km respectively. From a tourism standpoint, these trails are already used for both long-distance and day trip recreational travel, and provide an additional experience to attract visitors to Mahone Bay.



### 3.0 Existing Bicycle Network

The Town’s bicycle network is currently composed of the existing rail trail, which is used for both local and long-distance travel. The rail trail is a shared use trail, and permitted users include pedestrians, cyclists, ATVs, snowmobiles, skiers and horses. The rail trail in the Town of Mahone Bay has three different sections, namely the Dynamite Trail, Bay to Bay Trail and the Adventure Trail. Both the Dynamite Trail and Bay-to-Bay trail are part of the Rum Runner’s Trail, which is the overarching name for the 119 kilometers of rail trail that connects Halifax to Lunenburg. The Dynamite Trail enters the Town of Mahone Bay from the east, and the Bay-to-Bay trail is a 10 km spur line that leads to Lunenburg. The Adventure Trail leads west from the Town of Mahone Bay, and connects it to communities including Blockhouse and the Town of Bridgewater. All the trails are managed by community groups. Figure 2 shows the existing trails within the Town of Mahone Bay.



*Figure 2- Existing Shared-use Trails in the Town of Mahone Bay*

## 4.0 What We Heard

On October 29, 2018, Bicycle Nova Scotia (BNS) met with Mahone Bay staff and key stakeholders to determine the barriers to active transportation within the town as well as the key destinations and routes. Complete meeting minutes are included in Appendix A, and key themes are outlined below.

First, the two highways that pass through the town, Trunk 3 (Edgewater Street and Main Street) and Highway 325 (Main Street), were identified to be primary barriers to cycling usage due to their speed and busyness. Within Mahone Bay, these roads have developed to form a main street for the town, with many shops and other destinations located on this road. The roads also form a transportation spine for the community, meaning that crossing the road is necessary to reach different areas of town, and they are the interregional connections to nearby communities like Blockhouse, Mader's Cove and Oakland. As the roads exit town towards those communities, speeds usually increase and no active transportation infrastructure is provided, creating a larger barrier for non-motorized use. This also creates a barrier for connecting the recreational cycling network as cyclists in the area enjoy using Oakland Road and Mader's Cove Road for cycling, which can only be reached from the town by using Trunk 3 (Edgewater

Street). Both Main Street and Edgewater Street have limited space for retrofitting active transportation facilities as the road widths and right-of-way widths are constrained.

During the discussion, it was suggested that the project should focus on developing a connection between Bayview Community School and the southeast area of town. As students have limited mobility options, focussing on developing an “All Ages and Abilities” cycling route can increase their independence and safety. Currently, some students do cycle to school though parents advise them to use the sidewalk on Main Street and Edgewater Street, where necessary. After some discussion, it was suggested that a potential route along Clairmont Street, Kinburn Street, Spur Street, a small section of Highway 325 (Main Street) and Clearway Street could be an option to examine.

Finally, several trail crossings were identified to be concerns. The trail crossing at Main Street around Longhill Road was a significant concern as there are poor sightlines, and the road is very busy. The crossing at Clearland Road was also identified to be an issue due to sightlines.

## 5.0 Design Philosophy

Traditionally, North American bicycle design has treated cyclists similar to vehicles and offered limited accommodations for cyclists in roadway design. Cyclists are generally expected to act like vehicles and are often required to navigate heavy traffic routes. In consequence, most people do not feel comfortable cycling in North American communities.

Bicycle facility design guidance has evolved considerably in Canada in the last few years in an effort to make cycling an acceptable and attractive mode of travel for the general population. Evidence from European jurisdictions, where high percentages of residents commute by bicycle, as well as a growing body of knowledge and experience in North America has shown that when interaction with motorized traffic is limited, cycling can be an attractive travel option for people of all ages and abilities.

Contemporary design and planning principles now strive to physically separate bicycle and vehicular traffic and ensure that mixing occurs only where vehicle traffic volumes and speeds are restricted by roadway design. In order to achieve the highest impact, cycling infrastructure needs to be designed to achieve this high-quality level that will accommodate and be attractive to the broad population.

In 2017, the Transportation Association of Canada (TAC) issued new bicycle facility design guidance in *Chapter 5 Bicycle Integrated Design* of the *Geometric Design Guide for Canadian Roads* that focuses on designing cycling infrastructure for the largest segment of the population. The guidance focuses on bicycle facility types including protected bicycle lanes, bicycle paths and bicycle boulevards. It also takes a stance on older bicycle facility types including shared bicycle lanes and unmarked wide curb lanes, indicating that these do not serve the design user of cyclists. Figure 3 below shows TAC’s suggested facility type based on speed. The TAC guide also includes a detailed section that addresses additional factors, including motor vehicle volumes, heavy truck traffic and cyclist volumes.

This study will use Chapter 5 as a benchmark for evaluating the existing transportation network's suitability for bicycling and as a guide for its recommendation.

