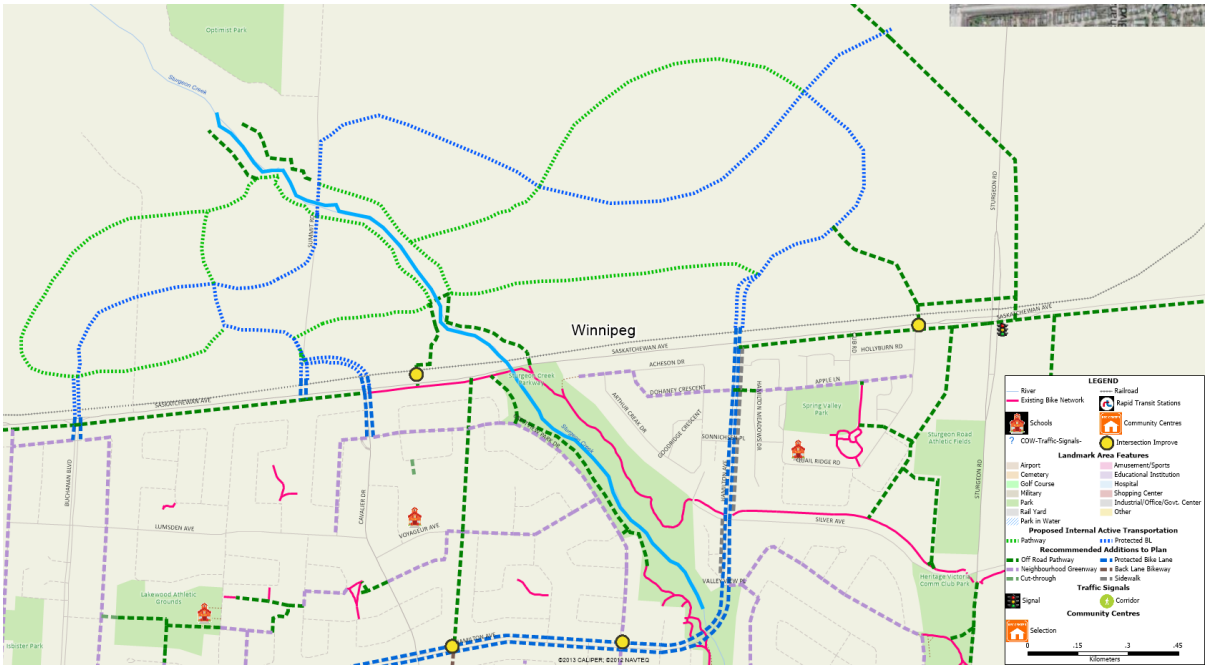
bikewinnipeg

MORE PEOPLE BIKING
MORE OFTEN

Bike Winnipeg Recommendations - Airport Area West Residential Secondary Plan

With no schools or community clubs planned within the development area, safe, comfortable, and convenient pedestrian and cycling connections to schools and community clubs outside of the planned development will be essential. The proposed plan drops all cycling facilities at the southern boundary of the development area, and fails to match the cycling facilities exiting the new community to those it proposes to connect to. In doing so, it fails to provide the connectivity needed under Complete Communities and within the plans own guiding principle of a transportation network that considers the needs of all users – pedestrians, cyclists, public transportation and private motor vehicles.



Map of recommended internal and internal bikeway connections for the Airport Area West Residential Secondary Plan. Bike Winnipeg, 2021.

Similar to the draft secondary plan for the Airport Area West Industrial area, we would like to see much stronger language promoting sustainable transportation. Specifically, a goal in that plan sets out to "Promote alternate forms of transportation such as transit and active transportation."

Cycling facility selection within the development area should be selected to maximize connectivity and comfort. Cycling facility selection must also be consistent with cycling treatments that can be retrofitted onto the roadways and rights of way in the adjacent neighbourhoods hosting the schools, community clubs, and recreation centres that residents of the new community are expected to patronize.

Failure to match cycling treatments within the development to treatments connecting from within existing development will result in an incohesive bike network that confuses users, adds delay to people on bike, and discourages use.

Planned cycling facilities in adjacent neighbourhoods must be provided by retrofitting existing roadways where no cycling facilities currently exist. This limits the type of cycling facility that can be installed along the planned connection points of Buchanan Blvd, Cavalier Dr, or Hamilton Ave. It's not possible to retrofit these roadways with multi-use paths as there is not enough space to do so.

We therefore recommend that **cycling facilities along Buchanan Blvd, Cavalier Dr, and Hamilton Ave, as well as their extensions into the planned development area be implemented through the use of one-way protected bike lanes**. With short sections of retrofitted roadway that can be transitioned back to the existing roadway, this treatment can be used to provide needed access into the adjacent neighbourhoods by providing quality connections to low volume residential roads that will provide interim connectivity to schools and community clubs in the Buchanan, Crestview, and Heritage Park neighbourhoods until planned treatments can be installed along the full length of the connecting streets.

The local bicycle network would benefit greatly from protected bike lanes along Hamilton Ave from Saskatchewan Ave to Buchanan Blvd, which would connect the Sturgeon Creek Greenway to the Yellow Ribbon Trail, and provide needed access to sites such as:

- John Taylor Collegiate
- Cavalier Shopping Centre
- Crestview School (indirect via HIllary Cr and Morgan Cr)
- Assiniboia West Community Club - Morgan and Buchanan sites (indirect via Chapman & Corbett)
- Hedges Middle School (indirect via Chapman & Corbett)
- Buchanan School (indirect via Chapman & Corbett)
- Unicity Shopping Mall (indirect via Chapman & Corbett)

Crossings of Hamilton Ave and Ness Ave along potential low stress residential street networks should also be considered as part of the planning. Specifically, the following intersections should be reviewed:

- Hamilton Ave @ Crestview Dr/Parkhill St
- Hamilton Ave @ Redfern Rd

- Hamilton @ Chapman Rd
- Ness Ave @ Parkhill St
- Ness Ave @ Muriel St
- Ness Ave @ Kirby Dr/Valley View Dr

In addition to the three proposed connections across Saskatchewan Ave, **we recommend adding a fourth crossing of Saskatchewan Ave at Quail Ridge Rd making use of the existing rail crossing**. This crossing could limit through traffic to persons on foot or bike to minimize traffic through flow. Such a crossing is needed to provide reasonably direct access to the planned Sturgeon Rd pathway that will be constructed along with the widening of Sturgeon Rd required by this plan.

