Minutes - Executive Policy Committee - July 14, 2010

REPORTS

Minute No. 398 Sustainable Transportation Direction Strategy
File PW 1/2010

EXECUTIVE POLICY COMMITTEE RECOMMENDATION:

The Executive Policy Committee concurred in the recommendation of the Winnipeg Public Service, as amended, and recommends to Council:

1. That the Sustainable Transportation Direction Strategy as outlined in Attachment "A" to the report from the Winnipeg Public Service dated June 17, 2010, and incorporating the following amendments:

   A. Inclusion of the Edward Schreyer Parkway (consistent with Map 5 of the Transcona West Area Structure Plan adopted by Council) in section 05-2c – Strategic Street Network Improvements

   B. Inclusion of the extension of Plessis Road south from Regent Avenue to Fermor Avenue (consistent with Policy Plate C of Plan Winnipeg 2020 Vision) in section 05-2c – Strategic Street Network Improvements,

   be endorsed in principle.

2. That the Proper Officers of the City be authorized to do all things necessary to implement the intent of the foregoing.

DECISION MAKING HISTORY:

Moved by Councillor Swandel,

That the recommendation of the Winnipeg Public Service be concurred in, with the following amendments:

- Amend Recommendation 1 by adding the following words after "report from the Winnipeg Public Service dated June 17, 2010":

  "and incorporating the following amendments:

  A. Inclusion of the Edward Schreyer Parkway (consistent with Map 5 of the Transcona West Area Structure Plan adopted by Council) in section 05-2c – Strategic Street Network Improvements

  B. Inclusion of the extension of Plessis Road south from Regent Avenue to Fermor Avenue (consistent with Policy Plate C of Plan Winnipeg 2020 Vision) in section 05-2c – Strategic Street Network Improvements",

and forwarded to Council.

Carried

The Director of Planning, Property and Development submitted a copy of his PowerPoint presentation on the OurWinnipeg Plan By-law No. 67/2010 and the Complete Communities Secondary Plan By-law No. 68/2010 which contained reference to the Sustainable Transportation Direction Strategy as well as a brochure titled Sustainable Transportation At-a-glance.

Submissions with respect to the Sustainable Transportation Direction Strategy were received from the following:

- Genstar Development Company
- Peter Miller, Resource Conservation Manitoba
- Mike Moore, President, Manitoba Home Builders Association

ADMINISTRATIVE REPORT

Title: **Sustainable Transportation Direction Strategy**

ISSUE: **Seeking endorsement of the Sustainable Transportation Direction Strategy as Council Policy that will apply to the entire city**

Critical Path: Executive Policy Committee → Council

AUTHORIZATION

Author	Department Head	CFO	CAO
P. Regan	D. Joshi	N/A	Glen Laubenstein, CAO

RECOMMENDATIONS

1. That Council endorse in principle the '*Sustainable Transportation Direction Strategy*' as outlined in Attachment "A".

2. That the Proper Officers of the City be authorized to do all things necessary to implement the intent of the foregoing.

REASON FOR THE REPORT

OurWinnipeg integrates four Direction Strategies that provide detailed policies, directions and strategies necessary for implementation. The four direction strategies are: *Complete Communities* (submitted for adopted as by-law), *Sustainable Transportation, Sustainable Water and Waste Infrastructure*, and *A Sustainable Winnipeg*.

Sustainable Transportation is the formalization of how transportation will be provided in Winnipeg for the next 25 years. The emphasis is on moving people, goods and services in a way that is socially, environmentally and economically sustainable.

The *Sustainable Transportation Direction Strategy* will be submitted for endorsement as Council Policy.

IMPLICATIONS OF THE RECOMMENDATIONS

- Each of the five (5) documents are being advanced under separate reports, which will describe the merits, content, and overview of each of the planning documents:

- *OurWinnipeg* Plan submitted for adoption as a Plan Winnipeg by-law.
- *Complete Communities Direction Strategy* submitted for adoption as a Secondary Plan by-law.
- The remaining three Direction Strategies – *Sustainable Transportation, Sustainable Water and Waste Infrastructure* and *A Sustainable Winnipeg* – submitted for endorsement as Council Policy.

- Endorsement of the *Sustainable Transportation Direction Strategy* as Council Policy will provide a set of guidelines for the City of Winnipeg Public Service to follow with respect to this subject matter. It expresses Council's will and expectations and provides transparency to the public.

- The strategic direction set through the *Sustainable Transportation Direction Strategy* will be the framework for developing Winnipeg's *Transportation Master Plan*. The overarching objective of this Master Plan is to guide the planning, development and maintenance of a multi-modal transportation system that will contribute to the sustainable development of the city and region.

Background
On April 25, 2009 the Mayor's Symposium on a Sustainable Winnipeg marked the beginning of the City's comprehensive process to create a new Municipal Development Plan – the OurWinnipeg Initiative – based on principles of sustainability. During the year long engagement process following the symposium, more than 42,000 Winnipeggers provided input into the planning process through speakupwinnipeg.com, roundtables, open houses, major face to face events, and community outreach.

Meeting future demand for continued mobility requires a balanced approach, intended to develop a community where transportation is easy and convenient today while not compromising the mobility needs of future generations.

The practices contained in the *Sustainable Transportation Direction Strategy* will result in the ability to better integrate land use and transportation planning. They will enable Winnipeg to assess future transportation needs systematically and proactively.

The *Sustainable Transportation Direction Strategy* forms the policy framework for the forthcoming *Transportation Master Plan*.

Plan Content
The Sustainable Transportation Direction Strategy identifies five (5) key goals to achieving a balanced and sustainable transportation system for Winnipeg, including:

A transportation system that is dynamically integrated with land use - An integrated approach to land use and transportation maximizes the efficiency and effectiveness of its transportation infrastructure, helping to create an efficient, sustainable and vibrant city.

A transportation system that supports active, accessible and healthy lifestyle options - Provision of adequately maintained walking, cycling and other forms of active transportation facilities are all part of achieving this goal. A safe and secure transportation system that is

universally accessible will help to ensure equitable access to mobility and a high quality of life for all citizens.

A safe, efficient and equitable transportation system for people, goods and services - In order to ensure sustainable economic growth, an efficient, cost effective transportation system for the timely and equitable movement of goods, services and people is essential.

Transportation infrastructure that is well maintained - A well-maintained transportation system promotes economic and social vitality, and a positive city image. It is an essential that the major assets, transportation infrastructure and transit system, be managed to enable future generations to continue to enjoy a high of level of mobility and accessibility.

A transportation system that is financially sustainable - Financial sustainability is an essential goal in the development of the *Transportation Master Plan*. This requires a review of the cost and benefits of each component of the *Transportation Master Plan* as they are developed and an assessment of potential additional sources of funding and program delivery to ensure financial sustainability for future generations.

Public Engagement

- The *Sustainable Transportation* Direction Strategy is based on the voices of Winnipeggers, commencing with the visions shared by participants at the Mayor's Symposium on Sustainability, held April 25, 2009, and augmented by the input received through the comprehensive speakupwinnipeg citizen involvement process. Over the course of approximately one year, more than 42,000 Winnipeggers provided input into the planning process through speakupwinnipeg.com, roundtables, open houses, major face to face events, and through community outreach.
- Public Involvement on *Our Winnipeg* and the companion documents was undertaken in three phases:
    - SpeakUpWinnipeg #1 (April 2009 – October 2009): Provided an opportunity for high-level / blue sky discussion regarding the future of our city. A wide range of online (blog, video, polls), social media tools, public events, roundtable meetings and a street team were used to engage more than 30,000 Winnipeggers.
    - SpeakUpWinnipeg #2 (November 2009 – January 2010): Provided an opportunity to check-in with key stakeholders and the general public. Website engagement was again used, along with open houses.
    - SpeakUpWinnipeg #3 (May/June 2010): Following the release of the draft *OurWinnipeg Plan* and accompanying Direction Strategies, this phase provided an opportunity to check back with key stakeholders and to share information with the general public in advance of the formal review/approval process. Website engagement, roundtables and public information sessions were used. Through the course of SpeakUpWinnipeg 2 and 3 more than 12,000 additional people were engaged.

HISTORY

On March 21, 2007, Executive Policy Committee recommended to Council that the Province of Manitoba be advised that The City of Winnipeg has commenced the review of *Plan Winnipeg 2020 Vision* as required by The City of Winnipeg Charter.

On April 25, 2009 the Sustainability Symposium marked the beginning of the City's comprehensive process to create a new Municipal Development Plan – the **OurWinnipeg** Initiative – that will be based on principles of sustainability.

Between April 25, 2009 and May 2010 more than 42,000 Winnipeggers provided input into the planning process through SpeakUpWinnipeg.com, roundtables, open houses, major face to face events, and through community outreach.

On May 26, 2010, a draft of the *Sustainable Transportation Direction Strategy* was released publicly.

FINANCIAL IMPACT

Financial Impact Statement **Date:** **June 16, 2010**

Project Name:

Sustainable Transportation Direction Strategy

COMMENTS:

The recommendation contained in this report is that Council endorse in principle the 'Sustainable Transportation Direction Strategy' as outlined in Attachment "A".

There are no financial implications associated with this recommendation.

"Original Signed By"
Mike McGinn, CA
Manager of Finance

CONSULTATION

In preparing this Report there was consultation with:

Internal Consultation: Public Works; Transit; Water and Waste; Community Services; Winnipeg Police Service; Winnipeg Parking Authority; Office of Sustainability; Legal Services.

External Consultation: A number of external stakeholders were consulted on this project.

SUBMITTED BY

Department	Planning, Property and Development
Division	Planning and Land Use
Prepared by	Brett Shenback, OurWinnipeg Team Member – Planner
Date	June 17, 2010
File	

Attachment "A": Sustainable Transportation Direction Strategy



Attachment A:
Sustainable Transport

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SUSTAINABLE TRANSPORTATION



Winnipeg

An OurWinnipeg™ Direction Strategy

PUBLIC SERVICE CONTRIBUTORS

The Sustainable Transportation Strategy includes contributions from across the Public Service, including:

CORE DRAFTING TEAM
Luis Escobar, Aldo Papetti, Brad Sacher, Kenn Rosin

***OURWINNIPEG* INITIATIVE TEAM**
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WATER AND WASTE DEPARTMENT
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WINNIPEG TRANSIT
Dave Wardrop, Bjorn Radstrom

SUSTAINABLE TRANSPORTATION

THIS IS A DRAFT

SUSTAINABLE TRANSPORTATION IS STILL IN DRAFT FORM. IT WAS CREATED THROUGH SPEAKUPWINNIPEG AND CONVERSATIONS WITH MORE THAN 40,000 WINNIPEGGERS.

Sustainable Transportation – one of four strategies forming the basis of **OurWinnipeg**, is the formalization of how transportation will be provided in Winnipeg for the next 25 years. The emphasis is on moving people, goods and services in a way that is socially, environmentally and economically sustainable.

The Planning, Property and Development Department, Winnipeg Transit and the Public Works Department, together with IBI Group and McCormick Rankin Corporation and local stakeholders have worked extensively in developing this new transportation strategy for Winnipeg.

