

MORE PEOPLE BIKING MORE OFTEN

Bike Winnipeg Recommendations for Bicycle Facilities Connecting to Transit StationsSubmitted February 24, 2017

Bike Winnipeg is pleased to be able to submit our recommendations for bicycle facilities connecting into the transit stations along the second phase of the Southwest Rapid Transit Corridor. At three times the speed of walking, the catchment area for a person riding a bike to or from transit has the potential to be nine times that of a person on foot.

The pedestrian and bicycle facilities being built as part of the Southwest Rapid Transit Corridor (SWRTC) will link together some of the city's densest neighbourhoods (Osborne Village, Lord Roberts, South Osborne, Earl Grey) and most visited destinations (University of Manitoba, The Forks, Downtown). We should expect that the new pedestrian and bicycle facilities associated with the SWRTC will encourage a large number of people currently driving to destinations on or near the route of the SWRTC to choose to travel to their destinations by bike once the projects have been completed. As we build up the bicycle network around the SWRTC AT Pathway, the number of people biking down the route will continue to grow. The new bicycle facilities being built as part of the SWRTC/Pembina Highway Underpass need to be planned with that much higher level of demand in mind.



Source: MassDOT Separated Bike Lane Planning & Design Guide

Maximize Connectivity

To maximize use along the AT pathways being completed as part of the Southwest Rapid Transit Corridor, it is critical to maximize the number of connections into/out of the existing bicycle and street network (especially low volume residential streets that can act as low stress bikeways). Wherever possible, it is best to provide people with multiple routes to their destinations.

Planning for the bicycle and pedestrian components of the SWRTC needs to be focused on connections to both existing and planned destinations along the route as well as design of the main AT pathway

Key Recommendations

- Improved Walkshed/Bikeshed Analysis
- Parker-Taylor AT Tunnel
- Chevrier Protected Bike Lanes
 - o Pembina/Chevrier/Crescent Intersection Improvements
- Seel/Linden Pl Protected Bike Lanes
- Markham Protected Bike Lanes
 - o Extend south along Barnes to Lee and East along Markham to Snow
- Chancellor Matheson/Pembina Intersection Improvements
- Somerville/Rockman/Somerset Neighbourhood Greenway
- Chancellor Station Connections
- Plaza Drive Painted Bike Lanes Extension
- Ensure Space is Maintained for IGF Stadium Bicycle Parking
- Ensure Lee Boulevard Connection into Waverley West is Bicycle Friendly

City Planning Documents

- Complete Communities
- Transit Oriented Design Guide
- Pedestrian and Cycling Strategies

Overlapping Projects/Studies

- Waverley Underpass
- Grant Park Campus Study
- East Fort Garry Study
- Oak Grove Master Plan
- Taylor Lands Master Plan
- Bishop Grandin Crossing Master Plan
- Pembina Buffered Bike Lanes
- Visionary Re(Generation)
- Bishop Grandin Greenway Pembina Overpass
- Waverley West (Northeast, Town Centre, ...)
- University of Manitoba Visionary (Re)Generation

Critical Design Guides

- MassDOT Separated Bike Lane Planning and Design Guide
- FHWA Separated Bike Lane Planning and Design Guide
- Fundamentals of Bicycle Boulevard Planning & Design
- Lessons Learned: Building the Protected Intersection
- Designing Intersections for Vancouver's Protected Bike Lanes

Mapping Walksheds & Bikesheds

We are happy to see the inclusion of walksheds and bikesheds in station planning. However, we feel there are a number of shortcomings in the analysis that has taken place that need to be addressed. Specifically, we feel that:

- 1. We'd like to see the network walkshed/bikeshed area compared to the "as the crow flies" walkshed/bikeshed area to help illuminate the consequences of barriers on access to transit stations. A walkshed/bikeshed ratio (accessible area/potential area)
- 2. We'd like to see barriers/gaps within the potential walksheds/bikesheds highlighted so that new facilities that remove the barrier/gap can be considered.
- 3. The five and ten minute cycling distances need to be extended to distances of 1.5kms and 3.0kms which are more in line with average cycling speeds^{1,2};
- 4. Walkshed and bikeshed analysis needs to be based on a comfort level test that considers the role that walkability and bikeability play in practical walkshed/bikeshed boundaries. For instance, a segment of arterial roadway such as Pembina without cycling facilities should be excluded the bikeshed network, and neither the walkshed nor bikeshed networks should cross the arterial at any point other than a signalized intersection.
- 5. The comfort level test should be in line with the principles of low stress bicycle network connectivity³.

