Winnipeg



Winnipeg Transportation Master Plan

Executive Summary

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Introduction

Winnipeg and the Manitoba Capital Region are growing at a pace we have not seen in several decades. Our economy is booming as businesses take advantage of Winnipeg's unique trade position in North America. Consequently, we are welcoming more new Winnipeg residents, seeking the opportunities the region is presenting. Once here, residents are discovering a range of housing choices, livable communities and opportunities to be civically engaged – all things that have always brought great pride to Winnipeggers. By 2031, it is projected that Winnipeg and the surrounding areas will be approaching one million people.

With this growth comes the opportunities for more compact and vibrant communities, greater economic development and increased justification for infrastructure renewal and expansion. However, growth also presents challenges and requires innovative and proactive transportation solutions to support Winnipeg's current and future prosperity in an economically, socially and environmentally sustainable manner.

The Winnipeg Transportation Master Plan (TMP) is intended to set out a strategic vision for transportation in Winnipeg over the next two decades. It will ensure that future transportation needs for an integrated network of highways, roads, rapid and conventional transit, cycling and pedestrian facilities can be planned and budgeted for as the City implements its future growth plan outlined in **OurWinnipeg**. The TMP was built on the strength of the vision and directions established through the development of OurWinnipeg and its supporting Direction Strategies. The TMP also provides an updated and expanded set of policies to guide future transportation and land development decisions.

The TMP is a long-term, strategic planning document, and as such is not intended to address site-specific or corridor-specific issues. Rather, its intent is to present a package of actions that, when implemented over time, will help the City achieve its strategic vision. The TMP is also intended to be a dynamic document that is responsive to changing conditions over time.

Key Strategic Goals

The directions and strategies contained within the TMP are based on the vision and key strategic goals identified in the Sustainable Transportation Direction Strategy that supports OurWinnipeg.

- A transportation system that is dynamically integrated with land use
- A transportation system that supports active, accessible and healthy lifestyle options
- A safe, efficient and equitable transportation system for people, goods and services
- Transportation infrastructure that is well maintained
- A transportation system that is financially sustainable

The recommendations contained in the TMP are presented by transportation components. The TMP provides a summary of current transportation trends, needs and opportunities that provide a high-level context for the development of a **Key Direction** or goal for each transportation component, highlighted at the beginning of each subsequent section of this summary. The Key Direction describes the results that the City is hoping to achieve and drives the **Directions** and **Enabling Strategies** concerning the specific component. The supporting Directions or objectives for each component are described here within, and the Enabling Strategies to fulfill these directions are summarized in EX 3 of this summary report.

Integrating Transportation and Land Use

Integration of transportation and land use planning ensures the vision for land use development for Winnipeg, as articulated in OurWinnipeg and Complete Communities is achieved by providing a transportation network that supports the urban structure and the concept of complete communities.

A key goal in OurWinnipeg is to accommodate a greater proportion of the City's future growth within the existing built boundary. This would be accomplished through redevelopment and intensification in the City's transit-supportive land use areas: the downtown, mixed-use centres, mixed-use corridors, and major redevelopment sites. Increasing transportation choice to and from these areas will be essential to encourage growth. In addition, increased density will be needed to justify major transportation investments such as rapid transit.

As part of this plan, a great deal of work was done to test several combinations of land use and transportation scenarios to examine how various sustainability indicators respond to different land use and transportation inputs, and to use these to guide the development of transportation networks and policies.

The assessment of integrated land use and transportation scenarios showed increases in density in the mixed-use corridors, mixed-use centres, and major redevelopment sites are needed to support rapid transit, encourage alternatives to driving and support other sustainable transportation objectives, and that the completion of the strategic road network is required to maintain the integrity of Winnipeg's transportation system for goods movement, and does not undermine the goals of sustainable transportation.

Direction: Transportation & Land Use

» **Ensure that land use and transportation decision making tools, including procedures, standards, and guidelines, are structured to reflect an integrated consideration of land use and transportation issues.**

Improving Travel Choices

Providing opportunities to access multiple modes of transportation to people of all ages and abilities that will improve the quality of life, economic vitality, and system efficiency.

The City has already moved toward increased choice by investing in quality transit corridors, taking the first steps toward rapid transit, and pursuing significant improvements to the active transportation network. Providing greater transportation choice will be the key to reducing Winnipeg's reliance on automobile travel. A key underlying goal of the transportation plan is to expand the range of travel options that are available to residents, workers and visitors, and to ensure that people are not dependent on one single mode. Expanded travel choice creates countless community benefits. Providing greater access and options for walking, cycling and transit will lead to improved health, increased personal mobility, more livable and socially active communities, and reduced impacts on the environment and our climate.

Several opportunities exist to enhance and improve travel choices for Winnipeggers, with some that have an applicability to the general, multi-modal transportation system and others that are mode specific.

General Applicability

Accessibility and Universal Design

In recent years, increased attention to the needs of persons with disabilities has led to advances in ensuring new construction is universally accessible and developing programs to retrofit existing infrastructure. Accessibility of public transit continues to improve with continued expansion of the Easy Access route network and introduction of new features such as automatic stop announcements. Nevertheless, many issues still persist in creating a barrier-free transportation system.

Transportation Demand Management

The rapid growth projected for Winnipeg will increase pressures on its infrastructure, in particular, the transportation system. Transportation demand management (TDM) can provide economic, environmental and social benefits, in that it can help to reduce or defer the need for major road infrastructure improvements, reduce emissions and congestions, and improve public health and accessibility of employment opportunities.

Complete Streets

Complete Streets are designed and operated to balance the safety and mobility needs of all users, respecting the relative regional and localized context of the street within the urban structure. By improving opportunities for other modes of travel, Complete Streets can

also reduce dependence on automobiles and enhance economic and urban development opportunities. Complete Streets can include a variety of features: road narrowing, on-street parking, bicycle lanes, bus lanes, sidewalk expansion, streetscape, speed limit reductions.

Directions: General Applicability of Travel Choices

» **Ensure that transportation projects, programs, and initiatives reflect accessibility and universal design principles.**

» **Develop and implement a series of TDM policies and programs.**

» **Support community stakeholders in the development and implementation of TDM initiatives.**

» **Balance the needs of all users of the street to support complete communities and the urban structure.**

Active Transportation

Winnipeg's AT networks (Map 1) will to be designed, maintained and developed to ensure the accessible, safe, and efficient use for all users while balancing the needs of the different AT modes and trip types that all share the networks.

Winnipeg has been expanding its active transportation (AT) network. The first major stride towards implementing AT policy in the City of Winnipeg was the council approval of the Active Transportation Study in 2006 as a resource in formulating future active transportation policies and programs for the City of Winnipeg. The subsequent Implementation Plan, adopted in 2007, has guided the significant expansion of the AT network, with over $23 million in funding from all levels of government and 375 kilometres of AT facilities in 2010/2011.

Despite these investments, however, there are still many gaps and deficiencies in the AT network that need to be addressed.

Walking

Most trips begin and end with walking. Where destinations are within reasonable distances, walking can be a competitive transportation option. This highlights the need to make sure that the places where people walk, whether on lands adjacent to the network on the network itself, are well designed for pedestrian accessibility.

Walkable urban environments are the most important consideration to enhancing walking as a mode choice for entire trips. Universally accessible sidewalks are the most basic infrastructure necessary to enable walking. The benefits of more walkable neighbourhoods include improved safety resulting from more 'eyes on the street', enhanced urban vitality and economic opportunities by encouraging smaller, local storefronts, and increased social interaction.

Year round maintenance of the pedestrian facilities is important to ensuring accessibility and usability of the network. This becomes increasingly important as Winnipeg's population ages and factors heavily in individual mode choice.

Cycling

Although extensive improvements to the cycling network have recently been made, a number of significant gaps and barriers remain to challenge network connectivity. Opportunities exists to further define neighbourhood level networks to support both localized neighbourhood bike travel and connectivity to the broader city-wide network, and to integrate transit service with bike facilities to provide cyclists with reasonable alternatives for moderate and long distance trips.

In addition, efforts to improving cycling as a viable mode will be most successful if they include year-round maintenance of at least a core network, as well as efforts to educate both the users of the cycling network and users of the broader network to ensure safe and respectful interaction.

Directions: Active Transportation

» **Ensure that AT networks are planned, designed, implemented and maintained to address year-round access.**

» **Work with community stakeholders to ensure that changes to AT networks meet the needs of their respective users.**

» **Ensure that the pedestrian network is planned, designed, implemented, and maintained to increase the competitiveness of walking as a transportation mode choice.**

» **Continually improve the city-wide cycling network (Map 1), to close gaps, mitigate barriers and areas of conflict between cyclists and other transportation network users.**

Transit

Expansion of Winnipeg's transit network and services will enhance transit as a mode choice if it provides good coverage and a basic level of service to all areas of the City and an effective network of rapid transit.