This new strategy forms the policy framework for the **Transportation Master Plan**, the main purpose of which is to dynamically analyze the needs of the new urban structure as it changes through time.

The practices contained in this new dynamic approach will result in the ability to integrate land use and transportation in a more holistic manner. It will enable Winnipeg to move from the current static approach to one that will assess future transportation needs systematically and proactively.

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01 INTRODUCTION

Urban transportation is a complex system tied to land use planning and urban design. The provision of transportation systems has a large influence on the form of the built environment and people's quality of life.

Our world is changing at an accelerating pace. As populations increase around the world, people are looking for more housing options, job opportunities and access to services, causing urban areas to grow rapidly. More than 50% of Canadians live in a medium to large sized city, with 55% of Manitobans living in the city of Winnipeg.



Winnipeg stands to gain by rising to the challenges and seizing the opportunities of this new world. The transportation system will be central to bringing Winnipeg into the future; it plays a role in everything from neighbourhood safety and family orientation to the efficient delivery of goods and services and commercial viability.

An effective sustainable transportation strategy will help guide decisions through changing times and will ensure that Winnipeg is poised to capitalize on opportunities. The transportation strategy needs to balance an ability to be specific enough for guiding decisions in the short term while being flexible and robust enough to encourage continual progress and innovation. It also needs to be affordable and cost effective to implement in order to ensure that it is financially sustainable.

Ongoing discussions through **SpeakUpWinnipeg** have revealed a number of themes and priorities. These include an emphasis on the sustainability of urban development, including transportation, community development and increasing options for Winnipeggers.

OurWinnipeg presents a vision for a city that is environmentally, economically and socially sustainable. All policy directions, including those for transportation, are guided by these three sustainability principles, ensuring the alignment of all City actions. Meeting future demand for continued mobility requires a balanced approach, endeavouring to develop a community where transportation is easy and convenient today while not compromising the mobility needs of future generations.

The path to achieving a sustainable transportation system for the city of Winnipeg must begin with strategic goals which will be further discussed throughout this document.

As they were developed in the context of sustainability, these goals are aligned to the vision and goals of **OurWinnipeg's** other Direction Strategies. The relationship between transportation and land use is fundamental and therefore the goals of **Sustainable Transportation** have been developed in concert with **Complete Communities** in particular. **Sustainable Transportation** specifically represents an integration of the transportation system's various components, including vehicles, transit, active transportation and the movement of goods and services. The following discussion outlines the key aspects of a future sustainable transportation plan, providing an integrated transportation system which balances the private vehicle, transit, goods movement, cycling and pedestrian options that connect Winnipeg's people and communities.

The strategic direction set through **Sustainable Transportation** will be the framework for developing Winnipeg's **Transportation Master Plan**. The overarching objective of this Master Plan is to guide the planning, development and maintenance of a multi-modal transportation system that will contribute to the sustainable development of the city and region.

The development of a transportation planning computer model designed to incorporate all transportation modes together with their interaction with changes in land use will be a key component in the development of the **Transportation Master Plan**. This model will fully integrate transportation and land use planning, where alternate settlement patterns and transportation plans/services may be tested against their ability to achieve the goals of the policy.

The model will anticipate future transportation needs based on existing and projected development, guide transportation facility and service improvement decisions for budgeting purposes and provide a valuable tool to assess new development for its impact on current systems and the need for development related improvements. It will also be useful in evaluating new and alternative development patterns that may minimize impact on existing facilities/services.

As the city grows over time, this tool will allow for dynamic transportation planning that responds to changes in land use. When projections for certain land use changes and growth are realized (or not), the tool can help re-evaluate transportation planning needs, adjusting implementation as needed.

The dynamic transportation planning process is illustrated schematically on Figure 01a. The current document is indicated on Figure 01a as one of the two key inputs into the development of the **Transportation Master Plan** along with **Complete Communities**.

Also, as illustrated in Figure 01a, ensuring that the transportation infrastructure is sustainably maintained is another key component of the **Transportation Master Plan** process. This will be critical to Winnipeg's continued economic, social and environmental viability and will require continued support for an asset management program that can ensure the infrastructure is maintained effectively and efficiently.

Additional components of the **Transportation Master Plan** are anticipated to include:

- the analysis and evaluation of integrated land use-transportation scenarios
- public consultation
- document preparation
- a staged, prioritized implementation plan, including preliminary life cycle cost estimates and financial sustainability options

DYNAMIC TRANSPORTATION PLANNING AND LAND USE MODEL

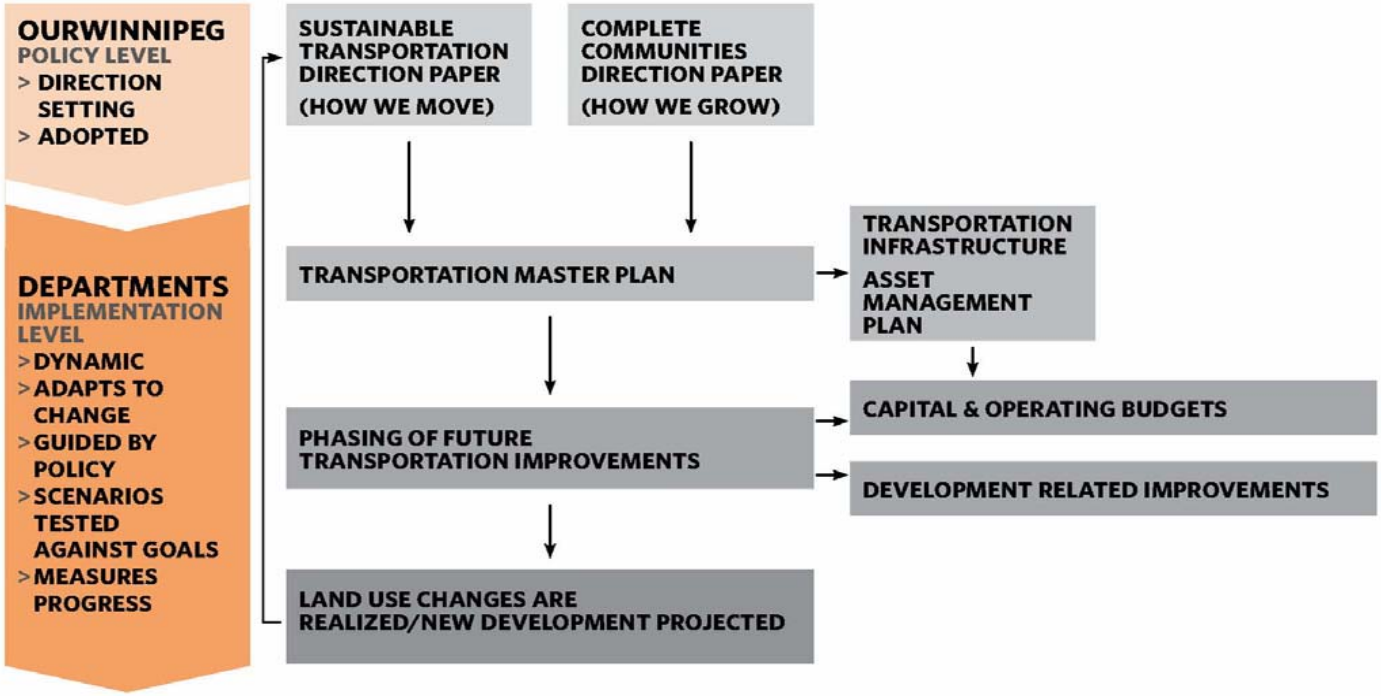


figure 01a

02 STRATEGIC GOALS

The success of **Sustainable Transportation** and the subsequent **Transportation Master Plan** will be measured by how well they support economic growth, personal mobility and accessibility .

There are several key strategic goals which are critical to achieving a balanced and sustainable transportation system for Winnipeg, including:

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



A TRANSPORTATION SYSTEM THAT IS DYNAMICALLY INTEGRATED WITH LAND USE

An integrated approach to land use and transportation maximizes the efficiency and effectiveness of its transportation infrastructure, creating an efficient, sustainable and vibrant city. An important component of integrated transportation and land use is that it minimizes both the number and length of trips people need to make.

A TRANSPORTATION SYSTEM THAT SUPPORTS ACTIVE, ACCESSIBLE AND HEALTHY LIFESTYLE OPTIONS

Provision of adequately maintained walking, cycling and other forms of active transportation facilities are all part of achieving this goal. A safe and secure transportation system in which pedestrians, cyclists and motorists co-exist is also essential. In addition, ensuring equitable access to mobility and a high quality of life for all citizens, regardless of their personal ability level, requires universal access to the transportation system.

A SAFE, EFFICIENT AND EQUITABLE TRANSPORTATION SYSTEM FOR PEOPLE, GOODS AND SERVICES

In order to ensure sustainable economic growth that supports Winnipeg as the region's economic engine, an efficient, cost effective transportation system for the timely and equitable movement of goods, services and people must be an essential element.

To achieve this goal we will need to utilize technology such as ITS (Intelligent Transportation Systems) and other transportation systems management tools, transportation demand management, strategic major street network improvements, rapid transit, and other innovative ways to move people, goods and services.

TRANSPORTATION INFRASTRUCTURE THAT IS WELL MAINTAINED

A well-maintained transportation system promotes economic vitality and a positive city image. It is an essential part of any truly sustainable transportation plan that the major assets, the transportation infrastructure and the transit system, be managed to enable future generations to continue to enjoy a high of level of mobility and accessibility. Investing in a measurable approach in the maintenance of the street, transit, pedestrian and cycling infrastructure will ensure the continued economic and social viability of the City.

A TRANSPORTATION SYSTEM THAT IS FINANCIALLY SUSTAINABLE

Financial sustainability is an essential goal in the development of the **Transportation Master Plan** for the next 25 years. This requires a review of the cost and benefits of each component of the **Transportation Master Plan** as they are developed and an assessment of potential additional sources of funding and program delivery to ensure financial sustainability for future generations.

03 CURRENT CONDITIONS

In order to put the development of goals and directions for Winnipeg's transportation system in the proper context, it is important to understand the current situation.

03-1 THE CURRENT STREET SYSTEM

The network of streets in Winnipeg is structured as follows:

- Local streets that primarily provide access to adjacent land use
- Collector streets that primarily provide access to adjacent land use and secondarily provide for through traffic movement
- Arterial streets that primarily provide for through traffic movement and secondarily provide access to adjacent land use

In many cities in Canada, there is a fourth level of street hierarchy with the primary function of providing for the movement of traffic with limited access to the remaining street network.

This means that all of the traffic typically handled by this fourth level of streets in the road hierarchy in other cities is handled by the arterial street system in Winnipeg. This is in addition to the arterial system accommodating access to adjacent lands, collector and local streets through the use of traffic control such as signals and stop signs.

Despite relatively modest population growth, this has resulted in ever increasing pressure on the arterial street system by both commuters and commercial development over the past 30 years.