Determination of comfort/stress level needs to take into account things like traffic volume, traffic speeds, presence of parking, and the presence and quality of bike lanes along road segments. Similarly, comfort level needs to account for the level of stress a person biking through an intersection would experience, taking into account things like the volume of traffic on the cross street and the presence of a median, curb extension, traffic signal or right turn lane.

For instance, on Pembina, we should not include an area within the bikeshed unless it can be reached via a safe crossing of Pembina, and given that travel on Pembina will be one way, the longest low-stress path should determine whether or not an area lies within a bikeshed .On busier collector roads such as Clarence and Chevrier, we should not assume that crossing or riding on these streets is accessible unless we have planned for adequate facilities to cross or travel along them (a neighbourhood greenway is not a realistic option for Clarence, Chevrier or Nathaniel as it strives for AADT of less than 1,500 and at maximum 3,000).

3

¹ Dill and Gliebe found that average cycling speed was 10.8mph (17.8 kph), including stop time - Understanding and Measuring Bicycling Behavior: a Focus on Travel Time and Route Choice; Dill, Gliebe, OTREC-RR-08-03. 2008; http://nacto.org/wp-content/uploads/2012/02/Dill-and-Gliebe-2008.pdf

² Average cycling speed in Copenhagen was measured at 16.4 kph- 2014 City of Copenhagen Bicycle Account (pg. 5) http://www.cycling-embassy.dk/wp-content/uploads/2015/05/Copenhagens-Biycle-Account-2014.pdf

³ For a definition of low stress bicycle connectivity, see Low Stress Bicycling and Network Connectivity, Maaza C. Mekuria, Peter G. Furth. and Hilary Nixon, Mineta Transportation Institute, 2012 http://transweb.sjsu.edu/PDFs/research/1005-low-stress-bicycling-network-connectivity.pdf

The goal of the analysis should be the identification of improvements that will maximize access to transit stations and to the bicycle network in general. Analysis should identify barriers and gaps in the walking and cycling networks that prevent people from walking or cycling to a transit station from destinations that would otherwise be within the five or ten minutes walking/cycling distance of the station.

We shouldn't be starting from the assumption that existing barriers cannot be overcome. We should be providing decision makers with options to improve access to transit stations along with objective information on the cost and benefits (including co-benefits such as improved connectivity and safety in the overall bicycle network) of those options. As we have developed rapid transit on the basis that it will help shape urban form and promote density, analysis of the benefits provided by various connectivity improvements need to include their likely influence on development in and around the transit station.

Recommendations

Where we want Exchanges

1) Exchange Somerville/Rockman/Somerset Neighbourhood Greenway in place of Windermre/Point Rd Neighbourhood Greenway

We think that it would be better to route people on bikes down Somerville/Rockman/Somerset instead of routing them south to Windermere and then Point Road and back to Windermere. Our reasons are as follows:

- Complexity of Pembina @ Point Intersection and traffic volumes on Windermere
- Would make use of existing Pedestrian Corridor at Rockman/Somerset to cross Pembina
- More direct, simplified wayfinding.
- Same or better connectivity
 - Wildwood Golf Course Riverside trail
 - Wicklow,
 - Riverside
 - Elm Park Bridge

Ultimately, we feel that connection will be part of a bikeway leading from the Elm Park Bridge all the way to Fort Whyte Alive! when combined with Seel/Linden Pl protected bike lanes.

Route Preference:

The findings suggest that cyclists are sensitive to the effects of distance, turn frequency, slope, intersection control (e.g. presence or absence of traffic signals), and traffic volumes. In addition, cyclists appear to place relatively high value on off-street bike paths, enhanced neighborhood bikeways with traffic calming features (aka "bicycle boulevards"), and bridge facilities. Bike lanes more or less exactly offset the negative effects of adjacent traffic, but were no more or less attractive than a basic low traffic volume street. Finally, route preferences differ between commute and other utilitarian trips; cyclists were more sensitive to distance and less sensitive to other infrastructure characteristics for commute trips.