One of the most significant enhancements to the transit system over the past few years has been the development of "Transit Quality Corridors" and the implementation of modern technology to provide real-time passenger information tools, marketed as "TransitTOOLS".

Transit will play a continuing essential role in Winnipeg's transportation mix. The TMP aims to leverage strategic improvements to the transit network to not just create a more reliable, competitive, and convenient alternative to driving, but to also catalyze urban transformation and intensification along major transit corridors and promote transit-supportive development throughout Winnipeg.

The TMP presents a renewed vision for public transit in Winnipeg, building on recent successes and investments to substantially improve the perception, comfort, reliability, and convenience of taking transit. The introduction of rapid transit and subsequent network changes present an opportunity to redefine transit's role in our City and communities. However, these changes will not result in substantial gains in ridership without transit-supportive land use and maximized transportation choice policies. To implement this vision, and expand transit in Winnipeg, an integrated system of two transit service networks is proposed: a base transit network and rapid transit. Both networks are predicated on two mutually supportive components: complete network coverage and high-quality service.

Base Transit Network

The base transit network includes most of the City's on-street mainline, express, and suburban feeder fixed-route bus system, and the dial-a-ride demand-responsive service for low ridership areas. The base network will provide efficient and accessible service on Winnipeg's street system, offering good coverage throughout the City, operating at convenient intervals, providing direct travel between major origins and destinations, meeting local travel needs in our neighbourhoods, and integrating effectively with rapid transit services. The base network will include further enhancements to the Quality Corridors recently implemented on major arterial streets.

The base transit network is an important component of the city-wide transit strategy and a critical support for rapid transit. It expands the reach of the transit system into all neighbourhoods, providing local service and access to destinations on the transportation network.

Rapid Transit Network

Rapid transit is necessary for Winnipeg's on-going growth. It is needed to ensure that residents are provided with a viable alternative to the automobile, to reduce existing and future road congestion, and to build a transportation system that is capable of serving future generations. Rapid transit is also essential for shaping land use in a manner that achieves the objectives of OurWinnipeg and Complete Communities.

Rapid transit is envisioned on four corridors in Winnipeg in the TMP by 2031, with an additional two corridors beyond 2031 (EX 1, **Map 2**). Initial priorities include the Southwest corridor (Stage 1 is under construction), a Western corridor along Portage Avenue, and an Easterly corridor, with a possible extension North on Main Street. Corridors in the Northeast and Southeast could be implemented as extensions to the primary corridors using staged and less expensive approaches and then converted to full rapid transit in the longer term.

The rapid transit network will use exclusive rights-of-way to bypass traffic congestion on the street system. Rapid transit stations will become multi-modal transportation hubs, where base network services either connect with trunk rapid transit routes or join the rapid transit

corridors from the street system to provide seamless travel, and where bicycle parking and park and ride facilities are fully integrated with rapid transit service. Stations will be supported by land use policies to encourage creation of mixed-use transit villages and transit-oriented developments.

Directions: Transit

» **Provide efficient and effective transit service to all areas of the city.**

» **Further strengthen the base transit network to support the efficiency and accessibility of transit.**

» **Implement a rapid transit network as part of the transit system to provide a viable alternative to the auto mobile and to reduce existing and future road congestion.**

» **Align land use and transportation planning decisions to support the rapid transit network.**

EX1 Summary of Rapid Transit Corridors

Indicator	Rapid Transit Corridor					
	Southwest	West	East	North	Southeast	Northeast
	Graham Mall to U of M	Portage & Main to Century	Graham Mall to Lagimodiere	Graham Mall to Burrows	Nairn to Bishop Grandin	Nairn to Perimter Hwy
Length (km)	13.5	4.9	5.8	2.5	7.3	7.3
2031 Peak Point Ridership (peak hour) (1)	1800	2050	1600	3200	250	500
2031 Average residential and employment density within 500 m of corridor (total residents+jobs per ha) (2)	76	151	90	187	23	35
Number of Regional Mixed-Use Centres within 1 km. (3)	0	1	1	0	0	0
Number of major redevelopment sites within 1 km (4)	5	0	1	1	1	1
Estimated capital cost $millions (LRT)(5)	$700	$340	$405	$177	-	-
Estimated capital cost $millions (BRT)	$275 for Stage 2	$146	$174	$76		
Recommendation on Phasing	Before 2031	Before 2031	Before 2031	Before 2031	Beyond 2031	Beyond 2031

NOTES

(1) Estimated based on Winnipeg Travel demand Model. Typically 1,200 passengers per hour is considered the minimum threshold for dedicated rapid transit facilities.
(2) Ideally densities of 125 persons plus jobs per hectare are required to support rapid transit along the majority of the corridor.
(3) Based on mixed use centres identified in OurWinnipeg.
(4) Based on major redevelopment sites identified in OurWinnipeg.
(5) Estimated potential capital costs based on LRT technology. Costs will vary based on alignment, level of grade separation, vehicle types and number of stations. Costs are indicative for the purpose of identifying potential funding needs over the long term and will be refined through further studies.

Road Network

In order to accommodate increasing demand as well as efficiently and effectively move people and goods within and through Winnipeg, a safe, connective and sustainable road network is required as part of a balanced, multi-modal transportation system.

Future growth and increasing demands to efficiently move people and goods within and through Winnipeg will intensify the needs for a safe, connective and sustainable road network.

Road Network Improvements

A number of strategic road network projects have been identified that will enable the efficient movement of goods and people in and around Winnipeg (**Map 3**). EX 2 summarizes and prioritizes the Strategic Road Network and other major road network improvements that are illustrated on **Map 4**.

It should be noted that the priority of the Strategic Road Network improvements illustrated in EX 2 and **Map 4** will be reviewed on an annual basis as part of the requirements necessary to ensure that transportation and land use planning continue to be integrated.

In addition to the improvements and additions to the Strategic Road Network, there are opportunities for:

- the implementation of a modern and integrated traffic signal management system to implement ITS solutions and to establish a traffic management centre to more efficiently and proactively address traffic management problems.
- Undertake other modifications to the existing major street network at key locations to replace transportation infrastructure that is beyond its useful life and to mitigate existing spot congestion problems.

EX 2 Summary of Road Network Improvements

Timeframe	Category	Link	Total Estimated Cost ($M)[1]
Short-term (by 2016)	Strategic Road Network Improvements	Kenaston (Route 90) - Ness to Taylor	$129
		CentrePort Canada Way and Connecting Roads [2]	n/a
		Chief Peguis Trail - Henderson to Lagimodiere [2]	n/a
	Other Major Road Network Improvements	Pembina Underpass [2]	$14.3
		Traffic Signal Management System [2]	$4.6
		Marion-Goulet Connection - Youville to Lagimodiere	$70
		Plessis Road Widening and Grade Separation at CN Mainline	$75
		Louise Bridge [3]	TBD[4]
		Waverley West Arterial Roads [2]	n/a
		Disraeli Bridge and Overpass [2]	n/a
		Sub-Total Short-term	**$292.9+**
Medium-term (by 2021)	Strategic Road Network Improvements	Chief Peguis Trail – Main to McPhillips	$110
		Bishop Grandin - Lagimodiere to Fermor	$80
		Edward Schreyer Parkway - Plessis to Chief Peguis	$60
		Fermor Avenue - Lagimodiere to Plessis	$40
		William R. Clement Parkway - Grant to Wilkes	$60
	Other Major Road Network Improvements	St. Mary's Road Widening - St. Anne's to Marion	$60
		Arlington Bridge [3]	TBD[5]
		Osborne Street Underpass [3]	TBD[4]
		Grade Separation at CN Mainline between Taylor and Sterling Lyon[3]	TBD[4]
		Sub-Total Medium-term	**$410+**
Long-term (by 2031)	Strategic Road Network Improvements	Chief Peguis Trail – McPhillips to Route 90	$130
		Bishop Grandin - Kenaston to McGillivray	$100
		William R. Clement Parkway - McGillivray to Wilkes	$100
		Silver Avenue - Century (Route 90) to Sturgeon	$90
		Chief Peguis Trail - Edward Schreyer Parkway to PTH101	$110
		PTH 6 Extension – CentrePort Canada Way to PTH 101	$150
		Sub-Total Long-term	**$680**
		TOTAL	**$1382.9+**

[1] All figures in 2011$ and do not account for inflation. Preliminary estimate only unless otherwise noted – subject to further review at preliminary/detailed design stage.

