

Recommended Improvements - Ruby/Banning Neighbourhood Greenway

Ruby and Banning Streets have the potential to be an important part of the City of Winnipeg’s bicycle network, with direct, low stress access to a community centre, multiple commercial nodes and several schools in an area of the city that has been recognized as having a high potential to attract cyclists. In order to reach that potential, the city needs to improve the safety and convenience people experience as they walk or bike along these streets. In particular, intersections along Ruby and Banning need improvements to ensure that pedestrians and cyclists on Ruby and Banning corridor encounter crossings that are appropriate to their comfort level and the level of traffic that they are facing.

The recommendations that follow are aimed at increasing the safety and convenience along this route to provide people on foot and bike with conditions appropriate for a neighbourhood greenway that hopes to encourage people to walk or bike to their destinations.



General Wolfe School is just one of the many important destinations along the Ruby/Banning Corridor

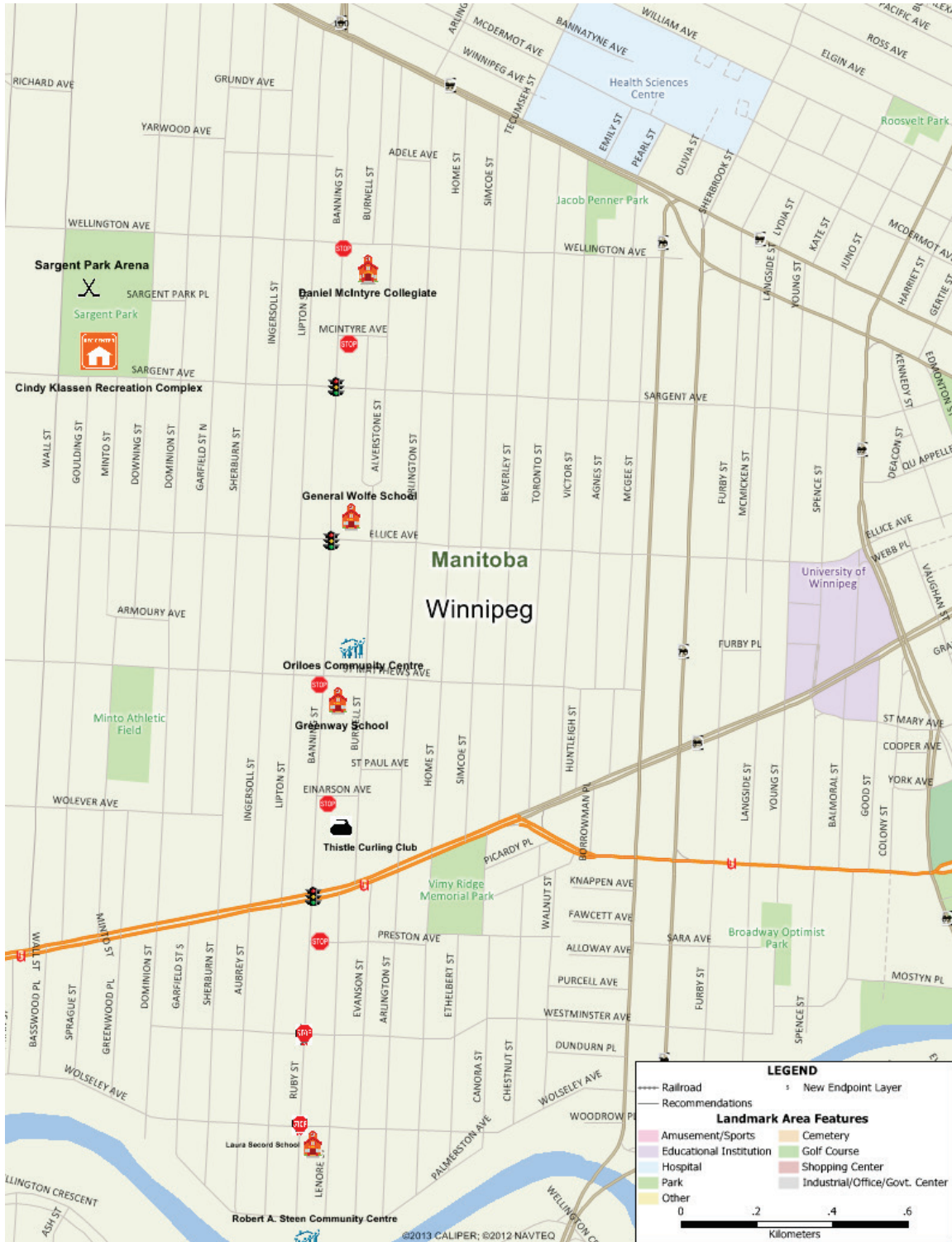
Important Destinations on the Ruby/Banning Corridor