Source: Where do cyclists ride? A route choice model developed with revealed preference GPS data; *Joseph Broach*, *Jennifer Dill* and *John Gliebe*; 2012

2) Exchange Ulster/Grey Friars/Rice Road Neighbourhood Greenway for Alleghany Neighbourhood Greenway

Pave and extend the pathway leading south from Ulster and Mapleridge to connect all the way to Killarney at Greyfriars. Ulster has better connections south than Alleghany:

- Mapleridge Fort Richmond Collegiate
- Greyfriars & Rice Road (via Wadham Bay Cut-Trhough)
- Lafayette/Mt. Allison Cut Through Baylor Connection

U of M Visionary (Re)Generation plan should be revised to match this change.

Where we Want Additions/Extensions/Improvements

3) Parker Station → Grant Park Pavilions AT Tunnel

We feel that one of the best opportunities to improve walking and cycling access to Parker Station and the SWRTC in general would be the addition of an AT tunnel connecting Parker Station beneath the CNR Mainline to the Taylor properties, Grant Park Campus, and Grant Park Shopping Centre north of the tracks. This is a very walkable area with a wealth of destinations that is currently somewhat poorly served by transit (at least along Taylor). While the tunnel would benefit the SWRTC, it would also have benefits for both the Oak Grove (Parker Lands) and the Grant Park Pavilions which are under development and could be shaped by their proximity to transit and to each other.

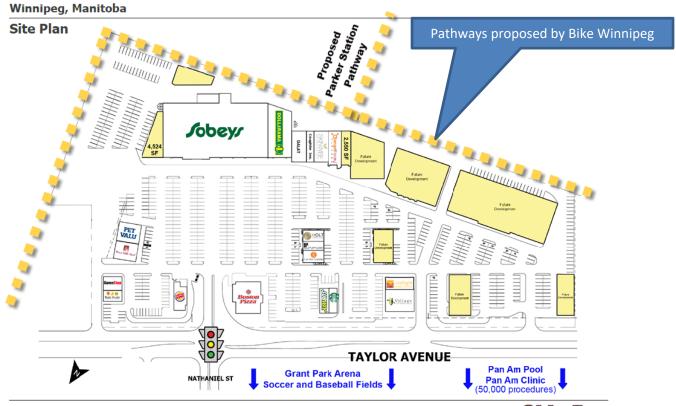
These developments lie within the 800m transit oriented development zone for the proposed Parker Station and would provide a ready market for transit passengers, and would likely see faster and denser development in the presence of a tunnel under the tracks linking Parker Station to these properties. Such a tunnel would also likely help influence the development of the Oak Grove (Parker Lands) development by providing a focal point for transit oriented development along the pathway.



800m Transit Oriented Design Zone north of the tracks that would lie within a 10 minute walk of the proposed Parker Station that would lie within a 10-minute walk if a direct crossing were included in phase II of the Rapid Transit Corridor.

Plans for Grant Park Pavilion (anchored by WalMart) include reference to a potential pathway across the tracks to the Parker Transit Station connected to Taylor by an AT pathway along the border between Grant Park Festival (anchored by Sobey's) and Grant Park Pavilion.

Grant Park Festival



Shing Go Succeeding By Helping Others Succeed

 $\textit{Grant Park Festival site plan with proposed pathway to Parker Station and \textit{Grant Park Pavilions overlaid}. \\$







Grant Park Pavilions site with proposed rail side pathways linking to Taylor pathway and Parker Station overlaid.







Ariel view of Grant Park Pavilions, Grant Park Festival and Oak Grove sites.



Photo from Grant Park Pavilions showing informal pathway crossing CNR mainline. Bike Winnipeg would like to see construction of an AT tunnel beneath the tracks to connect to the proposed Parker Station and Oak Grove development.

Given that the Grant park Pavilion and Taylor Lands developments will be in plain site from the Parker Station, we feel that the lack of a safe, direct crossing would pose a serious safety hazard as people will cross the CNR mainline at grade to reach destinations north of the tracks.

We have cheap finance and construction conditions now, and we are already negotiating with the rail line (which is being realigned) and the relevant property owners, so it makes sense for this project to be included within the second phase of the SWRTC project.



Existing (green) and potential (red) 3km bikesheds with addition of recommended walking and cycling facilities.