03-2 THE CURRENT PUBLIC TRANSIT SYSTEM

Winnipeg Transit currently operates an extensive network of 89 bus routes throughout the city, with a fleet of 545 buses. Over 75% of Winnipeg Transit's bus fleet is currently comprised of low-floor accessible buses, with the remainder to be converted to low-floor buses by the end of 2013.

Winnipeg's transit route network is comprised of:

- 54 conventional routes
- 28 express routes
- 3 free downtown shuttle routes (Downtown Spirit)
- 4 demand-responsive suburban "DART" routes

In 2006, Winnipeg began a multi-year comprehensive transit improvement program that involved an accelerated program of bus replacements, the implementation of upgrades to major stops and terminals, on-street transit priority measures (such as diamond lanes, queue jump lanes and transit priority signals), a leading-edge implementation of Intelligent Transportation System (ITS) technology for transit and new park & ride facilities. Roughly 500 bus stops have been upgraded, more than 100 bus stops are now equipped with heated shelters and transit priority measures have been implemented on several Transit Quality Corridors to improve travel times and on-time performance.

CURRENT QUALITY CORRIDORS WITH TRANSIT PRIORITY IMPLEMENTATION ARE:

- Pembina Highway
- St. Mary's Road
- St. Anne's Road
- Henderson Highway
- Regent Avenue
- McPhillips Street
- Main Street
- Marion/Goulet Streets
- Portage Avenue

Winnipeg Transit's entire bus fleet is now outfitted with a GPS-based Automatic Vehicle Location (AVL) system which has allowed Winnipeg Transit to provide all of its electronic schedule information (internet, Telebus and electronic bus departure display signs) in real-time.

Winnipeg Transit is constructing the first stage of the Southwest Transit Corridor, a bus rapid transit facility that will link downtown with major destinations in the southwest part of the city. This facility will reduce travel times along the corridor by allowing buses to travel up to 80 km/h between stations on an exclusive grade-separated transitway. The first stage of the corridor, which will eventually reach from the University of Winnipeg in the downtown area to the University of Manitoba, is expected to open by the end of 2011.

03-3 CURRENT ACTIVE TRANSPORTATION SYSTEM

In recognizing the significant environmental, economic, social and public health benefits of Active Transportation (AT), the City of Winnipeg has also made great strides towards improving facilities and programs for walking and cycling. Efforts are being guided by the **Active Transportation Study**, adopted by Council in 2006.

The City's capital budget for active transportation has risen from $300,000 in 2006, to more than $3 million in 2009. The City of Winnipeg has also identified approximately 450 km of active transportation infrastructure to be added to the approximately 190 kilometres that were present by the end of 2009.

These efforts, along with a rise in fuel costs during the summer of 2008, have resulted in an increase of 25% in cycling activity between 2007 and 2008. At the same time, spot surveys indicate an increase of approximately 15% in activity on the multi-use pathway system.

As part of the City's 2010 capital works program, an additional $20 million has been allocated to implement several additions to the City of Winnipeg active transportation network.

The current active transportation network in the City of Winnipeg (including the additions as part of the 2010 capital works program) is shown on Figure 03a.



CURRENT ACTIVE TRANSPORTATION NETWORK-2010

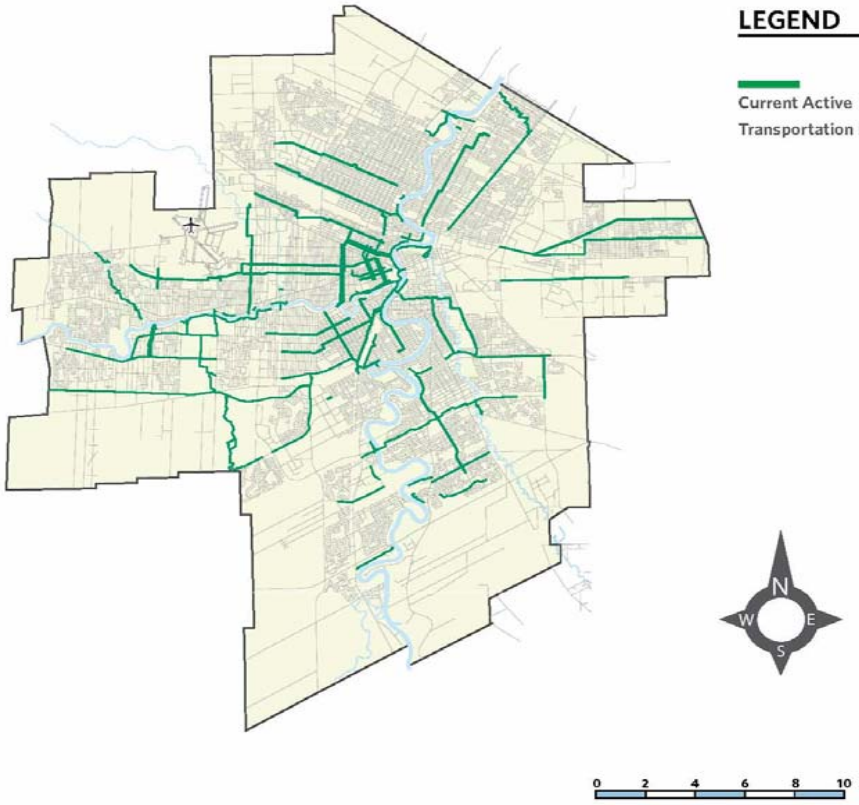


figure 03a

03-4 CURRENT TRAVEL DEMAND AND ITS ACCOMMODATION

The **2007 Winnipeg Area Travel Survey** provided valuable information about how, when and why various trips are accommodated within a typical 24-hour period on a weekday.

Among trips made by city households over the 24-hour period, the "return home" was the dominant trip purpose, accounting for 38% of all trips. The "work or related" and "school" trip purpose (trips to work or school) shares are 18% and 6% respectively, while discretionary trips, such as "shopping" and "leisure," represented 25% (Figure 03b).

WEEKDAY TRIPS BY PURPOSE

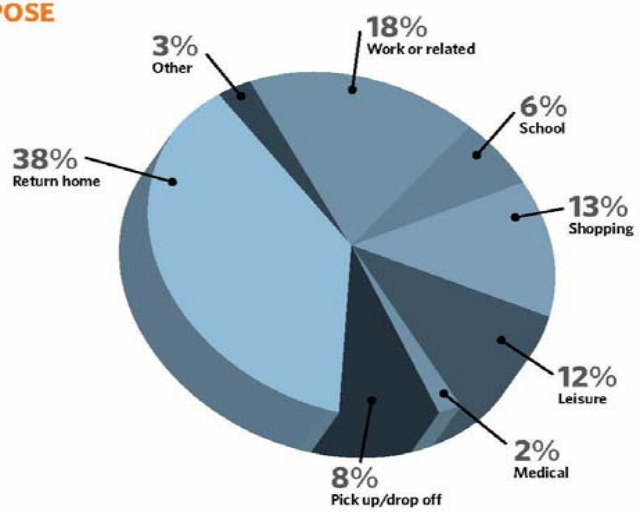


figure 03b

The dominant mode of travel was found to be auto trips (including "auto driver" and"auto passenger" trips), comprising 79.7% of trips made on a typical weekday, while Transit accounted for 8.3% of trips and non-motorized modes ("walk" and "bicycle" modes) comprised approximately 10% (Figure 03c).

WEEKDAY TRIPS BY MODE

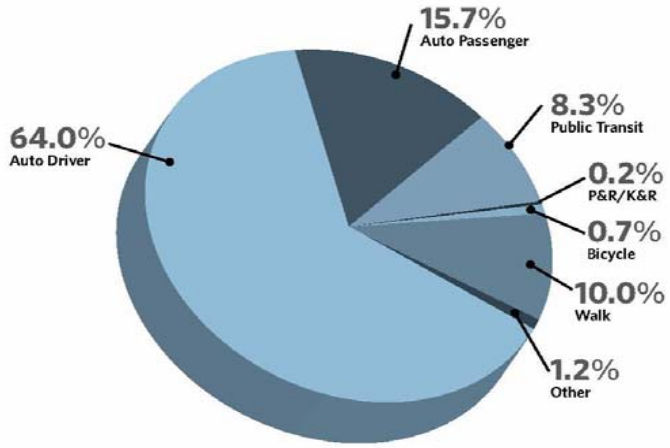


figure 03c

The highest concentration of trip making occurs in the AM and PM peak periods, primarily for work or school related travel. Trips occurring during this four hour period represent over a third of all daily trips made, with the remaining trips spread throughout the day. As a result, the greatest demand on the transportation system occurs during these time periods (Figure 03d).

24 HOUR WEEKDAY TRIPS BY TIME PERIOD WITHIN WINNIPEG

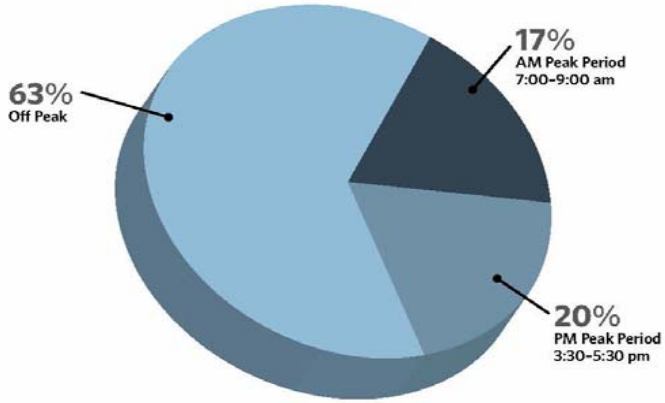


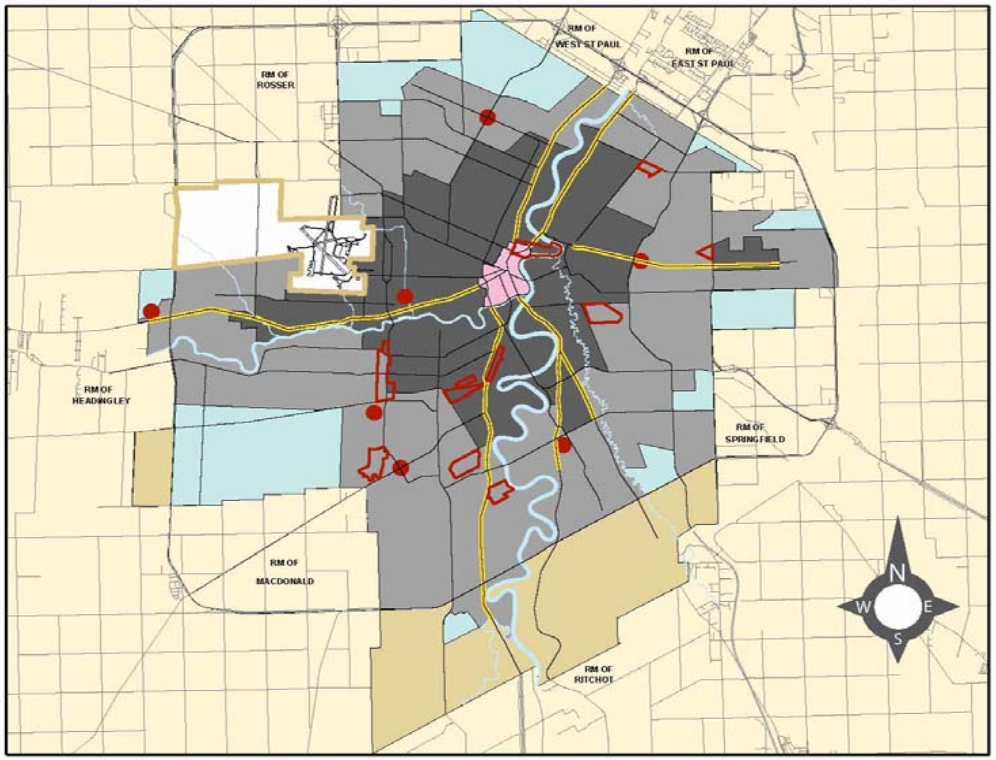
figure 03d

04 FUTURE URBAN STRUCTURE

Figure 04a illustrates the proposed urban structure plan being developed as part of **OurWinnipeg**. The development of transportation and land use are intrinsically intertwined. The transportation system should support the land use plan and the land use plan should be developed to minimize the resource consumption by transportation while reducing both the numbers of trips required and the length of trips taken. This will be discussed further in the following sections.