[2] Project included in adopted 2011 Capital Budget and/or 2012-2016 Five Year Forecast.

[3] Project included in adopted 2012-2016 Five Year Forecast for Design and/or Property Acquisition Only.

[4] To be determined after design.

[5] To be determined after study of options

Road Network Classification System

The City of Winnipeg currently uses a two-category system to classify its road network, primarily relating to road function and budgeting considerations: Regional Streets or Non-Regional Streets. In order to respond to the range of urban contexts and multi-modal function needs, a further refinement of the current road classification system will be necessary. It should incorporate roadway policies, design features, and ITS to foster a full range of mobility options and increase safety for all users.

Directions: Road Network

» **Ensure that a safe, connective and sustainable road network is part of the balanced, multi-modal transportation system.**

» **Enhance the efficiency and effectiveness of the existing road network.**

» **Develop a roadway network classification system to bring greater transparency to the management of the roadway network.**

Goods Movement

Balancing the needs of efficient and sustainable goods movement with those of complete communities will allow the City to remain economically competitive while maintaining neighbourhood liveability.

Winnipeg is a key intermodal and freight hub due to its geographical location. The City is a destination on the main lines of the Canadian National Railway (CN), Canadian Pacific Railway (CPR), Burlington Northern Santa Fe Railway (BNSF) railway networks, and provides direct connections to U.S. rail corridors. Winnipeg is home to three of the largest trucking industry companies in Canada, as well as major aerospace and transportation-related manufacturers such as Boeing and New Flyer.

Providing and maintaining an effective road network to employment lands and large industrial centres will accommodate current and future goods movement demand. This will be key to reducing the growing pressures on transportation infrastructure and minimizing impacts to neighbouring residential and commercial developments.

Direction: Goods Movement

» **Ensure an effective and sustainable goods movement network (Map 5) that includes key trade corridors and truck routes is part of the balanced, multi-modal transportation system.**

Regional Connections

The provision of effective and efficient regional transportation links in the Capital Region is essential to economic prosperity.

It is anticipated that population in the Capital Region outside of the City of Winnipeg will increase substantially in the future to over 103,000 people by 2031, resulting in a doubling of trips to/from the Capital Region outside Winnipeg. The concern with this increase in travel is that it primarily impacts the transportation network within the City. The coordination of transportation planning on a regional scale will therefore be essential. The provincial government has taken initial steps to coordinate the planning and delivery of services in the Capital Region, including the development of guiding principles for the region and establishing a Regional Planning Advisory Committee. The City of Winnipeg will continue to participate and contribute to ongoing discussions on the future of governance and service delivery in the Capital Region.

» **Support sustainable transportation linkages between Winnipeg and the surrounding municipalities.**

Direction: Regional Connections

Parking

Parking should facilitate access for bicycle and motor vehicle users of the transportation network to adjacent development in a manner that supports the concept of complete communities.

Parking policy influences both transportation and land use patterns in the City. Minimum requirements for the provision of off-street parking in Winnipeg outside of the downtown is regulated through the City's Zoning By-law. These requirements are based on the proposed land use and various measures in terms of size. In Downtown Winnipeg, off-street parking is regulated by the Downtown Zoning By-law, which does not contain minimum parking requirements.

Parking policies should be context-sensitive to ensure that parking is provided where it is needed; opportunities for modal shift are created; and parking is integrated with the urban landscape.

» **Provide for an effective and appropriate level of parking supply.**

Direction: Parking

Asset Management

Continuing support for a transportation asset management program will enable the existing and future transportation infrastructure to be maintained in a state of good repair, while not comprising on safety, level of service, or the life expectancy of assets.

In recent years, while the majority of infrastructure investments have been directed to expansion, major expenditures to renew aging infrastructure have also been made such as the renewal of the Disraeli Bridge and Overpass. However, Winnipeg will continue to face increasing financial pressures over the next decade to address transportation infrastructure needs to meet future demand and as existing assets age and reach their useful life span.

Funding shortfalls will result in the growth of the City's infrastructure deficit. An estimated $2.0 billion deficit is projected for existing transportation infrastructure, and an additional $3.0 billion deficit for new strategic transportation infrastructure (Executive Policy Committee, 2009). It is critical that all levels of government recognize and start to address this deficit to avoid placing additional financial burden on future generations.

Strategic asset management of transportation infrastructure can help make informed decisions about how to best allocate limited resources. The TMP carries forward and expands on the recommendations of the Strategic Infrastructure Reinvestment Policy (SIRP) report approved by Council in 1998, and includes strategies to guide infrastructure investment based on sound lifecycle and cost-benefit assessments, best asset management practices and financially-sustainable approaches.

Directions: Asset Management

» **Expand the existing transportation asset management program to respond to current and anticipated infrastructure maintenance requirements.**

Implementation, Funding, and Plan Monitoring

It is essential to have a comprehensive implementation, funding, and plan monitoring framework as part of the transportation master plan. It provides guidance for the actions to be taken by different stakeholders and city agencies in the short-, medium-, and long-term. Most importantly, it provides the framework necessary to evaluate and monitor the progress of the plan.

Implementation Strategy

The TMP outlines the strategy to implement the Directions and Enabling Strategies contained in the plan, which reflects the vision of OurWinnipeg as it relates to transportation while supporting the strategic directions of Complete Communities, Sustainable Transportation, and A Sustainable Winnipeg.

EX 3 summarizes the enabling strategies identified throughout the plan, providing the timeframe of the action within the short-, medium-, and long-term. Actions that initiated in an earlier time frame, but continued through the later periods are denoted with a ▶ symbol.

Connections to the key strategic goals of the Transportation Master Plan are indicated in the table. Partners in the implementation of each enabling strategy and an estimate of the level of effort and potential capital budget impact are also included.

Early Actions

Demonstrating action early in the implementation of the TMP will be important to assure its long-term success. The implementation strategy identifies several "Early Actions" that may have a major impact on the transportation network, and would also build public and political support and momentum for the overall TMP. These "Early Actions" are:

- Initiation of a **Complete Streets strategy**, including the identification of opportunities within scheduled or budgeted road rebuilding projects to implement as pilot complete streets.
- Build off the momentum from the Southwest Rapid Transit Corridor to showcase the benefits of **rapid transit** and to ensure rest of the network is built in a timely manner. The City can take proactive steps to continue to prepare other corridors for rapid transit by building up ridership through increased frequencies and limited stop service, and marketing and branding of these corridors to increase public awareness and support.
- Begin addressing **regional transportation** issues in Manitoba's Capital Region. In the short term, create a Regional Transportation Working Group to establish a much needed dialogue and framework from which regional transportation issues can be addressed and to explore the feasibility of establishing a regional transportation authority, which can improve the coordination and delivery of transportation infrastructure and services on a regional scale.
- The continuation and **expansion of the traffic signals management system** will build upon the initiative that began in 2008. It will enable the implementation of intelligent transportation system (ITS) solutions, and allow for the establishment of a traffic management centre to address traffic management problems more efficiently and pro-actively.