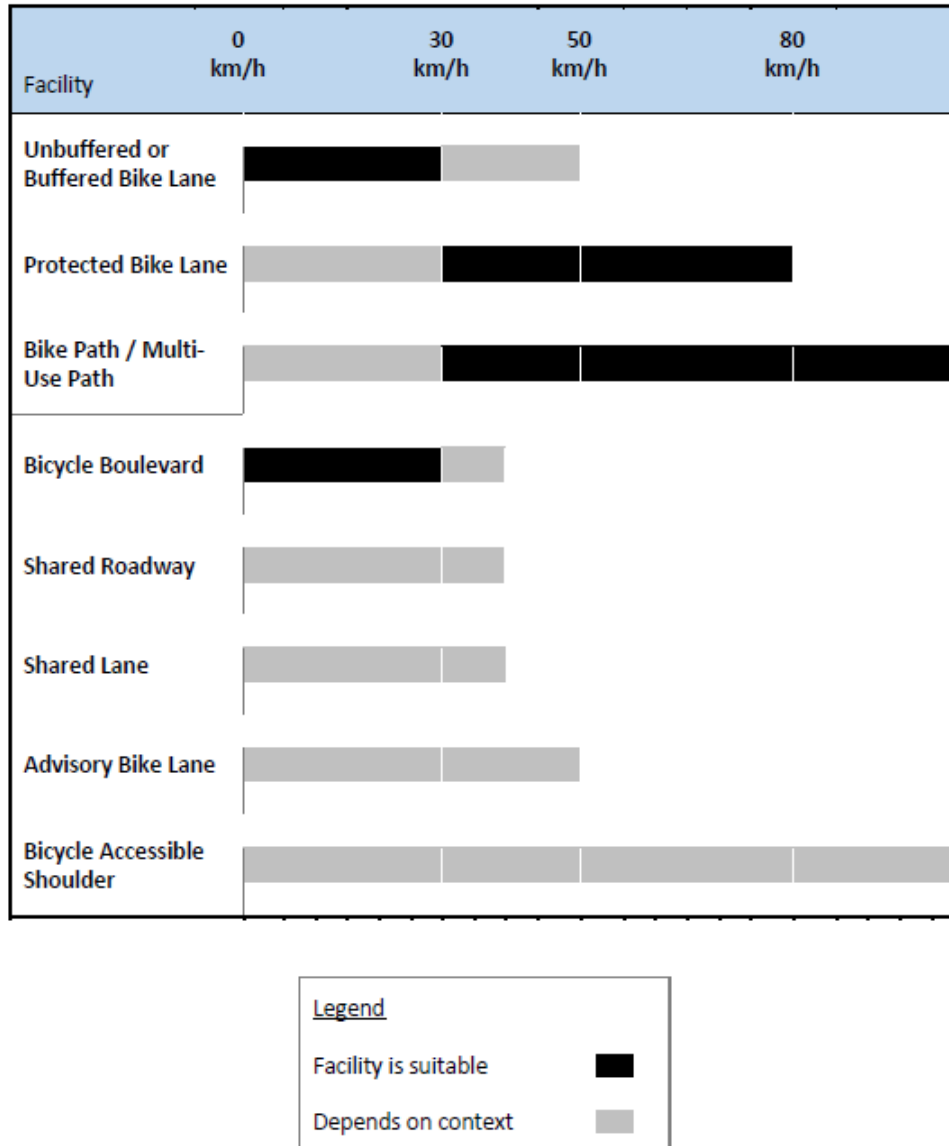


Figure 3- Bicycle Facility Types based on Roadway Speeds, from Figure 5.4.1 in TAC's 2017 Geometric Design Guide for Canadian Roads



## 5.1 All Ages and Abilities

All Ages and Abilities facilities are commonly narrowed down to only bicycle boulevards, protected bicycle lanes, and bicycle/multi-use paths. As not all these facilities are common in Nova Scotia, a description of each of them is provided below.



**Bicycle boulevards** are local roads where bicycle movement is prioritized and motor vehicle speeds and volumes are low. These roads will include crossing treatments such as bicycle actuation at traffic signals to allow cyclists to cross major roads. At minor roads, priority is given to cyclists through the re-orientation of stop signs. Traffic calming or diversion may be needed to maintain the low motor vehicle volumes and speeds.

Figure 4-Bicycle Boulevard in Seattle, WA



**Protected bicycle lanes** are generally used on higher speed roads, and they provide a vertical separation between bicycles and motor vehicles using elements such as parking stops, delineators or concrete curbs.

Figure 5-Protected bicycle lane in City of Edmonton, AB (Photo: Lindsay Vanstone)



**Multi-use/bicycle paths** are designated spaces for active transportation that is either located in the roadside or along an independent corridor (such as a rail-trail). Generally, where there is expected pedestrian use, separation between cyclists and pedestrians is preferred.