Supporting Statements from Various Planning Documents

"Simply having transit and development adjacent to one another is not enough. For transit facilities, they should be designed to be welcoming to the public and connected with the surrounding community." (p. 13, City of Winnipeg Transit Oriented Development Guidelines)

Complete Communities Planning Document

Transformative Areas- Major Redevelopment Areas - Major Redevelopment Sites (pg. 65)

- F Taylor Lands
- G Parker Lands

"Major Redevelopment Sites are advantageous, because they can draw on existing and nearby infrastructure. ... They can connect with nearby schools, community centres, libraries, and other city amenities." (pg. 64)

Direction 1 – Promote Development of Major Redevelopment Sites with Proactive and Collaborative Planning Process

 Create strong, multi-modal and active transportation linkages from each major redevelopment site to the Downtown, other Major Redevelopment sites, Centres, Corridors, Parks, major attractions and employment centres. (Implementation Tools – Planning, Capital Budget/Infrastructure, Leadership/Partnerships)

Direction 2 – Capitalize on the Proximity of Major Redevelopment Sites to Rapid Transit and High Frequency Transit

Direction 3 – Facilitate redevelopment through incentives, partnerships, and the removal of barriers. (pg. 68)

Sustainable Transportation

Strategic Goals – A Transportation that is Dynamically Integrated with Land Use An important component of integrated transportation and land use is that it minimizes both the number and length of trips people need to make. (pg. 6).

Taylor Redevelopment Master Plan

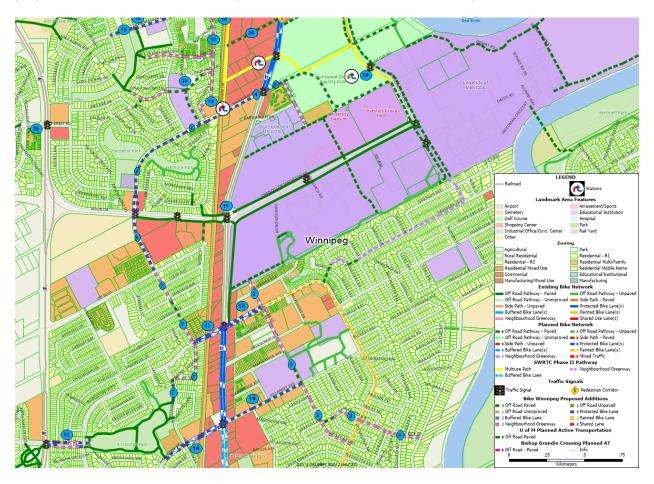
"The Taylor Redevelopment Site will also serve Winnipeg's new economy – one based on green energy and shortening travel distances" (pg. 3)

The Meeting Place (p. 26)

- Connections to the active transportation pathways in the area will be strongly encouraged
- Could connect to future City of Winnipeg pedestrian pathway to adjacent Parker Lands, south of the CNR mainline.

4) Markham Protected Bike Lane and Proposed Extensions

We agree with the proposal to install protected bike lanes along Markham, but would like to see the proposal extended south and east to provide needed connections for the bicycle network.



By providing this additional link along Markham Road, the SWRTC project will benefit through the creation of a direct low stress connection to Arthur A. Leach Junior High and the Waverley Heights Community Centre, as well as a low stress connection to the south along Chancellor Drive (which narrows into a residential street south of Markham Road) that connects into the Superstore and Fairlfield Park neighbourhood.

East of Pembina Highway, Markham Road could be upgraded to provide a low stress route into Victoria Hospital and the indoor soccer complex in the U of M campus via Snow Street. Connecting directly into the existing pathway leading in from D'Arcy Drive, protected bike lanes along Markham Road would provide a connection to the Bishop Grandin Greenway and St. Vital Park for people biking north from South Waverley Heights and Fairfield Park until a grade separated crossing can be constructed at the intersection of Pembina Highway and Bishop Grandin. Similarly, when the U of M Red River AT Bridge is built, Marham Road will also be part of the connection through to this facility, making it an important part of the city's bicycle network.

While the plan shown in February did not provide a level of detail for the bike facilities along Markham Road, we feel that a pair on one way protected bike lanes would provide the best functionality for Markham Road. Benefits of one way protected bike lanes include capacity, reduced conflict points at driveways and intersections, and better transitions on and off of the protected bike lanes.

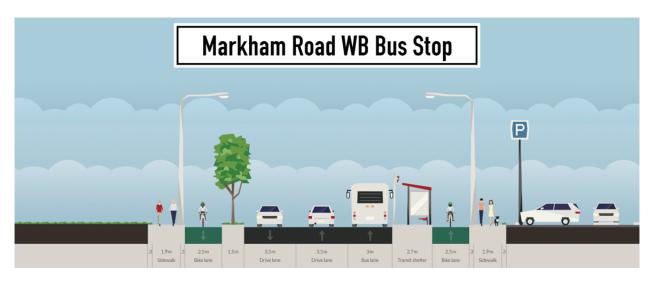
Bike Winnipeg has developed the following cross sections to illustrate our recommended design for the bike and walking facilities along Markham Road.