EX3 Summary of Transportation Master Plan Enabling Strategies

	Enabling Strategy	Timeframe: Short	Timeframe: Medium	Timeframe: Long	Support Key Strategic Goal #: 1	2	3	4	5	Partners	Level of Effort	Capital Impact	Operational Impact
Integrating Transportation and Land Use													
a)	Review and update current processes to coordinate land use, economic development and transportation planning.	●			▮		▮			Public Works, Transit, PPD	Medium	Low	Low
b)	New guidelines for the preparation of transportation impact studies.	●			▮					Public Works, Transit, PPD	Low	Low	Low
c)	Review transportation projects and programs to ensure they support the concept of complete communities.	●	▶	▶	▮					Public Works, Transit, PPD	Low	Low	Low
d)	Explore opportunities to utilize transportation investments to leverage development potential in transformative areas.	●	▶	▶					▮	Public Works, Transit, PPD	Low	Low	Low
Travel Choices: General Applicability													
a)	Include accessibility and universal design implications in all stages.	●	▶	▶		▮	▮			Public Works, Transit, PPD	Low	Low	Low
b)	Demonstrate leadership by incorporating barrier-free and universal design principles.	●	▶	▶		▮	▮			Public Works, Transit, PPD	Low	Low	Low
c)	Continue to provide capital funding to retrofit existing infrastructure to remove barriers to access.	●	▶	▶		▮	▮		▮	Public Works, Transit, PPD	Low	Medium	None
d)	Identify accessibility barriers as part of integrated planning processes.	●	▶	▶	▮	▮	▮			Public Works, Transit, PPD	Low	Low	Low
e)	Ensure transportation policies and implementation tools related to universal design and accessibility are monitored and updated.	●	▶	▶		▮	▮			Public Works, Transit, PPD	Low	Low	None
f)	Require TDM plans as part of transportation impact studies.	●	▶	▶		▮	▮			Public Works, Transit, PPD	Low	Low	Low
g)	Prepare TDM plans for major transportation projects.	●	▶	▶	▮	▮	▮			Public Works, Transit, PPD	Medium	Low	Medium
h)	Develop an internal TDM strategy.	●			▮	▮	▮			Public Works, Transit, PPD	Medium	Low	Low
i)	Support innovative parking strategies that allow for reductions in parking space requirements.	●	▶	▶	▮					Public Works, Transit, PPD	Low	None	Low
j)	Provide multi-modal network information, directions, alerts, and assistance.	●	▶	▶	▮	▮	▮			Public Works, Transit, PPD	Low	Low	Medium
k)	Support an integrated approach to marketing sustainable travel.	●	▶	▶			▮			Public Works, Transit, PPD	Medium	None	Low
l)	Partner with transportation-sharing programs to promote these services and facilitate their growth and long-term viability.	●	▶	▶			▮		▮	Public Works, Transit, PPD	Low	Low	Low

Enabling Strategy		Timeframe			Support Key Strategic Goal #					Partners	Level of Effort	Capital Impact	Operational Impact
		Short	Medium	Long	1	2	3	4	5				
m)	Encourage carpooling and high-occupancy vehicle travel.	●	▶	▶		▮				Public Works, PPD	Low	Low	None
n)	Continue to support existing sustainability programs in school transportation.	●	▶	▶			▮			Public Works, Transit, PPD	Low	None	Low
o)	Collaborate with the neighbourhoods to develop a local approach to traffic calming.	●	▶	▶			▮			Public Works, PPD	Low	Low	Low
p)	Continue to partner with organizers of large events to provide a broad range of travel options to attendees.	●	▶	▶		▮	▮			Public Works, Transit, PPD	Low	None	Low
q)	Develop Complete Streets Strategy.	●			▮	▮	▮			Public Works, Transit, PPD	Low	Low	Low
r)	Align Complete Streets strategy with road network classification system.		●	▶			▮			Public Works, Transit, PPD	Low	Low	Low
s)	Develop the Complete Streets Strategy in consultation with interested stakeholders.	●				▮	▮			Public Works, Transit, PPD	Low	None	None
t)	Incorporate into Complete Streets Strategy the need to ensure that encroachments into the right-of-way balance the public good, private needs, street operations, and safety.		●	▶		▮	▮			Public Works, Transit, PPD	Low	Low	Low
Active Transportation													
a)	Create and maintain an up-to-date AT facilities database.	●	▶	▶				▮		Public Works	Low	Low	Low
b)	Develop a process to monitor effectiveness of AT network.	●						▮		Public Works	Low	Medium	Low
c)	Allocate sufficient funding in future capital and operating budgets to complete the AT networks.	●	▶	▶				▮	▮	Public Works	Low	Medium	Low
d)	Work with regional partners to create safe connections to the regional AT networks.	●	▶	▶	▮	▮	▮			Public Works, PPD	Low	None	Low
e)	Formalize a prioritization process for facility investments.	●							▮	Public Works, PPD	Low	None	None
f)	Explore opportunities to expand the AT network in rail, hydro, and other available corridors.		●	▶	▮	▮				Public Works, Transit, PPD	Low	Medium	Low
g)	Encourage pedestrian- and cycling-supportive site design in all developments.	●	▶	▶	▮	▮				Public Works, Transit, PPD	Low	None	None
h)	Continue to work with local school divisions and schools to establish programs that encourage active travel to and from schools.	●	▶	▶		▮	▮			Public Works, School Boards	Low	None	Low
i)	Include design guidelines for a range of cycling infrastructure within the AT facilities design guide.	●	▶	▶	▮		▮			Public Works, PPD	Low	None	None
j)	Engage with communities to mitigate conflicts between different users of the transportation system.	●	▶	▶	▮	▮	▮			Public Works, Transit, PPD	Low	Low	Low

Enabling Strategy		Timeframe			Support Key Strategic Goal #					Partners	Level of Effort	Capital Impact	Operational Impact
		Short	Medium	Long	1	2	3	4	5				
k)	Continue to provide and expand information to the general public on AT facilities and programs.	●	▶	▶		▮				Public Works, Transit, PPD	Low	Low	Low
l)	Promote programs and events that support and encourage various forms of active transportation.	●	▶	▶		▮				Public Works, Transit, PPD	Low	Low	Low
m)	Provide or support education for all transportation users to improve understanding and compliance.	●	▶	▶		▮				Public Works, Transit, PPD	Low	Low	Low
n)	Seek innovative and new partnerships to support AT programs and facilities	●	▶	▶					▮	Public Works, Transit, PPD	Low	None	None
o)	Develop a city-wide pedestrian strategy.	●				▮				Public Works, Transit, PPD	Medium	Low	Low
p)	Develop a strategic approach to identifying the need for and prioritization of pedestrian amenities.	●			▮		▮			Public Works, Transit, PPD	Low	Low	Low
q)	Coordinate pedestrian network development with urban design efforts and strategies.	●	▶	▶	▮					Public Works, PPD	Low	None	Low
r)	Continue and enhance incentives and funding programs to stimulate and encourage streetscape and pedestrian realm improvements.	●	▶	▶	▮	▮				Public Works, PPD	Low	Medium	Low
s)	Maintain the walking network to address year-round pedestrian needs	●	▶	▶		▮	▮	▮		Public Works	Low	Low	Low
t)	Develop a city-wide cycling strategy that provides integrated guidance for the City's efforts to support cycling activity and connectivity	●				▮	▮			Public Works, Transit, PPD	Medium	Medium	Low
u)	Consider the creation of a network of cycling spines or super corridors.		●	▶	▮	▮				Public Works, PPD	Low	Medium	Low
v)	Develop an all-season operations and maintenance strategy for a core cycling network.	●						▮		Public Works	Low	Low	Low
Transit													
a)	Update service guidelines.	●					▮			Transit, PPD	Medium	Low	Low
b)	Design network to maximize transit route coverage and directness; allow for direct and safe active transportation linkages.	●	▶	▶			▮			Transit	High	Low	Low
c)	Adopt a fare strategy that prioritizes service improvements over fare freezes or reductions.	●					▮		▮	Transit	Low	None	Medium
d)	Develop partnerships with social service agencies to increase funding for subsidized transit fares.	●					▮		▮	Transit	Low	None	Low
e)	Further exploit ITS to enhance service reliability, performance monitoring, and system management.	●						▮		Transit, Public Works	Medium	Medium	Low
f)	Ensure transit services are fully accessible and barrier-free by 2020.		●				▮			Transit, Public Works	High	High	Low

Enabling Strategy		Timeframe			Support Key Strategic Goal #					Partners	Level of Effort	Capital Impact	Operational Impact
		Short	Medium	Long	1	2	3	4	5				
g)	Expand opportunities for transit park-and-ride.		●			▮	▮			Transit, PPD	Medium	Poten-tially High	Low
h)	Integrate transit with active transportation.	●	▶	▶	▮	▮				Transit, Public Works	Medium	Low	Low
i)	Monitor and implement innovative initiatives that improve the transit experience.	●	▶	▶			▮			Transit	Low	TBD	TBD
j)	Manage fleet and operations to maximize environmental benefits; reduce energy consumption and emissions.	●	▶	▶				▮		Transit	Low	Low	Low
k)	Provide at least 30-minute service on all transit routes at all times.		●	▶			▮			Transit	Low	Low	High
l)	Expand route coverage so that 95% of city residences are within a 5-10 minute walk of transit.		●	▶		▮	▮			Transit, PPD	Low	Medium	High
m)	Explore feasibility of providing inter-municipal transit services which serve centres outside the city.		●	▶			▮			Transit	Low	Low	Medium
n)	Continue to implement Quality Corridors as a first stage to the implementation of rapid transit.	●	▶	▶	▮		▮			Transit, Public Works	High	High	Medium
o)	Complete and expand the on-street transit priority program.	●	▶	▶			▮			Transit, Public Works	Low	Medium	Low
p)	Continue Winnipeg Transit's bus stop and shelter upgrade program.	●	▶	▶		▮	▮			Transit	Low	Medium	Low
q)	Restrict the use of diamond lanes to transit vehicles and bikes.	●	▶	▶		▮	▮			Transit, Public Works	Low	Low	Low
r)	Support transit oriented development along high frequency transit corridors.	●	▶	▶			▮			Transit, PPD, Public Works	Low	None	None
s)	Adopt the rapid transit network as the preferred long term network for the City.	●			▮	▮	▮		▮	Transit, Public Works	High	High	Low
t)	Continue to evaluate and adjust the rapid transit network.	●	▶	▶	▮					Transit, PPD, Public Works	High	High	Low
u)	Select best technology (LRT or BRT) that complements each rapid transit corridor.	●			▮		▮			Transit, PPD, Public Works	Medium	None	Low
v)	Support transit oriented development along rapid transit corridors and at rapid transit stations.	●	▶	▶	▮					Transit, PPD, Public Works	Low	None	None
w)	Initiate detailed integrated corridor planning, alignment, and technology assessment studies for the rapid transit corridors.	●			▮					Transit, PPD, Public Works	High	TBD	Low
x)	Initiate studies for the Stage 2 Southwest Rapid Transit Corridor.	●			▮					Transit, PPD, Public Works	High	TBD	Low
y)	Initiate studies for the Portage Avenue/ Airport Link corridor, the Eastern corridor and the Main Street North corridor.		●	▶	▮					Transit, PPD, Public Works	High	TBD	Low

