

Planning for Cycling

Integration and innovation: Winnipeg's Pembina Highway
Cycle Track

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Abstract

The City of Winnipeg has significantly expanded its cycling network in recent years through the development of a number of on-street lanes, bike boulevards, off-street pathways and cycle tracks. This expansion has resulted in improved safety, efficiency and connectivity of Winnipeg's cycling network. Despite significant improvements, Pembina Highway, a major cycling thoroughfare for University of Manitoba students, remained an intimidating yet necessary part of their journey. As the result of a policy - that requires active transportation upgrades as part of standard roadway maintenance of streets listed on the cities' cycling network - the building of an active transportation facility along Pembina Highway was made possible. Construction of the Pembina Highway 'cycle track' became an integrated part of the previously scheduled rehabilitation project. A number of design options were considered, resulting in the construction of a physically-separated cycle track, complete with an innovative design solution that detours cyclists behind bus stops, while maintaining their protection from traffic. This project represents the successful integration among a number of City departments - resulting in an innovative and effective solution to one of the most challenging and well-used cycling routes in Winnipeg.



Figure 1: An example of a proper cycle track

Introduction

In 2009 Winnipeg City Council approved a motion to invest 20.4 million dollars provided by three levels of government to expand Winnipeg's active transportation network (City of Winnipeg, 2011). This substantial increase in funding resulted in the development of 35 active transportation related projects including bike lanes, multi-use paths, diamond lanes and a cycle track (Winnipeg, 2011). Upon completion, the City of Winnipeg will be home to a total of 375 km of active transportation infrastructure (City of Winnipeg, 2011). In addition to the upgrades in physical infrastructure resulting from this large influx in government funding, the redevelopment of the Winnipeg Bike Map, the support of cycling events such as Ciclovía and the hard work of a number of cycling advocacy groups have greatly improved the cycling environment in Winnipeg.

Types of Cycling Infrastructure

Cycling infrastructure can take many forms but are generally differentiated between on street and off street facilities. In North America, many cities have shown a propensity to invest in off street pathways due to their ability to serve recreational cyclists in addition to commuter cyclists, in a format that greatly limits bicycle and car interaction. Cycling networks that rely heavily on off street pathways have been successful in cities such as Minneapolis, as they have proven easier to clear of snow in the winter months (Bicycling, 2010). In addition to being more resilient to harsh four season climates, off street bike paths often receive less public and political opposition as they do not impact vehicle traffic or reduce on street parking, which can be contentious in cities with strong car cultures such as Winnipeg.

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Despite being significantly more expensive, off street paths are popular in North American cities due to their recreational potential, appealing to the many North Americans who do not identify with using a bicycle for transportation (Furth, 2012). In recent years there has been significant expansion of Winnipeg's off street cycling network, with the building of the Bishop Grandin Greenway, the Northeast Pioneers Greenway, the Chief Peguis Greenway, the Transcona Trail and the Niakwa Trail.

Another approach to cycling infrastructure is to develop on street facilities that require right of ways be shared between cyclists and motorists. This approach has become popular in Europe, where cycle tracks have become common place across Denmark and the Netherlands (Furth, 2012). Cycle tracks are physically separated bike lanes that are built on existing roadways. Physical separations can take many forms including concrete medians, removable barriers, bollards or parked cars (Furth, 2012).

Cycle tracks provide a barrier between cyclists and motorists, only requiring careful attention by cyclists at intersections, where motor vehicles and cyclists are not separated from one another (Furth, 2012). Cycle tracks are effective in dense urban environments where off street cycling infrastructure is not possible. These types of facilities have been shown to be the safest, most effective forms of on street cycling infrastructure (Furth, 2012) but have been challenging to implement in North America as it requires motor vehicle road space is given up to accommodate on street cycle tracks.

Many European cities support the building of cycle tracks by developing legislation that requires cyclists be physically separated from traffic on streets with speed limits greater than 50 km / h (Furth, 2012), as collisions with cyclists at these speeds are far more likely to result in serious injury. The building of cycle tracks in North America has become a statement of a city's commitment to developing quality and progressive cycling infrastructure. New York City significantly expanded their network of cycle tracks in recent years and has since doubled the amount of bicycle commuters in their city over a four year period (NYC D.O.T., 2013).



Figure 2: One of the many Minneapolis bike paths



Figure 3: Vancouver's take on the cycle track

Cycling on Pembina Hwy.