Figure 6-Sidewalk and bicycle path in Town of Canmore, AB (Photo: Maggie Boeske)

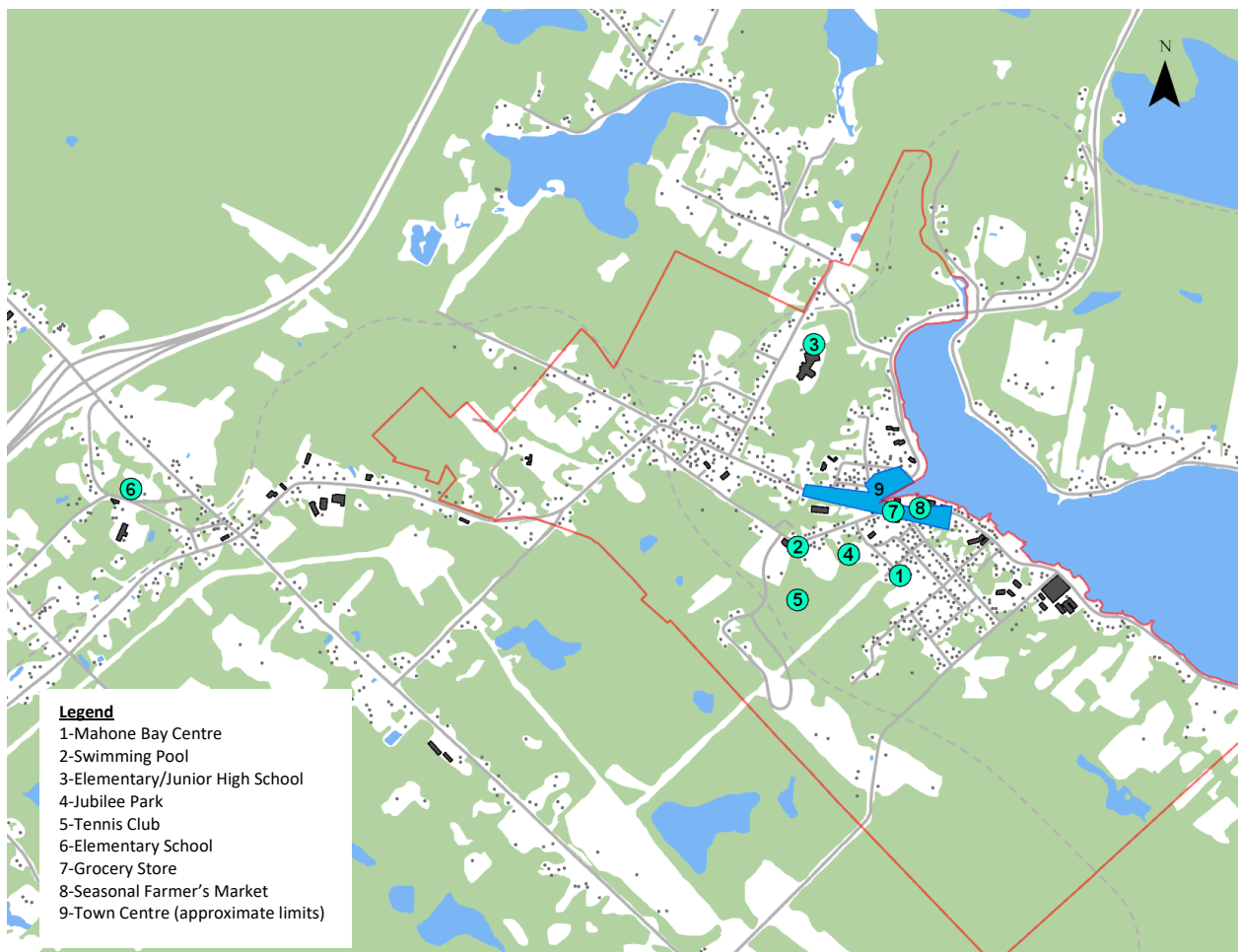


## 6.0 Network Planning

### 6.1 Destinations

Figure 7 shows key destinations within or near the Town of Mahone Bay.

- Mahone Bay's downtown extends out from the intersection of Main Street (Highway 325 and Trunk 3) and Edgewater Street (Trunk 3). The downtown is made up of numerous shops, many of which are tourist-oriented, that can be accessed directly from these roadways. The downtown is also home to several grocery stores, including a large supermarket and a seasonal farmer's market.
- There are several recreation areas on the east side of town including a swimming pool, tennis club, the Mahone Bay centre, and Jubilee Park.
- Schools in the area include an elementary/junior high school on Clearway Street within Mahone Bay limits and a private elementary school located within Blockhouse.



*Figure 7-Key Destinations within or near the Town of Mahone Bay*

## 6.2 Existing Cycling Conditions

The purpose of this section is to evaluate the existing connectivity between origins and destinations for cyclists, and to understand how much of a barrier is created by the characteristics of the existing road network. The Transportation Association of Canada (TAC) guide shows that motor vehicle volumes and speeds are the main considerations when determining whether the majority of the population feels comfortable cycling on a road shared with motor vehicles. These parameters can be used to assess the existing cycling conditions and evaluate the current barriers to cycling. From the TAC guide, a roadway that mixes bicycles and cars is only appropriate where the speed is 30 km/h or less and the traffic volume is less than 2500 veh/day.

Figure 8 shows traffic volumes and 85<sup>th</sup> percentile speeds along key routes in the Town of Mahone Bay. Data was available for Main Street, Edgewater Street, Clearway Street and Kinburn Street. The speed data came from speed display devices, which means that the speed data may have been influenced by the devices. However, the data should still provide a reasonable approximation for these purposes.