Enabling Strategy		Timeframe			Support Key Strategic Goal #					Partners	Level of Effort	Capital Impact	Operational Impact
		Short	Medium	Long	1	2	3	4	5				
z)	Identify potential supporting systems (e.g. streetcar-based downtown circulator).		●		▮					Public Works, Transit, PPD	High	TBD	Low
Road Network													
a)	Adopt the strategic road network as illustrated in Map 3.	●			▮		▮			Public Works, MIT	High	High	Medium
b)	Conduct planning and detailed design studies of the improvements to the Strategic Road Network (EX 1, Map 4).	●	▶	▶					▮	Public Works	High	High	Low
c)	Conduct an annual review of Strategic Road network improvements of the TMP monitoring process.	●	▶	▶				▮	▮	Public Works	Low	Low	Low
d)	Identify congestion hotspots that provide an opportunity to support sustainable modes and TDM.	●	▶	▶			▮			Public Works, Transit, PPD	Medium	Medium	Low
e)	Seek to improve access and efficiency of the taxi system (expanding on-street taxi zones, enforcement of no stopping zones).	●				▮	▮			Public Works	Low	Low	Low
f)	Investigate alternatives to roadway expansion and widening.	●	▶	▶	▮	▮	▮		▮	Public Works	Medium	TBD	Low
g)	Continue to implement localized improvements to the existing major road network that reduce congestion for all modes.	●	▶	▶				▮		Public Works, Transit, PPD	Medium	Medium	Low
h)	Evaluate the applicability of roundabouts.	●			▮	▮	▮		▮	Public Works	Low	Low	Low
i)	Minimize negative impact of property access on multi-modal functionality of strategic roadway network.	●	▶	▶	▮					Public Works, PPD	Low	Low	None
j)	Extend implementation of traffic signal management system to other key routes and establish a traffic signal optimization program.	●					▮			Public Works, Transit	Low	Medium	Low
k)	Integrate traffic signal management system with traffic operations and ITS solutions to improve the efficiency of the road network in a sustainable manner.	●					▮			Public Works, Transit	Low	Medium	Low
l)	Implement modern traffic management centre to monitor, manage and react efficiently to emerging congestion and unexpected traffic, security or emergency conditions.	●					▮			Public Works, Transit	Low	Medium	Low
m)	Adopt the primary road network classification.	●			▮		▮	▮	▮	Public Works, PPD	Low	Low	Low
n)	Develop an integrated road network classification system and identify appropriate design and operating guidelines for new roads, rehabilitation, and reconstruction.	●					▮	▮	▮	Public Works, Transit, PPD	Low	Medium	Low

Enabling Strategy		Timeframe			Support Key Strategic Goal #					Partners	Level of Effort	Capital Impact	Operational Impact
		Short	Medium	Long	1	2	3	4	5				
Goods Movement													
a)	Adopt and implement the goods movement network (Map 5).	●	▶	▶	▮		▮			Public Works. PPD	Medium	Medium	Low
b)	Continue to work with the transportation industry to direct higher volumes of goods movement towards the network.	●	▶	▶	▮		▮			Public Works. PPD	Low	None	None
c)	Continue to work with stakeholders to support the 24-hour operations of airport.	●	▶	▶			▮			Public Works, Airport	Low	None	None
d)	Explore and support opportunities for innovative goods movement and service that respond to changing delivery methods.	●	▶	▶		▮	▮			Public Works	Low	None	None
e)	Encourage sustainable loading and delivery practices and review related City policies and design standards.	●	▶	▶			▮			Public Works, PPD	Medium	Low	None
f)	Use ITS to minimize traffic flows and travel times, and improve safety on the goods movement network.	●	▶	▶			▮			Public Works	Medium	Low	Low
g)	Use ITS to collect data on truck movements and volumes to improve efficiency of the transportation network.	●	▶	▶			▮	▮		Public Works	Medium	Low	Low
h)	Continue to build on strategic partnerships with higher levels of government, key freight, rail and air agencies, and industry stakeholders.	●	▶	▶			▮	▮	▮	Public Works, CAO	Low	None	None
Regional Connections													
a)	Participate with surrounding Capital Region municipalities in development of coordinated transportation objectives	●	▶	▶			▮			Public Works, CAO, MIT	Low	None	None
b)	Support a framework for regional multi-modal transportation service delivery.	●			▮		▮			Public Works, CAO, MIT	High	TBD	TBD
c)	Explore the feasibility of developing a Regional Transportation Authority.		●						▮	Public Works, CAO, MIT	High	TBD	TBD
d)	Support the development of a transportation demand management (TDM) strategy for the Capital Region.		●	▶		▮	▮			Public Works, CAO, MIT	Low	None	Low
Parking													
a)	Review parking standards contained within the City's Zoning By-law (ensure consistency with the vision and objectives in OurWinnipeg, Complete Communities, and TMP).	●			▮		▮			Public Works, PPD, WPA	Medium	None	Low
b)	Develop parking standards according to urban structure classification.	●			▮		▮			Public Works, PPD, WPA	Medium	None	Low
c)	Provide opportunities in the development approval process to reduce the number of parking spaces required by the Zoning By-law.	●	▶	▶		▮	▮			Public Works, PPD, WPA	Low	None	Low
d)	Allow for payment in-lieu of providing parking.	●	▶	▶					▮	Public Works, PPD	Low	None	Low

Enabling Strategy		Timeframe			Support Key Strategic Goal #					Partners	Level of Effort	Capital Impact	Operational Impact
		Short	Medium	Long	1	2	3	4	5				
e)	Continue to develop municipally-owned parking facilities in key locations through the Winnipeg Parking Authority.	●	▶	▶			▮		▮	Public Works, PPD, WPA	Medium	Medium	Low
f)	Increase the supply of short-term on-street parking.	●	▶	▶			▮			Public Works, PPD, WPA	Low	Low	Low
g)	Develop strategies to manage on-street parking spaces in commercial areas that encourage short-term use.	●	▶	▶		▮		▮		Public Works, PPD, WPA	Low	None	Low
h)	Continue to provide flexible pricing options for on-street permit parking.	●	▶	▶		▮			▮	Public Works, PPD, WPA	Low	None	Low
i)	Manage parking supply on a district scale in downtown, regional mixed-use centres and major redevelopment sites.	●	▶	▶	▮		▮			Public Works, PPD, WPA	Low	None	Low
j)	Develop parking design guidelines.	●			▮		▮			Public Works, PPD, WPA	Medium	None	None
Asset Management													
a)	Refine the existing Transportation Asset Management program.	●						▮		Public Works, Finance	Medium	Low	Low
b)	Update the SIRP report with a transportation-specific component.	●						▮		Public Works, Finance	Medium	None	Low
c)	Continue to implement recommendations of the 1998 SIRP report until an updated report is adopted	●	▶	▶				▮		Public Works, Finance	Medium	Medium	Low
d)	Coordinate preventative or planned maintenance with new or redevelopment projects.	●	▶	▶				▮		Public Works, Finance	Low	Low	Low
e)	Review and refine the current policy for street cleaning, snow removal and ice control, and ongoing maintenance.	●	▶	▶				▮		Public Works, Finance	Low	None	Low
f)	Consider the adaptive re-use of structures for other modes.	●	▶	▶				▮		Public Works, Finance	Low	TBD	TBD
g)	Follow environmentally sustainable principles and practices	●	▶	▶				▮		Public Works, Finance	Low	None	Low
h)	Implement an asset management system for traffic control devices.	●	▶	▶				▮		Public Works, Finance	Medium	Low	Low
i)	Update and maintain transportation planning tools to meet future requirements and integrate with traffic operations.	●	▶	▶				▮		Public Works, Finance	Low	Low	Low
Funding													
a)	Address existing infrastructure needs and reverse trend of deferred infrastructure investments through best practices, preventative maintenance and asset management program.	●	▶	▶				▮	▮	Public Works, CAO, Finance	Medium	Low	High
b)	Invest in strategic transportation infrastructure to support Complete Communities and encourage sustainable modes of travel.	●	▶	▶	▮	▮			▮	Public Works, Finance	Medium	High	Low