- Robert A. Steen Community Club
- Laura Secord School
- Westminster Commercial Node
- Portage Avenue Commercial Node
- Thistle Curling Club
- Greenway School
- Orioles Community Club
- Ellice Avenue Commercial Node
- General Wolfe School
- Sargent Avenue Commercial Node
- Daniel McIntyre Collegiate
- Faith Temple

Important Regional Destinations Accessible from the Ruby/Banning Corridor

- Cindy Klassen Recreation Complex
- Health Sciences Complex
- Sargent Park Arena

Area Context Map



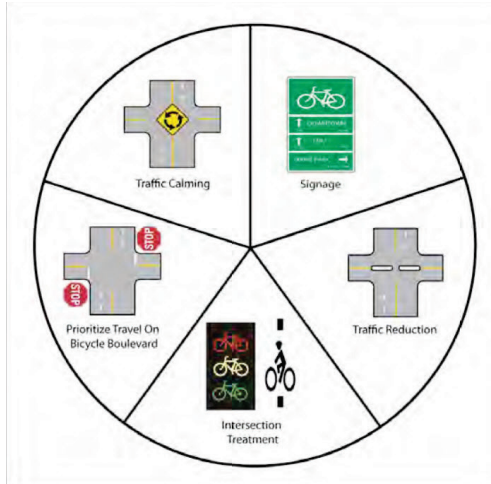
Map showing Banning/Ruby Corridor and area with recommended changes



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www.bikewinnipeg.ca

What is a Neighbourhood Greenway?

A neighbourhood greenway is a roadway that allows pedestrian, bicycle and car traffic, but which prioritizes travel by foot or bike. A neighbourhood greenway typically makes use of sidewalks to accommodate people walking, and utilizes a shared roadway to accommodate both people on bikes and in cars. While cars are tolerated, priority is given to people on foot or bicycle. Through traffic by people in cars and trucks is discouraged, while local access by car or truck is retained.



To accomplish this, a number of design elements are utilized (see diagram to the left). Short connections along a neighbourhood greenway may be reserved for people walking or biking, and through traffic at certain intersections may be restricted to people on bike or on foot.

To help prioritize the movement of people on bikes, stop signs are often oriented to favour the flow of people walking and cycling along the neighbourhood greenway. Specific attention is paid to major intersections to help provide convenient, safe and comfortable crossings of major

roadways. In many cases, people on foot or bike are provided with pedestrian/bicycle signals where they must cross major streets. This allows people on foot and bike to stop cross traffic before continuing on their journey.

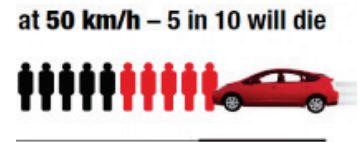
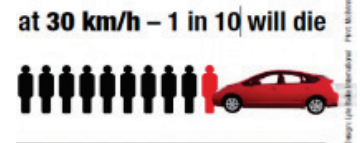
Neighbourhood greenways are an important component of Winnipeg's pedestrian and cycling strategies.

Speed Limit Reduction

Given the mixed nature of traffic on Ruby/Banning Streets (i.e. people on bikes must share the road with people in cars) and their importance as a route for children and adults on bikes, we firmly believe that the city should reduce the speed limit of these streets to 30km/hr for their full length between Palmerston and Notre Dame.

A reduced speed limit will serve three purposes:

1. Increase safety of people walking and biking on Ruby/Banning
 - a. 5 in 10 people will die if struck by a car travelling at 50 km/hr, but only 1 in 10 will be killed as a result of a collision with a car travelling at 30km/hr.
 - b. Reduced speed limits significantly reduce reaction times and stopping distances for people in cars or on bikes, meaning there is less likelihood of a collision occurring in the first place.
2. Increase Comfort Level for People on Bikes
 - a. Reduced speed limits minimize the differential in speed between people on bikes and in cars. That makes the roadway far more comfortable for people on bikes, encouraging more people to bike rather than drive to their destinations.