PROPOSED URBAN STRUCTURE



LEGEND

- Downtown
- Major Redevelopment Sites
- New Communities
- Regional Mixed Use Centre
- Regional Mixed Use Corridor
- Mature Communities
- Recent Communities
- Rural and Agricultural
- Airport Area

0 2 4 6 8 10
Kilometers

figure 04a
This is a draft version of the Urban Structure Map. It will be finalized upon approval of the **OurWinnipeg** plan and Direction Strategies.

05 A SUSTAINABLE STRATEGIC DIRECTION FOR TRANSPORTATION

As described in Section 02, there are five key goals to achieving a balanced and sustainable transportation system for Winnipeg:

- 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.

Several key components which will achieve these strategic goals are conceptually outlined in this section.

05-1 PUBLIC TRANSIT SYSTEM

Winnipeg has a high quality and efficient public transit system characterized by its focus on key corridors and incremental improvements to service. **Sustainable Transportation** will take these improvements to the next level, providing improved transit access across the city. We envision that public transit in Winnipeg will be structured into a hierarchy of three main categories: Rapid Transit, Transit Quality Corridors and Conventional Transit Service.



RAPID TRANSIT

The most appropriate form of rapid transit has to be selected within the context of each corridor. Light Rail Transit (LRT) and Bus Rapid Transit (BRT) are technologies that can be considered in Winnipeg's rapid transit service. The final choice for technology should be made following a detailed assessment of the actual corridors to be served, operating characteristics of the technologies, the City's financial capacity, the City's ability to implement and maintain the technology and any other determining factors.

TRANSIT QUALITY CORRIDORS

These are major transit corridors that have had a comprehensive set of coordinated transit priority measures developed and implemented along their length. Measures could include sections of bus-only lanes, queue-jump lanes approaching intersections, transit vehicle detection for active transit signal priority or pre-emption, passive transit signal priority, relocation or removal of stops and operation of express services. Priority transit services would almost always be able to operate at travel speeds equal to or better than the general traffic. Buses would be the mode used on Transit Quality Corridors.

CONVENTIONAL TRANSIT SERVICE

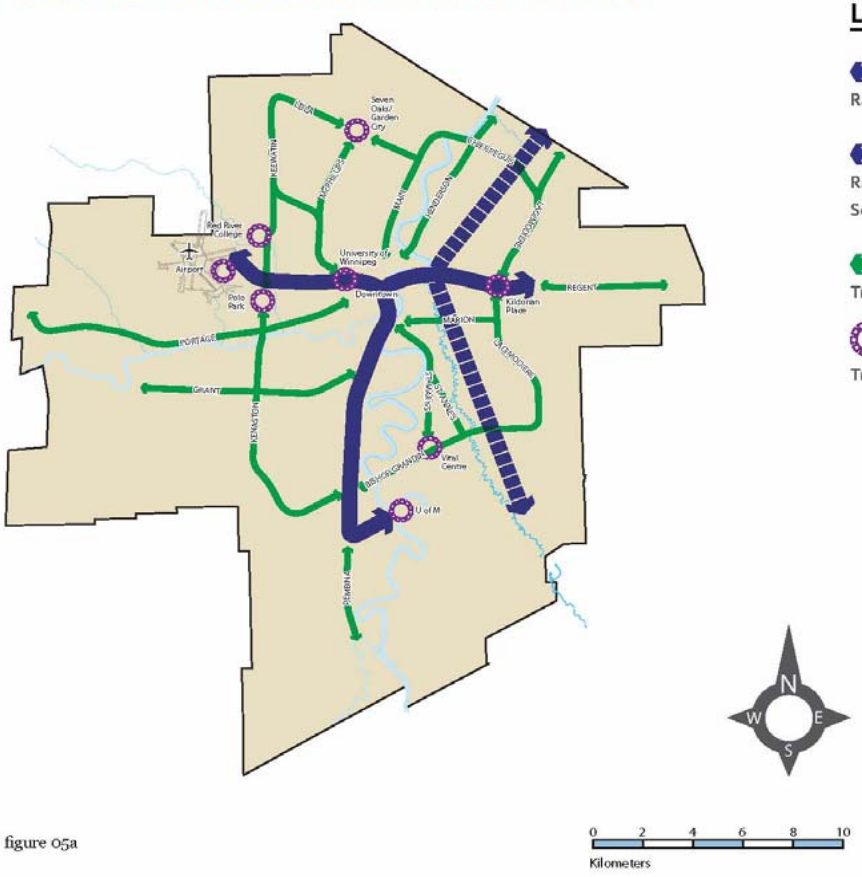
This describes the operation of buses in mixed traffic without the benefit of coordinated transit priority measures. Additional spot transit priority measures would always be considered at particular locations where they can benefit bus operations.

The inclusion of rapid transit in this vision is necessary, since only rapid transit, with its high levels of service frequency and absence of congestion delays, can make public transit fast and convenient enough to compete with the private automobile. In a balanced transportation system, public transit should be an easy and convenient option for moving people.

The transit vision map (Figure 05a) shows three rapid transit facilities focused on downtown Winnipeg, with a number of quality corridors to supplement the rapid transit services, feed the rapid transit facilities and provide suburb-to-suburb transit connections. The combination of rapid transit with quality corridors would form an effective network of higher order transit. This network can enhance land use planning efforts for intensifying development in many areas, improving the scope and scale of transit-friendly design.

At this conceptual level, only general corridors for the rapid transit and quality corridors have been identified. Analysis of potential corridors using a regional demand simulation model will occur as part of the development of the **Transportation Master Plan**.

CONCEPTUAL TRANSIT SYSTEM IMPROVEMENTS



LEGEND

- Rapid Transit (BRT/LRT)
- Rapid Transit (BRT)– Second Phase
- Transit Quality Corridors
- Transit Centres

figure 05a

RAPID TRANSIT CORRIDORS

Three rapid transit corridors are proposed. One to the area east of the Red River, one to the area west of the Red and south of the Assiniboine River and one to the area west of the Red and north of the Assiniboine. All three facilities converge downtown. The most appropriate form of rapid transit has to be selected within the context of each corridor.

SOUTHWEST

The Southwest Transit Corridor will connect downtown to the southwest sector of the city, with the University of Manitoba as the anchor at the south end of the corridor (its first stage, from Queen Elizabeth Way & Stradbrook to Pembina & Jubilee, is already under construction). The facility will need to cross the Assiniboine River (though not necessarily with a new bridge) and an appropriate corridor for the second stage (from Pembina & Jubilee to the University of Manitoba) will need to be identified. The facility would be supported by transit priority facilities serving the western portion of this sector and connections to the north and east, across the Assiniboine and Red Rivers. There are major areas of undeveloped or lightly used land along this corridor which could provide for considerable mixed-use intensification.

WEST

It is proposed that this facility connect the downtown with the cluster of important land uses in the southern portion of the sector, including the Airport, Red River College and the Polo Park area. The land uses in the northern portion of the sector are more dispersed and would be served better by Transit Quality Corridors connected to downtown and adjacent suburbs or by conventional transit service. Additional Transit Quality Corridors could extend access to west of the Airport, possibly into the CentrePort lands.

EAST

This facility would travel from downtown, across the Red River and serve the area to the east. The eastern sector is large, but generally not densely developed. This makes identifying a single obvious facility location difficult. It also makes it difficult to justify multiple rapid transit corridors (as indicated in the current Plan Winnipeg 2020 Vision). Rather than maintaining a number of rapid transit corridors, the new vision would see a single corridor in the northeast, supported by a number of transit Quality Corridors. Beyond identifying the most appropriate corridor for rapid transit, the other challenge will be identifying how best to cross the Red River. These challenges can be met by building on existing planning work.

Transit Quality Corridors would extend and support the reach of rapid transit in the following manner:

ADDITIONAL DOWNTOWN ACCESS

There are some areas of the city where the land use dispersion makes justifying rapid transit difficult. In these areas it is appropriate to enhance conventional transit through the introduction of comprehensive transit priority measures in certain corridors.

FEEDING RAPID TRANSIT

It is often inappropriate to extend rapid transit facilities to the edge of an urban area. Instead, they can end at appropriate locations within the urban area, with services to the edge provided by the less expensive, but equally effective priority transit services or by conventional feeder routes. Quality corridors can also connect larger areas of dispersed development to rapid transit corridors.

SUBURB TO SUBURB CONNECTIONS

As cities grow, economic activity disperses and commuting distances lengthen, thus it becomes increasingly important to create a transit network that more than simply radiates from downtown. Priority transit services can be used to connect the different rapid transit corridors and other suburban transit hubs.

All of these types of quality corridors are represented in the conceptual transit vision map.

A final element of the conceptual transit vision is downtown itself. It is important that all of the rapid transit and priority transit services converging on downtown do so in a way that allows easy connection for customers from one service to another. Downtown Winnipeg's large size also means that accessing every location can sometimes be difficult. An enhanced pedestrian network in the core should be considered in addition to permanent downtown transit circulation infrastructure.

STRATEGIES TO ACHIEVE TRANSIT SYSTEM GOALS:

- Identify and prioritize corridors in the rapid transit and transit priority network.
- Develop a work plan to implement corridors in a systematic and efficient manner.
- Work with communities and neighbourhoods to evaluate local conventional transit networks and respond to changing needs and travel patterns.
- Create an equitable, simple and intelligent fare system with incentives to increase ridership and mode split.
- Implement new customer service and information tools and enhance existing ones.
- Develop transit-oriented land use plans, and encourage the intensification of key transit nodes and corridors.
- Invest in transit operations to improve service frequency and coverage.
- Encourage transit use through the implementation of related policies, such as land use and parking.
- Invest in transit infrastructure maintenance and asset management.