Mahone Bay has two long distance routes, Main Street (Highway 325 and Trunk 3) and Edgewater Street (Trunk 3) that pass through the Town limits. While outside of the town these roads are rural roads, within the town, they are highly developed, with Main Street being a busy shopping area for tourists and locals. These roads are critical to getting around on any mode as there are many destinations along those streets and as the roads bisect the community, they are also the only way to get between many of the neighbourhoods. With both high operating speeds and high traffic volumes, these roads constitute a major barrier for cyclists.

Along the side streets, there was speed data for Kinburn Road and Clearway Street. The speed data suggested that operating speeds were relatively in line with posted speeds as motorists travelled around 49 km/h, which was close to the 50 km/h speed limit and 36 km/h on a road that with a speed display device showing 30 km/h, due to the school zone. The speed is high for a shared roadway on Kinburn Street; however, a more detailed look at traffic volumes would be needed to assess the barriers on both of these roads.

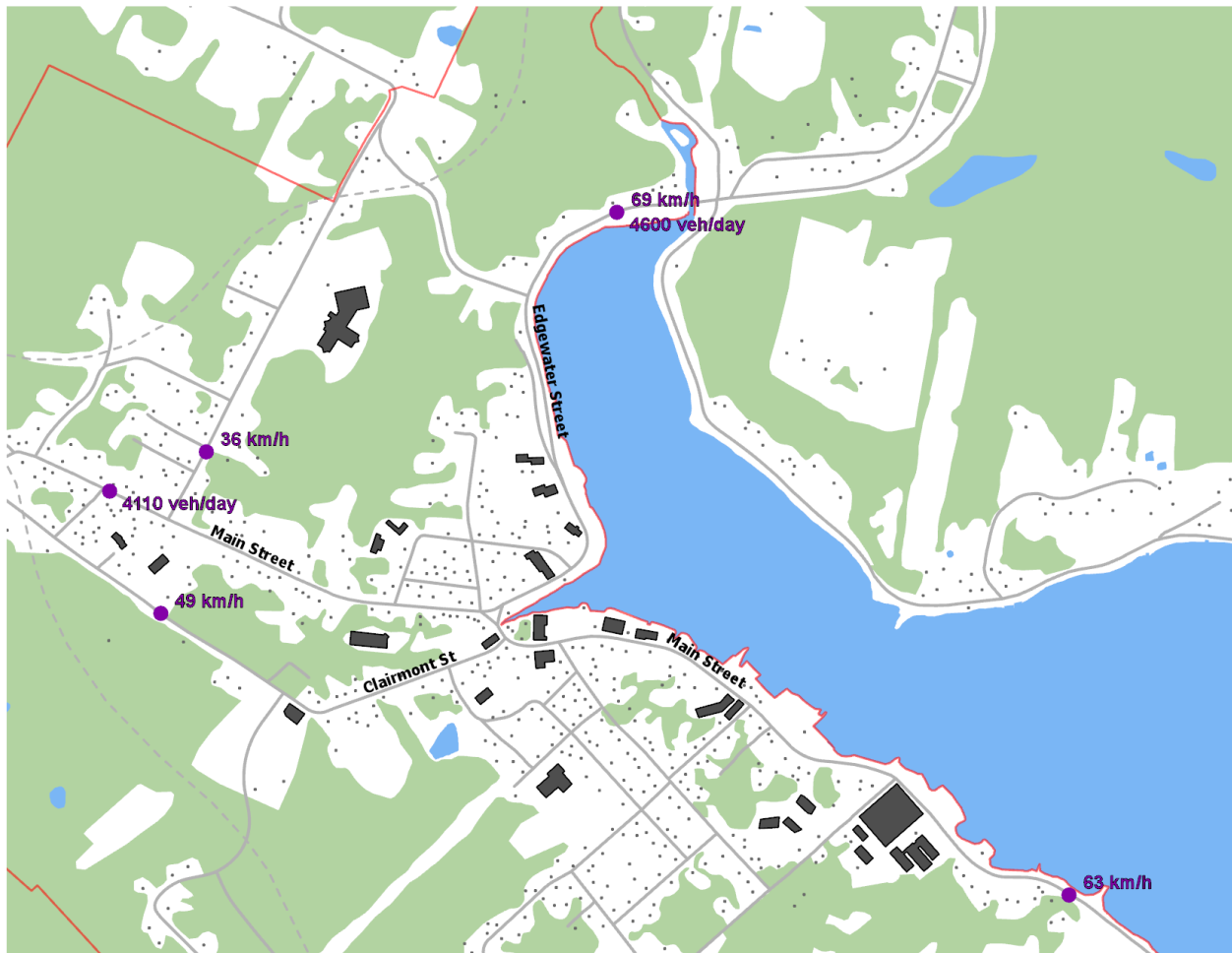


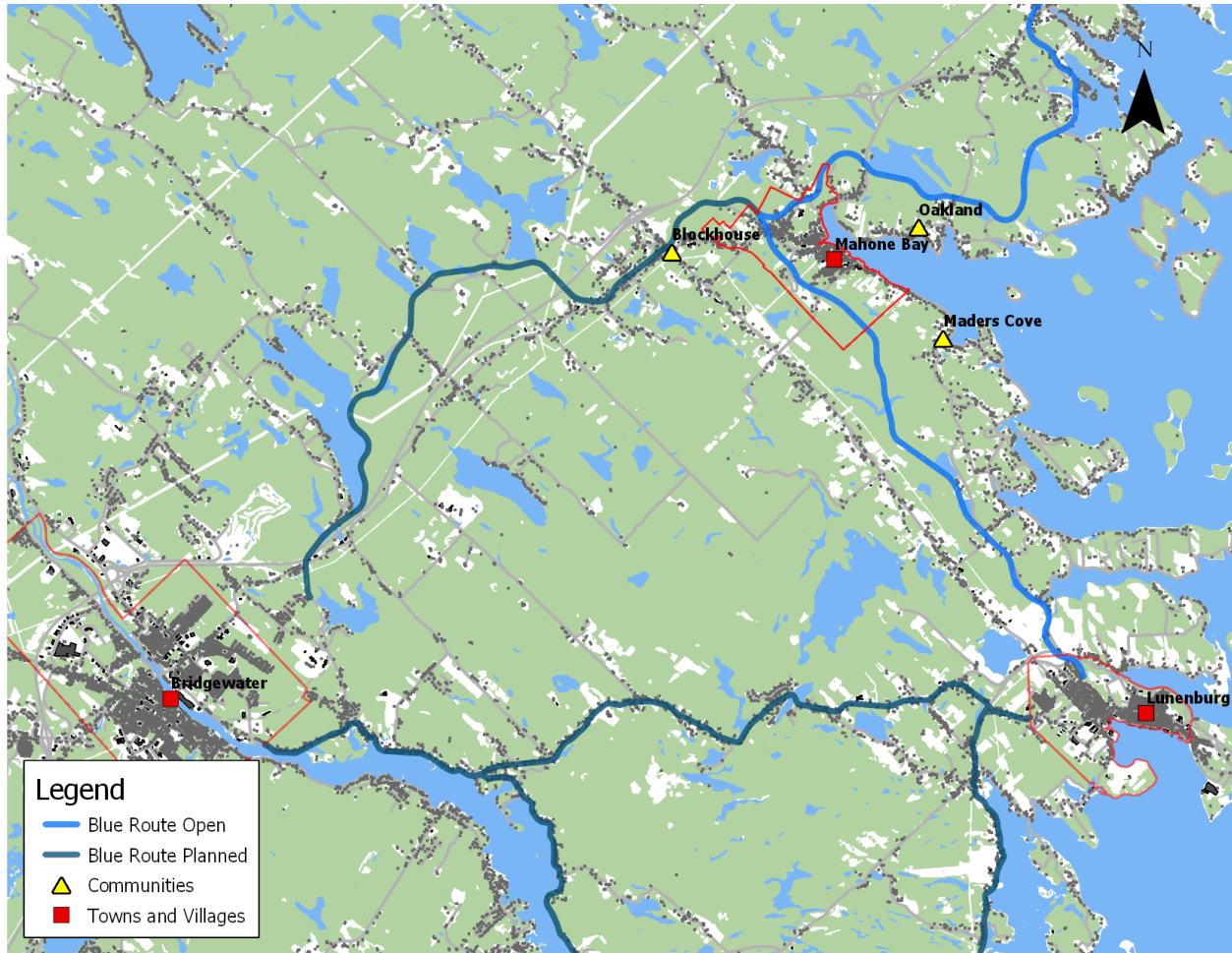
Figure 8- 85<sup>th</sup> percentile speeds and 2015 Average Annual Daily Traffic (AADT) on key routes in Mahone Bay

### 6.3 Regional Connections

On a provincial level, the Blue Route is intended to form a continuous cycling route that will connect communities across Nova Scotia. As shown in Figure 9, the Bay-to-Bay Trail and the Dynamite Trail have been designated as open sections of the Blue Route and the Adventure Trail will be designated in the future. These trails provide good regional connectivity to other towns and communities including the community of Blockhouse and the towns of Lunenburg and Bridgewater. However, one aspect that could be improved is establishing comfortable on-road connections between the trails and the Mahone Bay town centre. Another aspect, brought up in Section 3.0, is that the safety of some trail crossings could be improved. Finally, there may be other aspects that could improve conditions on the trail for cyclists, such as paving the pathway.