Measures such as speed humps should be considered to ensure an operational speed of 30km/hr or less is realized on the roadway segments of the proposed Ruby/Banning Neighbourhood Greenway.

Findings from the Winnipeg School Division Active School Travel Engineering report showed that speed was an issue along a number of streets in West End neighbourhoods. Rather than implementing reduced speed limits on a street by street basis in the neighbourhood, it might be more effective to implement a neighbourhood wide reduced speed limit.



New York has had substantial success using Neighbourhood Slow Zones to reduce speeds on residential streets.

Experience from New York City with [Neighbourhood Slow Zones](#) has shown that tackling speed issues on a neighbourhood wide basis can be a very effective measure to control speeds. In New York City areas where Neighbourhood Slow Zones have been implemented there has been a 10-15% decrease in speeds, 14% reduction in crashes with injuries and 31% reduction in injuries to vehicle drivers/passengers.



Permit & Encourage Use of Full Lane for People on Bikes



A second recommendation is to use both road side signage and on street pavement markings to visually reinforce the right of people on bikes to make use of the full lane when travelling along Ruby and Banning Streets. This signage will help encourage use of the full lane by children and adults on bike, while simultaneously announcing to people that have chosen to drive down the streets that the Ruby/Banning corridor has been prioritized for people on

bikes and foot, reminding them that while the presence of cars is tolerated, they must respect the pace of cyclists and only pass when they can change lanes to do so. These two measures will serve to reduce traffic speeds along the roadways while increasing the comfort levels of children and adults on bike.



Recommended Intersection Treatments

Wolseley Avenue

We recommend retaining the current 4 way stop. Traffic volumes on Wolseley are too high in comparison to Ruby to warrant change.

Westminster Avenue

We recommend retaining the current 4 way stop. Traffic volumes on Westminster are too high in comparison to Ruby to warrant change.

Preston Avenue

We recommend removing the 3-way stop at Ruby and Preston and replacing it with a single stop for Preston at Ruby. Doing so would remove an unnecessary stop for people biking along Ruby, adding to the comfort and convenience of the route.



Portage Avenue

A half signal has been installed at Portage Avenue to help facilitate crossings by pedestrians, but unfortunately, no provisions were made for cyclists when this half signal was installed. The simple fix for this is to install roadside push button activations on both sides of Portage so that cyclists can activate the signal without having to go up on the sidewalk. Care should be taken to ensure that the push buttons are positioned close enough to the road to allow activation from a roadside position. Eastbound Warsaw at Stafford is a good example. Westbound Warsaw at Stafford is a less agreeable example that used an existing light post but left the signal too far off the roadside to be effective.

In addition to the push button activation, we would also recommend the installation of bicycle signal heads to provide a visual cue for bicycle traffic.

The cost of push button activation with bicycle signals is estimated to be about \$1,000 to \$2,000 per direction.



Bicycle Detection Signage - Portland, Oregon



Bicycle Signal Head - Portland, Oregon

Einarson Avenue



The intersection of Banning at Einarson is currently controlled with a 4-way stop sign. We recommend changing this to a two way stop, with Banning having priority. Doing this would raise awareness of the Banning/Ruby route as an important cycling thoroughfare, and would remove an unnecessary delay for cyclists.

St. Mathews Avenue

The intersection of St. Mathews @ Banning is currently controlled by a two-way stop sign, with St. Mathews having priority. In addition, curb bump outs have been installed on the east side of Banning along St. Mathews at this intersection to reduce the crossing distance for the crosswalk on the east side of Banning. Given that St. Mathews has been identified as a potential bicycle network spine in the upcoming cycling strategy, and that this will likely result in a significant reconfiguration of St. Mathews to develop it as a bikeway in the near future, we do not recommend any changes at this time.

Ellice Avenue

The intersection of Ellice and Banning is currently controlled by a timed traffic signal (no activation is required to change the signal), which makes it ideal for bicycle traffic.