05-2 MAJOR STREET NETWORK

While local and collector streets provide essential elements to ensure mobility and access in and around adjacent land uses, the network of major arterial streets forms the backbone of the intra-city transportation system. Without a limited access freeway system, Winnipeg's major arterial streets must accommodate all urban goods movement, cyclists, transit bus routes, access to adjacent development and private vehicle trip making (see Section 03).

This means that to ensure that all travel demands can be accommodated in all available modes, this critical network (and the collector, local and lane network which connects it) needs to be adequately maintained, operated in a safe, effective and efficient manner and selectively improved as necessary.

This plan must include provisions to ensure the sustainability of the street network in the areas of Maintenance and Asset Management, Management of Operational Improvements, Capacity Improvements and Active Transportation.



05-2a MAINTENANCE AND ASSET MANAGEMENT

Maintaining our street network means keeping roads, sidewalks and public lanes in good repair and operational in all seasons. Transit infrastructure and vehicles also need to be maintained efficiently and effectively. Winnipeg is also a "winter city" and as such has provided a high level of snow and ice control on the entire street network to ensure that accessibility by all modes is effectively maintained.

In 2009, an internal cross departmental working group of department heads, managers and specialists completed a review of the condition of the city's infrastructure. A consistent methodology was established, significant information was shared, and the "appropriate asset management condition" was determined. This was done by examining leading practices, benchmarking against industry standards and determining an appropriate long-term condition trend. This appropriate asset management condition is not based on pristine or "new" conditions, rather it offers the lowest long-term preservation cost for the infrastructure.

The infrastructure deficit was calculated in two parts:

- the additional funding (over and above the capital budget forecast) required over the next 10 years to maintain the infrastructure at its current condition
- the additional funding required to maintain the City's infrastructure at an appropriate asset management condition (which, in many cases, is above the current condition)

Both components together make up the *Total Infrastructure Deficit*. Figure 05b illustrates the transportation component of this infrastructure deficit for the next 10 years.

Life cycle costing will be critical to meeting expectations for a well-maintained system. Maintaining the current inventory of infrastructure is a primary focus, enabling the future vitality and quality of life for our neighbourhoods.

The management of street network and transit assets requires continuing support for an asset management program in order to identify and prioritize key areas of short, medium and long term maintenance.

Strategically managing urban growth will also minimize the need for the addition of new infrastructure with its associated maintenance and operating costs.

EXISTING INFRASTRUCTURE DEFICIT–TRANSPORTATION COMPONENT
Unfunded projects over the next 10 Years, in 2009 $ millions

INFRASTRUCTURE TYPE	CAPITAL BUDGET REQUIRED	OPERATING BUDGET REQUIRED	TOTAL
BRIDGES	200	15	215
ROADS-REGIONAL	925	10	935
ROADS-LOCAL & LANES	756	32	788
TRANSIT	75	25	100
TOTALS	1956	82	2038

figure 05b

05-2b MANAGEMENT OF OPERATIONAL IMPROVEMENTS

The ability of the major street network in Winnipeg to ensure a high level of service for all modes is also dependent on how effectively and efficiently the system operates. It is essential that the management of the major street network be optimized through measures such as:

- Reducing delays and emissions through improvements to the traffic signal management system.
- Intelligent Transportation System tools.
- Minimizing delays and providing safe operating conditions through access management practices.
- Innovative intersection design (such as roundabouts) to reduce delay and emissions.
- Transportation Demand Management initiatives.



05-2c STRATEGIC STREET NETWORK IMPROVEMENTS

As Winnipeg grows by 180,000 people over the next 25 years, the city's transportation system will require selected improvements to the transportation network for accommodating the associated demand for efficient movement of people, goods and services. A conceptual major street network illustrating potential improvements is identified in figure 05c.

Moving goods and delivering services efficiently within Winnipeg and through the surrounding region is a significant factor in economic competitiveness and prosperity. Yet the movement of goods and delivery of services also requires the management of air emissions, noise, excessive land consumption, collisions, spills, pavement damage and increased road congestion. Attempting to balance these costs and benefits in a sustainable fashion is a significant challenge.

Goods movement also creates significant infrastructure needs within the city and to and from the capital region. Large volumes of goods being moved through the city create other problems such as noise and intrusion. Reducing unnecessary goods movement and channelizing movement to reduce intrusion will be critical to Winnipeg's long term health.

The conceptual major street network illustrated in figure 05c includes a component that could accommodate an improved level of urban goods movement around the city of Winnipeg that minimizes intrusion into residential neighbourhoods while providing efficient access to key areas of the city.

It also illustrates several conceptual additions to the Provincial highway network which link to or complete a major street improvement within the city.

Following acceptance of the strategic direction, the **Transportation Master Plan** process will further refine and prioritize specific major street system improvements (see Section 09).

STRATEGIES TO ACHIEVE THE MAJOR STREET NETWORK GOALS

- Identify and prioritize major street and highway system improvements.
- Develop a plan to implement corridor improvements in a systematic and efficient manner.
- Continue support for an asset management program to identify and prioritize key areas of short, medium and long term maintenance.
- Accommodate all modes and reduce both delay and emissions by investing in selected capacity improvements to existing major street network operations.
- Recommend improvements to assist the movement of goods into and out of the city, maintaining the integrity of residential neighbourhoods.
- Implement measures to protect and conserve a strategic goods network for roads, rail and air facilities.

CONCEPTUAL MAJOR STREET AND HIGHWAY NETWORK

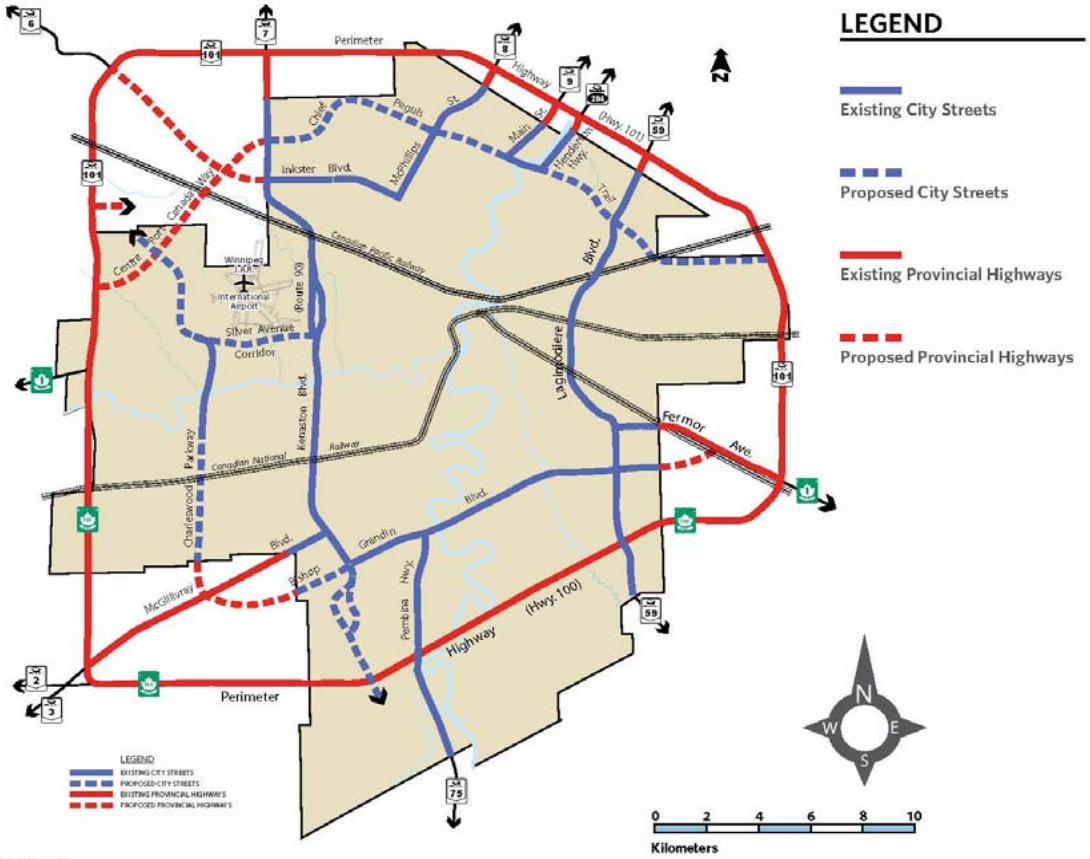


figure 05c

05-3 ACTIVE TRANSPORTATION

The proposed future active transportation network is illustrated in figure 05d and builds upon the network discussed in Section 3-3. However, as discussed in the Active Transportation Study approved by Council in 2006, increasing the role of active transportation will mean more than simply building infrastructure, even though that is certainly a key priority. A comprehensive plan needs to include policies and programs to help change behaviour. It is also critical that the need for Active Transportation becomes ingrained in all planning activities. This includes adding bicycle lanes, re-prioritizing winter maintenance operations to ensure that AT facilities are accessible throughout the year, and perhaps most importantly, ensuring any new land uses are designed to facilitate walking and cycling. The City presently has very few tools to influence the design of new developments such as large commercial uses.

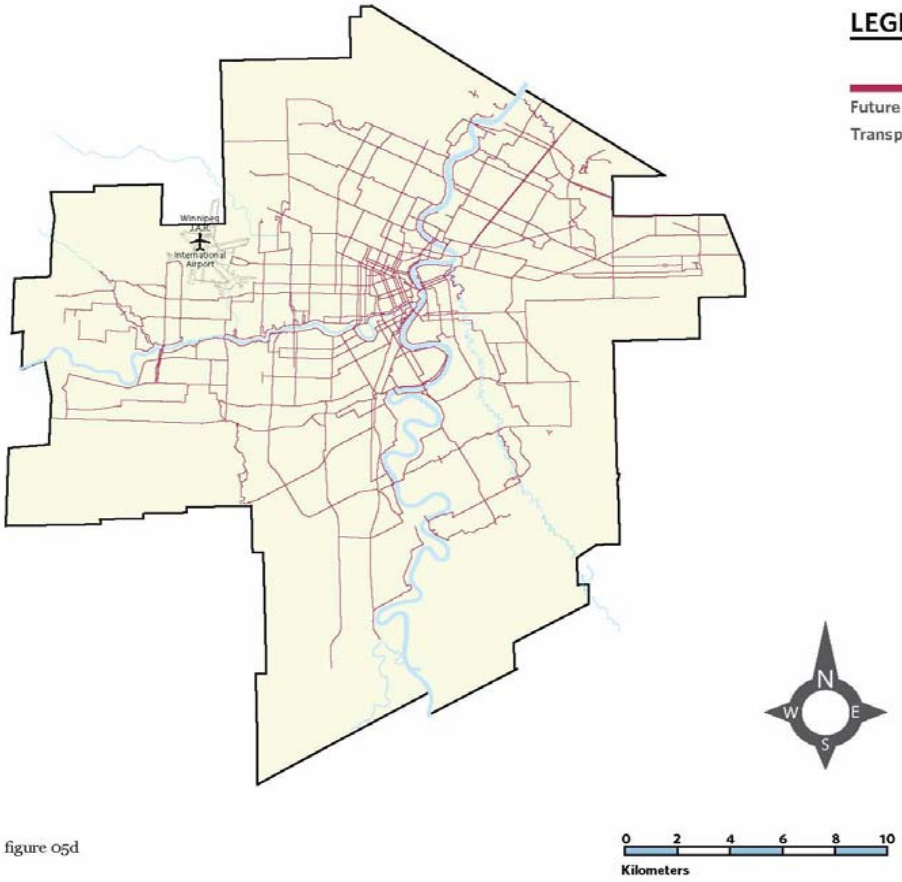
The concept of "complete streets" is gaining traction (streets that include facilities for pedestrians and cyclists in addition to transit and other vehicular needs), and Winnipeg should investigate the possible implementation of such a concept on selected major transportation corridors which have sufficient right-of-way to accommodate all modes without significantly compromising safety or capacity.