One limitation of the trail routes compared to on-road routes is that development in Nova Scotia tends to closely follow the road network. Therefore, the trails provide good regional connectivity but have limited access potential to destinations built off the highway network. On-road regional connections that could be explored for cyclists would be Trunk 3 to the rural communities of Oakland and Mader's Cove and Highway 325 between Blockhouse and Mahone Bay. These developments are located within 5

km of the town and were brought up during the stakeholder meeting as destinations that residents currently cycle to for recreation or transportation purposes.



*Figure 9-The Town of Mahone Bay in a Regional Context*

#### 6.4 Proposed Minimum Bicycle Network Grid

Using the above data, a minimum bicycle network grid was developed. The proposed minimum bicycle network is intended to identify several key projects that would substantially improve active transportation within Mahone Bay. For this reason, the projects were identified based on their impact, which was considered to be providing access to the most origins and destinations, and the opportunity, which is the potential to make these changes in the immediate term. The purpose of identifying the projects was not only to improve conditions for cyclists but also to determine the changes that could be made to make the streets more liveable for residents of Mahone Bay and adjacent areas as well as visitors to Mahone Bay. Figure 10 shows the proposed minimum grid; each route is outlined below in more detail. All three of the key routes fall within the town boundary as this area is the most developed and therefore, would likely see the highest impact.