Sargent Avenue

The intersection of Banning at Sargent is currently controlled by a two-way stop sign, with Sargent having priority. In addition, there is a pedestrian crossing corridor installed on the west side of Banning to aid pedestrian crossings. Northbound people on bikes who wish to make use of the pedestrian crossing corridor must dismount from their bikes and cross Banning to activate the pedestrian crossing signal. Whether they are travelling north or south, all people on bikes are required to dismount and walk their bikes across Sargent to make use of the pedestrian crossing corridor.



Cyclists must get off of their bikes and cross Banning to activate the pedestrian crossing corridor to cross Sargent

Schools are located on Banning both north and south of Sargent. Both are located on the east side of Banning, meaning that the natural flow for people walking to school will be on the east side of Banning, not the west side where the pedestrian crossing corridor is located.

Personal observation at this site noted that motorist compliance with the pedestrian crossing corridor was poor. Platooning of pedestrians that would be facilitated by the installation of a half signal might very well result in improved compliance and hence safety at this intersection.

There are a number of potential treatments to make this intersection friendlier to people on bike or foot.

- Move the existing pedestrian crossing corridor to east side and add signage for cyclists
- Add a pedestrian crossing corridor to the east side of Banning, synchronize it with the existing pedestrian crossing corridor on the east side of Banning, and add signage for cyclists.
- Replace the existing pedestrian crossing corridor with a Pedestrian Hybrid Signal on Sargent along with pedestrian and bicycle signals on Banning.
- Replace the existing pedestrian crossing corridor with a half signal on Sargent and pedestrian and bicycle signals on Banning.

East Side Pedestrian Corridor with Signage for Cyclists

Move the pedestrian corridor from the west side of Banning to the east side of Banning, install bicycle friendly push-button activation on either side of Sargent and signage instructing people on bikes to use the existing pedestrian signal heads as an indication when to proceed across Sargent. Paint advanced stop lines on either side of Banning to indicate where cars should stop to maintain a clear pathway for people crossing Sargent on bike or foot. Install appropriate signage to indicate the advanced stop lines.

Pros

- Low price tag
- Provides people on bikes with a way to activate the pedestrian crossing without having to leave the roadway and dismount their bikes.
- Allows pedestrians to follow natural travel flow on the east side of Banning
- Advanced stop line provides added safety for people on foot.

Cons

- Compliance with the advanced stop line may not be high, meaning vehicles stopping on Sargent may block those trying to bike across Sargent.
- Pedestrians on the west side of Banning may not feel as safe with the pedestrian corridor located on the east side of Banning.
- People on bikes must rely on the pedestrian crossing signal to indicate when it is safe to cross. The pedestrian crossing signal may not be as visible as hoped.

Estimated Cost

- \$5,000-\$10,000



Synchronized Pedestrian Corridors with Signage for Cyclists

One way to avoid the cons associated with moving the pedestrian corridor would be to add a second pedestrian corridor on the east side of Banning, and synchronize it with the existing pedestrian corridor. Bicycle friendly push button activation of the pedestrian corridors would be installed along with signage instructing use of pedestrian signal heads as an indication when to proceed across Sargent.

Pros

- Moderate price tag
- Provides a convenient crossing for people on bikes while providing visual cues to motorists on their expected stopping position.

Cons

- People on bikes must rely on the pedestrian crossing signal to indicate when it is safe to cross. The pedestrian crossing signal may not be as visible as hoped.
- Crossing time is based on walking speed, which means people on bikes are asked to stop crossing before necessary.

Estimated Cost:

- \$50,000-\$60,000



Pedestrian Hybrid Signal and Pedestrian and Bicycle Signals

Replace the existing pedestrian corridor with a pedestrian hybrid signal, pedestrian crossing signals, and bicycle signals. Pushbuttons would be installed to facilitate activation of the signal along sidewalk right of ways for people on foot, and along Banning for people biking along Banning.