Pembina highway is an essential route for many cyclists in Winnipeg and is especially popular among students of the University of Manitoba. Despite it being listed on the City of Winnipeg's bike route and identified by commuters as an essential route, it has long been characterized as an unfriendly environment for cyclists (Bike to the Future, 2010, Fuller, 2010). Given its importance and challenges, the City's Active Transportation Advisory Board listed an active transportation upgrade to Pembina highway as their number one recommendation (Bike to the Future, 2010). A particularly challenging aspect of Pembina highway are its few alternative route choices to access the southern part of the city, especially between Chevrier Blvd. and Plaza Dr. (Bike to the Future, 2010). In 2010, the City of Winnipeg indicated they would be doing a standard "mill and fill" road upgrade to Pembina highway between the Bishop Grandin Highway and Chevrier Blvd. This presented an opportunity for active transportation infrastructure to be integrated into an existing roadway project, as required by a City policy passed in 2008 (Bike to the Future, 2010).

Through the hard work of local advocacy groups such as Bike to the Future, Resource Conservation Manitoba, One Green City and with the support of ward councillor Justin Swandel, a motion was put forward at a Riel Community Committee meeting to include an active transportation facility on Pembina Highway as part of the roadway rehabilitation project in January of 2010 (Bike to the Future, 2010). Construction of the Pembina Hwy. cycle track, to connect the Bishop Grandin Greenway and the Chevrier Blvd. bike route began in the summer of 2012 (Winnipeg Free Press, 2012).

Active Transportation on Pembina:
The importance of Chevrier to Plaza Drive



Figure 4: Pembina Highway's cycling route upgrade area.



Figure 5: Preliminary drawings of the Pembina Highway cycle track.

The Pembina Hwy. Cycle Track

Although there was an exceptional level of engagement and support by Winnipeg cycling advocates, perhaps the greatest asset in leveraging the construction of the Pembina Highway cycle track was the development of a 2008 city policy that requires any rehabilitation of a street that is listed as a part of the Winnipeg cycling network, must also include upgrades that improve that street for cycling (Nixon, 2013).

As previously mentioned, several studies including the OTTO cycle GPS bicycle tracking study, listed Pembina Highway as a highly travelled cycling route for Winnipeggers (Nixon, 2013). In the early planning phases, a number of design options were considered including an off street pathway adjacent to Pembina Highway, or a pathway that would travel down the centre median of the highway (Nixon, 2013).

After careful consideration it was found the number of private approaches along Pembina prohibited the construction of an off street pathway, and a median path would require many potentially dangerous intersection crossings (Nixon, 2013).

Despite there being challenges with the numerous design options, the choice was made to build one way, buffered cycle tracks on both the north and south bound lanes of Pembina Highway. At current time the cycle track will not be complete until the spring / summer of 2013, when the route will be equipped with poly posts mounted on the pavement that will provide a clear physical separation from traffic (Nixon, 2013). In addition to the posts, the City has developed a unique design approach to address cyclist conflicts with transit buses, building an off-street detour that goes behind bus stops, allowing cyclists to bypass loading buses while still being protected from traffic (Nixon, 2013).

The entrance of these bus detours have been built to reduce cyclists speed, forcing people on bikes to slow down as they enter the shared spaces between cyclists and pedestrians, making it safer for pedestrians and transit users who must cross the cycle track to access transit stops. In a recent visit by leading design firm Copenhagenize, who specialize in creating bike and pedestrian spaces, founding member Mikael Colville-Andersen described the Pembina cycle track as a best practice that could “warm your heart on a frigid prairie night” (Copenhagenize, 2013).



Figure 6: The cycle track detours behind Pembina Highway bus stops.