We further recommend that a rail crossing along the Sturgeon Creek right of way be considered. This would be in line with the plan's goal to promote connectivity along and to Sturgeon Creek. This crossing would have to be implemented as a tunnel as the rail line is raised near Sturgeon Creek. At minimum, we would want to see a right of way maintained that could provide space for a connection so that future rehabilitations to the rail bridge over Sturgeon Creek can consider this option.

While the Pedestrian and Cycling strategies call for a pathway in the road right of way, a much better option would be to follow the property lines between Sturgeon Rd and Quail Ridge Rd.

- This provides a far more comfortable ride as riders are buffered from Sturgeon Rd
- This provides access to key destinations, some of which an alignment along Sturgeon Rd misses:
  - École Roméo-Dallaire
  - Sturgeon Rd Athletic Fields
  - Skatepark West/Matt Jonsson Memorial Skatepark
  - Heritage Victoria Community Club
  - Yellow Ribbon Trail
  - Heritage School
  - Living Prairie Museum
  - Sturgeon Heights Collegiate

Alignment of this pathway will need to be determined with the assistance of the Winnipeg Youth Soccer Association to ensure that pathway alignment and construction do not adversely affect use of the Sturgeon Road fields.

Even with this western realignment of the Sturgeon Rd Pathway, the Quail Ridge crossing combined with an additional pathway providing a connection to the internal pathway network is approximately 525m closer to the pathway than the Hamilton crossing, the most easterly crossing of Saskatchewan Ave within the planned development.

Ideally, the pathway through the Sturgeon Rd Athletic Fields would be complemented by a pathway on the east side of Sturgeon Rd as well that would connect to pathways leading to the Boeing property and

provide access/connections into the planned Airport Area West Industrial plan area. A utility right of way just east of Sturgeon Rd could provide an ideal alignment.

We would expect this eastern pathway to be included in the transportation charge associated with development agreement and cost sharing agreements resulting from the Airport Area West Industrial Secondary Plan.

A last request would be that Active Transportation plans developed as part of the Sturgeon Creek at Saskatchewan Avenue Project be completed as part of the development transportation charge. The unfinished Active Transportation elements from this plan include:

- Extension and upgrade of the pathway on the west bank of the creek
- Extension of pathway along the Hydro Corridor from Saskatchewan Avenue to Voyageur School

Summary of Recommendations

Internal Transportation Network

- Collector streets should be constructed with protected bike lanes to provide all ages and abilities cycling infrastructure.
- Local streets should be designed for low traffic and speeds of 30km/hr
- Greenspace should be incorporated into neighbourhood traffic calming
    - Where used to eliminate cut through traffic, such greenspace should include pedestrian/bike paths to ensure people on foot or bike are not forced to detour.
- Intersections should be designed to meet the needs of all ages and abilities
    - Protected intersections where collector or arterial streets meet
    - Raised crossings where local streets meet collector or arterial streets
    - Minimal crossing distances
    - Median where mid block crossings are utilized
- Existing private rail crossings should be incorporated into the walking and cycling networks as they greatly reduce detours that would otherwise be required to access critical destinations like schools, community centres, shopping, and parks
    - Efforts should be made to create rail crossings along the greenway
- Pathways along Sturgeon Creek should extend to the boundaries of the new development, with connections into the local street network
- A Walk/Bike bridge over Sturgeon Creek is needed along the southern east/west greenway.

External Transportation Network

Bike Winnipeg recommended Internal and external cycling network; Bike Winnipeg, 2021

- At minimum, protected bike lanes should be extended along Cavalier Dr and Buchanan Blvd at least past the first local streets south of Saskatchewan and then transitioned to existing mixed use conditions.
- Protected bike lanes should be extended along Hamilton Ave from Saskatchewan Ave to Buchanan Ave
- Pathways need to be added along Saskatchewan Ave
    - On the south side of Saskatchewan Ave
        - Assiniboia Downs Access Rd to Cavalier Dr
        - Hamilton Ave to Sturgeon Rd Pathway (West)
    - On the north side of Saskatchewan Ave
        - Quail Ridge Rd to Sturgeon Rd
- Pathways extensions planned as part of the Sturgeon Creek at Saskatchewan Avenue Project should be provided, including:
    - Extension and upgrade of the pathway on the west bank of the creek
    - Extension of pathway along the Hydro Corridor from Saskatchewan Avenue to Voyageur School
- Pathways along Sturgeon Rd (or on lands between Sturgeon Rd and Quail Ridge Rd) will be designed and constructed as part of the development's transportation charge.
    - Preference will be given to a pathway alignment that buffers users from Sturgeon Rd and provides access to residents along Quail Ridge Rd, including access to Ecole Romeo-Dallaire.

    - Alignment of this pathway will need to be determined with the assistance of the Winnipeg Youth Soccer Association to ensure that pathway alignment and construction do not adversely affect use of the Sturgeon Road fields.
- Improvements are needed at the following intersections to facilitate all ages and abilities access along low stress residential streets:
    - Hamilton @ Crestview Park Dr/Parkhill St
    - Hamilton @ Redfern Rd
    - Hamilton @ Chapman Rd
    - Ness Ave @ Parkhill St
    - Ness Ave @ Muriel St
    - Ness Ave @ Kirby Dr/Valley View Dr
    - Ness Ave @ Thompson Dr
    - Portage Ave @ Parkhill St

Cost Sharing

- The developer agreement should include cost sharing requirements for external improvements to the cycling network, as described above.

A full listing of recommendations has been included as an appendix to this document.

Specific Recommendations

Recommended additional language is shown in **bold**.

2.0 Planning Vision and Guiding Principles

2.2 Guiding Principles

Walkable and Connected → Walkable, Bikeable and Connected

Suggested Wording

- Encourage new neighbourhoods that are walkable, **bikeable**, interconnected and accessible, to promote active lifestyles for residents of all ages.
- **Promote alternate forms of transportation such as transit and active transportation.**
- Promote connectivity along, **to and across** Sturgeon Creek, **to adjacent communities and amenities**, as well as within the rest of the plan area **through a network of low stress walkways and bikeways** where practical and warranted.

Rationale

- Most destinations (schools, parks, community clubs, shopping, employment) will be beyond walking distance. A well connected bike network greatly increases the range of non-motorized transportation choices).
- Stressing a low stress network aligns the secondary plan with the Pedestrian and Cycling Strategies.
- Sturgeon Creek must be seen as a barrier to travel as well as a corridor of travel.