STRATEGIES TO ACHIEVE ACTIVE TRANSPORTATION GOALS

- Continue to expand on-street and off-street cycling infrastructure.
- Investigate the implementation of a Complete Streets policy.
- Investigate the establishment of a bike sharing program for the Downtown.
- Develop guidelines ensuring that new development contributes to the pedestrian environment.
- Increase bicycle parking throughout the Downtown and other commercial/employment centres.



PROPOSED FUTURE ACTIVE TRANSPORTATION NETWORK



LEGEND

Future Active
Transportation Network

Kilometers

figure 05d

05-4 FUNDING TRANSPORTATION

Currently, funding for the transportation system is obtained from several sources:

- Property taxes
- Government of Canada (gas tax)
- Province of Manitoba
- Developers

In order to achieve the goal of financial sustainability, the amounts and sources of all of the above funds will need to be reviewed. In addition, other sources of funding and program delivery will have to be investigated as the level of current funding is not able to provide sufficient resources to reduce the transportation infrastructure deficit discussed in Section 5-2b, let alone add to the capacity of the transportation system.

One such alternative program delivery model is a Transportation Authority. The Winnipeg Rapid Transit Task Force (WRTTF) in its 2005 report, recommended in that the City investigate the creation of a Winnipeg Transportation Authority to plan and deliver both road and transit systems. Governments at all levels have set up special purpose agencies (often in the form of crown corporations at the federal and provincial levels) to meet a defined set of objectives in a manner somewhat removed from the day-to-day business of government yet accountable to the parent government for its performance and cost-efficiency. At the municipal level, and specifically dealing with transportation and related land use, a number of perceived deficiencies in planning and delivering transportation were motivating factors that have led to the creation of special purpose agencies in cities across North America and elsewhere.

Most Canadian cities have experienced significant financial constraints which have limited their ability to deliver truly sustainable transportation, and similar constraints exist in many US cities, even given the availability of more federal funding than has been provided in Canada. An important motivating factor leading to the establishment of transportation authorities/organizations at the metropolitan/municipal level in both countries has been the need for an effective single organization responsible for transportation and able to deal directly with the federal and provincial/state government levels to negotiate and obtain reliable streams of funding. In Canada, our three largest cities (Toronto, Montreal and Vancouver) are finding it advantageous to have a special purpose transportation agency in place that is capable of handling these financial arrangements. Another aspect of this motivating factor is the likelihood that transportation user fees (e.g., gas taxes, vehicle registration fees, parking fees, road pricing) with resulting revenues dedicated for transportation capital and operating purposes will become more pervasive in future. Such fees tend to be unpopular in some quarters (e.g., auto drivers), and it is absolutely essential that they be administered in a transparent and accountable manner with demonstrated results in applying the revenues to transportation improvements. In general, these functions can be carried out more efficiently and effectively by a special purpose agency than by a municipal or provincial government with separate departments responsible for various aspects of system financing.

STRATEGIES TO ACHIEVE SUSTAINABLE TRANSPORTATION FUNDING

- Review the amounts currently allocated to transportation from City resources.
- Review the amounts currently allocated to transportation from other levels of government.
- Review the amounts for transportation currently obtained through all forms of development.
- Investigate the implementation of a Transportation Authority for the City of Winnipeg.

06 EMERGING ECONOMIC DEVELOPMENT INITIATIVES

It is necessary to recognize the recommendations contained in recent economic development initiatives, incorporating them as appropriate into the **Transportation Master Plan** to ensure that **Sustainable Transportation** is an inclusive process.

06-1 MAYOR'S TRADE COUNCIL REPORT

In 2008, the Mayor's Trade Council provided a report entitled **Winnipeg–Canada's Centre for Global Trade** on various economic and trade initiatives that should be considered by the City.

As stated in the Chairperson's introductory covering letter in the report:

> **"Amongst our recommendations we strongly urge that the City and Provincial governments collaborate and harmonize their trade policies consistent with provincial priorities; that those policies reflect federal criteria to create seamless trade and transportation investment priorities; that a formal senior committee be established with public/private sector participation to coordinate investment decisions reporting directly to the Premier and Mayor on progress; that Winnipeg support Manitoba's objective of creating an inland port based at the Winnipeg James Richardson International Airport and on lands adjoining it to the northwest; that trade routes connecting critical trade activity be established; that enterprise zones deferring, not forgiving, taxation be established to encourage investment in trade activities; and that political and business leaders champion this unique economic opportunity and jointly press the federal government for required support."**

The report included recommendations for strategic prioritized investment in the portions of the Winnipeg street system that would act as "trade routes" and would "be acknowledged as the key trade and commercial arteries fuelling our trade activities."

These recommendations will be considered in developing the **Transportation Master Plan**, as outlined in Section 9.

06-2 CENTREPORT CANADA

Stemming directly from one of the key recommendations in the **Mayor's Trade Council Report**, the development of CentrePort Canada is a major initiative for both the governments of Manitoba and Canada. CentrePort is a 20,000 acre site that will be utilized for goods movement and processing. It is adjacent to the James Armstrong Richardson International Airport. CentrePort is intended to be an inland port. Containers that have landed on the Atlantic or Pacific coasts, and potentially through the port of Churchill, could be moved directly from the ship to CentrePort to be broken up or handled for ongoing processing. Similarly, outgoing shipments could be consolidated. Air cargo shipments moving through James Richardson Airport could be processed.

Recently the Provincial and Federal Governments announced funding for a new expressway to link the CentrePort and airport areas to the Perimeter Highway. This major street addition will be included as part of the capacity improvements component in the **Transportation Master Plan**.



Source: Winnipeg Airports Authority

07 REGIONAL INTERFACE

As the largest urban centre within the Manitoba Capital Region (see figure 07a), Winnipeg has become the focus of complex growth issues that demand a regional perspective. The **Transportation Master Plan** will reflect the opportunity and the need for more integrated planning, inter-municipal and Provincial co-operation.

The **Transportation Master Plan** will build on Winnipeg's strengths as a major city. It will also show Winnipeg's leadership in responding to the pressures caused by growth by accommodating that growth in a sustainable manner, basing it on integrating land use and transportation and on using infrastructure more efficiently. This approach will establish a strong urban core for Winnipeg within the Capital Region and will be the basis for an efficient regional transportation system. Coordinated planning of the regional transportation system will ensure that major areas of regional employment and residence are well-served by a variety of travel modes.

The Province of Manitoba is responsible for major roadway facilities within the Capital Region. However, a number of Winnipeg's streets are also of regional significance, connecting to the provincial highway network and therefore serving regional populations.

CITY STREETS OF REGIONAL SIGNIFICANCE

- **Portage Avenue**, which becomes PTH 1 West at the City Limit
- **Roblin Boulevard,** which becomes PR 241at the City Limit
- **Wilkes Avenue,** which becomes PR 427 at the City Limit
- **McGillivray Boulevard**, which becomes PTH 3 at the City Limit
- **Pembina Highway,** which becomes PTH 75 at the City Limit
- **St. Mary's Road,** which becomes PR 200 at the City Limit
- **St. Anne's Road,** which becomes PTH 59 South at the City Limit
- **Fermor Avenue,** which becomes PTH 1 East at the City Limit
- **Dugald Road,** which becomes PTH 15 at the City Limit
- **Lagimodiere Boulevard,** which becomes PTH 75 at the City Limit
- **Henderson Highway,** which becomes PR 204 at the City Limit
- **Main Street,** which becomes PTH 9 at the City Limit
- **McPhillips Street,** which becomes PTH 8 at the City Limit
- **Brookside Boulevard,** which becomes PTH 7 at the City Limit
- **Inkster Boulevard,** which becomes PR 221 at the City Limit
- **Saskatchewan Avenue,** which becomes PR 425 at the City Limit

While the urban-regional connections listed are directly available to the regional population for access to Winnipeg, all other city roads are also available for their use and will certainly be affected by regional growth. As described in Section 05-2a, one of the strategic goals for the major street system is managing the existing transportation system more effectively and efficiently. This includes working with the Capital Region to develop coordinated initiatives such as Transportation Demand Management and other appropriate measures.

Several of the linkages listed above should also be considered for strategic capacity improvements as part of any Capital Region transportation strategy. This is illustrated conceptually on figure 05b and will also require discussion with the Province on funding strategies to achieve improvements to the essential identified linkages.

Additionally, active transportation such as walking or cycling has great potential for accommodating trips between Winnipeg and adjacent communities, particularly when combined with transit. It is important to discuss the planning, funding and implementation of a network of facilities for active transportation with the Province to ensure the needs of users throughout the Capital Region are met.

The City of Winnipeg will also participate in the development of a coordinated and integrated approach to planning and funding regional transit services. The focus of regional transit will be on areas where commercial development and other, more intensive land uses are concentrated. Winnipeg will work with the regional municipal governments and the Province to identify transit corridors that can link to existing transit service, as well as corridors to be protected for future service.

MANITOBA CAPITAL REGION



figure 07a

08 MEASURING SUCCESS

The Sustainable Transportation Direction Strategy also involves an ongoing process of performance measurement tied to its Vision and Goals that monitors the desired outcomes and any influencing factors. This information will allow the City to assess the success of actions taken and provide guidance for further implementation.

These measures should have five basic characteristics:

Diversity–should help measure social, economic, and environmental planning objectives.

Usefulness–should be applicable to planning decisions.

Easy to understand–experts as well as the general public should be able to interpret the information.

Availability–the data should be readily available or proper resources should be devoted to adequately collect the required data.

Comparability–the data should allow for comparison between various jurisdictions and institutions, as well as between time periods.

A proposed performance measurement framework is outlined in figure 08a, structured according to the five strategic goals identified in Section 03. This list represents a desirable set of indicators for monitoring the implementation of **Sustainable Transportation** and resulting transportation performance. Many of these indicators require extensive data collection and not all may be achievable without additional data and staffing resources.

In general, comprehensive performance measurement should be conducted every 5 years in conjunction with regular updates to this Direction Strategy and **OurWinnipeg**. Some indicators may be monitored more frequently, given the nature of their data and collection methods. Moreover, corridor and area-specific monitoring may be warranted to monitor localized changes from key strategic projects such as Rapid Transit corridors.