The above cross section should be manageable within the existing right of way along Markham Road. Snow storage may encroach on the bike lanes and sidewalks during winter, but not to the degree that mobility would be sacrificed.



Accommodation of bus stops at the intersection of Pembina and Markham would require acquisition of some property to allow for a bus pullout and platform with a full wrap around for the protected bike lanes. On the south side of Markham, the property desired is currently green space. On the north side of Markham, the property is currently used for off street parking, but this parking could be replaced by expanding parking into an adjacent green space.





Properties needed to provide space for bus pull outs and bus platforms that would allow the protected bike lanes to wrap around the bus stops at Markham and Pembina Highway.

5) Pembina to Snow

An extension of the proposed Markham Protected bike lanes from Pembina Highway to Snow St would provide connections to Victoria Hospital and the South Winnipeg Soccer Complex and provide future connections into the U of M's proposed trail system.

6) Barnes St. Protected Bicycle Lanes (Bison to Lee)

Extending the Markham Protected Bike Lanes south along Barnes to Lee Boulevard would provide connectivity south to Real Canadian Superstore and Fairfield Park neighbourhood.

7) Barnes St./Firbridge Crescent Local Street Bikeway

South of Lee, a neighbourhood greenway could be used to provide connectivity south to Bairdmore/Dalhousie (recommended as a protected bike lane to provide connectivity between the Kirkbridge Park pathway system and the neighbourhood greenway along Ulster that we have proposed connecting into the U of M). As part of the neighbourhood greenway, we would like to see bike paths added next to the existing cut-through sidewalks between Fairfield and Colebrook. At the southwest end of Firbridge, a short section of multi-use pathway would be recommended to connect into the Kirkbridge Park pathway system.

The Kirkbridge Park trail system has the potential to provide access to Waverley West trail system via Sandusky. A combination of protected bike lanes could be combined with a mix traffic bikeway along the one-way service roads along Sandusky to create a low stress bikeway connection to the South Pointe trail system in Waverley West..

Look into the Fermor Avenue Seine River Bridge rehabilitation project to see the use of a service road as a link to a pathway (north side of Fermor west of St. Anne's).

8) Seel/Lindenwood Pl. Protected Bike Lanes



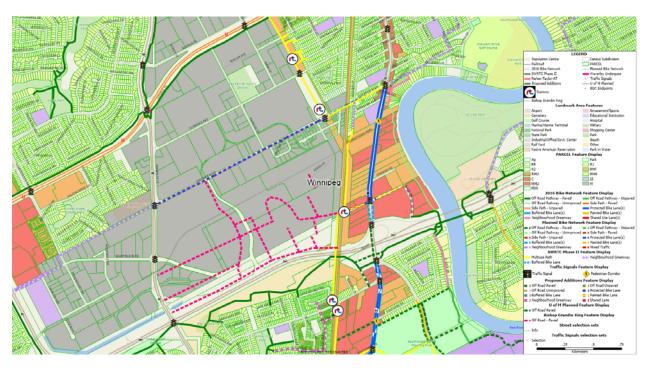
We recommend that the proposed Seel painted bike lanes be upgraded to protected bike lanes and that protected bike lanes be added along Linden PI to provide a connection west to the Linden Woods pathway system. Given that sidewalks are being considered for Seel, and considering the volume of traffic and presence of bus and truck traffic along Seel & Linden Place, we feel that an upgrade to protected bike lanes is warranted.

Combined with a Somerville/Rockman/Somerset Neighbourhood Greenway, this would create a long, direct low-stress connection from the Linden Woods pathway system to the Riverside Neighbourhood Greenway, the Elm Park Bridge (via the Jubilee Pathway) and Churchill Drive (via Riverside and Jubilee). For anyone traveling towards the Elm Park Bridge, this would be the last cut-off prior to the Pembina/Jubilee Underpass.

The Linden Woods pathway system could ultimately be extended west to Fort Whyte Alive, Kenaston Commons, and the Tuxedo Business Park via Lindenshore/Hartsdale/Princewood and a rail with trial along the BNSF line linking across Kenaston (as considered for The Walk residential development).