3.1.4 Mixed-Use Higher-Density Residential

Additional Recommended Policies

3.1.4.2.j High density residential properties will include secure, long term bicycle parking.
3.1.4.2.k Site plans for commercial, institutional, recreational, and high density residential properties abutting pathways shall incorporate access to those pathways.
3.1.4.2.l Preferential parking nearest front entrances of buildings should be given for bikes, hybrids/electric vehicles and car shares.
3.1.4.2.m Proximity to transit and the cycling network will warrant the provision of reduced parking requirements.
3.1.4.2.n Provision of Long Term Bicycle Parking and End of Trip Facilities will warrant the provision of reduced parking requirements.

Rationale
Additional policies, in line with objectives of Complete Communities, to help promote active transportation.

3.4 Park

Additional Recommended Policies

3.4.2.k Park planning/siting should be combined with traffic calming initiatives such as diverters or closures.

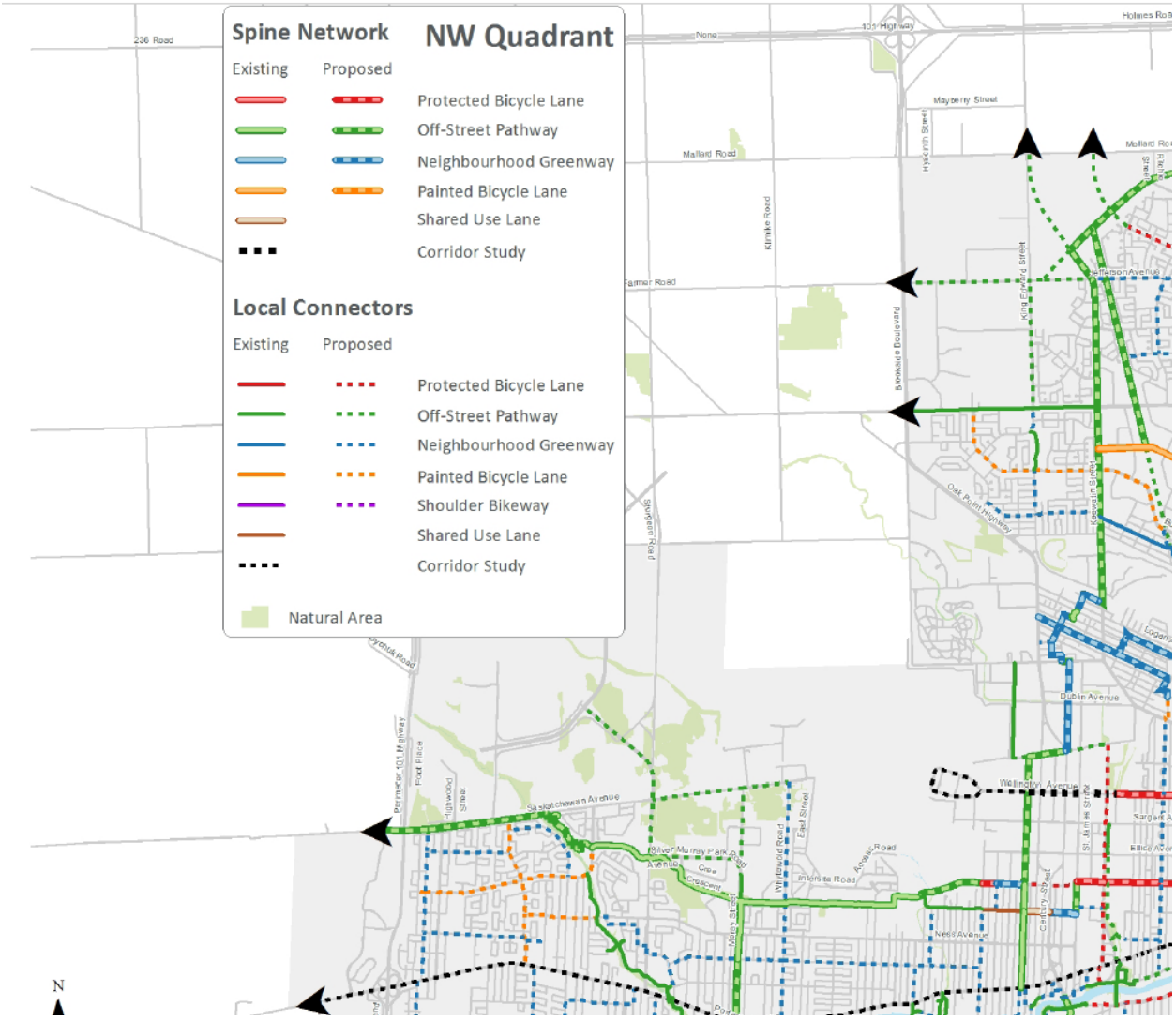
Rationale

Parks present an excellent opportunity to impede cut through traffic, and should be integrated into plans for neighbourhood traffic calming. Where parks are incorporated into neighbourhood traffic calming, pathways should be provided to ensure connectivity in the pedestrian and bicycle networks is maximized.

4.0 Transportation

Additional Notes on Planned Bikeway Connections

- The planned Headingley By-Pass will extend CentrePort Canada Way west to provide a connection to the Trans Canada Highway near St. Francis Xavier along a corridor north of Headingley. A complementary AT route would extend the Saskatchewan Ave pathway west under the Perimeter Overpass of Saskatchewan Ave.
- Isbister St is identified as a future Neighbourhood Greenway in the Pedestrian and Cycling Strategies.



The City of Winnipeg proposed bicycle network. Pg.169, Pedestrian and Cycling Strategies, City of Winnipeg, 2015.

4.1 Connections to External Transportation Network

4.1.2.3 Major Arterials

c. The supporting transportation study may identify required improvements to external roads **and pathways**.

Additional Recommended Policies

4.1.2.x1 Bikeway Cohesion & Transitions

Selection of on-street bicycle facilities should take into account connections into adjoining neighbourhoods (existing or planned) to promote smooth transition from new cycling facilities onto existing, planned, or desired cycling facilities and consistency within the overall cycling network.

Rationale

This requirement adds to the goal of promoting active transportation and helps ensure that the proposed network provides cohesive connections to the existing and planned cycling network.

4.1.2.x2 Addition/Modification of Fourth Railway Crossing

We recommend that the private access crossing of the Glenboro rail line to the east of Hamilton across from Quail Ridge Rd be incorporated into the internal bike network as a mixed use roadway.

Rationale

Without this fourth crossing, important connections to Ecole Romeo Dallaire, the Sturgeon Rd Athletic Grounds, the Yellow Ribbon Trail, rapid transit stops, and Heritage Victoria Community Club will require a significant detour for any residents located in the eastern half of the plan area.