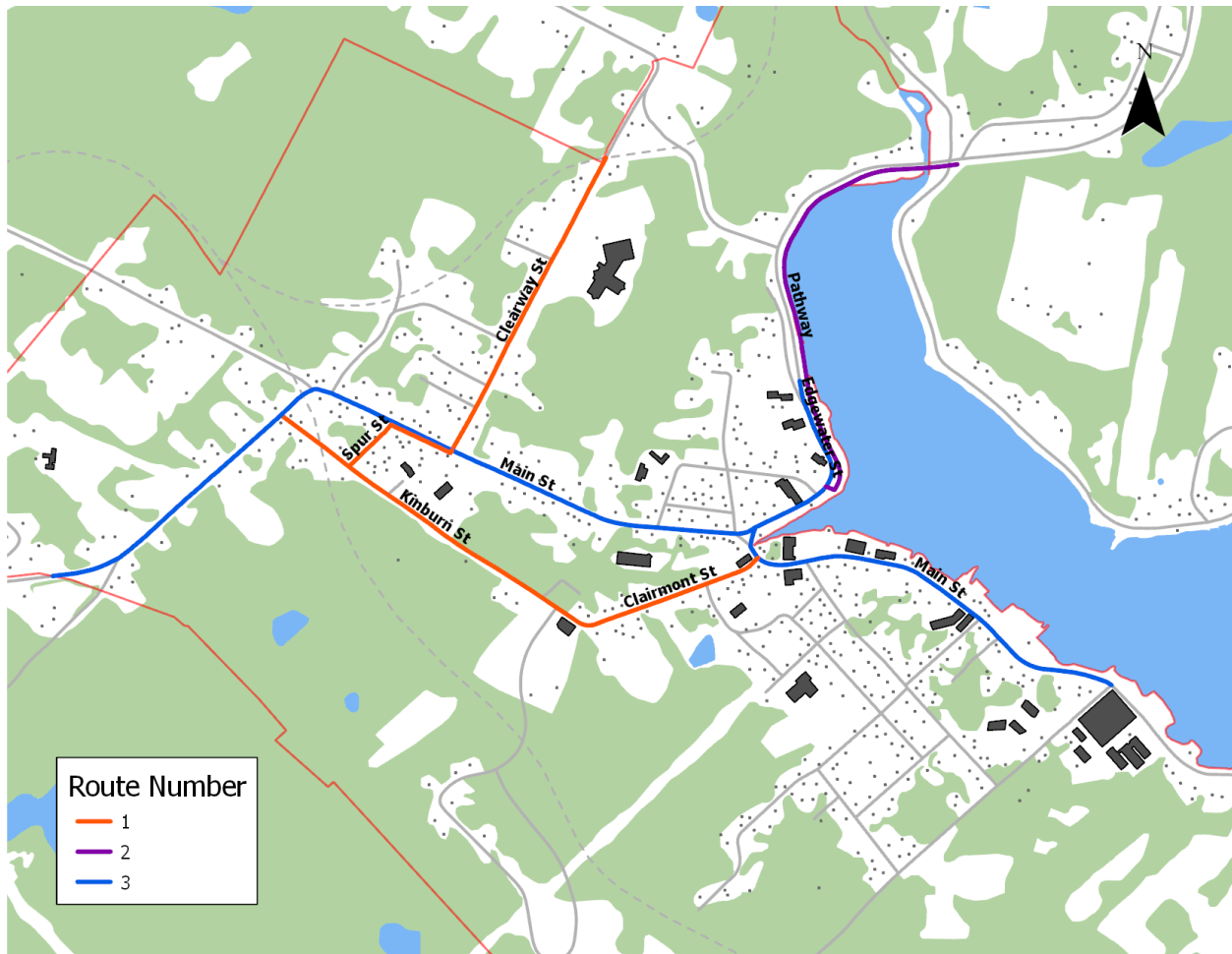


Figure 10- Proposed Minimum Grid for the Town of Mahone Bay

1. Develop a cycling route along Clairmont Street, Kinburn Street and Clearway Street that would connect the east neighbourhood to the town school.

Based on the feedback from the stakeholder meeting, a critical part of the network was connecting the east neighbourhood to Bayview Community School. The identified route would likely follow Clairmont Street, Kinburn Street, Spur Street, a small section of Main Street and Clearway Street. This route has the largest chance for immediate term change, and will be the project that Bicycle Nova Scotia will conduct a feasibility study on. The next steps in the process include:

- Collecting data (specifically road widths, traffic volume and speed data)
- Determining and recommending design options for committee review
- After committee review, developing a concept design for the preferred options.

As this route requires some usage of Main Street, a key piece will be considering how cyclists can safely travel along the roadway as well as how they can safely cross the road.