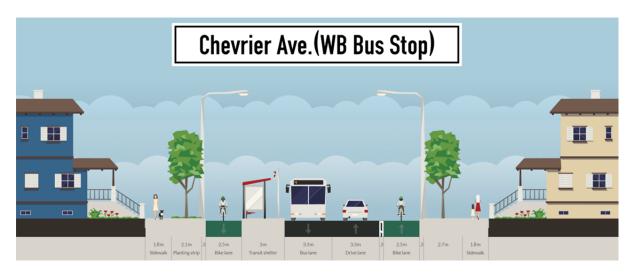
9) Chevrier Protected Bike Lanes

We feel that traffic levels and truck traffic volumes along Chevrier warrant protected bike lanes, as promised in previous stakeholder meetings. Bike Winnipeg recommends the installation of two one way protected bike lanes on Chevrier instead of the two way bike path that has been proposed.. Chevrier has a wide 24m right of way, so there is plenty of room to include protected bike lanes on both the north and south side of the roadway with enough width to allow for side by side cycling while still leaving room for snow storage. Raised bike lanes would likely be the most cost effective choice as snow clearance would be straight forward and cost effective.



Bike Winnipeg Proposed Cross Sections

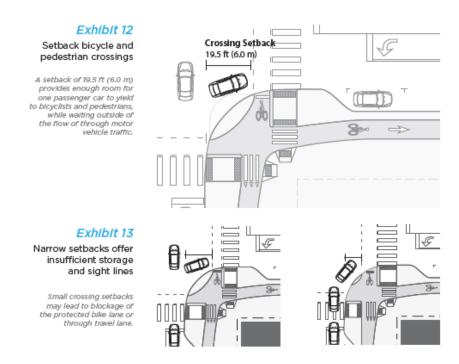






10) Pembina/Chevrier/Crescent Drive Intersection Improvements

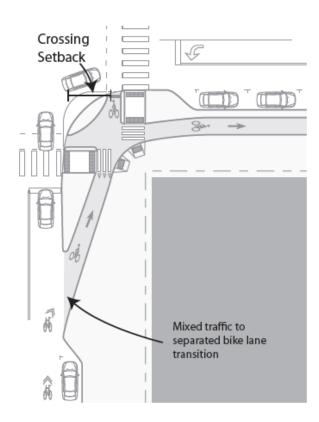
As part of the protected bike lane construction, we recommend that the city get rid of right turn channelization coming off of Chevrier onto Pembina to improve safety. In its place, we recommend that a protected intersection using signal phases to eliminate conflicting movements between bikes/pedestrians and motorized traffic be developed at this intersection.



Conceptual design for protected intersection at Chevrier and Pembina taken from Lessons Learned: Building the Protected Intersection

East of Pembina, we could also like to see protected bike lanes installed along Crescent Drive on approach to Pembina to transition into a protected intersection at Pembina & Crescent/Chevrier.

Exhibit 18
Configuration with mixed-traffic bicycle boulevard



High traffic volumes and high turn volumes (from both people biking and driving) at this intersection warrant the protected intersection at Pembina & Chevrier/Crescent.

Supporting Statement in Pedestrian and Cycling Strategies:

Supportive Policies and Programs (pg. 166)

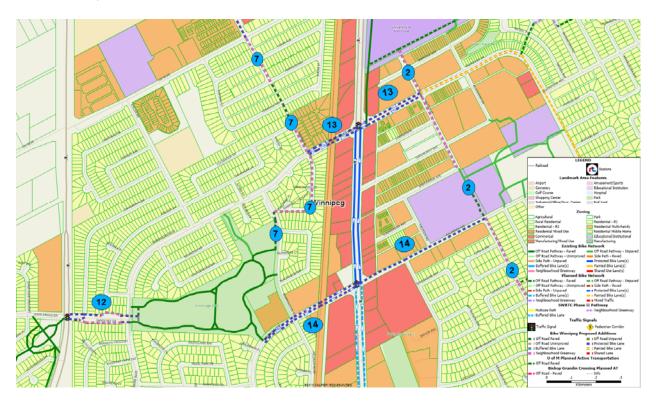
Make roads more accommodating to cyclists by removing channelized right turn lanes where feasible and reducing turning radii to discourage high speed turns, adding pavement markings to highlight conflict zones, and by providing traffic calming and bike permeable traffic diversion on local streets.