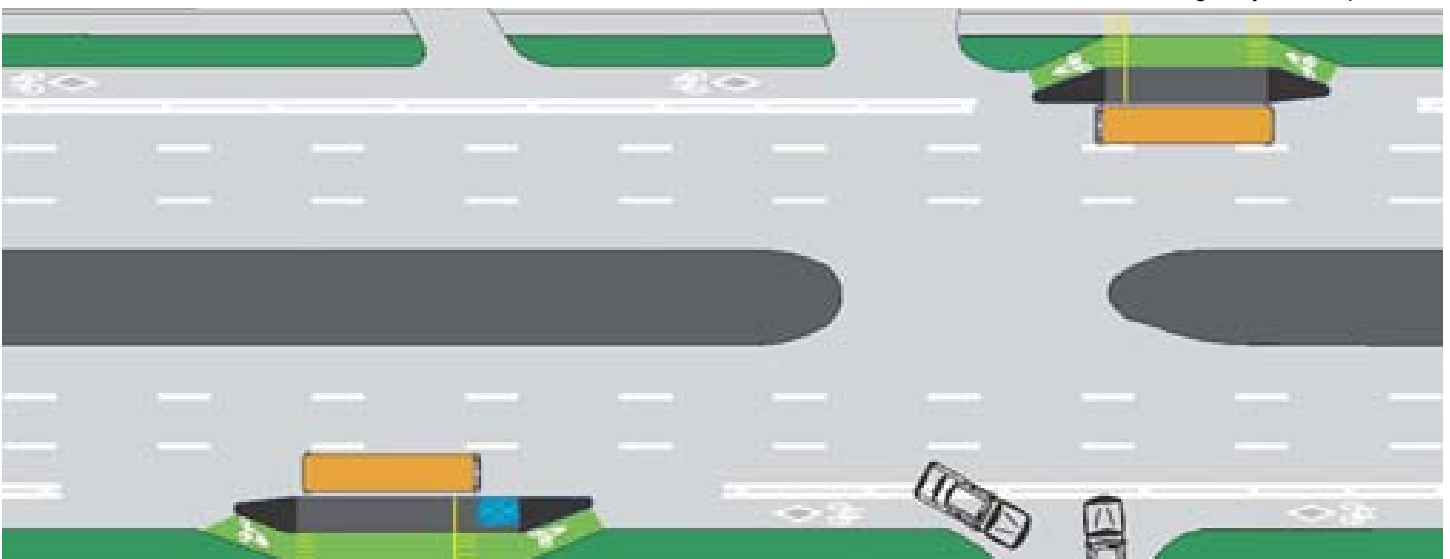


Figure 7: Birds eye view of the the Pembina Hwy. cycle track.

How Did It Succeed?

In Winnipeg, active transportation projects can be funded in two ways. One method is to use the roughly \$1 million active transportation budget to fund new projects while the second option is to incorporate active transportation upgrades into new infrastructure or rehabilitation projects, using the 2008 City policy previously discussed in this paper. In the case of the Pembina cycle track, the cost of building this new facility would have been far greater than the active transportation budget would allow, therefore this project was made possible by the innovative City policy that supports the building of progressive large scale cycling infrastructure projects in Winnipeg. In addition to the funding structures, a number of components needed to be addressed in helping this project succeed. Extensive consultation with business owners along Pembina Highway were conducted, in an attempt to address concerns such as potential parking reductions in areas where the proposed cycle track was to be built. Door to door visits were conducted by City staff, to discuss the proposed project (Nixon, 2013).

By engaging with business owners and other stakeholders in person prior to project implementation, the building of the Pembina Hwy. cycle track was a significantly smoother process when compared to previous attempts at building on street cycling infrastructure in Winnipeg.



Figure 8: Advocacy group bike to the future played an critical role in the development of the cycle track

“Door to door visits were conducted by City staff, to discuss the proposed project”

Lessons Learned

The success of this project has been the result of numerous lessons learned from previous active transportation project processes in Winnipeg. Specific improvements include a more thorough engagement process with business owners, on an individual basis, to ensure that people were informed of the implications that could result from the building of the cycle track. City staff was diligent in their documentation of the consultation process, to ensure that in the event of future conflict they had verifiable accounts of their discussions and negotiations with stakeholders (Nixon, 2013).

The careful documentation was described as an essential component in strengthening the rigor of their consultation process. In a previous attempt to build a cycle track on Assiniboine Avenue, the City faced opposition by area business owners after the project was built, who had previously been consulted and agreed to the development of the project. Despite having reached an agreement the change of heart by area businesses was challenging for the City given they did not extensively document their consultation process. These conflicts provided excellent learning experiences that were used to develop a more robust consultation process in the development of the Pembina cycle track.

The Role of Planners?

There has been significant progress in the expansion of Winnipeg's cycling network in recent years. A major asset in the expansion of active transportation projects have been the result of supportive planning documents such as Our Winnipeg, A Sustainable Winnipeg, Complete Communities and A Sustainable Transportation. These documents establish a supportive planning context that furthers the development of active transportation infrastructure in the city.

Another important role for planners in the development of active transportation projects is the continual improvement of public engagement processes that are inclusive and accessible. In the most recent active transportation projects, the City of Winnipeg in collaboration with the Green Action Centre are developing neighbourhood based engagement techniques that are trying to get citizens involved in meaningful ways, building the communities they want.

Lastly, the implementation of active transportation facilities is far easier to integrate into new development as opposed to retrofitting existing roads and neighbourhoods (Nixon, 2013). Planners have the opportunity to encourage those in the development industry to include active transportation facilities into their projects, contributing to a more efficient and cost effective method of making Winnipeg a more active, healthy, human oriented city.

Conclusion

The planning and implementation of the Pembina Hwy. cycle track demonstrates a coordinated effort by the public service, community members and local cycling advocates in developing an innovative solution, making one of Winnipeg's busiest car centric roads a safe place for cyclists. I would like to give a special thanks to City of Winnipeg Active Transportation Coordinator Kevin Nixon who has been very generous with his time and knowledge in informing this article.



Figure 9: Winnipeggers enjoying the city's other cycle track on Assiniboine Avenue.

Resources

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- Figure 8: Olivia Chow (2013)
- Figure 9: Switchboard (n.d.)

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