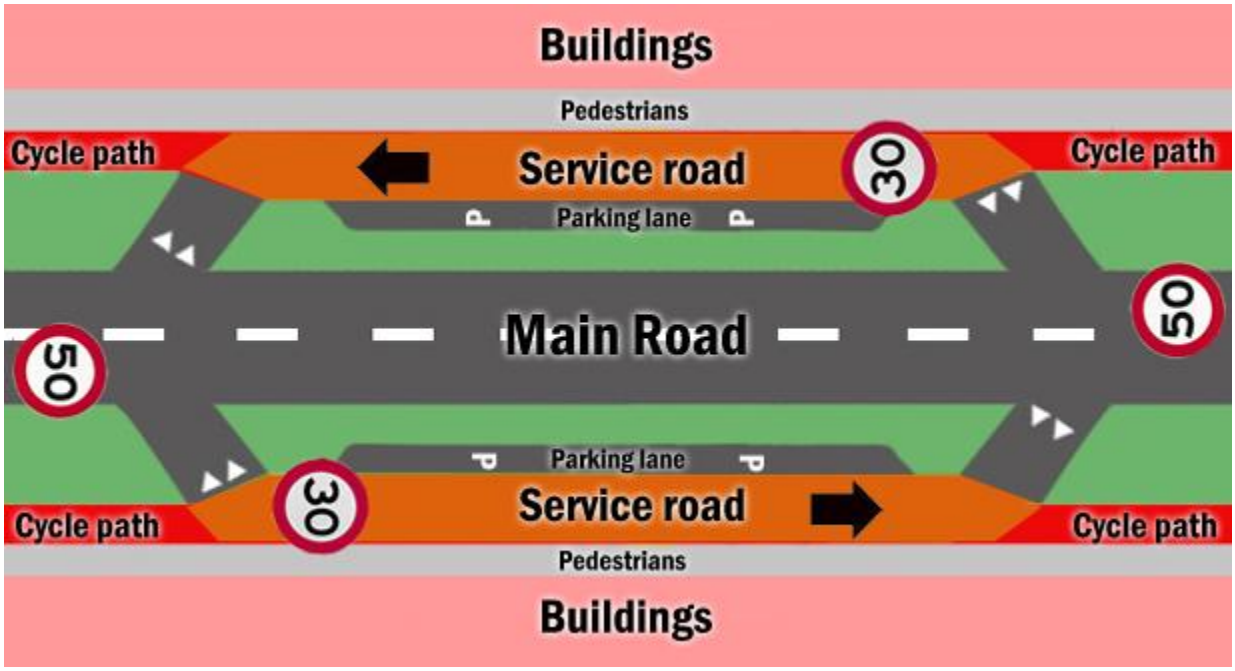
4.2 Internal Transportation Network

4.2.2.2 Network Design

e. Collector streets shall be designed for the use of motorized vehicles and cyclists. Vehicle access to single-family lots, duplexes, townhomes and rowhomes on collector roads shall be provided from either frontage roads or lanes.

We recommend against providing any access to single-family lots, duplexes, townhomes and rowhomes on collector roads, either through lanes or frontage roads as they increase potential conflict points on busier roadways. Access should instead be provided through local streets.

Under no circumstances should frontage roads cross bi-directional pathways as this created unnecessary conflict points. If frontage/service roads are used, cycling connections must be aligned away from the main road.



For a full description of this cycling treatment, including diagrams and videos, please refer to the article Dutch Service Streets and Cycling on the Bicycle Dutch blog.

f. Cycling facilities shall be provided **via protected bike lanes** within collector road rights-of-way.

Rationale

We recommend cycling on collector streets be implemented through the use of protected bike lanes. As reported in the Transportation Review, anticipated volumes along these streets will exceed recommendations for painted or buffered bike lanes. Additional benefits of protected bike lanes over a sidepath include better safety due to reduced conflicts, better access to destinations, and better cohesion with external roadway connections where sidepaths are neither planned nor feasible.

See comments attached to item 4.2.2.2 Additional Policies for further rationale.

Additional Policies

4.2.2.2

Cycling facilities will be designed for all ages and abilities.

Rationale

This aligns with recommendations from the Pedestrian and Cycling Strategies.

As reported in the Transportation Review, anticipated volumes along these streets will exceed recommendations for painted or buffered bike lanes. Additional benefits of protected bike lanes over a sidepath include better safety due to reduced conflicts, better access to destinations, and better cohesion with external roadway connections where sidepaths are neither planned nor feasible.

Table 6.18: Cross-Product Analysis

Scenario	Road Segment	AADT	Trains per Day	Cross Product	Warrented Protection
2030 Post Development	Buchanan Blvd Extension	5,250	2	10,500	Warning system without gates
	Hamilton Ave Extension	4,040	2	8,080	Warning system without gates
	Summit Road	2,630	2	5,260	Warning system without gates
	Sturgeon Road	25,240	2	50,480	Warning system with gates
2040 Post Development	Buchanan Blvd Extension	7,350	2	14,700	Warning system without gates
	Hamilton Ave Extension	6,350	2	12,700	Warning system without gates
	Summit Road	3,670	2	7,340	Warning system without gates
	Sturgeon Road	31,980	2	63,960	Warning system with gates

Transportation Review | Airport Area West
MMM Group Limited | May 2016 | 5515037.161 58

Anticipated collector street traffic volumes at Saskatchewan Avenue - pg. 58 Airport Area West ASP Transportation Review. Stantec, 2016

The guidelines below provide clear preference for protected bike lanes as the preferred cycling facility along collector roads with the traffic volumes and speeds anticipated in the Transportation Review undertaken for the area plan. It should also be noted that residents of the planned development will be reliant on the adjacent communities for schools and community clubs. Protected bike lanes can be extended into the adjacent neighbourhoods to provide coherent cycling facilities between the new and existing communities. Protected bike lanes extended into the adjacent communities would also allow safe transitions to be designed at their end.

Side Paths do not offer opportunities to transition into the external neighbourhoods, nor can sidepaths be transitioned into mixed use roadways where they end. They have also been found to be less safe than unidirectional protected bike lanes, as we are proposing within the plan area.