11) Chancellor Matheson North Pathway Pembina Crossing

Complete the pathway connection from the north side of Chancellor to the Bison/Chancellor cutthrough. The Chancellor Drive cut through pathway ultimately connects to Lakeshore Park and pathways, Chancellor School, Montclair Bay, and Lakeland Pl. If possible, the sidewalk leading from Shore St to the Bison Pathway should also be upgraded to a multi-use path.



12) Sandusky Protected Bike Lanes



A protected bike lane along Sandusky would provide a connection between South Pointe

Neighbourhood and Kirkbridge Park leading into Firbridge and Barnes, ultimately to Markham protected bike lanes, Bison pathway, and Chancellor Matheson pathway.

A short multi-use pathway segment would be needed at the north end of Kirkbridge Park to complete the connection to Firbridge, and a second short section of pathway should be added at the western end of Kirkbridge Park to help align people on bikes to the proper side of Sandusky.

13) Bairdmore/Dalhousie Protected Bike Lanes



Protected bike lanes along a short segment of Bairdmore/Dalhousie would provide connectivity between University of Manitoba, Fort Rouge Collegiate, Richmond West Plaza, Acadia Junior High, Dalhousie School, and the South Pointe Neighbourhood. It also ties the Markham/Barnes bikeway to the Pembina bikeway and Ulster/Greyfriars bikeway to the north, and the South Pointe/Sandusky/Kirkbridge Park/Firbridge bikeway into the Pembina bikeway and U of M south boundary pathway from the south.

Note that the intersection of Pembina and Dalhousie has the 2nd highest bicycle/vehicle collision rate in the city (2010-2014 MPI Collision Data).

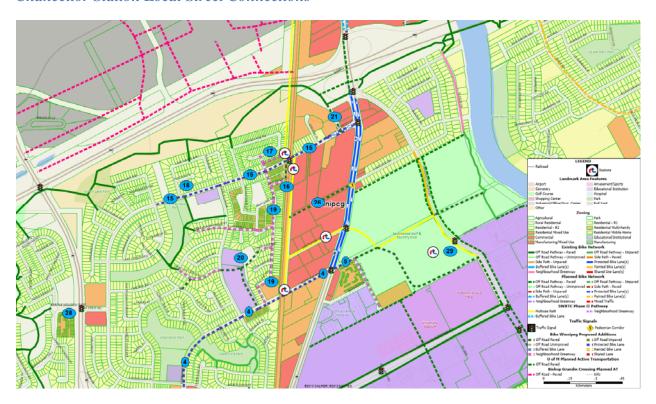
14) Kirkbridge/Killarney Protected Bike Lanes - Kirkbridge Park Pathway to Grey Friars

Protected bike lanes along this stretch or roadway would provide connectivity between Fort Richmond Plaza, Fort Rouge Collegiate, Acadia Jr High and Dalhousie School. Combined with protected bike lanes along Sandusky, this would help create a connection between the South Pointe neighbourhood to Kirkbridge Park and Fort Richmond.

15) Chancellor Protected Bike Lanes

To provide low stress connectivity to Pembina Highway, we are recommending protected bike lanes along Chancellor from Pembina to as far west as possible. Our preference would be for the protected bike lanes to be extended as far west as Swan Lake Bay to connect into the Bishop Grandin Greenway, but they should be extended at least as far west as Gull Lake.

Chancellor Station Local Street Connections



16) Connections to Lake Fall

A pathway along the west side of the tracks from Chancellor Drive south to Lake Fall would provide a connection to Gull Lake, which will act as the north/south bike route west of the Letellier rail line and SWRTC AT Pathway. This would be redundant and unnecessary if protected bike lanes were installed on Chancellor as the connection to Gull Lake would exist.

17) Connection between Lake Village Back Lane (north west) and AT Pathway

Station plans should include a direct connection into the back lane of Lake Village (between Chancellor and Lake Village). Again, this would not be necessary if protected bike lane were installed on Chancellor.

18) Lake Grove West Crossing

This crossing exists, but it would be nice to connect this crossing into pathway to the west of RHG Bonnycastle School.

19) Gull Lake Neighbourhood Greenway

To provide connectivity to the west of the Letellier Rail Line, we recommend a neighbourhood greenway along Gull Lake Road.

20) Gundy Lake → Waverley Heights CC → Syracuse Crescent Connection

Add a multi-use pathway between Gundy Lake and Syracuyse Crescent to provide access to the Waverly Heights Community Club. Upgrade and extend the existing sidewalk from Gundy Lake into the Community Centre..