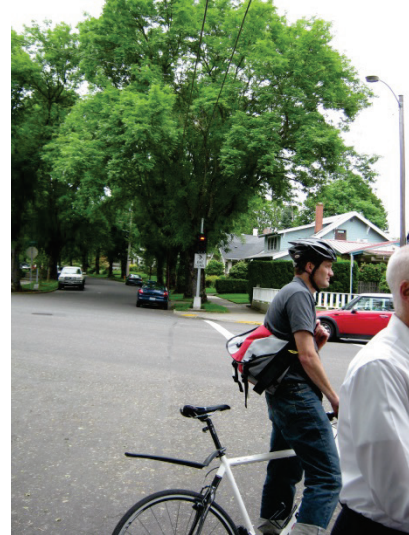
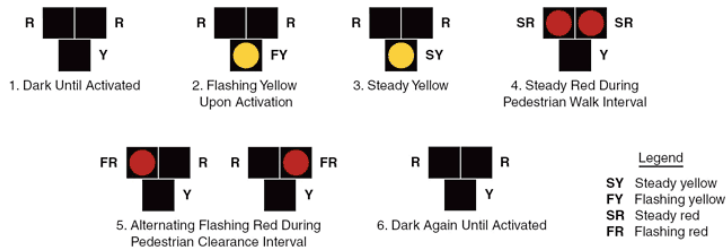


Figure 4F-3. Sequence for a Pedestrian Hybrid Signal



Pros

- Provides fast activation for people on foot or bike, which leads to high compliance
- High compliance rate improves safety
- Allows for platooning of people crossing Sargent on foot and bicycle, which will help with traffic flow on Sargent and should also help maintain compliance from people in cars and trucks.

Cons

- Higher cost
- This would be a new idea for Winnipeg and would require education.
- There is potential for increased through traffic from cars utilizing the signal.

Cost Estimate

- \$200,000

Half Signal and Pedestrian and Bicycle Signals

Replace the existing pedestrian corridor with a half signal. Pedestrian and bicycle signals would be provided to indicate when it is safe to proceed across Sargent for people walking or biking. Stop signs remain on Banning to control the crossing for people in cars and trucks. To maintain high compliance of pedestrians and cyclists with this signal, we recommend limiting the length of the cycle for the traffic signal to 60 seconds or less to minimize delay.

Pros

- High compliance rate improves safety
- This is a widely used intersection treatment in Winnipeg

Cons

- Higher cost
- Slower activation time for a half signal can lead to lower compliance from people on foot and bicycle. Signal cycle length should be limited to 60 seconds or less to minimize delay and maintain compliance. Count down timers displaying the time remaining before a walk/green signal could be used to increase compliance.
- There is potential for increased through traffic from cars utilizing the signal.

Cost Estimate

- \$150,000-\$200,000

Recommended Crossing Option

We recommend that the pedestrian corridor at Sargent and Banning be replaced with a pedestrian hybrid signal in combination with bicycle signals to regulate the movement of people cycling across Sargent. A pedestrian hybrid signal would provide safe crossings for both pedestrians and cyclists and retain walking paths on the both sides of Banning to maintain natural travel paths across Sargent. Wait times for people walking or biking across Sargent will be minimal and in line with expectations for a pedestrian/bicycle friendly corridor.

Wellington Avenue

This intersection is currently controlled by a two way stop, with Wellington having priority over Banning. Wellington is identified as an east-west corridor in the proposed cycling network, with connections to the Maryland/Sherbrook corridor (and a potential Cumberland bikeway), and eventually across the BNSF line to connect to a north/south corridor paralleling Empress. As the connectivity of Banning to the north of Wellington is limited, we would recommend leaving the two-way stop in place for the time being. Consideration should be given to bump-outs on Wellington to reduce crossing distances.

Monitoring

With improved crossing treatments on Ruby/Banning, there is some risk of traffic being induced to use the corridor as a north/south cut through route. We recommend that the city monitor traffic levels and speed over the next few years to determine if such increases do take place, reporting back after one year with recommendations for mitigation of any undesired activity that may have developed following implementation of recommendations included in this proposal.

Particular interest should be paid to traffic turning off of Notre Dame and Portage Avenue.

Potential Funding Sources

Potential funding sources for these improvements would include the following line items from the City of Winnipeg's annual capital budget (page numbers refer to the 2014 capital budget).

- Active Transportation Corridors (page 2-3)
- Traffic Signal Improvements (page 2-8)
- Traffic Engineering Improvements – Various Locations (page 2-9)
- Regional & Local Street Renewal (page 2-15).