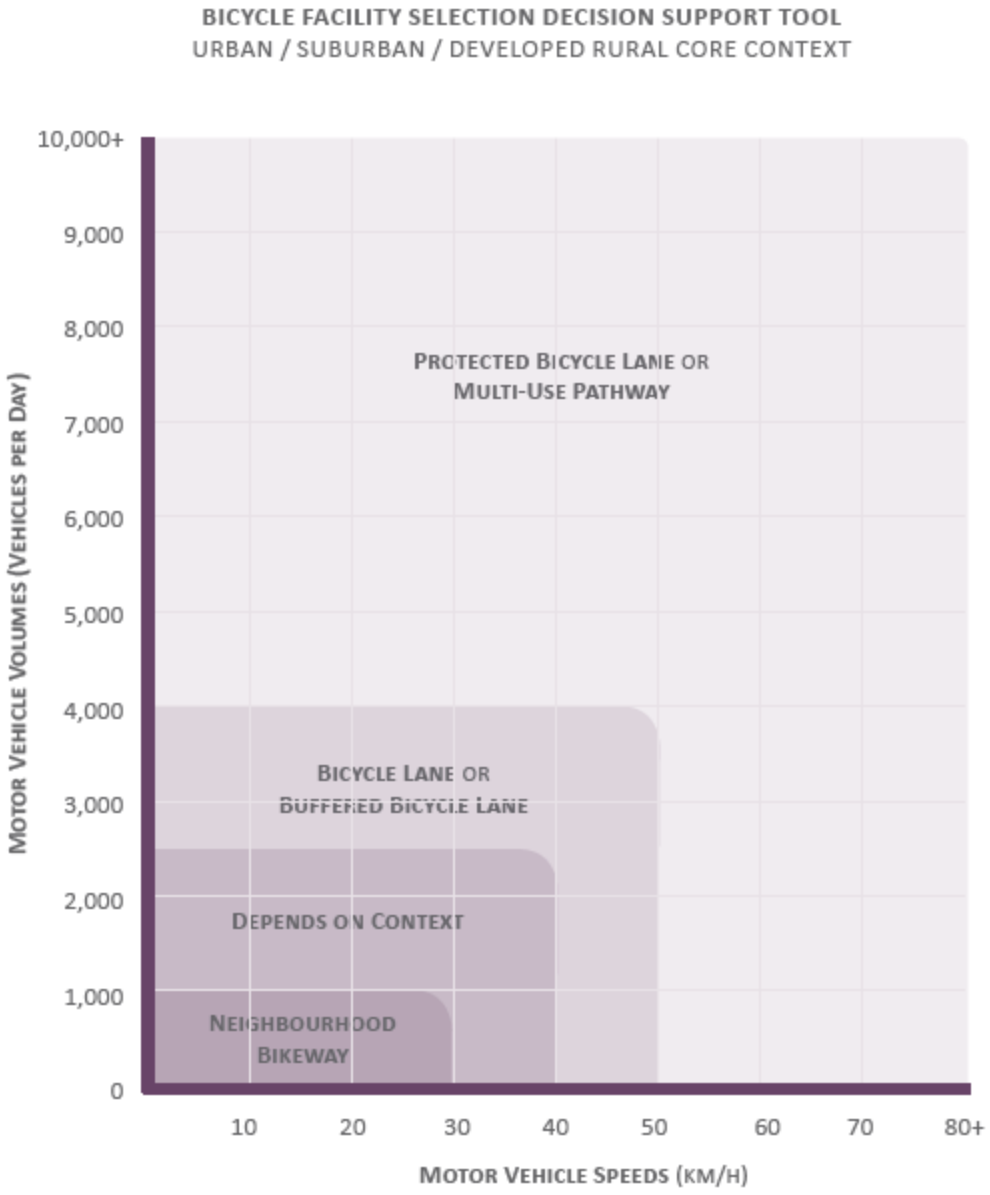


FIGURE D-29 // BICYCLE FACILITY SELECTION DECISION SUPPORT TOOL - URBAN / SUBURBAN / DEVELOPED URBAN CORE CONTEXT

British Columbia Active Transportation Design Guide, 2019

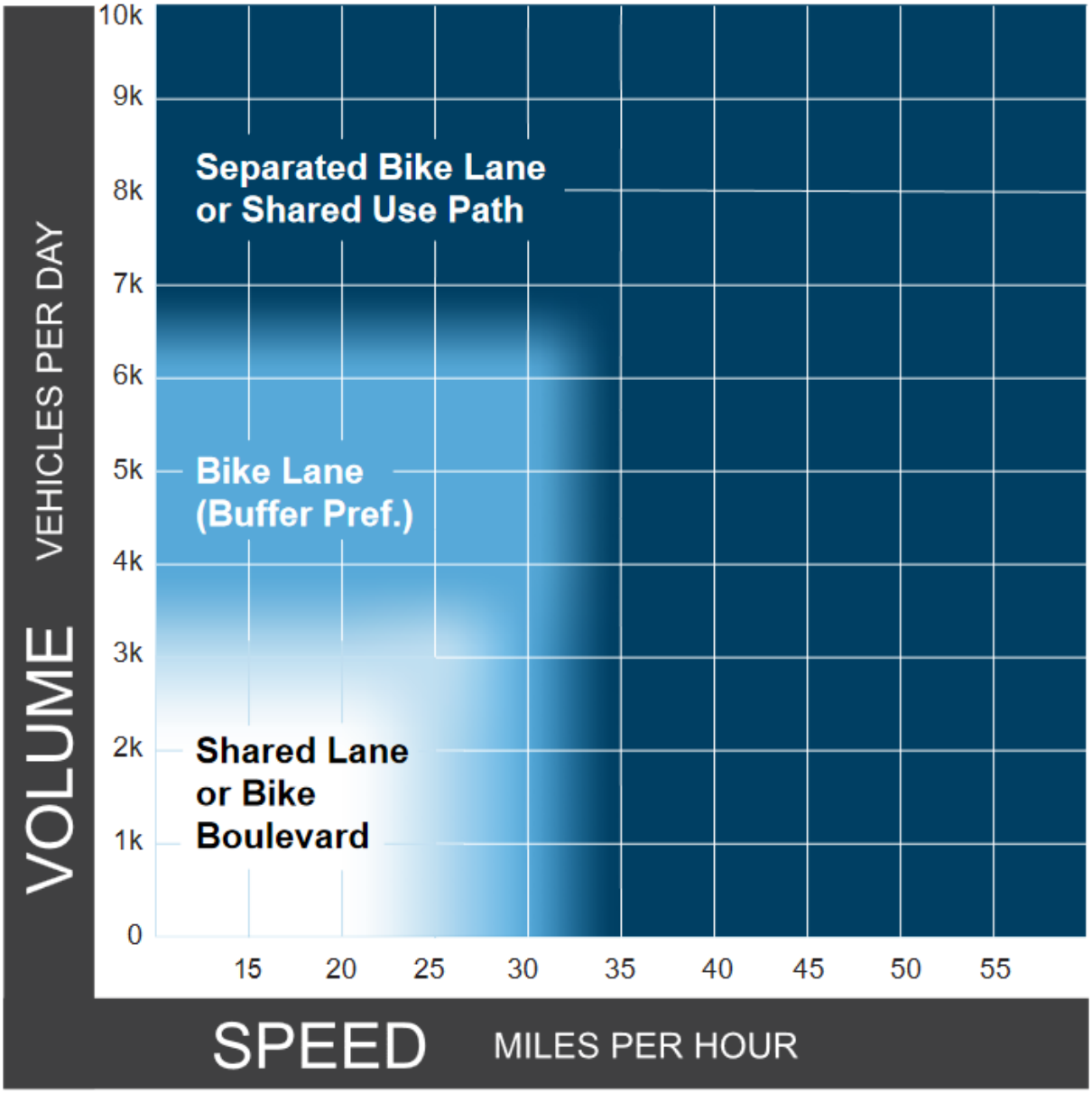
TABLE D-15 // PROTECTED BICYCLE LANE CONFIGURATIONS ON TWO-WAY ROADS

Source: Adapted from MassDot Separated Bike Lane Planning & Design Guide

	ONE-WAY PROTECTED BICYCLE LANE ON ONE SIDE OF THE ROAD	ONE-WAY PROTECTED BICYCLE LANE ON EACH SIDE OF THE ROAD	TWO-WAY PROTECTED BICYCLE LANE
			
ACCESS TO DESTINATIONS	Provides bicycle access to only one side of the road.	Provides full access to both sides of the road.	Provides bicycle access to only one side of the road.
NETWORK CONNECTIVITY	Does not address contraflow travel and may result in wrong way cycling.	Accommodates two-way bicycle travel.	Accommodates two-way bicycle travel, though contraflow travel through signals may be impacted by signal timing.
CONFLICT POINTS	If bicycles and motor vehicles are travelling in the same direction directly adjacent to each other, the number of conflicts may be reduced as travel behaviour is more predictable; however, turning movements yielding to bicycles remains the primary conflict; as a result, parking should be restricted close to intersections to ensure sightlines are unobstructed.	As bicycles and motor vehicles are travelling in the same direction, the number of conflicts may be reduced as travel behaviour is more predictable; however, turning movements yielding to bicycles remains the primary conflict, as a result, parking should be restricted close to intersections to ensure sightlines are unobstructed.	There is significant potential for conflict between turning motor vehicles and bicycles. Traffic signalization is recommended to mitigate this risk. Conflicting movements should be prohibited by providing separate signal phases for bicycle users and turning motor vehicles. If this is not possible, conflicts should be mitigated with clear signage and pavement markings indicating right-of-way. This should only be considered for short segments or where there is limited to no access or driveways
INTERSECTION OPERATIONS	Can likely make use of existing signals and phasing.	Can likely make use of existing signals and phasing.	Typically requires additional signal equipment for the contraflow bicycle lane.
IMPACT	Requires less width when compared to the other configurations.	Requires more width and impacts both sides of the road	Requires more width when compared to the uni-directional configuration on one side.