## 2. During shoreline expansion, consider developing a multi-use path along the waterfront of Edgewater Street.

The Town of Mahone Bay has a shoreline expansion project planned along Edgewater Street from approximately the three churches to Oakland Road. This project presents a prime opportunity to develop a waterfront pathway along this stretch that accommodates both pedestrians and cyclists. There is an existing gravel trail for pedestrians along some of the route but it is too narrow for both cyclists and pedestrians to use the space. Widening the path to accommodate cyclists, expanding the trail's length to reach Oakland Road, paving the trail to make it accessible to a broad range of users and formally connecting the path to existing pedestrian and cycling routes would make it a very high-quality addition to Mahone Bay's active transportation network. Based on TAC standards, a multi-use path should have a width of 3-6 m to accommodate both pedestrians and cyclists. On a network level, the pathway would do the following:

- 1) As current traffic volumes and speeds on Edgewater Street are too high for the majority of the population to feel comfortable cycling on it, the pathway will provide an alternate route that is located further from traffic and has scenic qualities.
- 2) By connecting Mahone Bay to Oakland Road, there will be greater connectivity for residences and businesses along Edgewater Street as well as to residences within Oakland itself. As well, it should provide a connection for local cyclists to reach Oakland Road, which was noted to be a popular cycling route.
- 3) The pathway has potential to enhance the environment for tourists.
  - a. The pathway would create a more comfortable environment for tourists to walk from the parking lots into town. This could encourage more tourists to use those parking lots instead of finding parking on the streets.
  - b. The pathway would also lead to the parking lot where tourists often stop to take photos of the three churches. This experience could be extended by promoting tourists to walk along the pathway into town. The town could use the pathway to promote a tourist experience; for example, placards could be placed along the trail, describing the town's history.
  - c. There is also the potential to promote cycle tourism as the pathway would connect to Oakland Road, which is already a popular route for cyclists.

## 3. Design Main Street (Highway 325 and Trunk 3) and Edgewater Street for 30 km/h, using walking and cycling friendly traffic calming.

A discussion about cycling on a network level in Mahone Bay is not complete without addressing Main Street and Edgewater Street. These two roads are critical transportation routes within Mahone Bay for all transportation modes. Within the town, these roads provide access to many local origins and destinations, from shops and grocery stores to neighbourhoods and the scenic waterfront. They are also part of the long-distance rural network, connecting Mahone Bay on a regional level to rural communities and nearby towns and villages.

As was discussed in Section 6.2, the current speeds and traffic volumes on this road are too high for most cyclists to feel comfortable sharing the road. There are also constraints for pedestrians. While there are some provisions, such as sidewalks on at least one side of the road, there are gaps in

access and difficult crossing points. In order to improve the area for cyclists, there are two primary options:

1. Provide separated infrastructure for cyclists.
2. Design the roads for 30 km/h using pedestrian and cycling friendly traffic calming, and consider whether measures can be taken to reduce through traffic through the town. The lower speed design features alone may be enough to reduce some traffic as more local trips could be done by active modes and through traffic may be deterred to other existing rural routes.

Option 1 is unlikely to be feasible along most sections of Main Street and Edgewater Street, as development patterns have restricted the space to add facilities. However, it may be possible to provide a separated route for cyclists and pedestrians along Edgewater Street during shoreline expansion, an idea which is discussed further in Section 6.4b. Option 2 is to design the roadway so that it supports a speed limit of 30 km/h through the developed parts of town. The purpose of Option 2 is not specifically about speed, but about enhancing the environment for pedestrians and cyclists, with the speed reduction being a necessary by-product.

When considering the design of a rural highway that passes through a developed town, a good source of lessons would be the Netherlands. The Netherlands is well-known for having a high active transportation (cycling and walking) mode share. They are also unique because their policies and roadway design strongly promotes cycling and walking, not just in their large urban areas but also in their small communities and rural areas. A key principle of their policies is the design of “self-explaining” roads, which means that the road is designed in a way that “support(s) road user expectations.”<sup>1</sup> Figure 11 shows a Dutch example of how their road design of a long distance rural road changes as it passes through a small community to promote a 30 km/h speed and a friendly environment for cycling and walking within the community. While the rural road context in the Netherlands looks substantially different from a North American context, this is a result of differences in their road design and policies and not road function. As can be seen in Figure 11, the road facilitates high-speed long-distance travel outside of the town but for the short distance that the road passes through the town, the road design changes to prioritize the living functions of the community’s residents. The road design change happens gradually to give motorists time to adjust. As the road approaches the town, pavement markings are used to laterally narrow the lane and bring the driver’s attention to the upcoming change in road characteristics. At the edge of the community where there starts to become a more concentrated development of houses and businesses, gateway speed limit signs are used to indicate the reduced speed limit of 30 km/h. A few metres later, this is followed by a speed bump, the removal of the centerline and the addition of sidewalks. The long-distance bicycle path merges to a shared roadway, as the traffic speeds are now low enough to allow cyclists to mix with cars. The road narrows as on-street parking is permitted and intersections are raised (also often known as “tabletop” intersections), which acts as a speed reduction measure. The on-street parking is used by residents and visitors but they are arranged as “chicanes”, alternating to require drivers to travel slowly and in single file. The on-street parking is sometimes replaced by measures that enhance the environment even further for pedestrians and

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<sup>1</sup> Aarts, Letty & Davidse, Ragnhild. “Recognizability of Rural Roads in the Netherlands.” (2007). *Researchgate*: [https://www.researchgate.net/publication/254446763\\_RECOGNIZABILITY\\_OF\\_RURAL\\_ROADS\\_IN\\_THE\\_NETHERLANDS](https://www.researchgate.net/publication/254446763_RECOGNIZABILITY_OF_RURAL_ROADS_IN_THE_NETHERLANDS)



cyclists such as extended sidewalk space and bicycle parking. Design features are similarly used to transition motorists out of the developed area and back into the rural high-speed environment.