- Syracuse Crescent links directly to the AT bridge over retention pond.
- Syracuse Crescent has a cut through linking to Augusta Dr/Lakeside Dr. that provides a link into Bridgewater Forest.

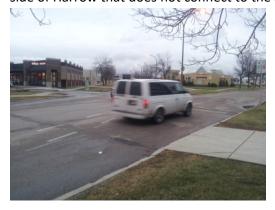
We would also like to see a southern extension of this path to connect with Arthur A. Leach Jr High and Markham Road.

21) Extension of Bishop Grandin Greenway south to Chancellor

- Connection to Pembina Village Shopping Centre (Applebee's, etc.).
- Added importance with impending construction of Pembina Overpass for Bishop Grandin Greenway.

22) Harrow/Harrow East Intersection Improvements

Improvements to the Harrow/Harrow East Intersection are needed to remove what is now a confusing situation for people driving or cycling south on Harrow/Harrow East (see photos below). There were plans to realign this intersection as part of the original 2010 stimulus plans that added bike lanes to Harrow Street. These modifications should be included as part of the SWRTC/Pembina Underpass project to improve the safety along a route that will see increasing numbers of people on bike once this project is completed. A sidewalk connection should also be added to connect the sidewalk on the west side of Harrow that does not connect to the sidewalk on the south side of Harrow East.





The current alignment of the Harrow/Harrow East intersection puts southbound cyclists in conflict with vehicles not turning on to Harrow East.



The 2010 plans for the addition of bike lanes on Harrow included realignment of the Harrow/Harrow East intersection, which was never completed.

Maybank Neighbourhood Connection Improvements

23) Waller → Hudson Connection

A short rail with trail connection form the Hudson back lane to Waller would improve connections from Hudson to the Waverley Underpass/Polo Park area

This connection had added importance if there are no improvements to Clarence.

Our 2015 recommendations for Clarence can be found <u>here</u>. As a minimum, we feel that a buffered bike lane is required along Clarence.

24) Waller → McGilivray Pl Connection

A short rail with trail connection form Waller to the bak lane north of the tracks leading to McGilivray Pl. would improve the connection from Maybank to the McGilvray pathway and Oakenwald in East Fort Garry

25) Consider Replacing Beaumont with Daniel

Daniel is a lower volume street that may be better suited to a neighbourhood greenway treatment. This could be paired with protected bike lanes on Beaumont between McGillvray and Riverwood to complete the connection to the McGillvray Pathway.

26) Thatcher Connection



A pathway should be built to connect into and upgrade the sidewalk leading to Safeway from the Thatcher pedestrian corridor on Pembina. Desire lines show that there is considerable existing use of this connection, which will only increase with the addition of the AT pathway. The pathway would be built along the north border of the Silver View Estates property.

27) Nathaniel Protected Bike Lanes

While Nathaniel is an important neighbourhood connection, it has too much traffic for a neighbourhood greenway treatment (currently 7,800 AADT and likely to grow with development of the Taylor Lands). Given the major destination along Nathaniel and the potential for an AT tunnel connecting the Taylor Lands to Parker Station; we feel that protected bike lanes would be warranted between Taylor Avenue and Grant Avenue to provide the all-ages, low stress connection that is needed.

- Could be part of future Grant Park Campus improvements.
- Collision history 3 bicycle/motor vehicle collisions 2010-2014 (MPI)

28) Arbour Meadow Gate/Lake Crest Road Protected Bike Lanes

- Would provide an important connection between Bridgeater Forest and Waverley Heights.
- Could be very difficult to install.

29) IGF Secure Bike Parking

This location only makes sense for bike parking on event days. Bike Valet would be far better suited to event day parking.

We have concerns that the ramp and new load in location will limit the capacity of the bike valet at Investors Group Field.

In addition to expected growth in ridership along the bike lanes and pathways along the SWRTC and through the U of M Fort Garry campus, planning should also consider the need to accommodate a substantial increase in the number of people biking to events at Investors Group Field. We feel that present bike parking in the northeast corner of the stadium will be overwhelmed by this additional capacity, requiring new bicycle valet stations to be located in the southwest corner of the stadium. The natural route into this location for a person biking in from the SWRTC AT Pathway would be Ken Pleon Way, accessed via Snow or protected bike lanes on Southwood Drive.



Existing (A,B,C,D) and potential bicycle valet sites at Investors Group Field