British Columbia Active Transportation Design Guide, 2019

Figure 9: Preferred Bikeway Type for Urban, Urban Core, Suburban and Rural Town Contexts



Pg 23, Bikeway Selection Guide, US Department of Transportation, Federal Highway Administration, 2021

Contextual Guidance for Selecting All Ages & Abilities Bikeways

Roadway Context				All Ages & Abilities Bicycle Facility
Target Motor Vehicle Speed*	Target Motor Vehicle Volume (ADT)	Motor Vehicle Lanes	Key Operational Considerations	
Any		*Any*	*Any of the following:* high curbside activity, frequent buses, motor vehicle congestion, or turning conflicts‡	**Protected Bicycle Lane**
< 10 mph	Less relevant	No centerline, or single lane one-way	Pedestrians share the roadway	**Shared Street**
≤ 20 mph	≤ 1,000 – 2,000		< 50 motor vehicles per hour in the peak direction at peak hour	**Bicycle Boulevard**
≤ 25 mph	≤ 500 – 1,500			
	≤ 1,500 – 3,000	Single lane each direction, or single lane one-way	Low curbside activity, or low congestion pressure	**Conventional or Buffered Bicycle Lane, or Protected Bicycle Lane**
	≤ 3,000 – 6,000			**Buffered or Protected Bicycle Lane**
	Greater than 6,000			**Protected Bicycle Lane**
	Any	Multiple lanes per direction		
Greater than 26 mph†	≤ 6,000	Single lane each direction	Low curbside activity, or low congestion pressure	**Protected Bicycle Lane, or Reduce Speed**
		Multiple lanes per direction		**Protected Bicycle Lane, or Reduce to Single Lane & Reduce Speed**
	Greater than 6,000	*Any*	*Any*	**Protected Bicycle Lane**
High-speed limited access roadways, natural corridors, or geographic edge conditions with limited conflicts		*Any*	High pedestrian volume	**Bike Path with Separate Walkway or Protected Bicycle Lane**
			Low pedestrian volume	**Shared-Use Path or Protected Bicycle Lane**

Choosing an All Ages & Abilities Bicycle Facility, NACTO, online, accessed on May 18, 2021

B. Intersections with collector streets will be designed as Protected Intersections

Rationale

Protected intersections greatly increase safety and comfort of people biking through intersections along protected bike lanes by extending their protection through the intersection.

The corner radius of the corner safety island should be as small as feasible to accommodate the design vehicle yet encourage slow motor vehicle speeds and appropriate yielding behaviour.

Protected intersections can also be paired with separate bicycle signal phases and bicycle actuation.