Proper reporting is a key aspect of performance measurement, because the knowledge generated by monitoring and analysis is only useful if decision makers and stakeholders are aware of it. Reports that effectively communicate both success and ongoing challenges can capture the attention of active community groups and the media. And that attention can help raise public awareness of accomplishments and necessary next steps. A report card should be developed based on the performance measurement framework providing simple rating for progress towards each objective (e.g., very good progress, good progress, little change, negative progress, very negative progress).

GOAL: A TRANSPORTATION SYSTEM THAT IS INTEGRATED WITH LAND USE

MEASURE	PERFORMANCE INDICATOR
LAND CONSUMPTION	URBAN LAND OCCUPIED BY TRANSPORTATION INFRASTRUCTURE/TOTAL URBANIZED LAND
POPULATION DISTRIBUTION	POPULATION DENSITY (POPULATION PER HA)
EMPLOYMENT DISTRIBUTION	EMPLOYMENT DENSITY (EMPLOYMENT PER HA)
	EMPLOYMENT SELF-CONTAINMENT (% OF EMPLOYED LABOUR FORCE WORKING WITHIN 5 KM OF THEIR PLACE OF RESIDENCE)
	HOME-BASED WORKERS (NUMBER PER 1,000 CAPITA)
NEIGHBOURHOOD TRAFFIC ISSUES	NEIGHBOURHOOD TRAFFIC COMPLAINTS RECEIVED (NUMBER)
TRANSIT SUPPLY AND LEVEL OF SERVICE	TRANSIT SERVICE FREQUENCY
	AM PEAK PERIOD TRANSIT SUPPLY (AM PEAK PERIOD TRANSIT SEAT-KM PER CAPITA)
	ALL DAY TRANSIT SUPPLY (24-HR TRANSIT SEAT-KM PER CAPITA)
	COMPLETION OF RAPID TRANSIT NETWORK (%)
	AVERAGE AM PEAK PERIOD TRANSIT TRIP TRAVEL TIME (MINUTES)

figure 08a

GOAL: A TRANSPORTATION SYSTEM THAT SUPPORTS AN ACTIVE, ACCESSIBLE AND SAFE LIFESTYLE

MEASURE	PERFORMANCE INDICATOR	
AIR EMISSIONS	GREENHOUSE GAS INTENSITY OF TRAVEL (CO2E EMISSIONS/PERSON-TRIP)	
	AIR POLLUTANT INTENSITY OF TRAVEL (NOX, SO2, CO, PM10, PM2.5, TPM, VOC EMISSIONS/PERSON-TRIP)	
	GREENHOUSE GAS EMISSIONS FROM PERSONAL TRAVEL (TOTAL CO2E EMISSIONS FROM PERSONAL TRAVEL)	
	AIR POLLUTANT EMISSIONS FROM PERSONAL TRAVEL (NOX, SO2, CO, PM10, PM2.5, TPM, VOC EMISSIONS FROM PERSONAL TRAVEL)	
BICYCLE AND WALKING FACILITY SUPPLY	SIDEWALK COVERAGE (PERCENT OF COLLECTOR AND ARTERIAL ROADS WITH SIDEWALKS OR PATHWAYS ON BOTH SIDES).	
	PEDESTRIAN NETWORKS THAT ARE COMPLETE AND DIRECT.	
	BICYCLE FACILITY SUPPLY (KILOMETRES OF BICYCLE LANES, SHOULDER LANES, AND MULTI-USE PATHS)	
	COMPLETION OF BICYCLE NETWORK (%)	
BICYCLE USE	AM PEAK PERIOD & ALL DAY BICYCLE MODE SHARE	
PEDESTRIAN ACTIVITY	AM PEAK PERIOD & ALL DAY WALK MODE SHARE	
SAFETY	ROAD INJURIES (NUMBER)	REPORTED PEDESTRIAN COLLISIONS (NUMBER)
	ROAD FATALITIES (NUMBER)	REPORTED CYCLIST COLLISIONS (NUMBER)

figure 08a *continued*

GOAL: AN EFFICIENT AND EFFECTIVE TRANSPORTATION SYSTEM FOR PEOPLE, GOODS AND SERVICES

MEASURE	PERFORMANCE INDICATOR		
AUTO OWNERSHIP & USE	AM PEAK PERIOD & ALL DAY AUTO MODE SHARE		
	AUTOMOBILE OWNERSHIP (AUTOMOBILES PER CAPITA)		
	AM PEAK PERIOD & ALL DAY AUTO OCCUPANCY		
TRANSIT USE & ACCESSIBILITY	AM PEAK PERIOD & ALL DAY TRANSIT MODE SHARE		
	TRANSIT USE (TRANSIT TRIPS PER 1,000 CAPITA)		
	RESIDENTIAL TRANSIT ACCESSIBILITY (PROPORTION OF HOUSEHOLDS WITHIN A 400 M WALKING DISTANCE OF TRANSIT STOPS)		
	EMPLOYMENT TRANSIT ACCESSIBILITY (PROPORTION OF EMPLOYMENT WITHIN 400 M WALKING DISTANCE OF TRANSIT STOPS)		
TRANSIT LEVEL OF SERVICE	TRANSIT SERVICE FREQUENCY	TRANSIT TRAVEL TIMES	NUMBER OF TRANSFERS
ROAD LEVEL OF SERVICE	AM PEAK PERIOD & ALL DAY WALK MODE SHARE	PM PEAK PERIOD & ALL DAY WALK MODE SHARE	

figure 08a *continued*

GOAL: AN EFFICIENT AND EFFECTIVE TRANSPORTATION SYSTEM FOR PEOPLE, GOODS AND SERVICES

MEASURE	PERFORMANCE INDICATOR	
GOODS MOVEMENT CONDITIONS	OFF-PEAK ROAD CONGESTION	CREATING "TRUCK LANES" AND HAZ MAT ROUTES
	DIRECTNESS OF TRUCK ROUTINGS MODIFYING THE REGULATORY FRAMEWORK TO FOSTER THE USE OF MORE EFFICIENT VEHICLES	REWARDING GREENER CARRIERS THROUGH THE PERMITTING SYSTEM
BUSINESS-EMPLOYEE ACCESSIBILITY	AVERAGE AUTO COMMUTE TIME (MINUTES)	AVERAGE TRANSIT COMMUTE TIME (MINUTES)
TRANSIT NETWORK EFFICIENCY	TRANSIT VEHICLE USE (PASSENGER-KM PER VEHICLE-KM)	TRANSIT OFF-PEAK PERIOD USE (100% - % OF DAILY TRANSIT PERSON TRIPS IN AM & PM PEAK PERIODS)
ROAD NETWORK EFFICIENCY	ROAD OFF-PEAK PERIOD USE (100% - % OF DAILY AUTOMOBILE PERSON TRIPS IN AM & PM PEAK PERIODS) NUMBER AND SEVERITIES OF COLLISIONS	
TRANSIT AFFORDABILITY	INCREASE IN TRANSIT FARES (%) COMPARED WITH INCREASES IN INCOME	
TRANSPORTATION FUNDING	CAPITAL INVESTMENT IN MUNICIPAL TRANSPORTATION PROJECTS ($/CAPITA) ROADS, TRAFFIC CONTROL SYSTEMS TRANSIT (FACILITIES AND FLEET) PEDESTRIAN FACILITIES CYCLING FACILITIES	OPERATING INVESTMENT IN MUNICIPAL TRANSPORTATION PROJECTS ($/CAPITA) ROADS TRANSIT (FACILITIES AND FLEET) PEDESTRIAN FACILITIES CYCLING FACILITIES

figure 08a *continued*

GOAL: TRANSPORTATION INFRASTRUCTURE THAT IS WELL MAINTAINED

MEASURE	PERFORMANCE INDICATOR
LEVEL OF STREET INFRASTRUCTURE MAINTENANCE	FINANCIAL INVESTMENT IN MAINTENANCE
LEVEL OF TRANSIT INFRASTRUCTURE MAINTENANCE	FINANCIAL INVESTMENT IN MAINTENANCE

figure 08a *continued*

GOAL: A TRANSPORTATION SYSTEM THAT IS FINANCIALLY SUSTAINABLE

MEASURE	PERFORMANCE INDICATOR
LEVEL OF STREET INFRASTRUCTURE MAINTENANCE FUNDING	SUSTAINABLE FINANCIAL INVESTMENT IN MAINTENANCE
LEVEL OF TRANSIT INFRASTRUCTURE MAINTENANCE FUNDING	SUSTAINABLE FINANCIAL INVESTMENT IN MAINTENANCE
LEVEL OF FUNDING FOR RECOMMENDED TRANSPORTATION SYSTEM IMPROVEMENTS	SUSTAINABLE FINANCIAL INVESTMENT IN TRANSPORTATION SYSTEM IMPROVEMENTS
LEVEL OF FUNDING FOR RECOMMENDED ACTIVE TRANSPORTATION IMPROVEMENTS	SUSTAINABLE FINANCIAL INVESTMENT IN ACTIVE TRANSPORTATION IMPROVEMENTS

figure 08a *continued*

09 NEXT STEPS

Transportation is a vital component of **OurWinnipeg**. It is both a major part of the urban environment and a lever for achieving other objectives. In addition to this Direction Strategy, a comprehensive **Transportation Master Plan** (TMP) will be developed over the coming months.

The process for creating the **Transportation Master Plan** will include developing a transportation planning model for the Winnipeg area which will be used to examine transportation needs and performance into the future. The model can be used to test alternate transportation plans and settlement patterns, ensuring that the transportation and land use nexus is fully taken into account.

The basis for this planning model will be the **2007 Winnipeg Area Travel Study** in which people were asked to describe all of the trips that members of their households had taken on a particular day including travel purpose, time, choice of mode and other aspects.

While the model is being developed, the transportation planning team, along with other teams comprising **OurWinnipeg**, will further develop the concepts to be included in a sustainable transportation plan. Various alternatives will be developed and tested, and evaluations of sustainable transportation initiatives will be included.

The **Transportation Master Plan**, will describe any required transportation improvements and supporting policies needed to achieve the long-term vision. The plan will be a living document, able to adapt to changing conditions and needs. While the TMP is a long term-planning tool, the plan will also include the more immediate directions required to address the current needs of Winnipeg's transportation system. It will address the role of each mode, how this role is to be achieved and the commitments and the expenditures that will be required. It will document the following:

- Transportation goals and objectives
- Transportation system improvements
- Transportation asset management
- Supportive policies, addressing issues such as parking, land use, urban design and Travel Demand Management (TDM) and travel behaviour
- Sustainable transportation financing options

It will take approximately one year to complete development of the comprehensive transportation plan. An important early element of the transportation strategy will be developing and modelling various integrated land use and transportation strategies to help decide on the most efficient development approach for Winnipeg.

A step-by-step action plan for implementing the public transit, active transportation, goods movement and other transportation initiatives will be prepared for the near term (5 year), mid-term (10 year) and long term (25 year) planning horizons. It will outline the specific timing, responsibilities, operational/coordination issues between agencies, costs to implement, policy/bylaw requirements and interactions with other activities.