Enabling Strategy		Timeframe			Support Key Strategic Goal #					Partners	Level of Effort	Capital Impact	Operational Impact
		Short	Medium	Long	1	2	3	4	5				
c)	Work with federal and provincial partners to secure infrastructure investment.	●	▶	▶					▌	Public Works, CAO, Finance	Medium	None	None
d)	Encourage the establishment of a federal and/or provincial transportation infrastructure delivery strategy.	●	▶	▶					▌	Public Works, CAO, Finance	Medium	Low	Low
e)	Work with province to outline a stable and predictable long-term funding strategy for rapid transit.	●	▶	▶					▌	Public Works, Finance	Medium	None	None
f)	Explore and assess applicability and acceptability of new financing tools and revenue sources to fund infrastructure projects within existing frameworks.	●	▶	▶					▌	Public Works, Finance	Low	None	None
g)	Assess applicability and acceptability of new approaches to financing such as those recommended in 2011 IFC report.	●	▶	▶					▌	Public Works, Finance	Low	None	None

Funding

In order to adequately fund the future growth and maintenance requirements of the multi-modal transportation network it will be necessary to address the expected capital funding shortfalls.

Since 2006, investments in Winnipeg's transportation network have been focused on expanding the system and, to a large extent, have been through funding assistance from the provincial and federal governments. The TMP identifies the levels of investment in capital and operating expendtures to implement the TMP in the short-, medium- and long-term time periods (EX 4 and EX 5).

» **Provide adequate funding for the growth and maintenance requirements of the multi-modal transportation network.**

Direction: Funding

EX 4 Estimated Annual Capital Expenditures Required for Transportation Master Plan Implementation (all figures in thousands, 2011$)

Capital Budget Component	Existing Level of Capital Expenditures		Short Term (by 2016)	Medium Term (2017-2021)	Long Term (2022-2031)
TMP Monitoring and Updates	$250	0.1%	$250	$250	$250
Walking / Cycling	$2,827	1.3%	$3,280	$3,830	$4,449
Local and Community Transit	$28,272	13.4%	$26,734	$31,355	$33,795
Roads – Base	$72,819	34.5%	$113,704	$100,729	$113,704
Roads – Strategic	$79,349	37.6%	$54,162	$99,562	$96,527
Subtotal*	$183,517	100.0%	$198,131	$235,727	$248,726
Rapid Transit	$27,600	15.0%	$55,000-$140,000	$26,400-$61,500	$26,400-$61,500

* Full costs exclusive of provincial or federal grants and other sources of funding. Excludes Water/Stormwater and "Other" capital expenditures.
** See main TMP report for assumptions on estimated expenditures.

EX 5 Estimated Annual Operating Expenditures Required for Transportation Master Plan Implementation (all figures in thousands, 2011$)

Operating Budget Component	Existing Level of Operating Expenditures		Short Term (by 2016)	Medium Term (2017-2021)	Long Term (2022-2031)
Walking / Cycling	$0	0%	$825	$825	$825
TDM	$0	0%	$100	$100	$100
Transit, including RT corridors	$40,331	25%	$46,935	$51,601	$59,936
Roads – Base	$118,814	75%	$120,624	$123,558	$128,989
Roads – Strategic	$0	0%	$249	$821	$2,438
Subtotal	$159,145	100%	$168,731	$176,456	$190,345

** See main TMP report for assumptions on estimated expenditures.

Plan Review and Updates

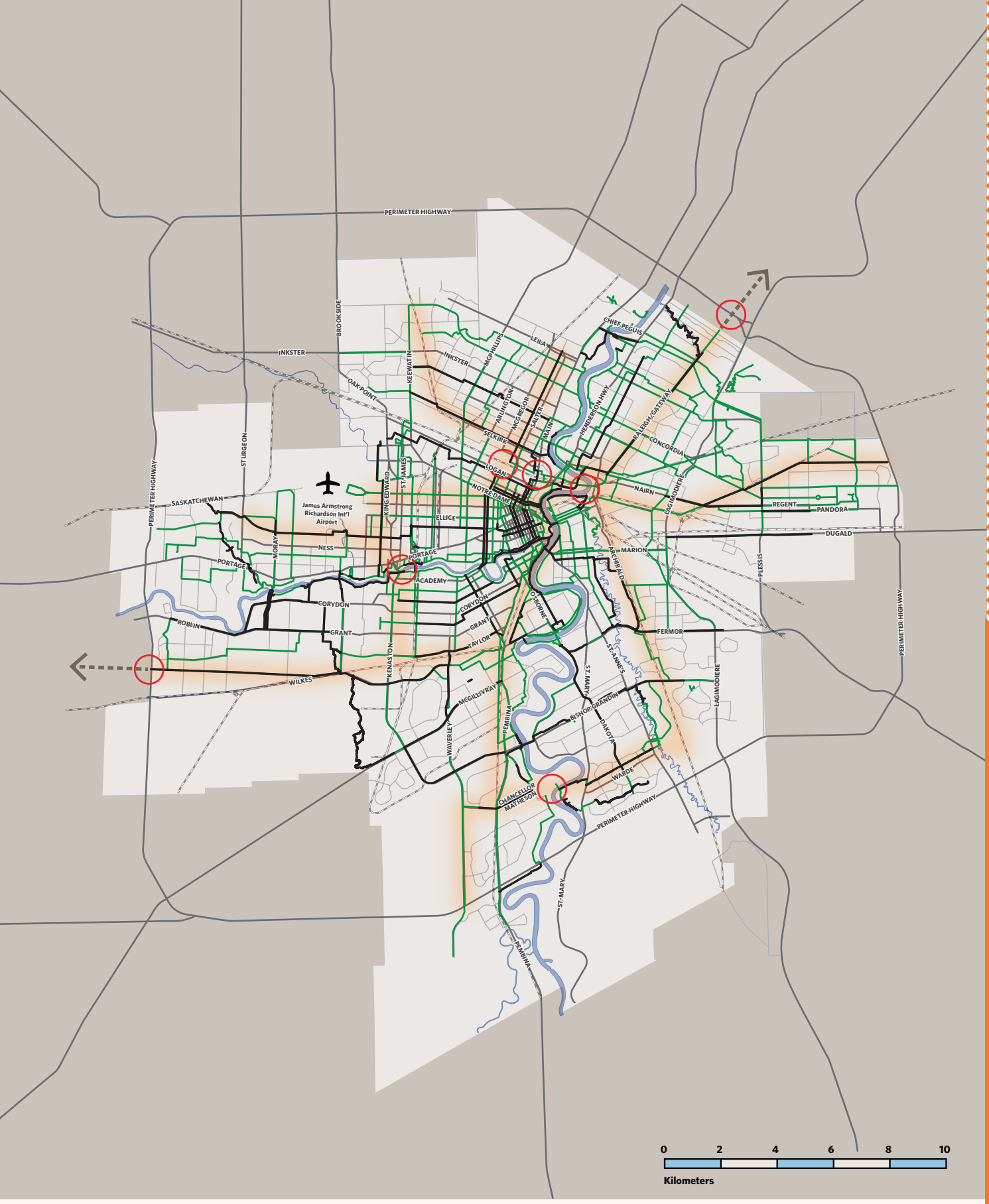
The Winnipeg Transportation Master Plan is not intended to be a static document. It must be regularly reviewed to ensure it meets the transportation needs of the City. Changing community expectations, growth patterns, and development pressures can necessitate a re-investigation of the Plan, as would changes in the expected timing of major rapid transit infrastructure. The on-going review process will involve:

- Annual updates through Winnipeg's Five-Year Capital Forecast and budgeting process.
- Preparation of an annual report to Council on local transportation conditions, behaviours, needs and trends with joint input from other departments. This annual report will include:
  - » Summaries of public feedback on transportation issues and projects implemented
  - » Updates on public and private sector TDM initiatives (i.e. carpooling, preferential parking, transit service delivery, flexible work hours, cycling facilities);
  - » Status of provincial initiatives, policies and funding programs; and
  - » Any need to review, amend or update components of the TMP.