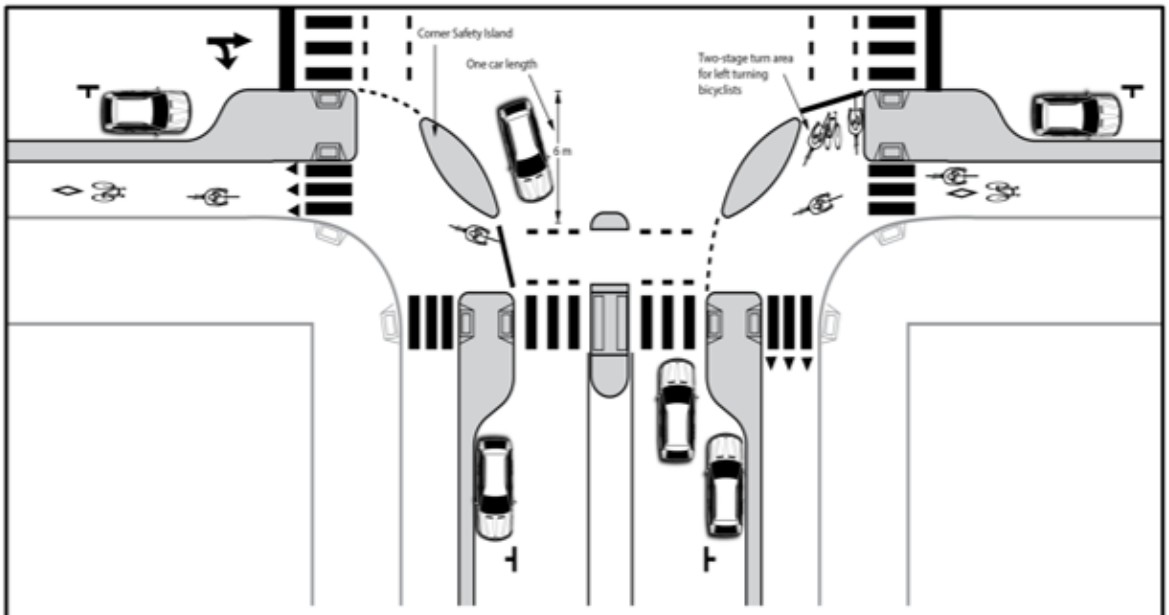


Figure 5.6.9 Protected Intersection

C. Intersections with minor roads will be designed with a 6m buffer between the collector street through lane and bicycle lane crossing.

Rationale

This recommendation provides safe crossings of minor streets for people on foot or bike using recommended treatments that increase visibility and reinforce yielding behaviour. By allowing motor vehicles to fully exit the collector street through lane before crossing the sidewalk and bike path, this intersection treatment also reduces the likelihood of rear end collisions along the collector street.

D. Sidewalks and protected bicycle lanes will be raised through collector and minor road intersections to promote yielding behavior.

Rationale

Raising sidewalks and protected bicycle lanes through minor street intersections reinforces primacy of the sidewalk/protected bike lane and has been shown to increase yielding behaviour form motorists.

E. Where parking is allowed on collector streets, a minimum 1m buffer will be provided between the parking land and the protected bike lane.

Rationale

A 1m buffer between the bike lane and parking lane provides a buffer between opening doors and the bike lane.

F. Walkways, pathways, and bike lanes should be built in such a manner that they are accessible and usable throughout the year.

Rationale

This policy is in line with recommendations in Complete Communities and the Pedestrian and Cycling Strategies calling for pedestrian and cycling facilities to be maintained year round.

4.2.2.5 Pedestrian Walkways

a. Pedestrian walkways (mid-block cut-through) should be provided, as necessary, to reduce pedestrian trip lengths to destinations, open spaces and transit routes.

Mid-block crossings should be designed for walk/bike access. Midblock cut throughs at collector streets should include median refuges or roadway narrowing.

Rationale

Cut-throughs will generally serve people on bike as well as on foot. Median refuges increase visibility for vulnerable road users, and divide crossings in two, greatly increasing the number of safe crossing gaps that will be provided to vulnerable road users.

4.2.2.6 Pathways

a. Pathways shall accommodate **utilitarian and** recreational uses, and form part of the pedestrian and cycling networks that facilitate linkages within and between neighbourhoods, and connect to the regional network.

Additional Recommended Policies

4.2.2.x1 Sturgeon Creek Walk/Bike Bridge

A walk/bike bridge should be built over Sturgeon Creek along the southern pathway right of way,

Rationale

Absence of such a bridge would force significant detours for people on foot or bike, reducing their access to destinations within and outside the planned area. This would be especially true for trips crossing Sturgeon Creek in the south end of the area plan.

4.2.2.x2 Sturgeon Rd Pathway Connection/Quail Ridge Road AT Connection

The developer will work with the owner of the private access located across from Quail Ridge Rd to develop a walk/bike connection across the railway and Saskatchewan Ave , and connect this crossing to the southern portion of the planned east/west pathway.

Rationale

Without this fourth crossing, important connections to Ecole Romeo Dallaire, the Sturgeon Rd Athletic Grounds, the Yellow Ribbon Trail, rapid transit stops, and Heritage Victoria Community Club will require a significant detour for any residents located in the eastern half of the plan area.

4.2.2.x4 Local Streets Shall be Designed for 30km/hr

Local streets will be designed and signed as 30km/hr streets to promote shared use by people in motorized vehicles and people on bikes.

Rationale

There is near universal agreement in the transportation profession that streets where cyclists will mix with motorized vehicles should be designed and signed for 30 km/hr to provide a safe, comfortable experience for people on bikes.

4.2.2.x5 Traffic Calming

Traffic calming measures such as diverters and closures shall be used to minimize vehicle volumes on local streets and prevent cut through traffic. Diverters and closures should not restrict travel for people on foot or bike.

Where feasible, parklands and open space can be used to provide traffic calming opportunities.

Rationale

Reduced traffic volumes increase safety and comfort of people on bikes travelling on streets where they are expected to mix with vehicular traffic, which would be the case on local streets as they form the core of the city's cycling network.

4.2.2.x6 Minor Street Intersections

See above.

4.2.2.x7 Collector Intersections

See above.

5.2 Land Drainage System

Pathways that make use of drainage ways should connect to the road network or continue through the neighbourhood. Do not dead end. Show how to connect to a local street.

Pathways built as part of the land drainage system should be planned to connect to the local street network, protected bike lane network, or other pathways Where pathways terminate at a collector street, the end of the pathway should be aligned with the end of a local street or a mid block crossing of the collector street.

6.2 Cost Sharing

c. Cost sharing arrangements for collectors, arterial roads, **pathways,** rail crossings, bridges and related infrastructure may be accomplished through the development of a transportation area charge which shall be administered by the City of Winnipeg.

Rationale

As the planned neighbourhood will be dependent on outside schools and community clubs, improvements to the city's walking and cycling networks needed to provide access to existing schools and community clubs should be given the same importance and cost sharing requirements as any roadway improvements necessitated by the development.

External Transportation Network

Collector Street Extensions

General

The developer shall share costs on the installation of protected bike lanes along external collector streets as needed for access to schools, community clubs, commercial areas, parks, and pathways in adjacent neighbourhoods.

Buchanan Blvd Protected Bike Lanes

At minimum, the developer shall share in the cost of installing protected bike lanes from Saskatchewan Ave to just south of Risbey Crescent to permit access to the local street network and provide a transition from protected bike lane to mixed use traffic south of the Risbey Cr intersection.