A monitoring framework will be developed for the TMP which will allow annual tracking to measure the City's progress in moving towards longer term goals and objectives and the achievement of TMP targets. This annual "report card" would assess the performance of the plan through various criteria representing a cross section of important goals.

Public consultation will be an important part of the development of the TMP. This consultation will be integrated with other **OurWinnipeg** consultation initiatives.

GLOSSARY

ACCESSIBILITY
See Universal Design

ACTIVE TRANSPORTATION
Any human-powered mode of transportation such as cycling, walking, skiing and skateboarding. While the main emphasis is on travel for a specific purpose, it does not exclude recreational travel.

ALTERNATIVE TRANSPORTATION (or **Alternative Modes**)
Modes of transportation that are alternatives to travel by a single occupancy vehicle, including riding transit, walking, cycling, and carpooling.

ARTERIAL STREETS
Streets that primarily provide for through traffic movement and secondarily provide access to adjacent land uses.

ASSET MANAGEMENT
An integrated approach involving planning, engineering and finance to effectively manage existing and new municipal infrastructure to maximize benefits, reduce risk and provide satisfactory levels of service.

BIKE LANE
A designated roadway lane for cyclists only.

BUS RAPID TRANSIT (BRT)
Transit systems that use buses to provide a service that is of a higher speed than an ordinary bus line. Often this is achieved by making improvements to existing infrastructure, vehicles and scheduling.

CAPACITY (ROADWAY)
Maximum hourly rate at which vehicles can reasonably be expected to pass a given point given prevailing roadway, traffic, and control conditions.

CAPITAL REGION
Refers to the City of Winnipeg and a number of surrounding municipalities - the City of Selkirk, the Town of Stonewall, and the Rural Municipalities of Cartier, East St. Paul, Headingley, Macdonald, Ritchot, Rockwood, Rosser, St. Andrews, St. Clements, St. Francois Xavier, Springfield, Tache, and West St. Paul. More information is available online through Manitoba Intergovernmental Affairs: http://www.gov.mb.ca/ia/capreg/

CENTREPORT CANADA
Located next to Winnipeg's James Armstrong Richardson International Airport, CentrePort is a 20,000-acre inland port, as well as Canada's first Foreign Trade Zone (FTZ).

CLIMATE CHANGE
A change in the state of the climate that can be identified using statistical tests by changes in the mean and/or the variability of its properties, and that persists for an extended period, typically decades or longer.

COLLECTOR STREETS
Streets that primarily provide access to adjacent land use and secondarily provide for through traffic movement.

COMPLETE COMMUNITY
Complete communities are places that both offer and support a variety of lifestyle choices, providing opportunities for people of all ages and abilities to live, work, shop, learn and play in close proximity to one another.

COMPLETE STREETS
Streets designed to enable safe and efficient access for people using a variety of transportation modes (automobile, truck, transit, walking, wheelchair, jogging, cycling) and for users with varying levels of physical and cognitive abilities. Complete streets are context sensitive and generally incorporate road treatments that address the unique issues of each corridor.

CONVENTIONAL TRANSIT SERVICE
This describes the operation of buses in mixed traffic without the benefit of coordinated transit priority measures.

DELAY (VEHICLE)
The time lost during vehicular travel due to causes beyond the driver's control. Delay may be operational (caused by congestion) and fixed (caused by traffic control devices).

DENSITY
In a planning context, density usually refers to the number of dwelling units, square metres of floor space, or people per acre or hectare of land.

ECONOMIC DEVELOPMENT
Any effort or undertaking which aids in the growth of the economy.

FREEWAYS
Streets that primarily provide for through traffic movement with limited access to the adjacent street system.

GOODS MOVEMENT
The transportation of goods (freight or commodities) by road, rail or air.

HEALTHY COMMUNITY
A community that is continuously creating and improving those physical and social environments and expanding those community resources that enable people to mutually support each other in performing all the functions of life and in developing to their maximum potential.

INFILL DEVELOPMENT
In contrast to Greenfield development (see: Greenfield), the development of vacant or underutilized parcels of land in existing, built-up areas.

INFRASTRUCTURE
The physical assets developed and used by a municipality to support its social and economic activities. The City of Winnipeg's transportation infrastructure inventory includes roads and right-of-way infrastructure, transit buses and facilities, and traffic control infrastructure.

INFRASTRUCTURE DEFICIT
The difference between the capital needs of an organization and the funding available to address the organization's infrastructure asset management requirements.

INTEGRATED PLANNING
Defined as a holistic view of strategic planning that acknowledges the interrelated and inter-dependent reality of complex urban environments.

INTELLIGENT TRANSPORTATION SYSTEMS (ITS)
The application of technology to goods and people movement to reduce delay and improve safety.

LAND USE
The various ways in which land may be used or occupied.

LEVEL OF SERVICE (LOS)
An indicator of the quality of operating conditions for the transportation system that may be applied to cycling or walking facilities (to reflect connectivity, convenience and comfort), transit service (to reflect speed, reliability, frequency and passenger comfort), or roadways (to reflect the ratio of vehicle demand to roadway capacity and resultant delay).

LIFE CYCLE COST
The sum of all recurring and one-time costs over the lifespan of a product, structure or system. These costs include the capital, operating, maintenance, and upgrades costs plus the remaining value at the end of the useful life of the product, structure or system.

LIGHT RAIL TRANSIT (LRT)
Electrically powered rail transit running on light gauge rail and operating in exclusive rights-of-way or dedicated running ways below, above, or at grade level in trains of multiple articulated cars.

LIVABLE COMMUNITY
A community in which the economic and social life of the community is intimately linked to its natural and built environment.

LOCAL STREETS
Streets that primarily provide access to adjacent land use and serve neighbourhood travel.

MAINTENANCE (OF INFRASTRUCTURE)
The set of activities required to keep a component, system, infrastructure asset or facility functioning as it was originally designed and constructed.

MAYOR'S TRADE COUNCIL (MTC)
In May 2007, Winnipeg Mayor Sam Katz appointed the Mayor's Trade Council (MTC) to develop recommendations for the City of Winnipeg concerning trade growth opportunities and supportive transportation asset investments. One of the key recommendations of the report prepared by the MTC was to establish the creation of an inland port based at the Winnipeg James A. Richardson International Airport and on lands adjoining it to the northwest. This recommendation resulted in the creation of CentrePort Canada.

MIXED USE DEVELOPMENT
The development of a tract of land, building or structure that includes two or more different land uses, including residential, office, retail or light industrial.

MOBILITY
Mobility refers to the efficient movement of people and goods in the urban environment. Increased transportation options and decreased travel times improves mobility.

MODE SHARE
The percentage of person-trips made by one travel mode, relative to the total number of person-trips made by all modes.

MODE SHIFT
The shift away from single occupant vehicle use and dependency to an increased variety of transportation mode usage for various types of trips.

PEAK PERIOD
A period of high person-trip demand, generally on weekday mornings and afternoons, which includes what are commonly referred to as "rush hours".

PEDESTRIAN ORIENTED
See Walkable.

PUBLIC TRANSPORTATION
A passenger transportation system available for shared use by the general public.In the city of Winnipeg, Winnipeg Transit is the main provider of public transportation services.`

RAPID TRANSIT
Rapid transit is a form of urban public transportation with higher than normal capacity and frequency and is most often separated from other traffic in underground tunnels, above-ground bridges or separate rights-of-way. Vehicles used can range from buses to light rail vehicles, such as streetcars, to subway trains.

ROUNDABOUT
A type of circular intersection in which traffic must travel in one direction around a central island. Traffic entering the circle must slow down and give the right-of-way to drivers already in the circle. Technically, these intersections are sometimes called modern roundabouts in order to emphasize the distinction from older circular junction types which had different design characteristics and rules of operation.

SAFETY
Freedom from the occurrence or risk of injury, danger or loss.

SUSTAINABILITY
According to the 1983 United Nations Brundtland Commission, the preeminent standard in the definition of sustainable development, it is "development that meets the needs of the present without compromising the ability of future generations to meet their own needs." While the term is most associated with its environmental implications, it has economic and social implications as well. UN 1983 Report of the World Commission on Environment and Development, aka the Brundtland Commission: http://www.un-documents.net/wced-ocf.htm

SUSTAINABLE TRANSPORTATION
Transportatoin that allows the basic access needs of individuals and societies to be met safely and in a manner consistent with human and ecosystem health, and with equity within and between generations. Sustainable transportation is affordable, operates efficiently, offers choice of transport mode, and supports a vibrant economy.

TRANSIT
See Public Transportation.

TRANSIT ORIENTED DEVELOPMENT (TOD)
Moderate to higher density compact mixed-use development, located within an easy five to ten minute (approximately 400m to 800m) walk of a major transit station. TOD involves high quality urban development with a mix of residential, employment and shopping opportunities, designed in a pedestrian-oriented manner without excluding the automobile. TOD can entail new construction or redevelopment of one or more buildings whose design and orientation facilitate the use of public transit and Active Transportation.

TRANSIT QUALITY CORRIDORS
Major transit corridors that have had a comprehensive set of coordinated transit priority measures developed and implemented along their length.

TRANSPORTATION DEMAND MANAGEMENT (TDM)
A range of strategies that encourage individuals to reduce the number of trips they make, to travel more often by alternatives to driving alone, to travel outside peak periods and to reduce the length of their trips.

TRANSPORTATION FACILITY
A facility or infrastructure related to the city's transportation system, including roads, bridges, traffic and street lights, sidewalks, garages and maintenance buildings.

TRANSPORTATION MASTER PLAN (TMP)
The document that establishes a framework for how the City of Winnipeg will address its future transportation needs.

TRAVEL MODE
The selected method of travel, such as automobile use (driver or passenger), public transportation or active transportation.

UNIVERSAL DESIGN
A term coined by architect Ron Mace of the University of North Carolina to encompass seven basic principles of good design: equitable use, flexible use, simple and intuitive use, perceptible information, tolerance for error, low physical effort and size and space for approach and use. It can be applied to a place, service or product. The principles are key ingredients to accessibility within a complete community and social sustainability within an urban environment. Universal Design characteristics maximize accessibility for a wide range of people from infancy to older ages with a variety of physical, sensory or cognitive abilities.

URBAN DESIGN
The design of buildings, places, spaces and networks that make up our cities and neighbourhoods and the ways people use them.

URBAN STRUCTURE
A spatial articulation of city building objectives based on land use, physical layout and design.

URBAN-REGIONAL CONNECTIONS
Connections between the transportation systems of the City of Winnipeg and the surrounding region.

WALKABLE
Walkability is a measurement of how conducive a place is to walking. This includes the physical nature of a place and other factors, such as safety and perceived enjoyment. Walkability is influenced by several factors including proximity to one's destination (for example work or school), the quality of pedestrian facilities, availability of parks and public spaces, urban density, mixture of uses and the presence of a defined urban centre. Find out how your neighbourhood ranks: http://www.walkscore.com/