Figure 11- Example of design features of a rural road changing as it enters a small community, from [Google Maps](#) (Image 1: rural road next to rural development such as farms, Image 2: lateral narrowing of the road using pavement markings to draw drivers' to the upcoming change in development and road characteristics, Image 3: 30 km/h speed limit sign followed by a speed bump several metres later, Image 4: Fully developed urban cross-section with sidewalks and parking added, some intersections are table topped, Image 5: Alternating parking along with sidewalk enhancements such as planters, lights and bicycle parking.

The Dutch example in Figure 11 is very relatable to the Town of Mahone Bay due to the constrained cross-section and the residential/business developments that directly abut the street. Another similarity is that there are already sections of Main Street in Mahone Bay that only allows one-way travel; for example, the parking on Main Street near Fairmont Street already forces vehicles to straddle the centerline in order to pass. Developing pedestrian and cycling friendly traffic calming will do more than just give active modes access, it should also make the road more intuitive to navigate for drivers as the design will give clear cues that they have entered a highly developed and busy area with many conflicts. Pedestrian and cycling friendly traffic calming of the street may involve adding sidewalks to both sides, resulting in narrower roads without a centerline that drivers have to navigate more slowly, “table topping” key intersections such as Clearway Street and Main Street so that the local and pedestrian functions are given equal or greater priority, and adding aesthetic features such as textured pavement to more clearly delineate space such as parking spots. The intersection of Main Street and Edgewater Street is a particular problem spot that could be improved to make it easier for pedestrians to cross the road.

Currently, both Main Street and Edgewater Street are relatively busy roads, with traffic volumes above 4000 veh/day. Conducting a complete road design as described above would require an analysis to determine the impacts on traffic, both within Mahone Bay and in the larger rural network. As well, traffic volume is a critical consideration for safety, as narrowing the road may not be reasonable depending on the expected vehicle flow. Ideally, re-designing Main Street and Edgewater Street within Mahone Bay would reduce the traffic; generally, traffic volumes less than 2500 veh/day make sharing the road reasonable for cyclists. However, there's little precedence in North America to quantify such a shift. From a general perspective, if the roadway was re-designed, there are several ways that traffic may be reduced through town. First, local trips by town residents may be done by active transportation instead of motor vehicles. Second, in an attractive environment for cyclists and pedestrians, tourists may feel even more encouraged to use existing parking lots to walk into town. Finally, regional commuters that don't have a specific reason to pass through town may be deterred to use another rural route that already exists. Currently, parallel rural routes are fairly similar in travel time, meaning that there is no incentive to avoid the town. For example, someone travelling from Lunenburg to Halifax could take the Highway 324 access to get onto Highway 103, or they could take Highway 324 and Fauxburg Road and then drive all the way through town to take the Trunk 3 access to Highway 103, or they could take Trunk 3 the whole way including through town, with speed differences within a few minutes. A re-design of the road could encourage these types of through travellers to use alternate routes unless they specifically intend to visit Mahone Bay or are deliberately taking Trunk 3 for scenic purposes.

The purpose of the above is to provide a high-level idea of potential changes that can be made to improve the roadway environment when a highway passes through town. A more detailed look at traffic volume on a network level, safety, loading and other elements would need to be considered to determine specific and feasible changes.

On a network level, these projects were identified to have the highest impacts for town residents and visitors. Project (1) will be taken forward for an in-depth evaluation by Bicycle Nova Scotia, due to the high priority identified at the stakeholder meeting and its potential to have an impact in the short term. Project (2) was identified as an option for the town to consider during shoreline expansion. Of the three projects, Project (3) has the largest scope of work and could be considered a long-range project for the town. In many ways, it is also the most critical, and if feasible, it would reduce the largest barrier to active modes in the town. It would also connect the first two projects to create a cohesive and connected network.

## 7.0 Conclusions

Based on the analysis of existing conditions, a cycling minimum grid was proposed for the Town of Mahone Bay. The minimum grid is composed of a local road route that would connect neighbourhoods, a pathway on Edgewater Street that can be considered during shoreline expansion and potential changes to Main Street and Edgewater Street within the town. For the Blue Route Bikeways Hub Project, Bicycle Nova Scotia will be doing an in-depth evaluation of a route along Kinburn Street, Spur Street and Clairmont Street. As a separate task, Bicycle Nova Scotia understands the importance of addressing problem trail crossings at Longhill Road and Clearland Road, as these were identified as significant issues in the stakeholder meeting.

# APPENDIX A

## Meeting Minutes