Cavalier Dr Protected Bike Lanes

At minimum, the developer shall share in the cost of installing protected bike lanes from Saskatchewan Ave to just south of the Crestview Park Dr/Ashern Rd intersection to permit access to the local street network and provide a transition from protected bike lane to mixed use traffic south of the Crestview Park Dr/Ashern Rd intersection.

The protected bike lanes will be required whether or not the rail crossing can be moved from Summit Rd to Cavalier Dr, as Cavalier Dr will be the access route into the adjoining neighbourhood regardless of the crossing location.

Hamilton Avenue Sidewalk Extensions

The developer shall share in the cost of installing sidewalks on the east side of Hamilton Ave between Silver Ave and Saskatchewan Ave and on the west side of Hamilton Ave between Silver Ave and just north of Valley View Pl.

Hamilton Avenue Protected Bike Lanes

At minimum, the developer shall share in the cost of installing protected bike lanes from Saskatchewan Ave to the Crestview Park De intersection to permit access to the local street network, the Yellow Ribbon Trail, and the Sturgeon Creek Greenway. The protected bike lanes may be transitioned from protected bike lanes to mixed use traffic west of the Crestview Park Dr/Parkhill St intersection..

The connections created by this section of protected bike lane are important in the local bike network, as they link the Sturgeon Creek Greenway to the Yellow Ribbon Trail, as well as to the St. James Assiniboia Centennial Pool and Fitness Centre.

Ideally, the protected bike lanes on Hamilton Ave should be extended as far west as Bachanan Blvd. There are very few front-facing properties along Hamilton Ave, and the roadway seems to have excess capacity at four lanes. Where demand for on-street parking is high, the bike lane can be pushed into the boulevard in order to provide parking bays. The parking bays would then provide temporary snow storage as needed.

The provision of protected bike lanes along Hamilton Ave between Buchanan and Saskatchewan Ave would provide excellent All Ages and Abilities access to John Taylor Collegiate and Cavalier Shopping Centre. Access to Corbett Dr and Knox St. would provide low stress connections to Assiniboia West Community Centre, Hedges Middle School, and Buchanan School; all important destinations for a community with no local schools or community centres.

Importantly, protected bike lanes along Hamilton Ave would extend the St. Matthews/Yellow Ribbon Trail network spine west to the Isbister St Neighbourhood Greenway, while providing low stress access to the Unicity Area Regional Mixed Use Centre via Corbett Dr.

Hamilton Avenue Crossing Improvements

The developer shall share in any costs deemed necessary to bring the following intersections up to standard for neighbourhood greenway crossings of a major street:

- Hamilton @ Crestview Park Dr/Parkhill St
- Hamilton @ Redfern Rd
- Hamilton @ Chapman Rd

These crossings would help create neighbourhood greenways that provide low stress access to schools, community centres, and shopping south of Hamilton Ave.

Ness Avenue Crossing Improvements

The developer shall share in any costs deemed necessary to bring the following intersections up to standard for neighbourhood greenway crossings of a major street:

- Ness Ave @ Parkhill St
- Ness Ave @ Muriel St
- Ness Ave @ Kirby Dr/Valley View Dr
- Ness Ave @ Thompson Dr

A neighbourhood greenway along Crestivew Park Dr/Parkhill St. would provide an all ages and abilities bike route providing connectivity between Saskatchewan Ave and Portage Ave @ Westwood Dr (a signalized intersection of Portage Ave). Such a bikeway would give residents low stress access to such important destinations as:

- St. James Assiniboia Centennial Pool and Fitness Centre (via Livinia)
- Westwood Village Shopping Mall

Access to Kirkfield Westwood Community Centre, Westwood Library, and Westwood Collegiate is also greatly improved, although these destinations would require a short medium stress connection or additional improvements to Westwood Blvd.

A neighbourhood greenway along Muriel St would provide additional access to:

- St. James Assiniboia Centennial Pool and Fitness Centre
- Ness Middle School
- Crestview Mall (via Muriel St Park pathways)
- Westwood Village Shopping Mall

Muriel St may provide a route to Kirkfield Westwood Community Centre, Westwood Library, and Westwood Collegiate than Westwood Blvd that is easier to adapt into a low stress route.

Routes along Kirby Dr/Valley View Dr could be adapted fairly easily to provide connections to Bruce Ave or Lodge Ave via Sturgeon Rd frontage streets and Booth Dr, as well as to the Sturgeon Creek Greenway via Setter St.

Strauss Dr/Thompson Dr is another excellent candidate for conversion into a neighbourhood greenway, providing access to Collège Sturgeon Heights Collegiate. With safe crossings at Ness Ave and Portage Ave, as well as improvements to either provide separation or reduce speeds and traffic volumes between Ness and Strauss Dr @ Thompson Dr, this bikeway would also create an important low stress connection between the Yellow Ribbon Trail and Assiniboine Crescent. Access to Assiniboine Cr, provides access to the Woodhaven Park Walk/Bike Bridge over Sturgeon Creek, and the Moray Bridge over the Assiniboine River.

Saskatchewan Ave Pathway

The developer shall share in the costs of pathway extensions built along Saskatchewan Ave. Sections of pathway to be constructed include:

- On the south side of Saskatchewan Ave
    - Assiniboia Downs Access Rd to Cavalier Dr
    - Hamilton Ave to Sturgeon Rd Pathway (West)
- On the north side of Saskatchewan Ave
    - Quail Ridge Rd to Sturgeon Rd

Sturgeon Rd Pathway

The developer shall share in the costs to construct a pathway connection from Saskatchewan Ave to the existing Yellow Ribbon Trail pathway, using right of ways between Quail Ridge Rd and Sturgeon Rd., including a connection to Spring Valley Park.

Alignment of this pathway will need to be determined with the assistance of the Winnipeg Youth Soccer Association and adjacent property owners to ensure that pathway alignment and construction do not adversely affect use of the Sturgeon Road fields.

A second pathway on the east side of Sturgeon Rd is also recommended, but should be included in the transportation charge associated with development of the Airport Area West Industrial Secondary Plan.

The high traffic volumes anticipated on Sturgeon Rd warrant pathways on both sides of the road, and would increase safety by reducing need for crossings.

Sturgeon Creek Pathway Upgrades and Extensions

The developer shall share in the costs to construct extensions to the Sturgeon Creek Pathway recommended by the Sturgeon Creek at Saskatchewan Avenue Project, including:

- Extension and upgrade of the pathway on the west bank of the creek
- Extension of pathway along the Hydro Corridor from Saskatchewan Avenue to Voyageur School