The TMP requires regular updating to remain relevant and effective in dealing with the City's transportation needs. Therefore, it is further recommended that the Plan undergo a full review every five years in association with future statutory reviews of OurWinnipeg.

MAPS

MAP 1 Active Transportation

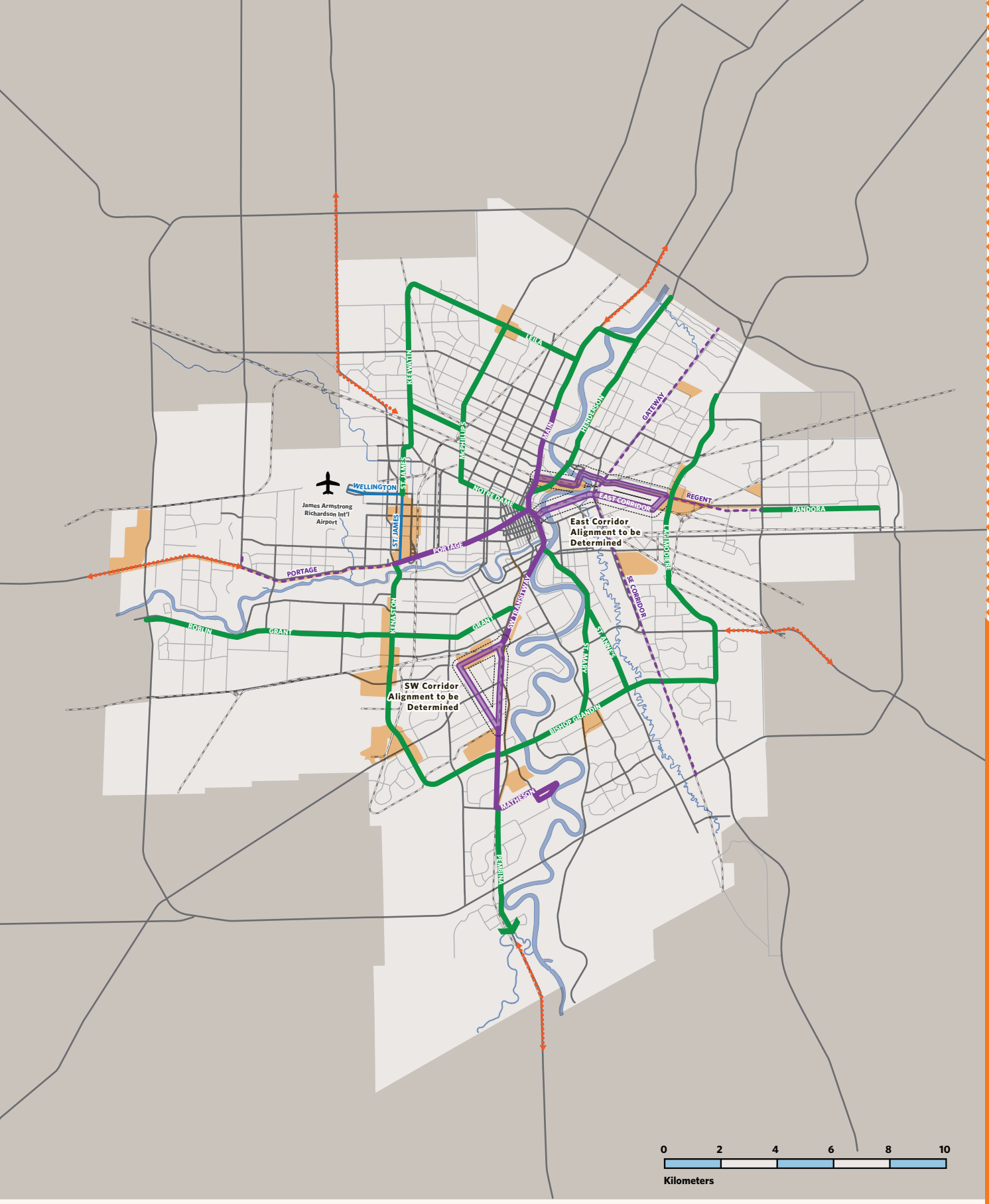


LEGEND

- Existing AT Network
- Proposed additions to AT Network
- Conceptual Bicycle Spines/Super Corridors
- Regional Trails
- Proposed Crossing Improvements

N

MAP 2 Rapid Transit

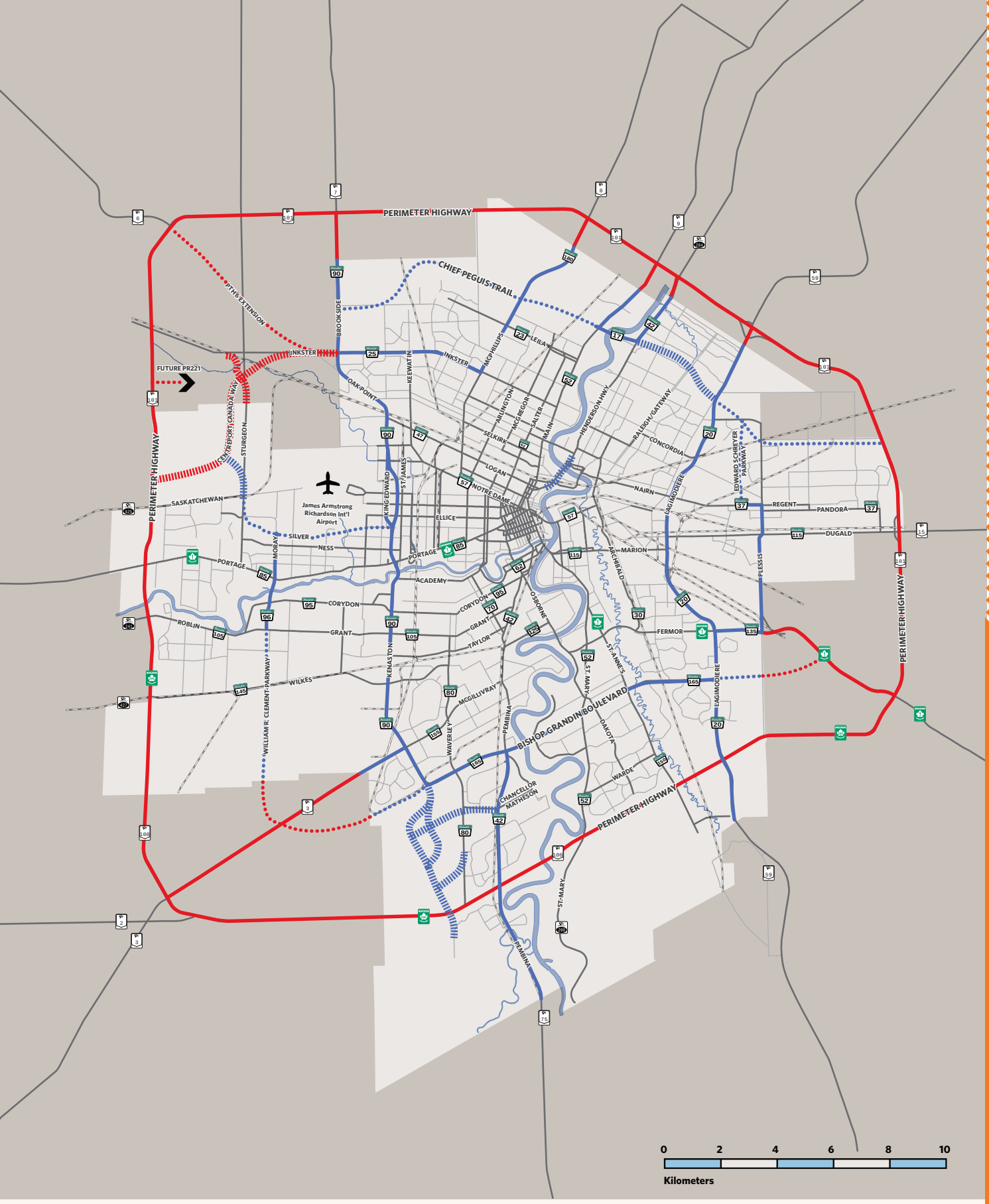


LEGEND

- Potential Quality Corridors
- Rapid Transit Corridor (to 2031)
- Rapid Transit Corridor (beyond 2031)
- Airport Link
- Potential Regional Connections
- Transit-supportive Growth Areas

N

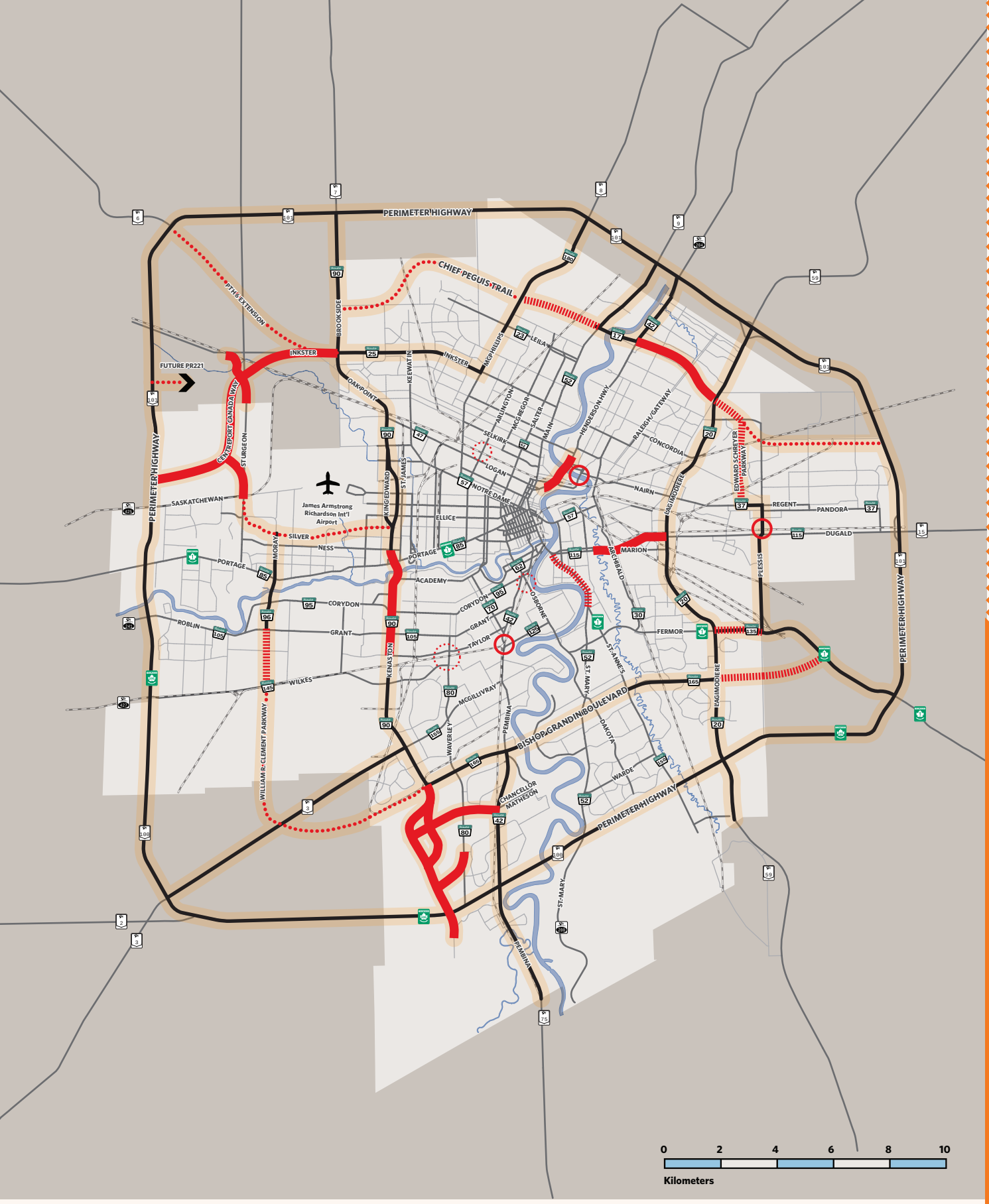
MAP 3 Strategic Road Network



LEGEND

- Existing Provincial Roadway
- Committed Provincial Roadway
- Future Provincial Roadway
- Existing City Roadway
- Committed City Roadway
- Future City Roadway
- Route 80 — City Route

MAP 4 Road Network Implementation

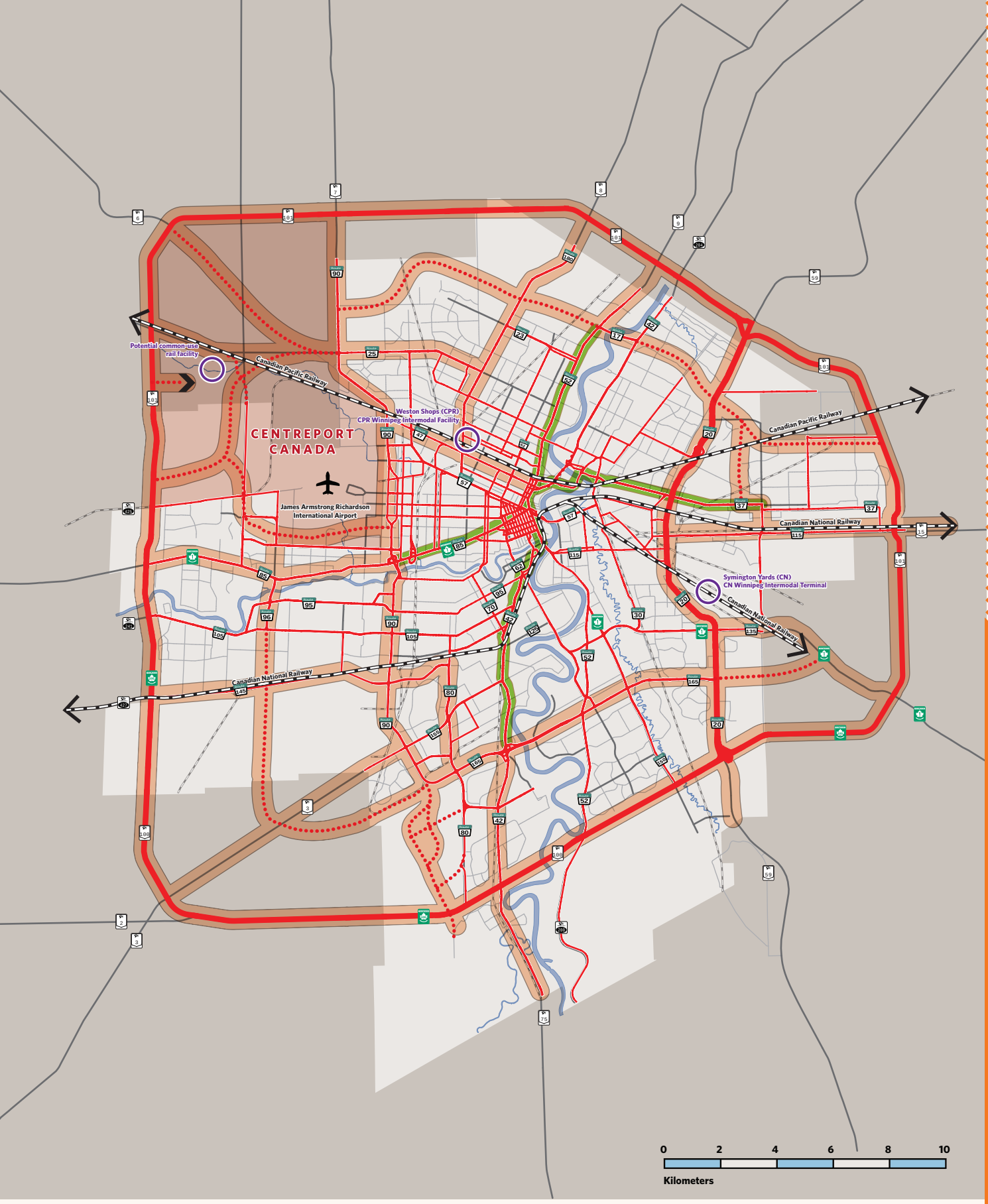


LEGEND

- Short Term
- Medium Term
- Long Term
- City Route (Route 80)
- Strategic Road Network

N

MAP 5 Goods Movement



LEGEND

- Existing Truck Routes
- Future Truck Routes
- Mainline Railway
- Strategic Goods Movement Network
- Strategic Goods Movement Network - Mixed Use Corridor
- Rail Intermodal Facilities

N